
PARALLEL PRODUCTS OF NEW ENGLAND, INC.

Final Environmental Impact Report

EEA # 15990

100 Duchaine Boulevard
New Bedford, Massachusetts 02745

January 2021

Prepared For:

Parallel Products of New England, Inc.
100 Duchaine Boulevard
New Bedford, Massachusetts 02745

Green Seal Environmental, Inc.

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Table of Contents

Table of Contents	1
1.0 Project Description.....	9
1.1 Project Summary.....	9
1.2 MEPA Project Review	9
1.3 Final Environmental Impact Report (FEIR)	10
2.0 Project Description	11
2.1 Existing Site Conditions	11
2.2 Phase 1 Project.....	16
2.3 Phase 2 Project Development	20
2.3.1 MSW Processing/Handling Facility	23
2.3.2 Biosolids Processing	26
2.3.3 Changes to Phase 2 Project Design Since DEIR Submission.....	29
2.4 Water/Wastewater.....	30
2.4.1 Introduction.....	30
2.4.2 Water Use.....	30
2.5 Wastewater Use	32
2.6 Wetlands	34
2.6.1 Introduction.....	34
2.6.2 Phase 1 Wetlands Impacts	34
2.6.3 Phase 2 Wetlands Impacts	35
2.6.4 Acushnet Cedar Swamp.....	35
2.7 Project Alternatives.....	36
2.8 Planning Consistency.....	38
2.9 Statutory and Regulatory Standards.....	40
2.9.1 Phase 1 Permitting	40
2.9.2 Phase 2 Permitting	40
2.10 Assessment of Impacts.....	41
2.11 Mitigation Measures	41
2.11.1 Wetlands	41
2.11.2 Odor	42

2.11.3	Noise	43
2.11.4	Traffic	43
3.0	Environmental Justice and Public Outreach	44
3.1	Potential Public Health Impacts	44
3.2	Climate Change Impacts	47
3.3	Community Outreach.....	47
4.0	Solid Waste	50
4.1	Agricultural Lands	50
4.2	Waste Handling Area.....	50
4.3	Rail Car Movements	51
4.4	PFAS	59
5.0	Traffic.....	60
5.1	Introduction.....	60
5.2	Project Description.....	60
5.3	Study Methodology.....	61
5.4	Existing Conditions.....	61
5.4.1	Study Area Intersections	62
5.4.2	Roadway Network	64
5.4.3	Public Transportation.....	65
5.4.4	Existing Traffic Volumes.....	66
5.4.5	Crash Summary.....	74
5.5	Future Conditions.....	75
5.5.1	Future Roadway Improvements	76
5.5.2	Background Traffic Growth.....	76
5.5.3	Historic Traffic Growth	76
5.5.4	Site Specific Growth	76
5.5.5	2027 No Build Traffic Volumes	76
5.5.6	Site Generated Traffic.....	79
5.5.7	Project Trip Distribution and Assignment	82
5.5.8	2027 Future Build Peak Hour Traffic Volumes.....	82
5.6	Traffic Operations Analysis	87

5.6.1	Level of Service Criteria	87
5.6.2	Capacity Analysis Results.....	87
5.7	Analysis & Potential Mitigation	99
5.7.1	Traffic Signal Warrant Analysis	99
5.7.2	Transportation Demand Management.....	101
5.8	Conclusions and Recommendations	101
6.0	Noise	103
6.1	Project Update.....	103
6.2	Project Description.....	103
6.3	Sound Metrics	107
6.4	Noise Regulations	109
6.4.1	Federal Regulations	109
6.4.2	Massachusetts State Regulations	109
6.4.3	Local Regulations	110
6.5	Existing Sound Levels	110
6.5.1	Baseline Sound Environment.....	110
6.5.2	Measurement Methodology	113
6.5.3	Measurement Equipment	113
6.5.4	Baseline Ambient Sound Levels	113
6.5.5	Long-term Sound Levels.....	113
6.5.6	Establishment of Background Sound Levels	114
6.6	Modeled Source Sound Levels	115
6.6.1	Continuous Noise Sources	116
6.7	Modeling Methodology	122
6.8	Sound Level Modeling Results.....	123
6.9	Evaluation of Sound Levels	124
6.9.1	Continuous Sources	124
6.9.2	Incidental Sources	125
6.10	Maximum Practicable Mitigation	126
6.11	Response to MassDEP Comments.....	127
6.12	Conclusions.....	128

7.0	Greenhouse Gas Emissions	130
7.1	Project Update.....	130
7.2	Envelope Update	131
7.2.1	Wall Insulation.....	131
7.2.2	Roof Insulation.....	134
7.3	HVAC Update.....	134
7.3.1	Biosolids Heating Efficiency	134
7.3.2	Heat Pump Incentives and Financial Calculations.....	134
7.3.3	Reduced Lighting Power Densities.....	135
7.4	Modeling Update	136
7.4.1	MSW	137
7.4.2	Glass Handling.....	138
7.4.3	Biosolids Building	139
7.5	Incentives	140
7.5.1	Solar Photovoltaic Canopy	140
7.6	Mobile Source Update	140
7.6.1	Mobile Source Emissions Summary	140
7.6.2	Rail Versus Truck Comparison.....	141
7.7	Summary and Mitigation Commitments.....	141
7.7.1	Project GHG Summary	141
7.7.2	Proponent’s Commitments to GHG Reduction	141
8.0	Mitigation and Draft Section 61 Findings	143
8.1	Intent of Section 61 Findings.....	143
8.2	Regulatory Overview	143
8.2.1	Contents of Section 61 Findings	143
8.2.2	Section 61 Findings and Agency Action	143
8.2.3	Proposed Section 61 Findings.....	144
8.2.4	Filing and Distribution of Section 61 Findings.....	144
8.2.5	Subject Matter Jurisdiction Limitations on Section 61 Findings:.....	144
8.3	FEIR Section 61 Findings Requirements.....	144

8.4	Department of Environmental Protection Proposed Section 61 Findings (Draft Certification)	145
8.5	State Agency Permitting Actions – MassDEP.....	146
8.6	Mitigation, Description, Cost, Implementation and Responsibilities	147
8.7	Mitigation Summary	155
9.0	Response to Comments.....	157
9.1	Traffic	160
9.2	Odor, Noise, Emissions, Vectors	163
9.3	Environmental Justice.....	175
	Comment Response	175
	Comment Summary	177
9.4	Siting Concerns.....	178
9.5	Health Issues	181
9.6	Adequacy of Studies Done.....	183
9.7	Impact to Wetlands, woodlands, Acushnet Cedar Swamp, Wildlife.....	184
9.8	Miscellaneous Comments	187
9.9	Biosolids processing and wastewater generation.....	191
9.10	PFAS contamination in wastewater residuals.....	195
9.11	MassDEP Comment Letter (Letter no. 2).....	196
	From Section 7.2.2:.....	207
	From Section 7.2.1:.....	208
	From Section 7.3.3:.....	208
	From Section 7.3.1:.....	209
	From Section 7.5:.....	209
9.12	K P Law letter (City of New Bedford) letter no. 81 (format)	212

TABLES

Table 2.1, p. 33	Pump Station Flowrates
Table 2.2, p. 40	Phase 1 Permit Status
Table 2.3, p. 41	Phase 2 Permit Status
Table 5.1, p. 67	June 2018 to February 2020 Volume Comparison
Table 5.2, p. 67	Route 140 Northbound at Kings Highway Volumes
Table 5.3, p.68	ATR Summary
Table 5.4, p.69	Vehicular Trip Generation, Existing Site Operations
Table 5.5, p.80	Hourly Distribution of Data
Table 5.6, p.81	Hourly Distribution of Truck Trips
Table 5.7, p.88	Capacity Analysis Results
Table 5.8, p.100	Traffic Signal Warning
Table 6.1, p.115	Hourly Minimum L90 Across Monitoring Period at Location CM-1
Table 6.2, p.119	Model Input Sound
Table 6.3,p.119	Power Levels per Noise Source
Table 6.4,p.120	Octave Band Noise Attenuation Levels
Table 6.5,121	Model Input Sound Power Levels per Noise Source
Table 6.6,p.123	CadnaA Model Output Sound Levels for Continuous Sources
Table 6.7,p.124	CadnaA Model Output Sound Levels for Incidental Sources
Table 6.8,p.125	Modeled Continuous Sound Levels Compared to Ambient
Table 6.9,p.125	Modeled Incidental Sound Levels Compared to Ambient for Backup Alarm
Table 6.10,p.126	Modeled Incidental Sound Levels Compared to Ambient for Idling Locomotive
Table 6.11, p.126	Modeled Incidental Sound Levels Compared to Ambient for Railcar Coupling
Table 7.1, p.133	Bio-solids Building Performance
Table 7.2, p.135	Glass Handling Building Lighting Calculation
Table 7.3, p.136	Biosolids Building Lighting Calculation
Table 7.4, p.136	MSW Building Lighting Calculation
Table 7.5, p.137	Modeling Input Assumptions
Table 7.6, p.137	MSW Energy Use
Table 7.7, p.138	Glass Handling (Processing, Bunker and Side Bunker)
Table 7.8, p.139	Biolsolids Processing
Table 7.9, p.141	Mobile Source GHG Emissions Analysis Summary
Table 7.10, p.141	GHG Comparison of Rail Haul vs On Road Haul
Table 7.11, p.141	Project GHG Emissions Summary

FIGURES

Figure 2-1, p.12	Site Locus Map
Figure 2-2, p.13	Appendix 4, Site Plans, sheet 2 of 22

FIGURES CONTINUED

Figure 2-3, p.14	Appendix 4, Site Plans, sheet 3 of 22
Figure 2-4, p.15	Appendix 4, Site Plans, sheet 4 of 22
Figure 2-5, p.17	Appendix 4, Site Plans, sheet 5 of 22
Figure 2-6, p.18	Appendix 4, Site Plans, sheet 6 of 22
Figure 2-7, p.19	Appendix 4, Site Plans, sheet 7 of 22
Figure 2-8, p.21	Appendix 4, Site Plans, sheet 8 of 22
Figure 2-9, p.22	Appendix 4, Site Plans, page 9 of 22
Figure 2-10, p.26	Biosolids Process Flow Diagram
Figure 2-11, p.31	Phase 1 &2, Appendix 4, sheet 12 of 22
Figure 3-1, p.45	Parallel Products Complaint Log
Figure 4-1, p.53	Sheet 1 of 6 Rail Movement Study
Figure 4-2, p.54	Sheet 2 of 6 Rail Movement Study
Figure 4-3, p.55	Sheet 3 of 6 Rail Movement Study
Figure 4-4, p.56	Sheet 4 of 6 Rail Movement Study
Figure 4-5, p.57	Sheet 4 of 6 Rail Movement Study
Figure 4-6, p.58	Sheet 6 of 6 Rail Movement Study
Figure 5-1, p.63	Study Intersections
Figure 5-2, p.70	2020 Base Weekday Morning Peak Hour Traffic
Figure 5-3, p.71	Base Weekday PM Traffic
Figure 5-4, p.72	2020 Existing Weekday PM Traffic AM
Figure 5-5, p.73	2020 Existing Weekday Morning Peak Hour Traffic
Figure 5-6, p.74	Crash Summary
Figure 5-7, p.77	2027 No Build Weekday Morning Peak Hour Traffic
Figure 5-8, p.78	2027 No Build Weekday Afternoon Peak Hour Traffic
Figure 5-9, p.83	Directions of Arrival and Departure
Figure 5-10, p.84	New Project Trips
Figure 5-11, p.85	2027 Build Weekday Morning Peak Hour Traffic
Figure 5-12, p.86	2027 Build Weekday Afternoon Peak Hour Traffic
Figure 5-13.1, p.89	Truck Queue, 1 of 8
Figure 5-13.2, p.90	Truck Queue 2 of 8
Figure 5-13.3, p.91	Truck Queue 3 of 8
Figure 5-13.4, p.92	Truck Queue Sheet 4 of 8
Figure 5-13.5, p.93	Truck Queue 5 of 8
Figure 5-13.6, p.94	Truck Queue 6 of 8
Figure 5-13.7, p.95	Truck Queue Sheet 7 of 8

FIGURES CONTINUED

Figure 5-13.8, p.96	Truck Queue Sheet 8 of 8
Figure 6-1, p.106	Aerial 1 Locus
Figure 6-2, p.108	Common Indoor and Outdoor Sounds
Figure 6-3 p. 112	Sound Monitoring Locations
Figure 6-4 p.118	Sound Modelling Source and Receptor Locations
Figure 7-1 p.133	Biosolids Building Wall

APPENDICIES

Appendix 1	MEPA - Secretaries Certificate for the EENF
Appendix 2	MEPA - Final Record of Decision (FROD)
Appendix 3	Secretaries Certificate for the DEIR
Appendix 4	Site Plans
Appendix 5	MSW Processing Flow Diagrams and Specifications
Appendix 6	Biosolids Process Flow diagram, Preliminary Basis of Design and Preliminary Equipment Sizing
Appendix 7	CDM Smith Wastewater Assessment
Appendix 8	New Bedford Conservation Commission Order of Conditions
Appendix 9	Air Emission Tracking Workbook Example
Appendix 10	Land Use Map
Appendix 11	Mass Coastal Railroad Communication
Appendix 12	Comment Letters
Appendix 13	Traffic Study
Appendix 14	WSP Energy Analysis
Appendix 15	Heat Pump Analysis
Appendix 16	Site Plan Review Approval

1.0 Project Description

1.1 Project Summary

Parallel Products of New England, LLC (PPNE), through an affiliate company own the properties located at 100 Duchaine Boulevard, New Bedford, MA. The 71 acre site was previously developed by Polaroid Corporation. PPNE has relocated its existing recycling operation from 969 Shawmut Avenue, New Bedford to the Duchaine Boulevard site.

PPNE is proposing to redevelop the site. The proposed project would be developed in two phases and consist of the project elements listed below:

Phase 1

1. Construction of a glass processing facility
2. Construction of 1.9 MW of roof top and canopy solar power installation
3. Construction of a new rail sidetrack to provide rail service to the site

Phase 2

1. Construction of a municipal solid waste (MSW) handling and processing facility
2. Construction of a biosolids drying facility
3. Expansion of the rail sidetrack constructed in Phase 1 to allow for handling additional rail cars

1.2 MEPA Project Review

Massachusetts Environmental Policy Act (MEPA) review is required as the project will require state permits and the proposed project includes elements that trigger mandatory MEPA review. The proposed MSW handling and processing facility requires MEPA review as the solid waste review thresholds established at 301 CMR 11.03 (9)(a) are exceeded. Also, the wastewater review thresholds established at 301 CMR 11.03 (5)(b) are exceeded for the proposed biosolids drying facility. The required MEPA review consists of the submission of an Environmental Notification Form (ENF) followed by a Draft Environmental Impact Report (DEIR) to be followed by a Final Environmental Report (FEIR).

PPNE prepared an Expanded Environmental Notification Form (EENF) which was noticed in the Environmental Monitor on February 20, 2019. The EENF can be viewed on the PPNE web site at www.parallelproductssustainability.com. After a review and comment period, on April 12, 2019, a Certificate (EEA# 15990) was issued by the Secretary of the Executive Office of Energy and Environmental Affairs. The Secretaries Certificate determined that PPNE must prepare a Draft Environmental Impact Report. The Secretaries Certificate included the scope to be addressed in the DEIR. Also, following the submission and subsequent review of the DEIR, PPNE is required

to prepare and submit a Final EIR (FEIR). A copy of the Secretaries Certificate for the EENF is included as Appendix 1.

The EENF submitted by PPNE included a Phase 1 waiver request. A Phase 1 waiver would allow Phase 1 of the project to proceed prior to completion of the DEIR and FEIR. The Secretary of the Executive Office of Energy and Environmental Affairs issued a Final Record of Decision (FROD) on May 15, 2019. The FROD granted the Phase 1 waiver, allowing Phase 1 of the project to proceed. The FROD is included as Appendix 2.

PPNE prepared the DEIR, which was noticed in the Environmental Monitor on November 22, 2019 (Project #15990). The DEIR can be viewed on the PPNE web site at www.parallelproductssustainability.com. After an extended public review and comment period and following several public information meetings, the Secretary of the Executive Office of Energy and Environmental Affairs, on January 30, 2020, issued the Secretaries Certificate for the DEIR. The Certificate required the preparation of a FEIR for the project. The Secretaries Certificate for the DEIR is included as Appendix 3.

1.3 Final Environmental Impact Report (FEIR)

The Secretaries Certificate for the DEIR required that PPNE prepare a FEIR for the proposed project. The FEIR is to “include additional analyses in the FEIR documenting the project’s impacts and proposed mitigation measures and a response to all comments received on the DEIR.” The Secretaries Certificate included the scope of the required FEIR.

The FEIR includes the additional information required by the Secretaries DEIR Certificate. The FEIR does not include all the information included in the DEIR. However, based on scoping meetings with MEPA, PPNE has agreed to include a detailed project description in the FEIR. This will repeat much of the project description from the DEIR. This information has been reformatted to correspond to the FEIR scope detailed in the Secretaries Certificate.

MEPA regulations require a 30-day review and public comment period of the FEIR. PPNE has agreed to extend the review and comment period an additional 30 days.

2.0 Project Description

2.1 Existing Site Conditions

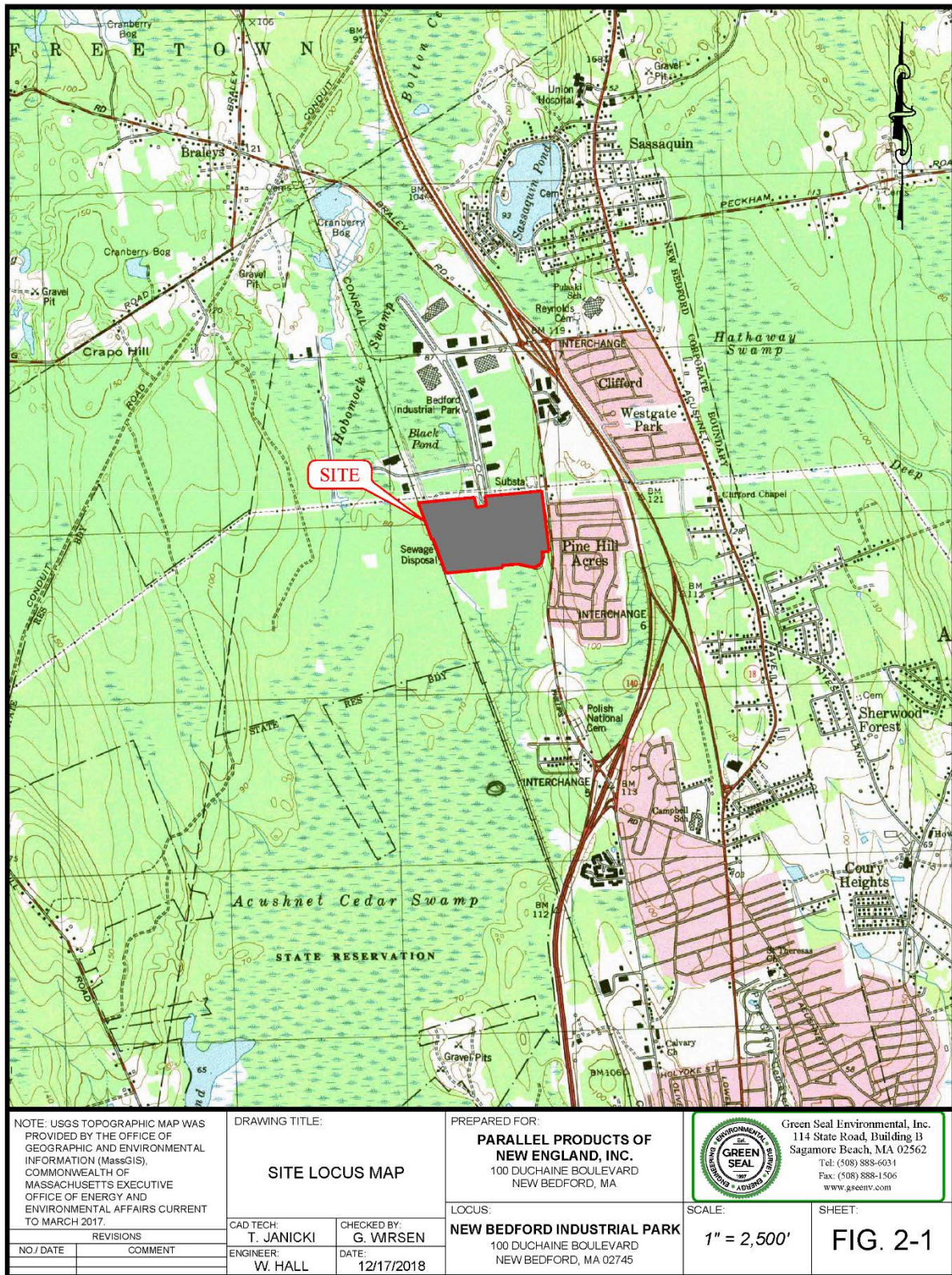
Affiliates of PPNE, SMRE 100 LLC own the properties located at 100 Duchaine Boulevard, New Bedford, MA. Prior to the purchase of the 100 Duchaine Boulevard site, PPNE operations were located at 969 Shawmut Avenue, New Bedford. Subsequent to the purchase of the site, PPNE has relocated its operations from Shawmut Avenue to 100 Duchaine Boulevard, New Bedford.

A full set of project plans as revised for the FEIR are included as Appendix 4. Selected sheets of this plan set that depict design features that are addressed as required by the DEIR Certificate are included throughout the FEIR when the specific design features are discussed in the text.

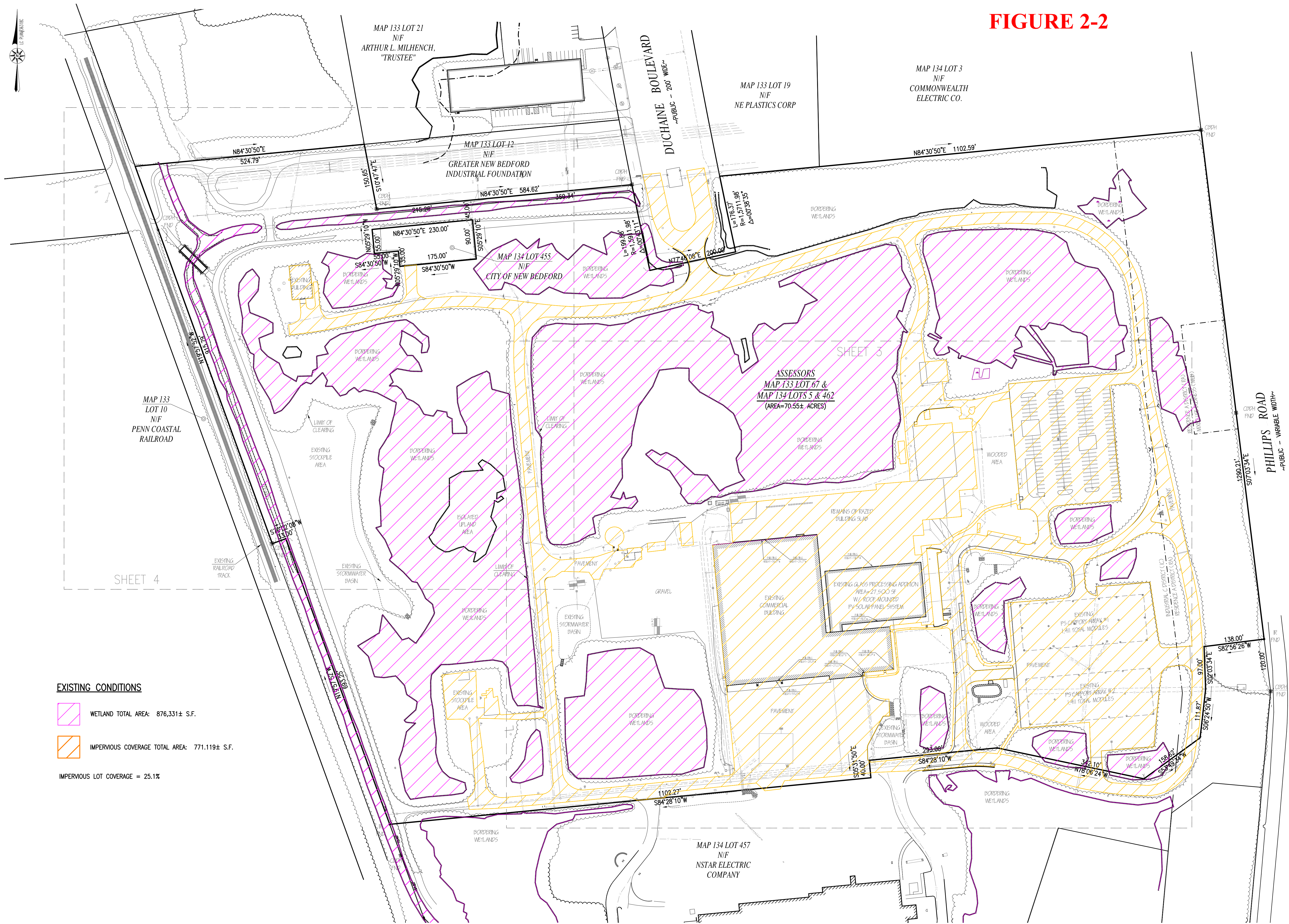
The proposed project (Phase 1 and Phase 2) is to be located at 100 Duchaine Boulevard, New Bedford. The site is an approximate 71-acre parcel identified by the New Bedford Tax Assessor as Lot 5 on Assessor's Plat 134. The site is zoned Industrial C. A locus plan of the site is included as **Figure 2-1**, presented on the proceeding page. The site is located within the New Bedford Business Park. The site was previously owned by Multilayer Coating Technologies, and before that by the Polaroid Corporation. The site was used by both previous owners to manufacture film. The site as developed by Polaroid included access roads, parking areas, stormwater management features and numerous buildings. An existing conditions plan of the site is included in **Figure 2-2**, **Figure 2-3**, and **Figure 2-4** (Sheets 2, 3 and 4 of Appendix 4 Site Plans) presented on the proceeding pages. The Site Plans have been revised to include dimensions of existing and proposed buildings and building heights as requested in the Secretaries DEIR Certificate. Additional plans have been added to the plan set to delineate wetland areas and impervious surfaces for the existing site. PPNE intends to utilize the existing infrastructure to the fullest extent possible in developing the proposed project.

The site, as purchased by PPNE affiliates included a 92,220 square foot building. A 27,500 square foot glass processing building has been constructed as part of the Phase 1 project development. With the construction of the glass processing building, the two buildings have a combined total of 119,720 square feet. Existing wetland areas and areas of impervious surfaces are shown on **Figure 2-2** (Sheet 2 of Appendix 4 Site Plans) presented on the proceeding pages). Under existing conditions, the site has 876,331 square feet of wetlands and 771,119 square feet of impervious surfaces. The total area of the site is 71 acres (3,092,760 square feet). Impervious lot coverage is approximately 25%.

Figure 2-1, Site Locus Map



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EXISTING CONDITIONS

- WETLAND TOTAL AREA: 876,331± S.F.
- IMPERVIOUS COVERAGE TOTAL AREA: 771,119± S.F.
- IMPERVIOUS LOT COVERAGE = 25.1%

EXISTING CONDITIONS

FIGURE 2-2

REVISIONS

1	9/13/19	CONSERVATION COMMENTS
2	10/15/19	PHASE I AND II
3	1/10/20	CONSERVATION COMMENTS
4	6/8/20	CONSERVATION COMMENTS
5	12/16/20	GREEN SEAL COMMENTS

SEAL

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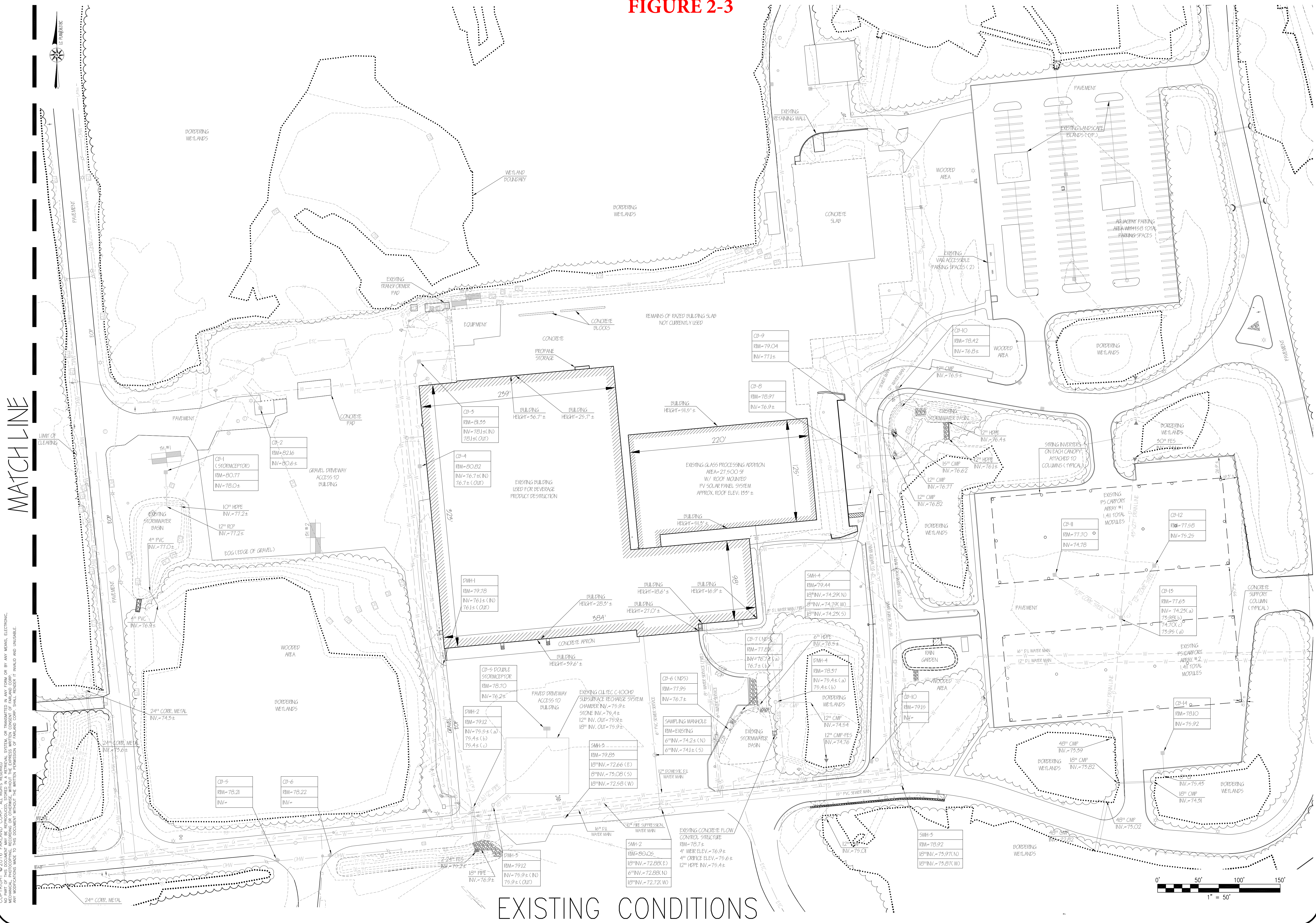
PROPOSED PROJECT DEVELOPMENT
— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR:
PARALLEL PRODUCTS OF NEW ENGLAND
401 INDUSTRY ROAD
LOUISVILLE, KY 40208

JULY 3, 2019
SCALE: 1"=100'
JOB NO. 15-500.2
LATEST REVISION:
DECEMBER 16, 2020

EXISTING CONDITIONS
OVERALL SITE
SHEET 2 OF 22

FIGURE 2-3



REVISIONS		
1	9/13/19	CONSERVATION COMMENTS
2	10/15/19	PHASE I AND II
3	1/10/20	CONSERVATION COMMENTS
4	6/8/20	CONSERVATION COMMENTS
5	12/16/20	GREEN SEAL COMMENTS



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DESIGNED BY: CAF

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PROPOSED PROJECT DEVELOPMENT

— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED _____
PARALLEL PRODUCTS OF NEW ENGLAND
FOR: 401 INDUSTRY ROAD
LOUISVILLE, KY 40208

JULY 3, 2019

SCALE: 1"=50'

B NO. 15-500.2

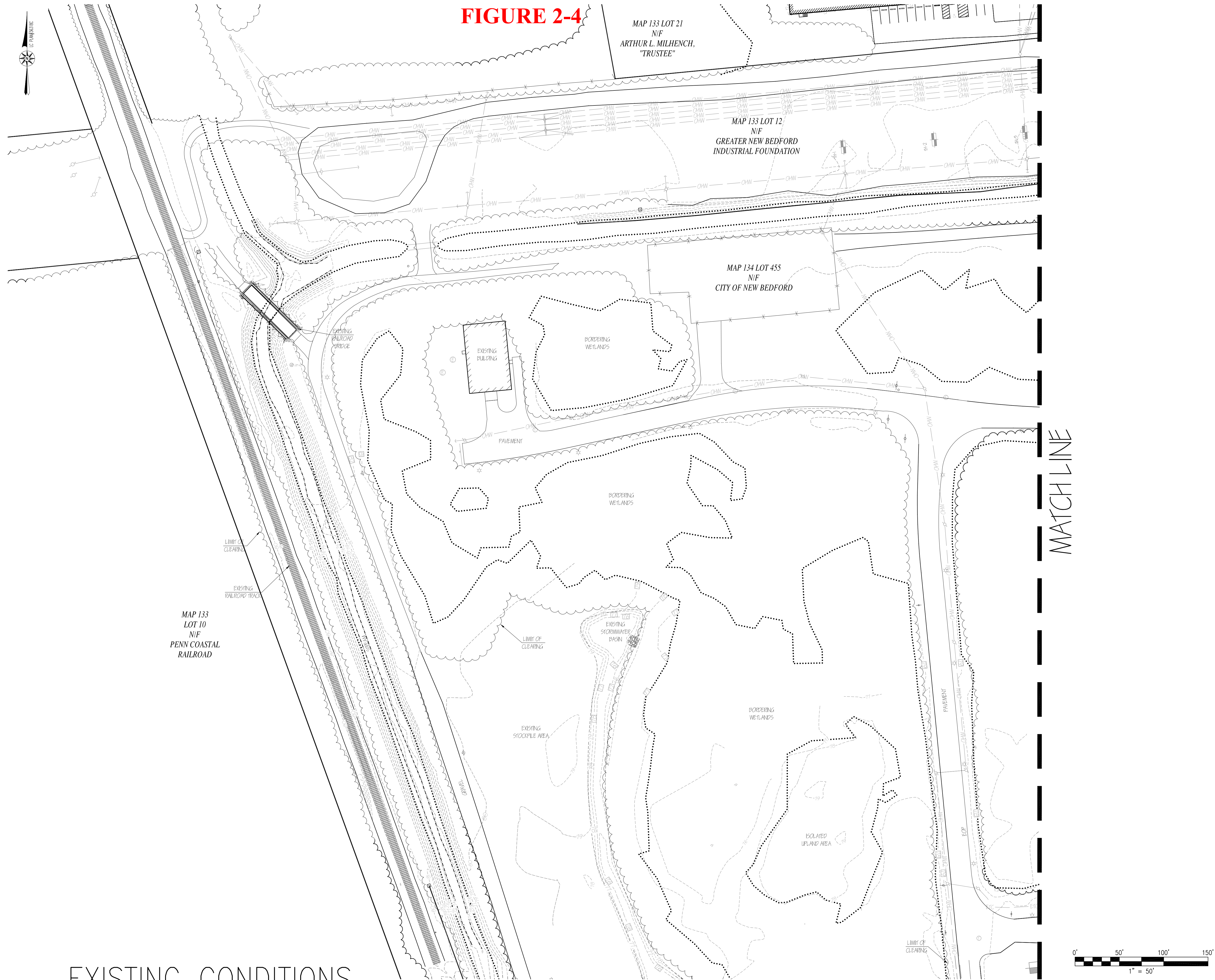
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TESTING CONDITIONS

SHEET 3 OF 22

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EXISTING CONDITIONS

FIGURE 2-4

REVISIONS

1	9/13/19	CONSERVATION COMMENTS
2	10/15/19	PHASE I AND II
3	1/10/20	CONSERVATION COMMENTS
4	6/8/20	CONSERVATION COMMENTS
5	12/16/20	GREEN SEAL COMMENTS

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PROPOSED PROJECT DEVELOPMENT

— 100 DUCHAINE BOULEVARD —

ASSESSORS MAP 133 LOT 67

ASSESSORS MAP 134 LOTS 5 & 462

NEW BEDFORD, MASSACHUSETTS

PREPARED FOR:
PARALLEL PRODUCTS OF NEW ENGLAND
401 INDUSTRY ROAD
LOUISVILLE, KY 40208

JULY 3, 2019
SCALE: 1"=50'
JOB NO. 15-500.2
LATEST REVISION: DECEMBER 16, 2020

EXISTING CONDITIONS CONT.

SHEET 4 OF 22

Since acquiring the site on March 10, 2017, PPNE has removed unused buildings and other unused site infrastructure remaining from the site's previous owners. Prior to submitting the EENF for the proposed project, PPNE installed 1.5 MW solar power on the site. Solar power has been installed on the roof of the 92,220 square foot existing building and on two canopy structures constructed in an existing parking lot as shown on the existing conditions plan, **Figure 2-2** (Sheet 2 of 22 of Appendix 4 Site Plans) as previously presented on page 10 of this report above.

Based on the historical use of the subject property, a Phase I Environmental Site Assessment and a Limited Subsurface Investigation (LSI) was conducted at the subject site. These investigations concluded that "Based on the results of this LSI, SAGE has not identified the presence of subsurface impacts at the site that would require reporting to MassDEP. As such, SAGE is of the opinion that further actions are not warranted at this time."

PPNE has relocated its existing ongoing operations located at 969 Shawmut Avenue, New Bedford to the 100 Duchaine Boulevard site. The relocated operations include receiving and processing containers (PET, glass and aluminum) under the Massachusetts bottle redemption program and processing full beverage containers that distributors want destroyed.

These operations are now located within existing buildings at the site.

2.2 Phase 1 Project

Phase 1 development consists of building a glass Beneficiation (processing) operation at the 100 Duchaine Boulevard site and the construction of approximately 1.9 MW of solar power energy generation (in addition to the 1.9 MW currently installed). The Phase 1 operation will recycle glass containers that are collected through the Massachusetts bottle deposit system. Phase 1 construction will include the construction of a rail sidetrack onto the site to service the glass processing operation. Bottles collected will be processed such that the glass can be reused to produce new glass containers and other glass products.

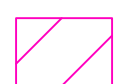

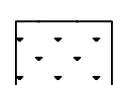
The Phase 1 project is depicted on **Figure 2-5, Figure 2-6 and Figure 2-7** (Sheets 5, 6 and 7 in Appendix 4 Site Plans) presented on the proceeding pages. Phase 1 land alterations are shown and tabulated on Sheet 5. Phase 1 construction adds 45,821 sf of buildings to the site (in addition to the glass building which is shown on the existing conditions plan, sheets 2 and 3).

Processing at the site will include crushing, sizing and separation of the glass by color. The glass cullet produced will subsequently be sold to glass manufacturers for the production of new products including glass containers. The closure of the Ardagh Group glass bottle plant in Milford, MA and the subsequent closing of the Strategic Materials Beneficiating plant in Franklin Massachusetts in 2018 has resulted in glass being disposed of in landfills, stored in various locations, and shipped to other glass bottle recycling facilities throughout the country.

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PHASE 1 LAND ALTERATIONS	
	AREA (± S.F.)
DISTURBED WETLANDS	4,910
WETLANDS REPLICATION	8,281
PROPOSED BUILDINGS	45,821
PROP. ROADWAY/PARKING	10,908
GREEN SPACE	1,365,610
WASTEWATER	N/A
WATER	N/A
LANDSCAPING	3,028
RAIL SPUR	96,810

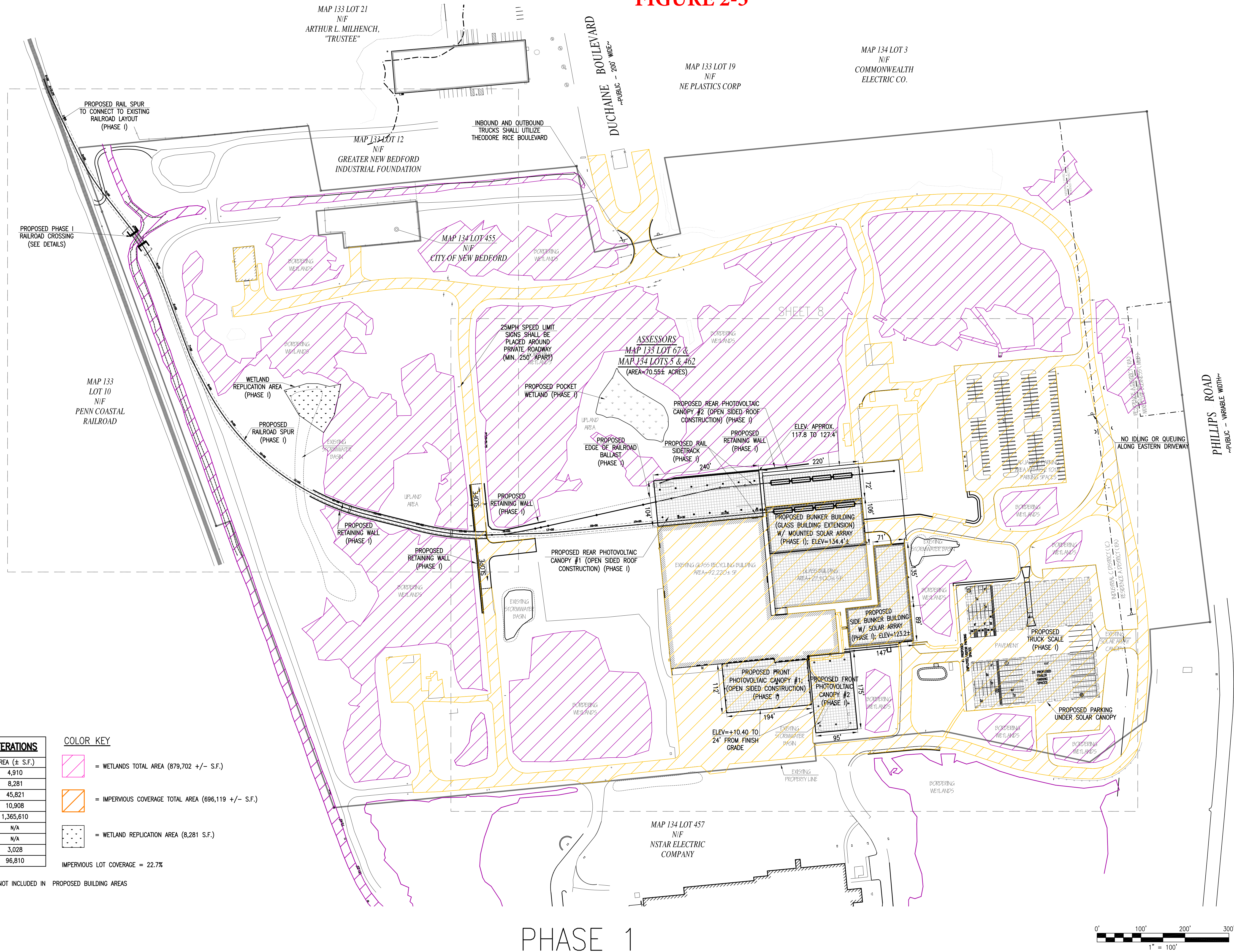
COLOR KEY

-  = WETLANDS TOTAL AREA (879,702 +/- S.F.)
-  = IMPERVIOUS COVERAGE TOTAL AREA (696,119 +/- S.F.)
-  = WETLAND REPLICATION AREA (8,281 S.F.)

IMPERVIOUS LOT COVERAGE = 22.7%

NOTE: SOLAR CANOPIES ARE NOT INCLUDED IN PROPOSED BUILDING AREAS

FIGURE 2-5



PHASE 1

REVISIONS

1	9/13/19	CONSERVATION COMMENTS
2	10/15/19	PHASE I AND II
3	1/10/20	CONSERVATION COMMENTS
4	6/8/20	CONSERVATION COMMENTS
5	12/16/20	GREEN SEAL COMMENTS



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P.508.717.3479
OFFICES IN:
• TAUNTON
• MARLBOROUGH
• WARWICK, RI

DRAWN BY: MJW

DESIGNED BY: CAF

CHECKED BY: CAF

PROPOSED PROJECT DEVELOPMENT

100 DUCHAIME BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR:
PARALLEL PRODUCTS OF NEW ENGLAND
401 INDUSTRY ROAD
LOUISVILLE, KY 40208

JULY 3, 2019

SCALE: 1"=100'

JOB NO. 15-500.2

LATEST REVISION:

DECEMBER 16, 2020

LAYOUT
OVERALL SITE - PHASE 1
SHEET 5 OF 22

[illegible]

DRAWN BY: MJW
DESIGNED BY: CAF
CHECKED BY: CAF

JULY 3, 2019
SCALE: 1"=50'
JOB NO. 15-500.2
LATEST REVISION: DECEMBER 16, 2020
LAYOUT - PHASE 1
SHEET 6 OF 22

FIGURE 2-7

MAP 133 LOT 21
N/F
ARTHUR L. MILHENCH,
"TRUSTEE"

MAP 133 LOT 12
N/F
GREATER NEW BEDFORD
INDUSTRIAL FOUNDATION

MAP 134 LOT 455
N/F
CITY OF NEW BEDFORD

PROPOSED RAIL SPUR
TO CONNECT TO EXISTING
RAILROAD LAYOUT
(PHASE I)

PROPOSED PHASE I
RAILROAD CROSSING
(SEE DETAILS)

MAP 133
LOT 10
N/F
PENN COASTAL
RAILROAD

WETLAND
REPLICATION AREA
(PHASE I)

PROPOSED
RAILROAD SPUR
(PHASE I)

EXISTING
STORMWATER
BASIN

RAILROAD CROSSING SIGNS
(FINAL LOCATION BY MASS COASTAL)

PROPOSED
RETAINING WALL
(PHASE I)

PROPOSED CAPE
COD BERM

PROPOSED
RETAINING WALL
(PHASE I)

PHASE 1

MATCH LINE

0' 50' 100' 150'

1" = 50'



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P.508.717.3479
OFFICES IN:
● TAUNTON
● MARLBOROUGH
● WARWICK, RI

CHECKED BY: CAF

PROPOSED PROJECT DEVELOPMENT

— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED BY: PARALLEL PRODUCTS OF NEW ENGLAND
FOR: 401 INDUSTRY ROAD
LOUISVILLE, KY 40208

LAYOUT - PHASE 1
CONT.
SHEET 7 OF 22

Changes to Phase 1 Project Design Since DEIR Submission

Subsequent to the submission of the DEIR the design of the proposed Glass Building Extension has been revised to allow rail cars to enter the Glass Building Extension such that rail cars can be loaded with glass inside the Glass Bunker Building. This design change was made to minimize noise impacts associated with loading rail cars with processed glass.

2.3 Phase 2 Project Development

Phase 2 of the project includes the construction of a municipal solid waste (MSW) processing/handling facility (MSW processing and handling building) and a biosolids processing facility. Note that post processed C&D residuals and bulky waste (Category 2 and 3 C&D) will be accepted for disposal (via rail) at the facility. Currently, significant quantities of MSW, C&D and biosolids are being trucked out of state for treatment and disposal. PPNE will construct a facility to collect and process this material in Massachusetts and then ship the residual waste out of state by rail for disposal. The infrastructure proposed will significantly increase transportation efficiencies and reduce greenhouse gas emissions.

The Phase 2 project development is shown on **Figure 2-8** and **Figure 2-9** (Sheets 8 and 9 of Appendix 4 Site Plans) presented on the proceeding pages. **Figure 2-8** (Sheet 8) depicts the land alteration resulting from Phase 2 construction. The proposed project (Phases 1 and 2 combined) will add an additional 162,827 square feet of buildings. Canopy structures built to support solar panels will occupy an additional 79,159 square feet. The site currently has 17.7 acres of impervious surfaces (25.1% lot coverage) consisting of access roads, buildings, parking lots, driveways and concrete slabs on grade in areas where buildings were previously demolished. Buildings planned for the proposed project are being constructed in areas of the site that are currently impervious when possible. Project construction will partially remove an existing concrete slab on grade in order to construct the rail sidetrack, converting surfaces that are currently impervious to pervious surfaces. The net impact of the proposed project (Phase 1 and Phase 2 combined) is an increase in impervious surfaces of 0.33 acres. This will increase the impervious surface lot coverage to 25.6% from 25.1%. Project construction will include wetlands replication in areas that are currently upland areas as approved by the New Bedford Conservation Commission. As a result, the area of wetlands on site will be increased by 3,371 square feet. PPNE will provide a financial assurance mechanism (FAM) to MassDEP prior to the receipt of an Authorization to Operate permit from MassDEP. The amount of the FAM will have an amount sufficient to clean up the site and remove any solid waste on site in the event of a default by PPNE.

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PHASE 2 LAND ALTERATIONS	
	AREA (± S.F.)
DISTURBED WETLANDS	0
PROPOSED WETLANDS	0
PROPOSED BUILDINGS	90,032
PROP. ROADWAY/PARKING	29,400
GREEN SPACE	1,246,178
WASTEWATER	N/A
WATER	N/A
LANDSCAPING	0
RAIL SPUR	0

COLOR KEY

 = WETLANDS TOTAL AREA (879,702 +/- S.F.)

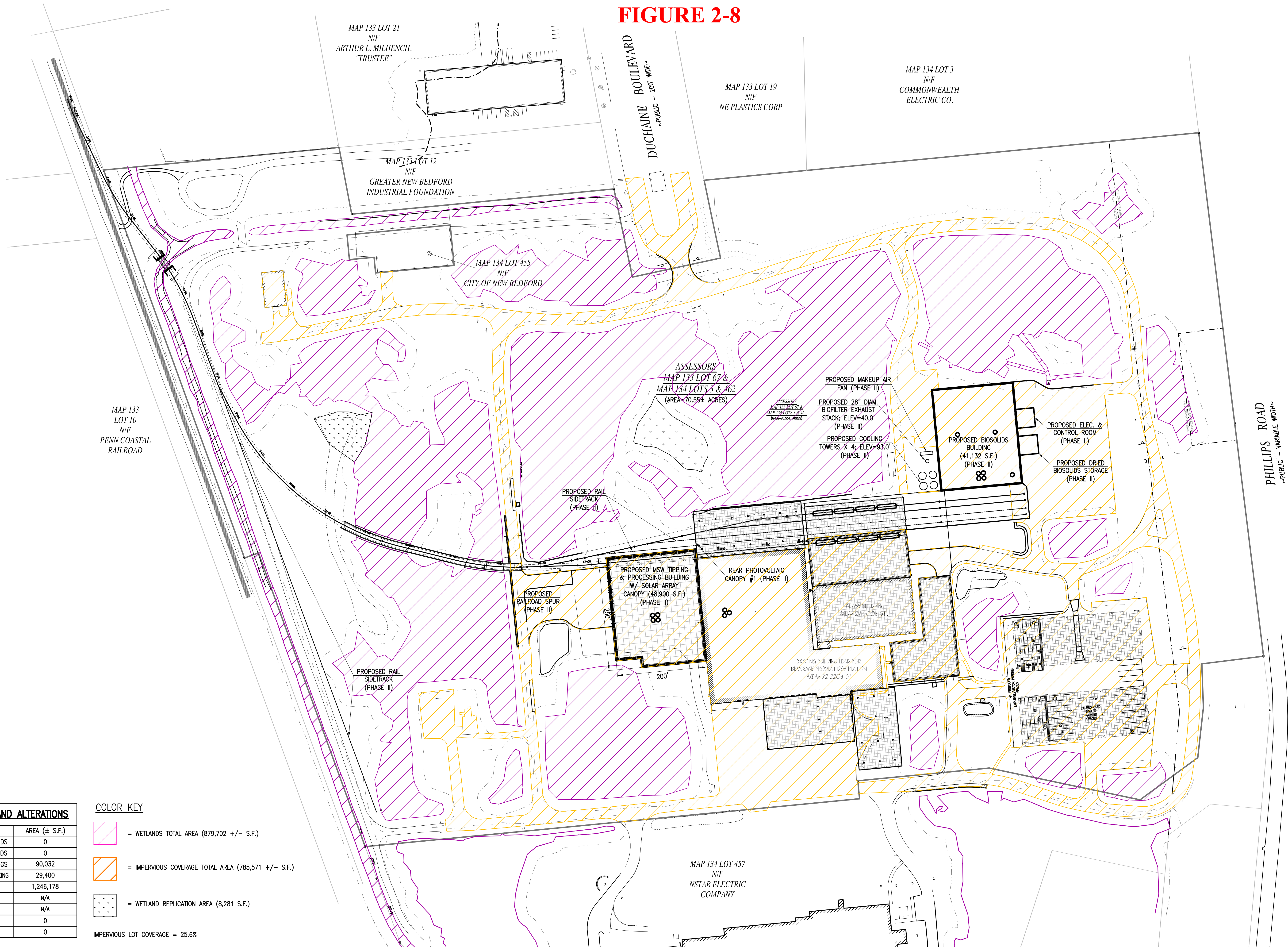
 = IMPERVIOUS COVERAGE TOTAL AREA (785,571 +/- S.F.)

 = WETLAND REPLICATION AREA (8,281 S.F.)

IMPERVIOUS LOT COVERAGE = 25.6%

NOTE: SOLAR CANOPIES ARE NOT INCLUDED IN PROPOSED BUILDING AREAS

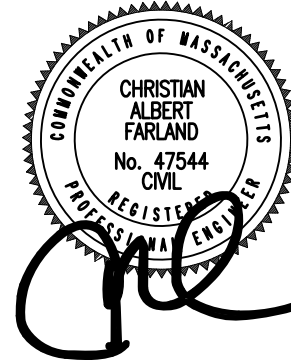
FIGURE 2-8



PHASE 1 & 2

REVISIONS

1	9/13/19	CONSERVATION COMMENTS
2	10/15/19	PHASE I AND II
3	1/10/20	CONSERVATION COMMENTS
4	6/8/20	CONSERVATION COMMENTS
5	12/16/20	GREEN SEAL COMMENTS



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DRAWN BY: MJW

DESIGNED BY: CAF

CHECKED BY: CAF

PROPOSED PROJECT DEVELOPMENT

— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED
FOR:
PARALLEL PRODUCTS OF NEW ENGLAND
401 INDUSTRY ROAD
LOUISVILLE, KY 40208

JULY 3, 2019

SCALE: 1"=100'

JOB NO. 15-500.2

LATEST REVISION:

DECEMBER 16, 2020

LAYOUT - PHASE 1 & 2
OVERALL SITE
SHEET 8 OF 22

ASSESSORS
MAP 133 LOT 67 &
MAP 134 LOTS 5 & 462
(AREA=70.55± ACRES)



0' 50' 100' 150'

1" = 50'

SHEET 9 OF 22

2.3.1 MSW Processing/Handling Facility

Phase 2 construction will include the construction of a MSW processing/handling facility. Phase 2 is expected to be constructed approximately two years after the Phase 1 construction. The project is being constructed in two phases due the difference in the expected duration of obtaining the required permits. The Phase 2 construction is depicted on **Figures 2-8 and 2-9 as previously shown above on pages 18 and 19 of this report.** (Appendix 4 Site Plans).

A new waste handling building will be constructed. The building is expected to be approximately 48,900 square feet in gross floor area and will connect with the existing site building. The tipping building will be designed to allow waste delivery trucks to drive into the building to dump/tip their loads of waste material for subsequent processing, handling, and transfer for off-site disposal. After tipping, front end loaders will stage the material for subsequent processing/handling. If the MSW is delivered baled, an excavator with a grapple will unload the delivery truck and place the bale on the tipping building floor in the rail car loading area. These bales will then be placed in rail cars for off-site shipment/disposal.

The existing 92,200 square foot building on site adjacent to the proposed tipping building will be used for the processing of MSW to extract recyclable commodities prior to disposal. The existing building will be modified as required to house the MSW processing equipment used to extract various recyclable material from MSW. Specifications for the MSW processing equipment are included in Appendix 4. The existing building will also include a baler to bale and shrink wrap (or bag) MSW after processing. Baled and shrink wrapped (or bagged) MSW and Category 2 and 3 C&D will be loaded in rail cars for shipment to disposal sites. The facility will not process C&D on-site.

The PPNE facility will receive MSW that has had recyclable materials (e.g. cans, bottles, glass containers, etc.) removed by the waste generator. This is material, such as curbside household MSW, that currently goes to combustion facilities or to landfills for disposal. The processing equipment to be utilized by PPNE will extract additional recyclable materials from the MSW that was not removed by the waste generator. On-site processing proposed by PPNE will allow for further extraction of recyclable materials in addition to traditional recycling/separation activities that are performed by the waste generator. This is different from a typical “dirty MRF” which accepts MSW without the removal of recyclable material and then removes recyclables from the MSW.

The facility will accept both baled MSW and MSW delivered loose in transfer trailers and packer trucks. Baled MSW will be delivered to the facility from other transfer stations that have baled MSW to meet existing railroad requirements for shipping MSW in rail cars. Baled MSW accepted at the facility will be loaded into rail cars for shipment to out-of-state disposal sites such as a landfill or waste to energy facility. Waste received at the facility baled will not be processed to extract additional recyclable material prior to loading into rail cars. The facility will also accept

C&D defined as Category 2 (C&D processing residuals) and Category 3 waste (bulky waste). These materials are generally material that have little or no recyclable value and will be loaded into railcars and sent off-site for subsequent disposal.

In addition to baled MSW, the facility will also accept loose MSW delivered in transfer trailers and packer trucks. Transfer trailers will consist of 100 cy live floor trailers. The average 100 cy transfer trailer capacity is 28 tons. Transfer trailers will originate primarily from transfer regional stations. Packer trucks such as the trucks that provide curbside pickup of MSW will also deliver MSW to the facility. The average capacity of a packer trucks is 9 tons.

Transfer trailers arriving at the facility will be weighed on a truck scale at the facility and then the truck will back into the tipping building and will discharge the waste onto the interior tipping floor. It is expected that Category 2 and 3 C&D waste will be delivered in 100 cy live floor trailers and no roll off container delivery is anticipated.

Non baled MSW received by the facility will be processed to extract recyclable materials. Processing will consist of a processing line that includes both mechanized separation equipment and a manual picking line. Materials extracted will include metals, cardboard, aluminum, wood, glass, PET, paper and plastic based on market conditions. The facility will include two processing lines with each line capable of processing 40 tons per hour of MSW. The processing lines will operate two to three shifts per day depending on the inbound volume accepted. The processing line flow diagram, plans and equipment specifications are included in Appendix 5. The processing line is anticipated to extract +/- 20%, recyclables from the MSW. After the recycled material has been extracted, the remaining waste will be baled and shrink wrapped/bagged for subsequent transport to a disposal facility. The primary means of transport for disposal will be by rail. Trucks can also be used to transport waste, if necessary. Recyclable materials extracted from MSW will be sent to recycling markets by either rail or truck depending upon market conditions and outlet locations.

The facility may also accept C&D residual waste and bulky waste. This waste is classified as Category 2 and Category 3 C&D waste by MassDEP. Category 2 waste is C&D waste that has been processed by a C&D processing facility and Category 3 is bulky waste that has little or no recyclable value. The processing facilities shipping them material to PPNE will have already removed waste ban material and other recyclable material from the C&D material as deemed appropriate. The Category 2 or Category 3 material accepted at the facility will be used as cover for baled MSW in the rail cars. It is expected that Category 2 and Category 3 C&D waste will be delivered to the site in live floor trailers weighing approximately 28 tons per load. This material will be received within the proposed tipping building.

Baled and shrink wrapped MSW will be loaded into gondola rail cars for shipment to disposal sites. PPNE will work with CSX to develop procedures for loading rail cars with baled MSW. It is expected that baled MSW will be loaded with Category 2 C&D residuals. Additionally, PPNE

may elect to ship MSW in watertight intermodal containers loaded on flat bed rail cars. CSX currently transports baled MSW in gondola cars and non-baled MSW in watertight intermodal containers on flat bed rail cars.

Each rail car can carry up to 90 tons of solid waste for disposal. It is expected that at full capacity the facility will produce 1,300 tons per day of residual waste that will be sent for disposal. In addition, up to 50 tons per day of dried biosolids will be produced and sent for disposal combined with the MSW. This will be sent for disposal in, on average, 15 rail cars each day. The rail sidetrack will also be used for transportation of processed glass to recycling markets. Up to 250 tons per day of glass will be shipped by rail from the site (3 rail cars).

The rail sidetrack will be modified in Phase 2 to allow the storage of more rail cars than can be accommodated by the sidetrack construction in Phase 1. The plans included in Appendix 4 (Sheet 5,6 8 & 9) and as previously appended to this section depict the extent of the rail sidetrack construction for both Phase 1 and Phase 2. With the completion of track construction in Phase 2, the sidetrack will allow for the receipt of 18 empty rail cars and the removal of 18 full rail cars. The site will be serviced by Mass Coastal Railroad. PPNE will purchase an electric rail car mover for the movement of rail cars on site. Rail car movement is discussed in further detail in Section 4.0 Solid Waste.

The Facility will be developed using state-of-the-art Best Management Practices (BMPs) to minimize potential impacts to the Site and surrounding environment. A partial list of BMPs that will be incorporated into the Facility are as follows:

- All tipping, handling, and loading will be performed within a fully enclosed processing and handling building.
- The building floor is designed as impervious concrete that will prevent any potential contamination of groundwater, stormwater or the surrounding environment. Any liquids released from the waste will be collected in a floor drain system. The liquid collected in this system will be gravity fed to a wastewater holding tank, which will be periodically trucked off site for disposal at a wastewater treatment plant. Sewer is available on-site and should this discharge be allowed to enter the New Bedford Sanitary Sewer, permits will be sought through the City.
- Use of a fine atomized misting system within the MSW Transfer Building and processing building will effectively control fugitive dust and odor in the building.
- Regular daily cleanup and sweeping will occur on the external paved surfaces. Environmental Monitoring and Operation and Maintenance Plans will be developed and staff will be trained on these operational procedures.

2.3.2 Biosolids Processing

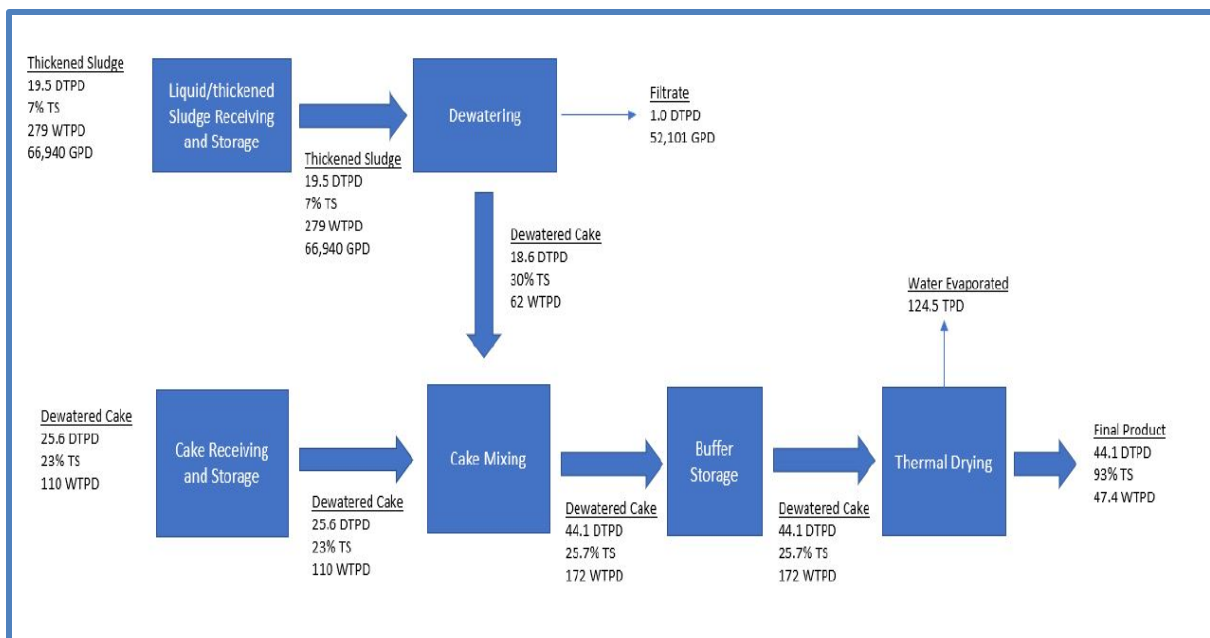
In Phase 2, the biosolids drying facility will be constructed. The facility will accept and process up to a maximum of 50 dry tons per day of biosolids. The biosolids will originate at various municipal wastewater treatment plants. The biosolids will be delivered to the facility by truck. The biosolids processing will be performed within a new building proposed to be constructed on site. The building is expected to be approximately 41,132 sf. The proposed biosolids processing facility is depicted in Figures 2-8 and 2-9, as previously presented above.

The facility will include the following five major processes:

- Liquid/thickened Sludge Receiving and Storage System
- Dewatering System
- Dewatered Cake Receiving and Storage System
- Cake Mixing System
- Drying System

Appendix 6 (Figure 2-10 presented below) includes a Biosolids Process Flow diagram, Preliminary Basis of Design and Preliminary Equipment Sizing. The facility will accept dewatered biosolids cake with a solids content of between 15% and 30%. The facility will also accept thickened wet slurry biosolids with a solids content of between 5% and 10%. Wet slurry biosolids received by the facility will be stored in tanks on site prior to processing. Delivery tanker trucks will connect to piping outside of the processing building in the area labeled truck bay. Once connected to the piping, the tanker trucks will discharge the liquid sludge to the facility storage tanks.

Figure 2-10
Biosolids Process Flow Diagram



Biosolids cake will be delivered in covered dump trucks. The delivery trucks will pull into the biosolids processing building and then dump loads in the receiving area of the facility.

Liquid biosolids storage tanks will be sized to contain three days of deliveries. Appendix 6 includes a process flow diagram and mass balance for the proposed facility when operated at 45 dry tons per day. The maximum daily processing capability will be 50 dry tons per day. The ratio of thickened wet slurry biosolids to dewatered cake will vary. The process flow diagram identifies the expected ratio of tonnages of wet slurry biosolids to tonnages of dewatered cake biosolids. The actual breakdown of wet slurry and dewatered cake will vary depending on the material being produced by wastewater treatment plants that elect to utilize the proposed facility. PPNE may elect to construct a facility to process less than 50 dry tons per day. This determination will be based on market conditions at the time of facility construction.

Biosolids delivered as a thickened wet slurry will be dewatered by centrifuge or screw press to produce biosolids cake with an expected solids content of 30%. The dewatering system will be designed to process 20 dry tons per day of wet slurry. Wastewater extracted in the dewatering process will be directed to the New Bedford sewer system. The expected discharge to the New Bedford sewer system from the dewatering process is expected to be 52,000 gallons per day. The dewatering system will be designed to have a solids capture rate of 95%. The dewatered slurry biosolids cake and the biosolids cake delivered to the facility will then be blended together.

The blended cake will then be directed to a thermal dryer that utilizes a natural gas burner. The biosolids will be dried to approximately 90% solids. Moisture evaporated from the biosolids during the drying process will be condensed with the condensate water and discharged to the New Bedford sewer system. It is expected that the daily discharge of condensate water to the sewer system will be 30,000 gallons per day. Drying will reduce the weight and volume of the biosolids. The dried biosolids will be sent for disposal in rail cars or beneficially used for purposes such as alternative daily landfill cover if the required Beneficial Use Determination permits are obtained. The facility will have the capability of storing seven days of dried sludge production.

The facility will include four dryers configured in a parallel configuration. Three dryers will normally be in use with the fourth as a standby in the event one dryer becomes unavailable. If all dryers become unavailable, biosolids will be stored on site in the liquid storage tanks and cake will be stored in the receiving area of the processing building. Should the biosolids storage areas become filled to capacity, the facility will stop accepting biosolids.

Belt dryers are assumed for preliminary design and will be utilized to produce dried biosolids. The dryer and facilities to house drying process equipment will be designed with built-in safety features to address potential fire risks associated with the following:

- Potential for fire within the dryer during drying operation
- Potential for fire resulting from dust generated from the dried material
- Potential for fire associated with storage of dried biosolids in silos

The National Fire Protection Association (NFPA) 820, Standard for Fire Protection in Wastewater Treatment and Collection Facilities, provides guidance for fire protection and electrical classification for wastewater facilities. In accordance with NFPA 820, Table 6.2.2(b), the drying facilities will be equipped with the following:

- Fire protection measures including hydrant protection, fire alarm system, and a fire suppression system (automatic sprinkler, water spray, foam, gaseous, or dry chemical).
- Fire protection measures including hydrant protection and fire alarm system for dried biosolids storage areas.

In addition to the NFPA 820 guidelines for drying facilities summarized above, the drying equipment will be equipped with inherent safety protection measures including heater controls and feedback loops, drying chamber temperature controls and feedback loops, process air temperature controls and feedback loops, and a fire suppression system. These systems and controls provide protection against fire hazard risks due to high temperature and dust:

- The dryer belt conveyor will be designed to minimize pass-through of dust in the process air stream. Finer dust particles that pass through the belt are either carried to the condenser's filter media and removed, or remain in the chamber where wash-out system will routinely clean the system with spray nozzles.
- Various sections of the drying equipment that convey dried biosolids and recirculating dryer gas for drying will be equipped with thermocouples. Chamber temperature will be monitored continuously, and a PLC control system will utilize this data to regulate the amount of heat added to the system. For example, a high temperature may indicate that insufficient product is being diverted through the dryer, and the heat supplied may be reduced.
- The dryer will be equipped with a quench spray system. If triggered (at a high temperature set point), the quench system will activate and saturate the dryer as an immediate safety measure.
- The dryer exhaust gas will be recirculated and reused to ensure an oxygen-deficient atmosphere in the dryer.

The dried biosolids product will be cooled prior to storage to reduce the risk of auto-oxidation. Fire hazards during dried biosolids storage in silos will be addressed using inert gas (nitrogen)

blanketing systems to maintain an oxygen deficient environment in the silo. In addition, the silo will be equipped with thermal sensors or carbon monoxide sensors to detect any potential rise in temperature.

The facility will be developed using state-of-the-art Best Management Practices (BMPs) to minimize potential impacts to the Site and surrounding environment. A partial list of BMPs that will be incorporated into the facility are as follows:

- All handling and processing of biosolids will be within an enclosed building
- Foul air associated with the sludge and cake storage, transfer, dewatering and drying processes will be collected under negative pressure and transferred to a biofilter for odor control. Foul air will be collected from the following plant areas:
 1. Biosolids Receiving Tanks
 2. Cake Receiving Bins
 3. Cake Screw Conveyors
 4. Dewatering Screw Conveyors
 5. Cake Mixing Bin
 6. Dewatered Cake Belt Conveyor
 7. Dried Biosolids Storage Silo
 8. Exhaust from Thermal Dryers
 9. Filtrate/Condensate Wet Well Cake
- The low odor, high volume process room air will be provided with an ionization system for odor control. Foul air from the following areas will be treated with the ionization odor control system:
 1. Cake Receiving Room
 2. Dewatering Process Room
 3. Cake Mixing Room
 4. Dryer Process Room

2.3.3 Changes to Phase 2 Project Design Since DEIR Submission

- The biosolids building has been increased in size such that all truck backing up to deliver biosolids will be within an enclosed building. This change was made to reduce noise impacts from backup alarms.
- A noise wall has been added to the project at the east end of the proposed rail spur to minimize noise impacts from rail operations.

2.4 Water/Wastewater

2.4.1 Introduction

The site is currently connected to the New Bedford water and sewer system. These connections were completed by the previous site owner(s). PPNE has recently been upgrading and rehabilitating the onsite infrastructure for the site, including the site sewer system. PPNE has been coordinating the project needs for water and sewer with the City of New Bedford. PPNE intends to utilize City water and wastewater for the proposed project. PPNE will pay the City for the use of these services.

2.4.2 Water Use

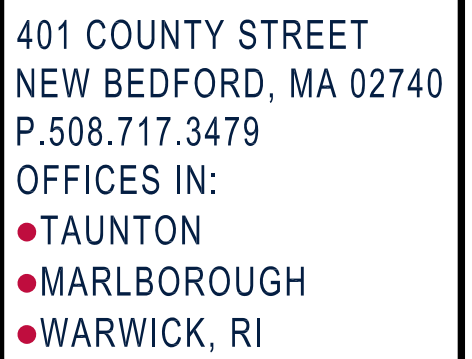
PPNE expects to have 150 employees at the site. This includes the relocation of 75 employees recently relocated to 100 Duchaine Boulevard from PPNE's former location at 969 Shawmut Avenue. Water use for employees is estimated at 15 gallons per day per employee based on 310 CMR 15.00 (2,250 gpd). Water will also be required for the misting system proposed for the MSW tipping building. Water use for the misting system is estimated to be 10 gpm or 14,400 gpd. Hose bibs will be provided in the tipping building, MSW processing building and in the biosolids processing building to be used for washdown as part of facility cleanup and maintenance activities. Washdown water use is estimated at 3,000 gallons per day. Makeup water will also be required for the cooling towers to be utilized by the biosolids drying process. The makeup water will replace water loss through evaporation and tower blowdown. Cooling tower makeup is expected to be 50,500 gpd. Total water use is expected to be 70,150 gpd. The water line modifications to tie into the proposed project facilities are shown on the Utilities Plan included in Figure 2-11 (Sheet 12, Appendix 4 Site Plans) as shown below on the proceeding page.

FIGURE 2-11

**ASSESSORS
MAP 133 LOT 67 &
MAP 134 LOTS 5 & 462
(AREA=70.55± ACRES)**

PHASE 1 & 2

COMMONWEALTH OF MASSACHUSETTS
CHRISTIAN ALBERT FARLAND
No. 47544
CIVIL



PROPOSED PROJECT DEVELOPMENT

— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED PARALLEL PRODUCTS OF NEW ENGLAND
FOR: 401 INDUSTRY ROAD
LOUISVILLE, KY 40208

GRADING, DRAINAGE &
UTILITIES - PHASE 1 & 2
SHEET 12 OF 22

2.5 Wastewater Use

Wastewater from employee sanitary and washing use is estimated at 15 gpd per employee per 310 CMR 15.00 (2,250 gpd). In addition to the employee generated wastewater, the biosolids processing facility will generate wastewater. The process flow diagram in Appendix 6 shows the various processes and the water use associated with biosolids processing. Dewatering of liquid biosolids by belt press or screw press will generate an estimated volume of 52,000 gallons per day of wastewater. Drying biosolids will create water vapor which will then be condensed to water which must be disposed as wastewater. The drying process will create an estimated daily wastewater volume of 53,000 gpd. The cooling towers required by the biosolids processing will have blowdown water that will need to be disposed as wastewater. Blowdown water is expected to be 9,500 gpd. Total wastewater to the City system is expected to be 113,750 gpd at maximum capacity.

The City sewer system will be used for disposal of wastewater generated by the facility. The existing site buildings are presently connected to the City sewer system. The proposed structures will also be connected to the City sewer system. Modifications to the wastewater piping will be constructed to connect the proposed buildings to the City sewer system. The proposed modifications to the site wastewater piping is shown on the Utilities Plan included within Figure 2-11, (Sheet 2 of 12, Appendix 4, Site Plans) previously shown above on page 28 of this report.

The wastewater collection system on site directs wastewater to the Industrial Park Pumping Station located in the northwest corner of the site. The pumping station is owned by the City of New Bedford and is located on a City owned parcel that is located within the property line of the 100 Duchaine Boulevard parcel. CDM Smith completed an assessment of the capacity of the Industrial Park Pumping Station on January 23, 2020. This assessment determined that the Industrial Park Pumping Station has the capacity to handle the additional wastewater generated by the proposed PPNE project. The CDM Smith assessment is included as Appendix 7.

The CDM Smith report used wastewater flowrates for the proposed project that were included in the EENF. The wastewater flowrates from the proposed project were revised in the DEIR. The wastewater flowrates from the facility presented in the DEIR are greater than the flowrates indicated in the EENF. As indicated above, the daily wastewater flow from the proposed facility is expected to be 113,750 gpd (0.11 MGD). The CDM Smith study assumed a daily wastewater flowrate from the proposed facility of 82,000 gpd (0.08 MGD). CDM Smith has assumed in their report that the peak hourly flowrate for the proposed project is twice the average daily flowrate. The following table (Table 2.1) shows the peak hourly flowrate for the proposed PPNE project, the existing peak hourly flowrate at the pump station and required pump station capacity including the PPNE project.

Table 2.1

Pump Station Flowrates	Ave Daily Flow (mgd)	Peak Hourly Flow (mgd)
Existing Conditions	1.23	3.74
Flow increase from PPNE project	0.11	0.22
Flow decrease due to I/I repairs	0.46	0.46
Flow to pump station with PPNE project	0.88	3.5
Existing pump station capacity	3.94	3.94
Increase in capacity from pump repairs	0.74	0.74
Pump station excess capacity	3.8	1.18

As summarized in the CDM Smith memorandum, MassDEP regulations at 314 CMR 12(2)(d) states:

“All sewer system authorities shall include provisions in their I/I plan for mitigating impacts from any new connections or extensions where the proposed flows exceed 15,000 gallons per day. Such mitigation shall require that four gallons of infiltration and/or inflow be removed for each gallon of new flow to be generated by the new sewer connection or extension, unless otherwise approved by the Department.”

Parallel Products will meet the 4:1 flow removal requirement prior to the startup of the proposed biosolids drying project. CDM estimates the current I/I entering the Industrial Park Pumping Station is 1.01 mgd (1,010,000 gpd). PPNE required I/I mitigation of four times the estimated PPNE wastewater flowrate of 113,750 gpd (0.11 MGD) equals 455,000 gpd (0.46 MGD).

The pump station contains three pumps. In its present condition, pump no. 2 is inoperable and pump no. 3 operates at 77% of the pump’s capacity. CDM Smith recommends that pump no. 3 be replaced or rebuilt to restore the pumps design capability. In addition, CDM Smith recommend that pump no. 2 be placed back in service as a standby pump in the event that either pump 1 or pump 3 fail.

PPNE commits to repair the sewer lines required to reduce inflow and infiltration by 0.46 MGD. PPNE also commits to the rebuild or replacement of pumps 2 and 3 in the City pump station at 100 Duchaine Boulevard.

The sewer system capacity existing and after the proposed project construction along with mitigation measures to be provided by PPNE are summarized in the following tables. CDM Smith has determined that the existing peak hourly flow to the City pump station at 100 Duchaine Boulevard is 3.74 mgd and that the pumping capacity at the pump station is currently 3.94 mgd. The pump station currently has an excess capacity of 0.20 mgd.

The PPNE project will increase flows to the pump station, but will decrease inflow and infiltration and increase pump capacity as indicated in Table 2.1 above.

A summary of the impacts to the City's wastewater sewer and treatment plant is summarized below:

- After completion of the PPNE project and the repairs to which PPNE is committed, excess capacity of the pump station will increase from the existing condition of 0.20 mgd in excess capacity to 1.18 mgd in excess capacity for the peak hourly flow. For the average daily flow, excess capacity will increase from 2.628 mgd to 3.8 mgd
- After completion of the PPNE project and the repairs to which PPNE is committed, the average daily flow to the sewer system and wastewater treatment plant will be reduced from 1.23 mgd to 0.88 mgd. For the peak hourly flow, the flowrate will be reduced from 3.74 mgd to 3.5 mgd.
- A standby pump in the pump station will be repaired to provide redundancy in pumping capacity at the pump station
- Repairs of the sewer lines entering the pump station will be repaired/replaced to reduce inflow and infiltration. This will eliminate flows to the pump station and to the wastewater treatment plant by 0.46 MGD. This is wastewater which needs to be treated but provides no revenue to the City.
- PPNE will pay the City for the treatment of all flows to the sewer system from the existing and proposed project.

2.6 Wetlands

2.6.1 Introduction

The proposed project development design has utilized existing infrastructure to the maximum extent possible. The project will use existing access roads and paved surfaces and will use existing buildings to the extent feasible. The project development includes the construction of a new rail sidetrack to service the site. Construction of the rail sidetrack will impact wetlands on site. The rail sidetrack will be constructed in Phase 1 of the project and expanded in Phase 2.

The "Final Record of Decision of the Secretary of the EOEEA" dated May 15, 2019 allowed the Phase 1 project to proceed prior to the completion of the Environmental Impact Report. Phase 1 engineering, permitting and construction are currently in progress.

2.6.2 Phase 1 Wetlands Impacts

The proposed rail sidetrack must cross a drainage swale and a bordering vegetated wetland to access the site. The variations on rail alignment are limited by the design restrictions (radius of curves, slope, etc.) associated with rail development. The design of the rail sidetrack has been designed to minimize the impacts to wetlands to the greatest extent feasible.

At the crossing of the drainage swale, the crossing point selected is an area where the track is approximately perpendicular to the swale, minimizing the area of the swale and riverfront area that is impacted. Also, the crossing point selected is the location of an existing abandoned bridge over the swale. The existing bridge will be removed as part of the development activities.

Alternatives evaluated included a three-sided box culvert, a four-sided box culvert and a bridge. Initially, PPNE selected a three-sided box culvert as the preferred alternative for the swale crossing. The box culvert alternative was presented in the Notice of Intent filed with the Conservation Commission. During review of the Notice of Intent, the Conservation Commission preferred a bridge for the swale crossing. A preference for a bridge crossing was also included in a comment letter from K P Law on behalf of the City of New Bedford (Letter no. 81). The project plans have been revised to include a bridge for this crossing.

The project is not located within Estimated Habitats of Rare Wildlife or Priority Habitat. The EENF included correspondence from the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife stating that the project is not located within Estimated Habitats of Rare Wildlife or Priority Habitats and therefore is not subject to compliance with the rare wildlife species section of the Massachusetts Wetlands Protection Act.

The route chosen for the rail sidetrack was selected to minimize the impact to bordering vegetated wetlands. The size of the area impacted was further minimized by using block retaining walls on each side of the track to minimize the width of the sidetrack cross section, thereby minimizing the extent of wetland impacts.

PPNE filed a Notice of Intent, dated October 2, 2019, with the New Bedford Conservation Commission. The Commission issued an Order of Conditions on July 30, 2020. The Order of Conditions is included as Appendix 8. This Order of Conditions is applicable to all construction proposed in Phase 1 and includes a stormwater management plan that complies with the Massachusetts Stormwater Policy. .

2.6.3 Phase 2 Wetlands Impacts

Phase 2 construction will not impact any wetlands. A Notice of Intent will be filed with the New Bedford Conservation Commission as some construction activity will be within the buffer zone.

2.6.4 Acushnet Cedar Swamp

The 100 Duchaine Boulevard site borders the Acushnet Cedar Swamp State Reservation to the west of the site. The site is separated from the Acushnet Cedar Swamp by the existing rail line.

Stormwater management is being designed in compliance with the Massachusetts Stormwater Standards. This management system will control the peak runoff, promote infiltration of stormwater and will treat stormwater to improve water quality. Stormwater discharged from the stormwater management system is directed to a drainage swale along the western property line.

This drainage swale is not hydraulically connected to the Acushnet Cedar Swamp near the proposed project. The drainage swale runs parallel to the rail line for several miles, collecting stormwater from other parcels, before draining to the Acushnet Cedar Swamp.

2.7 Project Alternatives

The proposed project is being developed to fill a need for in the Commonwealth for processing and economical transfer of generated solid waste materials to out of state disposal sites. Massachusetts solid waste disposal is currently impacted by the closures of in state landfills and the fact that no new landfills are being constructed. The Fall River landfill has recently closed, the Bourne landfill has become an ash landfill for ash generated at SEMASS and Crapo Hill Landfill is largely limited to member towns. The Taunton Landfill will be closed in 2020, the Southbridge Landfill has closed at the end of 2018, the Chicopee Landfill is presently closed and the Carver Landfill is closing in 2021.

The Massachusetts Solid Waste Master Plan reports that “Massachusetts landfill capacity is expected to decline from just under two million tons in 2010 to about 600,000 tons in 2020 as current landfills close and are not replaced. Without increased source reduction, recycling, composting, or in-state disposal capacity, net export could rise from 1.1 million tons in 2009 to nearly 2.0 million tons per year, or about 18 percent of the projected annual solid waste generation, in 2020.

The situation is similar for biosolids in that most of the biosolids generated in Massachusetts are transported out of state for processing and disposal. The proposed project is being developed to fill the need for economical out of state disposal of MSW and biosolids. Due to the distances involved, transportation by rail is the only viable option and an option that is better suited from a carbon footprint perspective.

An evaluation of alternative sites for the project was performed. There are limited alternatives for locating a truck to rail solid waste handling facility in Southeastern Massachusetts that would be considered adequate from both a user and regulatory perspective. A necessary factor is that any suitable site must be located adjacent to an existing active rail line. Rail service to the selected site area runs from Taunton to New Bedford. Suitable sites are limited to the lands abutting these rail lines.

A suitable site for the proposed use must be zoned industrial with solid waste handling as an acceptable use. Additionally, a suitable site must comply with the Massachusetts solid waste siting regulations at 310 CMR 16.00. This regulation stipulates restrictive siting criteria that must be met in order to operate a solid waste handling facility that includes at a minimum the following:

1. The waste handling area of a transfer station cannot be located within a Zone II of a public water supply, within an Interim Wellhead Protection Area of a public water supply, within a Zone I of a public water supply or within 250 feet of an existing well.

2. The waste handling area of the facility cannot be within 500 feet of an occupied residential dwelling.
3. The waste handling area of a facility cannot be within a Riverfront Area
4. A facility cannot be located on land classified as Prime, Unique or of State and Local Importance
5. A facility cannot be located where traffic impacts will constitute a danger to the public health, safety or the environment
6. A facility cannot be located where siting would have an adverse impact on Endangered, Threatened or Special Concern species, on Ecologically Significant Natural Communities or on any state Wildlife Management Area
7. A facility cannot be located within an Area of Critical Environmental Concern or would fail to protect the outstanding resources of an ACEC
8. A facility cannot be located where the facility would have an adverse impact on state forests or municipal parklands.
9. A facility cannot be located where operation of the facility would result in nuisance conditions which would constitute a danger to the public health, safety or the environment considering noise, litter, vermin, odors, bird hazards to air traffic and other nuisance problems.

Three sites have been evaluated as potential sites for use as a solid waste handling facility. These sites are located at 100 Duchaine Boulevard, New Bedford, 1080 Shawmut Avenue, New Bedford and 781 Church Street, New Bedford. All three sites are located adjacent to the rail line. An evaluation of each site follows. The potential to purchase the sites other than the selected site has not been investigated.

Site 1-100 Duchaine Boulevard, New Bedford:

This is the site that was selected for development. The site is approximately 71 acres zoned Industrial C with assessor's parcel ID 133-15. The site meets all of the siting criteria established by the MassDEP for siting a solid waste facility. The site has the space and buffer space necessary to meet the solid waste handling facility permitting requirements and has the space necessary to construct a rail sidetrack of sufficient length to provide the rail service required.

The site is located in the Industrial Park and traffic to the site has good access via Route 140. This is the selected site.

Site 2-1080 Shawmut Avenue, New Bedford:

This is a 3.6-acre site zoned Industrial B with assessor's parcel ID 123-20. A cursory review of this site indicates that the site meets all of the siting criteria established by MassDEP for siting a solid waste facility. The site abuts the existing rail line. It is expected that the project, when operating at full capacity, would fill 15 rail cars per day. Preliminary layouts for the facility at this location indicate that the site size is insufficient to include a 60,000-sf building and a rail sidetrack

sufficient to fill 15 rail cars per day. As such, this site is deemed insufficient in size for the project proposed by Parallel Products.

Site 3-781 Church Street, New Bedford:

This site is a 21.86-acre site zoned Industrial C with assessor's parcel ID 129-41. The site abuts the existing rail line. A cursory review of this site indicates that the site meets all of the siting criteria established by MassDEP for siting a solid waste facility. The project is somewhat constrained by wetlands but sufficient land is available for an enclosed handling building and a sidetrack capable of handling and filling 15 rail cars per day.

Access to the site requires truck traffic to pass numerous residential homes and the New Bedford Vocational Technical High School. This traffic situation is likely to be considered a nuisance and/or public safety condition and as such would not meet the MassDEP criteria for a solid waste facility. As such, this site was not considered a viable site for the proposed project.

The following rationale was taken into consideration while selecting the subject site.

1. The project is being constructed on a previously disturbed and largely abandoned site in an industrial zone.
2. Project is maximizing the use of existing infrastructure, including access roads and buildings.
3. The project is filling a need for recycling of deposit system glass bottles.
4. The project is providing a solution for the lack of landfill disposal options within the state by providing a rail alternative that will provide access to out of state disposal options.
5. Reduction in greenhouse gas emissions based on the use of rail for out bound waste shipment
6. Compliance with Massachusetts Stormwater Management Policy
7. Compliance with Solid Waste Management Regulations including waste ban regulations
8. Provides an in-state solution for biosolids treatment and disposal.
9. Potential nuisance conditions (odor, noise, traffic, emissions) have been evaluated in detail and mitigation measures have been incorporated, as necessary.
10. The site was of sufficient size to allow the development of solar power to offset the proposed project's greenhouse gas emissions.
11. The facility location allowed for development with limited visibility from residential areas.

Solid waste projects must comply with regulations at 310 CMR 16.00. These regulations establish criteria for siting solid waste facilities. The regulations were established for the protection of public health, safety and the environment. The sites have been evaluated based on these solid waste regulations. The preferred alternative best meets the siting requirements.

2.8 Planning Consistency

The project is designed to utilize existing site infrastructure to the greatest extent possible. This includes using existing access roads, existing parking areas, existing stormwater management

features and existing water and sewer connections. Proposed project elements have been located in areas that are currently impervious, where possible. A site plan depicting existing project features and areas of land alteration is included in the site plans presented within this chapter and within Appendix 4.

The proposed project meets the goals of the Massachusetts Solid Waste Master Plan in several ways. The Master Plan states that Massachusetts landfill capacity is declining as landfills are closed and are not replaced. Waste disposal in Massachusetts landfills was approximately two million tons in 2010. This has decreased to approximately 600,000 tons in 2020. The Master Plan identifies increasing export of waste to disposal facilities in other states as a means of making up for the loss of landfill capacity. Construction of a rail component for the MSW/C&D and biosolids processing make out of state disposal a viable option, especially for a state that will rely significantly on out of state exportation as a means to satisfy the Commonwealth's disposal needs.

One of the goals of the Master Plan is to reduce annual solid waste disposal by 30% by the year 2020. It is expected that this reduction will happen through a combination of source reduction, material reuse, recycling, composting and using source separated materials as fuels or other beneficial uses. Construction of a state-of-the-art MSW processing facility will increase recycling by allowing the removal of recyclable material from MSW that would otherwise be sent out for disposal to be managed here. The biosolids processing facility will also reduce waste disposal by removing water from the biosolids prior to disposal, thus extending landfill capacity or having the ability for the material to be "beneficially" reused.

The project complies with the New Bedford Master Plan in at least two areas. One of the goals and objectives in the transportation section of the Master Plan is to enhance the city's freight service by utilization of rail infrastructure. The addition of a rail sidetracks off of the existing main rail line allows this rail line to be used for local freight loading and unloading.

The New Bedford Master Plan encourages development of business park sites to increase and stabilize the commercial tax base and create jobs.

The Southeast Regional Planning and Economic Development District issued the Regional Land Use: Roles, Policies and Plan Outline for Southeastern Massachusetts in June 1996. New Bedford is within the area included in the report. The document includes a number of policies related to development in the study area. The policy that relates to the proposed project states that "SRPEDD prefers development in areas supported by underutilized infrastructure including land and buildings, transportation facilities, water and sewer and drainage facilities, etc. (For example, redevelopment of an existing site for an industrial use is preferred land use to conversion of farmland for industrial use.)" As described in this DEIR, the proposed project is located at the former Polaroid Manufacturing facility and the proposed project is utilizing the existing infrastructure to the maximum extent.

2.9 Statutory and Regulatory Standards

The project will require state and local permits and approvals for construction and operation of the proposed facility. A listing of the required permits and the permit status for each project phase follows.

2.9.1 Phase 1 Permitting

The Final Record of Decision issued by MEPA allowed Phase 1 of the proposed project to proceed prior to the acceptance of the FEIR. Construction of the glass processing building was completed in February 2020. Permitting for the other elements of the Phase 1 project has been completed as indicated in the Phase 1 Permit Status Table 2.2 shown below. *All of the above approvals are included in the appendices this report.*

Table 2.2		
Phase 1 Permit Status		
Permitting Agency	Permit Required	Status
State Agency		
MEPA	EENF	Secretaries Certificate issued April 12, 2019
MEPA	Phase 1 Waiver	Final Record of Decision May 15, 2019
New Bedford Agency		
Planning Board	Amended Site Plan	Issued December 23, 2020 (Included as Appendix 16)
Conservation Commission	Order of Conditions	Issued July 30, 2020

2.9.2 Phase 2 Permitting

Phase 2 of the project development will require permits in addition to the permits received for the Phase 1 project. Phase 2 permit applications for MassDEP permits will be submitted after the MEPA process has been completed with the acceptance of the FEIR. City of New Bedford permit applications will be submitted after receipt of Site Suitability approval from MassDEP. The permit requirements for Phase 2 are listed on the proceeding page,

Table 2.3

Phase 2 Permit Status		
Permitting Agency	Permit Required	Status
State Agency		
MEPA	EENF	Secretaries Certificate issued April 12, 2019
MEPA	DEIR	Secretaries Certificate issued Jan. 20, 2020
MEPA	FEIR	Public review and comment in progress
MassDEP, Solid Waste	Site Suitability	Permit application after acceptance of FEIR
MassDEP, Solid Waste	Auth. to Construct	Permit application after Site Assignment
MassDEP, Solid Waste	Auth. to Operate	Permit after completion of construction
MassDEP, Air Section	Limited Plan Approval	Emissions may be de minimis with no permit requirement
New Bedford Agency		
Board of Health	Site Assignment	Application after MassDEP Site Suitability
Planning Board	Site Plan Approval	Application after Site Assignment
Conservation Commission	Order of Conditions	Application after Site Assignment

2.10 Assessment of Impacts

The project has been sited and designed to meet the requirements of 310 CMR 16.00. These regulations were promulgated to minimize impacts to the environment and the public from solid waste projects. Potential impacts from the proposed facility have been addressed in the DEIR and in this FEIR. Potential impacts due to odor, air emissions, noise, and traffic are addressed in separate sections of this document that follow.

2.11 Mitigation Measures

The project design has included multiple design elements to minimize or mitigate potential impacts to the environment and to abutters to the facility. The mitigation measures are listed in the following sections under the environmental feature that is being mitigated.

2.11.1 Wetlands

The 71-acre site includes approximately 20 acres of wetlands. Impacts to wetlands cannot be totally avoided. The following measures were incorporated into the project to minimize and mitigate impacts to wetlands.

- The project design utilized existing site infrastructure to the maximum extent possible. This included use of existing access roads and building and locating proposed infrastructure on existing impervious surfaces to the extent possible.
- Impacts to bordering vegetated wetlands due to the rail crossing have been minimized by constructing the rail line between two retaining walls. This results in a smaller footprint than for a traditional embankment design.

- The rail crossing of the existing drainage swale on site utilized retaining walls to minimize the area of the drainage swale impacted by the crossing.
- The drainage swale crossing has been designed to comply with the Massachusetts Stream Crossing Standards.
- Wetlands impacted by the project construction will be replicated on site as defined in the Order of Conditions from the New Bedford Conservation Commission.
- Handling of MSW and biosolids will be done on impervious concrete floors within the proposed buildings. The buildings will also have trench drains at all truck doors to prevent and water on the handling floors from leaving the buildings.

2.11.2 Odor

MSW operations and biosolids drying have the potential to emit odors which could result in a nuisance condition. The facility has been designed to include multiple design features to ensure that the facility operation doesn't result in nuisance odors to abutters. The design features identified below were included in an odor modelling study conducted to ensure that odor will not present a nuisance condition for abutters to the project. The odor study is described in more detail in the DEIR. The odor study is not included in the FEIR as the Secretaries Certificate on the DEIR did not include any requirements for revisions to the odor study presented in the DEIR. The design features related to odor mitigation for the MSW processing and transfer and for the biosolids drying facility are listed below.

MSW Processing and Transfer

- All tipping, processing and loading into rail cars operations are done within an enclosed building
- The tipping and loadout building will be equipped with a misting system with odor counteractant.
- Building ventilation systems exhaust through elevated stacks to promote dispersion of exhaust air

Biosolids Drying

- All tipping and drying of biosolids will performed within a fully enclosed building.
- All building air associated with the sludge and cake storage, transfer, dewatering and drying processes will be collected under negative pressure and transferred to a biofilter to mitigate odor.
- Air from non-processing and storage areas will treated with an ionization system to mitigate odor prior to release to the atmosphere.
- Building ventilation systems exhaust through elevated stacks to promote dispersion of exhaust air

- An atmospheric dispersion modelling study was performed to ensure that odor was not a threat to public health, safety or the environment.

2.11.3 Noise

Noise resulting from operation of the proposed project could potentially cause a nuisance condition for project abutters. A noise modelling study was conducted and used to determine which mitigation features should be included in the project design to ensure that noise does not cause a nuisance condition to project abutters. The noise study is described in more detail in Chapter 6. The design elements included to mitigate noise associated with facility operations are listed below.

- The rail car mover will be electrically powered rather than a traditional diesel-powered car mover
- A 24' tall, L-shaped noise control wall will be constructed around the eastern and southern portions of the proposed rail spur, which will shield sounds from the ground level mechanical equipment at the Biosolids Building, as well as from some rail activities (idling locomotives and railcar coupling) Ventilation fans on the MSW building will be low noise units, or will utilize rooftop barriers, or fan silencers.
- The ventilation opening for the baghouse system will incorporate an acoustic louver.
- All facility operations (MSW processing, biosolids drying and glass processing) will be within fully enclosed buildings.
- A noise modelling study was conducted to ensure that noise was not a threat to public health, safety or the environment.

2.11.4 Traffic

Inbound glass, MSW, C&D and biosolids will be delivered by truck. A traffic study was performed to determine the impacts on traffic in the study area due to increased traffic associated with the project. The traffic study is included in Section 5 of the FEIR.

The traffic study concludes that the traffic impacts of the proposed development of the proposed solid waste facility at 100 Duchaine Boulevard does not constitute a danger to public health, safety or the environment with consideration to traffic congestion, pedestrian and vehicular safety, and roadway configuration.

3.0 Environmental Justice and Public Outreach

3.1 Potential Public Health Impacts

This section of the FEIR includes additional information about the operations of the facility and potential public health impacts. Impacts and mitigation measures are summarized below.

1. A description of measures that will be taken to compile, address, and correct underlying causes of any nuisance complaints (odor, noise, dust) is included. The aim of the complaint logging program will be to minimize and correct any sources of complaints, which will in turn minimize public health impacts.
2. A description of the means by which air emissions from operations will be managed and recorded to demonstrate compliance with MassDEP de minimis or permitted source recordkeeping requirements. The aim of the emission tracking system will be to ensure the facility remains a de minimis source or, if permitted, will demonstrate compliance with permit limits, which in turn results in minimization of public health impacts.
3. A discussion of the comprehensive nature of the air dispersion modeling conducted for the facility to date and its protection of sensitive receptors.
4. A discussion of the impacts of climate change on air quality and the minor significance of the facility on overall air quality in the region.
5. A discussion of air quality alerts and the minor significance of the facility on conditions that can lead to air quality alerts.

Parallel Products has prepared a system to log odor, noise, and dust complaints associated with operation of the facility which will be provided to MassDEP and the New Bedford Board of Health. A draft of the complaint log is provided below in Figure 3-1 below. Response measures and mitigation actions that will be implemented will be as follows:

1. Log complaint and concurrent weather and operating conditions
2. Independently confirm complaint by on-site and/or off-site observation, to the extent possible
3. Identify any immediate mitigation measures available and implement them
4. Conduct a root-cause analysis and review Best Management Practice (BMP), Standard Operating Procedure (SOP), and Preventative Maintenance (PM) documentation to determine if modifications are needed
5. Respond to complainant with a report of actions taken

Figure 3-1

Parallel Products - Complaint Logging Sheet

Date: _____

Time: _____

Complainant Name: _____

Complainant Address: _____

Logged by (PPNE Staff Initials): _____

Complaint Type: ☐Dust ☐Noise ☐Odor

Wind Speed (MPH): _____

Wind Direction: _____

Temperature (F): _____

Relative Humidity: _____

Complaint Details:[illegible]

Concurrent Operations Information:

--

Follow-Up:

--

Regarding details of air quality parameters to be monitored, Parallel Products will track monthly mass rates of air emissions for the preceding month, by the 15th of each month, by populating a 12-month rolling tracking Excel workbook with the operational activity rates (tons per month of glass processed, MSW tipped and processed, and biosolids processed). The operational activity rates will be tracked for the non-exempt stationary sources. The tracking workbook will multiply the activity rates by the air emission factors (mass per unit processed) to obtain the tons per month of the following regulated pollutants: Volatile Organic Compounds (VOCs) and Particulate Matter of 10 microns or less (PM10).

VOCs is representative of process emissions from the biosolids processing operations and PM10 is representative of process emissions from MSW tipping and processing and from glass processing. PM10 emissions are conservative and are inclusive of PM2.5 emissions, such that PM2.5 emissions will not need to additionally be tracked. MassDEP does not require tracking of de minimis combustion sources, mobile sources, and exempt sources at any facility, and accordingly as appropriate for the Parallel Products emission sources, tracking of the emissions of the small combustion sources, mobile sources, and cooling towers are not included.

The tracking workbook will be retained on site for inspection by MassDEP. If MassDEP requests a copy of the up-to-date workbook at any time, Parallel Products will provide it to the agency, and the document will become publicly available upon request from MassDEP. A copy of the tracking Excel workbook, pre-populated for maximum operating conditions for hypothetical, future operational dates is attached for illustration purposes (Appendix 9).

Because air dispersion modeling for the project was conducted with worst-case, maximum activity rates and because actual activity rates will be at or below those already modeled, there is no value in or requirement for ongoing modelling of cumulative concentrations of contaminants. Furthermore, air quality concentration thresholds (both federal for criteria pollutants and state for air toxics) used in the modeling analyses are developed to protect the most sensitive populations (receptors). The combination of the concentration thresholds and the modeling methodologies (i.e., use of ambient background conditions for criteria pollutant modeling and use of safety factors for air toxics thresholds) account also for cumulative effects of exposure to criteria and air toxics pollutants.

Regarding analysis of air quality impacts under future climate conditions, potential project impacts are within the bounds of the results of the air and odor analysis presented as Attachment 14 to the DEIR. Page 1-1 of that analysis describes the computer air dispersion modeling that was used to predict ambient air concentrations, stating that the model uses five years of hourly weather data to predict ambient air concentrations in all weather conditions. The use of five years of hourly weather data follows the EPA-prescribed methods “to ensure that worst-case meteorological conditions are adequately represented in the model results” (40 CFR 51 Appendix W 8.4.2.e.).

3.2 Climate Change Impacts

As indicated in the Fourth National Climate Assessment, average annual temperatures are expected to increase, with several more days of extreme heat occurring throughout the region each year due to climate change. However, the dispersion of air emissions is not particularly sensitive to ambient temperature, and the worst-case meteorological conditions for air dispersion are not generally associated with extreme heat events. Therefore, the use of the EPA-mandated five years of hourly weather data ensures that the model evaluated a broad enough range of weather conditions to ensure that worst-case conditions are adequately represented, even with expected future changes to weather patterns. The conclusions of the air quality impact assessment in Attachment 14 to the DEIR are that predicted impacts for all pollutants are below health protective levels of concern at all offsite locations based on the peak predicted level of operation of the proposed facility, and that operation of this facility will not cause or contribute to any health-protective exceedances of air quality concentrations. These conclusions will remain valid under future climate conditions.

The National Weather Service (NWS) provides data on air quality alerts based on an air quality index, for major air pollutants including ground-level ozone. Extreme temperatures may increase the frequency and severity of future air quality alerts, because the formation of ground-level ozone is affected by the weather, with ozone generated through atmospheric reactions in the presence of sunlight. As described in Section 5.3 of the DEIR, the Project is not a major source of ozone precursors (nitrogen oxides and VOC). Because the Project's air emission sources are minor (and none of the stationary combustion sources used for building heat will operate on hot days), the Project will not significantly contribute to future air quality alerts.

3.3 Community Outreach

PPNE has conducted efforts to educate the community on their plans for the new site at 100 Duchaine Boulevard in the New Bedford Business Park and address any questions or concerns they may have.

PPNE has gone door to door with fact sheets and comment cards with pre-paid postage (as show below to receive community input on the new site. Parallel Products' Community Outreach team has knocked on a total of 1,390 doors. A sample of the pre-paid postage card is show on the following page.

We welcome your comments and questions regarding the Parallel Products Green Energy Center. Parallel Products is committed to New Bedford and will directly address any concerns you may have. We intend to continue being a good and respectful neighbor and want to maintain an open dialogue with the community.

Name: _____

Address: _____

New Bedford, MA Zip Code: _____ Email: _____

Comment: _____

www.parallelproductssustainability.com

Parallel Products has knocked on 900 unique doors closest to the new site in the New Bedford Business Park. Each home received a comment card and fact sheet unless they refused. The Pine Hill Acres neighborhood, which consists of 360 homes, received a second visit from a Parallel Products representative, as they reside closest to the new site. Parallel Products representatives have also knocked on the 75 closest homes near their current site at 969 Shawmut Avenue and an additional 54 homes throughout New Bedford to educate the community about their plans for 100 Duchaine Boulevard and assess if the neighbors have had any complaints over the past 11 years.

To this date, Parallel Products has received 14 comment cards and has sent a response to all that have an address listed for return.

Parallel Products has also conducted 28 visits or meetings to key business stakeholders in the community and local vendors. Parallel Products held a public meeting at the Pulaski School on April 29, 2019. Roughly 150 people attended. This meeting was advertised on radio, Facebook, as well as multiple publication dates in the Standard Times. On July 24, 2019, Parallel Products hosted its future neighbors in the Business Park for a meeting. Every company in the Business Park received notices via email in advance of the meeting and 5 individuals attended.

On January 2 and 3, 2020, Parallel Products hosted two Open House Community Meetings in addition to two Community Meetings at the Greater New Bedford Regional Vocational Technical High School on January 6 and 7, 2020. In advance, the Community Outreach team reached out to key Environmental Justice Community Group Leaders identified by MEPA to find a convenient location and time. The meetings were advertised on the website, www.parallelproductssustainability.com, social media, The Standard Times, Portuguese Times, New Bedford Guide, and WBSM 1420 to ensure it was seen by the entire New Bedford community.

At the meetings, attendees listened to Parallel Products and the engineers on the project present their plans and results from their various studies. Then members of the audience were allowed to ask questions and Parallel Products was committed to answering all of them. Each meeting had 5 to 10 people attend.

Parallel Products plans to continue its community outreach efforts moving forward. To stay compliant with CDC guidelines due to the COVID-19 pandemic, Parallel Products hosted two virtual Community Meetings on December 14 and 16, 2020. The meetings were advertised on the website, social media, and in the Standard Times, Portuguese Times, New Bedford Guide, and WBSM 1420 for the two weeks leading up to the meetings. Three people attended Monday's meeting and seven people attended Wednesday's meeting via zoom. At the meetings, Parallel Products provided attendees with an update on the South Coast Green Energy Center and allowed attendees to ask their questions. Parallel Products answered all questions.

4.0 Solid Waste

The proposed project will require several solid waste permits from MassDEP for MSW processing and C&D handling and transfer as well as for the biosolids processing. The initial permit will be a site suitability permit (MassDEP BWP SW-01). This permit application must demonstrate that the project meets all site suitability criteria set forth in 301 CMR 16.00.

A draft of the site suitability permit application was included in the EENF. Also, all of the site suitability criteria as it relates to the proposed project was addressed in detail in the DEIR. This information was provided in the various MEPA documents such that comments by MassDEP and other agency/individuals could be included in the MEPA process. Comments received from MassDEP, the City of New Bedford and others are addressed in this section of the FEIR. A determination on the suitability of the proposed project at the 100 Duchaine Boulevard site will be determined by MassDEP and the New Bedford Board of Health in permit applications that will be submitted following the conclusion of the MEPA review process.

4.1 Agricultural Lands

Restrictions on the location of solid waste facilities in proximity to agricultural lands designated as Prime, Unique, or of State and Local Importance by the United States Department of Agriculture, Natural Resources Conservation Service. The restrictions on the proximity of solid waste facilities and these agricultural lands are defined in 310 CMR 16.40(4)(a). These regulations prohibit locating a solid waste facility on lands with these agricultural designations and require a 100-foot buffer between the facility and these agricultural lands.

The proposed site contains agricultural land that fall into this classification. Land Use maps provided in the DEIR maintained a 100-foot buffer from waste handling areas to lands classified as Prime, Unique or of State and Local Importance. MassDEP commented that the proponent “may” need to modify the proposed boundaries such that the limit of site assignment maintains a 100-foot buffer from the restricted agricultural lands. PPNE maintains that the reference to the “facility” as defined in 310 CMR 16.02 requires a 100-foot buffer from waste handling activities and not site assignment limits. However, to resolve this issue, the Land Use Map that was included in the DEIR has been revised and included as Appendix 10. The revised Land Use Plan provides a 100-foot buffer from the restrictive agricultural lands and the site assignment limit. The MassDEP letter addressing the setback from agricultural lands is identified as letter no. 2 included in Section 9.0 Comment Response.

4.2 Waste Handling Area

The waste handling area for the proposed project is shown on the Land Use Map included as Appendix 10. The waste handling area depicted on the Land Use Map is the area that meets all of the siting requirements for waste handling areas as defined in 310 CMR 16.00. This is not the area of proposed waste handling. The project is described in detail in Section 2.0 of the FEIR. Waste handling as defined in this section states that all waste handling will be within enclosed buildings.

PPNE expects that permit conditions established by MassDEP as well as site assignment conditions by the Board of Health will stipulate that all waste handling will be within enclosed buildings.

4.3 Rail Car Movements

The proposed project includes the construction of a rail sidetrack from the existing rail line that parallels the western property line of the 100 Duchaine Boulevard site. The site will be serviced by Mass Coastal Railroad (MC). MC operates between 7 AM and 7 PM in the project area. MC has indicated that it expects to service the site once per day typically between 10 AM and 11 AM. MC indicates that it would service the site 6 days per week should the project have sufficient demand to require daily service. Daily service to the site will include delivery of empty rail cars and removal of rail cars filled with solid waste. Daily service activity by MC is depicted in Step 1 and Step 2 of the rail movement plans included at the end of section 4.3. A letter from MC indicating its plans to service the site is also included in Appendix 11.

Movement of rail cars on site between daily service by MC will be done by PPNE employees. PPNE will purchase an electrically powered rail car mover to move the rail cars as required. The rail sidetrack includes six tracks connected by switches to allow rail cars to be moved on to and off of any of the six tracks. The six tracks and rail switches are labelled on the rail movement plans included at the end of this section [4.3].

Tracks 2, 3, 4 and 5 are used to store 18 empty and 18 full rail cars required for normal operations at full plant capacity. The initial condition shown on the rail movements plan in at the end of this section [4.3] and depicts 18 full cars on tracks 2 and 4. MC will arrive on site with 18 empty rail cars and move the empty rail cars on to tracks 3 and 5. MC will then connect to the full cars on tracks 2 and 4 and leave the site. These rail car movements are shown on the initial conditions plan, step 1 and step 2, on the rail movement plans included at the end of this section [4.3]. Track 6 is provided for the storage of 14 rail cars. This track is not required for normal daily operations, and provides for additional rail cars storage in the event that rail service to the site is delayed or temporarily interrupted. Switches are provided to allow movement of rail cars to all six tracks as required. PPNE employees will operate the switches as required to move rail cars to the desired tracks.

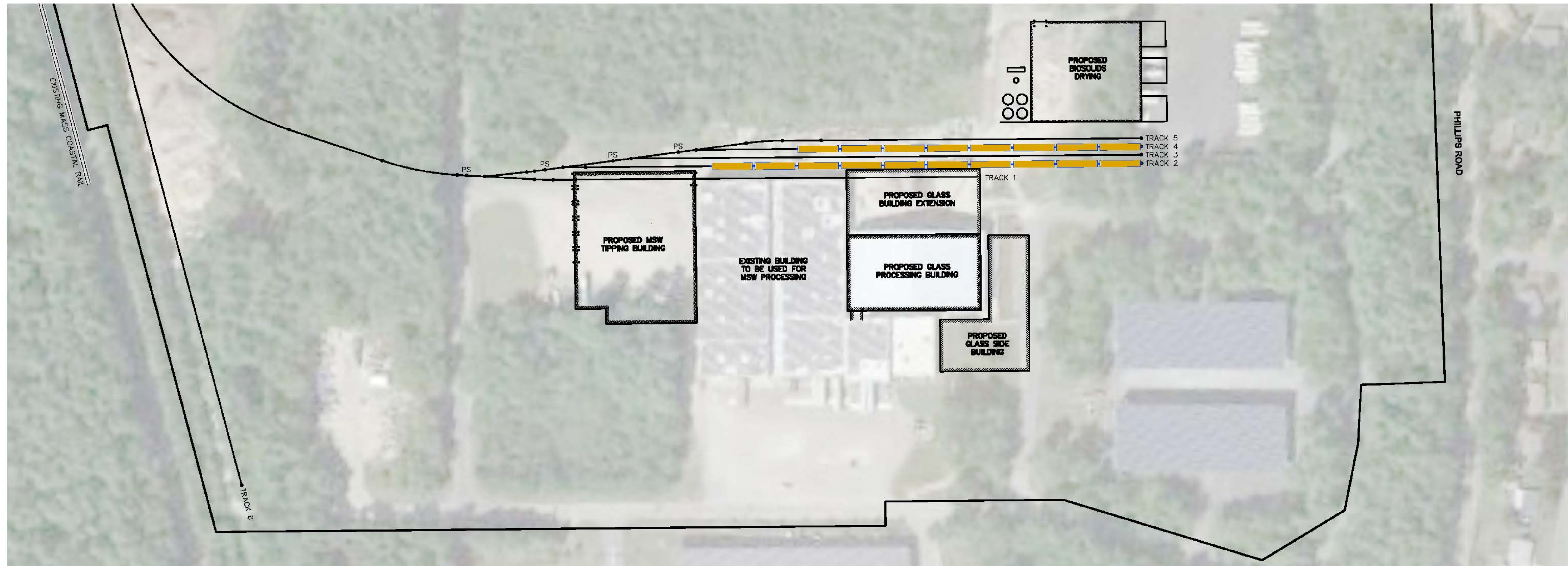
Loading of MSW and dried biosolids will be performed on track 1 which is located inside the proposed MSW tipping building. PPNE, using the rail car mover, will move empty rail cars from tracks 3 and 5 to track 1 in the MSW tipping building. The MSW tipping building can accommodate loading up to three rail cars at a time. Once the rail cars have been filled, PPNE will move the full cars to tracks 2 and 4. Dried biosolids will be moved from the biosolids processing building to the MSW tipping building by truck. Rail cars will be loaded by an excavator with a grapple or a bucket loader. Rail car movements showing the filling of the rail cars in the MSW tipping building are depicted on the rail car movement plans in steps 3 through 12.

Subsequent to the publication of the DEIR, activities associated with glass loading into rail cars was altered such that rail cars can enter the glass handling building and all glass loading will be within the building, which reduces external sound and stormwater contact

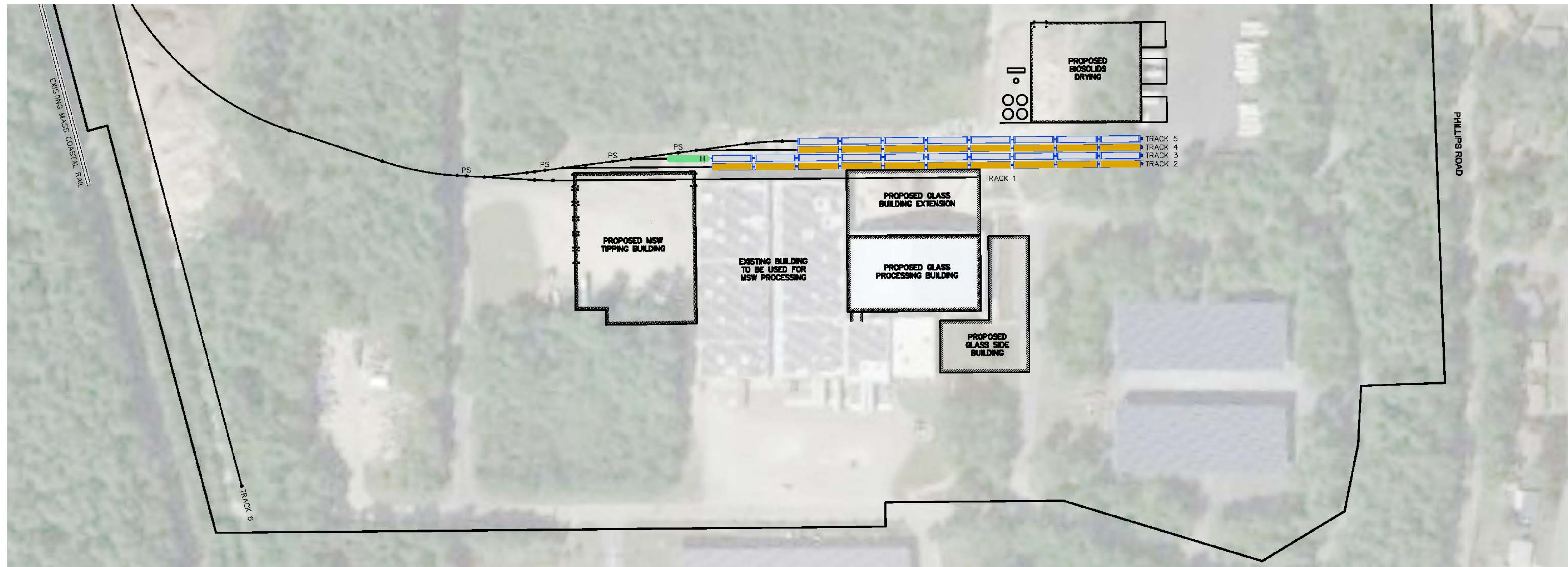
MC has committed to servicing the site six days per week once the level of activity on site requires daily service. Service to the site may be less frequent when the facility is operating at less than the permitted capacity.

CSX has historically required that MSW be transported in watertight intermodal containers loaded on flat bed rail cars. Recently with the development of balers that can shrink wrap or bag bales, CSX has started to allow baled MSW to be transported in open top gondola cars. CSX must approve the loading procedures on a site-by-site basis before transport in open top gondola cars is allowed. PPNE intends to work with CSX to develop loading procedures acceptable to CSX. If PPNE is unable to get CSX approval to use open top gondola cars for MSW transport, PPNE will load MSW into watertight intermodal containers for shipment on flat bed rail cars.

Figures 4-1 through 4-6 (sheets 1 through 6 of Appendix 11, Rail Movement Study) are presented on the following pages.



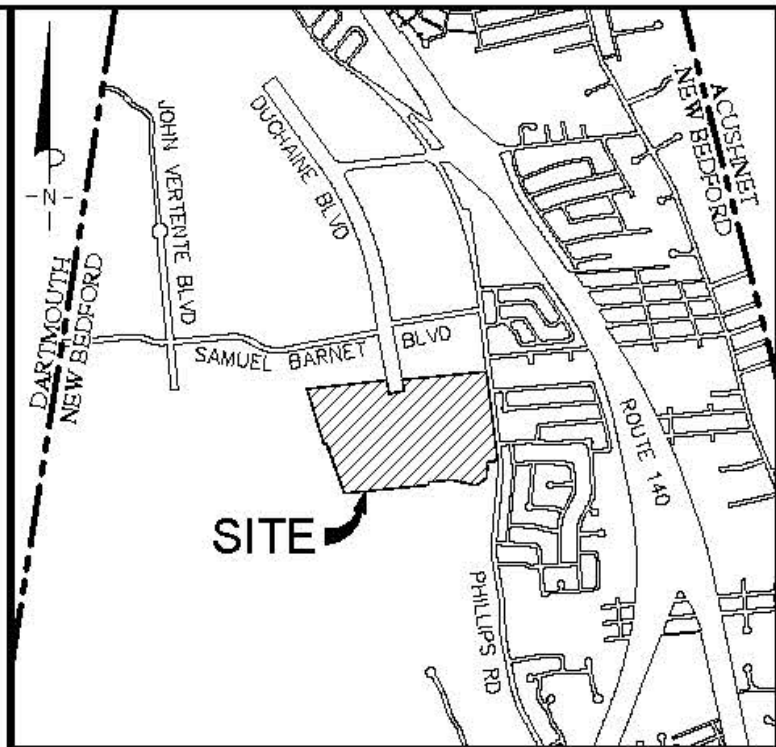
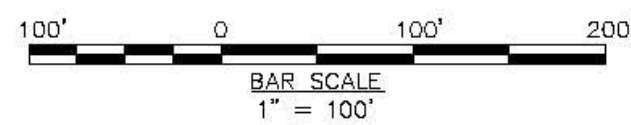
INITIAL CONDITIONS
10 FILLED RAIL CARS ON TRACK 2
8 FILLED RAIL CARS ON TRACK 4



STEP 1
MASS COASTAL DELIVERS 10 EMPTY RAIL CARS TO TRACK 3 AND
8 EMPTY RAIL CARS TO TRACK 5

- LEGEND
- EMPTY RAIL CAR
 - FULL RAIL CAR
 - LOCOMOTIVE
 - RAIL CAR MOVER
 - PS POINT OF SWITCH

NOTE:
SOLAR CANOPIES NOT SHOWN FOR CLARITY.



LOCUS MAP NOT TO SCALE

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NO.	DATE	COMMENT
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PURPOSE:

**FINAL ENVIRONMENTAL
IMPACT REPORT**

LOCUS:

100 DUCHAINE BOULEVARD
NEW BEDFORD,
MASSACHUSETTS

PREPARED FOR:

PARALLEL PRODUCTS OF
NEW ENGLAND, INC.

DRAWING TITLE:

RAIL CAR MOVEMENTS

CAD TECH:

T. JANICKI

CHECKED BY:

ENGINEER:

W. HALL

DATE:

5/14/2019

SCALE:

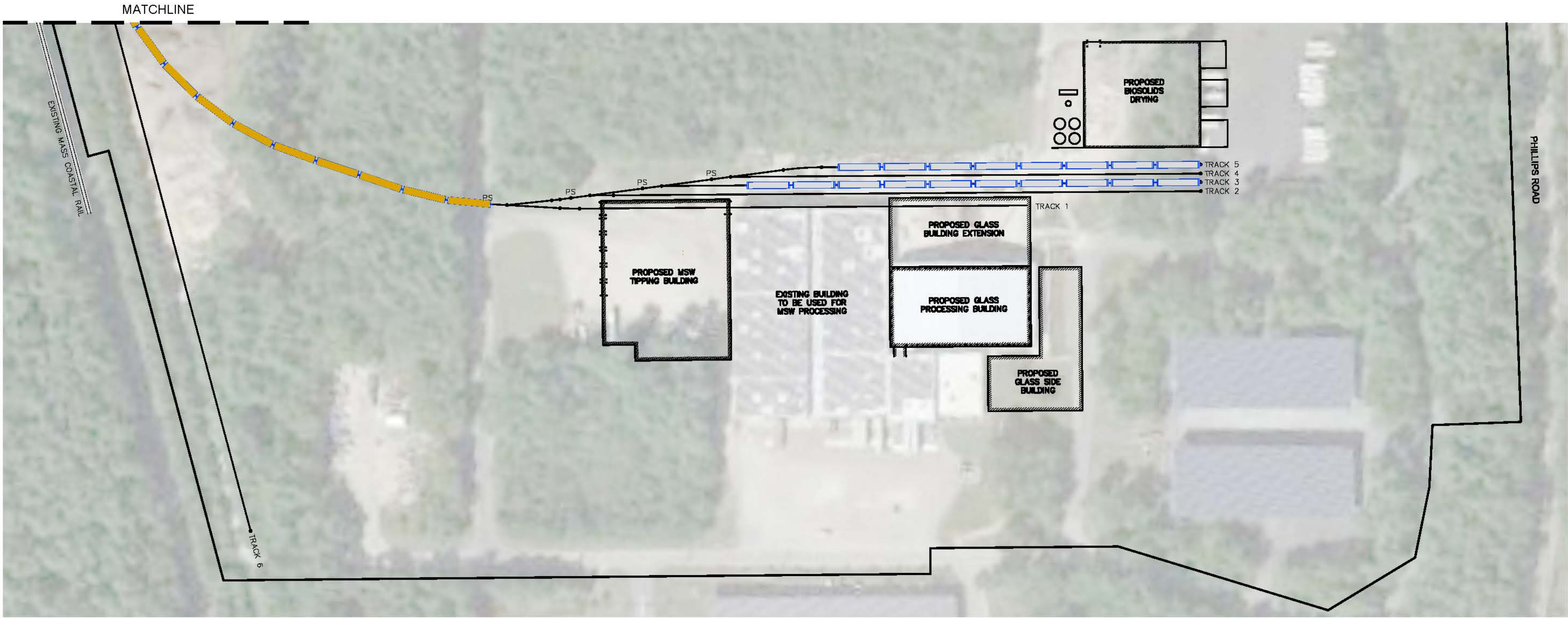
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SHEET:

1 of 6

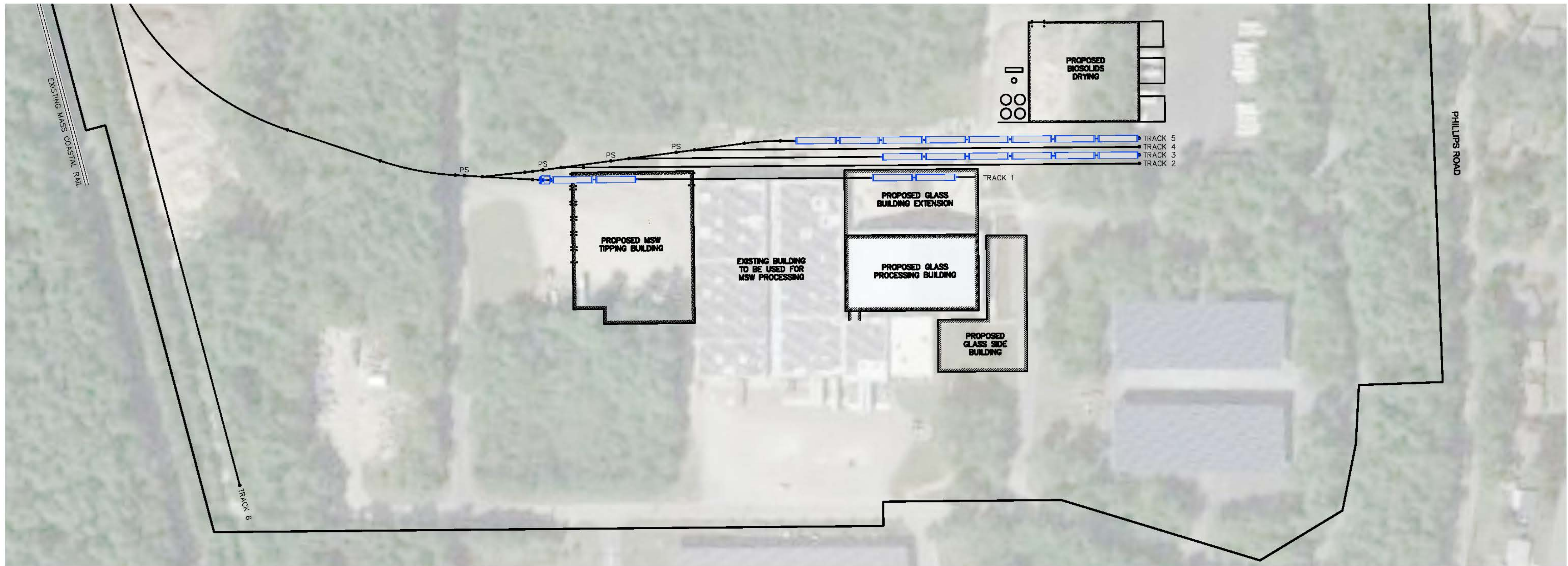


MATCHLINE



STEP 2

MASS COASTAL LEAVES SITE WITH 18 FULL CARS
(10 FROM TRACK 2 AND 8 FROM TRACK 4)



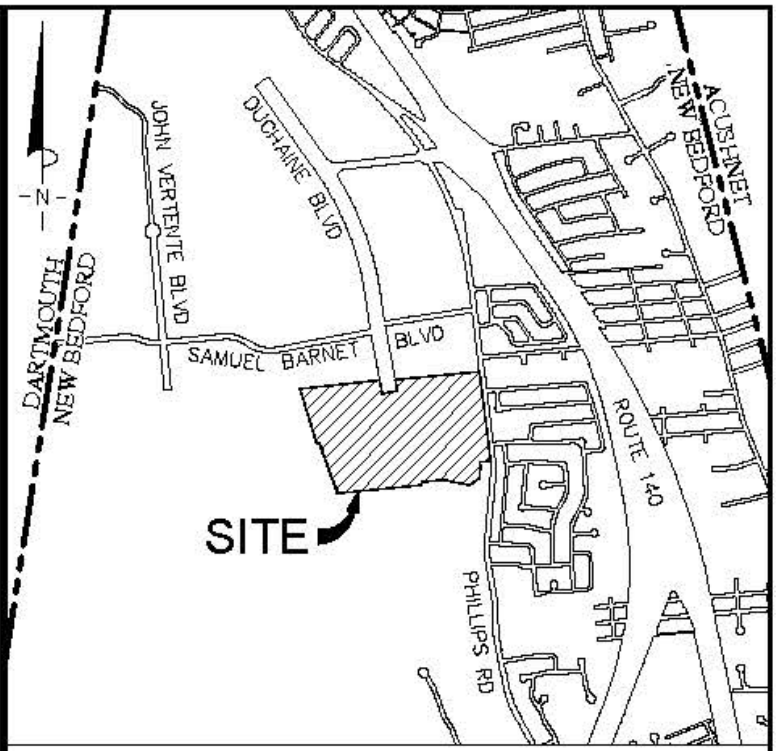
STEP 3

PPNE MOVES 2 EMPTY RAIL CARS FROM TRACK 3 TO GLASS BUILDING
PPNE MOVES 2 EMPTY RAIL CARS FROM TRACK 3 TO MSW TIPPING BUILDING

NOTE:

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100' 0 100' 200'
BAR SCALE
1" = 100'



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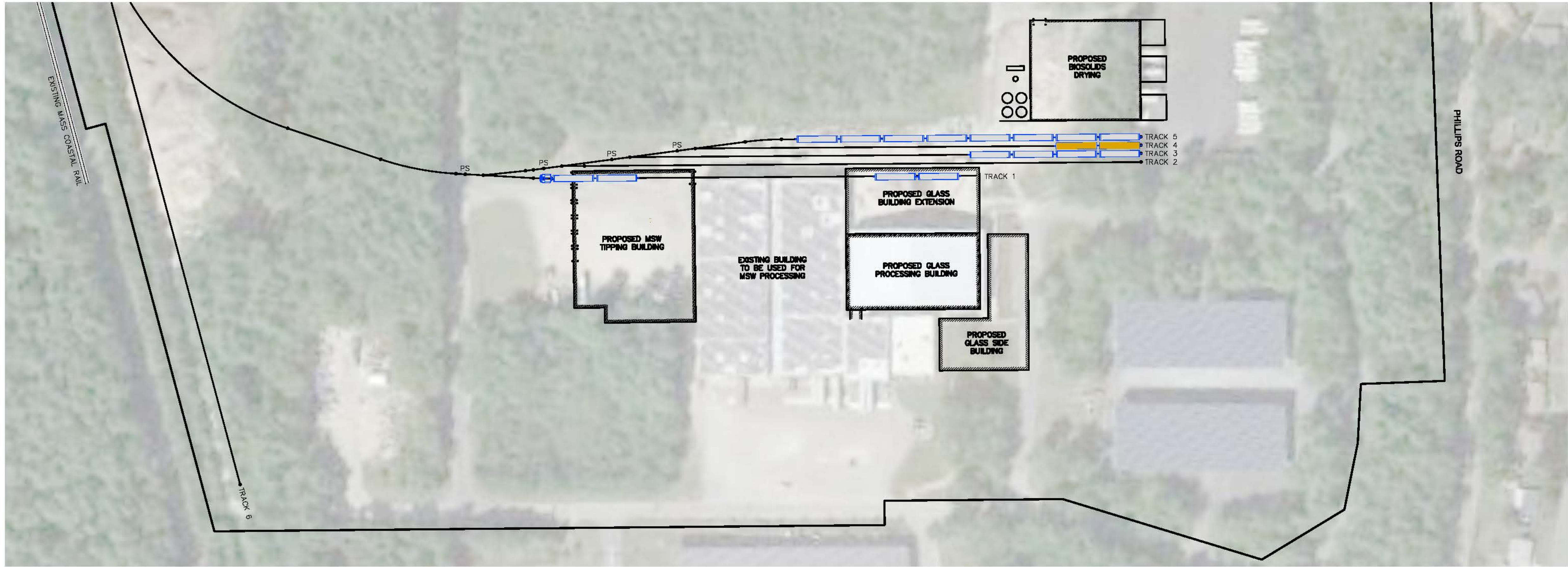
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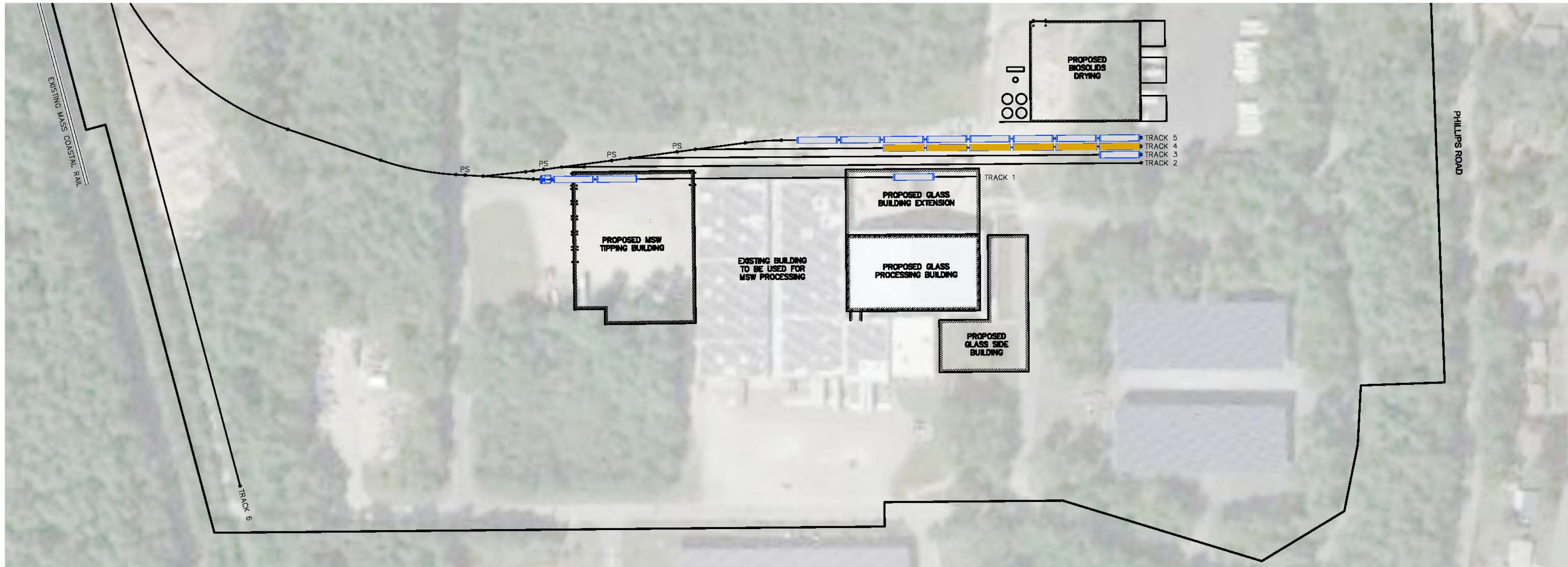
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SHEET:

2 of 6



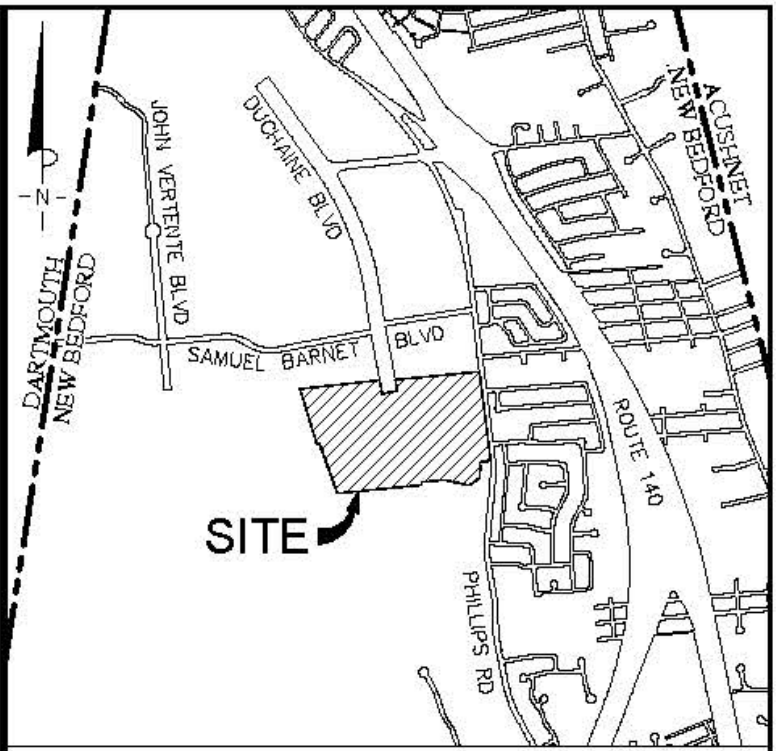
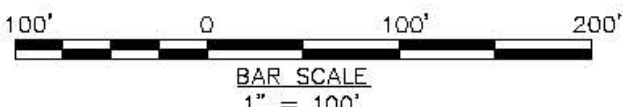
STEP 4
PPNE MOVES 2 FULL CARS FROM MSW TIPPING BUILDING TO TRACK 4
PPNE MOVES 2 EMPTY CARS FROM TRACK 3 TO MSW TIPPING BUILDING



STEP 5
PPNE MOVES 2 FULL CARS FROM MSW TIPPING BUILDING AND 2 FULL CARS FROM GLASS BUILDING TO TRACK 4
PPNE MOVES 2 EMPTY CARS FROM TRACK 3 TO MSW TIPPING BUILDING AND 1 EMPTY CAR FROM TRACK 3 TO GLASS HANDLING BUILDING

- LEGEND
- EMPTY RAIL CAR
 - FULL RAIL CAR
 - LOCOMOTIVE
 - RAIL CAR MOVER
 - POINT OF SWITCH

NOTE:
SOLAR CANOPIES NOT SHOWN FOR CLARITY.



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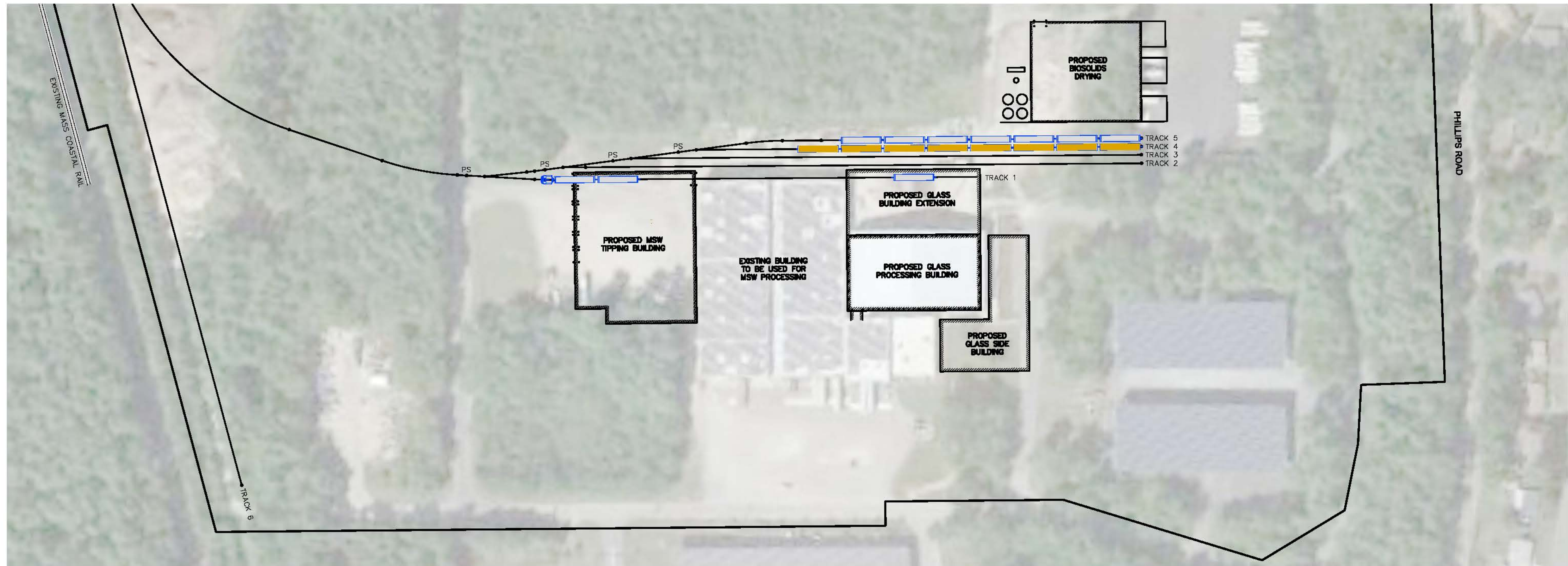
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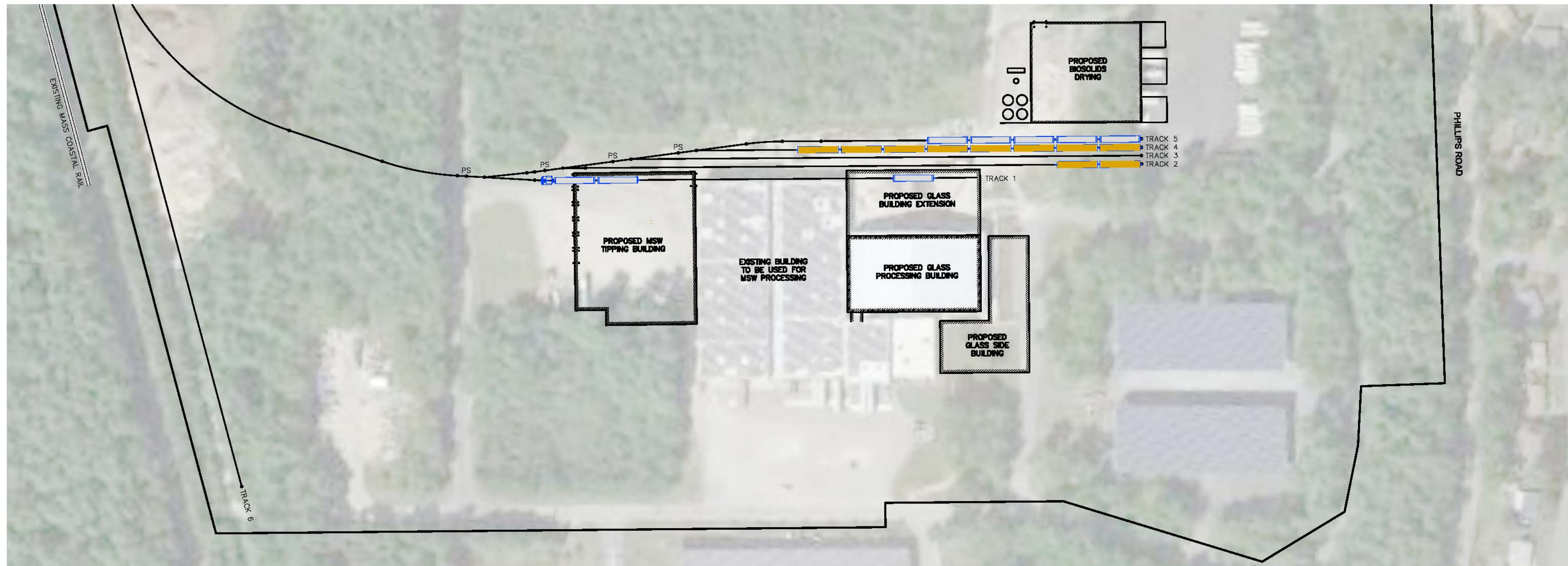
SHEET:

3 of 6



STEP 6

PPNE MOVES 2 FULL CARS FROM MSW TIPPING BUILDING TO TRACK 4
PPNE MOVES 2 EMPTY CARS FROM TRACK 3 AND TRACK 5 TO MSW TIPPING BUILDING

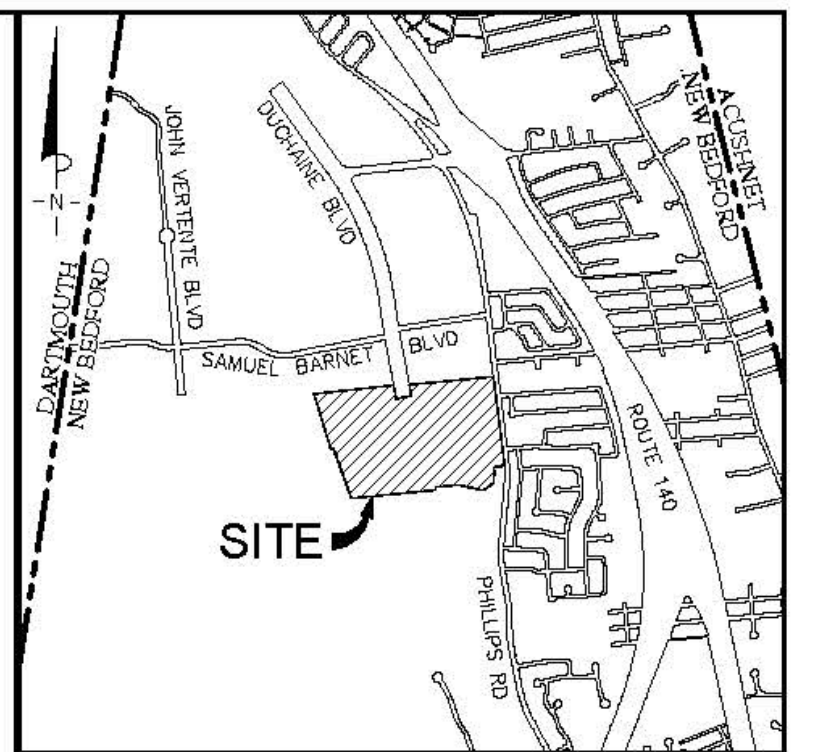
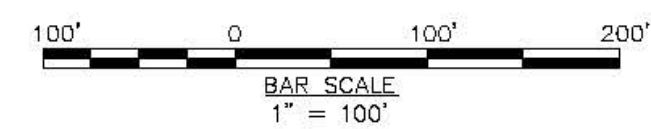


STEP 7

PPNE MOVES 2 FULL CARS FROM MSW TIPPING BUILDING TO TRACK 2
PPNE MOVES 2 EMPTY CARS FROM TRACK 5 TO MSW TIPPING BUILDING

- LEGEND
- EMPTY RAIL CAR
 - FULL RAIL CAR
 - LOCOMOTIVE
 - RAIL CAR MOVER
 - PS POINT OF SWITCH

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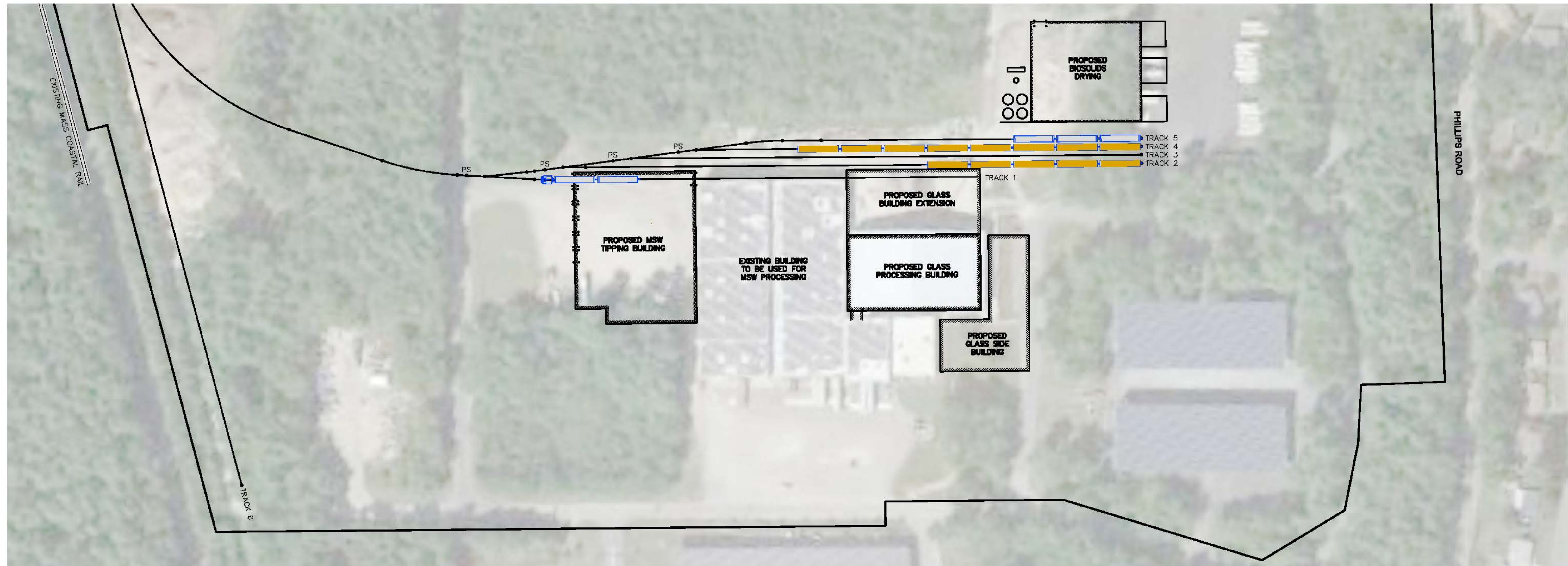
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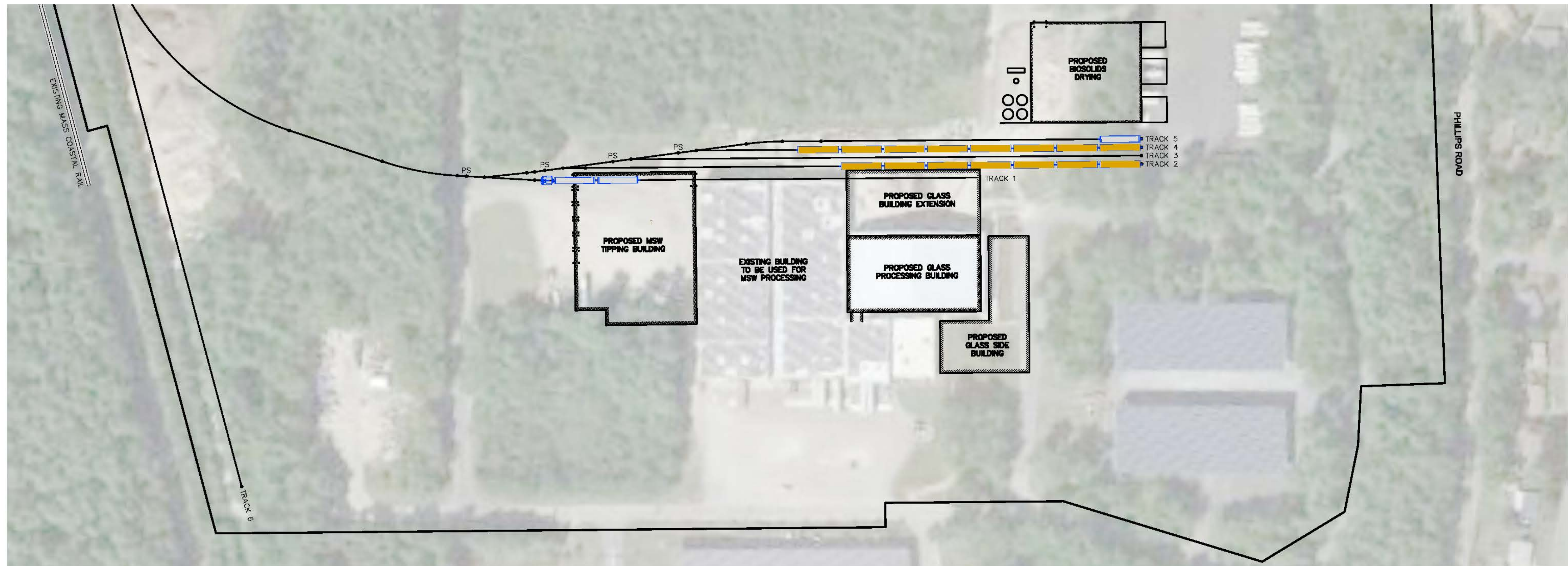
SHEET:

4 of 6



STEP 8

PPNE MOVES 2 FULL CARS FROM MSW TIPPING BUILDING TO TRACK 2 AND 1 FULL CAR FROM GLASS BUILDING TO TRACK 2
PPNE MOVES 2 EMPTY CARS FROM TRACK 5 TO MSW TIPPING BUILDING



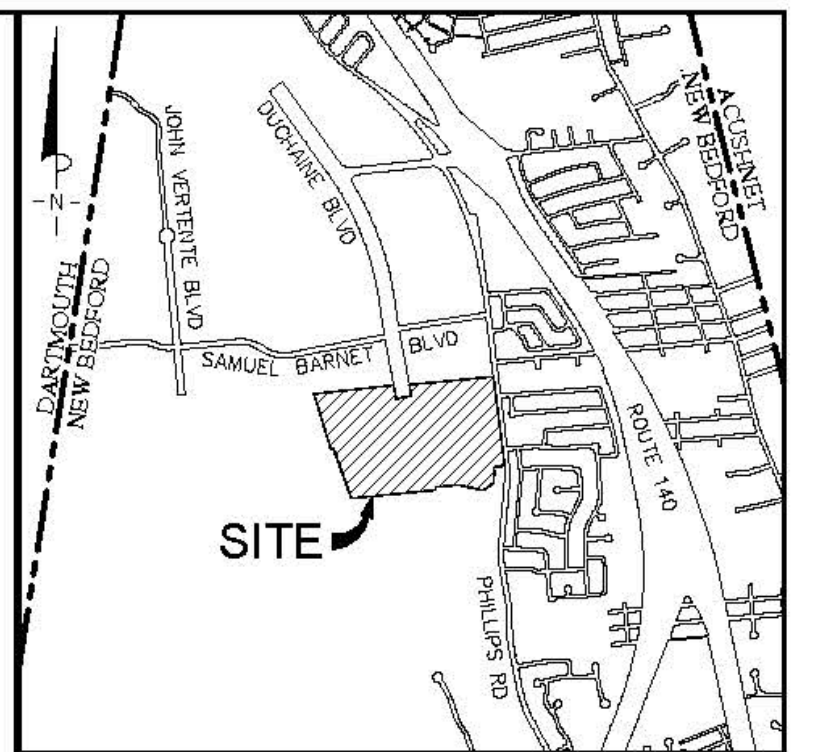
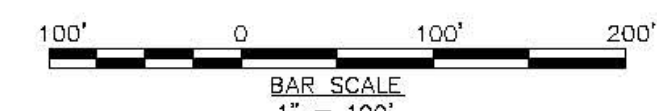
STEP 9

PPNE MOVES 2 FULL CARS FROM MSW TIPPING BUILDING TO TRACK 2
PPNE MOVES 2 EMPTY CARS FROM TRACK 5 TO MSW TIPPING BUILDING

- LEGEND
- EMPTY RAIL CAR
 - FULL RAIL CAR
 - LOCOMOTIVE
 - RAIL CAR MOVER
 - POINT OF SWITCH

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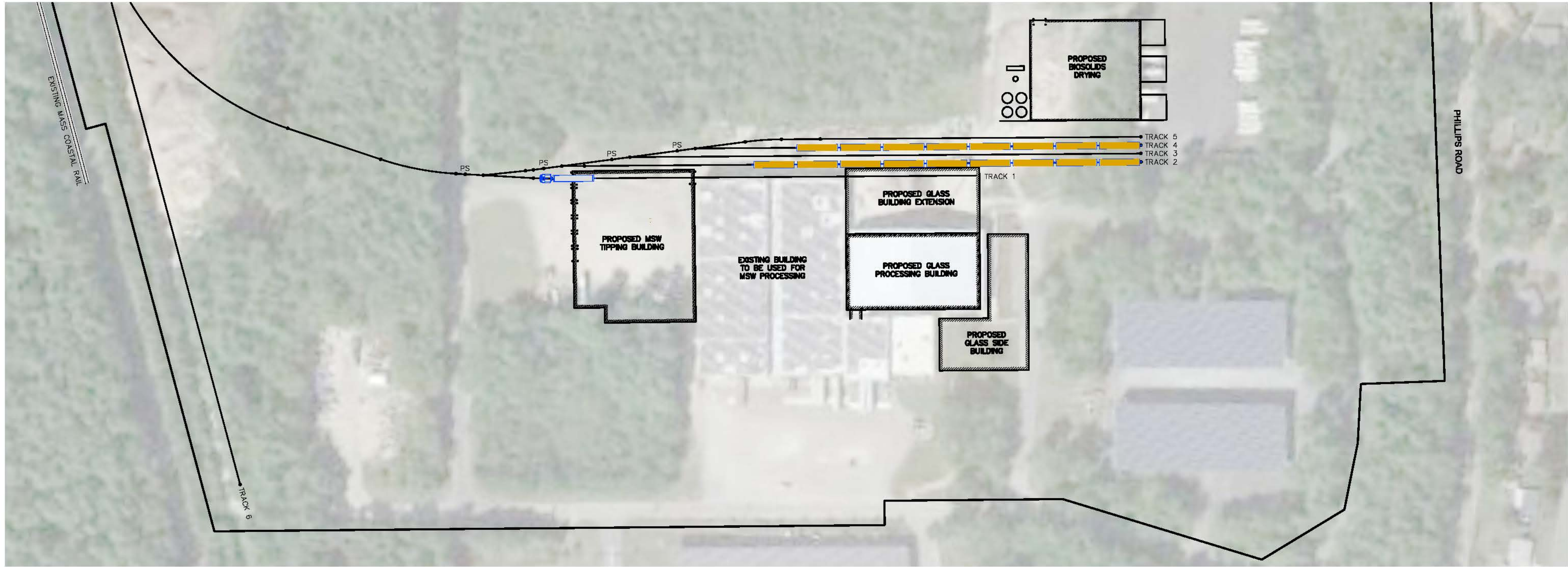
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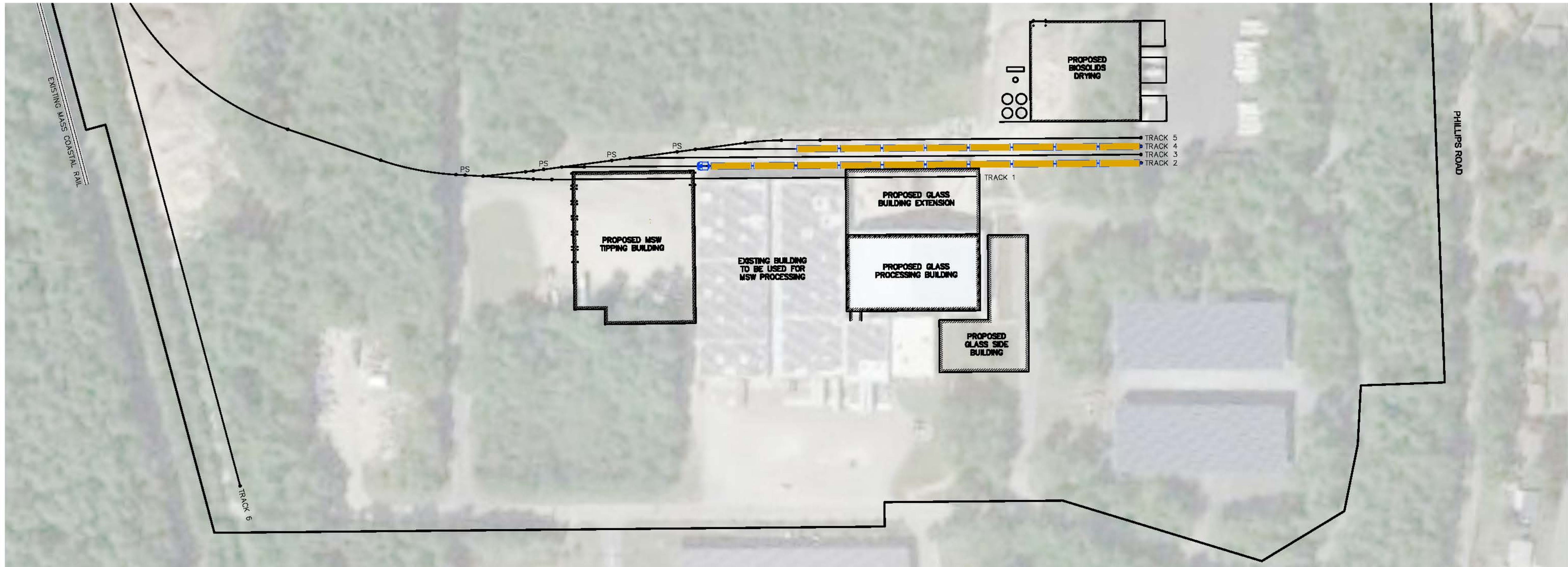
SHEET:

5 of 6



STEP 10

PPNE MOVES 2 FULL CARS FROM MSW TIPPING BUILDING TO TRACK 2
PPNE MOVES 1 EMPTY CARS FROM TRACK 5 TO MSW TIPPING BUILDING

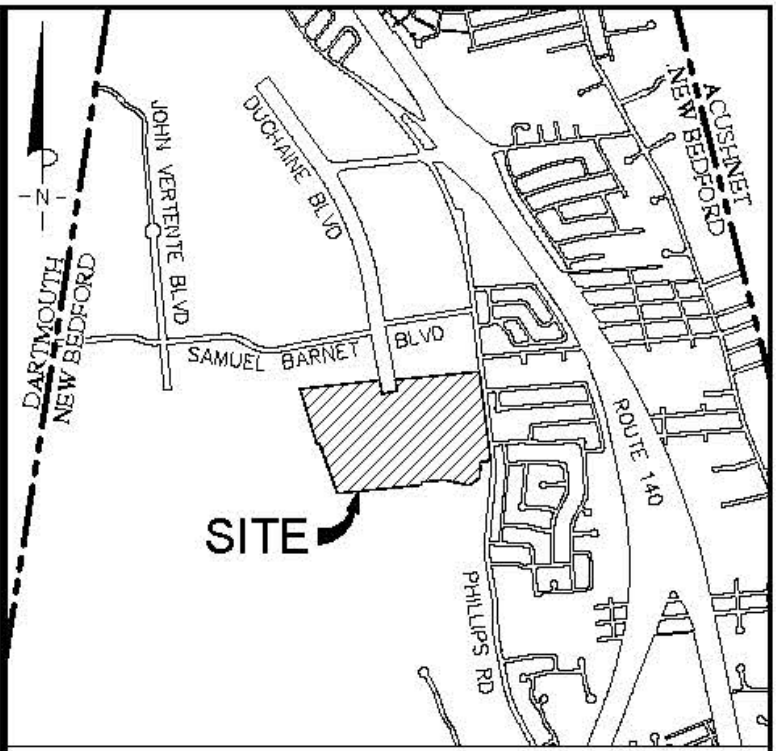
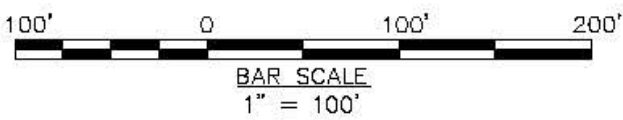


STEP 11

PPNE MOVES 1 FULL CAR FROM MSW TIPPING BUILDING TO TRACK 2

- LEGEND
- EMPTY RAIL CAR
 - FULL RAIL CAR
 - LOCOMOTIVE
 - RAIL CAR MOVER
 - PS POINT OF SWITCH

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T. JANICKI

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ENGINEER:

W. HALL

DATE:

5/14/2019

SCALE:

1"=100'

SHEET:

6 of 6

4.4 PFAS

PFAS is considered by MassDEP to be an “contaminant of emerging concern”. MassDEP submitted a comment letter during the DEIR public comment period. This correspondence is included in Section 9.0 Comment Response of the FEIR. Correspondence submitted by MassDEP has been labelled letter no. 25 and included in Attachment 9-1 of the FEIR. This correspondence states that “MassDEP has conducted monitoring, or required the monitoring of, PFAS in drinking water, wastewater, residuals, and rivers and is developing a strategy to address PFAS in wastewater and residuals.”

PPNE understands that new regulations and restriction will come into effect as the MassDEP continues their evaluation of PFAS. Construction of any biosolids processing facility will be more than a year from the issue of the FEIR. PPNE will develop the design of the biosolids processing facility in compliance with all new regulations and restrictions that come into effect.

PPNE plans to discharge wastewater from its proposed biosolids facility to the City of New Bedford’s wastewater treatment plant. PPNE will consult with the City during the design process to ensure the design complies with all existing and new design requirements including any PFAS related regulations, restrictions and monitoring requirements. Due to uncertainties of future regulations, PPNE cannot determine if the biosolids building size will need to be increased.

5.0 Traffic

This section of the FEIR provides a summary of the updated traffic analysis, addressing potential traffic impacts associated with the proposed transfer station as well as a response to the transportation related comments provided as part of the DEIR certificate. Technical documentation supporting the analysis presented in the FEIR is provided in Appendix 13

5.1 Introduction

The purpose of the traffic study was to evaluate existing and projected traffic operational and safety conditions in the vicinity of the site and identify mitigating measures to offset potential project-related traffic impacts on the surrounding roadways, if determined to be necessary based on safety and/or operational conditions. The study was conducted in accordance with MassDOT Transportation Impact Assessment (TIA) Guidelines. This study has determined that the proposed project, when developed and operational will allow for safe and efficient access to and from the facility.

Our assessment is based on a review of current traffic volumes and crash data collected for this study, a review of readily accessible traffic analyses, and the anticipated traffic generating characteristics of the proposed development. This study examines existing and projected traffic operations (both with and without the proposed project) at key intersections in the vicinity of the project site. The study area was chosen based on a review of the surrounding roadway network and anticipated traffic generating characteristics of the proposed project. It provides a detailed analysis of traffic operations during the weekday morning and weekday afternoon peak hours, when the combination of adjacent roadway volumes and potential traffic increases associated with the project would be greatest.

Based on the analysis presented, the projected traffic increases associated with both the background traffic growth and the project-related traffic generated by the proposed facility do not result in a significant impact to the operations of the surrounding roadway network. This report documents our findings and recommendations. It should be noted that these conclusions conservatively base all inbound and outbound traffic via truck without incorporating alternative modes or methods of waste disposal.

5.2 Project Description

The project site is bounded by a rail line to the west, Philips Road to the east, industrial properties to the north and property owned by Eversource to the south. The project is expected to be completed in two phases. Phase 1 includes the construction of glass processing facilities, construction of 1.9MW of rooftop and canopy solar power installation and the construction of a rail side-track to service the site. Phase 2 includes the constructing of a solid waste facility that will accept municipal solid waste (MSW) and construction and demolition (C&D) materials for handling a proposed maximum of 1,500 tons per day (tpd), and 400 tpd of biosolids. Access to the proposed site would

be provided by one full-access driveway from Duchaine Boulevard, which leads to an internal one-way loop roadway surrounding the proposed facility. To date, Phase 1 of the project is partially completed, with plastic, aluminium, and glass processing operations taking place at the site. Glass beneficiating, which is allowed in Phase 1 under the MEPA waiver, is projected to be implemented in Phase 2.

5.3 Study Methodology

This study evaluates existing and projected traffic operations at study area intersections for the weekday morning and weekday afternoon peak hour traffic conditions when the combination of adjacent roadway volumes and potential traffic increases associated with the project would be greatest.

The study was conducted in three steps. The first step involved an inventory of existing traffic conditions in the vicinity of the site. As part of this inventory, traffic counts were collected at key intersections during the weekday morning and weekday afternoon peak periods and adjusted to reflect the Base 2020 conditions prior to the completion of Phase 1 of the project, and to reflect the Existing 2020 conditions with Phase 1 included. Crash data was obtained from the Massachusetts Department of Transportation (MassDOT) to evaluate existing safety conditions within the study area.

The second step of the study builds upon data collected in the first phase and establishes the basis for evaluating the transportation impacts associated with future conditions. In this step, the Existing 2020 traffic volumes were projected seven years per MassDOT traffic analysis guidelines. While the DEIR projects traffic to design year 2026 based on 2019 Existing traffic volumes, the design year has been updated to 2027 in the FEIR due to the update of base year volumes to 2020 pre-COVID conditions. 2027 design year traffic volumes were analyzed under No Build (without Phase 2 of the project) and Build (with Phase 2 of the project) conditions. In this phase, the projected traffic demands of other future developments that could influence traffic volumes at the study area intersections were assessed.

The final step identifies measures, if necessary, to improve existing and future traffic operations and safety, minimize potential traffic impacts, and provide safe and efficient access to the project site.

5.4 Existing Conditions

Effective evaluation of potential traffic impacts associated with the proposed development requires a thorough understanding of the existing traffic conditions on the roadways and intersections serving the project site. The assessment of existing conditions consists of an inventory of the roadway and intersection geometries and traffic control devices, collection of peak-period traffic volumes, and a review of recent crash history. A discussion of this information is presented below.

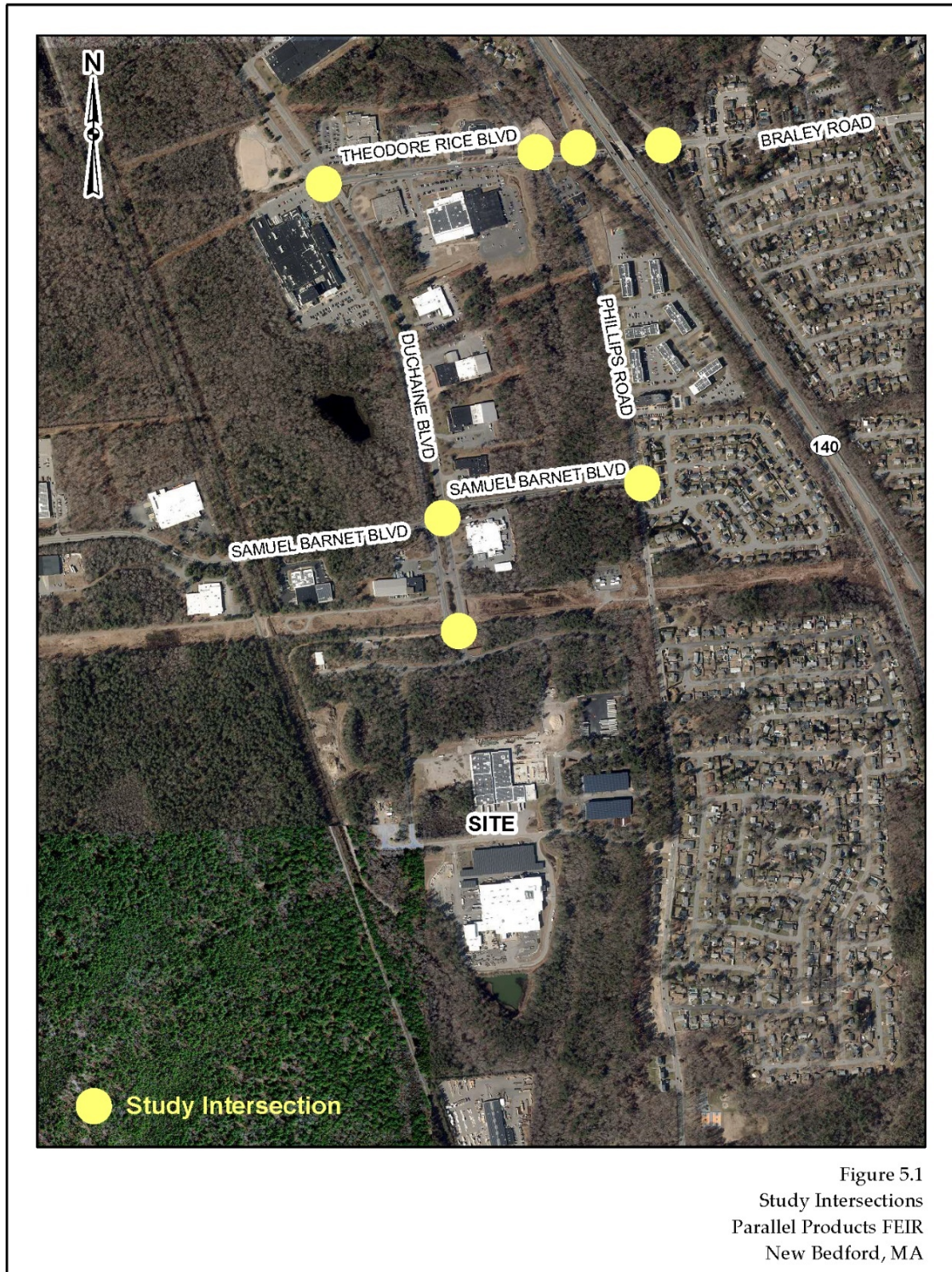
5.4.1 Study Area Intersections

The area identified for detailed analysis in this study was determined based on a review of the anticipated traffic generating characteristics of the proposed project, a review of the surrounding roadway network serving the project site. The study area intersections include:

- Route 140 Northbound on/off-ramp at Braley Road
- Route 140 Southbound on/off-ramp at Braley Road
- Braley Road/Theodore Rice Boulevard at Phillips Road
- Theodore Rice Boulevard at Duchaine Boulevard
- Duchaine Boulevard at Samuel Barnet Boulevard
- Phillips Road at Samuel Barnet Boulevard
- Duchaine Boulevard at Site Driveway

The study area intersections are depicted on Figure 5-1 on the proceeding page.

Figure 5-1 Study Intersections



5.4.2 Roadway Network

The project site benefits from access via the local and regional roadway systems. A brief description of the principal roadways serving the project site is presented below.

Alfred Bessette Memorial Highway (Route 140)

Alfred Bessette Memorial Highway (Route 140) is a limited access roadway that is classified as an urban principal arterial under MassDOT jurisdiction. Route 140 runs in the north-south direction throughout southeastern Massachusetts, providing two lanes of travel in each direction separated by a grass median. Route 140 has exits adjacent to the study area at Philips Road (Exit 5) and Braley Road (Exit 7). Route 140 northbound and southbound ramps are under two-way stop sign control with both Philips Road and Braley Road.

Braley Road

Braley Road is classified as an urban minor arterial under City of New Bedford jurisdiction within the study area, and primarily provides access to residential and industrial properties, Casimir Pulaski Elementary School, and to Route 140 via a diamond interchange. Braley Road generally runs in the east-west direction between Acushnet Avenue to the east and Phillips Road to the west, providing a single travel lane measuring 12 feet in width and a bicycle lane measuring 6.5 feet in width in each direction. At its intersection with Phillips Road and Theodore Rice Boulevard, Braley Road continues to the north toward the Freetown Town Line. North of the Phillips Road/Theodore Rice Boulevard intersection, Braley Road is approximately 40 feet in width with a double yellow center line and no striped travel lanes or shoulders. A cement concrete sidewalk is provided along the south side of Braley Road east of the Phillips Road/Theodore Rice Boulevard intersection.

Theodore Rice Boulevard

Theodore Rice Boulevard continues west from the intersection of Braley Road and Phillips Road as the east-west connection between Route 140 and Philips Road to the east and Duchaine Boulevard to the west, which provides access to industrial and commercial land uses within the New Bedford Business Park. Theodore Rice Boulevard is classified as a local roadway under City of New Bedford jurisdiction and provides a 20-foot wide travel lane in each direction, separated by a 12-foot wide raised, grass median. There are no sidewalks provided on either side of the roadway. The posted speed limit on Theodore Rice Boulevard is 30 mph, which does not appear to be supported by an approved Special Speed Regulation.

Phillips Road

Phillips Road is classified as an urban collector under City of New Bedford jurisdiction and runs in the north-south direction between Braley Road/Theodore Rice Boulevard to the north and Church Street to the south. Phillips Road is a two lane, two-way roadway, providing a 15-foot wide travel lane and 5-foot wide bicycle lane in each direction. Within the study area, a four-foot wide cement concrete sidewalk is provided on the east side of the roadway. The posted speed limit on Phillips Road is 30 mph; however, according to MassDOT Special Speed Regulation No. 4044, the approved speed limit is 25 mph northbound approaching the Braley Road/Theodore Rice Boulevard intersection, and otherwise 40 mph between Braley Road and Church Street.

Duchaine Boulevard

Duchaine Boulevard is classified as a local roadway under City of New Bedford jurisdiction and provides access to industrial and commercial land uses within the New Bedford Business Park. Duchaine Boulevard runs in the north-south direction and provides two 14-foot wide travel lanes in each direction separated by a grass median. Shoulders measuring 11 feet in width are provided on both sides of the roadway. Since the roadway is median divided, there are multiple U-turns locations along the corridor. The posted speed limit on Duchaine Boulevard is 30 mph, which does not appear to be supported by an approved Special Speed Regulation.

Samuel Barnet Boulevard

Samuel Barnet Boulevard is a local roadway under City of New Bedford jurisdiction and runs in the east-west direction, providing a connection between Phillips Road to the east and Duchaine Boulevard to the west. Samuel Barnet Boulevard provides access to industrial and commercial land uses and serves the New Bedford Business Park. Samuel Barnet Boulevard is a two-way, two-lane roadway generally providing a 13-foot wide travel lane in each direction, with seven-foot wide shoulders on either side of the roadway. The posted speed limit on Samuel Barnet Boulevard is 30 mph, which does not appear to be supported by an approved Special Speed Regulation.

5.4.3 Public Transportation

The Southeastern Regional Transit Agency (SRTA) operates two routes within the study area. An extension of Route 4-Ashley Boulevard operates within the New Bedford Business Park twice daily at approximately 6:30 AM and 3:30 PM Monday through Friday. The North End Shuttle operates via westbound Braley Road and southbound Phillips Road every 80 minutes from approximately 9:30 AM to 3:50 PM Monday through Saturday.

5.4.4 Existing Traffic Volumes

5.4.4.1 Existing Peak Hour Traffic Volumes

Due to COVID-19 conditions, traffic volumes are not considered to be normal at this time. Therefore, manual turning movement counts (MTMC) initially collected for the project on Wednesday, June 13, 2018, were used as a basis of the analysis and were adjusted to public schools, including the nearby Casimir Pulaski School, were still in session. The MTMCs were conducted during the weekday morning peak period from 7:00 AM to 9:00 AM and the weekday afternoon peak period from 3:00 PM to 6:00 PM. The traffic counts are summarized in 15-minute intervals and are provided in the Traffic Study presented as Appendix 13 of this report. The four highest consecutive 15-minute intervals during the peak periods constitutes as the peak hour for the study area network. The highest weekday morning peak hour volume was recorded between 7:30 AM and 8:30 AM, and the afternoon peak hour was recorded between 3:00 PM and 4:00 PM.

5.4.4.2 Seasonal Variation

In order to determine seasonal variation in the area of the project, traffic count data from MassDOT continuous count station 617 on Route 140 just north of the project site was reviewed. Based on this data, traffic volumes in the month of June are higher than an average month. Therefore, to present a conservative analysis, traffic volumes were not adjusted downward to present an average month.

5.4.4.3 Adjustment to 2020 Traffic Volumes

As noted above, updated traffic count data could not be collected due to the impact of the COVID-19 pandemic on traffic volumes and patterns. To update the June 2018 traffic volume counts previously collected to 2020 pre-COVID conditions, research was conducted to identify recent counts collected within the study area. Two ATR counts collected by MassDOT were identified: on the Route 140 northbound on-ramp from Braley Road on February 4, 2020 (MassDOT count location ID R26011), and on the Route 140 northbound off-ramp to Braley Road (MassDOT count location ID R26010) on February 19, 2020. As the count on the off-ramp was collected during school vacation week, it was not appropriate to use for this study. As a result, the February 4, 2020 count on the Route 140 northbound on-ramp was utilized to develop adjustment factors to adjust the June 2018 collected traffic volumes to Existing 2020 conditions. Table 5.1 below shows the seasonally-adjusted weekday morning (7:00 AM to 9:00 AM) and weekday afternoon (3:00 PM to 6:00 PM) peak period traffic volumes on the on-ramp collected in June 2018 compared with those collected in February 2020.

Table 5.1 June 2018 to February 2020 Volume Comparison

Peak Period	June 2018	February 2020	Change
Weekday Morning (7:00-9:00 AM)	235	273	+16%
Weekday Afternoon (3:00-6:00 PM)	357	432	+21%

As shown in Table 5.1, the seasonally adjusted volumes collected on the ramp in February 2020 are 16 percent higher than those collected in June 2018 during the weekday morning peak period. During the weekday afternoon peak period, volumes were found to be 21 percent higher in 2020 compared with the 2018 counts. Therefore, the peak hour volumes collected in June 2018 were grown by 16 percent in the weekday morning peak hour and by 21 percent in the weekday afternoon peak hour to reflect 2020 existing conditions.

It is expected that these adjustments would account for traffic associated with the Parallel Products facility and the glass operations that are currently occupying the site under the Phase 1 Waiver granted by MEPA. Similarly, traffic associated with the New England Farms convenience store/gas station and Dunkin' Donuts at 209 Theodore Rice Boulevard, completed in late 2018, is also expected to be accounted for in these adjustments. A traffic study with the traffic expected to be generated by the New England Farms development was not completed prior to its construction; however, the traffic associated with this development would be captured in the MassDOT ATR volumes and would therefore be accounted for in the calculated growth rate.

5.4.4.4 Saturday Traffic Volumes

ATR counts were collected by MassDOT from Tuesday, February 4 to Sunday, February 9, 2020 on the Route 140 northbound on- and off-ramps at Kings Highway, located approximately 3.6 miles south of the Route 140 at Braley Road interchange. Table 5.2 below compares the peak hour and daily counts collected on Saturday, February 8, 2020 with counts collected on Thursday, February 6.

Table 5.2: Route 140 Northbound at Kings Highway Volumes

	Thursday, 2/6/2020 4:15-5:15 p.m.	Saturday, 2/8/2020 12:00-1:00 p.m.
Route 140 Northbound Off-Ramp		
Peak Hour Traffic Volume	615	551
Daily Traffic Volume	6,448	6,416
Route 140 Northbound Off-Ramp		
Peak Hour Traffic Volume	230	205
Daily Traffic Volume	2,649	2,189

As shown in Table 5.2, Saturday midday peak hour and daily volumes are lower than the weekday afternoon and daily volumes on both the northbound off-ramp and northbound on-ramp at the Route 140 at Kings Highway interchange. Additionally, as Kings Highway is a commercial corridor with a large shopping center located at the interchange, it would be expected to have higher volumes of traffic on Saturdays in comparison to the Braley Road and Phillips Road corridors included in the Parallel Products study area. Based on a review of this available data, the Saturday peak hour traffic volumes in the study area are considered to be lower than the weekday peak hours analyzed, and therefore a Saturday midday peak hour analysis has not been performed. The Saturday count data is included in Traffic Study presented as Appendix 13 (this is an appendix within the Traffic Study).

5.4.4.5 Automatic Traffic Recorder Data

A 48-hour automatic traffic recorder (ATR) count was conducted on Duchaine Boulevard on Wednesday, June 13, 2018 and Thursday, June 14, 2018. The results of the counts are tabulated in 15-minute periods and are provided in Traffic Study presented as Appendix 13 of this report. The four highest consecutive 15-minute intervals during the weekday morning and weekday afternoon peak periods constitutes as the peak hours for Duchaine Boulevard. The ATR collected traffic volumes on Duchaine Boulevard near the proposed project site were adjusted to reflect 2020 traffic conditions using the adjustment factors discussed above. The resulting ATR data and peak hourly traffic flows are summarized in Table 5.3 below.

Table 5.3: ATR Summary

	ADT ⁽¹⁾	HV% ⁽²⁾	85th %ile Speed ⁽³⁾ (mph)	AM Peak ⁽⁴⁾	PM Peak ⁽⁵⁾
Duchaine Boulevard					
<u>North of Samuel Barnet Boulevard</u>					
Northbound	2,388	25.0	37	158	245
Southbound	<u>2,517</u>	<u>24.0</u>	<u>36</u>	<u>313</u>	<u>147</u>
TOTAL	4,905	24.5	37	471	392

(1) ADT - Average Daily Traffic (Vehicles per Day) adjusted to reflect 2020 volumes

(2) HV% - Percentage of Heavy Vehicles based on TMC completed on June 13, 2018

(3) Based on Field Speed Study completed July 13, 2018

(4) Weekday morning peak hour calculated to occur between 7:00 AM to 8:00 AM

(5) Weekday afternoon peak hour calculated to occur between 3:00 PM to 4:00 PM

To reflect the 2020 Base conditions, prior to the glass operations currently occupying the site under the Phase 1 waiver, the traffic associated with the glass operations were removed from the 2020 Existing traffic volumes to calculate the 2020 Base traffic conditions. The 2020 Base traffic volumes would reflect the operations of the site prior to the Phase 1 waiver, which includes the removal of the trips associated with the trucking facility previously on site, and the addition of

plastic, aluminum, and glass operations previously operating at the prior Parallel Products facility at 969 Shawmut Avenue in New Bedford.

Information provided by the proponent was utilized to determine the trips associated with the existing glass operations. These trips were then removed from the 2020 Existing traffic volumes to determine the 2020 Base traffic volumes. Employee trips associated with the glass operations were also removed. The facility currently employs 75 daily employees, operating in three 8-hour shifts each consisting of 25 employees. The shifts are scheduled to run from 6:00 AM to 2:30 PM, 2:00 PM to 10:30PM, and 10:00PM to 6:30AM. Based on these shifts, it is expected that all employees will be arriving to the site outside of the peak hour. However, as employees may not depart the site precisely at the end of the assigned shifts, to present a conservative analysis it was assumed that the employees from 10:00 AM to 6:30 AM shift would leave the site during the weekday morning peak hour, and employees from the 6:00 AM to 2:30 PM shift would leave the site during the weekday afternoon peak hour.

Although the Phase 1 waiver permits expanded glass operations with additional employees, the expansion has not yet taken place, and therefore was assumed to occur with Phase 2 of the project. The data collected at the facility used to determine the trips associated with Phase 1 of the project are provided in Table 5.4 below.

Table 5.4: Vehicular Trip Generation, Existing Site Operations									
Description	Weekday			Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Parallel Products Existing Truck Trips	45	45	90	4	4	8	4	4	8
NWD Trucking	-38	-38	-76	-3	-3	-6	-3	-3	-6
Net Change vs Baseline	7	7	14	1	1	2	1	1	2
Parallel Products Existing Employee Trips	75	75	150	0	25	25	0	25	25

The resulting 2020 Base traffic conditions for the weekday morning and weekday afternoon peak hours are presented in Figures 5-2 and 5-3, respectively. The 2020 Existing traffic peak hour traffic volumes are presented in Figures 5-4 and 5-5 for the weekday morning and weekday afternoon peak hours, respectively. Figures 5-2 through 5-5 are shown on the proceeding pages.

PPNE will restrict all trucks delivering solid waste or removing solid waste from using Phillips Road. PPNE will include the restriction on trucks from using Phillips Road in all contracts with customers of the facility. The contracts will include financial penalties if trucks utilize Phillips. Road and a ban from using the facility for repeat offenders. PPNE would support a general truck exclusion for Phillips Road should the City of New Bedford decide to implement this restriction.

Figure 5-2 2020 Base Weekday Morning Peak Hour Traffic

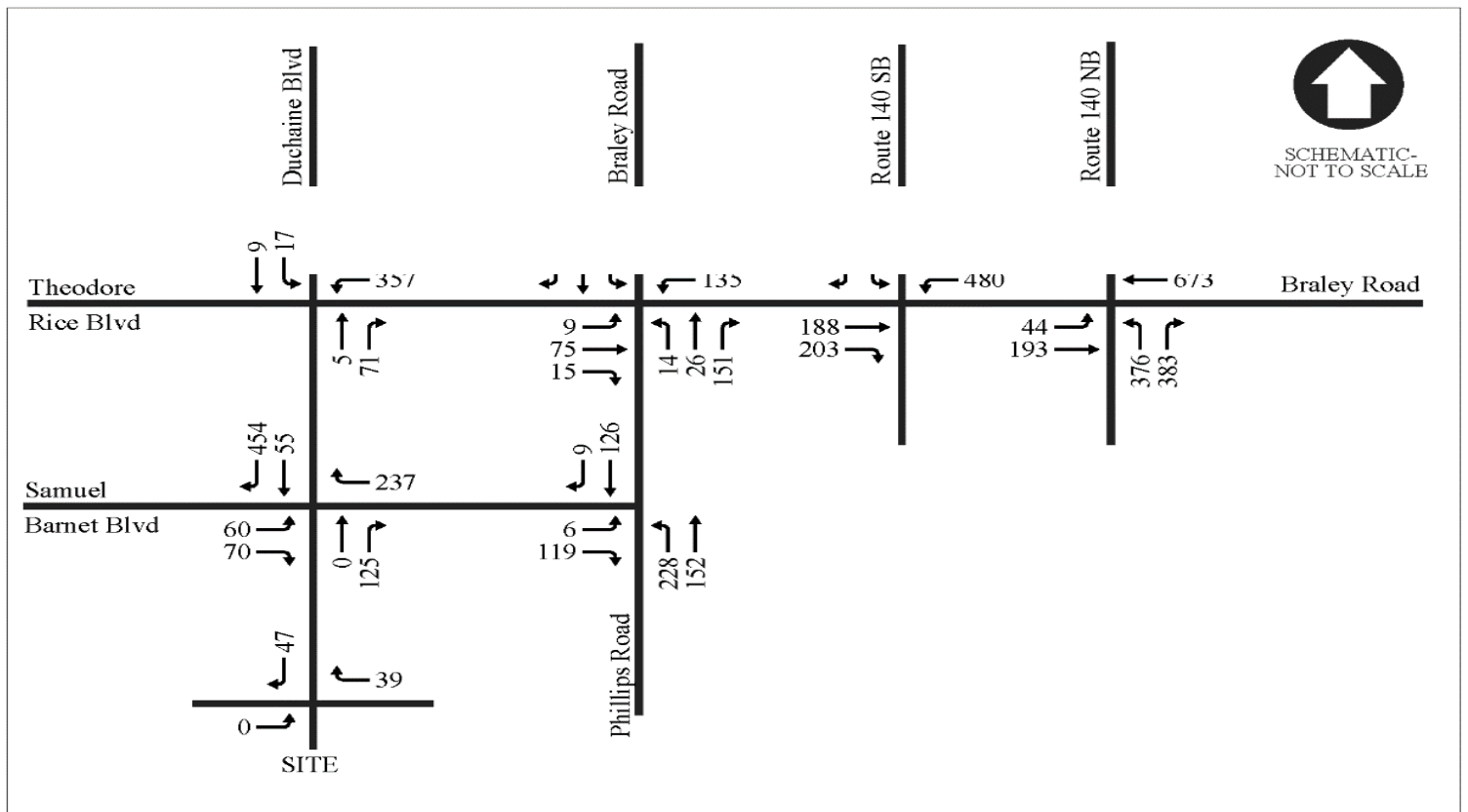


Figure 5.2
2020 Base Weekday AM
Parallel Products FEIR
New Bedford, MA

Figure 5-3, 2020 Base Weekday PM Traffic

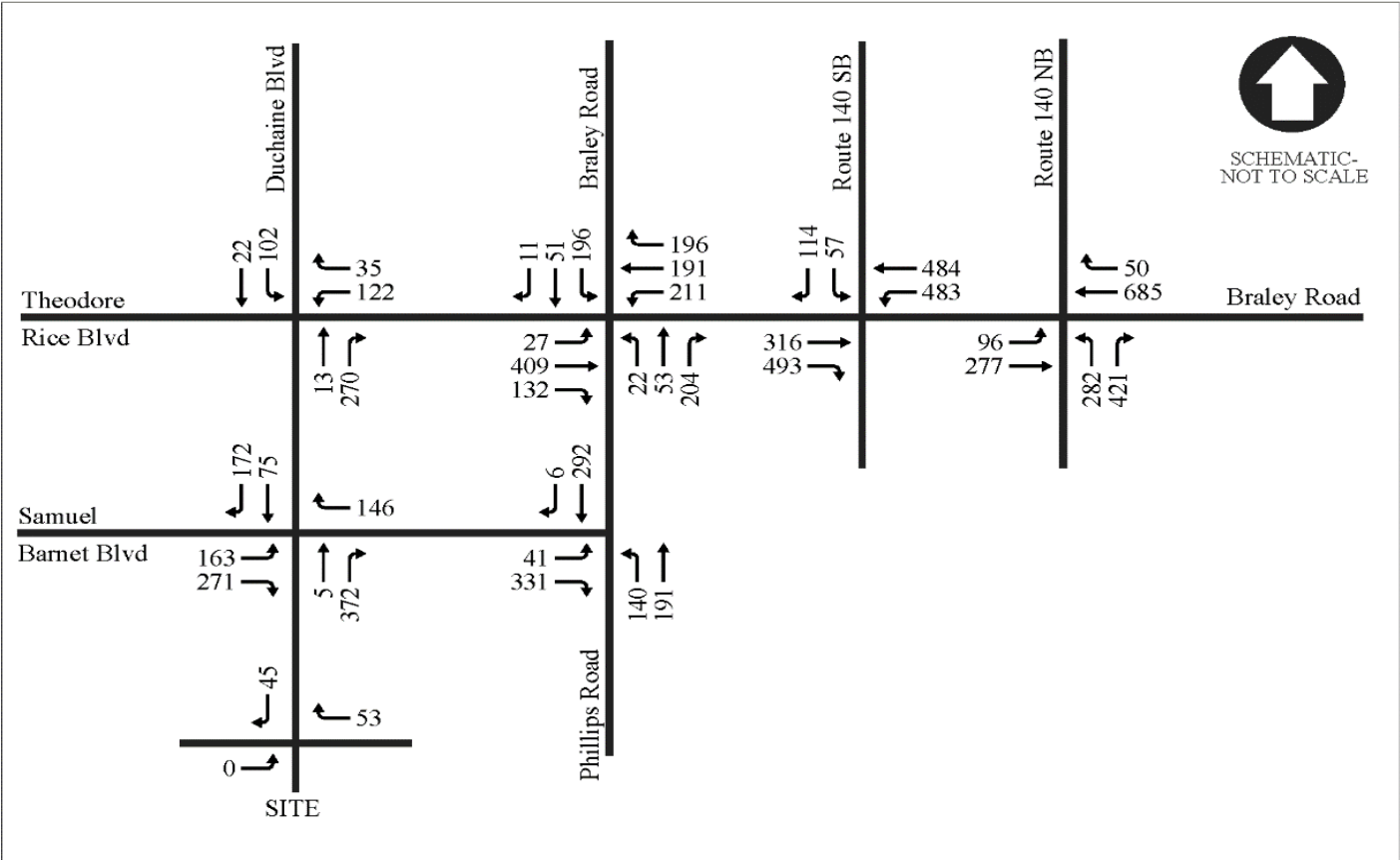


Figure 5.3
2020 Base Weekday PM
Parallel Products FEIR
New Bedford, MA

Figure 5-4, 2020 Existing Weekday Traffic AM

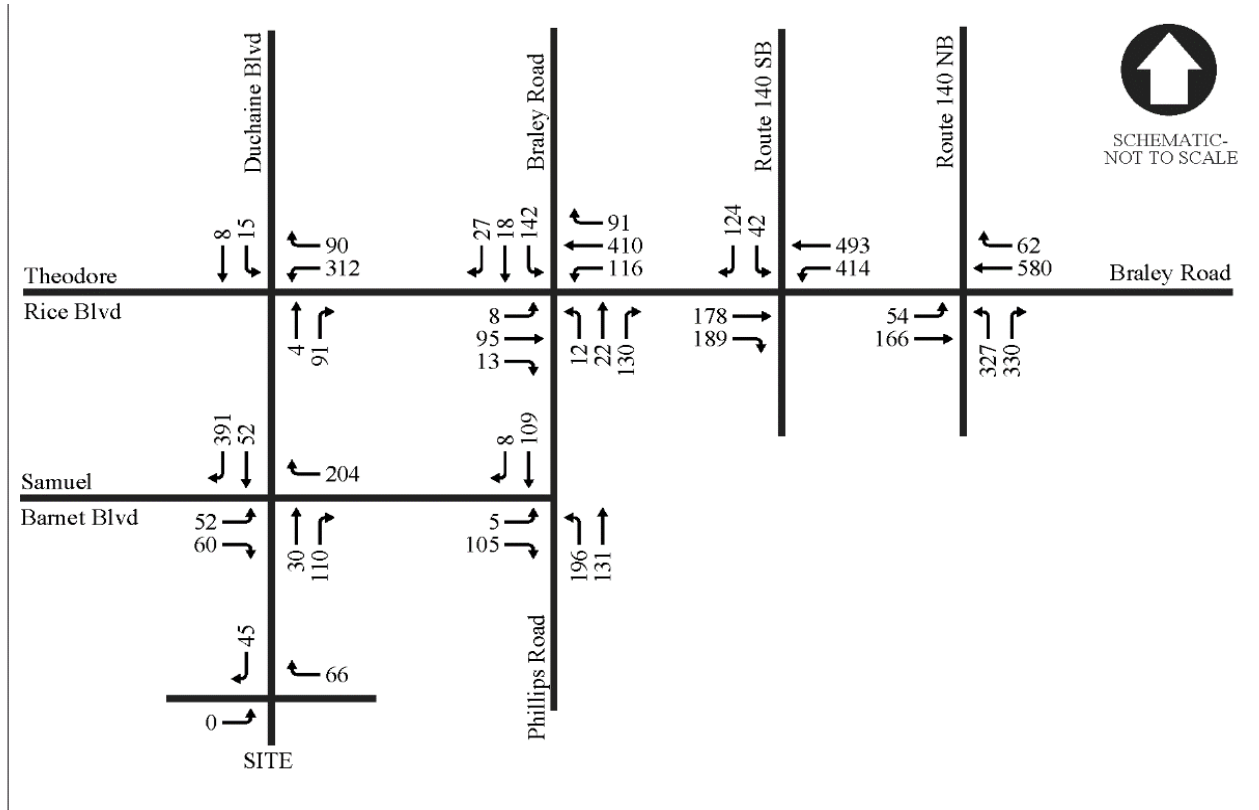


Figure 5.4
2020 Existing Weekday AM
Parallel Products FEIR
New Bedford, MA

Figure 5-5: 2020 Existing Weekday PM Traffic

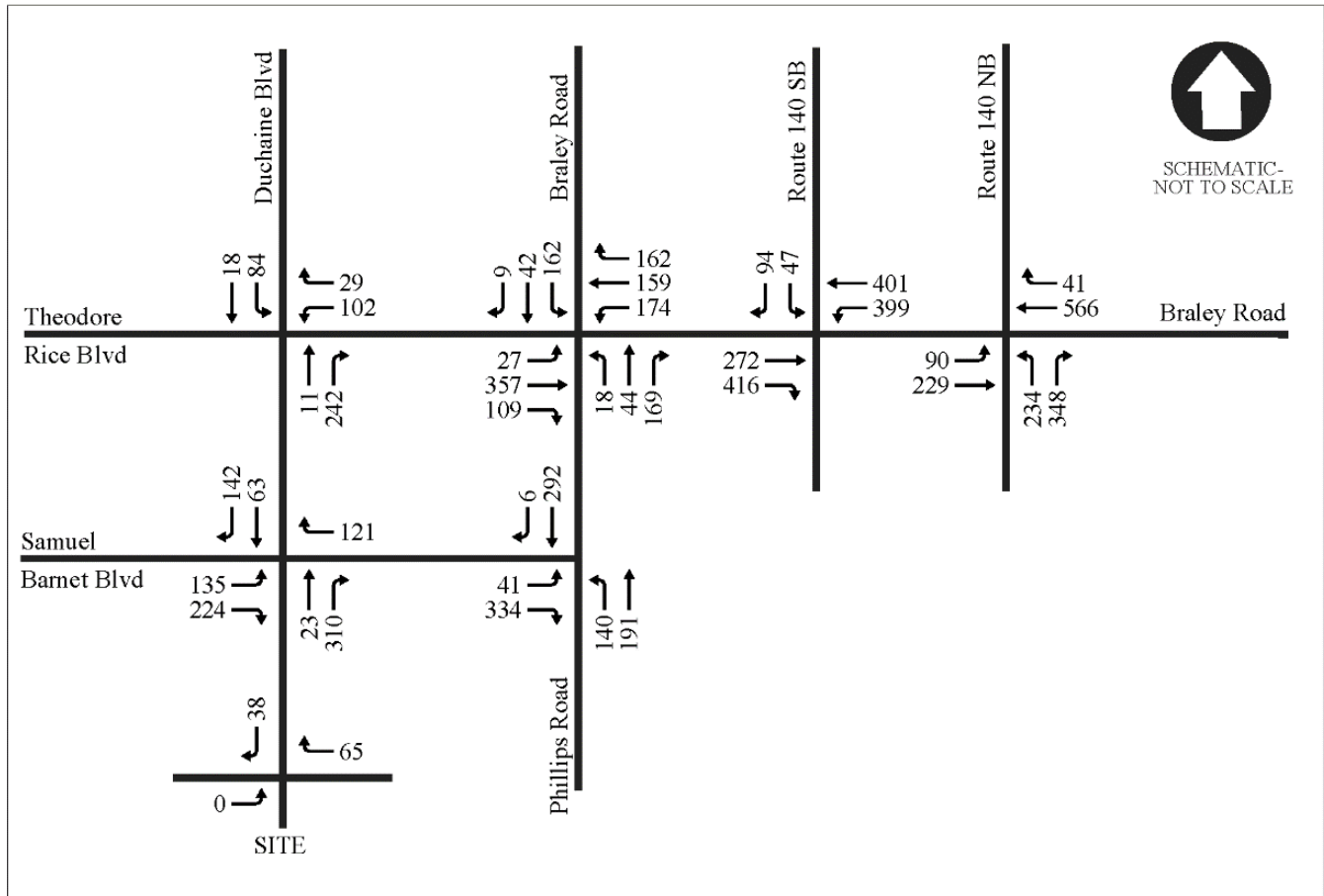


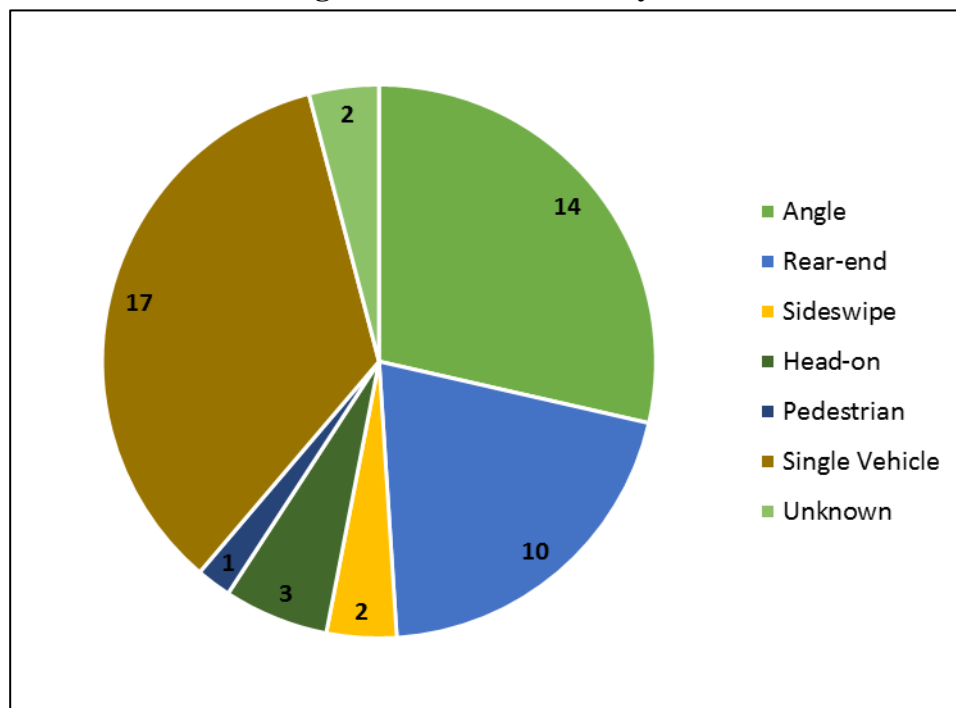
Figure 5.5
2020 Existing Weekday PM
Parallel Products FEIR
New Bedford, MA

5.4.5 Crash Summary

Crash data for the study area intersections was obtained from MassDOT for the most recent five-year period available. This data includes complete yearly crash summaries for 2013, 2014, 2015, 2016, and 2017. The MassDOT Crash Rate Worksheet was used to determine whether the crash frequencies at the study area intersections were unusually high given the travel demands at each location. The MassDOT Crash Rate Worksheet calculates a crash rate expressed in crashes per million entering vehicles. The calculated rate was then compared to the average rate for unsignalized intersections statewide and within MassDOT District 5. For unsignalized intersections, the statewide and MassDOT District 5 average crash rates are 0.57 crashes per million entering vehicles.

The crash data is summarized in **Figure 5-6** below, by crash type and a detailed summary is provided in Appendix 13.

Figure 5-6 Crash Summary



Over the five-year period analyzed, the unsignalized intersection of the Route 140 Northbound on/off ramps at Braley Road had a total of 15 reported crashes, resulting in a crash rate of 0.49 crashes per million vehicles entering which is lower than both the District and statewide average. The reported crashes were angle, rear-end, and single vehicle collisions with six of the reported crashes resulting in personal injury.

The unsignalized intersection of the Route 140 Southbound on/off ramps at Braley Road had a total of two reported crashes, resulting in a crash rate of 0.06 crashes per million vehicles entering which is lower than both the District and statewide average. One of the reported crashes was a single vehicle collision and one was a sideswipe collision. Both of the reported crashes resulted in property damage only.

The unsignalized intersection of Braley Road/Theodore Rice Boulevard at Phillips Road had a total of 14 reported crashes over the five-year period analyzed, resulting in a crash rate of 0.48 crashes per million vehicles entering, which is lower than the statewide and District 5 crash rate. The majority of the 14 reported crashes were single vehicle collisions and rear-end collisions, and five crashes resulted in personal injury.

The unsignalized intersection of Theodore Rice Boulevard at Duchaine Boulevard had a total of ten crashes over the five-year period analyzed resulting in a crash rate of 1.01 crashes per million vehicles entering, which is higher than the statewide and District 5 average crash rate. Four of the reported crashes were single vehicle collisions, one of which, in 2014, resulted in a fatality. Based on reports, speed was a prominent factor in this fatal crash and it is suspected that the operator of the vehicle was street racing and the fatal crash was believed to be an isolated incident.

The intersection of Duchaine Boulevard at Samuel Barnet Boulevard had a total of five reported crashes, resulting in a crash rate of 0.24 crashes per million vehicles entering which is lower than both the District and statewide average. All five reported crashes were single vehicle collisions resulting. One of the reported crashes resulted in personal injury, three resulted in property damage only, and the severity of one of the crashes was not reported.

The intersection of Phillips Road at Samuel Barnet Boulevard had a total of three reported crashes which resulted in a crash rate of 0.18 crashes per million vehicles entering, two of which resulted in personal injury with the third crash involving property damage only. The resulting crash rate is lower than both the statewide and District 5 average crash rate.

5.5 Future Conditions

To analyze the traffic impacts associated with the proposed project, MassDOT standards state that future year traffic volumes should be projected based on a seven-year project horizon. The 2020 base year traffic volumes were projected to the future year 2027, when both phases of the development are expected to be fully built and occupied. Independent of the proposed project, traffic volumes on the roadways in 2027 are assumed to include existing traffic, as well as new traffic resulting from general growth in the study area and from other planned development projects. The potential background traffic growth unrelated to the proposed project was considered in the development of the 2027 No Build (without project) peak hour traffic volumes. The anticipated traffic increases associated with the proposed development were then added to the 2027 No Build volumes to reflect the 2027 Build (with project) traffic

conditions. A more detailed description of the development of the 2027 No Build and 2027 Build traffic volume networks follows.

5.5.1 Future Roadway Improvements

Planned roadway improvement projects can affect area travel patterns and future traffic operations. There are no planned roadway improvements that would impact traffic on the study area roadways.

5.5.2 Background Traffic Growth

Traffic growth is primarily a function of changes in motor vehicle use and expected land redevelopment in the region. To predict a rate at which traffic on the roadways in the vicinity of the site can be expected to grow during the seven-year forecast period (2020 to 2027), both historic traffic growth and planned area redevelopments were examined.

5.5.3 Historic Traffic Growth

A background growth rate of one percent per year was confirmed with the Southeastern Regional Planning and Economic Development District (SPREDD) in order to forecast increases in general traffic volumes on the study area roadways and intersections for our future analysis. This rate captures growth associated with general changes in population and accounts for other small developments in the vicinity of the study area.

5.5.4 Site Specific Growth

There are no planned/permitted developments adjacent to the project study area to be added as site specific growth.

5.5.5 2027 No Build Traffic Volumes

The 2020 Existing peak hour traffic volumes were grown by one percent per year over the seven-year study horizon (2020 to 2027) to establish the 2027 base future traffic volumes. The 2027 No Build weekday morning and weekday afternoon peak hour traffic volume networks are illustrated in Figures 5.7 and 5.8, respectively, and are documented in the traffic projection model within the Traffic Study presented as Appendix 13 of this report.

Figure 5-7 2027 No Build Weekday Morning Peak Hour Traffic

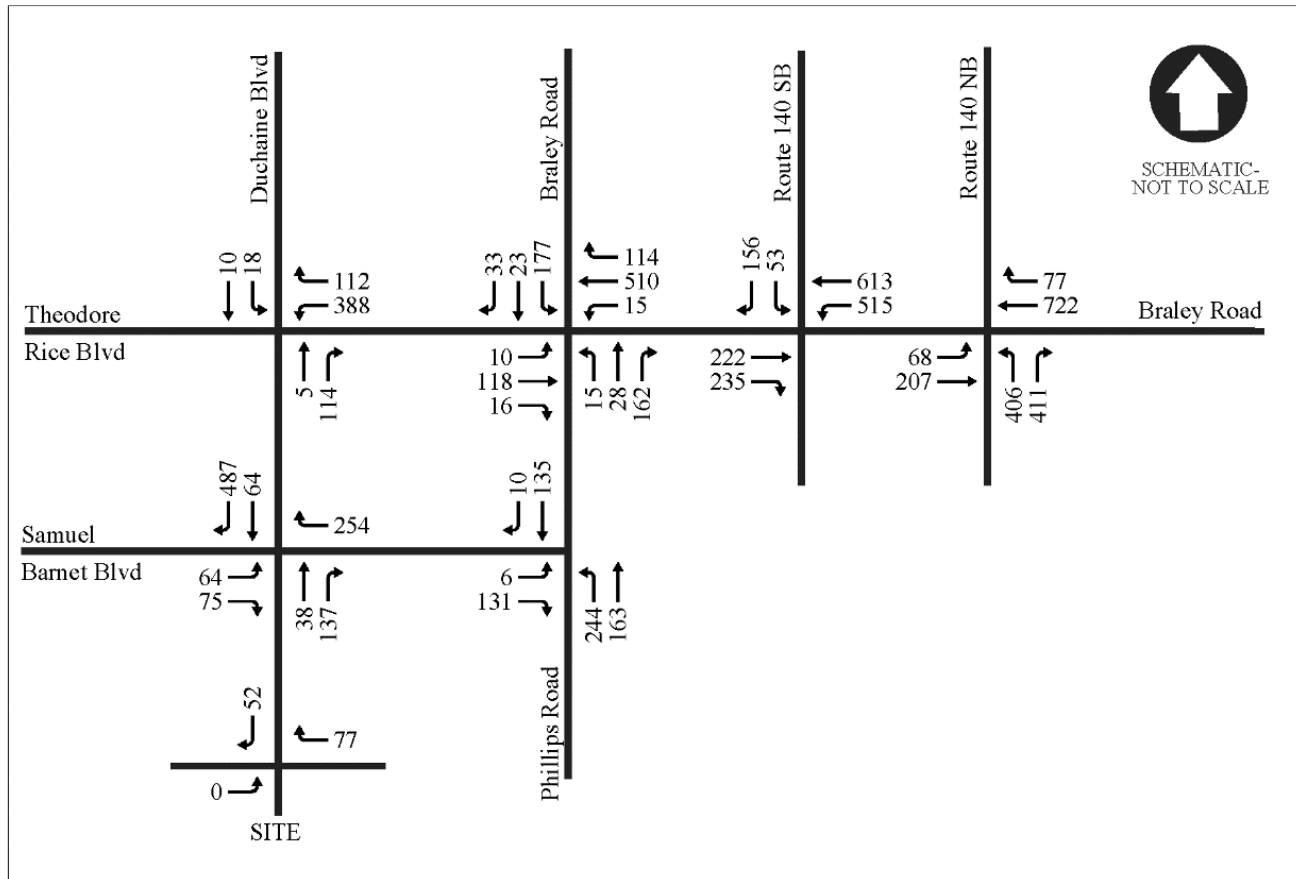


Figure 5.7
2027 No Build Weekday AM
Parallel Products FEIR
New Bedford, MA

Figure 5-8: 2027 No Build Weekday Afternoon Peak Hour Traffic

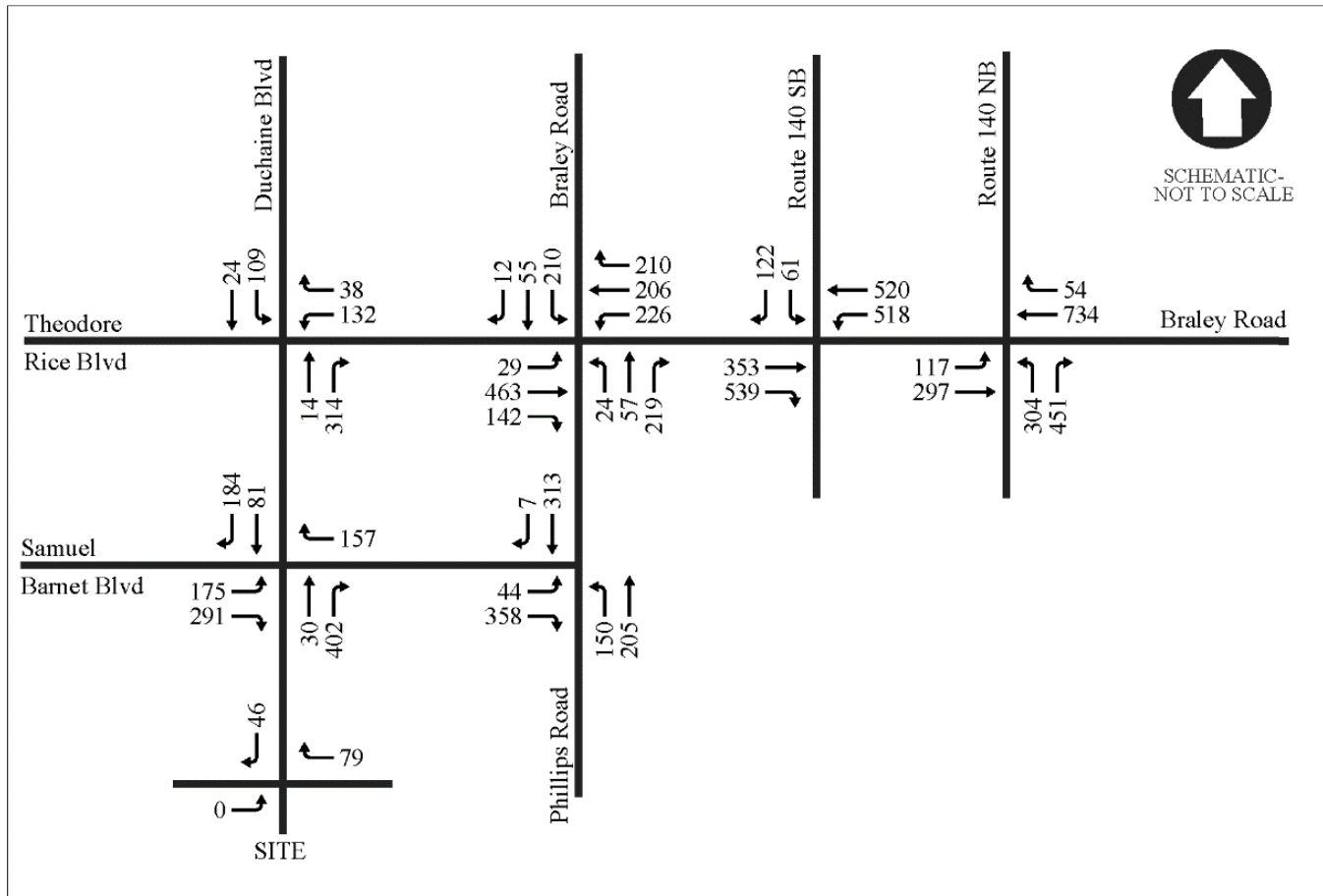


Figure 5.8
2027 No Build Weekday PM
Parallel Products FEIR
New Bedford, MA

5.5.6 Site Generated Traffic

The site proposes to receive a maximum of 1,500 tpd of solid waste (MSW and C&D) as part of Phase 2 of the project. To estimate the trip generation for the proposed site, data provided by the proponent on the allowable material tonnage and the maximum capacities of delivery vehicles were utilized. Based on information received, the inbound MSW to the proposed site includes approximately 1,065 tons per day in transfer trailers (approximately 28 tons per load), and 295 tons per day in packer trucks (approximately 9 tons per load). Inbound C&D to the proposed site includes approximately 140 tons per day, all of which will be transported in transfer trailers (approximately 28 tons per load). Inbound MSW and C&D is expected to add 152 daily truck trips (76 entering and 76 exiting).

In addition to the 1,500 tpd of solid waste (MSW and C&D), the site proposes to process up to 50 dry tons per day of biosolids. The biosolids accepted is expected to consist of 280 wet tons per day of biosolids slurry and 120 wet tons per day of biosolids cake. The biosolids slurry is expected to be transported primarily in large tanker truck (approximately 28 tons per truck). Smaller tanker trucks with an average capacity of 3,000 gallons (approximately 12 per truck) may also be used. Trip generation for inbound biosolids slurry is based on 9 large tanker trucks and 2 smaller tanker trucks.;

Biosolids cake will be transported to the facility in roll off containers with an average weight of 10-12 tons per truck load. Twelve trucks per day would be required to deliver 120 wet tons per day of biosolids cake. The total number of trucks delivering biosolids slurry and biosolids cake will be 23 trucks per day. After processing the weight of biosolids will be reduced to 44 wet tons per day. The 44 tons of product will be sent for disposal.

Although it is expected that the majority of outbound transportation of materials from the site will be done via rail, outbound materials were conservatively estimated to be transported from the proposed site in transfer trailers. 1,500 tons per day in combined MSW and C&D and 44 tons per day of dried biosolids would depart the site on a typical day in transfer trailers (approximately 28 tons per load) which would arrive at the site empty. As a result, outbound MSW, C&D, and biosolids would generate 112 truck trips per day (56 entering, 56 exiting).

As previously noted, the proposed facility expansion would also include expanded glass recycling operations already approved under the Phase 1 waiver for the project. The expansion would allow for an additional 20,000 tons of glass processing annually, or approximately 80 tons per day based on an annual operating schedule of 250 operating days. This additional glass would be transported to the site in dump trailers typically carrying 13 to 15 tons per truck. Based on an average capacity of 13.5 tons per truck, the expanded glass operations would result in additional 6 daily inbound truck trips, which would then depart the site empty. Processed glass would typically depart the site via rail; however, as a conservative measure, it can be assumed that material may depart the site via 28-ton dump

trailers. This results in an additional 3 daily outbound truckloads, which would arrive at the site empty. In total, the expanded glass processing operation would result in additional 18 daily truck trips (9 entering, 9 exiting).

Employment at the facility is proposed to increase from 75 to approximately 150 daily employees, operating in three 8-hour shifts each consisting of 50 employees. The shifts are scheduled to run from 6:00 AM to 2:30 PM, 2:00 PM to 10:30PM, and 10:00PM to 6:30AM. Based on these shifts, it is expected that all employees will be arriving to the site outside of the peak hour. However, as employees may not depart the site precisely at the end of the assigned shifts, to present a conservative analysis it was assumed that the employees from 10:00 AM to 6:30 AM shift would leave the site during the weekday morning peak hour, and employees from the 6:00 AM to 2:30 PM shift would leave the site during the weekday afternoon peak hour.

The site is proposed to accept truck deliveries between 5:00 AM and 9:00 PM. Data from two comparable sites, one in Rochester, MA and one in Taunton, MA were utilized to determine the hourly distribution of truck traffic entering the site and the estimated number of trips expected to access the site during both the weekday morning and weekday afternoon peak hours. The hourly distribution data is provided in Table 5.6 below.

Table 5.5: Hourly Distribution Data

Time	Hourly distribution of trucks (%)
5-6 AM	4%
6-7 AM	6%
7-8 AM	8%
8-9 AM	8%
9-10 AM	9%
10-11 AM	10%
11-12 AM	10%
12-1 PM	11%
1-2 PM	10%
2-3 PM	10%
3-4 PM	7%
4-5 PM	3%
5-6 PM	2%
6-7 PM	1%
7-8 PM	1%
8-9 PM	0%
Total	100%

To present a conservative analysis, the peak hour of the site generated traffic, 11 percent, was applied to the existing peak hour traffic of the surrounding roadways.

A summary of the expected peak hour trip generation for Phase 2 is shown in Table 5.7 below. Details on the trip generation calculations for Phases 1 and 2 of the project are provided in Traffic Study presented as Appendix 13 of this report.

Table 5.6: Hourly Distribution of Truck Trips

Description	Weekday			Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Inbound MSW/C&D Trips									
Packer	33	33	66	4	4	8	4	4	8
Transfer Trailer	43	43	86	4	4	8	4	4	8
Inbound Biosolid Trips	23	23	46	2	2	4	2	2	4
Outbound MSW/C&D/Biosolids	56	56	112	6	6	12	6	6	12
<i>Truck Trip Total (MSW, C&D, and Biosolids)</i>	155	155	310	16	16	32	16	16	32
Expanded Glass Trips (Approved under Phase 1)	9	9	18	1	1	2	1	1	2
<i>Truck Trip Total</i>	164	164	328	17	17	34	17	17	34
Facility Employees	75	75	150	0	25	25	0	25	25
Total	239	239	478	17	42	59	17	42	59

As shown in Table 5.6, Phase 2 of the proposed transfer station, including trips associated with expanded glass operations previously approved under the Phase 1 waiver, is expected to generate a total of 59 vehicle trips (17 entering and 42 exiting) during the weekday morning peak hour, and 59 vehicle trips (17 entering and 42 exiting) during the weekday afternoon peak hour. Over the course of an average weekday, the proposed project is estimated to result in approximately 478 vehicle trips (239 entering and 239 exiting) during the typical weekday. As stated in Table 5.4, the existing facility generates 90 truck trips per day. With the expansion of Phase 1 glass operations and the addition of MSW, C&D, and biosolids processing under Phase 2, the facility is anticipated to generate up to 418 daily truck trips. Per MassDEP, the maximum daily truck trip generation of the facility will not exceed 418 trips.

5.5.7 Project Trip Distribution and Assignment

The traffic expected to be generated by the proposed development was distributed onto the study area roadways and intersections based on expected access to/from Route 140. It was assumed that all of the truck traffic entering the site will utilize Route 140 to Braley Road. A small portion of the employee trips are assumed to access the site from the south, utilizing Phillips Road. The resulting arrival and departure patterns are presented in Figure 5.9. The resulting distributed new project trips during the weekday morning and afternoon peak hours are shown in Figure 5.10.

5.5.8 2027 Future Build Peak Hour Traffic Volumes

To establish the 2027 Build peak hour traffic volumes, the project-related traffic was assigned to the surrounding roadway network based on the project distribution patterns discussed above. These project trips were then added to the 2027 No Build peak hour traffic volumes to reflect the 2027 Build peak hour traffic volumes. The resulting 2027 Build weekday morning and weekday afternoon peak hour traffic volumes are presented in Figures 5.11 and 5.12, respectively.

Figure 5-9: Directions of Arrival and Departure

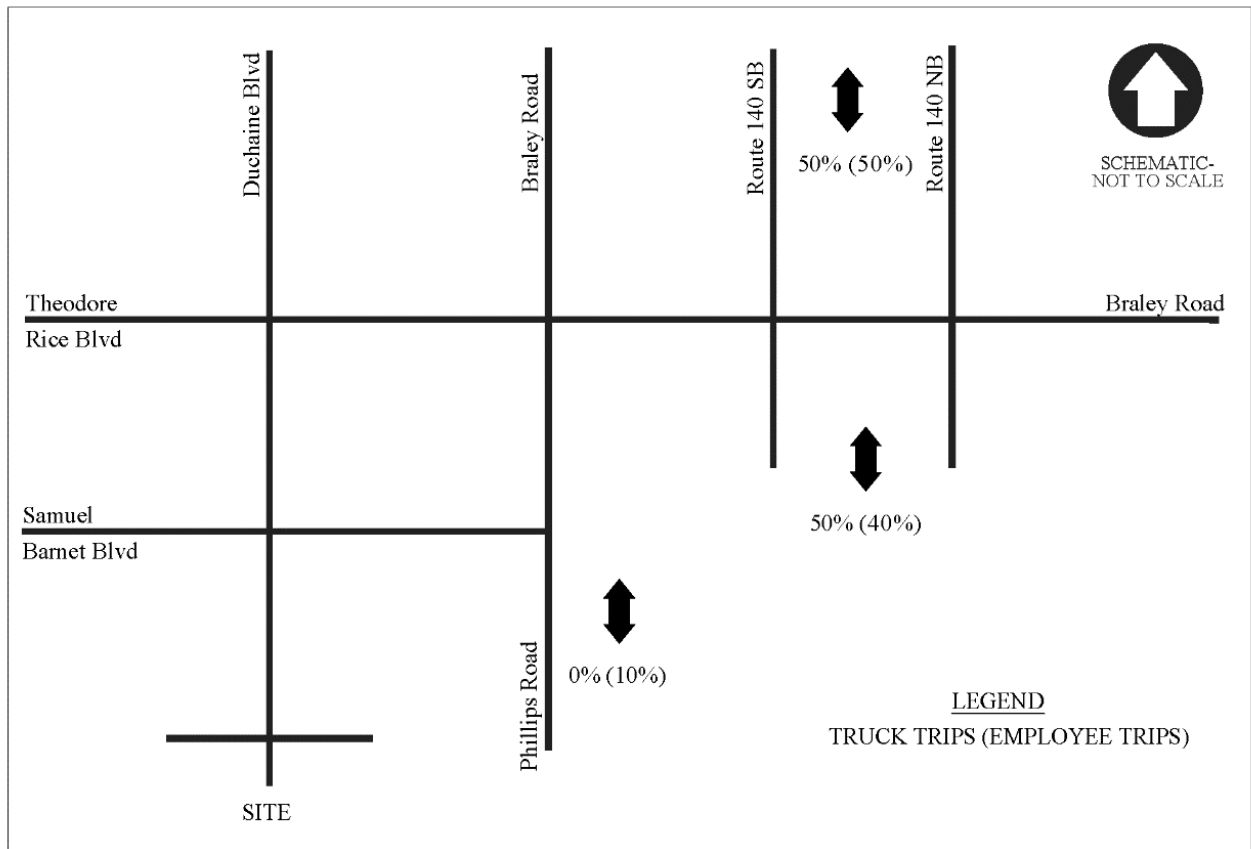


Figure 5.9
Direction of Arrivals and Departures
Parallel Products FEIR
New Bedford, MA

Figure 5-10: New Project Trips

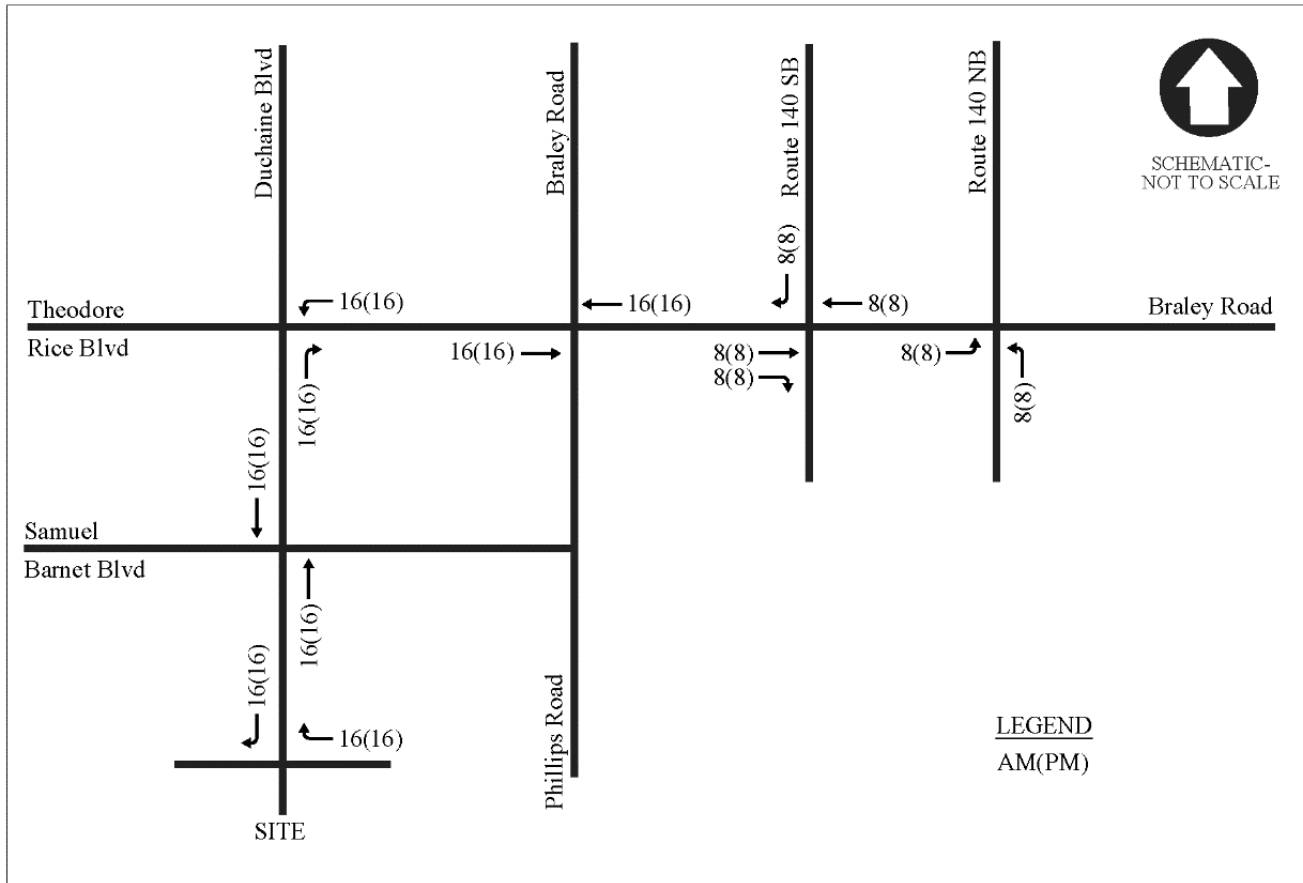


Figure 5.10
Project Generated Truck Trips
Parallel Products FEIR
New Bedford, MA

Figure 5-11: 2027 Build Weekday Morning Peak Hour Traffic

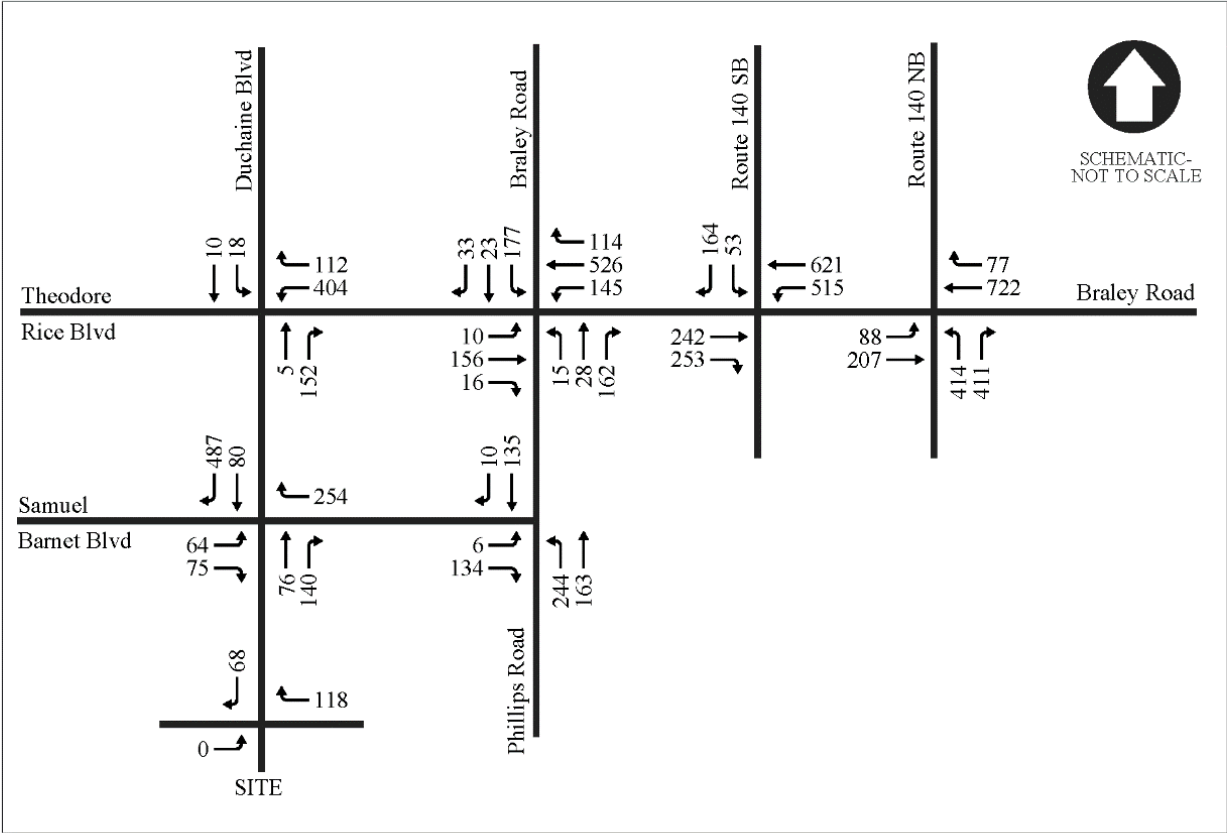


Figure 5.11
2027 Build Weekday AM
Parallel Products FEIR
New Bedford, MA

Figure 5-12: 2027 Build Weekday Afternoon Peak Hour Traffic

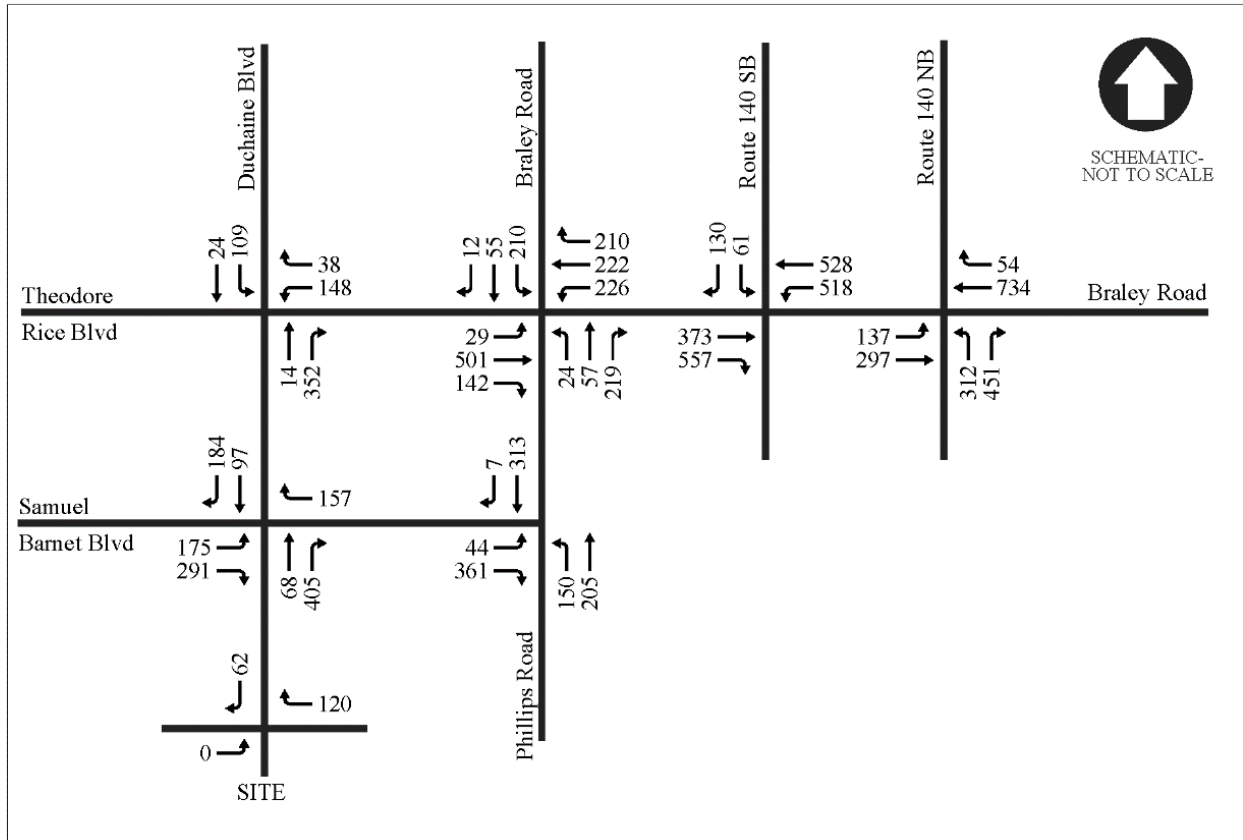


Figure 5.12
2027 Build Weekday PM
Parallel Products FEIR
New Bedford, MA

5.6 Traffic Operations Analysis

In previous sections of this report, the quantity of traffic on the study area roadways was described. The following section describes the quality of traffic flow at the study area intersections for the given travel demands. As a basis for this assessment, intersection capacity analyses were conducted using Synchro capacity analysis software for the study area intersections under the 2020 Base, 2020 Existing, 2027 No Build, and 2027 Build peak hour traffic conditions. The weekday morning and weekday afternoon peak hours were analyzed for the study area intersections under the three conditions. This analysis is based on procedures contained in the Highway Capacity Manual (HCM) which are summarized in Traffic Study presented as Appendix 13. A discussion of the evaluation criteria and a summary of the results of the capacity analyses are presented below.

5.6.1 Level of Service Criteria

Operating levels of service (LOS) are reported on a scale of A to F with A representing the best conditions (with little or no delay) and F representing the worst operating conditions (long delays).

5.6.2 Capacity Analysis Results

Intersection capacity analyses were conducted for the study area intersections to evaluate the 2020 Base, 2020 Existing, 2027 No Build, and 2027 Build peak hour traffic conditions. Based on the analysis, the network peak hour of the adjacent street traffic occurs between 7:30 AM and 8:30 AM for the weekday morning, and 3:00 PM and 4:00 PM for the weekday afternoon.

The capacity analysis results for the 2020 Base, 2020 Existing, 2027 No Build, and 2027 Build conditions are presented in Traffic Study presented as Appendix 13. The results of the unsignalized intersection capacity analyses for the critical approaches are presented in Table 5.7, presented on the following page. The expected queue lengths were adjusted based on the trucks accessing the site and their respective lengths. The adjusted queues are presented graphically in Figure 5.13. As shown on Sheets 4 and 8 of Figure 5.13, queues on the Route 140 Northbound off-ramp extend from the Braley Road intersection to the Route 140 mainline during the weekday morning and weekday afternoon peak hours under 2027 No-Build conditions. Under 2027 Build conditions, this queue is projected to increase by 277 feet during the weekday morning peak hour and 228 feet during the weekday afternoon peak hour.

Table 5.7 Capacity Analysis Summary

Intersection	Movement	2020 Base						2020 Existing						2027 No Build						2027 Build					
		Weekday AM			Weekday PM			Weekday AM			Weekday PM			Weekday AM			Weekday PM			Weekday AM			Weekday PM		
		LOS ¹	Delay ²	V/C ³	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Route 140 Northbound Ram at Braley Road	EB LT	B	10.3	0.07	B	10.4	0.14	B	10.5	0.10	B	10.6	0.16	B	10.8	0.11	B	11.0	0.18	B	11.0	0.14	B	11.3	0.21
	WB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	NB L	F	404.4	1.78	F	>500	2.44	F	499.7	1.99	F	>500	2.63	F	>500	2.43	F	>500	3.38	F	>500	2.74	F	>500	3.90
	R	B	13.7	0.50	C	18.9	0.65	B	13.7	0.50	C	18.9	0.65	B	14.8	0.55	C	22.3	0.72	B	14.8	0.55	C	22.3	0.72
Route 140 Southbound Ram at Braley Road	EB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	WB LT	B	11.2	0.48	C	22.7	0.73	B	11.6	0.49	C	24.1	0.75	B	12.6	0.55	D	34.6	0.85	B	13.2	0.57	E	40.1	0.89
	SB L	F	>500	3.60	B	13.6	0.24	F	>500	4.12	B	13.6	0.24	F	>500	10.39	B	14.4	0.27	F	>500	15.59	B	14.8	0.29
	R	C	16.8	0.36	A	0.0	0.00	C	17.0	0.36	A	0.0	0.00	C	18.8	0.41	A	0.0	0.00	C	19.5	0.44	A	0.0	0.00
Braley Road/ Theodore Rice Boulevard at Phillips Road	EB LT	B	12.9	0.22	F	205.1	1.47	B	14.3	0.32	F	244.0	1.59	C	15.4	0.36	F	302.3	1.79	C	17.8	0.48	F	355.6	1.92
	R	B	10.3	0.04	C	16.8	0.41	B	10.4	0.04	C	17.4	0.42	B	10.8	0.04	C	19.1	0.48	B	11.0	0.04	C	19.2	0.48
	WB LTR	F	138.1	1.22	F	257.0	1.56	F	154.4	1.27	F	270.5	1.61	F	211.5	1.39	F	335.3	1.82	F	242.5	1.47	F	354.5	1.89
	NB LTR	B	15.0	0.46	E	43.9	0.97	C	15.7	0.48	E	48.0	1.01	C	17.4	0.54	F	60.4	1.14	C	18.4	0.56	F	61.6	1.16
	SB LTR	C	15.8	0.46	E	36.0	0.83	C	16.4	0.48	E	42.1	0.92	C	18.2	0.54	E	46.3	0.98	C	19.2	0.57	E	47.3	1.00
Theodore Rice Boulevard at Duchaine Boulevard	WB LR	A	8.1	0.28	A	7.6	0.09	A	8.2	0.28	A	7.7	0.09	A	8.2	0.30	A	7.7	0.10	A	8.3	0.31	A	7.7	0.11
	NB TR	C	24.5	0.02	B	11.7	0.02	C	24.8	0.02	B	11.8	0.02	D	27.4	0.02	B	12.1	0.02	D	29.2	0.02	B	12.5	0.02
	SB L	D	25.8	0.12	B	12.8	0.23	D	26.3	0.12	B	12.9	0.24	D	29.8	0.14	B	13.5	0.26	D	32.2	0.15	B	14.4	0.28
	T	C	23.7	0.02	B	11.5	0.02	C	24.1	0.02	B	11.6	0.03	D	26.6	0.03	B	11.8	0.03	D	28.3	0.03	B	12.3	0.03
Duchaine Boulevard at Samuel Barnet Boulevard	EB LR	B	12.4	0.13	B	11.6	0.27	B	13.1	0.14	B	12.1	0.29	B	13.6	0.16	B	12.5	0.31	B	14.7	0.18	B	13.6	0.34
	WB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	NB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Phillips Road at Samuel Barnet Boulevard	EB LR	B	11.2	0.21	D	34.0	0.82	B	11.2	0.22	D	34.5	0.83	B	11.5	0.24	F	52.3	0.94	B	11.6	0.24	F	53.3	0.94
	NB LT	A	8.2	0.20	A	8.7	0.15	A	4.9	0.20	A	8.7	0.15	A	5.0	0.22	A	8.9	0.16	A	8.3	0.22	A	8.9	0.16
	SB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Duchaine Boulevard at Site Driveway	EB L	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	WB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00

1 Level-of-Service

2 Average vehicle delay in seconds

3 Volume to capacity ratio

Figure 5-13.1 Truck Queue Lengths, 1 of 8

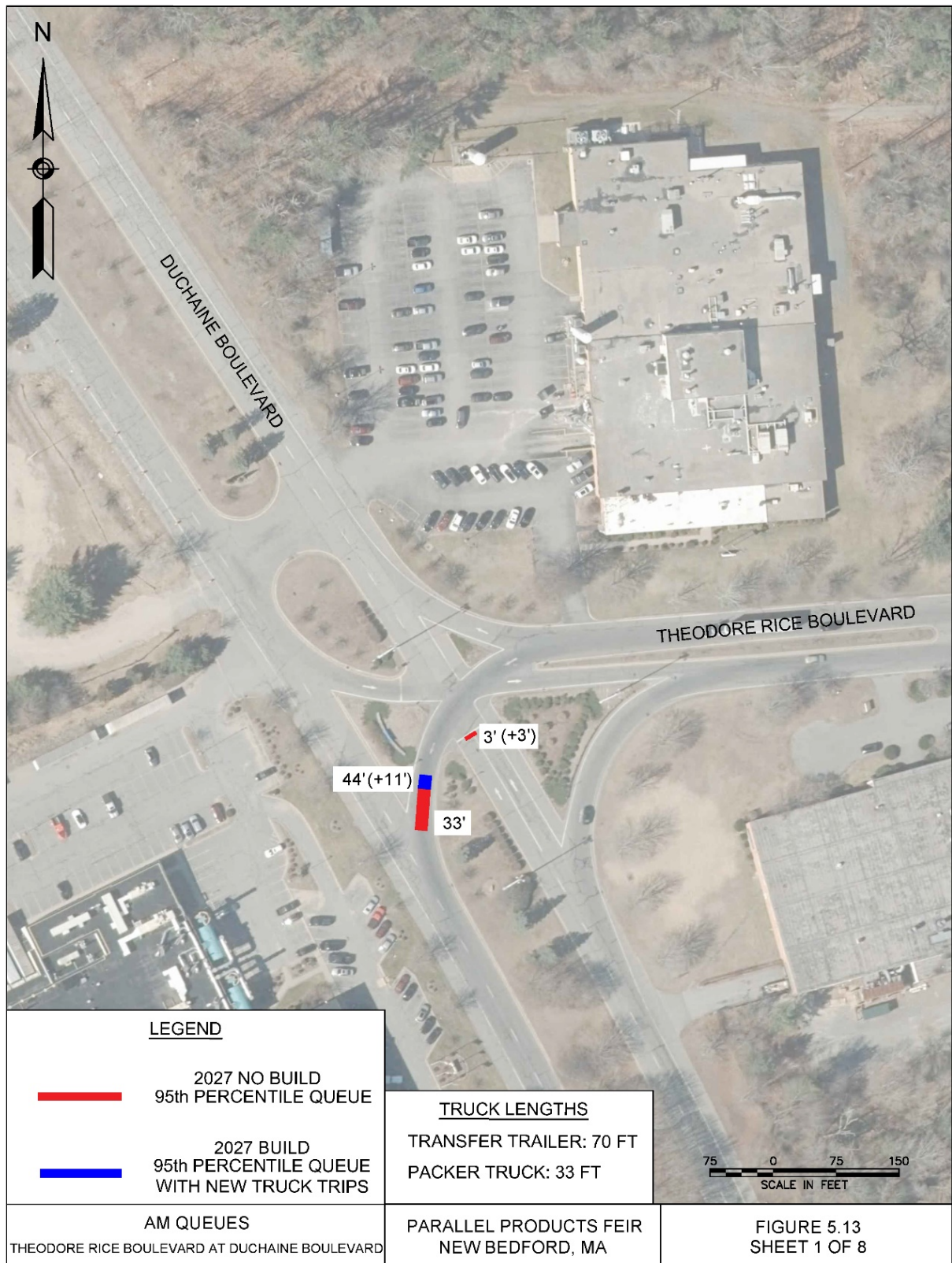


Figure 5-13.2 Truck Queue Lengths, 1 of 8

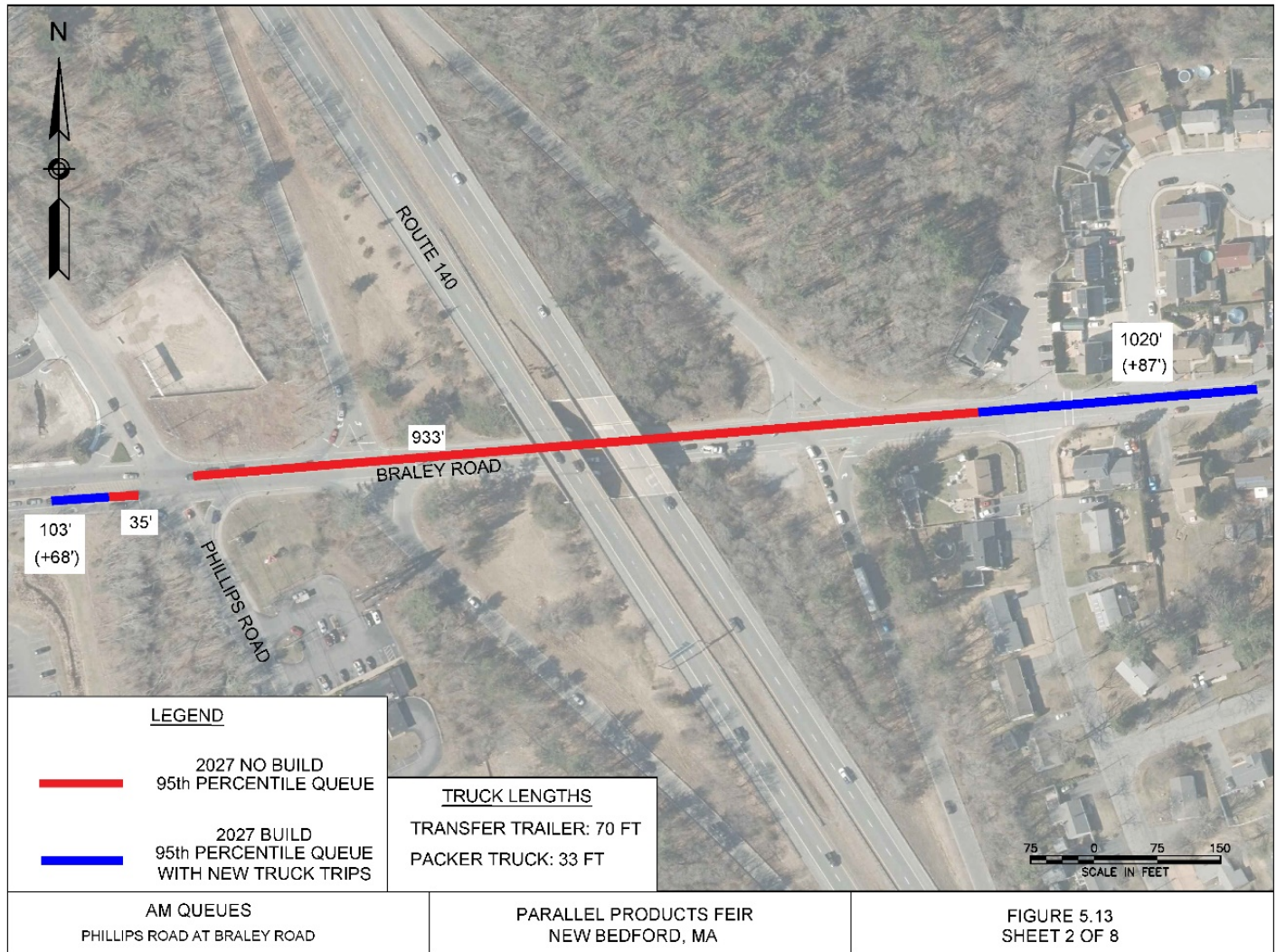


Figure 5-13.3, Truck Queue Lengths 3 of 8



Figure 5-13.4 Truck Queue Lengths Sheet 4 of 8

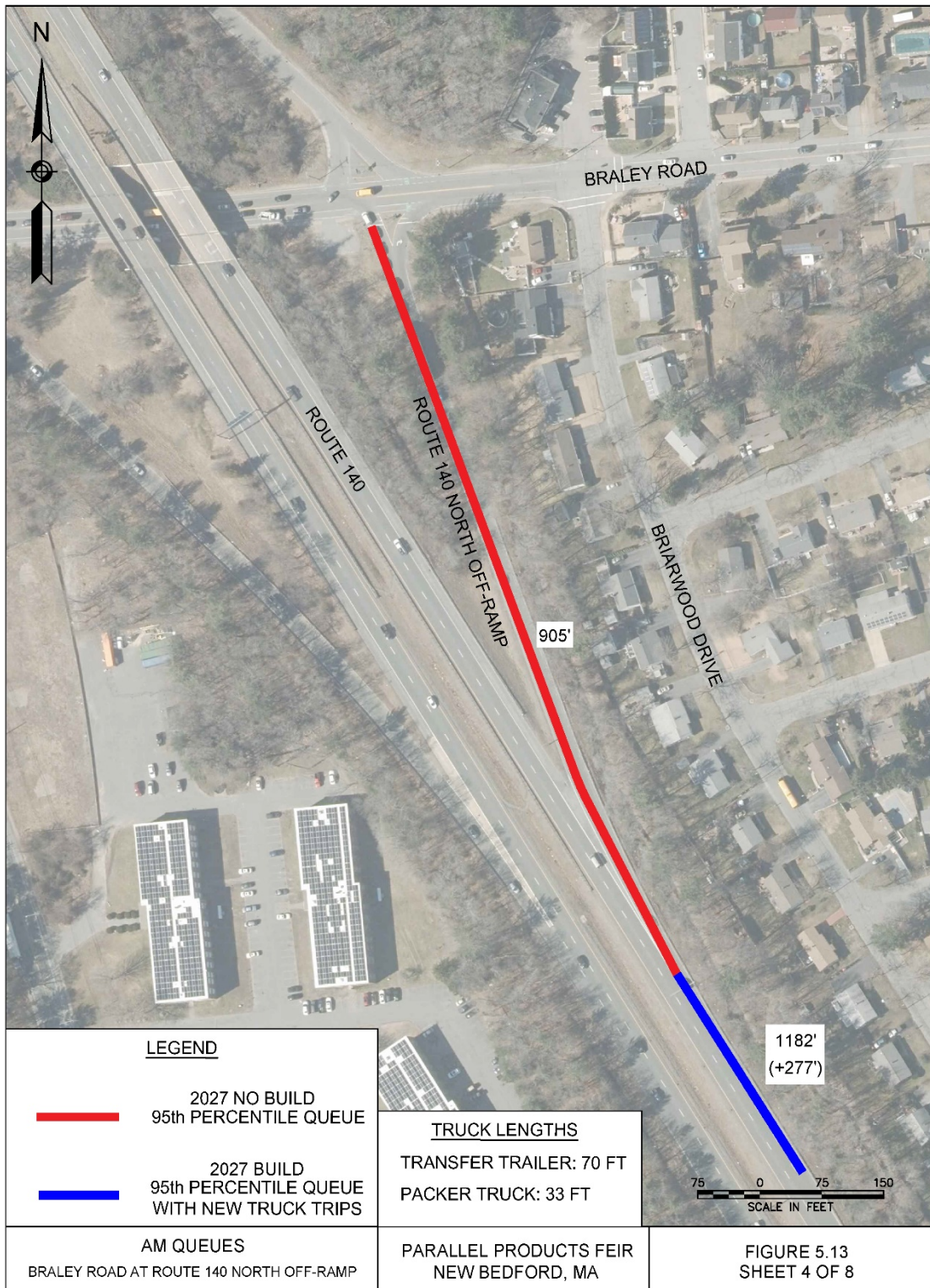


Figure 5-13.5, Truck Queue Lengths 5 of 8



Figure 5-13.6, Truck Queue Lengths 6 of 8

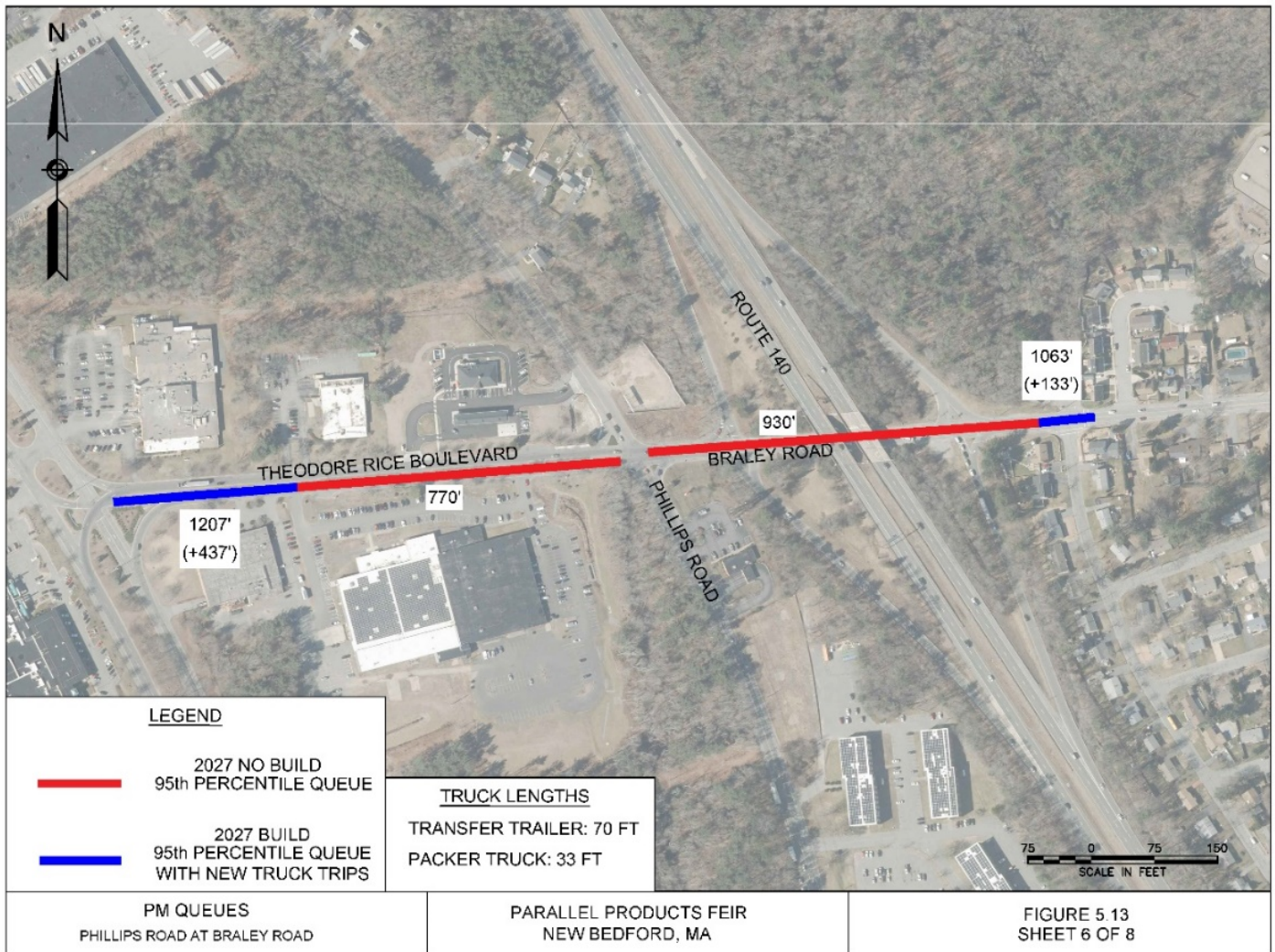


Figure 5-13.7, Truck Queue Lengths, Sheet 7 of 8



Figure 5-13.8, Truck Queue Lengths, Sheet 8 of 8

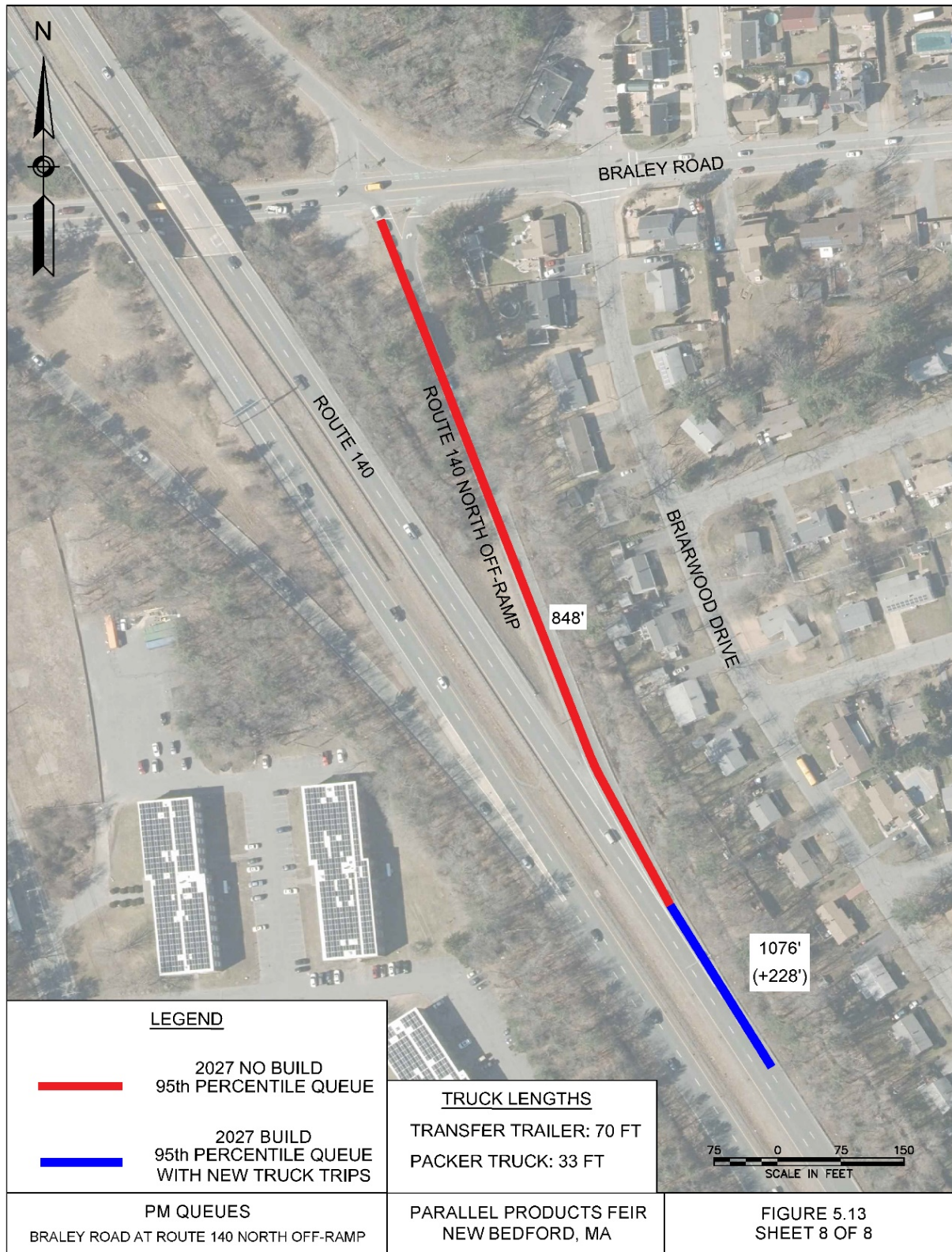


Table 5.7 reports the level-of-service results for the critical approaches at the unsignalized intersections within the study area during the weekday morning and weekday afternoon peak hours (which can also be found in Appendix 13). The specific capacity analysis results of the study area intersections are discussed below.

Route 140 Northbound on/off-ramp at Braley Road

As shown in Table 5.7, the critical stop-controlled northbound approach at the Route 140 Northbound off-ramp operates at a LOS B for right-turning vehicles during the weekday morning peak hour and LOS C during the weekday afternoon peak hour, and LOS F for left-turning vehicles during both the peak hours under the 2020 Base conditions. Under the 2020 Existing condition, both the northbound right and left-turn movements are shown to continue to operate at the same LOS. Under all future 2027 conditions, both No Build and Build, the northbound approach is also expected to operate at the same LOS for both movements.

Route 140 Southbound on/off-ramp at Braley Road

The capacity analysis results show that under the 2020 Base conditions the stop-controlled southbound approach at the Route 140 southbound off-ramp operates at LOS F for left-turning vehicles during the weekday morning and at LOS B during the weekday afternoon peak hour. The southbound right-turn movement is shown to operate at LOS C and at LOS A during the weekday morning and weekday afternoon peak hours, respectively. Under the 2020 Existing conditions, both southbound movements are shown to continue to operate at the same LOS. Similarly, under both the 2027 No Build and 2027 Build future conditions, both of these movements continue to operate at the same LOS.

Braley Road/Theodore Rice Boulevard at Phillips Road

Under the 2020 Base conditions, the stop-controlled northbound approach is shown to operate at a LOS C during the weekday morning peak hour and at LOS E during the weekday afternoon peak hour. The stop-controlled southbound approach is also shown to operate at LOS C during the weekday morning peak hour, and at LOS E during the weekday afternoon peak hour. The stop-controlled eastbound approach is shown to operate at LOS B for both the left-through movement and for the right-turn movement during the weekday morning peak hour, and LOS F and LOS C for the left-through movement and right-turn movement, respectively, during the weekday afternoon peak hour. The stop-controlled westbound approach is shown to operate at LOS F during both the weekday morning and weekday afternoon peak hours. Under the 2020 Existing condition, there are no expected changes in LOS for any of the approaches at the unsignalized intersection.

Under the 2027 No Build conditions, the eastbound left turn and through movement is expected to drop from LOS B to LOS C during the weekday morning peak hour, and the

northbound approach is expected to drop from LOS E to LOS F during the weekday afternoon peak hour. All other approaches are expected to continue to operate at the same LOS.

There are not expected to be any changes in LOS from the 2027 No Build to the 2027 Build conditions during either peak hour period analyzed.

Theodore Rice Boulevard at Duchaine Boulevard

The stop-controlled northbound approach at the intersection of Theodore Rice Boulevard at Duchaine Boulevard is shown to operate at a LOS C during the weekday morning peak hour and at LOS A during the weekday afternoon peak hour under the 2020 Base conditions. The southbound left turn approach is shown to operate at a LOS D during the weekday morning peak hour and LOS B during the weekday afternoon peak hour while the southbound through movement operates at a LOS C and LOS B during the weekday morning and weekday afternoon peak hours, respectively.

Under the 2020 Existing conditions, the northbound approach is shown to drop from a LOS A to a LOS B during the weekday afternoon peak hour. All other approaches are expected to maintain the same LOS.

Under the 2027 No Build conditions, the northbound approach and the southbound through movement are both expected to drop from LOS C to LOS D during the weekday morning peak hour while all other movements continue to operate with the same LOS.

There are not expected to be any changes in LOS from the 2027 No Build conditions during either peak hour analyzed under the 2027 Build conditions.

Duchaine Boulevard at Samuel Barnet Boulevard

Under the 2020 Base conditions the stop-controlled eastbound movement at the intersection of Duchaine Boulevard at Samuel Barnet Boulevard currently operates at LOS B during both the weekday morning and weekday afternoon peak hours. Based on the capacity analysis results, it is expected that the eastbound approach will continue to operate at LOS B under the 2020 Existing conditions and all future conditions (2027 No Build and 2027 Build).

Phillips Road at Samuel Barnet Boulevard

The critical eastbound approach on at the intersection of Phillips Road at Samuel Barnet Boulevard is shown to operate at a LOS B during the weekday morning peak hour and at LOS D during the weekday afternoon peak hour under the 2020 Base conditions. The capacity analysis indicates that under the 2020 Existing conditions, the eastbound approach is expected to continue to operate at the same LOS during both peak hours analyzed.

Under the 2027 No Build conditions, the stop controlled eastbound approach is expected to continue to operate at a LOS B during the weekday morning peak hour, and drop from a LOS D to a LOS F during the weekday afternoon peak hour.

There are not expected to be any changes in LOS from the 2027 No Build conditions during either peak hour analyzed under the 2027 Build conditions.

5.7 Analysis & Potential Mitigation

PPNE is having ongoing discussions with the City of New Bedford which includes discussions on potential mitigation, which has not been finalized. Potential measures were analyzed to evaluate mitigation to the study area intersections. Recent assessment included the completion of a signal warrant analysis for the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard, and considering Transportation Demand Management (TDM) measures.

5.7.1 Traffic Signal Warrant Analysis

A traffic signal warrant analysis was performed for the study area intersection of Braley Road at Phillips Road/Theodore Rice Boulevard based on procedures outlined in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) as amended. The MUTCD establishes nine criteria, referred to as warrants, for the installation of traffic signals. The warrants are based upon traffic volumes, existing roadway conditions, crash history, pedestrian volumes, and proximity to schools. The manual states that satisfaction of these warrants does not in itself require the installation of a traffic signal. However, a traffic signal should not be installed unless one or more of the warrants is met.

The analyses performed are based on the criteria for Warrant 1 (Eight-Hour), Warrant 2 (Four-Hour) and Warrant 3 (Peak Hour) volume warrants. The following warrants were not applicable to this project: Warrant 4 (Pedestrian Volumes), Warrant 5 (School Crossing), Warrant 6 (Coordinated Signal System), Warrant 7 (Crash Experience), Warrant 8 (Roadway Network), and Warrant 9 (Intersection Near a Grade Crossing). The results of the traffic signal warrant analysis are provided in Appendix 13 and discussed below.

The Warrant 1 (Eight-Hour) and Warrant 2 (Four-Hour) vehicular volume signal warrants are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing traffic signal control at an intersection. Warrant 1 is separated into Conditions A and B. According to the MUTCD, “the Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersection traffic is the principal reason to consider installing a traffic control signal.” The MUTCD also sets forth guidelines for Condition B, stating “the Interruption of Continuous Traffic, Condition B is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting

street suffers excessive delay or conflict in entering or crossing the major street. In order for this warrant to be met, minimum vehicular volumes for the major street and minor street, found in Table 4C-1 of the MUTCD, must be exceeded. If any one condition is satisfied, Warrant 1 is met.

To satisfy Warrant 2, the plotted points representing the hourly volumes on the major street and minor street intersection approaches during any four hours of an average weekday must fall above the applicable curve in Figure 4C-2 of the MUTCD.

The Warrant 3 (Peak Hour) vehicular volume signal warrant is intended for use at a location where traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic experiences undue delay when entering or crossing the major street. Warrant 3 is satisfied when the plotted point representing the total hourly traffic volume of both approaches on the major street and the corresponding hourly volume of the higher-volume minor street approach for one hour of an average day falls above the applicable curve in Figure 4C-4 of the MUTCD.

Analyses for Warrants 1, 2, and 3 were performed using the adjusted 2020 Existing, 2027 No Build, and 2027 Build traffic volumes at the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard. The results of the signal warrant analysis are provided in the Traffic Study presented as Appendix 13, and a summary of the results of the signal warrant analysis is shown in Table 5.7.

Table 5.8: Traffic Signal Warrant Summary

Braley Road at Phillips Road/Theodore Rice Boulevard	Warrant 1: Eight-Hour	Warrant 2: Four-Hour	Warrant 3: Peak Hour
2020 Existing	☑	☑	☑
2027 No Build	☑	☑	☑
2027 Build	☑	☑	☑

According to the warrant analysis results, the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard warrants the installation of a traffic signal under all three Warrants based on the 2020 Existing traffic volumes, independent of the project.

5.7.2 Transportation Demand Management

A Transportation Demand management (TDM) plan is proposed to further mitigate the project's traffic impacts to the surrounding roadway network. These measures are anticipated to reduce single occupancy vehicle (SOV) trips among employees, and to encourage the use of alternative modes of transportation to the site, the client is proposing to apply the following TDM measures:

- Providing opportunities for employees to participate in transit subsidy or reimbursement programs.
- Informing employees of nearby transit stops and bicycle and pedestrian amenities.
- Coordinate with SRTA to consider revising existing transit service to better service the project site.
- Implementing a carpool system among employees.
- Direct deposit offered to employees.
- Providing preferential parking for carpools and vanpools.
- Providing incentives to encourage bicycle ridership to the site, such as bike racks and other storage facilities on site.
- Subject to request and subsequent approval by the City of New Bedford and New Bedford Business Park, providing striped bicycle lanes along Duchaine Boulevard and shared bicycle markings along Theodore Rice Boulevard to provide connectivity to the existing bicycle amenities along Braley Road.

5.8 Conclusions and Recommendations

Phase 2 of the proposed transfer station development project consists of expanding the existing facility at 100 Duchaine Boulevard to accommodate a receiving capacity of approximately 1,500 tons per day (tpd) of MSW and C&D materials and an additional 400 tpd of biosolid materials. The site is currently utilizing the existing buildings on the site to process plastic, aluminum, and recyclable glass as part of Phase 1 of the project. The site is proposed to be accessed via the existing site driveway on Duchaine Boulevard, which leads to an internal one-way loop roadway surrounding the proposed facility.

Phase 2 of the proposed transfer station is expected to generate a total of 59 vehicle trips (17 entering and 42 exiting) during the weekday morning peak, and 59 vehicle trips (17 entering and 42 exiting) during the weekday afternoon peak hour. Over the course of an average weekday, Phase 2 of the proposed project is estimated to result in of approximately 478 vehicle trips (239 entering and 239 exiting) during the typical weekday.

Based on the capacity analysis results, the approaches under stop control at the Route 140 off-ramps onto Braley Road and at the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard operate over capacity and with high delays under the 2020 Base conditions. These

movements carry a majority of the traffic accessing the industrial park on Duchaine Boulevard during the peak hours. The proposed project would result in minor increases in delay on these over-capacity movements within the study area.

Based on the MUTCD traffic signal warrant analysis, the installation of a traffic signal at the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard is warranted under 2020 Existing traffic volumes independent of the project, as a result of existing development in the area.

Additionally, it is our opinion that the traffic impacts of the proposed development of this solid waste facility located at 100 Duchaine Boulevard do not constitute a danger to the public health, safety, or the environment with consideration to traffic congestion, pedestrian and vehicular safety, and roadway configuration.

6.0 Noise

An initial noise assessment was presented in the DEIR which addressed noise from truck traffic due to operation of the facility, as well as continuous operating sources of sound such as rooftop HVAC equipment, loading/tipping operations, ground level cooling towers and building exhaust stacks. This revised assessment documents additional mitigation, and shows that the impacts from all sounds emanating from the Project will be mitigated to the extent feasible, and will not cause a condition of noise pollution.

6.1 Project Update

Since the initial noise assessment, modifications have been made to the project process equipment, and the Massachusetts Department of Environmental Protection (MassDEP) requested additional evaluation of noise produced by the Project. In response to the MassDEP comments, this revised assessment identifies and evaluates short term incidental noise sources from the Project including railyard activities and backup alarms, and documents that PPNE has mitigated Project generated sound to the maximum extent practical.

This report provides a description of the applicable noise policy requirements, a brief explanation of noise terminology, a summary of the results of an ambient sound level monitoring program, a discussion of the sound level modeling analysis for the continuous sources of the proposed Project, a discussion of the sound level modeling analysis for the short-term incidental sound sources from the Project, and a review of mitigation feasibility. Noise control options are discussed in order to meet the requirements of the MassDEP Noise Policy at residential locations, and to avoid, minimize, and mitigate noise impacts. There have been no significant changes to the truck traffic generated by operation of the Project since the initial noise assessment, therefore those results are not presented here.

6.2 Project Description

Parallel Products of New England, Inc. (PPNE) is currently constructing a glass handling and processing facility at 100 Duchaine Boulevard in New Bedford, Massachusetts. PPNE is proposing to construct a municipal solid waste (MSW) processing, C&D transfer and biosolids processing facility at this site. The project will be implemented in sequential phases. The glass handling is being implemented as Phase 1. The MSW processing, C&D (Category 2 and 3) transfer for disposal and the biosolids processing will be implemented as Phase 2. This sound level evaluation is cumulative for both phases of operations, addressing all new sound sources associated with the Project.

The glass handling operation will recycle the used glass containers that are collected through the Massachusetts deposit system. Bottles collected will be processed such that the glass can be reused to produce new glass containers. Processing at the site will include crushing, sizing and separation of the glass by color. The cullet produced is then sold to glass manufacturers.

To facilitate the shipment of recycled glass by rail, the Proponent will construct a rail sidetrack from the existing rail line adjacent to the project site. Glass handling operations are enclosed within three adjacent/connected buildings.

A new MSW tipping building will be constructed at the site, with a capacity to accept up to 1,500 tons per day of MSW delivered to the facility by truck. The tipping building is expected to be approximately 48,900 square feet in floor area and will connect with an existing 92,200 SF building. The tipping building will be designed to allow waste delivery trucks to drive into the building to dump loads of waste material for processing. Front-end loaders will load the MSW into a feed hopper for the MSW processing equipment. The existing building on site adjacent to the proposed tipping building will be used for the processing of MSW. The existing building will be modified as required to house the MSW processing equipment used to extract recyclable material from MSW received. It is expected that approximately 20% of the MSW received by the facility will be reclaimed and recycled. This existing building will also include a baler to bale and shrink wrap MSW after processing to remove recyclable materials. The baled, non-recyclable fraction of the MSW will be loaded in rail cars for shipment to out-of-state disposal sites, along with construction and demolition (C&D) residuals and bulky waste.

A processing facility will be built to dry biosolids to Class A (Meets the land application requirements of EPA Section 503 regulations) specifications. Biosolids accepted will consist of thickened wet slurry biosolids with a solids content ranging from 5-10% and biosolids cake with a solids content ranging from 15-30%. The facility will utilize natural gas to dry the biosolids. The Project design details may be modified as they are refined through the permitting process.

The following describes the building ventilation, process equipment and other notable equipment associated with the Project that were included in the continuous sources sound study:

- Rooftop, ground level, and/or sidewall inlet and exhaust fans on MSW Building, Glass Processing Building, and Biosolids Building;
- Biofilter exhaust stack;
- Biosolids Building makeup air fan;
- Ground level cooling towers at Biosolids Building;
- Glass bunker building baghouse exhaust stack
- Front-end loader and tipping operations inside open garage door bays of MSW Building (truck deliveries)
- Front-end loader operations inside open garage door bay of MSW Building (railcar)
- The following describes the equipment associated with the Project that were included in the short-term incidental sources sound study:

- Backup alarms
- Railcar coupling via electric railcar
- Railcar coupling via diesel locomotive
- Idling locomotive

Operations at the proposed facility will vary slightly between daytime and nighttime periods. Sound level modeling was conservatively conducted for a daytime scenario and compared to both daytime and nighttime ambient sound levels. Mitigation was applied to several of the sound sources including use of an electric rail car mover, fan silencers, low noise fans, stack silencer(s), and one L-shaped sound barrier wall. With the noise mitigation measures described in this report, or equivalent design changes, the proposed Project will meet the requirements set forth in the MassDEP Noise Policy at all nearby residential locations, and will mitigate Project-generated sound to the maximum extent practical.

An aerial locus of the project site over aerial imagery is shown in Figure 6-1, presented on the following page.

Figure 6-1 Aerial Locus



Parallel Products New Bedford, Massachusetts



Figure 6-1
Aerial Locus

6.3 Sound Metrics

There are several ways in which sound levels are measured and quantified. All of them use the logarithmic decibel (dB) scale. The following information defines the sound level terminology used in this analysis.

The decibel scale is logarithmic to accommodate the wide range of sound intensities found in the environment. A property of the decibel scale is that the sound pressure levels of two or more separate sounds are not directly additive. For example, if a sound of 50 dB is added to another sound of 50 dB, the total is only a 3-decibel increase (53 dB), which is equal to doubling in sound energy but not equal to a doubling in decibel quantity (100 dB). Thus, every 3-dB change in sound level represents a doubling or halving of sound energy. A 3-dB increase or decrease corresponds to the threshold of perceptibility of change. In practice, a 3 dBA change in environmental sound is at the margin of perceptibility to the average person.¹

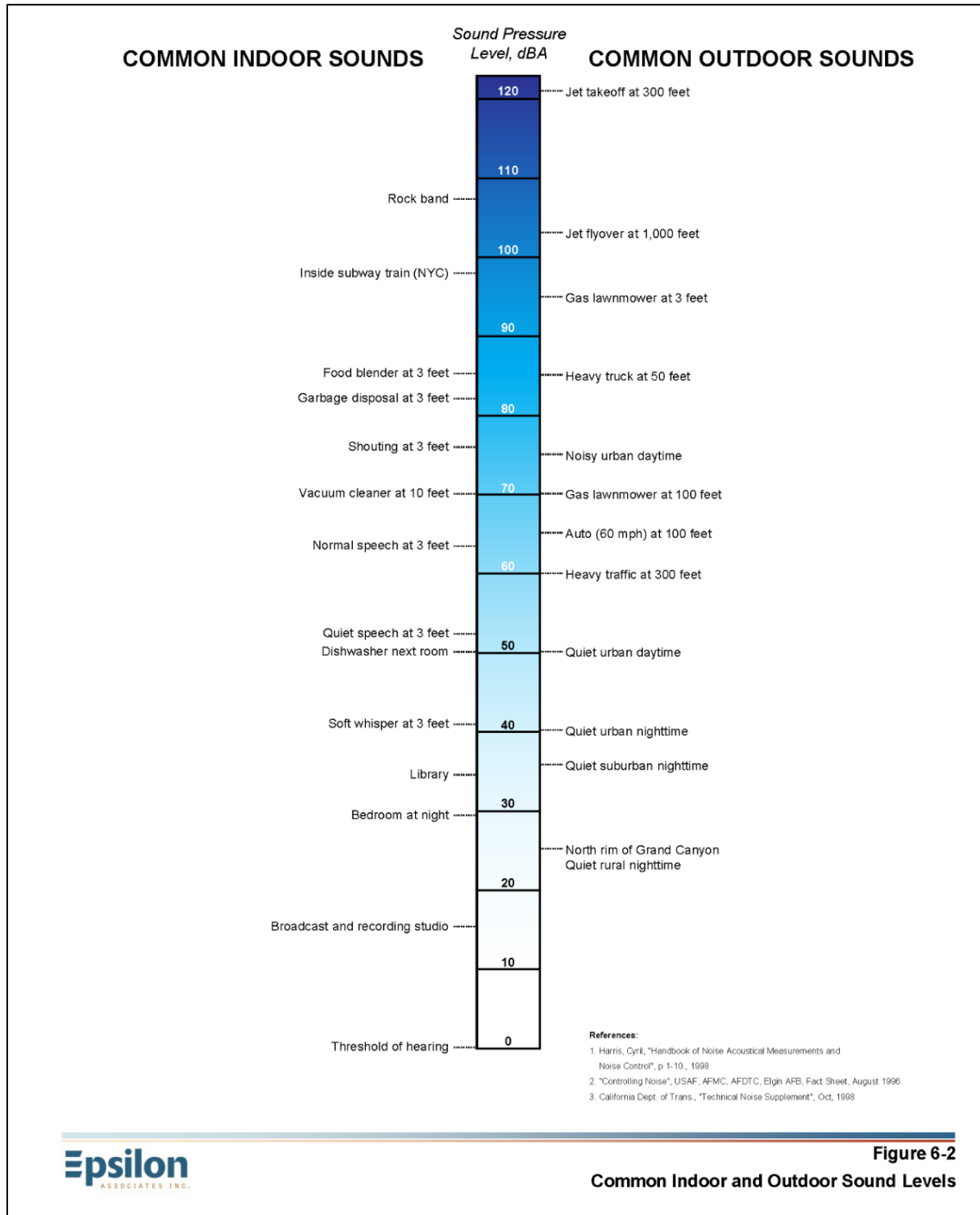
Another mathematical property of decibels is that if one source of sound is at least 10 dB louder than another source, then the total sound level is simply the sound level of the higher-level source. For example, a sound source at 60 dB plus another sound source at 47 dB it is equal to 60 dB.

A sound level meter (SLM) that is used to measure sound is a standardized instrument. It contains “weighting networks” (e.g., A-, C-, Z-weightings) to adjust the frequency response of the instrument. Frequencies, reported in Hertz (Hz), are detailed characterizations of sounds, often addressed in musical terms as “pitch” or “tone”. The most commonly used weighting network is the A-weighting because it most closely approximates how the human ear responds to sound at various frequencies. The A-weighting network is the accepted scale used for community sound level measurements; therefore, sounds are frequently reported as detected with a sound level meter using this weighting. A-weighted sound levels emphasize middle frequency sounds (i.e., middle pitched – around 1,000 Hz), and de-emphasize low and high frequency sounds. These sound levels are reported in decibels designated as “dBA”. Z-weighted sound levels are measured sound levels without any weighting curve and are otherwise referred to as “unweighted”. Sound pressure levels for some common indoor and outdoor environments as show on the proceeding page in Figure 6-2.

¹ 2009 ASHRAE Handbook – Fundamentals, American Society of Heating, Refrigeration, and Air-Conditioning Engineers, Inc., Atlanta, GA.

¹ *American National Standard Specification for Sound Level Meters*, ANSI S1.4-1983 (R2006), published by the Standards Secretariat of the Acoustical Society of America, Melville, NY.

Figure 6-2



Because the sounds in our environment vary with time they cannot simply be described with a single number. Two methods are used for describing variable sounds. These are exceedance levels and the equivalent level, both of which are derived from a large number of moment-to-moment A-weighted sound level measurements. Exceedance levels are values from the cumulative amplitude distribution of all of the sound levels observed during a measurement period. Exceedance levels are designated L_n , where n can have a value between 0 and 100 in terms of percentage. Three sound level metrics that are utilized in this report are described below.

- L_{90} is the sound level exceeded 90 percent of the time during the measurement period. The L_{90} is close to the lowest sound level observed. It is essentially the same as the residual sound level, which is the sound level observed when there are no obvious nearby intermittent sound sources. The L_{90} level is used to establish the “ambient” or “background” sound level as part of the MassDEP Noise Policy.
- L_{eq} , the equivalent level, is the level of a hypothetical steady sound that would have the same energy (*i.e.*, the same time-averaged mean square sound pressure) as the actual fluctuating sound observed. The equivalent level is designated L_{eq} and is typically A-weighted. The equivalent level represents the time average of the fluctuating sound pressure, but because sound is represented on a logarithmic scale and the averaging is done with linear mean square sound pressure values, the L_{eq} is mostly determined by loud sounds if there are fluctuating sound levels.

6.4 Noise Regulations

6.4.1 Federal Regulations

There are no federal community noise regulations applicable to this Project.

6.4.2 Massachusetts State Regulations

The Massachusetts Department of Environmental Protection (MassDEP) has the authority to regulate noise under 310 CMR 7.10, which is part of the Commonwealth’s air pollution control regulations. Under MassDEP regulations, noise is considered to be an air contaminant and, thus, 310 CMR 7.10 prohibits “unnecessary emissions” of noise.

The MassDEP administers this regulation through its Noise Policy DAQC 90-001, dated February 1, 1990. The Noise Policy limits a source to a 10-dBA increase above the ambient sound measured (the L_{90} sound level) at the property line for the site and at the nearest residences. According to the MassDEP, “Noise levels that exceed the criteria at the source’s property line by themselves do not necessarily result in a violation or a condition of air pollution under MassDEP regulations (see 310 CMR 7.10). The agency also considers the effect of noise on the nearest occupied residence and/or building housing sensitive

receptors”.² In addition, “[a] new noise source that would be located in an area in which housing or buildings containing other sensitive receptors could be developed in the future may be required to mitigate its noise impact in these areas.”²

MassDEP’s Noise Policy further prohibits “pure tone” conditions where the sound pressure level in one octave band is 3 dB or more than the sound levels in each of the two adjacent octave bands. A qualitative example of a source emitting a “pure tone” is a fan with a bad bearing that is producing an objectionable squealing sound.

6.4.3 Local Regulations

There are no local quantitative noise regulations applicable to this Project.

6.5 Existing Sound Levels

The Project is to be located at 100 Duchaine Boulevard in New Bedford, Massachusetts. The property is bordered by residential neighborhoods to the northeast, east and southeast, with a new residential development along the immediate southeast property line. PPNE has purchased two of the newly built houses located on the west side of Phillips Road and closest to the industrial property to the southeast of the site. To the north, west and south, the property is bordered by industrial/commercial properties. The site currently consists of one industrial building complex and several surface parking lots.

6.5.1 Baseline Sound Environment

An existing sound level survey was conducted during the daytime and nighttime hours to characterize the existing “baseline” acoustical environment in the vicinity of the site. Two long-term continuous sound level monitoring stations were deployed for 7-days to:

1. Establish representative A-weighted broadband ambient sound pressure levels, for evaluating requirements of the MassDEP policy; and
2. Establish representative octave-band ambient sound pressure levels to identify any existing “pure tones,” as defined by MassDEP, and evaluate whether the addition of modeled sound levels from the proposed Project to these background sound levels may introduce or exacerbate existing “pure tones” in the community.

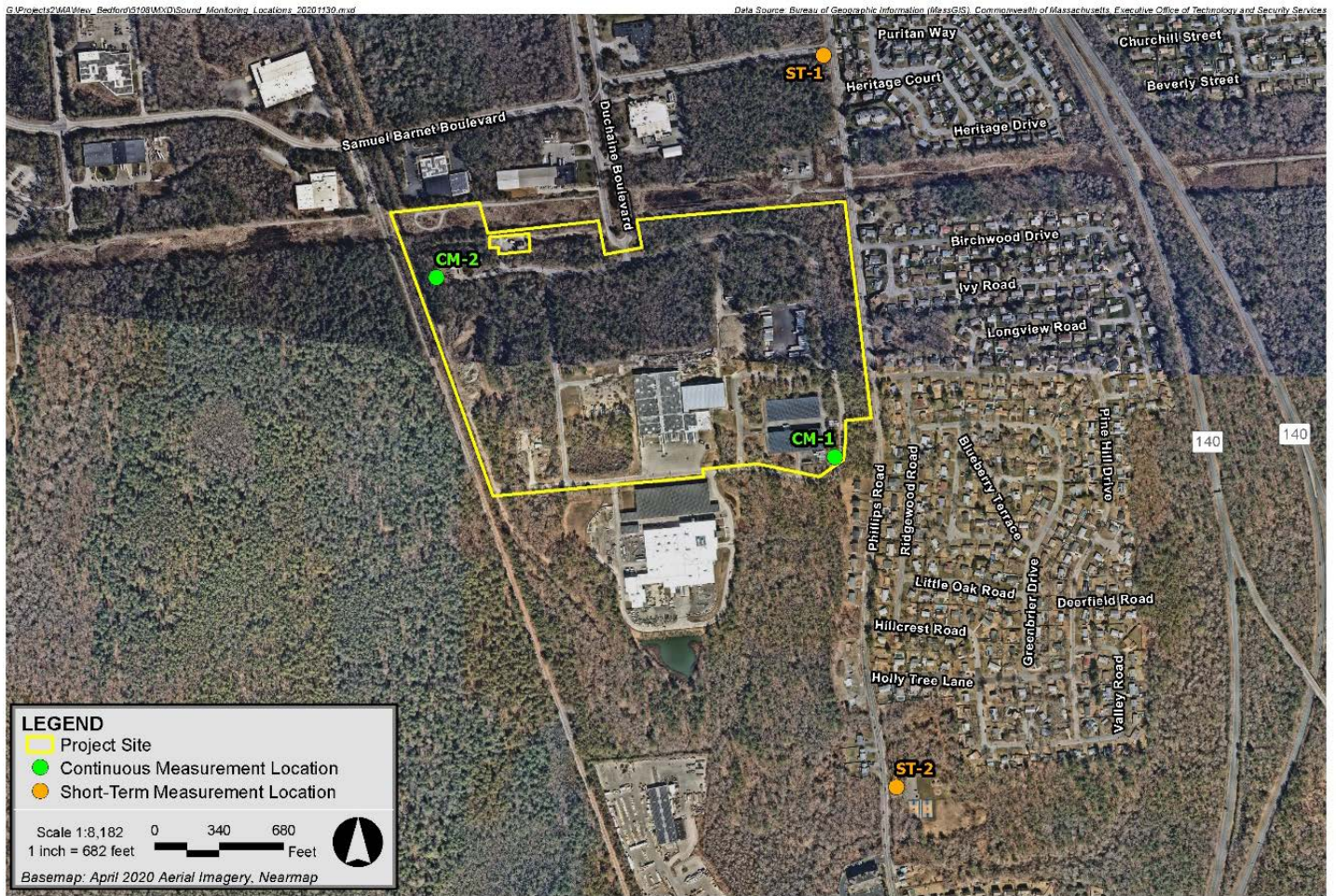
Only measurement periods during, or affected by, precipitation were excluded from the analysis. This approach is consistent with ANSI Standard S12.18-1994 (R2009).

² Energy and Environmental Affairs. *Noise Pollution Policy Interpretation* / MassDEP. <http://www.mass.gov/eea/agencies/massdep/air/programs/noise-pollution-policy-interpretation.html>. Accessed October 2016.

In addition, two short-term sound level measurements were performed at two locations near the site. These measurements took place during the daytime and nighttime in residential areas that extended further away from the Project site. Daytime measurements were conducted between 10 AM and 3 PM to avoid influence from local commuter traffic. Nighttime measurements occurred between 12 AM and 3 AM to capture the quietest portion of the night. The short-term monitoring intervals were 20 minutes in duration.

For the purpose of these analyses, only the long-term location (CM-1) that was most conservative and most representative of residential receptors was used. The DEIR Noise report discusses the other monitoring locations in more detail. These measurement locations are depicted in Table 6.3 presented on the proceeding page. Location CM-1 is described below, for descriptions of the other locations that are not a part of the FEIR analysis, refer to the DEIR Noise Section

Figure 6-3 Sound Monitoring Locations



Parallel Products New Bedford, Massachusetts



Figure 6-3
Sound Monitoring Locations

Location CM-1 is located near the Project property line immediately southeast of the Project. The GPS coordinates for this location are 337911.14 East and 4619989.37 North per UTM-19N NAD83. This location is representative of the newly built residences situated next to the property line and immediately west of Phillips Road. This is also representative of all the residences that lie to the east of Phillips Road. Continuous hourly one-third octave-band and broadband sound level data were collected at this location. Noise sources at this location include on-site vehicle traffic and distant noise from Eversource, immediately south of the

Project site. Vehicle traffic along Phillips Road, birds, insects and planes overhead were also observed at this location.

6.5.2 Measurement Methodology

A comprehensive sound level measurement program was developed to quantify the ambient sound levels around the Project. Continuous A-weighted and octave-band measurements (24 hours/day) were made over approximately a one-week period from Tuesday, June 26, 2018 through Tuesday, July 3, 2018. The long-term monitor was generally unattended, with personal observations made by a field technician during deployment, a nighttime site visit, and demobilization. Meteorological data was collected concurrently nearby, three miles to the south at the New Bedford Regional Airport National Weather Service (NWS) station provided by the National Centers for Environmental Information (NCEI), for the duration of the measurement program. All sound level data collected from CM-1 and meteorological data collected during the program are included in the ambient analysis as presented in the DEIR.

6.5.3 Measurement Equipment

The CM-1 location was equipped with a Larson Davis (LD) Model 831 integrating sound level meter, tripod-mounted at a height of approximately five feet (1.5 meters) above ground level and fitted with the manufacturer's environmental windscreen. This LD Model 831 was used to collect continuous background sound pressure level data. The background meter was connected to a microphone, via an extension cable and housed in an environmental suitcase, that was programmed to log statistical A-weighted broadband and unweighted octave-band sound level data (L1, L10, L50, L90, Lmax, and Leq) over one-hour intervals with a one-minute time history.

All sound monitoring instrumentation met the "Type 1 - Precision" requirements set forth in ANSI S1.4-1983 as specified in the ANSI S12.18-1994 methodology as well as those in ANSI S1.11-2004 (octave filter standard) for acoustical measuring devices.

6.5.4 Baseline Ambient Sound Levels

The ambient sound level environment consists primarily of nearby vehicle traffic from Phillips Road, traffic on Route 140 and other roadways, nearby industrial work/construction noise during the daytime, children playing at the park, rustling vegetation, occasional aircraft, birds, and insects.

6.5.5 Long-term Sound Levels

Long-term sound levels were measured continuously from Tuesday, June 26, 2018 through Tuesday, July 3, 2018. A brief summary of the measurement results is presented herein.

Continuous 1-hour sampling periods with a one-minute time history were measured. Daytime is defined as the hours between 7 AM and 10 PM. Nighttime is defined as the hours

between 10 PM and 7 AM. Hourly A-weighted broadband sound pressure level data from the continuous ambient monitoring stations are presented in the DEIR. Periods of precipitation totaling approximately 16 hours as recorded at the nearby New Bedford Regional Airport National Weather Service (NWS) station, were excluded from the dataset. These precipitation periods are presented in the DEIR.

- The hourly daytime residual background (L_{90}) measurements for CM-1 ranged from 38 to 53 dBA;
- The hourly nighttime residual background (L_{90}) measurements for CM-1 ranged from 29 to 48 dBA;

6.5.6 Establishment of Background Sound Levels

As observed by the Epsilon field staff, sound levels at CM-1 during the measurements in the summer months of June & July, 2018 were significantly affected by insect noise. Sound from insects likely affects the background in this area for many months of the year due to the forested landscape. During some periods of the year, sound from insects and birds will not be present (i.e., winter); therefore, to more closely replicate sound levels observed at the same monitoring locations during these periods (“quiet seasons”), a high-frequency natural sound (HFNS) filter was applied to the measured one-third octave-band data from which a new broadband sound level was calculated. This technique removes all sound energy above the 1,250 Hertz frequency band. The methodology for the filtration process was as specified in ANSI/ASA S12.100-2014 and the sound pressure levels presented in this report using this methodology are indicated as ANS-weighted levels (presented in dBA).

In order to accurately represent the data when activities at the Facility could have time restrictions, the ambient data were processed hourly to allow for ease of comparison to Project related sound levels. For each block hour (i.e. the 1 AM hour being from 1:00 AM to 1:59 AM), the lowest hourly L_{90} data point across all 7 days was determined. The hourly data was based on the ANS-weighted broadband (dBA) background sound levels described above. Data from the last day of monitoring, July 3rd, was not included in the analysis as it was a holiday weekend and thus was not representative of a typical day. The lowest hourly L_{90} data that were used to evaluate the Project and requirements of the MassDEP Noise Policy are presented in Table 6-1 below.

Table 6.1 Hourly Minimum L90 Across Monitoring Period at Location CM-1

Hour Start	Hour End	Lowest Hourly ANS Weighted L90 Ambient (dBA)
12:00 AM	12:59 AM	31
1:00 AM	1:59 AM	31
2:00 AM	2:59 AM	30
3:00 AM	3:59 AM	32
4:00 AM	4:59 AM	35
5:00 AM	5:59 AM	39
6:00 AM	6:59 AM	38
7:00 AM	7:59 AM	42
8:00 AM	8:59 AM	40
9:00 AM	9:59 AM	37
10:00 AM	10:59 AM	40
11:00 AM	11:59 AM	38
12:00 PM	12:59 PM	41
1:00 PM	1:59 PM	41
2:00 PM	2:59 PM	40
3:00 PM	3:59 PM	41
4:00 PM	4:59 PM	40
5:00 PM	5:59 PM	39
6:00 PM	6:59 PM	38
7:00 PM	7:59 PM	37
8:00 PM	8:59 PM	38
9:00 PM	9:59 PM	37
10:00 PM	10:59 PM	35
11:00 PM	11:59 PM	34

6.6 Modeled Source Sound Levels

Modeled sources are broken into two types - continuous and incidental. Continuous sources represent the primary sources of sound from system ventilation, tipping/moving of MSW, railcar loading, etc. Incidental noise sources represent sounds from mobile sources that do not occur continuously when the facility is operating such as backup beepers, railcar coupling, and idling locomotives.

At this stage of the Project, key components for the facility have been selected, however some equipment selection may be refined as the design process progresses. Reference sound level data used in the noise model includes vendor data, as well as representative data from sound level measurements of a similar facility or equipment where no data are provided by the manufacturer.

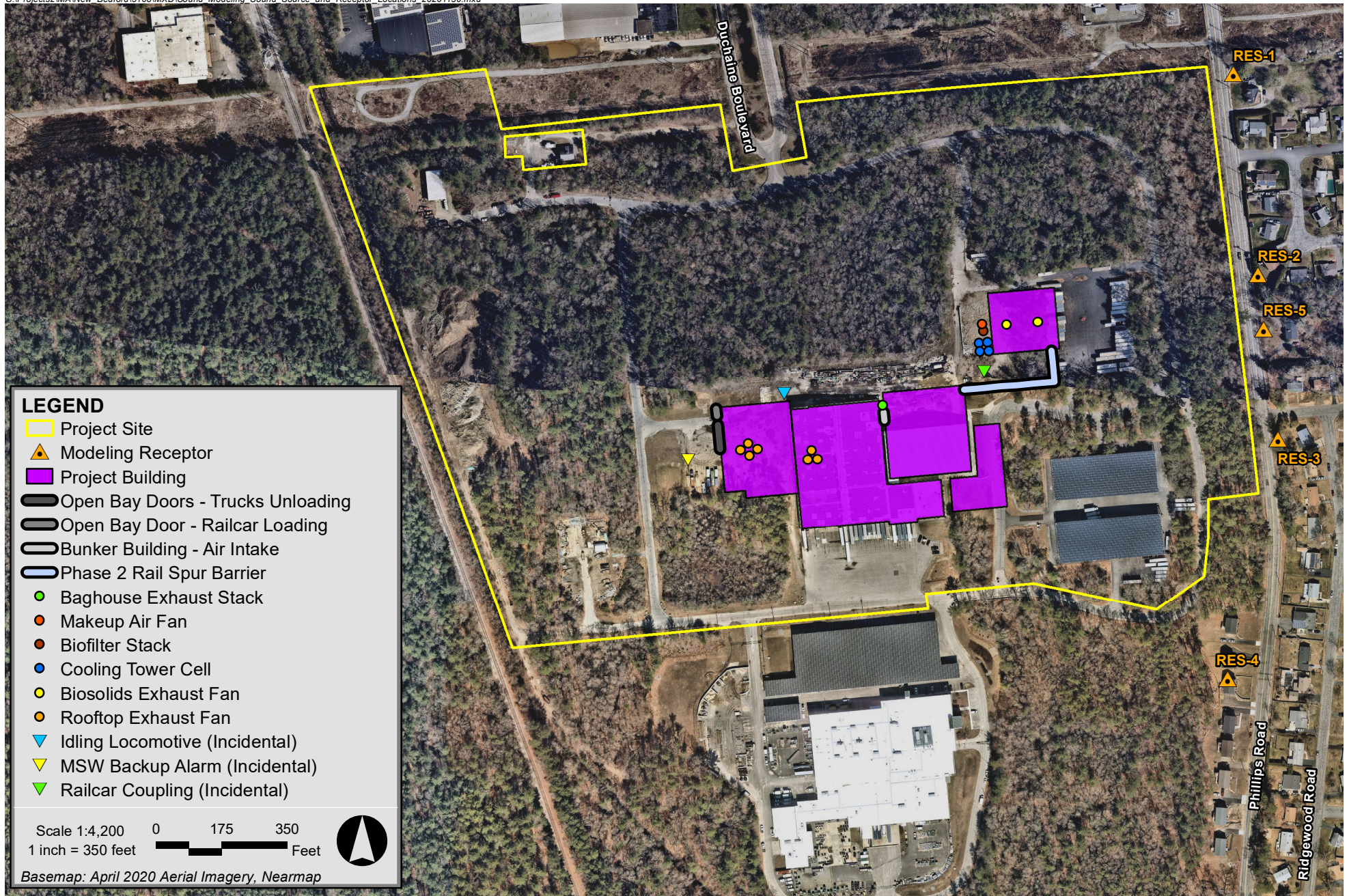
6.6.1 Continuous Noise Sources

Continuous sources represent stationary sources that are operating the majority of the time that the facility is operational. The continuous sources that were input into the noise model are described individually below. The model inputs associated with these sources are presented in Table 6-2 below. A more detailed breakdown of the pre-attenuation sound levels is presented in Table 6-3. The noise attenuation devices and their associated sound level reductions are presented in Table 6-4. The locations of the continuous noise sources are shown in Figure 6-4.

1. Rooftop Exhaust Fans – The model includes nine (9) rooftop exhaust fans with four (4) on the MSW building, three (3) on the existing glass building, and two (2) on the biosolids building. Each of these fans uses sound level data obtained for the “Cook 365UCIC Tubular Centrifugal Blower 25,000 CFM” fans.
 - a. The two rooftop biosolids fans include fan silencers of the “Ruskin type XFA-403” variety which are capable of a 25 dBA reduction in sound levels.
 - b. The fans on the MSW building and glass building (7 fans in total) have a 5 dBA sound level reduction applied. These sound levels could be achieved by using quieter fans, rooftop barriers, or fan silencers.
2. Loading Bay Doors – The model includes three (3) open loading bays on the west side of the MSW building. These bay doors are input into the model as vertical area sources to represent sound being emitted through the openings. These loading bay doors represent the sounds from a front end loader (MSW tipping/dumping/moving) that is occurring inside the building. The sound levels associated with this source are based on actual measurements performed by Epsilon staff at a similar operation at another facility.
3. Railcar loading bay – The model includes one (1) open railcar loading bay on the west side of the MSW building. This source is modeled as a vertical area source to represent sound being emitted through the opening. The same sound level source data for the Loading Bay Doors was used to represent the sound of railcar loading.
4. Baghouse intake – One (1) ventilation opening is included in the model on the west side of the glass building. This source represents the ventilation intake for the baghouse system on the glass building. The source is assumed to incorporate an acoustic louver of the “Slimshield Louver, type SL-12” variety which achieves a 17 dBA reduction

5. Baghouse exhaust – The baghouse exhaust is modeled as two (2) fans fed into the same stack. The model assumes minimal duct losses as well as an additional 2 dBA reduction from noise controls such as a stack silencer or stack directional orientation that the project will incorporate.

A 325 foot long 24-foot tall “L-shaped” sound barrier wall will be included around the rail spur, attached to the southeastern corner of the Biosolids building as showing in Figure 6-4 on the proceeding page. The purpose of this wall is to shield the residential area to the east and southeast of the site from sound generated by the railcar coupling, idling locomotive, cooling towers, and other ground level equipment located on the west side of the biosolids building. As the design of project equipment progresses, specifications of mechanical equipment may change, and compliance with the sound limits may be achieved through different methods (i.e. a shorter sound barrier wall in a different configuration may be utilized).



Parallel Products New Bedford, Massachusetts

Table 6.2 Model Input Sound Power Levels per Noise Source	
Noise Source	Broadband (dBA)
Biosolids Rooftop Fans with fan silencers (2 total)	77
Biofilter Fan (1 total), with 5 dBA additional reduction	96
Biofilter Stack (1 total) with silencer	78
Cooling Towers (4 total) with 5 dBA additional reduction	94
25,000 CFM Rooftop Exhaust Fans (7 total) with 5 dBA additional reduction	89
Three open loading bays (west side of MSW Building)	110
One open railcar loading bay (west side of MSW Building)	110
Ventilation opening for baghouse with acoustic louver (west side of Glass Building)	95
Baghouse exhaust fans (1 stack source, assumes duct loss and 2 dBA additional attenuation)	86

Table 6.3 Power Levels per Noise Source									
Noise Source	Insertion Loss (dB) per Octave-Band Center Frequency (Hz)								
	31.5	63	125	250	500	1k	2k	4k	8k
MSW Activity Outside Open Garage Door	107	109	107	107	105	106	102	99	95
Supply Fan	93	93	90	99	100	95	94	89	86
Biofilter Stack	89	79	92	96	98	92	92	86	77
Exhaust Fans	97	97	99	94	90	90	84	75	68
Cooling Tower	103	103	102	100	96	94	90	86	83
NYB HPCH Backward-inclined 40 inch Fan	104	104	98	93	94	92	90	84	79
NYB HPCH Backward-inclined 33 inch Fan	92	92	95	87	90	88	88	89	85

Table 6.4 Octave Band Noise Attenuation Levels

Noise Source	Insertion Loss (dB) per Octave-Band Center Frequency (Hz)								
	31.5	63	125	250	500	1k	2k	4k	8k
In-Duct Sound Power Level Reductions	0	0	0	5	10	15	20	22	25
Ruskin Acoustical Diffuser	4	4	8	15	26	33	25	17	14
Critical Grade in-stack Silencer	5	20	35	32	27	20	20	21	21
Slimshield Louver SL-12	3	6	7	10	12	18	18	14	13

6.6.2 Incidental Noise Sources

Incidental noise sources represent sounds from mobile sources that do not occur continuously when the facility is operating such as backup beepers, railcar coupling, and idling locomotives. These noise sources are federally regulated by the Occupational Safety and Health Administration (OSHA) (backup beepers) and the U.S. Environmental Protection Agency (USEPA) (railcar coupling and idling locomotives). Federal laws and regulations³ preempt state and local government regulation of these sources, however, these sources were modeled and extra noise mitigation for these sources is included in the Project.

Continuous sources are steady or relatively steady sources of sound, and the public will experience those sounds *in toto*, that is, as a combined total effect. Cadna/A modeling reflects the combined impact of the continuous sources. As noted in MassDEP's Noise Policy Interpretation, MassDEP evaluates how a new noise source may affect people when the agency reviews applications for approval under its air pollution regulations. The review of projects under the air pollution regulations has focused on sources subject to those regulations, and on directly supporting equipment such as cooling fans. To be responsive to MassDEP's comments, and to provide through MEPA review meaningful opportunities for public review of the potential environmental impacts of the Project, this revised

³ Federal law preempts state and local governments from regulating the sound of trucks making deliveries to a commercial site under the Noise Control Act of 1972 and the Surface Transportation Assistance Act of 1982. USEPA regulates railroad emissions in standards published at 40 CFR 201: Noise Emission Standards for Transportation Equipment: Interstate Rail Carriers.

assessment evaluates the impacts of intermittent sound. Intermittent sources will have a different character than the continuous sound, and the potential for nuisance is separate. This revised analysis evaluates intermittent sources of sound separately to better characterize and address their impacts and mitigation, to provide consistency for comparison to prior projects reviewed per MassDEP's Noise Policy, and to avoid the mischaracterization of potential impacts through the application of cumulative layers of conservatism.

The incidental sources that were input into the noise model are described individually below. The model inputs associated with these sources are presented in Table 6.5 below. The location of each incidental noise source is shown in Figure 6-4.

1. Backup Alarm – Truck backup alarm operating at the west side of the MSW building. As an impact avoidance measure, the biosolids unloading operation will allow trucks to drive forward only, so no backup alarms will occur during biosolids unloading.
2. Idling Locomotive – Idling locomotive located just north of the northeast corner of the MSW building.
3. Railcar Coupling – This source represents railcar coupling, assumed to be occurring at the furthest possible eastern point of the rail spur (closest to the residential area) which is just south of the cooling towers for the biosolids building. The sound level of railcar coupling was based upon the day/night (DNL) sound level of railcar coupling at 200 ft.

Table 6.5 Model Input Sound Power Levels per Noise Source

Table 6.5 Model Input Sound Power Levels per Noise Source		
Noise Source	Frequency (Hz)	Broadband (dBA)
Backup Alarm	1,000	109
Idling Locomotive	125	107
Railcar Coupling	2,500	95

6.7 Modeling Methodology

The noise impacts associated with the proposed Project were predicted using the CadnaA noise calculation software developed by DataKustik GmbH. This software uses the ISO 9613-2 international standard for sound propagation (Acoustics - Attenuation of sound during propagation outdoors - Part 2: General method of calculation). The benefits of this software are a refined set of computations due to the inclusion of topography, ground attenuation, multiple building reflections, drop-off with distance, and atmospheric absorption. The CadnaA software allows for octave-band calculation of sound from multiple sources as well as computation of diffraction.

Inputs and significant parameters employed in the model are described below:

- *Site Plan:* The Project Site Plan provided the locations and dimensions of key inputs into the model such as site buildings, and rail spur locations.
- *Modeling Locations:* Sound level modeling was conducted at five residential locations RES-1 through RES-5. Residential modeling locations 1 through 4 are representative of the closest residential property lines to the northeast, east, and southeast of the Project. Parallel Products has purchased two of the newly built houses located on the west side of Phillips Road to the southeast of the site, and therefore Receptor RES-4 has been placed at the closest residential property line not owned by the Project to the southeast. The five residential modeling locations are shown in Figure 6-4. All receptors were modeled with a height of 5 feet above ground level (AGL) to mimic the ears of a typical standing observer.
- *Terrain Elevation:* Elevation contours for the modeling domain were directly imported into CadnaA which allowed for consideration of terrain shielding where appropriate. The terrain height contours for the modeling domain were generated from elevation information derived from the National Elevation Dataset (NED) developed by the U.S. Geological Survey.
- *Source Sound Levels:* Broadband and octave-band sound power levels (when available) for the potential noise sources for the Project presented in Tables 6-2 through 6-5 were input in the model.
- *Meteorological Conditions:* A temperature of 10°C (50°F) and a relative humidity of 70% was assumed in the model.
- *Ground Attenuation:* Spectral ground absorption was calculated using a G-factor of 0 for the Project site which corresponds to “hard ground”. For all other offsite areas, a G-factor of 0.5 was used which corresponds to “mixed ground”.
- *Directivity:* A directivity correction was applied to the biofilter exhaust stack, and the baghouse exhaust stack.

Sound pressure levels due to the operation of all equipment operating simultaneously at full load were modeled at the five (5) sound level modeling locations. This is a conservative modeling assumption which will result in higher predicted sound levels relative to various actual part-load and intermittent operation of some of the sources.

Several modeling assumptions inherent in the ISO 9613-2 calculation methodology, or selected as conditional inputs by the user, were implemented in the CadnaA model to ensure conservative results (i.e., higher sound levels), and are described below:

- As per ISO 9613-2, the model assumed favorable conditions for sound propagation, corresponding to a moderate, well-developed ground-based temperature inversion, as might occur on a calm, clear night or equivalently downwind propagation.
- Meteorological conditions assumed in the model (T=10°C and RH=70%) were selected to minimize atmospheric attenuation in the 500 Hz and 1 kHz octave-bands where the human ear is most sensitive.
- No additional attenuation due to tree shielding, air turbulence, or wind shadow effects was considered in the model.

Figure 6-4 below shows the location of the receptors as well as the modeled location of the equipment for both the continuous and the incidental noise model runs.

6.8 Sound Level Modeling Results

The resulting sound levels from the Project's sources were exported from the CadnaA model. The results are split up into two segments. The first segment is the continuous sources which were all modeled cumulatively. The resulting project only sound levels are documented in Table 6-6 below. The second segment of the modeling results are the modeled sound levels at each receptor for the incidental noise sources. These model outputs are documented in Table 6-7 below. The results from the model are evaluated against ambient sound levels and the MassDEP Noise Policy in Section 6.6 below.

Table 6.6 CadnaA Model Output Sound Levels for Continuous Sources	
Receptor	Project Only Sound Level (dBA)
RES-1	35
RES-2	36
RES-3	36
RES-4	36
Worst Case PL (RES-5)	37

Table 6.7 CadnaA Model Output Sound Levels for Incidental Sources			
Receptor	MSW Backup Alarm (dBA)	Idling Locomotive (dBA)	Railcar Coupling (dBA)
RES-1	20	43	21
RES-2	18	39	27
RES-3	18	39	27
RES-4	20	32	21
Worst Case PL (RES-5)	21	47	29

6.9 Evaluation of Sound Levels

According to the MassDEP Noise Policy, a source of sound will be considered to be violating the noise regulation at 310 CMR 7.10 if the source increases the broadband sound level by more than 10 dBA above ambient. In addition to limiting the increase in the ambient sound level, the Noise Policy prohibits “pure tone” conditions where the sound pressure level in one octave band frequency is at least 3 dB greater than the sound levels in each of two adjacent frequency bands. The compliance analysis for the noise sources is presented for Continuous Sources and Incidental Sources.

6.9.1 Continuous Sources

For the continuous sources, the Project Only sound levels provided in Table 6-6 above are added to the ambient sound levels to calculate the predicted future total sound levels. It is important to note that the sound levels are logarithmic and thus must be added logarithmically. These new future predicted sound levels are then compared to the ambient sound level to document that the increase is at or below 10 dBA. The lowest ambient L90 sound level across the monitoring period is shown for each hour in Table 6-1 of Section 6.5.5 of this document. For the purposes of this analysis, the lowest individual hour is used as the ambient data to be as conservative as possible. The existing ambient sound level that corresponds to this lowest hour is 30 dBA. Table 6.8 below provides the comparison of the modeled results to the lowest existing ambient sound level.

Table 6.8 Modeled Continuous Sound Levels Compared to Ambient				
Receptor	Project Only Sound Level (dBA)	Ambient L₉₀ Sound Level (dBA)	Total Ambient Plus Project (dBA)	Increase over Ambient (dBA)
RES-1	35	30	36	6
RES-2	36	30	37	7
RES-3	36	30	37	7
RES-4	36	30	37	7
Worst Case PL (RES-5)	37	30	38	8

Notes:

1. Only whole numbers are shown; calculations were performed using values with additional precision.

6.9.2 Incidental Sources

For the incidental noise sources, the modeled sound impact of the specific activity is added to the lowest ambient hour during the time window that the activity can occur. Similarly to the continuous sound levels analysis, it is important to note that the sound levels are logarithmic and thus must be added logarithmically. These new future predicted sound levels are then compared to the ambient sound level to demonstrate that the increase is at or below 10 dBA. The lowest ambient L₉₀ sound level across the monitoring period is shown for each hour in Table 6.1 of Section 6.5.5 of this document. Tables 6.8, 6.9, and 6.10 show the comparison of each activity to ambient conditions along with the time restriction used for the activity.

Table 6.9 Modeled Incidental Sound Levels Compared to Ambient for Backup Alarm (no time restriction)				
Receptor	Activity Only Sound Level (dBA)	Ambient L₉₀ Sound Level (dBA)	Total Ambient Plus Project (dBA)	Increase over Ambient (dBA)
RES-1	20	30	30	0
RES-2	18	30	30	0
RES-3	18	30	30	0
RES-4	20	30	30	0
Worst Case PL (RES-5)	21	30	31	1

Notes:

1. Only whole numbers are shown; calculations were performed using values with additional precision.

Table 6.10 Modeled Incidental Sound Levels Compared to Ambient for Idling Locomotive (5:00 AM to 9:00 PM)				
Receptor	Activity Only Sound Level (dBA)	Ambient L₉₀ Sound Level (dBA)	Total Ambient Plus Project (dBA)	Increase over Ambient (dBA)
RES-1	43	37	44	7
RES-2	39	37	41	4
RES-3	39	37	41	4
RES-4	32	37	38	1
Worst Case PL (RES-5)	47	37	47	10

Notes:

1. Only whole numbers are shown; calculations were performed using values with additional precision.

Table 6.11 Modeled Incidental Sound Levels Compared to Ambient for Railcar Coupling (no time restriction)				
Receptor	Activity Only Sound Level (dBA)	Ambient L₉₀ Sound Level (dBA)	Total Ambient Plus Project (dBA)	Increase over Ambient (dBA)
RES-1	21	30	31	1
RES-2	27	30	32	2
RES-3	27	30	32	2
RES-4	21	30	31	1
Worst Case PL (RES-5)	29	30	33	3

Notes:

1. Only whole numbers are shown; calculations were performed using values with additional precision.

6.10 Maximum Practicable Mitigation

The proposed Project is designed to avoid noise impacts to residences, and PPNE has proposed mitigation measures to minimize sound levels at residences to the extent practicable.

In addition to compliance with MassDEP policy, evaluation of all practicable avoidance, minimization, and mitigation is required by MEPA as part of this process/assessment. The project has evaluated such measures. Further controls were considered but not deemed either available or practicable. During this sound assessment, PPNE had already identified and mitigated a number of sources that had “stand-out” contributions to overall modeled sound levels at nearby

receptors. The resulting sound impacts are now from a cumulative contribution of many sources. Because sound source contributions are added logarithmically and not arithmetically, reducing total sound impacts any further to achieve an overall net reduction would require a significant reduction in the sound impacts of *each and every* continuous contributing source. Each intermittent sound source has been analyzed individually, and each has a physical barrier, and/or time-of-day restriction. Therefore, with the proposed noise controls, the Project has mitigated impacts to the extent practicable.

PPNE provided initial conceptual design elements during the sound assessment process. Initial noise impacts, based on the original project design, were modeled and opportunities were identified to implement a variety of avoidance, minimization, and mitigation measures. PPNE has committed to avoid, minimize and mitigate noise impacts to the maximum extent practicable by taking the following measures:

- Selection of an industrially-zoned parcel
- Siting of noise generating equipment and material handling routes away from residences
- Arranging traffic flow through the biosolids unloading process to allow trucks to avoid backing up (and avoid backup alarm noise)
- Specification of an electric, rather than diesel powered, rail car pusher
- Selection of a combination of low noise equipment, silencing equipment, and/or noise reducing insulated walls to achieve lower impacts than required by MassDEP policy for stationary sources
- Use of a speed limit and location of weigh scales on the west side of the property to minimize sound from trucking operations
- Use of a 24' tall noise barrier wall around the eastern and southern portions of the rail spur, to shield sounds from locomotives, railcar coupling, and the ground level mechanical equipment at the Biosolids Building

As detailed design progresses, PPNE will review all specified equipment for sound characteristics and ensure the resulting combined impacts from stationary sources will not exceed the currently modeled, best-practices impacts.

6.11 Response to MassDEP Comments

This section of the FEIR is responsive to MassDEP's comments on the sound level modeling assessment that was presented by Parallel Products of New England in the DEIR. This section of the FEIR builds on the prior DEIR sound analysis and incorporates each of MassDEP's requested changes. Specifically:

1. The waste delivery vehicles on-site inside and outside the building were included in the noise model

2. The CadnaA modeling for the DEIR included the MSW processing equipment, biosolids processing equipment, and glass processing equipment.
 - a. MSW and biosolids processing equipment are insignificant sources that will not contribute to the overall sound level generated by the Facility.
 - b. The glass processing equipment has been modified in the FEIR analysis to reflect the updated glass processing design and building ventilation.
3. Biosolids and glass tipping and loading occurs indoors with the doors closed, therefore these are insignificant sources that will not contribute to the overall sound level generated by the Facility.
4. All loading of rail cars will be indoors.
5. Movement of railcars was characterized to include locomotive noise and coupling noise in the FEIR noise report.
6. Short duration sounds are addressed as follows:
 - a. There are no outdoor operations of waste handling equipment.
 - b. Delivery vehicle backup alarms are addressed in the FEIR noise report.
 - c. Dump truck tailgate sounds are included in the tipping areas and are indoors in all cases.
7. PPNE met with MassDEP on February 24, 2020 for the scoping meeting prior to the FEIR revision of the sound report. During this meeting, PPNE and MassDEP discussed the establishment of ambient sound levels, modeling of potential sound sources, and the use of L_{90} sound levels.

As stated in this section of the FEIR, PPNE has documented that sound impacts will be avoided, minimized, and mitigated to the extent feasible.

6.12 Conclusions

A comprehensive sound level modeling assessment was conducted for the Parallel Products of New England Project. In addition, ambient sound levels were measured to characterize the existing background sound levels within the area. Results of the comprehensive sound level assessment demonstrate that sound levels from the Project with the sound mitigation measures described in this report will meet the requirements set forth in the MassDEP Noise Policy at residential locations, and that the Project will not cause a condition of noise pollution.

Sound pressure levels due to the operation of all stationary equipment operating simultaneously at full load were predicted at the five sound level modeling locations. Simultaneous operation at full load is a conservative modeling assumption, which will result

in higher predicted sound levels relative to various actual part-load and intermittent operation of some of the stationary sources. All of the future predicted total sound levels documented in Table 6-7 above show compliance with the MassDEP Noise Policy which restricts the increase over ambient sound levels to 10 dBA. In addition, operations from the Facility will not create any “pure tones”. Throughout the analysis, PPNE has documented that sound impacts will be avoided, minimized, and mitigated to the extent feasible.

A similar analysis was performed for the Project incidental noise sources with the main difference being the use of time restrictions related to the activities, specifically for the idling locomotive. With the idling locomotive operation restricted to the hours of 5:00 AM to 9:00 PM and addition of a sound wall around the eastern and southern edge of the rail spur, PPNE has mitigated Project generated sound from all of the incidental noise sources to the maximum extent practical, as documented in Tables 6-8, 6-9, and 6-10 above.

7.0 Greenhouse Gas Emissions

An initial Greenhouse Gas (GHG) analysis was presented in the DEIR. The initial analysis addressed the GHG emissions that would be generated by operation of the Project, and options that may reduce those emissions in accordance with the MEPA GHG Policy.

The GHG analysis presented in the Draft Environmental Impact Report (DEIR) focused on emissions of carbon dioxide (CO₂). As noted in the GHG Policy, although there are other GHGs, CO₂ is the predominant contributor to global warming. Furthermore, CO₂ is by far the predominant GHG emitted from the types of sources related to this Project, and CO₂ emissions can be calculated for these source types with readily available data.

Greenhouse Gas (GHG) emissions sources can be categorized into two groups: (1) stationary sources, or emissions related to structures and equipment that are stationary on the site; and (2) mobile sources, or emissions related to transportation. Stationary sources can be further broken down into direct sources and indirect sources; direct sources include GHG emissions from on-site fuel combustion, and indirect sources include GHG emissions associated with electricity and other forms of energy that are imported from off-site power plants via the regional electrical grid for use on-site.

The Code at the time of filing the Environmental Notification Form (ENF) and the DEIR was the 9th Edition, amended to incorporate the building energy provisions of International Energy Conservation Code (IECC) 2015. A new Building Code was adopted in November 2020. The Proponent has elected to comply with the new Massachusetts Energy Code for GHG Policy compliance. The new Massachusetts Code, based on IECC 2018, together with the guidance of the modeling protocol of ASHRAE 90.1 Appendix G, defines the baseline for this GHG analysis. As discussed in previous filings, the conditioned Project buildings are less than 100,000 sf and are therefore not subject to the Stretch Energy Code.

The DEIR Certificate included comments from the Executive Office of Environmental Affairs (EOEA) and the Department of Energy Resources (DOER). As the building design has advanced since the filing of the DEIR, design decisions have been informed through careful modeling and cost analysis. In this continuation of the GHG analysis, EOEA and DOER comments are addressed.

7.1 Project Update

As detailed in the EENF, the proposed overall project includes a solar PV canopy and is a combination of three industrial processes: recycled glass handling, municipal solid waste (MSW) tipping and processing and construction and demolition (C&D) handling, and biosolids processing. The project will be implemented in sequential phases. The glass

handling is being implemented as Phase 1, the MSW processing and biosolids processing will be implemented as Phase 2. The Glass Processing Building is fully constructed.

Three buildings will be heated and are considered “conditioned spaces”. These buildings will be minimally heated in the winter to maintain 50 degrees Fahrenheit. They are:

- The Glass Processing Building, Glass Processing Section (27,500 sf)
- The Glass Processing Building, Bunker Building Section (23,320 sf)
- Bio-solids Building 41,132 sf, (30,000 sf of conditioned space)

In addition, two unconditioned buildings/spaces will be constructed; the MSW Tipping Building in combination with the processing area of the existing building (87,000 sf) and the Glass Processing Side Bunker Building (21,973 sf). Because their only non-process energy use will be lighting and ventilation, the GHG analysis of these buildings will be limited to lighting and ventilation only.

7.2 Envelope Update

7.2.1 Wall Insulation

As detailed in the DEIR, all buildings will be built to achieve at least code minimums. The Glass handling building and glass handling bunker buildings have been constructed with R-19 continuous insulation. A minor error in the WSP Code Compliance Memo has been corrected. The corrected memo now reads: “5.4.3.1 – Continuous Air Barrier / All conditioned spaces will be required to comply with the Continuous Air Barrier requirement within Section 5.4.3.1.” Please refer to Appendix 14 for details.

The biosolids building will have an above-code envelope as detailed in Figure 7-1 on the proceeding page, below.

SCALE:	AS NOTED
DATE:	4May2011
DRAWN BY:	P
JOB NUMBER:	19-00000000

Table 7.1 – Bio-solids Building Performance				
Measure	Baseline		Proposed	
	%	U	%	U
Concrete Wall	10	0.090	10	0.250
Metal Wall	90	0.052	90	0.034
Window	0	0.380	0	0.420
Aggregate vertical assembly	100	0.056	100	0.055
Percent Improvement				2.2%

The biosolids building will be a pre-engineered metal building with a roof height of 53'-4 3/4". The base of the walls of the building will have 4' of exposed concrete with an R-value of 4 below an insulated metal panel with an R-value of 29, continuous insulation. There are no windows in the proposed design. A cross section of the proposed Biosolids wall is shown below in figure 7-1 on the proceeding page.

In addition to the code-compliant proposed wall section detailed above, an enhanced wall section has also been studied. The enhanced wall section was modeled as an alternative to the proposed design in order to test the efficacy of an enhanced building envelope on energy use. The enhanced wall alternative increases the insulation at the metal panel to R=42. A cross section of the enhanced Biosolids wall has been presented above. With a design temperature of 50 degrees Fahrenheit, the difference between the proposed envelope and the enhanced envelope was minor. A less than half of a percent energy savings improvement was calculated, with an estimated annual utilities savings of approximately \$200. The cost to incorporate the enhanced envelope into the design would be approximately \$31,000 over the proposed envelope. This equals a payback of 155 years. For these reasons, increasing the envelope performance is not justified. The Proposed envelope design represents the most cost-effective way to deliver this much-needed Project.

7.2.2 Roof Insulation

The biosolids building will be constructed with R=19 insulation + an R=11 liner system, as prescribed by ASHRAE 90.1-2018.

The roof of the Glass Handling Building was designed with the R=19 insulation but without the R=11 liner system prescribed by ASHRAE 90.1-2013. The cost to install an R=11 equivalent liner system is between \$300,000 to \$400,000. When the glass handling building was modeled both with and without the R=11 liner system, the difference in energy savings was approximately 28 MMBtu annually, or an approximate 0.8% reduction in heating energy with the liner system. The utility savings associated with the liner system are roughly \$350 annually.

The Proponent believes that the minor additional heating energy consumption and incremental GHG impact due to the code deviation does not warrant the retrofit and requests that the project be allowed to forgo this design element.

7.3 HVAC Update

7.3.1 Biosolids Heating Efficiency

The EENF referenced a 90% efficient heating system in the biosolids building. That efficiency was used to reach the EENF GHG reduction of 0.02% for the Biosolids Building. The DEIR references an 82% efficient heating system, and that number was used to reach the DEIR GHG reduction of 0.3% for the Biosolids Building. The switch to the 82% efficient system was made after advancing the design and speaking with product specialists.

90% efficient boilers are available, however they come at a cost increase of 48% compared to a traditional unit. Additionally, 90% efficient condensing furnaces of the roof-mounted industrial-type are not typical for this application. A direct-fired burner would be required to achieve 90% condensing efficiencies. This type of burner cannot be paired with a biosolids facility because of the potential products of combustion in the airstream. Because direct-fired furnaces are not allowed in this type of building, and because the difference in GHG savings between the two systems is negligible, the owner has decided to proceed with an 82% efficient boiler.

7.3.2 Heat Pump Incentives and Financial Calculations

The DEIR contained a detailed heat pump analysis for the Project. This study has been updated to include available incentives and ventilation losses. Please refer to Appendix 15 for the updated Heat Pump Analysis. When modeled, the heat pump systems reduce

GHG emissions by 40%. However, heat pumps add an additional \$78,000 per year in utility costs to the Glass Handling and biosolids buildings when compared to the proposed gas-fired heating system. Heat pumps would also increase construction cost by approximately \$413,000.

While heat pumps have an appreciable GHG benefit, the added capital cost combined with the increased annual utility costs make this mitigation measure financially infeasible. Additionally, heat pumps units are currently available in sizes up to ~240,000 Btu/hr. For example, one (1) proposed gas heating make-up air unit for the Bio-solids is currently 47,500 CFM, and approximately 4,000,000 Btu/hr. This would need to be replaced with seventeen air-source heat pumps, which is not a realistic design or approach to heating a high-bay warehouse or manufacturing facility.

7.3.3 Reduced Lighting Power Densities

As detailed in the DEIR, the Project is committing to a 20% reduction in lighting power density (LPD) measured from ASHRAE 2016. The project's LPD tables have been updated to reflect the most recent code update and to include a 10% reduction in Baseline LPD, as required by MA amendment C406. The updated lighting power tables are shown, below.

Table 7.2 Glass Handling Building Lighting Calculation		
Measure	Baseline	Proposed
Low bay LPD	0.86 W/sf	0.86 W/sf
Reduced 10%	0.77 W/sf	
Reduced 20%		0.69 W/sf
Area (Glass processing, glass bunker, and side bunker)	72,793 sf	72,793 sf
Lighting Requirement	56,051 W	50,227 W
Operating Hours	8,760	8,760
Lighting Energy Use	491 MWh/yr	440 MWh/yr

Table 7.3 Biosolids Building Lighting Calculation		
Measure	Baseline	Proposed
High bay LPD	1.23 W/sf	1.23 W/sf
Reduced 10%	1.11 W/sf	
Reduced 20%		0.98 W/sf
Area	41,132 sf	41,132 sf
Lighting Requirement	45,657 W	40,309 W
Operating Hours	8,760	8,760
Lighting Energy Use	400 MWh/yr	353 MWh/yr
Table 7.4 MSW Building Lighting Calculation		
Measure	Baseline	Proposed
High bay LPD	1.23 W/sf	1.23 W/sf
Reduced 10%	1.11 W/sf	
Reduced 20%		0.98 W/sf
Area	87,000 sf	87,000 sf
Lighting Requirement	96,309 W	86,678 W
Operating Hours	8,760	8,760
Lighting Energy Use	844 MWh/yr	759 MWh/yr

7.4 Modeling Update

Modeling has been updated as indicated in the following three subsections. In each case for all buildings, baseline and proposed inputs are the same, with the exception of the input included in Table 7-5. Additionally, because of the minimal heat set point and lack of air conditioning, no credit has been taken for the minor improvement in proposed envelope performance. The modeling assumes equivalent baseline and proposed envelopes.

Table 7.5 Modeling Input Assumptions		
Energy Model Assumptions	IECC 2018 Baseline	Proposed Design
Boiler & Furnace Efficiency	80% Efficient	82% Efficient
Interior Lighting Power Density	Building Area with 10% reductions (Per C406.1 Enhancements)	Building Area with 20% Reductions

7.4.1 MSW

The MSW model has been updated to include ventilation fans. This includes seven 24,000 cfm fans with a nominal Horsepower of 15. This represents an operational 9.33 kw/hr each, 24 hours/day, 365 days/year. Please refer to Table 7.6 below for details.

Table 7.6 MSW Energy Use				
MSW Tipping and Processing				
Building Size	87,000	sf		
			Baseline	Proposed
			MMBtu/yr	MMBtu/yr
DIRECT (NATURAL GAS)				
Space Heating			0	0
	subtotal		0	0
INDIRECT (ELECTRICITY)			MWh/yr	MWh/yr
Ventilation			572	572
Space Heating			0	0
Internal Lighting			844	759
	subtotal		1,415	1,331
ENERGY USE INDEX			kBtu/sf/yr	kBtu/sf/yr
			55.5	52.2
	(compared to baseline)			-6%
GHG EMISSIONS			tons/yr	tons/yr
Direct	Gas-burning		0	0
Indirect	Electricity		502	473
	Total		502	473
	Diff, tpy			-30
	Diff, % (compared to baseline)			-6.0%
CO ₂ Emission Factors:				
	Electricity ¹	710 lb/MWh		
	Natural Gas ²	117 lb/MMBtu		
¹ 2016 ISO New England Electric Generator Air Emissions Report ² EIA Fuel Emissions Factors, Weighted National Average (1029 Btu/scf)				

7.4.2 Glass Handling

The Glass Handling Model includes Glass Processing, Bunker Building, and Side Bunker Building (lighting only). Modeling been updated to include ventilation fans. End-of-process fans will be located at two baghouse exhausts (manifolded to one stack). These fans will draw a total of approximately 27,100 cfm on a twenty-four-seven operational basis. The impact of the makeup air heating necessary to operate the baghouses has been added to the heating load of the building. Please refer to Table 7.7 for details.

Table 7.7 Glass Handling Processing Energy Use					
Glass Handling (Processing, Bunker, and Side Bunker)					
Glass Processing	27,500	sf			
Bunker Building	23,320	sf			
Side Bunker (lighting only)	21,973	sf			
Total	72,793	sf			
			Baseline	Proposed	Heat Pump
			MMBtu/yr	MMBtu/yr	MMBtu/yr
DIRECT (NATURAL GAS)					
Space Heating			3,565	3,478	-
	subtotal		3,565	3,478	0
INDIRECT (ELECTRICITY)			MWh/yr	MWh/yr	MWh/yr
Ventilation			442	442	442
Space Heating			57	57	391
Internal Lighting			494	439	448
	subtotal		993	938	1,281
ENERGY USE INDEX			kBtu/sf/yr	kBtu/sf/yr	
(excludes side bunker area)			136.8	131.4	
(compared to baseline)				-4%	
GHG EMISSIONS			tons/yr	tons/yr	
Direct	Gas-burning		209	203	
Indirect	Electricity		339	320	
	Total		547	523	
	Diff, tpy			-24	
	Diff, % (compared to baseline)			-4.4%	
CO ₂ Emission Factors:					
Electricity ¹	682 lb/MWh				
Natural Gas ²	117 lb/MMBtu				
¹ 2017 ISO New England Electric Generator Air Emissions Report					
² EIA Fuel Emissions Factors, Weighted National Average (1029 Btu/scf)					

7.4.3 Biosolids Building

The Biosolids Model included below, has been updated. Please refer to Table 7.8 below for details.

Table 7.8 Biolsolids Processing

Biosolids Processing				
Building Size		41,132 sf		
DIRECT (NATURAL GAS)			Baseline	Proposed
			MMBtu/yr	MMBtu/yr
Dryer Heating Load			136,365	136,365
Space Heating			6,766	6,601
		subtotal	143,131	142,966
INDIRECT (ELECTRICITY)			MWh/yr	MWh/yr
Process Electricity			4,844	4,844
Ventilation			1,435	1,435
Space Heating			112	112
Internal Lighting			399	355
		subtotal	6,790	6,746
ENERGY USE INDEX			kBtu/sf/yr	kBtu/sf/yr
			4,043	4,035
(compared to baseline)				0%
GHG EMISSIONS			tons/yr	tons/yr
Direct	Gas-burning		8,373	8,364
Indirect	Electricity		2,410	2,395
		Total	10,784	10,758
		Diff, tpy		-25
Diff, % (compared to baseline)				-0.2%
CO ₂ Emission Factors:				
	Electricity ¹	710 lb/MWh		
	Natural Gas ²	117 lb/MMBtu		
¹ 2016 ISO New England Electric Generator Air Emissions Report ² EPA Fuel Emissions Factors, Weighted National Average (1029 Btu/scf)				

7.5 Incentives

The design team participated in a meeting with MassSave on April 28, 2020. Mass Save is a collaborative of Massachusetts' natural gas, electric utilities and energy efficiency service providers to help customers save money and energy. The purpose of the meeting was to introduce the owner to the incentive programs currently available to the project. Representatives from Eversource met with the Owner, architect, and other members of the design team to discuss the following:

- The project will follow the prescriptive incentive approach for high performance lighting and HVAC measures.
- Custom approach measures are potentially available for process equipment, such as Variable Frequency Drives (VFDs) if this is not standard practice for certain systems.
- SMART Incentive and tax credits available for the onsite solar photovoltaic systems

As suggested by Eversource, the owner will re-engage MassSave as the design progresses to further evaluate potential incentives.

7.5.1 Solar Photovoltaic Canopy

The Proponent is an advocate of renewable energy. Currently, the site operates a 1.6 MW truck canopy solar installation. As part of this project, the Proponent is installing an additional 1.9 MW of canopy and rooftop solar power on site. According to PV Watts, a 1.9 MW array located in New Bedford will produce approximately 2,500 MWh annually. This equates to a 907 ton per year reduction in CO₂.

Construction of the 1.9 MW photovoltaic (PV) canopy will begin in February 2021. Construction will continue until completion, with a June 2021 as target completion date. In addition, all new buildings will be PV-ready as required by code.

7.6 Mobile Source Update

7.6.1 Mobile Source Emissions Summary

The mobile source emissions calculation remains unchanged from the Draft EIR. The mobile source emissions summary is detailed in Table 7.9 below.

Table 7.9 Mobile Source GHG Emissions Analysis Summary		
Pollutant	CO₂e (lbs/day)	CO₂e (tons/yr)
Front-End Loader Emissions	2804	512
Truck-Generated Emissions	6307	1150
Employee Vehicle-Generated Emissions	324	59
Total	9,435	1721

7.6.2 Rail Versus Truck Comparison

The rail versus truck emissions calculation comparison remains unchanged from the Draft EIR. Please refer to Table 7-10 for a summary of results.

Table 7.10 GHG Comparison of Rail Haul vs On Road Haul				
	MSW/Biosolids		Glass	
	Truck	Rail	Truck	Rail
GHG (lb/day)	154,426	63,247	19,289	7,441
GHG (tpy)	28,183	11,543	3,520	1,358
Difference (tpy)	-	-16,640	-	-2,162
Difference (%)	-	-59%	-	-61%

7.7 Summary and Mitigation Commitments

7.7.1 Project GHG Summary

Table 7.11 below presents a composite of project GHG emissions profiles of the Baseline and Proposed cases.

Table 7.11 Project GHG Emissions Summary				
	Baseline	Proposed	Difference	
	tons/yr			%
Glass Handling	547	523	24	-4.4
MSW	502	473	30	-6.0
Biosolids	10,784	10,758	25	-0.2
Total Buildings	11,833	11,754	79	-0.7
Mobile Sources	1,721	1,721	-	-
On-site renewable energy		-907		

7.7.2 Proponent's Commitments to GHG Reduction

PPNE has detailed their commitments to mitigate project GHG emissions. PPNE is committed to environmental stewardship. As design develops further, additional technologies may be adopted that will further decrease GHG emissions, but these are not yet ripe for selection. The proponent will encourage the continued evaluation of energy efficiency and renewable energy measures throughout the life of the project.

PPNE is committed to the following mitigation elements for the project:

- The installation of 1.9 MW of canopy solar PV to increase the site's overall PV capacity to 3.5 MW.
- A 20% reduction over ASHRAE in lighting power density in the new buildings (glass handling, MSW tipping, and biosolids processing) and in the MSW processing area of the existing building
- High-efficiency mechanical equipment;
- VFDs where appropriate;
- High-performance building envelopes;
- PV-Ready new construction;
- Construction waste recycling.

The proponent has included in the design of the project, all feasible GHG emissions mitigation to avoid, reduce, minimize, or mitigate damage to the environment.

The proponent is committed to implementing the energy efficiency and GHG emission reduction measures presented in this analysis but must retain an amount of design flexibility to allow for changes that will inevitably occur as design progresses. If, during project design, a specific combination of design strategies proves more advantageous from an engineering, economic, or space utilization perspective, the design of the project may vary from what has been described herein. Energy performance minima and associated GHG emission reductions will be adhered to.

Upon completion of the project, PPNE will submit a self-certification to the MEPA Office, prepared in accordance with the GHG Policy. This certification will identify the GHG mitigation measures incorporated into the project and will illustrate the degree of GHG reductions from a baseline case, as baseline is defined herein, and how such reductions are achieved.

8.0 Mitigation and Draft Section 61 Findings

PNE has prepared these draft Section 61 Findings to comply with the requirements of the Secretary's DEIR Certificate. The Secretary of the Executive Office of Energy and Environmental Affairs, on January 30, 2020, issued the Secretaries Certificate for the DEIR. The Certificate required the preparation of a FEIR for the project

8.1 Intent of Section 61 Findings

This section was prepared to present the information required in Massachusetts General Law (MGL) Chapter 30, Section 61, the Massachusetts Environmental Policy Act (MEPA) regulations (301 CMR 11.00, section 11.12), and scope of the Final Environmental Impact Report required by the Secretary of Energy and Environmental Affairs.

8.2 Regulatory Overview

In accordance with M.G.L. c. 30, section 61, any Agency, that takes Agency Action on a Project for which the Secretary required an EIR, shall determine whether the Project is likely to, directly or indirectly, cause any Damage to the Environment and make a finding describing the Damage to the Environment and confirming that all feasible measures have been taken to avoid and minimize the Damage to the Environment.

8.2.1 Contents of Section 61 Findings

In all cases, the Agency shall base its Section 61 Findings on the EIR and shall specify in detail: all feasible measures to be taken by the Proponent, or any other Agency or Person, to avoid Damage to the Environment or, to the extent Damage to the Environment cannot be avoided, to minimize and mitigate Damage to the Environment to the maximum extent practicable. The Draft EIR (DEIR) is required as part of the Certificate of the Secretary of Energy and Environmental Affairs to include a separate chapter on mitigation measures associated with DEIR and that this chapter also includes Draft Section 61 Findings for all state agency actions. The Draft Section 61 Findings shall contain a clear commitment to implement mitigation, an estimate of the individual costs of the proposed mitigation, identification of the parties responsible for implementing the mitigation, and a schedule for the implementation of mitigation. In accordance with M.G.L. c. 30, section 61, the reasonably foreseeable climate change impacts of a project, including its additional GHG emissions, and effects, such as predicted sea level rise shall be taken into consideration.

8.2.2 Section 61 Findings and Agency Action

Provided that mitigation measures are specified as conditions to or restrictions on the Agency Action, the Agency shall:

1. Make its Section 61 Findings part of the Permit, contract or other document allowing or approving the Agency Action, which may include additional conditions to or restrictions on the Project in accordance with other applicable statutes and regulations; or
2. Refer in its Section 61 Findings to applicable sections of the relevant Permit, contract or other document approving or allowing the Agency Action.

8.2.3 Proposed Section 61 Findings

Proposed Section 61 Findings prepared by a Proponent in accordance with 301 CMR 11.07(6)(k) are intended to assist a Participating Agency in fulfilling its obligations in accordance with M.G.L. c. 30, section 61. The Proponent's preparation of Proposed Section 61 Findings shall not mean that a Participating Agency has made its own Section 61 Findings. Except in accordance with 301 CMR 11.06(4) and 11.08(7), the Proponent's Proposed Section 61 Findings shall not limit an Agency's discretion in making its own Section 61 Findings.

8.2.4 Filing and Distribution of Section 61 Findings

The Proponent and a Participating Agency shall each file a copy of the Section 61 Findings with the Secretary, who shall publish notice of the availability of the Section 61 Findings in the next Environmental Monitor in accordance with 301 CMR 11.15(2), and shall each circulate copies of the Section 61 Findings to any Agency or Person upon request.

8.2.5 Subject Matter Jurisdiction Limitations on Section 61 Findings:

In the case of a Project undertaken by a Person that requires one or more Permits or a Land Transfer but does not involve Financial Assistance, any Participating Agency shall limit its Section 61 Findings, or any mitigation measures specified as conditions to or restrictions on the Agency Action, to those aspects of the Project that are within the subject matter of any required Permit or within the area subject to a Land Transfer.

8.3 FEIR Section 61 Findings Requirements

As stipulated by EOEEA, "The DEIR should include a separate chapter summarizing proposed mitigation measures. This chapter should also include draft Section 61 Findings for each State Agency that will issue Permits for the project. The DEIR should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation (either funding design and construction or performing actual construction), and contain a schedule for implementation. To ensure that all GHG emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed by the Proponent, I require Proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or

their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings.”

8.4 MA DEP Proposed Section 61 Findings (Draft Certification)

Project Name: Parallel Products of New England – MSW and Biosolids Facility

Project Location: New Bedford, Massachusetts

Project Proponent: Parallel Products of New England, LLC

EEA #: 15990

Date Noticed in Environmental Monitor: _____

The Proposed Section 61 Findings below and the subsequent sections contain commitments that the Proponent has made and will serve as a basis for the MassDEP’s Section 61 Findings. The mitigation measures include commitment to reduce impacts associated with:

- Storm water
- Wetlands and riverfront areas
- Transportation
- Nuisance conditions (air, sound, etc.)
- Greenhouse gas emissions
- Endangered, Historic and Archaeological resources
- Consistency with Regulations and Policy

These Findings are for the Parallel Products of New England, LLC – Facility (EEA #15990) and have been prepared in accordance with the provisions of M.G.L. c. 30, Section 61 and 301 CMR 11.00. On [insert date] the Secretary of Energy and Environmental Affairs issued a Certificate stating that the Project’s Final Environmental Impact Report (Final EIR), dated [insert date] adequately and properly complied with the MEPA statute and regulations.

The facility will accept MSW, C&D and biosolids for processing. MSW will be processed in state-of-the-art separation equipment to extract recyclable material. After processing, the non-recyclable fraction of the MSW will be loaded in to rail cars for shipment to out of state disposal facilities. The facility will also accept C&D residual waste and bulky waste. This waste is classified as Category 2 and Category 3 C&D waste by MassDEP. Category 2 waste is C&D waste that has been processed by a C&D processing facility and Category 3 is bulky waste that has little or no recyclable value. The processing facility will have removed all waste ban material and other recyclable material from the C&D material as deemed appropriate. The Category 2 or Category 3 material accepted at the facility will be used as cover for baled MSW in the rail cars. PPNE will be required to comply with existing Waste Ban requirements set forth in 310 CMR 19.017 as part of their operational requirements. Biosolids accepted for

processing will be dried to reduce the volume of the biosolids. The dried biosolids will then be sent for disposal in rail cars. The facility will maintain and report all of their inbound and outbound statistics to the MassDEP on a quarterly and annual basis.

Based upon its review of the MEPA documents, the permit applications submitted to date, and the Department’s regulations, the Department finds that the terms and conditions to be incorporated into the permit required for this Project will constitute all feasible measures to avoid damage to the environment, including consideration of the potential effects of climate change, and will minimize and mitigate such damage to the maximum extent practicable for those impacts subject to the Department’s authority (see the Mitigation Table which is incorporated into the Section 61 Findings). Implementation of the mitigation measures will occur in accordance with the terms and conditions set forth in the permits.

Department of Environmental Protection	By	Date
Parallel Products of New England	By	Date

8.5 State Agency Permitting Actions – MassDEP

The following is a list of the state permits/permitting actions that will be triggered as part of the proposed development.

- 310 CMR 16.00 - Site Assignment for Solid Waste Facilities (BWP SW-01). Application is in a “draft” form and will be finalized and submitted to MassDEP upon acceptance of the Final EIR.
- 310 CMR 19.000 – Solid Waste Regulations – Authorization to Construct (BWP SW-05). Anticipated to be submitted to MassDEP upon completion of the Site Assignment Hearings.
- 310 CMR 19.000 – Solid Waste Regulations – Authorization to Operate (BWP SW-06) Anticipated to be submitted to MassDEP upon completion of project construction.
- 310 CMR 10.00 – Wetlands Protection Act Regulations – Order of Conditions. Notice of Intent in accordance with the wetlands protection act prior to submission of an Authorization to Construct (ATC) application.
- 310 CMR 27.00 - Underground Injection Control. A permit application will be submitted prior to construction to infiltrate the storm water from the associated roof runoff. Will be submitted to MassDEP prior to submission of an ATO application.

- 310 CMR 7.00 – Air Quality Control - Limited Plan Approval – At this point in time it is anticipated that emissions will be considered de minimus with no permit requirement(s)

8.6 Mitigation, Description, Cost, Implementation and Responsibilities

AREA OF CONCERN	IMPACT	MITIGATION MEASURE DESCRIPTION	SCHEDULE, COST & RESPONSIBILITY
Greenhouse Gas Emissions	Facility could yield impacts through the use of energy, fossil fuels and construction if it is not properly planed and/or operated.	<ul style="list-style-type: none"> • Conditioned spaces will meet mandatory and prescriptive requirements of the energy code • A 20% reduction over Code in lighting installations electricity use in the new buildings (glass handling, MSW tipping, and biosolids processing) and in the MSW processing area of the existing building • High-efficiency mechanical equipment; • VFDs where appropriate; • High-performance building envelopes; • PV-ready new construction; • Construction waste recycling. • Utilization of rail transport will reduce GHG by 60% when compared with the use of trucks 	<p>Schedule:</p> <p>Mitigation measures will be incorporated into final project design and specifications. Design including mitigation measures will be included in ATC application and once installed and/or instituted will occur throughout the life of the project.</p> <p>Cost : \$125,000</p> <p>Responsibility</p> <p>Project Architect/PPNE</p>

AREA OF CONCERN	IMPACT	MITIGATION MEASURE DESCRIPTION	SCHEDULE, COST & RESPONSIBILITY
Wetland & Riverfront Areas	Facility is located near wetland and riverfront areas.	<p>The facility has been designed to minimize impacts to wetlands and riverfront areas by maximizing the use of existing infrastructure on site.</p> <p>Impacts to wetlands and riverfront areas are limited to Phase 1 construction which is currently in progress. Permitting for Phase 1 construction is currently in progress. A Notice of Intent has been approved by the New Bedford Conservation Commission.</p> <p>Phase 2 construction does not impact wetlands or riverfront areas of the site. Some minor activity will be within the buffer zone and a Notice of Intent will be filed regarding this activity.</p> <p>The existing storm water management system on site will be modified as required to maintain compliance with the Massachusetts Stormwater Management Policy.</p>	<p>Schedule:</p> <p>Mitigation measures for Phase 1 activity have been included in the NOI submitted to the Conservation Commission. Phase 2 designs will be included in the ATC application.</p> <p>Cost: \$430,000 (including bridge)</p> <p>Responsibility:</p> <p>Phase 1: Site Design Engineer/Contractor/PPNE</p> <p>Phase 2:</p> <p>Site Design Engineer /Contractor/PPNE</p>

AREA OF CONCERN	IMPACT	MITIGATION MEASUREDESCRIPTION	SCHEDULE, COST & RESPONSIBILITY
Air Quality	Facility operations could cause impacts to air quality	<p>Facility is committed to:</p> <ul style="list-style-type: none"> • Keeping operations indoors • Using electrically powered equipment • Using an atomized water mist at multiple locations and a water spray when necessary to control dust for MSW operations • Utilizing a biofilter and ionization system for odor control for biosolids operations • Regular sweeping outdoors on the paved surfaces • Paving all surfaces that are associated with facility operations • Using an electrically powered rail car mover <p>The predicted air pollutant and odor concentrations are shown to comply with the applicable national and Massachusetts standards, and protective odor concentration criteria at residences, using the USEPA AERMOD model. This modeling demonstrates that the proposed project as designed does not cause or contribute to a condition of air pollution.</p>	<p>Schedule:</p> <p>Design mitigation measures will be included in ATC application.</p> <p>Mitigation measures will commence once controls are installed and/or instituted throughout the life of the project</p> <p>Cost: \$250,000</p> <p>Responsibility:</p> <p>Mitigation measures design by architect/engineers and PPNE</p> <p>Operational requirements will be followed by PPNE</p>

AREA OF CONCERN	IMPACT	MITIGATION MEASUREDESCRIPTION	SCHEDULE, COST & RESPONSIBILITY
Nuisance Conditions	Facility could pose nuisance conditions if not properly planned and/or operated.	<p>The facility will be properly designed to significantly reduce the potential for on and/or off-site nuisance conditions:</p> <p>1. Sound:</p> <ul style="list-style-type: none"> a. All waste handling will be within enclosed buildings b. Tipping /delivery doors are away from surrounding receptors c. Electric rail car mover will be used d. Air handling units and fans will be low noise units or fitted with silencers e. A noise wall will be constructed to reduce noise impacts of cooling towers (these walls may be combined with each other) f. Noise wall will be construction at end of rail spurs g. Onsite truck noise was modeled and determined to be below FHWA criteria for residences <p>2. Litter</p> <ul style="list-style-type: none"> a. Maintaining the tractor trailer entrance and exit doors in the closed position when not in use b. Conducting all waste handling activities indoors c. Covering the all trailers and containers after bulk loading and before leaving the building d. Implementing a daily inspection program as a part of the Operations & Maintenance Program 	<p>Schedule:</p> <p>Mitigation measures will be fully designed and will be included in ATC application.</p> <p>Operation of the proposed mitigation measures during project will commence once installed and/or instituted throughout the life of the project.</p> <p>Cost: 250,000</p> <p>Responsibility:</p> <p>Mitigation measures design by architect/engineers and PPNE</p> <p>Operational requirement will be followed by PPNE</p>

AREA OF CONCERN	IMPACT	MITIGATION MEASURE DESCRIPTION	SCHEDULE, COST & RESPONSIBILITY
Nuisance Conditions	Facility could pose nuisance conditions if not properly planed and/or operated.	<p>3. Dust</p> <ul style="list-style-type: none"> a. Minimizing door openings within the proposed buildings b. Minimizing cross-ventilation of air through the building by having the tipping door openings all on one side of the building c. Conducting all waste handling activities indoors d. Maintaining equipment on site that will remove the materials from the tipping floor for subsequent processing e. Requiring all waste delivery vehicles to be covered f. Sweeping the paved areas and building interiors g. Use an atomizing misting system within MSW tipping areas h. Use water to moisten loads as required to control dust <p><i>Refer to the noise section of the DEIR and Attachment 13 for details of the noise modeling</i></p>	<p>Schedule:</p> <p>Mitigation measures will be included as part of ATC application.</p> <p>Operation of mitigation measures during the project will commence once installed and/or instituted throughout the life of the project.</p> <p>Cost: \$100,000</p> <p>Responsibility:</p> <p>Mitigation measures design by architect/engineers and PPNE</p> <p>Operational requirement will be followed by PPNE</p>

AREA OF CONCERN	IMPACT	MITIGATION MEASURE DESCRIPTION	SCHEDULE, COST & RESPONSIBILITY
Traffic Generation	Based on limited traffic increases, the facility should develop a Transportation Demand Management System	<ul style="list-style-type: none"> • Providing opportunities for employees to participate in transit subsidy or reimbursement programs • Informing employees of nearby transit stops and bicycle and pedestrian amenities • Coordinate with SRTA to consider revising existing transit service to better service the project site • Implementing a carpool system among employees • Direct deposit offered to employees. • Providing preferential parking for carpools and vanpools • Providing incentives to encourage bicycle ridership to the site, such as bike racks and other storage facilities on site • Providing striped bicycle lanes along Duchaine Boulevard and shared bicycle markings along Theodore Rice Boulevard to provide connectivity to the existing bicycle amenities along Braley Road. This is contingent upon City approval 	<p>Schedule:</p> <p>Mitigation measures will be instituted during construction and will be on-going throughout the life of the facility</p> <p>Cost: \$50,000</p> <p>Responsibility:</p> <p>Mitigation measure through design or coordinated by architect/engineers and PPNE</p> <p>Ongoing mitigation efforts will be followed by PPNE</p>

AREA OF CONCERN	IMPACT	MITIGATION MEASURE DESCRIPTION	SCHEDULE, COST & RESPONSIBILITY
Threatened or Endangered Species	The facility could impact threatened and/or endangered species	According to MassGIS there is Priority Habitat of Rare Species and an Estimated Habitat of Rare Wildlife located approximately 1500 feet south of the site. These areas are separated from the site by the existing rail line. The siting of the facility will not have an adverse impact on Endangered, Threatened or Special Concern Species listed by the NHESP.	Not Applicable
Areas of Critical Environmental Concern	The facility could impact an Area of Critical Environmental Concern	No Areas of Critical Environmental Concern (ACECs) were identified within on half mile of the site.	Not Applicable
Historic or Archaeological Resources	The facility could be sited in an area of historical or archaeological significance	No historical or archaeological sites of significance were identified on-site or in close proximity to the site. The controls proposed will ensure that impacts are mitigated and/or eliminated.	Not Applicable

AREA OF CONCERN	IMPACT	MITIGATION MEASURE DESCRIPTION	SCHEDULE, COST & RESPONSIBILITY
Build & Alternatives	The development of the site or not seeking viable alternatives could yield potential impacts.	<p>An Alternatives Analysis was prepared to provide an overview as to why the proposed site was the optimal choice for the proposed project.</p> <p>A suitable site for the proposed project must be located adjacent to an active rail line and must meet all of the siting requirements of 310 CMR 16.00. This criteria limits the number of sites that are suitable for the proposed project.</p> <p>Three sites were selected for comparison. Two of the sites were rejected due to the size of the site in one instance and traffic considerations for the other site. The selected site satisfied all the required site selection criteria.</p> <p><i>The alternatives evaluation is included in the FEIR in Section 2.6</i></p>	Not Applicable
No Build Alternatives	Not building the proposed facility could result in greater environmental benefits	<p>Should the facility “NOT” be constructed, it is estimated that the following impacts could occur.</p> <ul style="list-style-type: none"> • Increased regional traffic counts (total mileage driven) • Increased emissions associated vehicular emissions (more distant facilities) • Potentially less recycling • Increased greenhouse gas emissions 	Not Applicable

AREA OF CONCERN	IMPACT	MITIGATION MEASURE DESCRIPTION	SCHEDULE, COST & RESPONSIBILITY
Construction	During construction, the site could present impacts to the surrounding receptors and/or roadway networks.	<p>The facility will be developed following controlled “construction” requirements and oversight. The facility shall take the following steps to mitigate impacts:</p> <ul style="list-style-type: none"> • Develop a SWPPP in association with the Order of Conditions. • Make sure inbound and outbound vehicles utilize the major roadway networks surrounding the facility. • Park all vehicles on-site during construction phases. • Wet surfaces that may create nuisance dust conditions. • Perform construction activities following local zoning ordinances and MA State Building code. • Maintain proper on-site safety measures compliant with OSHA. 	<p>Schedule:</p> <p>Phase 1 construction is in progress</p> <p>Phase 2 construction will follow the receipt of the ATC permit</p> <p>Cost: \$20,000</p> <p>A project cost estimate will be developed during final design of the project</p> <p>Responsibility:</p> <p>Construction Contractor/PPNE</p>

8.7 Mitigation Summary

The mitigation table presented above generally outlined costs associated with mitigation measures for the proposed project. However, it is expected that this project will cost approximately \$50,000,000 +/- to design and develop. The following is a list of features that are relevant with respect to mitigation:

- All waste handling activities conducted within the subject site buildings
- Indoors controls such as an atomizing dust/odor suppression system
- Electrically powered processing line (MSW & Baler)
- High-efficiency mechanical equipment & lighting

- VFDs where appropriate
- High-performance building envelopes
- Air handling units and fans will be low noise units or fitted with silencers
- A noise wall will be constructed to reduce noise impacts of cooling towers
- A noise wall will be constructed at the end of the rail spur
- PV-Ready new construction
- Construction waste recycling
- Utilization of rail transport will reduce GHG by 60% when compared with the use of trucks
- Utilizing a biofilter and ionization system for odor control for biosolids operations
- Regular sweeping outdoors on the paved surfaces
- A bridge has been used for the rail crossing at the drainage swale to minimize the impact on the drainage swale
- Paving all surfaces that are associated with facility operations to control dust
- Using an electrically powered rail car mover
- Providing opportunities for employees to participate in transit subsidy or reimbursement programs.
- Informing employees of nearby transit stops and bicycle and pedestrian amenities.
- Coordinate with SRTA to consider revising existing transit service to better service the project site.
- Implementing a carpool system among employees.
- Direct deposit offered to employees.
- Providing preferential parking for carpools and vanpools.
- Providing incentives to encourage bicycle ridership to the site, such as bike racks and other storage facilities on site.
- Storm water controls and BMPs for construction and ongoing operations
- Development of a SWPPP
- On-going O&M and inspection procedures

9.0 Response to Comments

This section provides responses to comment letters submitted during the comment period for the DEIR. Comment letters from individuals and regulatory agencies have been provided by the MEPA Office.

Because many of the comments received address similar issues, a response to each individual letter has not been provided. Each section below includes a brief synopsis of each group of similar comments, followed by a comment response and identification of the location within the FEIR where the comment is further addressed. The comment response includes an index identifying the comment letter and comment within that letter. Each letter that has been received is listed below with a letter number assigned. Each comment in the comment letters is identified in the right-hand margin using the format x-y, where x is the letter number and y is the comment number. A copy of each comment letter with the comment numbers noted in the right-hand margin is included in Appendix 12 (A large number of form letters were received commenting on the project. Only one sample copy of this letter has been included in Appendix 12, as all the form letters are identical). Each of the comment response sections below includes an index of comment numbers in the right-hand margin indicating which letter and comment is addressed in that comment response.

Individual responses are provided for three of the letters received. These are letters no. 2, 80 and 81 in the listing below and are letters from MassDEP (Southeast Regional Office) (Letter no. 2), KP Law (on behalf of the City of New Bedford) (Letter no. 81), and Massachusetts Department of Energy Resources (Letter no. 80). Individual responses are provided for these letters as the comments address specific regulatory requirements.

Letter No	Letter Submitted by
1	Lisa Marie Andrews (email)
2	MassDEP, Southeast Regional Office
3	Mike McHugh (1) (email)
4	Mike McHugh (2) (email)
5	Michelle Roza
6	Nelson Ostiguy
7	State Representative Paul Schmid
8	Paul Schofield (email)
9	Jennifer Silva (email)
10	Richard Fornier (email)
11	Richard Hatten (email)
12	Rita Lizotte
13	Robert Ladino (1)
14	Robert Ladino (2)
15	Robert Ladino (3)
16	Ron R. Cabral (1) (email)

17 Ron R. Cabral (2) (email)
18 Ron R. Cabral (3) (email)
19 Roger A. Cabral
20 Town of Acushnet
21 Senator Mark Montigny
22 Sharon Pickering (1) (Public Comments Portal)
23 Sharon Pickering (2) (email)
24 Bull Dogs for Life (email)
25 Stephanie Cooper, MassDEP, Boston (email)
26 Manual Carreiro
27 Thomas Rua
28 Thomas Grota
29 Tracy Wallace (1) (Public Comment Portal)
30 Tracy Wallace (2) including Attachment A and B
31 Vincent Carolan (email)
32 Wallace A. Greely
33 Wendy Graca (email)
34 William Andrews (1) (Public Comment Portal)
35 William Andrews (2)
36 William Andrews (3) (email)
37 William Pires
39 Alexia Orphanides
40 Ariane Lambert
41 Barbara Bouchard
42 Becca Kurie
43 Betty Grota
44 Brad Markey
45 Brittney Furtado
46 Carl Anctil
47 Carl Roza
48 Carol Sherman
49 Carol Strupczewski (1)
50 Carol Strupczewski (2)
51 Catherine Brickett Hatten
52 Charles Kennedy (1)
53 Charles Kennedy (2)
54 Claudia and Stanley Kosta
55 Claudia Ostiguy (1)
56 Claudia Ostiguy (2)
57 Conservation Law Foundation
58 Corine Anctil
59 David Amaral
60 Deborah Fleet
61 Donna Poyant
62 Eileen Dunleavy
63 Elizabeth Isherwood

64	Elizabeth Saulnier (1)
65	Elizabeth Saulnier (2)
66	Form letter 1
67	Form letter 2
68	Frances Heggi
69	George Faria
70	Giselda Rodriques
71	Jennifer Silva
72	Jim Niland
73	Jose Da Costa
74	Karen Chin
75	Kayla Trahan
76	Ken Costa (1)
77	Ken Costa (2)
78	Ken Costa (3)
79	Rick Kidder
80	Dept of Energy Resources
81	K P Law (City of New Bedford)

A summary of the comments included in the comment letters and responses to the comments follows.

9.1 Traffic

Comment Summary

Numerous comments have been received related to traffic to and from the site. A listing of the traffic related comments is shown below.

- Impact of increased traffic on accidents, compromised off-ramps, railroad crossings, delay of emergency vehicles, school congestion, and roadway damage 1-2, 35-2
- Validity of the traffic report is questioned. 1-3, 31-5
- Speed of traffic 4-5, 30-9
- Use of Phillips Road, no way to enforce trucks to not use Phillips Road 8-1, 30-8
- Did the traffic study include Exit 5 and Exit 7 10-4, 30-1
- Time of day and day of week for traffic data collections 11-1, 43-2
- Was traffic data collected during time of day when school busses operate 11-2, 45-2
- Drivers make a turnaround in homeowners' driveways to avoid traffic 12-3, 46-1
- Impact of Dunkin Donuts on traffic 16-1, 49-1
- Was traffic data used by McMahon from Transportation Data Corp. 17-1, 50-1
- Was a traffic study done of traffic coming off the ramps of route 140 when school was in session 17-2, 51-2
- Request a new traffic study 17-3, 53-3
- Trucks pass by children waiting for school bus 17-4, 54-1
- 400 trucks will pass neighborhood to access the most convenient entrance to proposed plant. 17-5, 55-2
- Did the study give any consideration for cars entering or exiting the industrial park? 17-6, 56-2
- Independent traffic study is required. 17-7, 60-2
- Traffic study based on insufficient traffic counts 17-8, 62-2
- Traffic will be impacted at the junction of 140 and 195 18-1, 62-3
- Did Massachusetts do a traffic study (traffic light or stop sign) 19-2, 64-2
- Quality of life impacted 20-3, 68-3
- 22-1, 70-1
- 23-1, 72-3
- 24-1, 74-2
- 26-2, 74-3
- 27-1, 74-4
- 27-4, 75-1
- 28-3, 77-8
- 65-4, 78-1

Comment Response

The Parallel Products facility is located within the New Bedford Business Park, a commercial and industrial district accessed from Route 140 by Braley Road and Theodore Rice Boulevard. As such, these roadways are designed to carry the volume and types of heavy truck traffic generated by Parallel Products and other industrial tenants of the Business Park, some of which generate more daily truck trips than Parallel Products. An analysis of traffic operations and crash rates is presented in the FEIR. This analysis was conducted in accordance with MassDOT Traffic Impact Assessment (TIA) Guidelines as required by MEPA. In accordance with the MassDOT TIA guidelines, manual turning movement counts were collected at study area intersections on a “typical” Tuesday, Wednesday, or Thursday while school was in session, during the weekday morning (7:00 a.m. to 9:00 a.m.) and weekday afternoon (3:00 p.m. to 6:00 p.m.) peak periods. These hours capture traffic associated with 8:45 a.m. arrival and 3:00 p.m. dismissal at the Casimir Pulaski Elementary School. In addition, Automatic Traffic Recorder (ATR) counts were collected on Duchaine Boulevard for a 24-hour period. Vehicle speeds on Duchaine Boulevard were collected via radar in accordance with MassDOT guidelines; the 85th percentile speed was found to be 37 mph northbound and 36 mph southbound.

The traffic study area includes the intersections of Braley Road with the Route 140 Exit 7 ramps. The proposed project is not anticipated to generate additional trips at the Phillips Road/Church Street interchange (Exit 5) aside from a small number of off-peak employee trips at shift changes; therefore, the Exit 5 interchange is outside the scope of the traffic study area. Additionally, as the proposed project is anticipated to add a negligible volume of traffic to area freeways such as Route 140 and Interstate 195 compared with existing and projected future No-Build volumes, freeway operations analysis on Route 140 and Interstate 195 are outside the scope of the study. The potential impact of queued vehicles on the Route 140 ramps at Braley Road is depicted in Figure 5.13 of the FEIR.

As noted in the FEIR, the proposed Phase 2 expansion of the Parallel Products facility is not anticipated to significantly increase delay in the study area, which includes the Braley Road corridor from the Phillips Road intersection to the Route 140 Northbound Ramps intersection. Based on the capacity analysis results presented in the FEIR, the approaches under stop sign control at the Route 140 off-ramps onto Braley Road and at the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard operate over capacity and with high delays under 2020 Base conditions prior to the opening of the Parallel Products facility under Phase 1. These movements carry a majority of the traffic accessing the industrial park on Duchaine Boulevard during the peak hours. These conditions are projected to worsen under 2027 No-Build conditions, without the Phase 2 expansion, due to background growth in traffic volumes in the study area.

The 2027 Build condition analyzes future traffic operation with the proposed Phase 2 expansion in place and analyzes the effect of both additional truck traffic from expanded recycling operations and additional passenger car traffic due to the increase in employment at the facility. With the proposed project, the already congested movements would experience negligible increases in delays compared with No-Build conditions. Movements which are projected to operate at acceptable levels of service under 2027 No-Build conditions would continue to do under 2027 Build conditions. Weekday morning and afternoon peak hour levels of service, delays, and vehicle to capacity ratios under 2020 Base, 2020 Existing, 2027 No-Build, and 2020 Build conditions are summarized in Table 5.7 of the FEIR. Queues are summarized graphically in Figures 5.13 of the FEIR and are tabulated in the Traffic Study presented as Appendix 13.

Although the Braley Road corridor currently experiences congestion, neither MassDOT nor the City of New Bedford has conducted a traffic study or proposed improvements to date. The New England Farms/Mobil/Dunkin' Donuts/Lloyd's Deli/Pizza Hut Express development at 209 Theodore Rice Boulevard was approved by the City of New Bedford in 2017 and opened in 2019. This development was not required by the City of New Bedford to conduct a Traffic Impact Study. Existing traffic volumes were updated to pre-COVID 2020 conditions for the FEIR to incorporate additional traffic generated by New England Farms and other developments that have occurred since the June 2018 counts used in the DEIR were collected.

The traffic study presented in the DEIR was based on traffic counts collected in June 2018 while school was still in session. The 2018 traffic volumes were updated to pre-COVID 2020 conditions for the FEIR based on comparison of the June 2018 volumes with traffic counts collected by MassDOT at the Route 140 at Braley Road interchange in February 2020. The development of growth factors and adjustment of 2018 traffic volumes to pre-COVID 2020 conditions is detailed in Section 5.4.4.3 of the FEIR.

As presented in the FEIR, trucks will access the site to and from Route 140 via Braley Road and Theodore Rice Boulevard. The Route 140 at Braley Road (Exit 7) interchange ramps are included in the study. Any trips to the site via Phillips Road are expected to be site employees, which would be accessing the site outside of the peak hour, and would likely be traveling in a passenger vehicle. PPNE will restrict all trucks delivering solid waste or removing solid waste from using Phillips Road. PPNE will include the restriction on trucks from using Phillips Road in all contracts with customers of the facility. The contracts will include financial penalties if trucks utilize Phillips Road and a ban from using the facility for repeat offenders. PPNE would support a Heavy Commercial Vehicle Exclusion (HCVE) along Phillips Road to prevent truck traffic from other generators within the New Bedford Business Park from using Phillips Road, should the City of New Bedford pursue establishing a HCVE along Phillips Road.

Based on a review of school bus routes published by the New Bedford School District, there are no school bus stops located on the PPNE truck route along Theodore Rice Boulevard and Braley Road from the New Bedford Business Park to the Route 140 interchange. The nearest

school bus stop to the truck route is at the Southcoast Condominiums at 2064 Phillips Road, approximately one-quarter mile south of the intersection of Braley Road with Phillips Road and Theodore Rice Boulevard. The Casimir Pulaski Elementary School, located just east of Route 140 off of Braley Road starts at 8:45 AM and school dismissal is at 3:00 PM. Based on typical school arrival and departure patterns, these times coincide with the weekday morning (7:30 AM to 8:30 AM) and weekday afternoon (3:00 PM to 4:00 PM) peak hours analyzed as part of the capacity analysis presented in Transportation/Traffic – Traffic Operations Analysis section of the FEIR. Therefore, the 2027 Build conditions, as presented in the capacity analysis reflect both school related traffic and the peak hour volumes of the site-generated traffic, presenting a conservative scenario. The 2027 Build capacity analysis results indicate that the proposed project is not expected to have a significant impact on traffic operations at these intersections.

9.2 Odor, Noise, Emissions, Vectors

Comment Summary

Odor, Noise and Emissions comments received are summarized in the bullet points that follow: Index

- Implausible that correct measures can be obtained when industry is not even operational 4-6, 44-3
4-7, 45-1
- Air pollution 5-5, 46-1
- Former Parallel Products plant on Route 140 in Taunton 8-1, 51-3
- Impacts to residences 12-5, 60-2
- Air pollution and odors impact on school children 14-6, 53-7
- No assurances that facility will not be a nuisance 16-1, 54-1
- Truck noise is 16 time louder than cars 26-2, 55-2
- Equipment will breakdown causing problems 28-3, 56-2
- How will vectors be controlled (rats, seagulls)? 30-10, 53-6
- Odor and noise at residences 31-5, 57-18
- What mitigation is proposed for hydrogen sulfide emissions from C&D? 32-1, 61-2
- Will there be odors behind a sludge truck? 35-1, 62-2
- Rail, plant and trucks will have additional greenhouse gas emissions that currently do not exist 35-4, 65-5
- Parallel Products doesn't plan to monitor emissions on monthly basis 42-1, 66-2
- Dust is an explosion risk 43-2, 68-2
- 44-3, 70-2
- 72-1, 73-2
- 74-2, 74-3
- 74-5, 75-1
- 77-4, 77-5
- 77-6, 77-9
- 77-11, 78-1
- 77-12, 77-10

Comment Response

Preconstruction Environmental Review

The PPNE facility and operation is designed to provide a valuable service to the state of Massachusetts and the community. Through the MEPA process and the upcoming site assignment process, PPNE has documented that impacts are avoided, minimized, and mitigated as much as feasible for the Facility. The proposed project has undergone a rigorous environmental review including conservative assessments of potential impacts associated with odor, noise, and air quality. The MEPA process is an environmental review process (e.g. 14-6) designed to identify potential impacts and document the proponents efforts to avoid minimize and mitigate those impacts. At the conclusion of the MEPA process the media office will issue section 61 findings for state agencies to use in their review of permits to construct and operate the facility. The state agencies will then issue permits only to the extent that the appropriate environmental safety standards are met, and will include requirements to operate in compliance with the section 61 findings. Through this environmental review process, PPNE will document measures to avoid, minimize, and mitigate traffic and odor impacts to the extent feasible (e.g. 75-1). Air and odor impacts have been modeled as described in the DEIR, and modeled impacts are below health and nuisance thresholds.

The inputs to the air and odor modeling were based on currently available industry data regarding the quality of the expected municipal solid waste (MSW) and biosolids. There are many MSW and biosolids processing facilities currently in operation already. Data from these facilities can be obtained from permits on file with state agencies, as well as from equipment vendors. It is an accepted practice to apply data from similar facilities to analyze a new not-yet-built facility for permitting. The methods prescribed by USEPA and MassDEP for air quality analyses are developed with an inherent overestimation bias to be protective of human health and property.

The air and odor modeling analyses contain significant layers of conservatism, in that the predicted model results are intentionally overestimated compared to what would be expected to occur during operation. The air quality assessment uses a predictive model that uses 5 years of meteorological data, including wind direction and speed, temperature, and stability parameters. The data set includes over 43000 discrete hours that should statistically encompass most normal weather patterns from all times of day/night and seasons of the year. The analysis combines the background air quality as measured by MassDEP at nearby representative monitoring locations with the predicted worst-case impacts from the proposed project, and compares them to regulatory thresholds. All publicly accessible locations are included in the modeling analysis, including recent residential construction (e.g., 77-14).

PPNE has performed predictive studies using conservative assumptions regarding worst case operation of the facility. Computer predictive models also used conservative assumptions and

project specific information such as meteorology and terrain to demonstrate potential impacts. These analyses show that the air, noise, and odor impacts are below applicable health and nuisance-based criteria and provide assurance that actual operations will have lesser impacts than predicted. This overall approach has been used for the siting of new sources of air pollution since the implementation of the Clean Air Act of 1970 and has been expanded and made more rigorous through the MEPA and MassDEP site assignment processes. The site assignment process will also include an independent review to ensure the accuracy of the provided analyses.

Air Quality Impacts

As described in Section 6 of Attachment 14 to the DEIR, the predicted air pollutant and odor concentrations are shown to be below the applicable health-based air quality criteria and protective odor concentration criterion, using USEPA approved models. Therefore, it can be concluded that the proposed project as designed does not cause or contribute to a condition of air pollution in the area.

Air quality impacts from diesel emissions, namely diesel particulate emissions from mobile sources (trucks and loaders), were analyzed as part of the air quality analysis described in pages 108-118 (Air Quality Impacts Section) of the DEIR. The analysis documented compliance with the applicable health-based pollutant concentration criteria. PPNE notes that the project does not intend for trucks to use Phillips Road and that EPA's health-based criteria and standards are intended to protect human health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Air quality impacts from truck and facility operations are conservatively estimated as described in Attachment 14 of the DEIR and the analysis documents that predicted concentrations at off-site locations will be below USEPA's health-based criteria. Computer dispersion modeling using EPA approved methods documents that over the course of five-year modeling, the worst case air and odor emissions are not predicted to cause or significantly contribute to any health related impacts (e.g. 8 1, 12-5) and are not predicted to cause an odor nuisance condition. Per the analysis presented in the DEIR impacts for all pollutants were below health protective levels of concern (e.g., 28-3) at all offsite locations based on the peak predicted level of operation of the proposed facility. Operation of this facility will not cause or contribute to any health-protective exceedances of air quality concentrations. The air dispersion modeling (e.g., 35-1) included the impacts of prevailing winds, and documented that air impacts from normal operations are not predicted cause or contribute to unhealthy air, and odor impacts from normal operations will not cause a nuisance condition.

As described in Section 6 of Attachment 14 to the DEIR, the predicted air pollutant concentrations from emissions from biosolids drying are shown to be below the applicable health-based air quality criteria, using USEPA approved models. PPNE has described all of its currently planned activities, including biosolids drying, in this MEPA process. Attachment 14

of the DEIR described the air emissions from trucks and plant operations, and described potential odor sources (e.g., 77-3).

Ambient dispersion modeling in the DEIR documents that The National Ambient Air Quality Standards (NAAQS) will not be exceeded (e.g., 61-2). Per EPA, these standards “provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly.” Air and noise modeling addressed impacts at outdoor receptors (e.g. 68-2), including backyards and parklands.

PPNE analyzed the potential impacts from air toxics emissions. Trace air contaminants from both the facility and diesel exhaust fumes with toxic properties were specifically addressed and compared to the MassDEP Ambient Allowable Levels (AAL) and Threshold Exposure Levels (TEL). Using conservative estimates for future diesel exhaust emission rates, no potential exceedances of the health-based criteria were identified. Air toxics emissions were addressed in the DEIR (e.g., 55-2).

Specifically, PPNE notes that the proposed processes will not be a significant source of mercury (e.g., 77-9) emissions and that mercury was included in the air toxics analysis described above. Compliance with health-based standards is predicted for all air toxics. PPNE’s proposed project involves handling and processing municipal solid waste at ambient temperatures. Mercury’s release from municipal solid waste processing is related to high temperature processing and PPNE proposes no such high temperature processing. Furthermore, mercury-containing materials are banned from the municipal solid waste stream.

Air Pollution Control

PPNE will have an electric train mover, rather than a diesel locomotive engine, to avoid air pollution from railcar movement on site. The delivery/transport train is expected to make one trip onto the site per day which will additionally minimize the impacts associated with trains. PPNE will have an electric train mover, rather than a diesel locomotive engine, to avoid air pollution from railcar movement on site. The delivery/transport train is expected to make one trip onto the site per day which will additionally minimize the impacts associated with trains. Train operators will comply with applicable EPA regulations at 40 CFR 1033, which per EPA “dramatically reduces emissions from diesel locomotives of all types” and “reduces idling for new and remanufactured locomotives”. (reference: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/regulations-emissions-locomotives>)

The burning of sludge or chemicals present in building wash (e.g., 51-3) are addressed in the project description (pages 4-21 of the DEIR – Project Description and Permitting Section) which states that PPNE is not proposing any sludge burning or chemical building wash activities.

As described in the DEIR (at page 12), natural gas will be used as an energy source to dry the biosolids with Best Management Practices (BMPs) in-place to ensure complete combustion of the natural gas fuel.

Dust particles (e.g., 77-12) will not be generated by the biosolids drying process and accordingly will be minimized through proper system design. The “dry” biosolids will contain some residual moisture that will keep dust from being an issue. The DEIR presented a conservative comparison of emissions, including any Project dust emissions, against MassDEP ambient air quality standards and air toxics limits, and predicted that no limits will be exceeded at any public receptor in any weather condition.

PPNE notes that the application of Best Available Control Technology (BACT) is reviewed by MassDEP during the air plan approval review process for stationary combustion sources subject to that process. MassDEP has the authority to determine whether a proposed project meets BACT (e.g., 14-3).

PPNE notes that direct emissions of ozone from the ionization process (e.g. 30-20) are very minor and will not affect ambient air quality. Based on a comparison to the air quality dispersion modeling results predicted for trace contaminants in pages 108-118 (Air Quality Impacts Section) of the DEIR and a conservative estimate of ozone emissions from the odor control system, the maximum ozone concentrations at residences will be well below the ozone air quality standards.

PPNE notes that Greenhouse gas emissions (e.g., 74-5) are a global, not a local, concern. As stated in Appendix C Section 3.3 of the EENF, the project will prevent thousands of annual vehicle miles generated by heavy-duty diesel trucks and thousands of tons of GHG emissions produced from sending locally generated municipal solid waste and biosolids to processing facilities out of state. This should significantly reduce GHG emissions on a regional scale.

Odor Control

Regarding potential odor problems from the facility (e.g., 4-7, 8-1, 12-5, 26-2, 28-3), PPNE takes odor concerns very seriously. The Project has been specifically designed to avoid off-site odor impacts. Odor modeling presented in the DEIR documents that the proposed processes are not predicted to be a nuisance source of odor at any residential area. Computer dispersion modeling using EPA approved methods documents that over of course of five-year modeling, the worst-case air and odor emissions are not predicted to cause or significantly contribute to any health-related impacts and are not predicted to cause an odor nuisance condition. Odor modeling is conservatively based on a 24/7 operation and demonstrates that odor impacts are below the protective odor concentration criterion. As described in Section 6 of Attachment 14 to the DEIR, the predicted odor concentrations as a result of biosolids drying are shown to be below the applicable MassDEP odor criteria, using USEPA approved models. The odor study

(e.g., 72-1) relies on conservative assumptions and EPA-approved modeling techniques, and PPNE has committed to Best Management Practices (BMPs) for the handling of materials.

As described in the DEIR, PPNE will be limiting the amount of time that railcars are on site and establishing BMPs for sanitation.

The odor modeling included conservative assumptions and addressed potential impacts over the full range of meteorological conditions. Each potentially odor generating activity was included in the computer modeling analysis. Additionally, the inputs to the air and odor modeling were based on industry data regarding the quality of the expected MSW and biosolids. The air and odor modeling contain significant layers of conservatism and the results will be overestimated compared to actual operating conditions.

Through this MEPA process, PPNE is demonstrating before-the-fact that appropriate odor minimization and mitigation techniques will be in place to avoid the generation of nuisance conditions. PPNE is not responsible for compliance violations at other facilities (e.g., 77-5) and has transferred operations away from its former facility on Route 140 in Taunton (e.g., 43-2).

Municipal Solid Waste (MSW) and Biosolids are already transported by trucks statewide and any odor associated with truck transport is by its nature transient and localized. Per traffic section comments (e.g., 30-10), trucks will route from the highway into the industrial park, and will not go through residential areas. Attachment 14 of the DEIR described the air emissions from trucks and plant operations, and described potential odor sources (e.g., 77-3). As discussed in the traffic section, trucks are routed away from residential areas.

Noise Mitigation

PPNE has taken the potential for noise impacts from the facility seriously and has designed the proposed project to keep noise generating activities as far from sensitive receptors as possible and to dampen and shield sources of noise to minimize and mitigate noise impacts. PPNE conducted predictive noise modeling of both stationary- and transportation-based sources of sound and documented that using conservative modeling assumptions. PPNE has looked holistically at all facets of potential noise generating activities associated with the Project and concluded that the Project will not cause or create a condition of noise pollution at residential receptors. Industrial noises (e.g., 26-2, 28-3) are avoided, minimized, and mitigated to the extent feasible per the FEIR section 6.0 and computer modeling has been used to predict sound level impacts at residential neighborhoods. The revised noise mitigation and analysis is found in FEIR Section 6.0. The predicted sound level impacts over existing background (e.g., 53-6) are based on conservative estimates of both the continuous and intermittent noise levels predicted for the new facility operations and conservatively low background based on ambient monitoring the computer Cadna/A noise modeling includes additional layers of conservatism PPNE has

proposed systems with extensive noise mitigation to minimize noise impacts at residential areas.

Noise from idling trucks were addressed in the DEIR and an updated analysis of noise is provided in FEIR Section 6.0. The backup indicators from the trucks and heavy equipment are addressed in Section 6.0 of the FEIR which addresses noise impacts from transient sounds. Updated analysis in FEIR includes intermittent sources of sound (e.g., 77-7), including backup alarms from third-party delivery vehicles. As described in Section 6 of this FEIR, sound levels from equipment drop off quickly with distance. The Cadna/A model addresses the drop-off in sound levels over distance, as well as reflections and atmospheric effects when predicting observed sound levels at different receptors. The PPNE owned on-site vehicles' backup beepers are using white noise sounds and only third-party trucks that are making deliveries on-site will have standard truck back-up alarms. Additionally, PPNE notes that the project does not intend for trucks to use Phillips Road and nighttime truck traffic will be restricted. Regarding noise nuisance produced by trucks (e.g., 4-6), truck routing is away from residential areas to the extent feasible, and noise modeling has documented that the increase in truck traffic is in compliance with guidelines. Traffic routing (e.g., 5-5, 16-1) has been pointed away from residential areas and the traffic trucks will be given strict instructions to keep to the designated routes. The proposed rail spur will be used for locomotive transport during the mid-day. The locomotive equipment has been sited to the West side of the project to minimize sound related impacts on residence to the East. Per traffic section comments (e.g., 30-10), trucks will route from the highway into the industrial park, and will not go through residential areas.

There will be no train whistles associated with the proposed project. Locomotive sound impacts are addressed in Section 6 of this FEIR. Modeling shows that train operation will not cause or contribute to a condition of noise pollution.

PPNE notes that most noise generating activities are limited to daytime hours only and nighttime activities will be almost entirely indoors and enclosed. The noise analyses specifically address both daytime and nighttime activities and compare against the existing measured background daytime and nighttime sound levels to document compliance.

PPNE conducted predictive noise modeling using the Cadna/A industry standard model as described in Section 6 of the FEIR, as well as Attachment 13 of the DEIR. This modeling was updated per Section 6.0 of the FEIR. A new addition to the FEIR is the analysis of transient noises such as third-party delivery trucks' backup alarms, which are specifically addressed in FEIR Section 6.0. The modeling software uses the shape, size, and efficacy of the proposed sound barriers. The proposed design reflects the result of iterative analyses to identify the equipment layout and noise control configuration that best avoids, minimizes, and mitigates sound impacts to residential receptors. When analyzing sound levels, it is important to note that sound levels in decibels (dB) are logarithmic not directly additive. The computer modeling program, Cadna/A, considers the noise reduction/attenuation via propagation over distance to

generate a conservative estimate of the noise levels at far field receptors. The sound levels listed in the noise analysis as inputs to the model are the sound levels at a specific distance and are not representative of the noise attenuation over the distance to the receptors. The Cadna/A computer study concludes that PPNE will not cause or contribute to a condition of noise pollution at residential receptors.

PPNE consulted with MassDEP, including the Department of Solid Waste on February 24, 2020 and June 11, 2020. Section 6.0 of the FEIR was developed and presented to address MassDEP comments as well as the requirements of the MEPA certificate.

PPNE notes that most activities are limited to daytime hours only and nighttime activities will be almost entirely indoors and enclosed. PPNE also notes that many components of the Project, including glass storage and rail car loading, are enclosed to minimize impacts. PPNE has updated the project to store and load glass in an enclosed building (e.g., 74-5).

Best Management Practices and Compliance Tracking

MassDEP and City of New Bedford Board of Health permits will establish operating conditions and limits for the proposed facility. The permits will establish limits on the quantity of material that can be on site at any time. The facility will be required to cease accepting material once the permitted limit for material on site is reached. Equipment breakdown (e.g., 35-4) is one situation where the facility would need to cease accepting waste. Waste handling facilities typically have phone systems that can call all users of the facility to advise when the facility is not accepting waste. This system is also typically used to notify users of the facility when the facility has reached its daily permit limit and that the facility is not accepting any waste on that day.

PPNE has proposed specific Best Management Practices (BMPs) including the use of dedicated truck routes, speed limits, time of day restrictions, street sweeping, enclosures, and air quality controls to avoid pollution from traffic, air quality emissions, and other air quality concerns and nuisances to the residents of New Bedford. These are summarized in Section 8 - Mitigation and Draft Section 61 Findings.

Best Management Practices (e.g., 35-1) will be used to prevent upset conditions, and to identify and quickly correct upset conditions that do occur. The proposed facility includes processing and handling equipment which will experience breakdowns from time to time. Redundancy of equipment is provided for some equipment to improve reliability, while other equipment breakdowns will result in an interruption in processing and handling. One example of redundancy is the biosolids processing facility will include a standby dryer.

PPNE will monitor operations as described in the DEIR and apply BMPs to maintain operations consistent with the equipment specifications. Additionally, PPNE will be monitoring air emissions monthly (per page 284 of Part 2 of the DEIR filing) and keeping a rolling 12-month

tracking sheet for air emissions (e.g., 77-4). Compliance Assurance Monitoring (e.g. 77-10) refers to a specific EPA regulation for major sources of air emissions that use add-on control devices. Using conservative calculations, PPNE's air emissions will be well below all major source thresholds. Because project operations are well short of major source thresholds, that specific EPA regulation does not apply, but PPNE will be subject to other EPA and MassDEP air quality regulations, and will operate in compliance with the applicable regulations.

Dust emissions will be controlled using best practices. The DEIR comment response section (at Page 142) states that the biosolids dryer and facilities to house drying process equipment will be designed with built-in safety features to address potential fire risks (e.g., 77-12).

Vector Control

All handling and processing of MSW and biosolids will be conducted within an enclosed building. This prevents seagulls' access to the waste (e.g., 53-7).

MSW will typically be on site for 24 hours or less before it is loaded into rail cars for shipment to disposal locations with all handling and processing within enclosed buildings. This will minimize the opportunity for rats to accumulate (e.g., 77-6). PPNE will contract with a pest control company to monitor and control rats on site by utilization of bait stations.

C&D Waste Handling

In certain environmental conditions, hydrogen sulfide can be produced from C&D waste (e.g., 57-16). This has been an issue at landfills that use C&D material for daily cover. Hydrogen sulfide can be produced from the sulfur in gypsum wall board. Hydrogen sulfide is produced over time when gypsum wall board is placed in anaerobic and wet conditions. Hydrogen sulfide generation at landfills resulted in nuisance conditions due to its rotten egg odor.

The facility will accept only Category 2 C&D waste. Category 2 C&D waste is residual waste from the processing of C&D waste at a recycling operation. Category 2 waste is the waste fraction that remains after all waste ban items and recyclable materials have been extracted by a waste processing facility. One of the waste ban items that is removed by waste processing facilities is gypsum wall board. Gypsum wall board was added to the list of waste ban items that must be removed from the waste prior to waste processing. Gypsum wall board was added as a waste ban item as a result of the history of hydrogen sulfide generation in C&D waste.

C&D residuals are relatively dry when produced at a C&D processor. This material as processed is not sufficiently wet or anaerobic to generate any significant quantities of hydrogen sulfide. This material will be handled at the proposed facility within an enclosed building which will preclude the wetting of the material. In addition, C&D residuals will be on site for only short periods of time, limiting the time available for hydrogen sulfide generation.

The proposed facility includes processing and handling equipment which will experience breakdowns from time to time. Redundancy of equipment is provided for some equipment to improve reliability. However, other equipment breakdowns will result in an interruption in processing and handling. One example of redundancy is the biosolids processing facility will include a standby dryer. Should equipment breakdowns make it impossible to process waste, the facility will cease accepting waste until the required repairs have been made.

MassDEP and City of New Bedford Board of Health permits will establish operating conditions and limits for the proposed facility. The permits will establish limits on the quantity of material that can be on site at any time. The facility will be required to cease accepting material once the permitted limit for material on site is reached. Equipment breakdown is one situation where the facility would need to cease accepting waste. Waste handling facilities typically have phone systems that can call all users of the facility to advise when the facility is not accepting waste. This system is also typically used to notify users of the facility when the facility has reached its daily permit limit and that the facility is not accepting any waste on that day.

All handling and processing of MSW and biosolids will be conducted within an enclosed building. This will not allow seagulls access to the waste.

MSW will typically be on site for 24 hours or less before it is loaded into rail cars for shipment to disposal locations with all handling and processing within enclosed buildings. This will minimize the opportunity for vectors to scavenge. PPNE will contract with a pest control company to monitor and control rats on site by utilization of bait stations.

In certain environmental conditions, hydrogen sulfide can be produced from C&D waste. This has been an issue at landfills that use C&D material for daily cover. Hydrogen sulfide can be produced from the sulfur in gypsum wall board. Hydrogen sulfide is produced over time when gypsum wall board is placed in anaerobic and wet conditions. Hydrogen sulfide generation at landfills resulted in nuisance conditions due to its rotten egg odor.

The facility will accept only Category 2 C&D waste. Category 2 C&D waste is residual waste from the processing of C&D waste at a recycling operation. Category 2 waste is the waste fraction that remains after all waste ban items and recyclable materials have been extracted by a waste processing facility. One of the waste ban items that is removed by waste processing facilities is clean gypsum wall board. Gypsum wall board was added to the list of waste ban items that must be removed from the waste prior to waste processing. Gypsum wall board was added as a waste ban item as a result of the history of hydrogen sulfide generation in C&D waste.

C&D residuals are relatively dry when produced at a C&D processor. This material, as processed, is not sufficiently wet or in an anaerobic state. This material will be handled at the proposed facility within an enclosed building which will preclude the wetting of the material.

In addition, C&D residuals will be on site for only short periods of time, limiting the time available for it to go anaerobic and create hydrogen sulfide generation.

Several comments indicated a concern for biosolids fire and/or explosion. Building and process design has code requirements to address fire/explosion prevention. This is discussed in section 2.2.4 and as follows.

Belt dryers are assumed for preliminary design and will be utilized to produce dried biosolids. The dryer and facilities to house drying process equipment will be designed with built-in safety features to address potential fire risks associated with the following:

- Potential for fire within the dryer during drying operation
- Potential for fire resulting from dust generated from the dried material
- Potential for fire associated with storage of dried biosolids in silos

The National Fire Protection Association (NFPA) 820, Standard for Fire Protection in Wastewater Treatment and Collection Facilities, provides guidance for fire protection and electrical classification for wastewater facilities. In accordance with NFPA 820, Table 6.2.2(b), the drying facilities will be equipped with the following:

- Fire protection measures including hydrant protection, fire alarm system, and a fire suppression system (automatic sprinkler, water spray, foam, gaseous, or dry chemical).
- Fire protection measures including hydrant protection and fire alarm system for dried biosolids storage areas.

In addition to the NFPA 820 guidelines for drying facilities summarized above, the drying equipment will be equipped with inherent safety protection measures including heater controls and feedback loops, drying chamber temperature controls and feedback loops, process air temperature controls and feedback loops, and a fire suppression system. These systems and controls provide protection against fire hazard risks due to high temperature and dust:

- The dryer belt conveyor will be designed to minimize pass-through of dust in the process air stream. Finer dust particles that pass through the belt are either carried to the condenser's filter media and removed, or remain in the chamber where wash-out system will routinely clean the system with spray nozzles.
- Various sections of the drying equipment that convey dried biosolids and recirculating dryer gas for drying will be equipped with thermocouples. Chamber temperature will be monitored continuously, and a PLC control system will utilize this data to regulate the amount of heat added to the system. For example, a high temperature may indicate that insufficient product is being diverted through the dryer, and the heat supplied may be reduced.

- The dryer will be equipped with a quench spray system. If triggered (at a high temperature set point), the quench system will activate and saturate the dryer as an immediate safety measure.
- The dryer exhaust gas will be recirculated and reused to ensure an oxygen-deficient atmosphere in the dryer.
- The dried biosolids product will be cooled prior to storage to reduce the risk of auto-oxidation. Fire hazards during dried biosolids storage in silos will be addressed using inert gas (nitrogen) blanketing systems to maintain an oxygen deficient environment in the silo. In addition, the silo will be equipped with thermal sensors or carbon monoxide sensors to detect any potential rise in temperature.

9.3 Environmental Justice

Comment Summary

Comments regarding environmental justice received are listed below

	Index
	30-26, 57-6
• Poor notification of the public regarding meetings on the project.	30-14, 57-7
• Public meetings did not inform the public of project details	19-3, 57-8
• Transfer stations are disproportionately clustered in low income communities of color	26-1, 66-2
• Project is actually in the EJ criteria area, not near it	45-1, 77-3
• New Bedford's rates of Asthma, cancer, COPD and other medical issues are statistically elevated	55-1, 77-9
	61-1
	59-1
	62-1

Comment Response

On January 2 and 3, 2020, Parallel Products hosted two Open House Community Meetings in addition to two Community Meetings at the Greater New Bedford Regional Vocational Technical High School on January 6 and 7, 2020. In advance, the Community Outreach team reached out to key Environmental Justice Community Group Leaders identified by MEPA to find a convenient location and time. The meetings were advertised on the website, www.parallelproductssustainability.com, social media, The Standard Times, Portuguese Times, New Bedford Guide, and WBSM 1420 to ensure it was seen by the entire New Bedford community. At the meetings, attendees listened to Parallel Products and the engineers on the project present their plans and results from their various studies. Then members of the audience were allowed to ask questions and Parallel Products was committed to answering all of them. Each meeting had 5 to 10 people attend

To stay compliant with CDC guidelines due to the COVID-19 pandemic, Parallel Products hosted two virtual Community Meetings on December 14 and 16, 2020. The meetings were advertised on the website, social media, and in the Standard Times, Portuguese Times, New Bedford Guide, and WBSM 1420 for the two weeks leading up to the meetings. Three people attended Monday's meeting and seven people attended Wednesday's meeting via zoom. At the meetings, Parallel Products provided attendees with an update on the South Coast Green Energy Center and allowed attendees to ask their questions. Parallel Products answered all questions.

Parallel Products has knocked on 900 unique doors closest to the new site in the New Bedford Business Park. Each home received a comment card and fact sheet unless they refused. The Pine Hill Acres neighborhood, which consists of 360 homes, received a second visit from a Parallel Products representative, as they reside closest to the new site. Parallel Products representatives have also knocked on the 75 closest homes near their current site at 969

Shawmut Avenue and an additional 54 homes throughout New Bedford to educate the community about their plans for 100 Duchaine Boulevard and assess if the neighbors have had any complaints over the past 11 years.

PPNE acknowledges the status of nearby communities as environmental justice (EJ) communities (e.g., 81, 57, and 77-3) and has addressed the environmental justice issues in accordance with recent MEPA policy in Attachment 15 of the DEIR and the section beginning on Page 39 of the DEIR. Through this MEPA process and the enhanced public outreach, PPNE has worked with local agencies to consult with potentially impacted neighborhoods regarding the environmental impacts of the proposed facility. The goal of the MEPA process is to ensure consultation with potentially impacted neighborhoods (e.g., 57-6), and the evaluations presented in this process show that quality of life impacts will be minimized. Through this MEPA process, we are documenting that quality-of-life issues such as noise and odor, and environmental concerns associated with air quality will be managed correctly and will be avoided, minimized, and mitigated to the extent feasible. Per Page 55 of the DEIR, Parallel Products proposes a facility that will avoid, minimize, and mitigate potential EJ air-related impacts (e.g., 59-1, 61-1, 62-1). Regarding compliance with the Executive Office of Environmental Affairs' Environmental Justice Policy, PPNE did conduct the additional procedural requirements including enhanced public outreach and enhanced analysis of environmental impacts. PPNE followed the EEA EJ policy, which addresses compliance with the executive orders (e.g., 77-3). The enhanced environmental review and analysis of impacts in Attachment 15 of the DEIR includes an analysis of baseline public health conditions within New Bedford and nearby communities and includes mitigation to reduce impacts on these populations. The enhanced analysis and review (e.g., 57-7) begins on Page 40 of the DEIR. PPNE also notes that moving forward, KP Law's suggested changes to the enhanced outreach will be accommodated.

Regarding vulnerable communities in the affected area (e.g., 76-78), the air quality analysis in the DEIR specifically identified sensitive receptors and documented no significant impacts from facility operations at those receptors. PPNE notes that EPA's and MassDEP health-based criteria and standards are intended to protect human health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. PPNE's air quality analysis documented compliance with these standards at the affected receptors. Parallel Products has selected an industrially-zoned setting to avoid impacts to the public (e.g., 77-3).

PPNE acknowledges MassDEP's comments regarding extended outreach. PPNE has performed outreach activities as described in Section 3.3 of the FEIR. These have included opportunities for residents and local officials who may be affected by the project to be involved and informed. The outreach activities and planned outreach activities go well beyond the regulatory requirements.

The project site is within an Environmental Justice area.

Extend public comment period for the DEIR

Comment Summary

	Index
<ul style="list-style-type: none">• Comments were received requesting that the comment period for the DEIR be extended.	10-1, 44-5 5-1, 47-1 20-1, 51-1 21-1, 52-1 29-1, 59-2 31-1, 64-1 33-1, 74-1 34-1, 76-1 36-1

Comment Response

The standard public review period for MEPA projects is 30 days. Due to requests from the public, PPNE requested that the public review period be increased to 62 days. PPNE has committed to increase the review period for the FEIR from 30 days to 60 days.

9.4 Siting Concerns

Comment Summary

A listing of the comments received related to concerns regarding siting of the project.

• Proximity of facility to residences	Index
• Biosolids processing should not take place near people's homes	1-2, 21-2
• Quality of life will be impacted	5-2, 21-3
• Facility should be located far removed from communities	6-1, 27-2
• Impact to property values	6-2, 30-5
• New Bedford is sick and tired of being the dump site for the state of Massachusetts	7-1, 30-6
• Facility is less than a mile from a school	9-1, 30-11
• Concern property tax will increase due to wear and tear on roads	10-3, 30-12
• Negatively impacts quality of life	12-1, 31-2
• Project fails to meet required 500 foot setback from residences	12-4, 31-3
• MEPA issued a waiver of site suitability demonstration.	12-5, 31-4
• Site Suitability demonstration has been omitted from DEIR	12-6, 31-5
• Facility will require site assignment and meet site suitability criteria	13-1, 37-1
• Site is zoned Industrial and Residential – Fact is omitted in several areas of the DEIR	13-4, 42-2
• Project is not entitled to preferential consideration due to other solid waste facilities in New Bedford	13-5, 43-2
• Siting the project off of Phillips Road which is an antiquated pedestrian street	13-8, 44-1
• Stacks will be visible with removal of trees and during winter. Property values will be impacted. Stacks not shown on plans	14-5, 45-2
• Site should be kept heavily wooded	14-7, 47-2
• Could "Dirty MRF" be located further from homes	19-1, 47-3
• Fire could impact schools and required evacuation	47-4, 48-1
• Facility is unneeded and illegally licensed	51-4, 53-5
• Hours of operation are not defined	54-1, 57-15
	65-2, 66-2
	67-1, 68-3
	69-2, 69-1
	72-4, 73-1
	74-2, 74-3
	77-15

Comment Response

Numerous comments have been received regarding siting of the facility. The siting has been described in detail in Section 1.0 of the FEIR. The proposed facility requires further approvals from MassDEP and the City of New Bedford. These approvals will require that the facility meet the requirements of 310 CMR 16.00 Site Assignment for Solid Waste Facilities. The

purpose of this regulation is to protect public health, safety and the environment by comprehensively regulating the siting of solid waste facilities in Massachusetts. These regulations stipulate siting criteria for all types of solid waste facilities. The regulatory criteria has been developed to ensure that solid waste facilities do not endanger public health, safety or the environment.

The siting criteria within 310 CMR 16.00 has been addressed in some detail within the FEIR. This siting criteria will also be detailed in the site suitability application that will be submitted to MassDEP and to the City of New Bedford Board of Health following the completion of the MEPA review. The site suitability application process with MassDEP includes a public comment period. Following a determination by MassDEP that the site is suitable, the City of New Bedford will hold a public hearing on the project and is open to public comment. This hearing will review the site suitability determination issued by MassDEP and determine if the Board of Health also finds the site to be suitable for the proposed use as a solid waste facility.

A draft of the narrative of the site suitability application was included in the Expanded Environmental Notification Form (EENF). The siting information from the EENF was also included in the DEIR, although not in the specific format of the MassDEP site suitability permit application. Public comments were received noting that the site suitability demonstration was not included in the DEIR and other comments stating that it is not appropriate to include the site suitability demonstration in the MEPA documents. The site suitability information has been submitted within the MEPA submittals to provide a comprehensive project description. However, the ultimate determination of suitability will be made by the MassDEP and subsequent Board of Health review processes. Site suitability has not been waived by MEPA as indicated in one comment submitted.

PPNE believes the project meets all the siting criteria included in 310 CMR 16.00 and anticipates that MassDEP will determine that the site is suitable following a site suitability permit application review that proceeds the MEPA process.

Several comments were received regarding the siting criteria included in 310 CMR 16.00. Comments were received indicating that the required 500-foot distance to residences included in 310 CMR 16.00 were not met. This setback criteria requires a 500-foot setback from waste handling areas. Waste handling for the proposed project is restricted to the interior of the waste processing buildings. Compliance with this criterion is demonstrated on the Land Use Plan included in Appendix 10. The setback criteria does not require a 500 foot setback from the property line. The regulations require a 500-foot waste handling setback from residences and/or other applicable receptors and a demonstration that the facility will not result in nuisance conditions which would constitute a danger to the public health, safety or the environment taking into consideration noise, litter, vermin such as rodents and insects, odors, bird hazards to air traffic and other nuisance conditions. These potential nuisance conditions have been addressed in the FEIR and will be addressed in the site suitability application to MassDEP and

the Board of Health. The Board of Health review will also likely include a peer review of the studies prepared to demonstrate compliance with 310 CMR 16.00.

A comment was received that the DEIR narrative excluded the fact that the site is zoned partially industrial and partially residential. This comment is correct. However, the proposed project is located entirely within the portion of the site that is zoned industrial.

A comment was received indicating that the project was entitled to preferential consideration as defined in 310 CMR 16.00. PPNE agrees that the project is not entitled to preferential consideration.

Concern was expressed that Phillips Road is an antiquated pedestrian street. PPNE has committed to precluding truck traffic servicing the site from using Phillips Road.

Project plans included in the FEIR have been revised to include the location, size and elevation of all stacks required by the project. The project has been designed to utilize existing buildings and infrastructure to the maximum extent possible. This design approach will minimize the need to remove trees from the site. No trees or vegetation will be removed from the area between the eastern site access road and Phillips Road.

A comment was received inquiring if the MSW handling facility could be further from residences. The project has been developed to utilize existing facilities to the extent possible to minimize site impacts. MSW processing will be performed within an enclosed building. The MSW receiving building will be built on the west side of the existing processing building and the doors will be on the west building elevation to minimize the potential for impacts to residences to the east of the site. These doors are approximately 1,500 feet from the closest residence.

A comment was received indicating that the project is unneeded and illegal. The need for the project is the result of the closure of landfills throughout Massachusetts. Facilities with rail access are necessary as available landfills are too remote to be economically serviced by truck. Also, the disposal options for biosolids within Massachusetts are limited. The project requires a series of permits before the project can be developed. PPNE will obtain all permits and approvals prior to construction and operation.

The facility will be designed to include fire suppression systems and will meet all fire codes. The project includes adequate set back from residences, schools and public roads to preclude any impacts of a fire at the project site.

Hours of operation were included in the DEIR. Hours of operation have not changed and are as follows. Solid waste and biosolids will be accepted between 5:00 AM and 9:00 PM Monday through Saturday. Biosolids may also be received on Sundays from 6:00 AM to 6:00 PM.

9.5 Health Issues

Comment Summary

Comments received concerning potential health impacts of the proposed facility are listed below:	Index
	1-1, 53-1
	5-3, 59-3
• Open trucks and containers transporting material cannot be healthy for people living, working and attending school in the area.	9-1, 59-4
• Hazardous materials dumped by Polaroid puts health and welfare at risk	10-2, 60-3
• Air and water pollution due to operation of proposed plant	5-6, 62-3
• Sewage sludge presents extreme health risk to community	12-2, 64-3
• Air pollution and odor impact on school children waiting for a bus	19-3, 66-2
• Concerns about impact to air quality from additional traffic and facility operations	27-3, 68-2
• Not comfortable sending Children outside	28-3, 71-1
• Potential for truck and train accidents resulting in toxic spills	30-13, 72-2
• Risk of asthma and respiratory disease	32-1, 72-4
• Air pollution due to proximity of residences	35-1, 74-2
• Residents with existing medical conditions are concerned about health issues	42-3, 74-3
• Quality of life impacted	43-2, 74-4
• How will trucks be covered?	44-2, 77-9
• Schools, adult daycare and residential areas impacted by pollution	44-3, 77-10
	44-4, 77-14
	45-2
	47-3
	51-5

Comment Response

Health Impacts:

The environmental justice component in Attachment 15 to the DEIR addresses the baseline health of the communities in close proximity to the site. (e.g., 43).

The aforementioned BMPs include waste quality controls, which will address concerns of the intake of extremely hazardous substances (e.g., 1-1).

As mentioned in the noise, odor, and air emissions comment responses, traffic is routed away from residential areas (e.g., 5-3, 27-3).

The proposed facility has conducted a comprehensive analysis of potential impacts from air pollution, odor and noise. The analysis determined the maximum impact and then utilized that value to compare to health-based air quality criteria and protective odor criteria the Project then made modifications to the Project design to mitigate air quality, odor and noise related impacts. The health-based air quality criteria used in evaluation, the National Ambient Air Quality Standards (NAAQS) and the MassDEP ambient air limits (AALs) and threshold effects levels (TELs), are specifically designed to be protective of all members of the public, this includes sensitive subpopulations such as children, the elderly and those with pre-existing health conditions such as asthma (e.g., 71-1, 77-14). Therefore, it can be concluded that the proposed project as designed does not cause or contribute to a condition of air pollution in the area and appropriately has taken measures to avoid, minimize and mitigate impacts from the Proposed facility. The air, noise, and odor evaluations that support the health impact conclusions include an evaluation of public outdoor areas where people could be, such as the neighborhood park, (e.g. 74-4) and showed no condition of pollution.

9.6 Adequacy of Studies Done

Comment Summary

A number of comments were received which questioned the validity of studies done for the project. Index

- MSW and wastewater sludge have no legally enforced standards. No confidence in calculated environmental impacts 3-1, 45-3
6-3, 48-2
13-2, 49-4
- Since plant is not operational, data and measurements are speculative 14-1, 50-1
- What time of day was air quality testing done? 26-3, 53-2
- Need independent studies done 27-4, 55-3
28-1, 56-1
28-2, 60-1
30-7, 59-6
43-1, 66-3
68-1

Comment Response

Studies done on the impacts of the proposed project were included in the DEIR. The studies have been reviewed by multiple agencies during the review of the DEIR. MassDEP provided detailed comments on the studies within the DEIR. PPNE has revised the studies to reflect comments from MassDEP and has included details of the revised studies in the FEIR.

Upon completion of the FEIR process, PPNE will apply for site suitability with MassDEP. Studies prepared by PPNE will be again evaluated by MassDEP to determine if studies demonstrate that the site meets the site suitability requirements included in 310 CMR 16.00.

If MassDEP issues a positive determination of site suitability, the New Bedford Board of Health will hold public hearings to determine if the site will be site assigned for solid waste handling. These hearings typically include peer review of the studies prepared by the applicant.

9.7 Impact to Wetlands, Woodlands, Acushnet Cedar Swamp, Wildlife

Comment Summary

A number of comments were received regarding wetlands, woodlands, Acushnet Cedar Swamp and wildlife. The comments received are summarize in the bullets below:

	Index
• Site is NHESP Estimated Habitat of Rare Wildlife	4-1, 74-3
• Site is NHESP Priority Habitat of Rare Species	4-2
• Acushnet Cedar Swamp is a protected wetland	4-3
• Spills and contamination in wetlands, impacts to Atlantic White Cedar trees and wildlife	4-4
• Acushnet Cedar Swamp is designated a National Natural Landmark	6-1
• Area of Critical Environmental Concern	11-3
• Wildlife impacts and plants are destroyed.	21-4
• Who will clean the main line if there is spillage?	30-24
• Will freight trains inhibit commuter rail when it becomes available?	30-2
• The Northern Long-eared Bat may be affected by the project. Should consult with Division of Fisheries and Wildlife	30-3
• Polluted water could enter the Acushnet Cedar Swamp. MSW may contain dangerous substances.	30-4
• Project is in violation of City of New Bedford's 25-foot wetland setback	35-3
• PPNE has been found in violation by the Conservation Commission for dumping piles of glass in the buffer zone.	53-4
	51-6
	54-1
	65-3
	74-2
	78-1

Comment Response

Several comments were received regarding the proximity of the facility with areas designated by Mass Wildlife's Natural Heritage and Endangered Species Program (NHESP) as Estimated Habitat of Rare Wildlife and as Priority Habitat of Rare Species. There is an area within the Acushnet Cedar Swamp that is designated as both an Estimated Habitat of Rare Wildlife and as Priority Habitat of Rare Species. These areas are 1,500 feet from the property line of the site and 2,000 feet from the nearest proposed waste handling area. These areas are identified on Appendix 10.

During the preparation of the Expanded Environmental Notification Form (EENF), the Natural Heritage and Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries and Wildlife was contacted regarding the proposed project. The NHESP confirmed that the proposed project is not within Estimated Habitat of Rare Wildlife or Priority Habitat. The NHESP correspondence was included in an appendix to the EENF and there was not mention that the redevelopment of the facility would yield impacts to the Northern Long-eared Bat. The existing rail line parallels the western property line of 100 Duchaine Boulevard site. The rail line separates the Acushnet Cedar Swamp from the 100 Duchaine Boulevard site. The rail line is a hydraulic barrier that prevents any stormwater from 100 Duchaine Boulevard from flowing directly to the Acushnet Cedar Swamp. Stormwater management for the site is discussed below.

The project design includes a stormwater management system designed in compliance with the Massachusetts Stormwater Standards. This management system will control the peak runoff, promote infiltration of stormwater and will treat stormwater to improve water quality. The stormwater management plan will be included with submittals to the New Bedford Conservation Commission and the New Bedford Planning Board. Stormwater discharged from the stormwater management system is directed to a drainage swale along the western property line. This drainage swale is not hydraulically connected to the Acushnet Cedar Swamp. The drainage swale runs parallel to the rail line for several miles, collecting stormwater from other parcels, before draining to the Acushnet Cedar Swamp.

Comments received expressed concerns regarding dangerous substances in MSW contaminating the area. The facility has been designed to preclude the release of dangerous substances. The waste handling areas are all within enclosed buildings with impervious concrete floors. All waste handling will be done a minimum of 2 feet above the high groundwater level on site. Also, trench drains will be located at all truck doors at the waste handling buildings. The trench drains will collect any water within the waste handling building that has been in contact with waste material. All water collected in the trench drains will be removed from the site for proper disposal or sent to the City sewer system if water tests indicate that disposal meets the requirements of the City treatment plant.

A comment was received regarding Areas of Critical Environmental Concern (ACEC). As indicated on the Land Use Plan in Appendix 10, there are no ACEC's within a half mile of the site.

The rail line to be utilized by the project is designated for use by both for commuter rail and freight service. The site will be serviced by Mass Coastal Railroad. The Mass Coastal Railroad currently operates on this line and will coordinate with any future passenger services. With respect to spillage, it is assumed that all in-transit mitigation activities are assumed by the rail carrier.

Comments were received regarding potential impacts to wildlife and plants. The facility has been designed to utilize the existing site infrastructure to the maximum extent possible. This includes using existing access roads, existing buildings, and existing site infrastructure. Impacts to wetlands and vegetation has been minimized. No plants will be removed from the site area between Phillips road and the eastern most existing access road on site.

PPNE is not in violation of Massachusetts or City of New Bedford's wetland regulations. PPNE has been issued an Order of Conditions (OOC) for the project. This OOC can be found Appendix 8.

PPNE was notified by the New Bedford Conservation Commission that a limited quantity of glass was within the buffer zone. This glass was immediately removed upon notification.

9.8 Miscellaneous Comments

Comment Summary

Miscellaneous comments received that do not fit within the above categories are as follows

• Bales of MSW sit at the Rochester facility with nowhere to ship. Will the same thing happen at the proposed PPNE facility	Index
• Disposal sites for MSW, sludge and glass are not defined	14-3
• The company has not been forthcoming with the community and multiple statements have been misleading or vague.	14-4
• Proponent has no experience with similar facilities	30-25
• Facility should have financial assurance to protect city in event of default	14-2
• A stay should be imposed on any taxpayer funds from the \$500,000 State Intermodal Railroad Assistance Program (IRAP)	13-3
• Map included on DEIR pages 577-581 is out dated	13-7
• The company has not provided an evacuation plan for the facility	30-26
• Parallel Products is a repeat violator of nuisance contracts and cleanliness rules (Taunton)	30-21
• Material extracted from MSW is not defined	30-22
• Recycling would be more efficient if recyclable material was removed before waste went into trashcans	51-7
• Shipping waste out of Massachusetts is not a goal of MassDEP	57-1
• Investing in “Dirty MRF” is actually an investment in polluting landfills	57-2
• “Dirty MRF” will result in no reduction of waste	57-3
• Daily tonnage is specified but annual tonnage of waste accepted is not	57-4
• Details of bales is not provided. Also, source of baled MSW is not defined	57-5
• Does recovery rate of 20% include recovery from baled MSW received	57-10
• Project should not get preferential consideration under 310 CMR 16	57-11
• Current Parallel Products site on Shawmut Ave is literally a dump	57-12
• Standing water in basins, water is stained	64-4
• Stored glass will not be enclosed but stored in a solar canopy	69-3
• Parallel Products formerly sought approval for 50 Duchaine Blvd for operations	72-5

Comment Response

MSW disposal sites are likely to change through the life of the project due to market conditions and availability of landfills. The MassDEP Final Report titled Massachusetts Materials Management Capacity Study, dated February 11, 2019 concluded that “Disposal capacity, while increasingly scarce in New England is widely available in New York, Pennsylvania and Ohio.” and “These states have multiple large, regional mega-landfills, some with rail sidings, which offer an outlet for Massachusetts waste.” At the present time, PPNE expects to load dried biosolids in rail cars comingled with MSW.

PPNE has included a rail spur in the project design to provide a cost-effective means of shipping waste materials long distances. PPNE will not begin operations without having a disposal site for waste material under contract to accept waste from PPNE. Recyclable materials extracted from waste will be baled. This material will be sent either by truck or by rail to recycling markets. If necessary baled recyclable materials can be temporarily stored on site without causing any nuisance conditions. It is expected that glass will be sent to recycling outlets by rail. PPNE is currently shipping glass by truck. Rail will open up access to additional markets for recycled glass.

Comments have been received indicating that PPNE has been not forthcoming on project details and has made vague and misleading statements. PPNE has made an effort to provide public access to all information on the project. The PPNE web site at www.parallelproductssustainability.com includes copies of all documents prepared for the project.

On January 2 and 3, 2020, Parallel Products hosted two Open House Community Meetings in addition to two Community Meetings at the Greater New Bedford Regional Vocational Technical High School on January 6 and 7, 2020.

To stay compliant with CDC guidelines due to the COVID-19 pandemic, Parallel Products hosted two virtual Community Meetings on December 14 and 16, 2020. The meetings were advertised on the website, social media, and in the Standard Times, Portuguese Times, New Bedford Guide, and WBSM 1420 for the two weeks leading up to the meetings. Three people attended Monday’s meeting and seven people attended Wednesday’s meeting via zoom. At the meetings, Parallel Products provided attendees with an update on the South Coast Green Energy Center and allowed attendees to ask their questions. Parallel Products answered all questions.

Parallel Products has knocked on 900 unique doors closest to the new site in the New Bedford Business Park. Each home received a comment card and fact sheet unless they refused. The Pine Hill Acres neighborhood, which consists of 360 homes, received a second visit from a Parallel Products representative, as they reside closest to the new site. Parallel Products representatives have also knocked on the 75 closest homes near their current site at 969 Shawmut Avenue and an additional 54 homes throughout New Bedford to educate the

community about their plans for 100 Duchaine Boulevard and assess if the neighbors have had any complaints over the past 11 years.

Solid waste transfer stations, including transfer stations with rail, and biosolids drying facilities are not uncommon. PPNE will supplement its work force with staff with experience with transfer stations and biosolids drying projects as required.

A comment was submitted indicating that the project should have a financial assurance to protect the City in the event of a default. PPNE will provide a financial assurance mechanism (FAM) to MassDEP prior to the receipt of an Authorization to Operate permit from MassDEP. The amount of the FAM will be an amount sufficient to clean up the site and remove any solid waste on site in the event of a default by PPNE.

Presently the IRAP Grant that was issued to PPNE has expired. As such, no IRAP monies are currently available for project development.

The Land Use Map (2020 Aerial) presented as Appendix 10 has been updated. This updated map show features (e.g., new residential dwellings) that were not on older versions of the aerial photos.

A comment was received that an evacuation plan has not been provided. Fire suppression systems and fire alarm systems will be developed during project design. This design will evaluate and design for proper access and egress of plant employees during a fire or other emergency event.

PPNE is unaware of any violations in Taunton.

PPNE will extract recyclable material from MSW received at the facility. The recyclable material will consist of cardboard, paper, food and beverage containers (aluminum, tin and plastic), and metal.

A comment was received that recycling would be more efficient if recyclable material was removed before waste went into trashcans. PPNE agrees with this comment. The material that PPNE receives and processes is material that has been disposed of by the waste generator. The processing equipment used by PPNE will extract recyclable materials that were not removed from the waste stream by the waste generator. The material removed from the waste will include cardboard, paper, PET bottles, plastic, and aluminum and tin containers.

A comment was received that shipping waste out of state is not a goal of MassDEP. Shipping waste out of state is not a goal of MassDEP, however, MassDEP acknowledges that out of state shipment of waste is required to meet the state's needs as in state disposal options are very limited. Combustion facilities are operating at capacity and landfills continue to close. MassDEP expects that by 2027, 95% of the state's current landfill capacity will no longer be available.

Comments were received regarding the MSW processing facility indicating that this was “an investment in polluting landfills” and that “Dirty MRF” will not result in any reduction in waste. The PPNE facility will receive MSW that has had recyclable materials removed by the waste generator. This is material, such as curbside collected material, currently goes to combustion or landfill disposal. The processing equipment to be utilized by PPNE will extract any recyclable materials from the MSW that was not removed by the waste generator. Processing by PPNE will extract recyclable material in addition to recycling done by the waste generator. This is different from a typical “dirty MRF” which accepts MSW without the removal of recyclable material and then removes recyclables from the MSW. The PPNE facility will reduce the tonnage of waste that is disposed in landfills.

The proposed project will accept a maximum of 1,500 tons per day of MSW and C&D and 50 dry tons per day of biosolids. The facility is expected to accept waste 300 days per year for maximum annual tonnages of 450,000 tpy for MSW and 15,000 dtpy for biosolids.

PPNE expects, subject to permit approvals, to ship the processed MSW baled and bagged or baled and shrink wrapped. This will make a watertight bale of MSW. Typical baling equipment is depicted in Appendix 5 of this FEIR.

PPNE will also accept baled MSW from other transfer stations. Baled MSW received from other transfer stations will be loaded into rail cars without processing the waste to extract recyclable materials.

PPNE is not seeking preferential consideration in siting the project as defined in 310 CMR 16.

A comment stated that the Shawmut Avenue facility was a “dump”. Presently PPNE no longer occupies this location.

Presently, PPNE is currently complying with the Massachusetts Stormwater Policy as well as stormwater related policies and regulations set forth by the City of new Bedford. It is PPNE’s opinion that all stormwater controls and BMP’s are functioning effectively and as intended.

A comment mentioned that Parallel Products formerly sought approval for 50 Duchaine Blvd for operations. This statement is correct. However, since that time, plans for development at this location were subsequently cancelled and the property was sold.

9.9 Biosolids Processing and Wastewater Generation

Comment summary

A number of comments were received regarding impacts of wastewater generated at the proposed facility and on the impacts of the additional wastewater on the City's wastewater treatment plant and on the receiving waters from the wastewater treatment plant effluent. The comments are summarized in the bullet points that follow:

There were also comments regarding PFAS chemicals in biosolids. Comments related to PFAS are addressed in section 9.11, which is a response to comments related to PFAS submitted by MassDEP.

• Impact of additional wastewater on the City system	Index
• Wastewater treatment plant discharges into Acushnet River	5-4
• Unknown if the City's pump station can handle the additional wastewater that the proposed facility will generate	20-2
• Not clear if processed biosolids will be beneficially reused or if the material will go for disposal	30-16
• DEIR refers to building sized for gasification	30-17
• Are biosolids truck covered?	30-18
• Ionization systems give off dangerous levels of ozone which is harmful to the environment and hazardous to health	30-19
• Potential for accidents and spills	49-3
• Leachate from floor drains can have high concentrations of metals, odor and other contaminants including PFAS	57-9
	77-13

Comment Response

The City sewer system will be used for disposal of wastewater generated by the facility. The existing site buildings are connected to the City sewer system. Total wastewater to the City system is expected to be 113,750 gpd (0.11 million gallons per day (mgd)). Wastewater is generated primarily by the biosolids processing facility.

The wastewater collection system on site directs wastewater to the Industrial Park Pumping Station located in the northwest corner of the site. The pumping station is owned by the City and is located on a City owned parcel that is located within the property line of the 100 Duchaine Boulevard parcel. CDM Smith completed an assessment of the capacity of the Industrial Park Pumping Station on January 23, 2020. This assessment determined that the Industrial Park

Pumping Station has the capacity to handle the additional wastewater generated by the proposed PPNE project. The CDM Smith assessment is included as Appendix 7.

As summarized in the CDM Smith memorandum, MassDEP regulations at 314 CMR 12(2)(d) states

All sewer system authorities shall include provisions in their I/I plan for mitigating impacts from any new connections or extensions where the proposed flows exceed 15,000 gallons per day. Such mitigation shall require that four gallons of infiltration and/or inflow be removed for each gallon of new flow to be generated by the new sewer connection or extension, unless otherwise approved by the Department.

Parallel Products will meet the 4:1 flow removal requirement prior to the startup of the proposed biosolids drying project. CDM estimates the current I/I entering the Industrial Park Pumping Station is 1.01 mgd (1,010,000 gpd). The PPNE required I/I mitigation of four times the estimated PPNE wastewater flowrate of 113,750 gpd (0.11 MGD) equals 455,000 gpd (0.46 MGD).

The pump station contains three pumps. In its present condition, pump no. 2 is inoperable and pump no. 3 operates at 77% of the pumps capacity. CDM Smith recommends that pump no. 3 be replaced or rebuilt to restore the pumps design capability. In addition, CDM Smith recommend that pump no. 2 be placed back in service as a standby pump in the event that either pump 1 or pump 3 fail.

PPNE commits to repair the sewer line repairs required to reduce inflow and infiltration by 0.46 MGD. PPNE also commits to the rebuild or replacement of pumps 2 and 3 in the City pump station at 100 Duchaine Boulevard.

The sewer system capacity existing and after the proposed project construction along with mitigation measures to be provided by PPNE are summarized in the following tables. CDM Smith has determined that the existing peak hourly flow to the City pump station at 100 Duchaine Boulevard is 3.74 mgd and that the pumping capacity at the pump station is currently 3.94 mgd. The pump station currently has an excess capacity of 0.20 mgd.

The PPNE project will increase flows to the pump station, but will decrease inflow and infiltration and increase pump capacity as indicated below.

Table 2-1 Pump Station Flow Rates		
	Ave Daily Flow (mgd)	Peak Hourly Flow (mgd)
Existing Conditions	1.23	3.74
Flow increase from PPNE project	0.11	0.22
Flow decrease due to I/I repairs	0.46	0.46
Flow to pump station with PPNE project	0.88	3.5
Existing pump station capacity	3.94	3.94
Increase in capacity from pump repairs	0.74	0.74
Pump station excess capacity	3.8	1.18

A summary of the impacts to the City's wastewater sewer and treatment plant is summarized below:

- After completion of the PPNE project and the repairs to which PPNE is committed, excess capacity of the pump station will increase from the existing condition of 0.20 mgd in excess capacity to 1.18 mgd in excess capacity for the peak hourly flow. For the average daily flow, excess capacity will increase from 2.628 mgd to 3.8 mgd
- After completion of the PPNE project and the repairs to which PPNE is committed, the average daily flow to the sewer system and wastewater treatment plant will be reduced from 1.23 mgd to 0.88 mgd. For the peak hourly flow, the flowrate will be reduced from 3.74 mgd to 3.5 mgd. A standby pump in the pump station will be repaired to provide redundancy in pumping capacity at the pump station
- Repairs of the sewer lines entering the pump station will be repaired/replaced to reduce inflow and infiltration. This will eliminate flows to the pump station and to the wastewater treatment plant by 0.46 MGD. This is wastewater which needs to be treated but provides no revenue to the City.
- PPNE will pay the City for the treatment of all flows to the sewer system from the existing and proposed project.

The facility will accept wet slurry biosolids with a solids content of 5% to 10%. Wet slurry biosolids is a liquid that will be delivered in tanker trucks. The facility will also accept dewatered biosolids cake with a solids content of 15% to 30%. Biosolids cake is a solid that will be delivered in covered dump trucks.

Initially, PPNE considered gasification of biosolids as a component of biosolids processing. Biosolids gasification is no longer a component of the proposed facility. A reference to biosolids was noted in a public comment letter. This reference to gasification should not have been included in the DEIR. References to gasification will not be included in the FEIR. PPNE will not use any gasification process in the proposed project.

Ionization System

Ionization systems are commonly used for odor control in wastewater treatment facilities and in sewage lift stations. When operated properly, ozone is not produced by the ionization system. Ozone can be produced by improper operation of the system. PPNE will properly run the system and if necessary, monitor ozone levels within the biosolids building to ensure that ozone is not being produced by the odor control system.

All handling of biosolids and solid waste will be done within enclosed buildings with impervious concrete floors. Trench drains will be located at all truck doors to collect any liquids spilled during waste handling.

Leachate will be collected from the floors of the processing buildings in trench drains located at all truck doors. Leachate will flow from the trench drains to a double wall industrial wastewater holding tank. Leachate collected in the tank will be tested prior to disposal to determine how to properly dispose of the water. Depending on the testing results, the water will be either be disposed of in the City sewer system or trucked to an offsite disposal facility that can accept the material based on laboratory test results.

9.10 PFAS Contamination in Wastewater Residuals

Comment Summary

A MassDEP email from Stephanie Cooper was received addressing the issue of PFAS contamination. This email is labeled as Letter no. 25. A number of letters were also received regarding this issue from public comments. The following is a listing of the issues raised by MassDEP and by public comments.

	Index
<ul style="list-style-type: none">• MassDEP is developing a strategy to address PFAS in wastewater residuals.	10-2
<ul style="list-style-type: none">• PFAS can leach into groundwater and harm all of us	15-1
<ul style="list-style-type: none">• PFAS is present in drinking water and sewage sludge and is unregulated	15-2
<ul style="list-style-type: none">• How do we protect ourselves against existing regulations that do not fully address chemicals in sewage sludge	15-3
<ul style="list-style-type: none">• Stop recirculating water that has contaminants	15-4
<ul style="list-style-type: none">• What controls have EPA placed on sludge waste emissions?	15-5
<ul style="list-style-type: none">• Remove the proposed sewage sludge facility from further consideration	15-6
<ul style="list-style-type: none">• Sludge facility should be developed with independent agencies	15-7
<ul style="list-style-type: none">• Establish enforceable parameters monitored by agencies accessible to the public	15-8
<ul style="list-style-type: none">• Establish a fund paid for by PPNE to treat any person who has adverse health issues	25-1
<ul style="list-style-type: none">• Secretary should require a supplemental report on how leachate will be tested for PFAS and pretreated	57-17

Comment Response

PFAS is considered by MassDEP to be an “contaminant of emerging concern”. MassDEP submitted a comment letter (letter no. 25) on the DEIR. This correspondence states that “MassDEP has conducted monitoring, or required the monitoring of, PFAS in drinking water, wastewater, residuals, and rivers and is developing a strategy to address PFAS in wastewater and residuals.”

PPNE understands that new regulations and restriction will come into effect as the MassDEP continues its evaluation of PFAS. Construction of any biosolids processing facility will be more than a year from the issue of the FEIR. PPNE will develop the design of the biosolids processing facility in compliance with all new regulations and restrictions that come into effect.

PPNE plans to discharge wastewater from its proposed biosolids facility to the City of New Bedford's wastewater treatment plant. PPNE will consult with the City during the design process to ensure the design complies with all existing and new design requirements including any PFAS related regulations, restrictions and monitoring requirements.

Support Project

Two letters, nos. 63 and 78, support the project and request that the project be approved.

9.11 MassDEP Comment Letter (Letter no. 2)

Each comment from the MassDEP letter is printed in italic below followed by a response to the comment.

Comment no. 2-1

“The proponent is reminded that this Project is subject to the EPA permitting requirements under the 2015 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), Sector N (SIC code 5093) recycling centers, commonly referred to as material recovery facilities (MRF), that accept glass, plastic, and aluminum from non-industrial sources are required to apply for industrial stormwater permit coverage.”

Comment Response

PPNE acknowledges that the project is subject to EPA permitting under NPDES Multi-Sector permitting for stormwater discharges. PPNE will obtain a Multi-Sector permit for stormwater discharges associated with industrial activity prior to the start of operations.

Comment no. 2-2

“The Project Proponent is advised that if oil and/or hazardous material are identified during the implementation of this Project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional (LSP) should be retained to determine if notification is required and, if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures are necessary if contamination is present. The BWSC may be contacted for guidance if questions arise regarding cleanup.”

Comment Response

PPNE will comply with 310 CMR 40.0000 for the construction of the proposed facility.

Comment no. 2-3

“Air Quality. With the exception of the Sound Report, the DEIR has responded to the Air Quality's comments on the EENF. In the absence of seeing the DEIR's proposed mitigations

for noise in its Sound Report, the Department's solid waste comments address its expectations in the subsequent FEIR MEPA filing."

Comment Response

The FEIR contains a new Sound Report with substantial new mitigation elements designed and incorporated, and additional review to address specific MassDEP comments.

Comment no. 2-4

"The site contains agricultural lands classified by the USDA as prime farmland and farmland of statewide importance. The Land Use Map submitted within the DEIR depicted the proposed areas of waste handling setback a minimum of 100-feet from the agricultural lands; however, the proposed limit of site assignment is shown bordering the areas of agricultural lands. The Proponent may need to modify the boundaries of the proposed area to be site assigned pursuant to 310 CMR 16.40(4)(a)."

Comment response

The boundaries of the proposed site assignment have been revised to comply with this comment. The revised boundaries are shown on the Land Use Plan in Appendix 10.

Comment no. 2-5

"The Traffic Impact Study estimated the Project related traffic volumes and the hourly distribution of trucks accessing the site, including the Project related peak hour traffic volumes, on data collected from a comparable site in Rochester, MA. The TIS estimated that 1,500 tons per day (tpd) of material (MSW and C&D) will arrive in trucks carrying an average of 19.7 tons per truck. It appears that the comparable site referenced in the DEIR is the Southeastern Massachusetts Resource Recovery Facility (SEMASS) in Rochester, which is a 3,000 tpd waste to energy disposal facility. The Proponent should provide rationale to explain how SEMASS is an appropriate comparable site or revise the traffic study in the subsequent MEPA filing. In addition, the Proponent should provide more information to support the Project related peak hour traffic volumes. It should be noted that MassDEP has analyzed data from existing solid waste facilities for incoming waste volume by vehicle capacity and the data indicates that an average load of 19.7 tons per truck is high compared to other solid waste transfer stations."

Comment response

A typical transfer station accepts small loads of solid waste and consolidates the waste and then sends the consolidated waste to disposal (typically landfills or resource recovery facilities) in larger trucks. The proposed PPNE facility is comparable to SEMASS in that the waste accepted is not then sent for disposal by truck. The waste accepted by PPNE will be loaded in to rail cars and the rail cars will be sent to disposal sites. Like SEMASS, the PPNE facility will accept

larger trucks which originate at other transfer stations. As such, the tonnage of waste per truck accepted at the PPNE facility is expected to be similar to the truck tonnages accepted at SEMASS.

The DEIR referenced the Covanta Southeast Massachusetts (SEMASS) facility in Rochester, MA to provide an estimation of the hourly distribution of truck trips throughout the day. The FEIR uses additional data from New England Waste Disposal facility in Taunton, MA in conjunction with the SEMASS data to estimate hourly distribution of truck trips. Operational analysis was based on traffic counts collected in the study area in June 2018, grown to pre-COVID-19 2020 conditions based on comparison with counts collected by MassDOT at the Braley Road and Route 140 interchange in February 2020.

Comment no. 2-6

“The Traffic Impact Study estimated the site-generated trips for the biosolid processing facility on the assumptions that biosolids will arrive in trucks with a 24-ton capacity. The Proponent should provide supporting information to justify the assumption that biosolids will arrive in trucks with a 24-ton capacity. In addition, the TIS did not appear to evaluate outbound trips associated with the biosolid processing facility.”

Comment response

The project is expected to accept 280 wet tons per day of thickened biosolids slurry with a solids content of 7%. The thickened slurry will be transported to the site in tanker trucks. It is expected that the biosolids will be transported primarily in 6,000-8,000 gallon tanker trucks with an average truck capacity of 28 tons. Smaller tanker trucks with an average capacity of 3,000 gallons, or 12 tons, may also be used. Trip generation for inbound biosolids has been developed assuming 9 tanker trucks per day with a capacity of 28 tons and 2 tanker trucks per day with a capacity of 12 tons.

The project will also accept 120 wet tons per day of biosolids cake with a moisture content of 23%. It is expected that the cake will be transported to the facility in rolloff containers averaging 10-12 tons per container. Twelve trucks per day would be required to deliver 120 wet tons of biosolids cake.

At the facility, the biosolids will be processed by drying. The weight of the biosolids delivered to the facility will be reduced to 44 dry tons per day through the drying process. The 44 tons per day of dried biosolids will be sent for disposal either separate from or combined with MSW.

Comment no. 2-7

“The Traffic Impact Study within the DEIR adjusted the existing traffic volume to account for vehicle trips associated with the glass facility (Phase 1) and estimated site generated traffic for the solid waste transfer station and biosolid facility (Phase 2). MassDEP recommends that the

Proponent provide supporting information to justify the adjustment to existing traffic volumes and to demonstrate that the methods used to estimate the site-generated traffic comply with MassDOT's Transportation Impact Assessment Guidelines."

Comment response

In response to comments received on the DEIR, the FEIR has been updated to analyze 2020 Baseline conditions in the absence of Phase 1 of the PPNE facility; 2020 Existing conditions with Phase 1 currently in operation; and 2027 future No-Build and Build conditions with and without the Phase 2 expansion, respectively. 2020 Base conditions were estimated by subtracting existing PPNE employee and truck trips from the 2020 Existing conditions and adding trips generated by the former NWD trucking facility previously occupying the site, collected in June 2018. Trip generation estimates were generated using data collected from similar existing sites in accordance with MEPA filings for similar facilities throughout the Commonwealth.

Comment no. 2-8

"The Traffic Impact Study assumes that "all truck traffic entering the site will utilize Route 140 to Braley Road." Because the TIS assumed all truck traffic will utilize Route 140 to Braley Road, the Proponent should commit to the truck routes as presented in the traffic study, or the Proponent must revise the traffic study. In addition to recommending a truck exclusion route along Phillips Road, the Proponent should implement an internal protocol that prohibits trucks accessing their facility from using Phillips Road. The Department recommends that the Proponent provide information on a protocol in the subsequent MEPA filing."

Comment response

PPNE currently restricts its truck deliveries to the identified truck route via Theodore Rice Boulevard, Braley Road, and Route 140, and will continue to do so under the Phase 2 expansion. PPNE will include the prohibition on trucks from using Phillips Road in all contracts with customers of the facility. The contracts will include financial penalties if trucks utilize Phillips Road and a ban from using the facility for repeat offenders. PPNE would support a Heavy Commercial Vehicle Exclusion (HCVE) to prevent truck traffic from other generators within the New Bedford Business Park from using Phillips Road, should the City of New Bedford pursue establishing a HCVE along Phillips Road.

Comment no. 2-9

"It should also be noted that During the ENF filing, Solid Waste provided comments on the Traffic Impact Study suggesting the Proponent should discuss mitigation measures with MassDOT or the City of New Bedford. The Proponent has not proposed or recommended any mitigation measures and the DEIR did not appear to contain information on discussions with

MassDOT or the City of New Bedford. In addition, Solid Waste provided comments stating that the Proponent must commit to limiting the maximum number of vehicles utilizing the site to that presented in the traffic study. The DEIR did not appear to contain a commitment to a maximum number of vehicles utilizing the site per day.”

Comment response

PPNE is having ongoing discussions with the City of New Bedford which includes discussions on potential mitigation, which has not been finalized. Potential measures were analyzed to evaluate mitigation to the study area intersections. Recent assessment included the completion of a signal warrant analysis for the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard, and considering Transportation Demand Management (TDM) measures.

In addition, PPNE would support a Heavy Commercial Vehicle Exclusion (HCVE) to prevent truck traffic from other generators within the New Bedford Business Park from using Phillips Road, should the City of New Bedford pursue establishing a HCVE along Phillips Road. As stated in the FEIR, daily truck trips will not exceed 418 trips.

Comment no. 2-10

“During the ENF filing, Solid Waste commented that the Proponent’s Sound Level Assessment Report (“Sound Report”) has not considered all potential sound sources from proposed facility operations. The revised Sound Report included in the DEIR also has not considered all potential sound sources from proposed facility operations. The Sound Report considered the following potential sound sources: general rooftop exhaust fans, biosolids exhaust fans, biofilter stack exhaust and ID fan, cooling towers, makeup air fan, MSW tipping and loading, glass intake fan, and glass exhaust fan. Pursuant to 310 CMR 7.00 Air Pollution Control Section 7.10: U Noise, MassDEP regulates all sounds emanating from a solid waste facility operation. The Sound Report did not consider the following potential sound sources:

- Waste delivery vehicles on-Site inside and outside the building;
- MSW processing equipment, biosolid processing equipment, and glass processing equipment;
- Biosolid tipping and loading and glass tipping and loading;
- Loading of rail cars and movement of railcars; and
- Short duration sounds from the outdoor operation of waste handling equipment, delivery vehicle back-up alarms, and dump truck tailgates.
- The Department recommends that the Proponent revise the Sound Report in the subsequent MEPA filing. Solid Waste requests that the Proponent schedule a scoping meeting prior to the next revision to the Sound Report to discuss the following:
- Establishment of the ambient sound level based on the 7-day average of the lowest daytime and nighttime hourly L90 levels;

- Modeling of all potential sound sources as described above; and
- Modeling and analysis of Project generated sound sources using L90 sound levels.”

Comment response

The Sound Report included in this FEIR builds on the prior analysis and incorporates each of MassDEP’s requested changes. Specifically:

1. The waste delivery vehicles on-site inside and outside the building were included in the noise model
2. The Cadna/A modeling for the DEIR included the MSW processing equipment, biosolids processing equipment, and glass processing equipment.
 - a. MSW and biosolids processing equipment are insignificant sources that will not contribute to the overall sound level generated by the Facility.
 - b. The glass processing equipment has been modified in the FEIR analysis to reflect the updated glass processing design and building ventilation.
3. Biosolids and glass tipping and loading occurs indoors with the doors closed, therefore these are insignificant sources that will not contribute to the overall sound level generated by the Facility.
4. All loading of rail cars will be indoors.
5. Movement of railcars was characterized to include locomotive noise and coupling noise in the FEIR noise report.
6. Short duration sounds are addressed as follows:
 - a. There are no outdoor operations of waste handling equipment.
 - b. Delivery vehicle backup alarms are addressed in the FEIR noise report.
 - c. Dump truck tailgate sounds are included in the tipping areas and are indoors in all cases.
7. PPNE met with MassDEP on February 24, 2020 for the scoping meeting prior to the FEIR revision of the sound report. During this meeting, PPNE and MassDEP discussed the establishment of ambient sound levels, modeling of potential sound sources, and the use of L₉₀ sound levels.

As stated in the FEIR Sound Report, PPNE has documented that sound impacts will be avoided, minimized, and mitigated to the extent feasible.

Comment no. 2-12

“The Department acknowledges outreach performed on behalf of the Project to community groups and EJ organizations however notes that MassDEP also recommended in previous comments of the Executive Summary and the Environmental Justice Populations sections found on pages 572-574 that notices be posted in community locations frequented by residents (shopping centers, houses of worship, community/cultural centers). Community outreach can also include publishing notices in local newspapers and alternative media outlets familiar to

the community. As well as ensuring notice to the community prior to and during the public meeting and permitting process to ensure the community has opportunities to participate.”

Comment response

The Project has taken a number of steps to ensure that the public and the City of New Bedford has had the opportunity to have meaningful involvement in the siting and design of this facility. The Project has had multiple public meetings which were noticed both in English, Portuguese, and Spanish newspapers, has made translators and translated Project filings available, and in addition the Project has alerted various community leaders, and organizations within the New Bedford and community to alert them of Public meetings and Project filings. In addition to the MEPA process, this Project will also go through the siting assignment process.

The public outreach associated with this FEIR has been enhanced as follows:

Repeat or paraphrase Sec 3.3

Comment no. 2-13

“Comments appended to the DROD included concerns that some local officials and residents who could be impacted by the proposed Project were unaware of opportunities for public participation in the Project review. To respond to these comments, the Department recommends the Project Proponent consider holding an additional site visit or public meeting on the Project proposal.”

Comment response

On January 2 and 3, 2020, Parallel Products hosted two Open House Community Meetings in addition to two Community Meetings at the Greater New Bedford Regional Vocational Technical High School on January 6 and 7, 2020.

To stay compliant with CDC guidelines due to the COVID-19 pandemic, Parallel Products hosted two virtual Community Meetings on December 14 and 16, 2020. The meetings were advertised on the website, social media, and in the Standard Times, Portuguese Times, New Bedford Guide, and WBSM 1420 for the two weeks leading up to the meetings. Three people attended Monday’s meeting and seven people attended Wednesday’s meeting via zoom. At the meetings, Parallel Products provided attendees with an update on the South Coast Green Energy Center and allowed attendees to ask their questions. Parallel Products answered all questions.

Parallel Products has knocked on 900 unique doors closest to the new site in the New Bedford Business Park. Each home received a comment card and fact sheet unless they refused. The Pine Hill Acres neighborhood, which consists of 360 homes, received a second visit from a Parallel Products representative, as they reside closest to the new site. Parallel Products representatives have also knocked on the 75 closest homes near their current site at 969

Shawmut Avenue and an additional 54 homes throughout New Bedford to educate the community about their plans for 100 Duchaine Boulevard and assess if the neighbors have had any complaints over the past 11 years.

Comment no. 2-14

“It is recommended that plans are in place that support the development and implementation of best management practices (BMPs) to alleviate the potential impacts of additional pollution from traffic, air quality emissions, and other air quality concerns and nuisances that affect the residents of New Bedford. When implemented, the proposed BMPs should help to alleviate the statistically higher rates of environmentally-related health outcomes that MassDPH’s Environmental Public Health Tracker has identified for New Bedford.”

Comment response

Per FEIR section 2.3.2, PPNE has put in-place plans to support the development and implementation of BMPs to alleviate potential impacts, as follows:

Air quality concerns and nuisances:

- All tipping, handling, and loading will be performed within a fully enclosed processing and handling building.
- The building floor is designed as impervious concrete that will prevent any potential contamination of groundwater, stormwater or the surrounding environment.
- Use of a fine atomized misting system within the MSW Transfer Building and processing building will effectively control fugitive dust and odor in the building.
- Regular daily cleanup and sweeping will occur on the external paved surfaces. Environmental Monitoring and Operation and Maintenance Plans will be developed and staff will be trained on these operational procedures.

Commonwealth of Massachusetts, Department of Energy Resources, letter no. 80

Each comment from the DOER is printed in italic below followed by a response the comment

Comment 80-1

The energy modeling section (Tables 4, 5, and 6) of the greenhouse gas (GHG) analyses does not appear to contain the 22,592-sf Side Bunker Building. This building is included in the WSP “New Lighting Requirements and Reduction” section of the report. Please clarify.”

Comment response

As an unconditioned space, the side bunker’s ventilation and lighting has been included in the Glass Processing building’s total loads. Please refer to Table 7-2 for the Side Bunker’s inclusion in the

lighting calculation and Table 7-7 for the Side Bunker's inclusion in the Glass Processing building's overall energy use calculation.

Comment 80-2

"Since the EENF, the project has reduced the proposed heating efficiency in the Biosolids processing facility from 90% to 82%. Why was this mitigation measure reduced?"

Comment response

Upon further design refinement, it was determined that a direct-fired burner would be required to achieve a 90% efficiency. This direct-fired type of burner cannot be paired with a biosolids facility because of the potential products of combustion in the airstream. Please refer to Section 7.3.1 for further details.

Comment 80-3

"The project appears to be underestimating heat pump Alternative Energy Credit (AEC) value. Please include supporting calculations."

Comment response

Available AECs have been updated. Please refer to the attached WSP Energy Analysis, included as Appendix 14, for supporting documentation and calculations.

Comment 80-4

"The lighting end use for all buildings appears unusually high compared to reference buildings. This appears to primarily be due to continuous operation for the entire year."

- *Please confirm lighting operating schedule by hour, day, season.*
- *Referencing the table below, Table 5 of the GHG analysis presents a lighting end use that appears to correlate to a Lighting Power Density (LPD) much higher than that reported in the WSP "New Lighting Requirements and Reduction" report. Please check the energy model to confirm that this LPD is correct."*

Table 5 (W/sf)	WSP Report (W/sf)	
Baseline	1.73	1.19
Proposed	1.37	0.95

Comment response

The energy model tables have been updated to reflect the LPDs reported in WSP's report. Please refer to Tables 7-2 through 7-4 for lighting energy use calculations and Tables 7-6 through 7-8 for the incorporation of these values into the energy model tables.

Comment 80-5

"Page 96 of the Noise Impacts section of the DEIR states that the Glass Processing facility will have eight (8) ventilation fans. However, the energy model for the Glass Handling (Processing & Bunker) facility (Table 5) of the GHG analysis does not contain any ventilation load. Please clarify."

Comment response

The planned Glass Handling ventilation has been modified to two baghouse exhausts (manifolded to one stack) in place of the eight ventilation fans. These baghouse exhausts will draw a total of approximately 27,100 cfm on a twenty-four-seven operational basis. The impact of the makeup air heating necessary to operate the baghouses has been added to the heating load of the building. Please refer to Section 7.4.2 and Table 7-7 for details.

Comment 80-6

Section 2.2.2 on Page 3 of the GHG analysis states that the base of the biosolids building will be 15' of exposed concrete with a metal wall above. Please provide a UA analysis for the vertical walls to compare the proposed envelope performance to code requirements. This UA analysis should include all necessary dimensions (exposed concrete wall height; total building height, total vertical surface area, etc).

Comment response

From Section 7.2.1:

The biosolids building will have an above-code envelope as detailed in Table 7-1, below.

Table 7-1 Bio-solids Building Envelope Performance

Measure	Baseline		Proposed	
	%	U	%	U
Concrete Wall	10	0.090	10	0.250
Metal Wall	90	0.052	90	0.034
Window	0	0.380	0	0.420
Aggregate vertical assembly	100	0.056	100	0.055
Percent Improvement				2.2%

The biosolids building will be a pre-engineered metal building with a roof height of 53'-4 3/4". The base of the walls of the building will have 4' of exposed concrete with an R-value of 4 below an insulated metal panel with an R-value of 29, continuous insulation. There are no windows in the proposed design. A cross section of the proposed Biosolids wall has been included in Section 7.2.

In addition to the code-compliant proposed wall section detailed above, an enhanced wall section has also been studied. The enhanced wall section was modeled as an alternative to the proposed design in order to test the efficacy of an enhanced building envelope on energy use. The enhanced wall alternative increases the insulation at the metal panel to R=42. A cross section of the enhanced Biosolids wall has been included in Section 7.2. With a design temperature of 50 degrees Fahrenheit, the difference between the proposed envelope and the enhanced envelope was minor. A less than half of a percent energy savings improvement was calculated, with an estimated annual utilities savings of approximately \$200. The cost to incorporate the enhanced envelope into the design would be approximately \$31,000 over the proposed envelope. This equals a payback of 155 years. For these reasons, increasing the envelope performance is not justified. The Proposed envelope design represents the most cost effective way to deliver this much-needed Project.

Comment 80-7

"Page 2 of the GHG Analysis states that "the project will comply with the mandatory and prescriptive requirement of ASHRAE 90.1 2013". However, it appears that the conditioned buildings are not achieving the ASHREA 90.1 2013 Section 5 – Building Envelope measures as follows:

• *Sections 2.2.1 & 2.2.2 on page 3 of the GHG Analysis state that both conditioned buildings will achieve a wall insulation value of R-19 (R19+R-0c.i.). ASHREA 90.1 2013 Table 5.5.5 requires R-0+R-19c.i for a metal building. Ensure that the walls are achieving the code minimum continuous insulation requirement, or better.”*

Comment response

As detailed in the DEIR, all buildings will be built to achieve at least code minimums. The Glass handling building and glass handling bunker buildings have been constructed with R-19 continuous insulation.

The biosolids building will be a pre-engineered metal building with a roof height of 53’-4 3/4”. The base of the walls of the building will have 4’ of exposed concrete with an R-value of 4 below an insulated metal panel with an R-value of 29, continuous insulation. There are no windows in the proposed design. A cross section of the proposed Biosolids wall has been included in Section 7.2.

Comment 80-8

“We understand that the proponent has started construction on the Glass Handling building and has completed the roof without including R-11 L.S. It is unclear from the submission that they are maintaining the commitment to code level envelope.”

Comment response

From Section 7.2.2:

The roof of the Glass Handling Building (under construction) was designed with the R=19 insulation but without the R=11 liner system prescribed by ASHRAE 90.1-2013. The cost to install an R=11 equivalent liner system is between \$300,000 to \$400,000. When the glass handling building was modeled both with and without the R=11 liner system, the difference in energy savings was approximately 28 MMBtu annually, or an approximate 0.8% reduction in heating energy with the liner system. The utility savings associated with the liner system are roughly \$350 annually.

The Proponent believes that the minor additional heating energy consumption and incremental GHG impact due to the code deviation does not warrant the retrofit and requests that the project be allowed to forgo this design element.

Comment 80-9

“Section 5.4.3.1 on page 2 of the WSP Report states that “Continuous Air Barrier / Only the conditioned space of the Glass Building will be required to comply with Section 5.4.2.1, all other buildings are unconditioned.”. A continuous air barrier should be applied to all conditioned buildings, including the Biosolids building.”

Comment response

From Section 7.2.1:

As detailed in the DEIR, all buildings will be built to achieve at least code minimums. The Glass handling building and glass handling bunker buildings have been constructed with R-19 continuous insulation. A minor error in the WSP Code Compliance Memo has been corrected. The corrected memo now reads: “5.4.3.1 – Continuous Air Barrier / All conditioned spaces will be required to comply with the Continuous Air Barrier requirement within Section 5.4.3.1.” Please refer to Appendix 14 for details.

Comment no. 80-10

“The project has elected to incorporate C406.1 measure 2 “Reduced Lighting Power Density” as one of the two C406.1 measures. Table 4, 5, and 6 of the GHG analysis and the “New Lighting Requirements and Reduction” section of the WSP Report do not appear to incorporate the C406.1 measure in the baseline building, however. Please clarify.”

Comment response

Please refer to Section 7.3.3 and Tables 7-2 and 7-4 that clearly indicate a 10% reduction in lighting power density calculated in the baseline, as well as a 20% reduction incorporated into the proposed case.

Comment no. 80-11

“Clarify that the 20% LPD reduction is being applied after accounting for C406.1 measures. The 10% reduction required by C406.1 cannot be counted toward mitigation.”

Comment Response

From Section 7.3.3:

As detailed in the DEIR, the Project is committing to a 20% reduction in lighting power density (LPD) measured from ASHRAE 2016. The project’s LPD tables have been updated to reflect the most recent code update and to include a 10% reduction in Baseline LPD, as required by MA amendment C406.

Comment no. 80-12

“The project should meet the heating system efficiency commitment in the EENF of 90% for the biosolids building and increase the efficiency to 90% for all conditioned areas.”

Comment response

From Section 7.3.1:

The EENF referenced a 90% efficient heating system in the biosolids building. That efficiency was used to reach the EENF GHG reduction of 0.02% for the Biosolids Building. The DEIR references an 82% efficient heating system, and that number was used to reach the DEIR GHG reduction of 0.3% for the Biosolids Building. The switch to the 82% efficient system was made after advancing the design and speaking with product specialists.

90% efficient boilers are available, however they come at a cost increase of 48% compared to a traditional unit. Additionally, 90% efficient condensing furnaces of the roof-mounted industrial-type are not typical for this application. A direct-fired burner would be required to achieve 90% condensing efficiencies. This type of burner cannot be paired with a biosolids facility because of the potential products of combustion in the airstream. Because direct-fired furnaces are not allowed in this type of building, and because the difference in GHG savings between the two systems is negligible, the owner has decided to proceed with an 82% efficient boiler.

Comment no. 80-13

“Meet with MassSave® electric and gas Program Administrators for the project. Estimate MassSave incentives based on meeting.”

Comment response

From Section 7.5:

The design team participated in a meeting with MassSave on April 28, 2020. Mass Save is a collaborative of Massachusetts' natural gas, electric utilities and energy efficiency service providers to help customers save money and energy. The purpose of the meeting was to introduce the owner to the incentive programs currently available to the project. Representatives from Eversource met with the Owner, architect, and other members of the design team to discuss the following:

- The project will follow the prescriptive incentive approach for high performance lighting and HVAC measures.
- Custom approach measures are potentially available for process equipment, such as Variable Frequency Drives (VFDs) if this is not standard practice for certain systems.
- SMART Incentive and tax credits available for the onsite solar photovoltaic systems

As suggested by Eversource, the owner will re-engage MassSave as the design progresses to further evaluate potential incentives

Comment no. 80-14

“The proponent plans to complete construction of on-site PV by January 2020. Please confirm that this was completed or present a detailed schedule for installation.”

Comment response

From Section 7.5:

The Proponent is an advocate of renewable energy. Currently, the site operates a 1.6 MW truck canopy solar installation. As part of this project, the Proponent is installing an additional 1.9 MW of canopy and rooftop solar power on site. According to PV Watts, a 1.9 MW array located in New Bedford will produce approximately 2,500 MWh annually. This equates to a 907 ton per year reduction in CO₂.

Construction of the 1.9 MW photovoltaic (PV) canopy which will begin on or around February 1, 2021. Construction will continue until completion, with a July 30, 2021 as target completion date. In addition, all new buildings will be PV-ready as required by code.

Comment no. 80-15

“Above-code envelope should be used throughout. In summary: a. Above Code-threshold envelope is recommended (vertical walls, windows, roofs and exposed floors). Priority should be given to increasing continuous insulation. Distinguish between R value of batt and R value of continuous insulation. Indicate planned wall assembly U value and wall construction type (mass, wood, metal stud, etc). Confirm that the relationship between R-value and assembly U-factor conform to Appendix A of the Code.

b. Analyze opportunities for above code envelope improvements. “

Comment response

From Section 7.2.1:

The biosolids building will be a pre-engineered metal building with a roof height of 53’-4 3/4”. The base of the walls of the building will have 4’ of exposed concrete with an R-value of 4 below an insulated metal panel with an R-value of 29, continuous insulation. There are no windows in the proposed design. A cross section of the proposed Biosolids wall has been included in Section 7-2.

In addition to the code-compliant proposed wall section detailed above, an enhanced wall section has also been studied. The enhanced wall section was modeled as an alternative to the proposed design in order to test the efficacy of an enhanced building envelope on energy use. The enhanced wall alternative increases the insulation at the metal panel to R=42. A cross section of the enhanced Biosolids wall has been included in Section 7.2. With a design

temperature of 50 degrees Fahrenheit, the difference between the proposed envelope and the enhanced envelope was minor. A less than half of a percent energy savings improvement was calculated, with an estimated annual utilities savings of approximately \$200. The cost to incorporate the enhanced envelope into the design would be approximately \$31,000 over the proposed envelope. This equals a payback of 155 years. For these reasons, increasing the envelope performance is not justified. The Proposed envelope design represents the most cost-effective way to deliver this much-needed Project.

Comment no. 80-16

“Include a table similar to the example below. For “code value” ensure that the value incorporates any improved efficiency per requirements of Section C406.1 of the Massachusetts’ amendments.” (Table from letter is not repeated here)

Comment response

Table 7-1 Bio-solids Building Envelope Performance

Measure	Baseline		Proposed	
	%	U	%	U
Concrete Wall	10	0.090	10	0.250
Metal Wall	90	0.052	90	0.034
Window	0	0.380	0	0.420
Aggregate vertical assembly	100	0.056	100	0.055
Percent Improvement				2.2%

9.12 K P Law letter (City of New Bedford) letter no. 81 (format)

Each comment from the MassDEP letter is printed in italic below followed by a response to the comment.

Comment no. 81-1

“It is notable that the DEIR, in discussing the solid waste issues, seeks to address Department of Environmental Protection ("DEP") site suitability criteria to assess whether the proposed site is suitable for the handling of solid waste materials. The siting of a solid waste transfer station is subject to the requirements of state statute (O.L. c. 111, §150A and regulation (310 CMR 16.000). This highly regulated process includes review by the DEP as well as the local Board of Health, with each having a distinct and significant role in the approval process. Before the local Board of Health undertakes its review through a public hearing process, the DEP must undertake its review and approval. A Site Suitability Report submission is a DEP requirement for permitting of a solid waste handling facility in order to demonstrate that the site is appropriate for such use. Once site suitability is determined by the DEP, the applicant will need to apply to the Board of Health for a site assignment. This analysis is therefore premature and inappropriate for a DEIR. The conclusions reached by the applicant in this regard are of no substantive value as they will be subject to DEP, and ultimately New Bedford Board of Health, review. The City objects to their inclusion in the DEIR as they are subject to review under a separate regulatory scheme.”

Comment response

PPNE agrees that site suitability is a determination that will be made by MassDEP and the New Bedford Board of Health. The draft Site Suitability Application included in the EENF and the discussion of site suitability in the DEIR were included to provide as much information on the site and on the proposed facility. PPNE is aware that a determination of site suitability will not be made by any agency during the MEPA process.

Comment no. 81-2

“The City is particularly concerned with the depiction of the waste handling area for the project and how this waste handling will be undertaken. While the applicant states that waste handling activities will not take place outside of enclosed building structures, the Waste Handling Area as defined in the DEIR extends beyond those building, leading to a concern that waste handling may be expanded beyond the enclosed buildings. Such activities should not be permitted as the waste will be exposed to the elements and rendered uncontrolled leading to inevitable off-site impacts. All waste handling should be confined within enclosed areas so as to prevent the uncontrolled migration of waste materials which would negatively impact public health and

safety. The definition of the Waste Handling Area should be revised to restrict it to the enclosed buildings.

Further, the DEIR does not specify what waste handling activities, if any, may be proposed in areas and locations outside of the proposed facility buildings. A Waste Handling Area boundary that encompasses general open areas around the site could facilitate the introduction of future waste handling activities outside of enclosed buildings (such as open-air stockpiling of waste materials that are not addressed in this DEIR). The Waste Handling Area should specifically and clearly reflect the actual intended areas and locations where waste handling activities are proposed. If waste handling activities are proposed for areas outside of facility buildings, these activities and their associated environmental impacts should be addressed and discussed in the DEIR. It is the City's position that waste handling outside of site buildings should be prohibited, given the availability of enclosed space on the site, so as to properly protect public health and safety. There is simply no reason why waste handling should be permitted to occur outside the buildings.

The Waste Handling Area boundary appears arbitrarily based upon a 500 foot off-set distance from adjacent residences in order to satisfy the regulatory requirement. The Land Use Plan incorporated into the DEIR shows houses located on the east side of Philips Road. The Land Use Plan should also show the houses located on the west side of Philips Road which are shown Figure 12 (Residential Sound Modeling Locations) of the DEIR to confirm their minimum 500-foot setback from the proposed waste handling area. The applicant should not be imply drawing a line based upon the 500-foot setback requirement but should clearly identify all houses within the setback area. Further, since the site is located just over 500 feet from a NHESP Priority Habitat a site-specific evaluation should be undertaken and/or consideration given to potential for impacts to that habitat due to wetland connectivity. Once again, the City objects to any waste handling within the set-back area that is outside of enclosed buildings, as such activities would adversely impact health and safety.”

Comment response

The waste handling areas depicted on the Land Use Plan show the areas of waste handling that meet the siting restrictions included in 310 CMR 16.00. As stated in the DEIR and reiterated in the FEIR, waste handling is proposed only within enclosed buildings. PPNE expects that conditions included in the Site Assignment from the Board of Health and conditions included in the Authorization to Construct and Authorization to Operate from MassDEP will include conditions that limit all waste handling to within enclosed buildings.

The distance from the 100 Duchaine Boulevard parcel to NHESP Priority Habitat is over 1,500 feet. The distance to Phase 2 of the project development is over 2,000 feet. The site is separated from the NHESP Priority Habitat by the existing rail line that parallels the western property line. The rail line prevents “wetland connectivity” with lands west of the proposed project.

The Land Use Plan included in the FEIR, as Appendix 10 has been revised to identify residences on both the east and west side of Phillips Road.

Comment 81-3

“A major component of the project and a major concern of the City, is the processing of biosolids. Significant concerns not adequately addressed by the applicant are the potential for polyfluoroalkyl substance (PFAS) contamination of the site as a result of that processing and contamination of the City of New Bedford's wastewater and biosolids as a result of the large volume of PFAS-bearing wastewater that will be discharged to the City. Perhaps most important the project's concentration of PFAS wastes in the City is a further imposition on a fiscally constrained City that already is managing a disproportionately large share of environmental burdens.

Recognizing that PFAS compounds can pose health risks but are largely unregulated, EPA issued its comprehensive PFAS Action Plan on February 14, 2019. The federal action plan is an accelerated program designed to limit human exposure to potentially harmful levels of PFAS in the environment by, among other means, developing federal drinking water standards for those substances. Not content to wait for EPA, Massachusetts proposed its own PFAS drinking water standard on December 27, 2019. Moreover, proposed federal legislation would add certain PFAS compounds to the list of "hazardous substances," which would place them under the jurisdiction of the Superfund Program and require public disclosure under one or more toxic release inventory programs. These rapidly advancing legislative and regulatory initiatives at both the state and federal levels enjoy bipartisan support owing to their focus on public health. This project's effect of concentrating PFAS from biosolids generated elsewhere in the region in the City is inadvisable, inappropriate and, likely, unsustainable.

There is a significant potential for PFAS and other contaminants to be enter groundwater and potentially drinking water, as the property is located on a potentially productive aquifer. PFAS compounds in particular are highly mobile and persistent in the environment. The state's concern on this issue is reflected by its proposal just last month of a very low 20 ng/L Maximum Contaminant Level for drinking water. The substantial threat to drinking water and the public health, not to mention liability for groundwater contamination, has not been addressed.

The discharge to the City of wastewater from the biosolids digester is also of grave concern. As proposed, wastewater contaminated with PFAS from other communities' biosolids will be discharged to the City of New Bedford municipal wastewater treatment plant. These discharges could have two adverse effects as discussed below, both of which would be exacerbated by the expected tightening of regulatory control on PFAS compounds.

No publicly owned treatment works is designed to or capable of destroying PFAS in wastewater. As a result, substantial discharges of PFAS to the City's collection system would pose a risk of noncompliance with any new PFAS-specific effluent limitation imposed on its

treatment plant. Noncompliance brings with it enforcement, resulting in costly injunctive relief and, often, penalties. The City's alternative to facing such liability is to act pursuant to its Industrial Pretreatment ordinance, either by establishing local limits requiring the project to adopt as-yet unidentified and un-evaluated treatment technologies, or by prohibiting or terminating PFAS discharges to its system based on a finding that they "reasonably [appear] to present an imminent endangerment to the health and welfare of persons, or any discharge presenting, or which may present, an endangerment to the environment." None of these issues are evaluated in the DEIR.

Beyond the quality of the discharge from the City's treatment plant, introduction of PFAS from the processing of other communities' biosolids risks raising levels of PFAS in the City's own biosolids to a level that precludes use of one or more otherwise lawful disposal or reuse options. MassDEP, which regulates biosolids applications through the issuance of Approvals of Suitability (AOS), is already moving to address PFAS in biosolids. Since January of 2019, the Department has been incorporating a requirement for PFAS testing in all new or renewed AOSs. Regulatory constraints on those compounds is the logical next step following this data collection effort, and the proposal to concentrate PFAS from other communities in the City's biosolids will place the City squarely in the path of and likely at odds with those constraints. The DEIR fails to evaluate or account for this substantial risk.

For all of these reasons, the biosolids component of the project should not proceed without a PFAS mitigation plan that removes PFAS from the wastewater stream to concentrations suitable for acceptance at the municipal treatment facility under current and future discharge criteria, or that provides for a bond of sufficient value to protect the City from foreseeable adverse consequences of becoming the destination of PFAS wastes from throughout the region. The DEIR, while acknowledging the release of PFAS into the wastewater system, should address the issue of PFAS contamination in the environment and present proposed mitigation measures including wastewater pretreatment systems. As it stands, this portion of the DEIR is woefully inadequate in failing to properly address a known threat to public health, safety, and the environment. As a result, the biosolids portion of the project should not be allowed to proceed.”

Comment response

PFAS is considered by MassDEP to be an “contaminant of emerging concern”. MassDEP submitted a comment letter on the DEIR. This correspondence is included in Section 9.0 Comment Response of the FEIR. Correspondence submitted by MassDEP has been labelled letter no. 25 and included in Appendix 12 of the FEIR. This correspondence states that “MassDEP has conducted monitoring, or required the monitoring of, PFAS in drinking water, wastewater, residuals, and rivers and is developing a strategy to address PFAS in wastewater and residuals.”

PPNE understands that new regulations and restriction will come into effect as the MassDEP continues its evaluation of PFAS. Construction of any biosolids processing facility will be more than a year from the issue of the FEIR. PPNE will develop the design of the biosolids processing facility in compliance with all new regulations and restrictions that come into effect.

PPNE plans to discharge wastewater from its proposed biosolids facility to the City of New Bedford's wastewater treatment plant. PPNE will consult with the City during the design process to ensure the design complies with all existing and new design requirements including any PFAS related regulations, restrictions and monitoring requirements. Due to uncertainties of future regulations, PPNE cannot determine if the biosolids building size will need to be increased.

Comment no. 81-4

“A primary wetland concern is the installation of the retaining wall for the rail spur and the associated wetlands impacts that will occur as part of this work. Although the applicant has identified impacts associated with the actual construction footprint of this work, it has neglected to account for the bordering vegetated wetland that the applicant will be semi-isolating with its retaining wall. It is therefore necessary for the applicant to conduct an evaluation of impacts to the wetland areas south of the crossing. This analysis should consider the ecological, wildlife habitat, wetland function, flood storage and hydraulic impacts created by the retaining wall. Based on this analysis, the applicant should provide calculations on culvert sizing to ensure that the retaining wall will not act as a restriction to any of the factors listed above. This is of utmost importance, especially considering the site is within a Zone X of the floodplain. Since precipitation rates are increasing, it will be important to ensure that the wetlands throughout the site continue to drain as they do under existing conditions.

The alternative analysis for the culverted stream crossing is limited. The preferred alternative from a wetland perspective would be a bridge span of the stream crossing, not a 3-sided or 4-sided box culvert. No information was provided as to the sizing of the culverts within the retaining wall and why they were selected. The analysis briefly discusses the preferred wetland alternative (bridge span), only saying that approach would cause more disturbance. No supporting calculation is included in the DEIR, and it remains unclear how abutments built in the upland with the only wetland impact being driven piles would be a greater disturbance than the selected box culvert. The alternative analysis should evaluate aesthetic and biological impacts of each alternative to determine whether a box culvert or bridge span is preferred, and provide additional information within the alternative analysis specific to ecological, wetland and hydrological impacts, as well as cost estimations of each alternative.”

Comment response

Subsequent to the receipt of this comment letter, PPNE submitted a Notice of Intent to the New Bedford Conservation Commission regarding the wetlands impacts to the proposed Phase 1

development. Phase 1 development received a waiver from future MEPA review. The issues addressed in this comment were addressed in the review and hearings on the Notice of Intent submitted by PPNE. An Order of Conditions was issued allowing Phase 1 to proceed. PPNE changed the design of the rail crossing of the drainage swale from a three sided culvert to a bridge as requested in this comment. Further wetlands mitigation was provided by wetlands replication. The project plans included in the FEIR include all design changes included in the Order of Conditions.

Comment no.81-5

The applicant estimates that the project will result in an addition of 300 new truck trips per day and 150 new employee trips per day into an already stressed traffic environment. From a traffic standpoint, the most significant issue that has not been fully analyzed is the high crash rate at the intersection of Theodore Rice Boulevard and Duchaine Boulevard which currently exceeds both the District and Statewide crash rates for unsignalized intersections. The traffic added to this intersection during the peak hours would exacerbate the crash risk at this problematic intersection. A full crash analysis is required for this junction, to include police crash reports, current geometry, lighting, signing, and pavement markings. The applicant should provide plans and details for improvements to this intersection necessary to make it safer and mitigate the impact from the added traffic resulting from the project. This significant threat to public safety must be addressed before the project may proceed.

The Site-Generated trip section of the DEIR includes a descriptive breakdown of the expected trip generation and indicates that the trip generation calculations are provided in Appendix E; however, some of the data provided does not appear to match the trip generation section in the report. Specifically, while the report text states there will be 26 tons per day arriving in roll off containers, it also states that the applicant conservatively assumes 4 tons per truck, which equates to almost 7 trucks per day, and not the 4 shown. This is a significant discrepancy which may have a serious impact on the overall operation of roadways and intersections and should be corrected as it a cause of confusion and concern. A thorough review of the Traffic Impact Study and supporting calculations should be performed to identify and correct any similar discrepancies.

Comment Response

As shown in Traffic Study presented as Appendix 13, ten crashes occurred at the intersection of Theodore Rice Boulevard and Duchaine Boulevard during the five-year study period from 2013 to 2017, the most recent five years of complete crash data available from MassDOT. Five of the ten crashes occurred during the overnight hours (between 6:00 p.m. and 7:00 a.m.), which is outside the hours Parallel Products is expected to generate new truck trips through the intersection, and only one crash, involving property damage only, involved a heavy truck. As the intersection is within the New Bedford Business Park and is designed to accommodate

heavy truck traffic generated by the businesses in the park, it is not anticipated that additional heavy truck traffic would degrade the safety of the intersection.

Trip generation has been revised in the FEIR. The facility will not accept municipal solid waste (MSW) or construction and demolition debris (C&D) in roll-off containers. All inbound MSW and C&D will be transported in 9-ton packer trucks or 25-ton transfer trailers.

Comment no. 81-6

“Noise is, of course, a significant concern with such a substantial operation. Noise controls described on page 28 of the DEIR include a 50-foot long, 15-foot tall sound barrier along the southern edge of the biosolids building; however, residences are located to the east. Clarification is required regarding the effectiveness of the sound barrier wall as a noise control measure for ground level equipment located on the west side of the biosolids building and an explanation of the level of attenuation it will achieve. Also, while the wall is described as L-shaped, the wall is not shown as L shaped in the Project Plan set (included as Attachment 8). This will need to be explained. In addition, nuisance noise disturbances from equipment and truck back-up alarms are a common complaint of residents located close to facilities such as the proposed project. The DEIR lacks discussion on how nuisance impacts from back-up alarms will be addressed.”

Comment Response

PPNE has updated its noise analysis as-described in Section 6.0 of the FEIR to incorporate improvements made through the design development, and to address comments made on the DEIR. The sound barrier described on page 28 of the DEIR was placed on the southern edge of the biosolids building to mitigate cooling tower sound; this cooling tower sound was already blocked to the east by the biosolids building. As the design has progressed, PPNE has expanded this noise control measure. The current design includes a 325 foot long 24-foot tall “L-shaped” sound barrier wall, or equivalent, which will be added around the rail spur, attached to the southeastern corner of the Biosolids building. This is best shown on Figure 6-4, described as the “Phase 2 Rail Spur Barrier”. The expanded wall will shield the residential area to the east and southeast not only from cooling tower sound, but also from sound generated by the railcar coupling, idling locomotive, and other ground level equipment located on the west side of the biosolids building.

The updated noise analysis described in Section 6.0 of the FEIR addresses noise from equipment and truck back-up alarms, and documents how PPNE will address and avoid potential nuisance impacts.

Comment no. 81-7

The DEIR reviews the applicant's attempts to address Environmental Justice. While the DEIR outlines that all meeting requirements have been satisfied, meetings with local citizens' advocacy groups have revealed ongoing concerns with the outreach performed, as well as maintaining biodiversity and habitat in the area, potential impacts to air quality created during construction and ongoing operations, noise and odor from the facility. Southcoast Neighbors United, c/o Wendy Graca and Tracy Wallace should be added to the Environmental Justice groups for notice purposes.

Comment response

Public outreach is an ongoing process, including this FEIR and future filings. Southcoast Neighbors United, c/o Wendy Graca and Tracy Wallace will be added for notice purposes.

Comment no. 81-8

"The DEIR states that soil and water were not evaluated during the multi-pollutant analysis due to the enclosed operation design of the facility. This analysis should include all environmental media as a contingency in case of a release prior to unloading or subsequent to loading in the enclosed facility. Simply stating that handling will occur indoors does not address the very real possibility that material will migrate outside those buildings, causing impacts to soil and water which would not otherwise be planned for. This analysis should be required in order to anticipate and address unanticipated impacts to all environmental media.

Further, while the existing tree line may provide for visual buffer "during non-winter months", consideration should be given to adding understory native evergreen plantings for year round visual buffer which may provide additional noise, odor, and air quality mitigation. The DEIR cites climate change impacts to urban areas in the northeast as presented in the Fourth National Climate Assessment as including extreme temperature events, episodes of poor air quality, recurrent waterfront and coastal flooding and intense precipitation events that can lead to increased flooding. While the DEIR notes that the understanding of climate change is incomplete, this underscores the need to plan for the extremes in design and operational contingency plans."

Comment response

The existing native vegetation is established and modifications such as adding understory native evergreen plantings are unlikely to be successful in the long term. In practice, the noise, odor, and air quality mitigation performed by specific plantings is difficult to quantify and is conservatively excluded from analyses. PPNE will develop final landscaping plans in consultation with the City of New Bedford, and will review feasible options for plantings along

the eastern property line as part of those final landscaping plans in addition to already agreed upon landscaping plans associated with the Phase 1 approval.

Operational plans will include contingencies for weather events, including events made more frequent by climate change.

APPENDIX 1

MEPA SECRETARIES CERTIFICATE FOR THE EENF



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
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April 12, 2019

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
EXPANDED ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Parallel Products of New England
PROJECT MUNICIPALITY : New Bedford
PROJECT WATERSHED : Buzzards Bay
EEA NUMBER : 15990
PROJECT PROPONENT : Parallel Products of New England, LLC
DATE NOTICED IN MONITOR : February 20, 2019

Pursuant to the Massachusetts Environmental Policy Act (MEPA; G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I have reviewed the Expanded Environmental Notification Form (EENF) and hereby determine that this project **requires** an Environmental Impact Report (EIR). I am declining to allow a Single EIR as requested by the Proponent. The Proponent must submit a Draft EIR (DEIR) in accordance with the Scope provided in this Certificate. In a separate Draft Record of Decision (DROD), also issued today, I **propose to grant** a Waiver that will allow the proponent to proceed with Phase 1 of the project prior to completing the MEPA process for the entire project.

Project Description

As described in the ENF, the project includes the phased construction of a glass recycling/processing facility; a solid waste handling and processing facility that will accept 1,500 tons per day (tpd) of municipal solid waste (MSW) and construction & demolition (C&D) waste; and a biosolids drying facility that will accept 50 dry tpd of biosolids. Phase 1 includes construction of a glass recycling/processing facility within a 27,500-square foot (sf) building,

construction of a railroad (RR) sidetrack from the main RR line to the glass processing facility, and installation of a 1.9 megawatt (MW) solar photovoltaic (PV) array. The glass recycling/processing facility will recycle glass collected through the Massachusetts bottle deposit system. Glass processing will include crushing, sizing and separation of the glass by color. Processed glass will be stored in bunkers until it is loaded into rail cars or trucks to shipment for bottle manufacturers. Phase 1 is proposed to meet an immediate regional need for glass processing in the region by providing an alternative market for glass that would otherwise be disposed.

Phase 2 includes construction of the MSW and C&D transfer station and the biosolids drying facility and extension of the RR sidetrack to service these facilities. Phase 2 will construct a 50,000-sf waste handling building which will be connected to an existing 103,000-sf building. The larger building will house processing equipment which will remove waste ban items and separate out recyclable materials. It also includes construction of a stand-alone 30,000-sf building to house the biosolids processing equipment. Biosolids processing will consist of drying the biosolids to reduce the volume and tonnage of the material prior to off-site disposal. Shipment of all outbound material will primarily occur via rail car.

Project Site

The 71-acre project site is located within the New Bedford Industrial Park at 100 Duchaine Boulevard in New Bedford. The site is generally bounded by industrial properties and Samuel Barnett Boulevard to the north, Phillips Road to the east, undeveloped land to the south, and a rail line and the Acushnet Cedar Swamp State Reservation to the west. The site was previously developed by the Polaroid Corporation and contains access roads, parking areas, stormwater management infrastructure and numerous buildings. The Proponent purchased the site in 2016 and has relocated a portion of its processing and recycling operations from 969 Shawmut Avenue to the project site. The site also contains 1.5 MW of solar PV mounted on a series of carport canopies. Access to the site is provided from Duchaine Boulevard, via an internal one-way loop roadway surrounding the proposed facility. The site has adequate area to support truck movement and access and is easily accessible from Route 140 (Alfred M Bessette Memorial Highway) via Braley Road or Phillips Road.

Wetland resource areas in the vicinity of the project include Bank, Bordering Vegetated Wetlands (BVW), Land under Water (LUW), and Riverfront Area. The project site is not located in Priority and/or Estimated Habitat as mapped by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP) or an Area of Critical Environmental Concern (ACEC). The site does not contain any structures listed in the State Register of Historic Places or the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth.

Environmental Impacts and Mitigation

According to the EENF, potential environmental impacts of Phase 1 include alteration of 4.6 acres of land, creation of 21,780 sf of impervious area, generation of 108 new average daily vehicle trips (adt), consumption of 150 gallons per day (gpd) of potable water, and generation of

150 gpd of wastewater. Phase 1 will impact BVW (4,087 sf), Bank (36 linear feet (lf), and Riverfront Area (900 sf). The EENF describes commitments to avoid, minimize and mitigate environmental impacts associated with Phase 1 including: limiting all glass processing to an enclosed building; designing the RR crossing to reduce impacts to BVW and RFA; wetland replication; constructing the project on a previously altered site; use of rail to ship glass off-site; construction period erosion and sedimentation control measures; and generating renewable energy with solar PV systems.

Potential environmental impacts associated with full-build of the project include alteration of 8.8 acres of land; creation of 3.5 acres of impervious area; generation of 568 new adt (including employee trips), an increase in water demand of 13,000 gpd of potable water, and an increase in wastewater flow of 82,975 gpd of wastewater. The project will also generate GHG emissions associated with the project's energy use and trip generation. Measures to avoid minimize, and mitigate project impacts include constructing the project on a previously altered site; limiting all discharge and handling of solid waste to the enclosed tipping floor; limiting all biosolids processing to an enclosed building; use of rail to transport the majority of material from the site; installation of a floor drain collection system that drains to a holding tank to prevent groundwater contamination; erosion and sedimentation controls; stormwater management controls and implementation of Best Management Practices (BMPs) to minimize odor, dust, noise, and litter impacts.

Jurisdiction and Permitting

The project is undergoing MEPA review and requires the preparation of a mandatory EIR pursuant to Sections 11.03(5)(a)(6) and 11.03(9)(a) of the MEPA regulations because it requires State Agency Actions and will result in: New Capacity for storage, treatment, processing, combustion or disposal of 150 or more wet tpd of sewage sludge and New Capacity of 150 or more tpd for storage, treatment, processing, or disposal of solid waste (respectively). Because it requires an EIR, the project is subject to review in accordance with the MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol. The project is also subject to the Executive Office of Energy and Environmental Affairs' Environmental Justice (EJ) Policy.

Phase 1 of the project will receive Financial Assistance from the Massachusetts Department of Transportation (MassDOT) Industrial Rail Access Program (IRAP) in the amount of \$500,000. Phase 1 will require an Order of Conditions from the New Bedford Conservation Commission (or in the case of an appeal, a Superseding Order of Conditions from MassDEP) and a new or amended Site Plan Approval from the New Bedford Planning Board.

The remainder of the project will require a Determination of Site Suitability, Authorization to Construct, and Authorization to Operate and may require a Limited Plan Approval (LPA) from MassDEP and a NPDES General Permit (GP) for Construction and/or Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity from the U.S. Environmental Protection Agency (EPA). The project will also require a number of local permits from the City of New Bedford, including: Site Assignment from the Board of Health, a new and/or Amended Order of Conditions from the Conservation Commission, and a new and/or amended Site Plan Approval from the Planning Board.

Because the Proponent is seeking Financial Assistance, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Phase 1 Waiver Request

The Proponent submitted an EENF in support of its request for a Phase 1 Waiver, which would allow Phase 1 of the project to proceed prior to completion of the EIR for the entire project. Consistent with this request, the EENF was subject to an extended 30-day public comment period. At the Proponent's request, the comment period was extended for an additional two-weeks and closed on April 12, 2019.

The MEPA regulations at 301 CMR 11.11(1) state that I may waive any provision or requirement in 301 CMR 11.00 not specifically required by MEPA and may impose appropriate and relevant conditions or restrictions, provided that I find that strict compliance with the provision or requirement would:

- (a) result in an undue hardship for the Proponent, unless based on delay in compliance by the Proponent; and
- (b) not serve to avoid or minimize Damage to the Environment.

The MEPA regulations at 301 CMR 11.11(4) state that, in the case of a partial waiver of a mandatory EIR review threshold that will allow the Proponent to proceed with Phase 1 of the project prior to preparing an EIR, I shall base the finding required in accordance with 301 CMR 11.11(1)(b) on a determination that:

- (a) the potential environmental impacts of Phase 1, taken alone, are insignificant;
- (b) ample and unconstrained infrastructure facilities and services exist to support Phase 1;
- (c) the project is severable, such that Phase 1 does not require the implementation of any other future phase of the project or restrict the means by which potential environmental impacts from any other phase of the project may be avoided, minimized or mitigated; and
- (d) the agency action(s) on Phase 1 will contain terms such as a condition or restriction, so as to ensure due compliance with MEPA and 301 CMR 11.00 prior to commencement of any other phase of the project.

Single EIR Request

The Proponent submitted an EENF and requested that I permit the filing of Single EIR, rather than a Draft and Final EIR. A Single EIR may be allowed, provided I find that the EENF: a) describes and analyzes all aspects of the project and all feasible alternatives, regardless of any jurisdictional or other limitation that may apply to the Scope; b) provides a detailed baseline in relation to which potential environmental impacts and mitigation measures can be assessed; and, c) demonstrates that the planning and design of the Project use all feasible means to avoid potential environmental impacts.

Review of the EENF

The EENF included a detailed project description, an alternatives analysis, existing and proposed conditions plans, and information regarding traffic impacts, noise impacts, air and odor impacts, and GHG emissions. The Proponent provided supplemental information to the MEPA Office regarding Phase 1, existing operations at the project site, and wetland impacts to facilitate MEPA review.¹ For purposes of clarity, references to the EENF in this Certificate include this supplemental information. The comment period was extended for two-weeks at the Proponent's request to provide additional time to review and comment on the EENF.

The project exceeds solid waste and wastewater threshold and is located within one mile of a designated Environmental Justice (EJ) community. The Proponent consulted with MassDEP and the MEPA Office regarding the enhanced outreach requirements of the EJ Policy. The Proponent published Spanish and Portuguese language versions of the MEPA Public Notice in *El Planeta* and the *Portuguese Times* (respectively) in addition to the *New Bedford Times*. The Proponent also notified the following organizations of the project and MEPA scoping session and provided them with a copy of the EENF: Coalition for Social Justice, Alternatives for Community & Environment, Hands Across the River Coalition, and Old Bedford Village. These were identified as EJ leaders based on consultation with MassDEP. The comment period was extended for two-weeks at the Proponent's request to provide additional time to review and comment on the EENF. The comment period commenced on February 20, 2019 and concluded on April 5, 2019. I accepted all late comments as allowed in accordance with 301 CMR 11.06(3). A MEPA site visit and scoping session was held on March 7, 2019. Spanish and Portuguese translation services were provided at the MEPA scoping session. As noted above, the Proponent will hold a public meeting in early May which will provide another opportunity for public participation and outreach.

I have received numerous comment letters that identify concerns regarding the project and public outreach. During the MEPA review period, the Proponent also agreed to hold a public meeting which will provide the community with an additional opportunity to learn about and comment on the project. The meeting is proposed to be held during the evening at the Pulaski School in the north end neighborhood of New Bedford. It is proposed to be held in early May although a final date has not been selected. Once scheduled, the Proponent will publish notice of the meeting in the *Standard Times* and will notify the above referenced EJ groups. The Proponent has also created a website (<http://parallelproductssustainability.com>) which provides information on the project and will be updated to include renderings of the proposed project.

Comments from State Agencies generally support the Phase 1 waiver request. In addition, comments from MassDEP note the important role that the Phase 1 project plays in supporting the alternative market for collecting and diverting glass from disposal. I have also received numerous comment letters from the City, abutters, and other stakeholders that express concerns regarding noise, odor, and traffic and identify the need for additional public engagement. I note that MassDEP's Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.00) and Solid Waste Regulations (310 CMR 19.00) require that facilities be designed and constructed to prevent pollution of land, air and water, and to prevent the creation of nuisance conditions. The

¹ Emails from Whitney Hall (Green Seal Environmental Inc.) to Page Czepiga (MEPA Office) sent 3/5/19, 3/11/19, and 4/2/19.

Scope for the DEIR requires additional public outreach and analysis of project impacts to demonstrate that the project will not disproportionately affect EJ communities. It also requires that the Proponent provide information that addresses the applicable Site Assignment and Solid Waste regulatory approval criteria to support MassDEP permitting.

Alternatives Analysis

The EENF identified the criteria the Proponent used to evaluate the following potential sites in New Bedford: Site A- 100 Duchaine Boulevard (71 acres), Site B – 1080 Shawmut Avenue (3.6 acres), and Site C – 781 Church Street. According to the EENF, all three sites are located in industrial zoned areas, are located adjacent to a rail line, and would comply with MassDEP siting criteria established for the waste handling area of solid waste handling facilities. According to the EENF, Site B was not large enough to accommodate a waste handling building and a rail side track of sufficient length necessary for the required rail service. The EENF indicated that Site C could accommodate a waste handling building and sufficient rail side track. According to the EENF, Site C was eliminated as it would require trucks accessing the site to pass numerous residences and the New Bedford Vocation Technical High School. According to the EENF, Site A was selected as the Preferred Alternative as it is located in an existing industrial park, has adequate space to accommodate a waste handling building and rail side track of sufficient length, has good access to high-capacity roads and highways, and will avoid routing trucks through residential areas or past schools.

Solid Waste

The Proponent has been operating a glass, aluminum, and plastics container recycling operation at 969 Shawmut Avenue in New Bedford since 2008. The Proponent intends to relocate all recycling operations from 969 Shawmut Avenue to the project site as part of Phase 1. Comments from MassDEP indicate the Proponent holds a General Permit for its recycling operations and submitted Annual Certification on May 11, 2018, as required by 310 CMR 16.04. I refer the Proponent to MassDEP's comments which provide guidance on the annual certification requirements. Phase 2 will be regulated in accordance with MassDEP Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.00) and Solid Waste Facility Regulations (310 CMR 19.00). The EENF included a detailed description of project operations and a preliminary site suitability application (BWP SW 01) which addresses how the project will meet MassDEP Site Suitability Criteria. The criteria include avoiding handling of waste in areas contributing to ground or surface water supplies or in the Riverfront Area, setbacks from residential areas, minimizing impacts to traffic and air quality and avoiding, or minimizing impacts to other sensitive resources including agricultural land, rare species habitat, Areas of Critical Environmental Concern (ACEC) and open space. According to the draft Site Suitability Application included in the EENF, the project design and location conform with the criteria. I refer the Proponent to comments from MassDEP which identify additional information necessary to demonstrate consistency with the criteria.

As described in the EENF, MSW, C&D, glass, and biosolids will be delivered to the facility by truck between 6:00 AM and 6:00 PM, Monday through Saturday. Biosolids delivery may also occur on Sunday between 6:00 AM and 6:00 PM. The facility will receive C&D, baled

MSW, and loose MSW in live floor trailers, transfer trailers, and packer trucks (respectively). Trucks will be weighed on a truck scale and backed into the 50,000-sf waste handling building to tip their load. Processing equipment and manual picking lines will remove waste ban items from the mixed waste and separate other recyclable materials for recycling or diversionary uses. Extracted recyclables will be sent to recycling markets by rail or truck and residual waste will be baled, shrink-wrapped, and transported via rail to off-site disposal. All biosolids processing will be done within a separate enclosed building with two odor control systems. The facility will accept both dewatered cake biosolids and thickened wet slurry biosolids. Wet slurry biosolids will be stored in tanks until they are dewatered via centrifuge or screw press. The dewatered biosolids cake will be blended with other biosolids cakes and directed to a thermal dryer that utilizes a natural gas burner. The biosolids will be dried to approximately 90% solids and sent for disposal via railcar or truck.

The following BMPs were incorporated into the project design to minimize potential impacts to the site and surrounding environment:

- All tipping, handling, and loading of MSW/C&D and all biosolids processing will occur within fully enclosed buildings;
- Tipping floor will be constructed of impervious concrete and include a floor drain collection system that drains to a holding tank to prevent contamination of groundwater;
- Use of a fine atomized misting system within the MSW handling and processing buildings to control fugitive dust and odor;
- Regular daily clean-up and sweeping to control fugitive dust on external paved surfaces;
- Use of a negative pressure air collection system, wet scrubber, and ionization system to reduce odors from the biosolids facility; and
- Designing building stacks with adequate heights and exit velocities to facilitate air dispersion.

Demolition of existing buildings will generate C&D waste, portions of which may contain asbestos. Removal or abatement of regulated asbestos-containing material must be completed consistent with the requirements of 310 CMR 7.00. I encourage the Proponent to incorporate C&D recycling activities into project plans and refer the Proponent to MassDEP's comment letter which provides regulatory guidance on Asphalt, Brick, and Concrete (ABC) recycling and processing.

Environmental Justice

Because the project exceeds MEPA EIR thresholds for wastewater and solid waste and is located within one mile of an EJ Community, it is subject to the EEA EJ Policy and requirements for enhanced public participation and enhanced analysis of impacts and mitigation. The EJ Policy was designed to improve protection of minority and low income communities from environmental pollution as well as promote community involvement in planning and environmental decision-making to maintain and/or enhance the environmental quality of their neighborhoods. The Proponent's outreach efforts and the enhanced outreach requirements of the

EJ Policy were identified earlier in this Certificate. The EENF identified one census block group designated as an EJ community (i.e. 25% or more of the residents area are minority) that is located within one mile of the project. The EENF included an “Environmental Justice Analysis” (Appendix J) which provided an assessment of baseline public health conditions, analysis of potential air impacts, and measures to avoid, minimize, and mitigate said impacts. It included an evaluation of the baseline health of the EJ communities in the broader area surrounding the project site using data from the Department of Public Health’s (DPH) Environmental Public Health Tracking website. The analysis reviewed cancer data (from 2000 to 2013), the incidences of asthma (from 2000 to 2014), acute myocardial infarctions (AMI) (from 2000 to 2014), and Chronic Obstructive Pulmonary Disease (COPD) (from 2000 to 2014).

The analysis found that occurrences of these issues vary in the surrounding area with New Bedford having rates above the statewide average and Acushnet and Dartmouth having rates similar to or lower than the statewide average. Based on the results of the air quality dispersion model, the EENF concluded that the project will comply with all health-protective standards and will not cause or contribute to any health-protective exceedances of air quality concentrations. Specifically, the project will not exceed NAAQS/MAAQS which were established to “provide public health protection, including protecting the health of “sensitive” populations such as asthmatics, children, and the elderly” or MassDEP’s AALs and TELs which were developed to evaluate potential human health risks from exposures to airborne chemicals. Comments from MassDEP identify concerns regarding adverse impacts to proximate sensitive receptors (two schools and a daycare) and request an expanded discussion of potential project-related impacts to these sensitive receptors.

Wetlands/Stormwater

The Proponent provided supplemental information to the MEPA Office to clarify a slight reduction in wetland impacts based on plan refinements that occurred after the EENF was submitted.² According to this supplemental information, Phase 1 will impact BVW (4,087 sf), Bank (36 lf), and Riverfront Area (900 sf). Remaining development, which will be addressed in the DEIR, will not impact wetland resource areas. The New Bedford Conservation Commission will review Phase 1 to determine its consistency with the Wetlands Protection Act (WPA), the Wetlands Regulations (310 CMR 10.00), and associated performance standards, including the Stormwater Management Standards (SMS). According to the EENF, all wetland impacts are associated with construction of the rail spur over a drainage swale and a BVW crossing. The EENF indicated the Proponent will provide wetlands replication to mitigate impacts to BVW. Comments from the City indicate they will require mitigation at a 1.5:1 ratio of mitigation to impacts. I anticipate that the Proponent will coordinate closely with the City Conservation Agent to provide appropriate wetland replication while reducing tree clearing. I refer the Proponent to comments from the City that note an outstanding compliance issue that must be remedied prior to the commencement of site work.

The following measures were incorporated to reduce wetland impacts: crossing perpendicular to the swale and BVW to minimize the impacted area, installation of a box culvert

² Emails from Whitney Hall (Green Seal Environmental Inc.) and Christian Farland (Farland Corp.) to Page Czepiga (MEPA Office) sent 4/2/19 and 4/8/19, respectively.

within the alignment of an abandoned bridge to cross the swale, locating the swale crossing within previously disturbed soils, aligning the BVW crossing so a portion of the crossing can be constructed on an isolated area of uplands within the wetland, and use of retaining walls (in-lieu of sloped embankments) to construct the BVW crossing to reduce wetland impacts. Comments from MassDEP request additional consideration of alternative designs that will further reduce impacts to wetland resource areas. In an email dated March 29, 2019, the Proponent prepared a response to MassDEP's comments which elaborated on crossing structures considered for the site and confirmed that the crossings will comply with MA Stream Crossing Standards. Supplemental comments from MassDEP identify additional information that should be provided during permitting, including an expanded analysis to address the applicable Riverfront Area performance standards and information to demonstrate the project's compliance with the MA Stream Crossing Standards and support its designation as a Redevelopment Project per at 310 CMR 10.58(5).

The existing stormwater management system includes a series of catch basins, detention ponds, and subsurface infiltration systems. According to the ENF, the existing stormwater management system will continue to serve the site as the project will not significantly increase impervious area or result in significant changes to site drainage or topography. Comments from MassDEP note that components of the stormwater management system may be subject to the *Underground Injection Control (UIC)* program and provide guidance on NPDES permitting.

Transportation/Traffic

The EENF included a Traffic Impact and Assessment Study (TIAS) which was performed in general conformance with MassDOT/EEA's Guidelines for *EIR/EIS Traffic Impact Assessments*. Comments from MassDOT indicate the study area is adequate for capturing the traffic impacts of the project. The TIAS concluded that Phase 1 of the project will generate approximately 108 new trips per day (54 vehicles entering and 54 vehicles exiting). Full-build of the project will generate 418 new truck trips per day (209 truck trips entering, 209 truck trips exiting). In addition, employees will contribute approximately 150 vehicle trips (75 entering, 75 exiting) for a total of 568 vehicle trips accessing the site on an average weekday. Trip generation was calculated based on empirical data collected from a similar solid waste facility in Rochester, MA. The Proponent anticipates shipping all outbound material by rail. To provide a conservative analysis, the trip generation calculations assumed all outbound material would be transported by truck. The planned use of rail for outbound shipment would reduce trip generation by approximately 110 trips per day. I refer the Proponent to comments from MassDOT and the City which request the Proponent commit to and implement a Transportation Demand Management (TDM) program to reduce trip generation. Comments from MassDOT also identify bus stops located in close proximity to the site and encourage the Proponent to design access roads in accordance with Complete Street standards to facilitate opportunities to walk and bike to the site and proximate transit connections.

The TIAS included a summary of study area crash rate data for the five year period of 2011-2015 which identified two unsignalized intersections³ that exceed the MassDOT-District 5

³ The two intersection locations are: 1) Braley Road/Theodore Rice Boulevard at Phillips Road and 2) Theodore Rice Boulevard at Duchaine Boulevard.

and state-wide average rates. Comments from MassDOT indicate that the additional traffic volume generated by the project is not expected to significantly impact safety at these intersections. According to the TIAS, there are no Highway Safety Improvement Program (HSIP) high crash cluster intersections within the study area. The TIAS included capacity analyses at study area intersections for the weekday morning (AM) and evening (PM) peak hours for 2018 Existing, 2025 No-Build, and 2025 Build conditions. The addition of project-generated traffic will cause certain turn movements to experience slightly increased delays compared to the 2025 No-Build conditions. The TIAS indicated the delays are generally not significant to impact the LOS and noted that the impacted locations will continue to operate under capacity in 2025 Build Conditions.

Greenhouse Gas Emissions

The EENF included a GHG analysis consistent with the MEPA GHG Policy (the Policy). The Policy requires projects to quantify carbon dioxide (CO₂) emissions and identify measures to avoid, minimize, or mitigate such emissions. The analysis quantified the direct and indirect CO₂ emissions associated with the project's energy use (stationary sources) and transportation-related emissions (mobile sources). I note the City of New Bedford is a designated Green Community under the provisions of the Green Communities Act of 2008. As such, the City has adopted the Commonwealth of Massachusetts' Stretch Code (SC). The project will be required to meet the applicable version of the SC in effect at the time of construction. The SC requires at least a 10-percent reduction in energy use compared to the base Building Code requirements. Stationary sources were evaluated using equipment assumptions and excel spreadsheets. Mobile GHG emissions were estimated using information from the TIAS, MOVES CO₂ emission factors, and followed the standard methodology outlined in MassDEP's *Guidelines for Performing Mesoscale Analysis of Indirect Sources* (May 1991). Mobile source emissions were calculated for local on-road process truck deliveries, employee vehicle trips, onsite and offsite idling, and the use of front-end loaders for glass and MSW/C&D handling.

The GHG analysis evaluated CO₂ emissions for two alternatives as required by the Policy including: 1) a Base Case compliant with the 9th Edition of the Massachusetts Building Code, and 2) a Preferred Alternative (Mitigation Alternative) that incorporates additional energy saving measures. The 9th Edition of the Building Code references the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1-2013 and the International Energy Conservation Code (IECC) 2015. The EENF indicated that the equipment for processing the glass and MSW/C&D is industry standard and would not differ from the base case scenario. It also indicated that the glass recycling and MSW/C&D processing buildings will be unconditioned spaces. Based on this, the GHG analysis for the glass recycling and MSW/C&D processing facilities was limited to the energy use associated with their buildings, specifically the lighting demands. Similarly, the GHG analysis for the biosolids processing facility was limited to the energy use associated with lighting, ventilation, and heating demands. The EENF identified those measures that will be incorporated into the project design, measures that were dismissed as infeasible or inappropriate, and measures that will be studied further during advanced design stages.

The Proponent has committed to incorporate the following measures to reduce GHG emissions:

- Installation of 1.9 MW of solar PV via canopy (carport and shed) and rooftop arrays during Phase 1 (in addition to existing 1.5 MW on-site PV array);
- Reduced Lighting Power Densities (LPD) to achieve a 10% reduction over Code requirements in all buildings;
- Construction of all new buildings as solar PV-ready with appropriate structural capacity and space allocations for solar PV arrays;
- Energy-Efficient condensing boiler for heating the biosolids processing building; and
- Construction waste recycling.

Because the project is at a conceptual design level, the Proponent has an opportunity to consider incorporation of additional GHG reduction measures. As recommended by DOER, the Proponent should consider a further reduction in LPD and the use of cold-climate heat pumps to provide space heating in the biosolids processing building. I acknowledge and appreciate the Proponent's commitment to renewable energy which will assist the Commonwealth in meeting its overall GHG reduction goals stated in the Global Warming Solutions Act of 2008. The Proponent has installed 1.5 MW of solar PV at the site and will install an additional 1.9 MW of solar PV in Phase 1. Installation of the 1.9 MW solar PV array will generate 2,499 MWh/year and result in a GHG reduction of 907 tpy. The combined 3.5 MW array will generate 4,543 MWh/year for a total GHG reduction of 1,647 tpy.

The EENF evaluated and quantified the GHG reductions that could be achieved by implementing the following measures in the biosolids processing facility: advanced vacuum drying technology (2,393 tpy) and variable frequency drives (VFDs) in the ventilation system (36 tpy) and process motors (211 tpy). The EENF indicated the Proponent cannot guarantee these GHG reductions as they were based on conceptual engineering estimates and/or vendor representations. Based on this, these additional measures were not included as GHG mitigation commitments. It is unclear whether they will be incorporated into the project. This should be addressed in the DEIR. The EENF also indicated that the Proponent is evaluating gasification of dried biosolids for a later stage of the project. Gasification is not proposed at this time. If the Proponent intends to incorporate gasification into the project at a later date, it would be subject to a Notice of Project Change (NPC) to the MEPA Office and additional review, permitting and air quality analysis.

Phase 1 stationary source CO₂ emissions were estimated at 102 tpy in the Base Case. Adoption of energy efficient lighting will reduce stationary source CO₂ emissions by 10 tpy, for a total of 92 tpy or a 10% decrease. Installation of the 1.9 MW solar PV array will reduce GHG emissions by 907 tpy. The EENF indicated the estimated number of new trips associated with the Phase 1 project (108 new trips) is not anticipated to generate a significant level of mobile source GHG emissions. To be conservative, the EENF did not take credit for the reduction in mobile source emissions associated with shipping outbound materials by rail instead of trucks or the reduced travel from trucks transferring materials from their point of origin within the greater New Bedford area to more distant facilities. The GHG emissions (Table 7 of Appendix C) for full-build of the project are summarized below.

	BASECASE	PROPOSED	DIFFERENCE	
			TPY	%
MOBILE SOURCE EMISSIONS	3,377	3,377	0	0
STATIONARY SOURCE EMISSIONS	10,898	10,835	63	-0.58%
<i>Glass Recycling</i>	<i>102</i>	<i>92</i>	-	-
<i>MSW/C&D Processing</i>	<i>314</i>	<i>282</i>	-	-
<i>Biosolids Processing</i>	<i>10,482</i>	<i>10,461</i>	-	-
1.9 MW SOLAR PV		-907	-	-
TOTAL	14,275	13,305	970	-6.80%

Air Quality

The project will require a Limited Plan Approval (LPA) from MassDEP to ensure that the project, and the facility as a whole, conforms to National Ambient Air Quality Standards (NAAQS) and the Massachusetts Ambient Air Quality Standards (MAAQS). MassDEP's permitting process may include a review to demonstrate compliance with the Best Available Control Technology (BACT) review. The EENF included an Air and Odor Analysis (Appendix D) which evaluated emissions associated with stationary combustion sources, mobile diesel equipment, dust from material handling, and potential odor sources. The analysis used the U.S. EPA's AERMOD air dispersion model to determine potential air quality impacts associated with the above emissions on proximate residential receptors. To be conservative, the analysis assumed all outbound shipment of material will occur via truck. The analysis quantified potential emissions from the project for nitrogen dioxide (NO₂), particulate matter up to 2.5 micrometers in size (PM_{2.5}), and MassDEP air toxics and compared them to the NAAQS and MassDEP's Ambient Air Levels (AALs) and Threshold Effect Exposure Limits (TELs).

The analysis also evaluated potential odors from MSW tipping and processing and biosolids processing. These were compared against the recommended odor concentration limit in MassDEP's "Draft Odor Policy for Component Facilities". The analysis identified the following measures to reduce air quality and odor impacts: wet scrubbing for air emanating from the biosolids dryers; ionization for oxidation of the air constituents emanating from the biosolids dewatering operations; and designing building stacks to facilitate air dispersion. Based on the results of the air dispersion modeling, predicted air pollutant, and odor concentrations are shown to be below the applicable NAAQS/MAAQS, MassDEP AALs and TELs at residences, and protective odor concentration criterion at residences. Based on this, the analysis concluded that the project as designed, will not cause or contribute to a condition of air pollution in the area.

Noise

The EENF included a Sound Level Assessment Report (Appendix D) which provided a description of the applicable noise regulatory requirements, a brief explanation of noise terminology, a summary of the results of the complete ambient sound level monitoring program, and a discussion of the sound level modeling analysis for the proposed project. The EENF also discussed the project's consistency with the MassDEP Noise Policy. The primary noise sources

of the project include MSW/C&D tipping and handling, ventilation equipment, outdoor front-end loader at the glass handling building, process ventilation equipment at the biosolids building, and four cooling towers. The project and majority of on-site equipment will operate 24 hours/day and 7 days per week, with the exception of the outdoor front-end loader at the glass processing building which will operate from 7:00 AM to 10:00 PM. I refer the Proponent to comments from MassDEP which identify additional sound sources that should be incorporated into the analysis.

The MassDEP Noise Policy limits new noise-generating equipment to a 10-dBA (A-weighted decibel) increase in the ambient sound measured at the property line and at the nearest residences. The EENF provided a summary of the results from sound level modeling measured at four representative locations around the facility and within the community. The locations were selected to represent the closest sensitive receptors (primarily residential) surrounding the project site. The analysis identified the following measures that were incorporated into the project to reduce noise impacts: electric rail car pusher to move rail cars within the site, fan silencers or low noise exhaust fans on the biosolids building, silencer or low noise unit in the scrubber stack and quiet cooling towers or construction of a sound barrier wall (50-ft long by 15-ft tall) along the southern edge of the biosolids building to shield the residential area from the sound generated by cooling towers. With implementation of the proposed mitigation, modeled future daytime and nighttime sound levels from the project are predicted to increase the measured background sound levels by 3 to 8 dBA at all modeled residential receptor locations, thereby demonstrating consistency with the MassDEP Noise Policy limit. Modeling also indicates that the proposed project is not expected to create any "pure tone" conditions, as defined by MassDEP, when combined with existing background sound levels at any modeled receptor locations.

Water/Wastewater

According to the EENF, the project will increase water demand by 13,000 gpd and will increase wastewater flows from the site by 82,975 gpd. Wastewater generation is primarily associated with water removed from biosolids either by dewatering or by drying/condensing. The project will be served by municipal water and sewer infrastructure. Comments from MassDEP indicate the City has an EPA approved Industrial Wastewater Pretreatment Program (IPP). The Proponent should consult with the City to determine measures necessary to comply with the City's IPP. I refer the Proponent to comments from the City which requests analysis to determine whether existing infrastructure can accommodate and treat the wastewater flows. Comments from MassDEP encourage the Proponent to implement measures to reduce water consumption.

Conclusion

Based on review of the EENF, consultation with State Agencies, and a review of comment letters, I hereby require the Proponent to file a Draft EIR and Final EIR. The Scope below identifies additional information and analysis that should be provided in the DEIR to demonstrate that environmental impacts have been minimized, avoided and mitigated to the maximum extent feasible; to demonstrate that the project will not disproportionately affect an EJ community; and to provide information and analysis for permitting agencies to evaluate consistency with regulatory standards and to make associated Section 61 Findings.

In a separate DROD, also issued today, I propose to grant a Waiver that will allow the Proponent to proceed with Phase 1 of the project prior to completing the MEPA process for the entire project. The Phase 1 waiver is limited to the construction of a glass recycling/processing facility, a RR sidetrack from the main RR line to the glass processing facility, and a 1.9 MW solar PV array. The DROD addresses the project's consistency with the criteria for a Phase 1 Waiver and related conditions.

SCOPE

General

The EIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. The majority of the EENF was comprised of the preliminary site suitability application with appended technical studies. This provided information for review by State Agencies and the public; however, the DEIR must contain a full and self-contained description and analysis of the project. It should provide additional narrative to explain and support the analysis of the project's impacts and mitigation, and extract relevant documentation and tables from technical appendices to supplement the narrative. The DEIR should include a comprehensive narrative with a separate chapter for each of the categories identified herein.

Project Description and Permitting

The DEIR should include a detailed description of the existing and proposed conditions, describe any changes to the project since the filing of the EENF, and should provide an update on Phase 1. The DEIR should include updated site plans for existing and post-development conditions at a legible scale. It should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and a description of how the project will meet those standards and provide an update on the state, federal, and local permitting process. The DEIR should provide an update that describes all of the enhanced public outreach efforts and meetings that have occurred since the EENF was submitted in accordance with the EJ Policy.

The DEIR should show areas of land alteration for buildings, roadways, parking, wastewater, water and stormwater infrastructure, lawns and landscaping, and other project components. The DEIR should describe the project's consistency with the City's current Master Plan and the Southeast Regional Planning and Economic Development District's (SRPEDD) current Regional Policy Plan. It should also include a discussion of the facility's role in achieving the Commonwealth's goals as outlined in MassDEP's Solid Waste Master Plan.

Solid Waste

The DEIR should include a narrative summary that describes how C&D, baled and loose MSW, and dewatered cake and thickened wet slurry biosolids, will be delivered, transferred from vehicles, processed, and shipped-off site. The DEIR should address the issues identified in the "Suitability Criteria" section of MassDEP's comment letter (dated March 22, 2019). The DEIR

should include a narrative description and supporting figures that describes the movement of empty and full railcars on the site, including the new rail spurs and extended sidetrack. It should provide plans that show the waste handling area and associated 500-foot setback from residential properties, including the newer residences referenced in MassDEP's comments. Plans should also depict wetland resource areas in relation to the proposed waste handling area. The DEIR should address the project's consistency with applicable site suitability criteria. Comments from the City identify concerns regarding the explosion/combustion potential of dried biosolids. The DEIR should address this issue and identify associated mitigation measures, as appropriate. It should also describe contingency plans for processing biosolids if one or more dryer becomes unavailable.

Environmental Justice

In accordance with the EJ Policy, the Proponent must provide enhanced public outreach of the DEIR to EJ populations in New Bedford. Enhanced public outreach should include preparation and distribution of a fact sheet that provides a summary of the project, environmental impacts (including air quality), and public comment opportunities. The fact sheet should include photos of similar facilities (or direct individuals to a website to view renderings). The project fact sheet should be provided to the public library and City Hall; included on the project website; and provided upon request by residents. Prior to submitting the DEIR, the Proponent should contact the Toxics Action Center, EJ groups identified above, and the City's Planning Department for input on alternative media outlets and information repositories in which to provide notice of the DEIR. The Proponent should consult with the MassDEP's and/or EEA's Environmental Justice Director during preparation of the DEIR regarding the proposed circulation and participation plan to ensure compliance with the EJ Policy.

I have received numerous comment letters that identify concerns regarding the project and public outreach. As noted above, the Proponent will be holding a public meeting to discuss the project, its potential environmental impacts, and mitigation measures. The DEIR should provide a detailed update that describes all of the proponent's enhanced public outreach efforts and meetings that have occurred since the EENF was submitted.

Comments from MassDEP identify concerns regarding adverse impacts to proximate sensitive receptors (two schools and a daycare) that are generally located within a one-mile radius of the project. Other comments identify concerns with potential mobile source emissions, air quality, noise, and odor impacts on vulnerable populations (children and the elderly). Because the project is sited within one mile of a designated EJ population, the DEIR should expand on the discussion of air dispersion modeling results provided in the EENF to identify the direction and extent of potential impacts and to inform development of effective mitigation measures. The DEIR should evaluate increased buffers between property lines and sources of noise/air emissions, increased plantings and vegetated buffers or other barriers to reduce potential impacts.

The EENF indicated that New Bedford has statistically higher rates of environmentally-related health outcomes, including asthma and COPD. The DEIR should discuss the current and future impacts that climate change (including extended periods of drought, and extreme temperatures) will have on air quality within the EJ populations. The DEIR should evaluate

development of a plan to reduce air emission and odor impacts that will be implemented on days when the National Oceanic and Atmospheric Administration (NOAA) issues air quality alerts. In addition, the Proponent should consider implementing an air emissions monitoring plan to track the project's air emissions and identify thresholds which would trigger an evaluation of the need to implement additional mitigation to reduce air quality and odor impacts. The Proponent should also consult with MassDEP and the City's Health Agent to develop a system to log and track odor, noise, and dust complaints during the construction and operational phases of the project. The DEIR should describe the plan and how the community will be notified of the system.

Wetlands/Stormwater

During MEPA review of the EENF, the Proponent indicated project plans were refined to eliminate all wetland impacts associated with the remaining development. The DEIR should provide project plans and a supporting narrative that describes how the project was designed to avoid, minimize, and mitigate impacts to wetland resource areas. This narrative should also provide an update on Phase 1, including any design revisions that further reduced wetland impacts and the location and size (sf) of the wetland replication area. The DEIR should also provide plans that clearly identify new impervious areas and should evaluate all feasible methods to reduce impervious surfaces, including reduced parking ratios, narrow driveway widths, etc. The DEIR should describe the project's stormwater management system and provide conceptual plans identifying existing and proposed stormwater infrastructure. It should discuss how the project will comply with the requirements of applicable stormwater programs, including but not limited to MassDEP's SMS and NPDES GP and/or MSGP (as applicable). The DEIR should consider retrofitting the existing stormwater management system and incorporating additional low impact development (LID) measures to improve water quality.

Transportation/Traffic

Traffic accessing the site will travel through the Theodore Rice Boulevard/Braley Road at Phillips Road intersection in the easterly and westerly directions. This intersection operates as a 4-way stop sign-controlled location. The DEIR should provide revised traffic modeling to reflect this condition. It should provide information to demonstrate that vehicle queues will not block the proximate Route 140 off-ramps. Comments from MassDEP note that the Proponent must commit to limiting the maximum number of vehicles utilizing the site to that presented in the traffic study, or revise the traffic study to reflect the maximum proposed site traffic flow rate. The DEIR should address this and provide a revised traffic study, as necessary.

The DEIR should include a thorough evaluation of TDM measures to reduce site trip generation, including the measures identified in comments from MassDOT and the City. All feasible measures should be incorporated into a TDM plan for the project. The DEIR should include the draft TDM plan and a commitment by the Proponent to implement said plan. I encourage the Proponent to improve bicycle and pedestrian connectivity between the site and adjacent land uses, including proximate bus stops.

Greenhouse Gas Emissions

The FEIR should include a revised GHG analysis that includes the additional information and analyses requested in DOER's comment letter. The DEIR should clarify whether VFDs (for ventilation and process motors) and advanced vacuum technology will be incorporated into the biosolids processing building. If not included as mitigation commitments, the DEIR should provide supporting financial analysis or data to support the dismissal of these measures. The DEIR should clarify the planned code pathway and which two measures have been incorporated into the "Base Case" Scenario as required by Section C406.1 of the Building Code and/or should revise the GHG analysis accordingly. The DEIR should provide additional information on the construction type, building envelope, and space heating output of the biosolids processing building. As recommended by DOER, the revised GHG analysis should evaluate reducing LPD to achieve a 20% reduction over Code requirements in all buildings (vs 10% currently proposed) and the use of cold-climate heat pumps to provide space heating in the biosolids buildings. The DEIR should present the results of calculations used to establish the existing/baseline condition(s), the build condition(s), and the impact of proposed emissions-reduction mitigation. If the project does not incorporate additional reductions in LPD or cold-climate heat pumps, the DEIR should explain, in reasonable detail, why the use of these measures which could provide significant GHG reductions, were not selected. The Proponent should consult with DOER to confirm the approach of the GHG analysis prior to preparing the DEIR. The DEIR should also include a mobile source GHG analysis which has been updated to reflect any changes since the DEIR (as appropriate). The mobile source analysis should quantify the GHG reduction that could be achieved by shipping outbound material by rail instead of trucks.

Air Quality/Noise

The DEIR should include a revised sound analysis that incorporates the additional sound sources identified in MassDEP's comment letter. Prior to filing the DEIR, the Proponent should consult with DPH to identify additional measures that can be incorporated into the project to further reduce impacts to air quality and noise. The DEIR should provide an update on this consultation, including a thorough evaluation of the feasibility and benefits of the identified measures. The Proponent should commit to implementing any measures which are determined to be feasible. The DEIR should confirm the air permitting required by the project and provide an update on the air permitting process, including any BACT analysis.

Water/Wastewater

The DEIR should provide an update on consultations with the City regarding monitoring, metering, and pretreatment necessary to comply with the City's IPP. The DEIR should clarify whether the municipal wastewater infrastructure (including piping and pump stations) is adequate to accept and treat the additional flows from the project and/or should identify any necessary improvements. I refer the Proponent to the City's comment letter for additional guidance. The DEIR should include a draft spills contingency plan to address prevention and management of potential releases of oil and/or hazardous material. At a minimum, the spills contingency plan should address refueling of machinery, storage of fuels, and accidental

releases. The DEIR should also identify measures incorporated into the project design to reduce the project's water demand.

Construction Period Impacts

The DEIR should describe construction methodology and sequencing, potential construction period impacts (including but not limited to traffic management, materials management, parking, air quality and noise impacts, and other items as they related to the construction period), and identify feasible measures that can be implemented to eliminate or minimize these impacts. This discussion may be prepared and presented in the DEIR as a draft Construction Management Plan (CMP). The draft CMP should include appropriate erosion and sedimentation control BMPs consistent with applicable NPDES Permit requirements. The project must comply with MassDEP's Solid Waste and Air Pollution Control regulations, pursuant to M.G.L. c.40, §54. The DEIR should discuss the solid waste and air quality regulatory requirements identified in MassDEP's comment letter and identify the specific and aggressive construction recycling and source reduction goals the Proponent will adopt.

Because this project is located in close proximity to a designated EJ population, the Proponent should mitigate the construction period impacts of diesel emissions to the maximum extent feasible. This mitigation may be achieved through the installation of after-engine emission controls such as diesel oxidation catalysts (DOCs) or diesel particulate filters (DPFs), or the use of equipment that meets Tier 3 or Tier 4 emission standards for non-road construction equipment. The DEIR should address how the project will support compliance with the Massachusetts Idling regulation at 310 CMR 7.11.

Mitigation and Draft Section 61 Findings

The DEIR should include a separate chapter summarizing proposed mitigation measures. This chapter should also include draft Section 61 Findings for each State Agency that will issue Permits for the project. The DEIR should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation (either funding design and construction or performing actual construction), and contain a schedule for implementation. To ensure that all GHG emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed by the Proponent, I require Proponents to provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings.

Response to Comments

The DEIR should contain a copy of this Certificate, and a copy of each comment letter received. Based on the large volume of form letters received, copies of form letters may be provided electronically. To ensure that the issues raised by commenters are addressed, the DEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction. A single response to form letters can be provided. This directive is not intended, and

shall not be construed, to enlarge the scope of the DEIR beyond what has been expressly identified in this certificate. I recommend that the Proponent use either an indexed response to comments format, or a direct narrative response. Responses must specifically address each comment letter on the EENF; references to a chapter or extensive section of the DEIR are not adequate.

Circulation

The Proponent should circulate a hard copy of the DEIR to any State and City Agencies from which the Proponent will seek permits or approvals, and to any parties specified in Section 11.16 of the MEPA regulations. The Proponent must circulate a copy of the DEIR to all other parties that submitted individual written comments. In accordance with 301 CMR 11.16(5), the Proponent may circulate copies of the DEIR to these other parties in CD-ROM format or by directing commenters to a project website address. However, the Proponent should make available a reasonable number of hard copies to accommodate those without convenient access to a computer and distribute these upon request on a first-come, first-served basis. The Proponent should send correspondence accompanying the CD-ROM or website address indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. In addition, a hard copy of the DEIR should be made available for review at the New Bedford Public Library. The DEIR submitted to the MEPA office should include a digital copy (e.g., CD-ROM, USB drive) of the complete document.



April 12, 2019

Date

Matthew A. Beaton

Comments received:

Form letters beginning "I am strongly opposed to the..." (1,013 received)

Form letters beginning "I strongly support the..." (two received)

03/08/2019	Tracy Wallace (1 of 2)
03/18/2019	Robert Ladino
03/22/2019	Massachusetts Department of Environmental Protection (MassDEP) (1 of 2)
03/26/2019	Roger Cabral
03/26/2019	Cheryl Souza
03/27/2019	Marlene Pollock
03/27/2019	Tracy Wallace (2 of 2)
03/27/2019	Wendy Graca
03/28/2019	Claire B.W. Miller, Toxics Action Center
03/29/2019	Massachusetts Department of Transportation (MassDOT)
03/29/2019	Jonathan F. Mitchell, Mayor, City of New Bedford
03/29/2019	Department of Energy Resources (DOER)
03/29/2019	Vincent Carolan

03/31/2019 Claudia Ostiguy
04/02/2019 Ron Cabral
04/02/2019 Carol Strupczewski
04/05/2019 MassDEP (2 of 2)

MAB/PRC/prc

Czepiga, Page (EEA)

From: cstrupczewski@verizon.net
Sent: Tuesday, April 02, 2019 9:33 AM
To: Czepiga, Page (EEA)
Cc: RRCRT@aol.com; cbostiguy@gmail.com; ritalapre@gmail.com; brad.markey@newbedford-ma.gov
Subject: EEA15990 Paralles Products

Paige Czepiga
Environmental Analyst
MEPA Office

First of all I want to thank and Secretary Matthew Beaton for the extension to April 5 for allowing residents to write their opposition for Parallel Products of New England plans for its expansion in the New Bedford Business Park with the future possibility of having a wastewater sludge facility.

My immediate concern is Phase I and its final step. If granted this will be devastating to the entire development of Pine Hill Acres more than 350 home, Heritage Estates, Long Built Homes, and Briarwood quality of life for more than a thousand residents. Presently, residents in Pine Hill Acres less than 500 feet for the facility are being awoken with loud noise at night, during the daytime, detection of odors in the neighborhood, and can clearly see the well-lighted outside holding stalls with materials in them from Phillips Road. Abutting the property, there are newly built homes.

As I drove on Phillips Road past the Parallel site at 10 p.m., I could clearly see down from the road the lighted open holding stalls which are less than 200 feet from the street. There are no trees, shrubs, privacy fence around the stalls.

The quality of life in this densely popular area is quickly changing for all of the residents from air to noise to traffic. Phillips Road is a two-lane street and can't take the traffic of heavy vehicles on it multiple times a day which will most likely happen as some trucks will take Exit 5 off of Route 140 to enter the southern area of the Business Park which is closer to the Parallel Products factory.

Please do not grant the Phase I step.

Carol Strupczewski
1075 Braley Road
New Bedford, MA 02745

508-995-6135

Czepiga, Page (EEA)

From: Cheryl Souza <clsouza@comcast.net>
Sent: Tuesday, March 26, 2019 8:06 PM
To: Czepiga, Page (EEA)
Subject: Parallel Products of New England

Ms Czepiga,

I have just learned about a project proposed for a location close to my home. I live at 80 Keene Road, in Acushnet, not far from the New Bedford Industrial Park. It has just been brought to my attention that Parallel Products of New England is proposing to bring a biosolid facility to the Industrial Park. I am a strong proponent of environmental cleanliness, and the company does present itself as an environmentally conscious company, however, there has definitely not been enough community outreach regarding the effects on neighbors and the environment they live in.

Parallel Products is also not being truly forthcoming, by denying their plan to implement the "gasification" of biosolids which is in their own words "cutting edge technology". Generally, cutting edge technology really means "we are making this up as we go along."

Please postpone the upcoming deadline for the public comment period, the company has not advertised their public forums, nor have they offered them at times the average working class person would be able to attend.

In addition, there is an anonymous campaign reaching out to the community with poorly written, blatantly false and repetitive flyers. The website for this campaign is <http://stoptheparalleldump.com>. It is not uncommon, in today's world, that corporations employ many ways to get their projects completed regardless of community interest. I believe the owner of that website should be brought to light, it could be Parallel Products themselves.

thank you for your time,

Cheryl Souza

80 Keene Road

Acushnet, Ma 02743

508-685-0330



CITY OF NEW BEDFORD
JONATHAN F. MITCHELL, MAYOR

March 29, 2019

Executive Office of Energy and Environmental Affairs (EEA)
Attention: MEPA Office
Paige Czepiga: EEA No. 15990
100 Cambridge St, Suite 900
Boston MA 02114

RE: EEA 15990: Parallel Products

Dear Ms. Czepiga,

I write to present the response of the City of New Bedford regarding Parallel Products of New England's (PPNE) proposed facility expansion project at 100 Duchaine Blvd. in our business park.

Given the facility's proximity to a densely populated residential neighborhood, I am troubled by the paucity of PPNE's outreach to public, and particularly to the abutting Pine Hill neighborhood. I believe strongly that there needs to be a much more robust public engagement effort that has been undertaken to date.

Moreover, I am not convinced that the preliminary impact analysis regarding potential noise, odor, and traffic is adequate given the stakes, and I would encourage MEPA to exercise its oversight authority to ensure that further study is pursued so that the decision-makers and the public alike can have greater confidence in the findings. In sum, unless and until PPNE is able to satisfactorily address reasonable neighborhood concerns in the areas of noise, odor, and traffic, I am not prepared to lend my support to the project.

In addition to my concerns regarding public engagement and neighborhood impacts, municipal departments have identified a number of specific operational/environmental issues with the proposed facility. These are enumerated below, and are based upon departmental reviews of the EENF submitted to the City of New Bedford in February 2019.

1) **Land Use Impacts**

The project site is in the City's Business Park, a location established to accommodate most industrial uses. As such, the project site is meant to be buffered from the surrounding neighborhood which is residential to the east. If MEPA should allow the project to proceed, PPNE must be required to ensure that all impacts to this neighborhood are satisfactorily mitigated. This would include all potential noise, odor, or additional traffic impacts. It should be noted that the Land Section of the ENF Form was not completed. As the project is a redevelopment of a previously used industrial site, the responses in this section are not likely to have revealed any otherwise unidentified potential impacts.

However, responses would have quantified the amount of land occupied for certain uses (buildings, parking areas, etc.) and would have identified the project's consistency with current City Master Plan and the current Regional Policy Plan of the Southeast Regional Planning and Economic Development District (the regional planning agency whose territory includes New Bedford). Previous environmental studies at the site included a Phase 1 Environmental Assessment and a Limited Subsurface Investigation, by SAGE Environmental. These reports are not included in the EENF, but a table of reported releases to the environment from the Phase 1 Environmental Assessment is provided, showing three releases reported to MassDEP between 1994 and 2008. All three were assigned Release Tracking Numbers (RTNs), and all three either had the RTN retracted or had audits completed. Six previous spills or releases were also identified, between 1978 and 1994, with minimal information on remedial actions.

2) Economic Development

It is recognized that this project would entail a significant economic investment, which would bring a positive return to the City in increased tax revenue and water usage fees.

3) Rail Infrastructure, Waste, and Energy Efficiency

- a) **Rail Infrastructure:** PPNE is proposing to add a rail stub in order to utilize rail as an option for shipping out waste materials after processing. This is an important component of the project and is seen as a benefit as it mitigates truck traffic which is already increased significantly.

This rail siding requires the crossing of a Bordering Vegetated Wetland (BVW) and a perennial stream with associated Riverfront area. The ENF states that less than 5000 s.f. of BVW will be impacted by the rail crossing. The plans show that retaining walls will be utilized to minimize wetland impacts from the rail crossing. The wetland boundaries in the vicinity of the crossings have not yet been verified by the Conservation Commission and therefore the square footage of Resource Area impacts cannot be confirmed. This should be provided.

Rail transport of outgoing material is identified as beneficial for many aspects of the project, including greenhouse gas emissions, other air pollutant emissions, efficient energy usage, and traffic considerations. However, rail transport is faced with uncertainties: The owner of the rail line is not identified; no mention is made of discussions with the railroad owner about installing the proposed rail spur; and MSW is proposed to be baled, wrapped, and shipped in gondola (open-topped) rail cars. At present, CSX, the largest railroad network in the eastern US, will only haul MSW in sealed intermodal containers on flat-bed rail cars. If this policy does not change, the facility must either pack MSW in sealed intermodal containers or ship it off site in trucks.

The project will be supported by a grant of \$500,000 from the Massachusetts Department of Transportation's Industrial Rail Access Program. There is no mention of contingency if this financing does not come through.

- b) **Waste:** The EENF states (erroneously) that the Crapo Hill Landfill is located in New Bedford, and that District member communities "*are not expected to utilize the proposed facility for MSW disposal.*" However, there may be an advantage to some dialog between the District (and/or its member communities) and the project's proponent, to consider some use of the proposed facility to prolong the life of Crapo Hill, and/or to address long range planning for when the Crapo Hill Landfill does close.

The proposed facility consists of three primary components: A glass bottle processing facility, to accept 200 tons per day (tpd) of glass bottles for crushing and shipment to end-users; A municipal

solid waste (MSW) processing facility, that will accept 1,500 tpd for processing and transfer. The proponents expect to extract up to 20%, or 300 tpd, of material for recycling, and ship 1,200 tpd of waste for out-of-state disposal; A wastewater biosolids (sludge) processing facility that will accept 50 tpd dry weight (or up to 600 tpd wet weight), and ship dried product for end use or disposal. Inbound material will arrive by truck. Outbound material will be transported by rail, with some truck shipment as necessary. The waste shed area and waste sources are not identified, although District member communities are specifically noted as "not expected to use the proposed facility for MSW disposal" (Draft Site Suitability Application, pg 58).

- i) Glass Facility: The glass processing facility is alternately described as replacing the proponent's existing glass "beneficiation" operation from their facility at 969 Shawmut Ave, New Bedford, but is also identified as "the relocation and upgrade of the glass recycling operation that Strategic Materials previously operated in Franklin, MA to the 100 Duchaine Boulevard site. The new glass recycling facility will be owned by PPNE and will be operated in conjunction with Strategic Materials" (Draft Site Suitability Application Narrative, p. 10.). The facility is proposed to receive 200 tpd of glass bottles collected through the Massachusetts bottle deposit system for crushing, sizing and separation by color, and shipment off site for re-use or disposal. The proponent's parent company is experienced in various aspects of product destruction and container processing.
- ii) MSW Facility: As described in the EENF, the MSW facility is essentially a "Dirty Material Recovery Facility (MRF)", or a mixed waste processing facility, with a goal of extracting 20% of incoming material for recycling from raw waste. Such facilities are labor-intensive and face substantial worker safety challenges. They do not require any consumer or waste hauler separation of recyclable materials from waste and have largely fallen out of favor within the waste industry, displaced by single-stream recyclables collection and processing in a "Clean MRF". Massachusetts has devoted considerable effort into educating consumers and the waste industry about recycling and has for many years tried to encourage separation and recycling at all stages of the waste generation-collection-handling-disposal processes. Waste entering a "Dirty MRF" that has already been stripped of recyclable material will likely have a very low recyclables recovery rate. Operation of the MSW facility as described does not appear consistent with the general consensus of what the future of waste handling in Massachusetts should be. The MSW tipping (or receiving) building is 50,000 square feet, which appears adequate for the proposed tonnage; the tipping floor appears best configured for direct load of waste into intermodal rail cars. It appears likely the operation will target loads specific for processing and then move those loads into the processing facility, which appears to be insufficient at 103,000 square feet, for handling 1,500 tpd of mixed waste. For comparison, the E. L. Harvey Materials Recycling Facility in Hopkinton, Massachusetts, which is permitted for 600 tpd of single-stream recyclables or mixed waste, is 80,000 square feet in size.
- iii) Biosolids Processing Facility: The biosolids processing facility is expected to receive and process 50 tpd dry weight of biosolids. At the low end of the range of solids content presented in the EENF, this will actually be 600 tpd of raw material. The proposed receiving and storage facilities for the thickened and dewatered biosolids appear to be adequately sized with appropriate redundancy. The building size of 30,000 square feet may be insufficient, unless an additional upper level is included. Very little detail is provided on the design for the railcar loadout system. Additionally, there is no mention of combustion and explosion mitigation measures associated with the dried biosolids. Dried biosolids are a known explosion hazard, especially during storage. Also, the dryer does not have a standby unit, and there is no mention of the impacts to the process if one or more driers become unavailable.

- c) **Energy Efficiency:** PPNE is proposing to add an additional 1.9 MW of solar power in the form of PV panels to the already 1.5 MW generated onsite. This is a net Greenhouse Gas mitigation for the project and is a good use of the sites non-programmable rooftops.

The solar power component will need to be supported through the Solar Massachusetts Renewable Target (SMART) Program, and the requested Phase I MEPA waiver is “*imperative*” for SMART Program support. There is no mention of contingency if SMART program support does not come through.

4) **Traffic and Trip Generation**

- a) **Traffic/Trip Generation:** PPNE has included a traffic impact study which states that the facility will generate 418 new truck trips per day (209 in/out) and 150 employee trips per day (75in/out). This is a significant increase over the existing conditions of 76 vehicle trips per day. To be conservative, this includes the contingency that all outgoing material will be by truck instead of by rail. Truck traffic in tons per load and in distribution throughout the day is estimated based on data from the SEMASS facility in Rochester, Massachusetts. Traffic from the existing NWD Trucking facility on the site is deducted, as this facility is expected to relocate.

Truck estimates appear to be accurate, except that the fraction from the biosolids component appears to be somewhat low (at the low range of solids content of the incoming material, each truck as presented would carry 30 tons, which is high). Facility traffic will be present from 6:00 am to 6:00 pm Mondays through Saturdays, with the biosolids component also creating traffic on Sundays. Only a small portion of the traffic is expected to occur during peak hours (7:30 am – 8:30 am, and 3:00 pm – 4:00 pm). Seven local intersections were studied, including Philips Road, Braley Road, the Route 140 exit ramps, and intersections within the Business Park. A 2025 “Build” scenario was projected to result in only two minor reductions in Level of Service at intersections.

It is recommended that PPNE describe Transportation Demand Management (TDM) strategies in effort to reduce the impacts associated with these trips, such as carpool and vanpool preferential parking designation, working with SRTA to locate transit service accommodations, shuttle services, bicycle parking accommodations, and other options. It would further be recommended that along with a traffic analysis the proponent should provide a report on how the added vehicle traffic would impact the road conditions and add to their maintenance.

5) **Emissions, Odor, Sound**

- a) **Emissions, Odor:** PPNE analyzed emissions associated with stationary onsite combustion sources, mobile diesel equipment, dust from materials handling, and potential odor sources (biosolids, MSW). Their plan proposes to avoid, minimize, and mitigate impacts to air quality and smell through the use of best industry practices, wet scrubbing and ionization. It goes on to state that National and State Ambient Air quality standards and standards for Air Toxics will not be exceeded ‘in residential areas.’

As this project is located in an industrial area, we ask that PPNE clarify air quality impacts at the facility itself, particularly for the benefit of employees of PPNE who will be exposed to this air every day as well as the nearby neighborhood. The City should be able to peer review the air quality report at the time when PPNE returns to the planning board for a Site Plan modification in order to ensure the plant employees and residential neighborhood to the east of the site is

protected from any toxics in the air.

- b) **Sound:** PPNE analyzed sound levels associated with the proposed plant operations, taking into account sounds generated from tipping activities, fans and exhaust towers, and both indoor and outdoor activities. The project will be subject to Massachusetts State laws as administered by the DEP, which regulate noise under air pollution. The controls/mitigation include using an electric yard engine for moving rail cars within the site, employing low-noise air quality control and ventilation mechanisms such as fans and stacks, and a noise barrier wall between the biosolids cooling towers and residential area to the south. It would be recommended that the City peer review the sound assessment report at the time when PPNE returns to the planning board for a Site Plan modification in order to ensure the residential neighborhood to the east of the site is protected from excessive decibels or pure tone sounds.

6) Wetlands, Water Resources

- a) **Wetlands:** Wetland replication has not been shown on the plans. The Conservation Commission has a policy of requesting a 1 ½ to 1 ratio of wetland mitigation to wetland impacts. The wetland replication area should be constructed in an area that is currently developed or grassland such that mature upland trees in the 100' Buffer Zone do not need to be cut to facilitate the replication area. The Conservation Commission also has a policy of maintaining a 25' setback of undisturbed land between wetland resource areas and proposed development (with the exception of wetland crossings). Incursions into the 25' setback have been noted in several locations and it is hoped the plans can be redesigned to maintain an undisturbed setback.
- b) **Water Resources:** It appears a portion of the new rail spur would cross through the high yield aquifer while the remaining rail siding, recycling, MSW and biosolids facilities would be within the medium yield aquifer. Long Term Pollution Prevention Plans shall be requested for each component of the facility. Spill control plans shall also be requested with respect to the diesel fuel for the rail cars and other on-site fuel facilities. The proponent should prepare a Pollution Prevention and Emergency Response plan for both the construction phase and normal operations that identifies potential contamination sources, threats of Hazardous Material and Hazardous Waste releases to the environment, describes material storage and handling details, containment and contingency plans for spill response, and documents regular inspection and employee education opportunities. Areas used for vehicle maintenance and loading docks should install a mechanical shut-off valve or other flow-arresting device between the catch basin or other stormwater-capture structure draining this area and the leaching structures.

7) Wastewater and Stormwater

- a) **Wastewater:** PPNE is expected to use 13,150 GPD of water and will generate 83,125 Gallons Per Day (GPD) of wastewater (biosolids drying will be extracting water from the product). It is recommended that the proponent demonstrate through a groundwater study that the project will not have adverse impacts on groundwater levels or adjacent surface waters and wetlands. It has also recommended an infrastructure analysis be done that the proponent demonstrate the current piping and pump station is sufficient to handle the proposed new water and wastewater use. This would include the new loads impact to the wastewater treatment facility. This would determine if a pre treatment facility would be needed either on site or at the Industrial Park Pump station. The plant loadings should include nitrogen loads.
- b) **Stormwater:** The rail siding also crosses a stormwater detention facility which was constructed under SE49-0738 to capture runoff from a construction stockpiling facility. This Order of

Conditions has expired and does not have a Certificate of Compliance. The applicant/owner shall be required to obtain a Certificate of Compliance prior to any other work commencing on site. Following this, the Notice of Intent for Phase I will have to modify the design of the stormwater facilities and stockpile area to accommodate the rail siding. Additionally, runoff from the idling MSW trucks and recycling trucks may contain trash which will enter into the stormwater system.

A plan for keeping the pavement clean and preventing the clogging of the stormwater facilities is needed. It is also of concern to the city that the plans seem to show removal of existing catch basins as well as serious increase in impervious areas. Also noted would be an explanation of how any contaminated run off from the waste areas will be dealt with.

In conclusion, in the course of the City's review it has become evident that many environmental considerations should be understood much better than they are at present and will require significant attention going forward. It is in this context that I encourage MEPA to require the proponent to issue an Environmental Impact Report. Only a continued robust program of impact analysis will put MEPA, the public, and state and local officials, in a position to decide if this particular project, at this particular location, makes sense for New Bedford, our region, and the Commonwealth. Thank you for your consideration.

Sincerely,



Jon Mitchell

CC: Energy and Environmental Affairs Secretary Matthew Beaton
Senator Mark Montigny
Representative Paul Schmid
Representative Christopher Hendricks
New Bedford Planning Board

Czepiga, Page (EEA)

From: Claudia Ostiguy <cbostiguy@gmail.com>
Sent: Sunday, March 31, 2019 2:18 PM
To: Czepiga, Page (EEA)
Subject: Additional Comment Period Extension

EEA No. 15990 Parallel Products of New England, New Bedford

Page Czepiga
Environmental Analyst
MEPA Office

Ms Czepaga,

I appreciate and thank you and Secretary Matthew Beaton, for the extension to accept comments expressing thoughts and concerns regarding the establishing of Parallel Products of New England in the North End of New Bedford.

It is my understanding that MEPA, establishes regulations and reviews thresholds for projects that are of a nature, size or location, likely to cause damage to the environment, directly or indirectly.

Residents from many housing developments, 2 Elementary Schools and businesses in the actual Business Park that Parallel is joining, were stunned to learn of this invasive industry popping up, seemingly overnight, in our area.

New Bedford, has struggled for decades in its attempt to be a clean city. We are well aware of environmental challenges that impact health, and quality of life issues.

At this time, our concern is Phase I, and the final step, the Environmental Impact Report. Should this certification be granted Phase II, which would be an even greater challenge, would begin.

Parallel's site is in the south end of the Business Park, directly across from a residential housing development with over 300

homes. (NOTE: there are many other residential sites impacted as well.)

Since Parallel has established their facility at this site, the landscape that blocked view and access to the previous businesses has been severely altered. With the recent building of new homes that abut the Parallel property, the dense tree line and vegetation that once buffered the park and the main Street (Phillips Rd) and the housing development (Pine Hill Acres) has been reduced to a few trees.

You can see the plant.

You can see stalls filled with recyclables. You can see dozens of vehicles including front end loaders.

You can hear the disruptive noises.

There's a faint odor detected, which will most probably get worse as the warmer weather arrives and the work load increases.

We are informed that this industry will be processing six days a week from 6 AM - 6PM and possibly some Sundays.

This brings up not only the din from the plant, but brings up the issue of trucks, 18 wheelers in fact, which will be delivering 1,500 TONS of recyclables/MSW daily. This fleet will be taking Rte 140 South and Exit 7, Braley Road Exit, which leads into the Business Park. What you may not be aware of is that this exit, with 4 ramps, 2 on and 2 off is just West of an Elementary Magnet School. This area is already a huge logistical problem. Braley Road is impassible twice a day when the Pulaski School opens and closes. Buses, private vehicles, block the way so that Emergency Vehicles, should they be activated, have a difficult time getting through either to the Business Park or residential areas. There's also the Business Park traffic as well that adds to this frustrating problem. These tractor trailers may in all likelihood avoid Exit 7 and take Exit 5 which will have them take Phillips Road. This two lane street is not designed or able to take the load of heavy trucks and would directly travel by residential homes. Once at the plant, these trucks will sound back

up bell noises, powerful engine noises and the actual sound of dumping products.

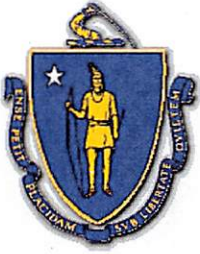
Even before this project is completed, we have lost our peace of mind. We feel disrespected and neglected. Many of us have bought homes in this bedroom community with the thought of enjoying our homes inside and outdoors. Many are retired elderly. All our hard work and sacrifices to sustain and enjoy our homes will literally be erased with noise, air pollution and traffic jams. This is just the tip of the iceberg.

We were here first! We are being invaded and taken over. It's disheartening to learn that the powers that be are supporting 50 jobs over the welfare of thousands of taxpaying citizens.

I respectfully request that at this time, you do not give EIR Certification to Parallel Products of New England in New Bedford.

Parallel must inform our community directly of their plans. Give us this time to get educated before anything else moves ahead.

Sincerely,
Claudia Ostiguy
426 Valley Road
New Bedford, MA 02745
cbostiguy@gmail.com
508-995-7613



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF
ENERGY AND ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENERGY RESOURCES
100 CAMBRIDGE ST., SUITE 1020
BOSTON, MA 02114
Telephone: 617-626-7300
Facsimile: 617-727-0030

Charles D. Baker
Governor

Karyn E. Polito
Lt. Governor

Matthew A. Beaton
Secretary

Judith F. Judson
Commissioner

29 March 2018

Matthew Beaton, Secretary
Executive Office of Energy & Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02114
Attn: MEPA Unit

RE: Parallel Products, New Bedford, Massachusetts, EENF #15990

Cc: Maggie McCarey, Director of Efficiency Programs, Department of Energy Resources
Judith Judson, Commissioner, Department of Energy Resources

Dear Secretary Beaton:

We've reviewed the Expanded Environmental Notification Form (EENF) for the above project. The proposed project consists of the following:

- 115,000-sf of lighted buildings for MSW tipping and glass processing;
- 30,000-sf of semi-heated, lighted, and ventilated building for biosolids processing.

The proponent is proposing the following improvements for GHG mitigation:

- Lighting power density reduction of 10% for all buildings;
- Heating efficiency improvement (from 85% to 90%) for biosolids processing building;
- Installation of 1.9-MW of additional solar PV.

The following requires clarification in the next submission:

- For all buildings, clarify the planned code pathway and which two of the six C406.1 measures are being included;

Parallel Products, EEA #15900
New Bedford, Massachusetts

- For the semi-heated biosolids processing building, provide the following:
 - Information about building construction (metal building, metal-framed, etc);
 - Envelope information (both roof and walls): R-value for insulation between studs, stud spacing, and R-value of continuous insulation;
 - Space heating output per area (btu/hr-ft²).

Our recommendations are as follows:

1. Evaluate reducing lighting power density to 20%.
2. Evaluate using cold-climate heat pumps for space heating for the biosolids buildings.
3. Provide a schedule for installation of the planned 1.9-MW solar PV system.

Sincerely,



Paul F. Ormond, P.E.
Energy Efficiency Engineer
Massachusetts Department of Energy Resources

Czepiga, Page (EEA)

From: Marlene Pollock <marlenepollock929@gmail.com>
Sent: Wednesday, March 27, 2019 8:32 AM
To: Czepiga, Page (EEA)
Subject: Parallel Products Project

Ms. Czepiga,

I am writing to ask you to delay any approval of this project, since it is a significant undertaking, yet there has been almost very little notice to people in New Bedford about it. I just found out about it and I am very active in the community, especially around environmental issues.

In addition, I understand that any meetings that have been held about this project have not been well publicized, nor at times to allow people to attend. There needs to be public hearings, with effective publicity through newspapers, radio, social media, etc. to let people know about these hearings, and to schedule them with enough notice at times that people can attend.

Please delay any procedures moving toward approval of this project until the public can fully find out about it and weigh in on it, especially those whose homes abut the project directly.

Sincerely,

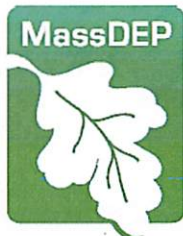
Marlene Pollock

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Marlene Pollock
Organizer
Coalition for Social Justice
New Bedford & Cape Cod
508-982-8751

Learn more about CSJ's work:

https://youtu.be/scwkT1Ic6ZY?list=PLkDkZsSMuETz_2Whez0pX8R-Q0tz102x7



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

March 22, 2019

Mathew A. Beaton,
Secretary of Environment and Energy
Executive Office of Energy &
Environmental Affairs
100 Cambridge Street, Suite 900,
ATTN: MEPA Office,
Boston, MA 02114

RE: ENF Review EOEEA #15990
NEW BEDFORD.Parallel Products of New
England (PPNE) at 100 Duchaine Boulevard

Dear Secretary Beaton,

The Southeast Regional Office of the Department of Environmental Protection (MassDEP) has reviewed the Environmental Notification Form (ENF) for the Parallel Products of New England (PPNE) Project at 100 Duchaine Boulevard, New Bedford, Massachusetts (EOEEA # 15990). The Project Proponent provides the following information for the Project:

The Site is an industrially zoned, approximately 71-acre parcel, located within the New Bedford Business Park. The Site location and property boundaries are shown in Figure 1 using an aerial view. The Site was previously developed by Polaroid and already includes access roads, parking areas, and various buildings. Much of the existing infrastructure will be used in developing the proposed Project. New buildings will be constructed for glass processing, municipal solid waste (MSW) and construction and demolition (C&D) waste tipping, and biosolids drying.

PPNE is proposing to develop the Site in two phases. Phase 1 construction will consist of the construction of a glass processing building and equipment and construction of a rail sidetrack from the main line rail to the 100 Duchaine Boulevard Site. The glass processing area will consist of a 27,500 sf building to house the processing equipment.

Phase 2 of the Project includes the construction of a municipal solid waste (MSW) processing/handling facility and the biosolids processing facility. Currently, significant quantities of MSW and biosolids are being trucked out of state for treatment and disposal. PPNE will construct a facility to collect and process this material in Massachusetts and then ship the residual waste out of state by rail for disposal.

The processing proposed will also significantly increase transportation efficiencies and reduce greenhouse gas emissions. The proposed solid waste handling facility will accept up to 1,500 tons per

day of MSW delivered to the facility by truck. The proposed facility will process the MSW to extract recyclable material from the MSW. PPNE expects to recover and recycle approximately 20% of the MSW received, which supports the Massachusetts solid Waste Master Plan and is state-of-the-art for the Commonwealth. The non-recyclable fraction of the MSW along with the C&D residuals/bulky waste will be then loaded in rail cars for transport to out of state disposal sites, primarily landfills.

Bureau of Water Resources Comments

Wetlands Comments: The Wetlands Program has reviewed the Parallel Products LLC EENF (EEA# 15990) and offers the following comments. The Project Proponent acknowledges that work will occur within Areas Subject to Protection under M.G.L. c. 131, § 40; and that a Notice of Intent (NOI) will be filed with the New Bedford Conservation Commission and the Department. The EENF indicates that the Project will alter 4,436 square feet of Bordering Vegetated Wetland (BVW), 350 square feet of Land under Waterbodies & Waterways (LUWW), 1500 square feet of Riverfront Area, and 60 linear feet of inland Bank. The EENF states that the resource area alterations are associated with the construction of a proposed railroad spur, and that replication will be provided for the impacted BVW. The EENF also states that the impacts to BVW have been reduced by incorporating retaining walls into the crossing design to reduce the culvert length and minimize the amount of fill. The EENF does not address the potential use of a span or bridge design to further reduce or eliminate impacts to BVW, inland Bank and LUWW. The EENF does not indicate whether the proposed railroad spur crossing meets the stream crossing standards. The NOI should include a discussion of alternative designs for the proposed railroad spur crossing and address the stream crossing standards. The NOI should also include the Riverfront Area alternatives analysis required by 310 CMR 10.58(4)(c).

The Wetlands Protection Act Regulations for Inland Bank (310 CMR 10.54(4)(a)5.) state that a Project or Projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 50 feet (whichever is less) of the length of the bank found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. The Project proposes to alter 60 linear feet of inland Bank and therefore is required to undertake a Wildlife Habitat Analysis as part of the NOI submission. Please be aware, however, that in accordance with 310 CMR 10.54(4)(a)(6), the impact on bank caused by the installation of a stream crossing in compliance with the Massachusetts Stream Crossing Standards is exempt from the requirement to perform a wildlife habitat evaluation.

Water Management Comments. According to the ENF, it is expected that the New Bedford Water Department will supply 13,150 gallons per day (gpd) of water for this Project. New Bedford has the capacity to provide the requested volume for this Project based on its recent water use. However, MassDEP noticed that there was a discrepancy between the water use and wastewater generation volume presented in the ENF. MassDEP expects that the water being supplied by the New Bedford Water Department may change but New Bedford still has the ability to supply up to 83,125 gpd of water. MassDEP suggests the Proponent evaluate and implement conservation efforts that incorporate Best Management Practices (BMPs) at the Project Site. MassDEP also encourages Project Proponents that add additional demand to the public water system (PWS) to work with the PWS to mitigate the additional demands proposed by the Project.

Wastewater Comments: The City of New Bedford has an EPA approved Industrial Wastewater Pretreatment Program (IPP). The Proponent has had initial discussions with the City regarding the

wastewater generated by the Project. The City and the Proponent will determine the proper monitoring, metering and pretreatment necessary to comply with the City's IPP.

Underground Injection Control Comments. The Proponent details the uses of a comprehensive stormwater management system to collect, convey, treat and control stormwater discharges associated with the Project. The Proponent should be aware that the conveyances of stormwater through underground stormwater infiltration structures are subject to the jurisdiction of the MassDEP *Underground Injection Control (UIC)* program. These structures must be registered with MassDEP UIC program through the submittal of a BRP WS-06 UIC Registration application through MassDEP's electronic filing system, eDEP. The statewide UIC program contact is Joe Cerutti, who can be reached at (617) 292-5859 or at joseph.cerutti@state.ma.us. All information regarding on-line (eDEP) UIC registration applications may be obtained at the following web page under the category "Applications & Forms": <https://www.mass.gov/underground-injection-control-uic>.

Industrial Stormwater, Sector N - Recycling Facilities. Under the 2015 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), Sector N (SIC code 5093) recycling centers, commonly referred to as material recovery facilities (MRF), that accept waste for sorting and distribution, including material recovery facilities that receive paper, glass, plastic, and aluminum from non-industrial sources are required to apply for industrial stormwater permit coverage.

Common requirements for coverage under an industrial stormwater permit include development of a written stormwater pollution prevention plan (SWPPP), implementation of control measures, and submittal of a request for permit coverage, usually referred to as the Notice of Intent or NOI.

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters.

BMPs must be selected and implemented to limit erosion on areas of your Site that, due to topography, activities, soils, cover, materials, or other factors are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

For additional information on Sector N of the industrial stormwater program see https://www.epa.gov/sites/production/files/2015-10/documents/sector_n_scraprecycling.pdf

Bureau of Waste Site Cleanup Comments

Based upon the information provided, the Bureau of Waste Site Cleanup (BWSC) searched its databases for disposal sites and release notifications that have occurred at or might impact the proposed Project area. A disposal site is a location where there has been a release to the

environment of oil and/or hazardous material that is regulated under M.G.L. c. 21E, and the Massachusetts Contingency Plan [MCP – 310 CMR 40.0000].

There are no listed MCP disposal sites located at or in the vicinity of the site that would appear to impact the proposed Project area. Interested parties may view a map showing the location of BWSC disposal sites using the MassGIS data viewer (Oliver) at:

http://maps.massgis.state.ma.us/map_ol/oliver.php Under “Available Data Layers” select “Regulated Areas”, and then “DEP Tier Classified 21E Sites”. MCP reports and the compliance status of specific disposal sites may be viewed using the BWSC Waste Sites/Reportable Release Lookup at: <https://eeaonline.eea.state.ma.us/portal#!/search/wastesite>

The Project Proponent is advised that if oil and/or hazardous material are identified during the implementation of this Project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional (LSP) should be retained to determine if notification is required and, if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures are necessary if contamination is present. The BWSC may be contacted for guidance if questions arise regarding cleanup.

Bureau of Air and Waste Comments:

Air Quality Comments. Construction and operation activities shall not cause or contribute to a condition of air pollution due to dust, odor or noise. To determine the appropriate requirements please refer to:

- 310 CMR 7.09 Dust, Odor, Construction, and Demolition
- 310 CMR 7.10 Noise

Construction-Related Measures. MassDEP requests that all non-road diesel equipment rated 50 horsepower or greater meet EPA’s Tier 4 emission limits, which are the most stringent emission standards currently available for off-road engines. If a piece of equipment is not available in the Tier 4 configuration, then the Proponent should use construction equipment that has been retrofitted with appropriate emissions reduction equipment. Emission reduction equipment includes EPA-verified, CARB-verified, or MassDEP-approved diesel oxidation catalysts (DOCs) or Diesel Particulate Filters (DPFs). The Proponent should maintain a list of the engines, their emission tiers, and, if applicable, the best available control technology installed on each piece of equipment on file for Departmental review.

Massachusetts Idling Regulation. MassDEP reminds the Proponent that unnecessary idling (i.e., in excess of five minutes), with limited exception, is not permitted during the construction and operations phase of the Project (310 CMR 7.11). With regard to construction period activity, typical methods of reducing idling include driver training, periodic inspections by site supervisors, and posting signage. In addition, to ensure compliance with this regulation once the Project is occupied, MassDEP requests that the Proponent install permanent signs limiting idling to five minutes or less on-site.

Spills Prevention. A spills contingency plan addressing prevention and management of potential releases of oil and/or hazardous materials from pre- and post-construction activities should be presented to workers at the site and enforced. The plan should include but not be limited to, refueling of machinery, storage of fuels, and potential on-site activity releases.

Solid Waste Comments. As a result of its review of the Expanded Environmental Notification Form (“EENF”) for the Parallel Products of New England Project at 100 Duchaine Blvd New Bedford (“Project” or “Site” or “facility”) EEA No. 15990, the Massachusetts Department of Environmental Protection (MassDEP) Solid Waste Management Section (Solid Waste) is providing the following comments regarding solid waste permitting and the management of solid waste/recyclable and asbestos materials generated from the Project pursuant to Massachusetts Solid Waste Regulations 310 CMR 16.00: *Site Assignment Regulations For Solid Waste Facilities* and 310 CMR 19.000: *Solid Waste Management* and Asbestos Regulations 310 CMR 7.15.

EENF Project Information:

The EENF denotes Parallel Products of New England (PPNE or Proponent) is proposing to develop the site in two phases. Phase 1 development consists of building a glass beneficiation operation and the construction of approximately 1.9 MW of solar power energy generation. This operation will recycle the glass containers that are collected through the Massachusetts bottle deposit system. Phase 1 construction does not trigger any MEPA review thresholds. The Phase 1 activity is included in this EENF as required by 301 CMR 11.01 (c) Segmentation.

PPNE is requesting a Phase 1 Waiver to allow the construction of the Phase 1 infrastructure to begin prior to the acceptance of the Single EIR required for Phase 2 construction.

PPNE has been operating a recycling operation at 969 Shawmut Avenue, New Bedford for the past 11 years. Since purchasing the 100 Duchaine Blvd Site in 2016, PPNE has been repairing the infrastructure at the Site to accommodate future company operations. In addition to the operations detailed in the EENF, PPNE will be moving all of its recycling operations currently located at 969 Shawmut Avenue to the 100 Duchaine Boulevard site which, in addition to glass recycling, includes aluminum and plastics container recycling. The relocation of the Shawmut Avenue operations is currently in progress and as a result operations are currently split between the two facilities. PPNE has submitted a Solid Waste permit (i.e., General Permit) for the proposed recycling operations at the Duchaine Blvd facility and is currently conducting plastics recycling at the Site.

Phase 2 of the Project includes the construction of a 1,500 ton per day municipal solid waste (MSW) processing/handling facility and a 50 dry tons per day biosolids processing facility. The proposed facility will process the MSW to extract recyclable material from the MSW. A processing facility will be built to dry biosolids into a Class A biosolid.

Additionally, the EENF states that “Demolition and construction activity at the Site will result in the generation of solid waste. The construction and demolition waste generated by the Project will be sent to licensed construction and demolition waste processors to maximize recycling of the waste materials.” During the MEPA scoping session, PPNE clarified that existing structures may be renovated or demolished as part of the site development.

Solid Waste Comments:

PPNE identified the following Solid Waste permits required for each phase of the proposed Project:

Phase I:

1. General Permit for Recycling Operations

Phase II:

1. Site Suitability (BWP SW-01)
2. Authorization to Construct a Large Handling Facility (BWP SW-05)
3. Authorization to Operate a Large Handling Facility (BWP SW-06)

A. Solid Waste Permitting:

PPNE submitted a **General Permit Certification** on May 11, 2018 for its glass, paper cardboard, metal and plastics recycling operations at the Site and is required to submit an "Annual Certification Statement for the General Permit pursuant to 310 CMR 16.06(1)(a)3. Refer to webpage link: <https://www.mass.gov/how-to/general-permit-initial-annual-certification-recycling-composting-digestion>.

The **Site Suitability Permit Application (BWP SW-01)** requires submittal of the EEA Secretary's Certificate on the ENF or EIR as appropriate. Refer to weblink: <https://www.mass.gov/how-to/sw-01-38-site-suitability-report>.

An **Authorization to Construct a Large handling Facility Permit Application (BWP SW-05)** may only be submitted if MassDEP issues a Decision on the Site Suitability application finding that the proposed Site is suitable for the proposed Project and the New Bedford Board of Health issues a Site Assignment for the Project property pursuant to the requirements of 310 CMR 16.00, Site Assignment Regulations for Solid Waste Facilities. Refer to weblink: https://www.mass.gov/files/documents/2016/08/uw/sw0529ap.pdf?_ga=2.260746381.1049696916.1553003081-1847519295.1541521730.

PPNE will be required to submit an **Authorization to Operate a Large Handling Facility Application (BWP SW-06)** pursuant to 310 CMR 19.029, Applicable Permit and Certification Procedures for Operation, Construction, Modification or Expansion of a Solid Waste Facility. Refer to weblink: <https://www.mass.gov/how-to/sw-06-10-20-operate-an-existing-facility>

B. Management of Solid Waste and Asbestos Materials from Demolition and Construction Activities

- Waste materials that are determined to be solid waste (e.g., construction and demolition waste) and/or recyclable material (e.g., metal, asphalt, brick, and concrete) shall be disposed, recycled, and/or otherwise handled in accordance with the Solid Waste Regulations including 310 CMR 19.017: *Waste Bans*.

Asphalt, brick and concrete (ABC) rubble, such as the rubble generated by the demolition of buildings or other structures must be handled in accordance with the Solid Waste regulations. These regulations allow, and MassDEP encourages, the recycling/reuse of ABC rubble. The Proponent should refer to MassDEP's Information Sheet, entitled "Using or Processing Asphalt Pavement, Brick and Concrete Rubble, Updated February 27, 2017", that answers commonly asked questions about ABC rubble and identifies the provisions of the solid waste regulations that pertain to recycling/reusing ABC rubble. This policy can be found on-line at the MassDEP website: <https://www.mass.gov/files/documents/2018/03/19/abc-rubble.pdf>

- **Demolition and Asbestos Containing Waste Material:** The proposed Project includes the demolition of structures which may contain asbestos. The Project Proponent is advised that demolition activity must comply with both Solid Waste and Air Quality Control regulations.

Please note that MassDEP promulgated revised Asbestos Regulations (310 CMR 7.15) that became effective on June 20, 2014. The new regulations contain requirements to conduct a pre-demolition/renovation asbestos survey by a licensed asbestos inspector and post abatement visual inspections by a licensed asbestos Project monitor. The Massachusetts Department of Labor and Work Force Development, Division of Labor Standards (DLS) is the agency responsible for licensing and regulating all asbestos abatement contractors, designers, Project monitors, inspectors and analytical laboratories in the state of Massachusetts.

In accordance with the revised Asbestos Regulations at **310 CMR 7.15(4)**, any owner or operator of a facility or facility component that contains suspect asbestos containing material (ACM) shall, prior to conducting any demolition or renovation, employ a DLS licensed asbestos inspector to thoroughly inspect the facility or facility component, to identify the presence, location and quantity of any ACM or suspect ACM and to prepare a written asbestos survey report. As part of the asbestos survey, samples must be taken of all suspect asbestos containing building materials and sent to a DLS certified laboratory for analysis, using USEPA approved analytical methods.

If ACM is identified in the asbestos survey, the Proponent must hire a DLS licensed asbestos abatement contractor to remove and dispose of any asbestos containing material(s) from the facility or facility component in accordance with **310 CMR 7.15**, prior to conducting any demolition or renovation activities. The removal and handling of asbestos from the facility or facility components must adhere to the Specific Asbestos Abatement Work Practice Standards required at **310 CMR 7.15(7)**. The Proponent and asbestos contractor will be responsible for submitting an *Asbestos Notification Form ANF-001* to MassDEP at least ten (10) working days prior to beginning any removal of the asbestos containing materials as specified at **310 CMR 7.15(6)**.

The Proponent shall ensure that all asbestos containing waste material from any asbestos abatement activity is properly stored and disposed of at a landfill approved to accept such material in accordance with **310 CMR 7.15 (17)**. The Solid Waste Regulations at **310 CMR 19.061(3)** lists the requirements for any solid waste facility handling or disposing of asbestos waste. Pursuant to **310 CMR 19.061(3) (b) 1**, no asbestos containing material; including VAT, asphaltic-asbestos felts or shingles; may be disposed at a solid waste combustion facility.

C. Suitability Criteria:

- The Water Resources Map submitted within the Draft Site Suitability Report appears to indicate that riverfront area lies within the proposed waste handling area. The Proponent should review the requirements of 310 CMR 16.40(3)(d)(6) and consider modifying the proposed waste handling area.
- Figure 6-1 of the Sound Level Assessment Report depicts new residential dwellings southeast of the Site on the western side of Phillips Road. The new residential dwellings are not identified in Appendix A Insert 3 Land Use Plan. It is unclear if these dwellings are located within 500 feet of the waste handling area.

It appears that the Proponent's Sound Level Assessment Report has not considered all potential sound sources from proposed facility operations. Pursuant to 310 CMR 7.00 Air Pollution Control Section 7.10: U Noise, MassDEP regulates all sounds emanating from a solid waste facility operation including the operation of: waste handling equipment inside and outside the

building; waste delivery vehicles on-Site inside and outside the building; and fixed mechanical equipment. Potential sound sources include both the movement of waste handling equipment and the sound produced during materials loading, unloading and transfer.

- The Site borders the Acushnet Cedar Swamp State Reservation. The EENF states “the siting of the Facility will not have an adverse impact on the physical environment of, or on the use and enjoyment of, state or municipal parklands or conservation land, or other open space held for natural resource purposes” however they did not offer any explanation or mitigating factors to support their claim.
- Proponent should provide a detailed description of the movement of empty and full railcars for the Site including the five new rail spurs within the proposed Site assigned area and the extended sidetrack along the western property boundary adjacent to the existing rail line. The Department recommends that the Proponent provide this information in the SEIR.
- Traffic Impact Study. The Traffic Impact Study performed by McMahon Associates indicates that two study intersections will operate at a traffic volume greater than their capacity for some turning movements and that one intersection has a crash ratio higher than the statewide and District 5 average. The Proponent has not proposed or recommended any mitigation. The Proponent should discuss these intersections with the roadway overseeing agency, MassDOT or the City of New Bedford as appropriate, regarding the necessity for and development of mitigation measures.

The Proponent presented assumptions regarding the distribution incoming waste volume by vehicle capacity, which directly affected the predicted Project related traffic volume. The Proponent is advised that, during MassDEP permitting, the Proponent must commit to limiting the maximum number of vehicles utilizing the site to that presented in the traffic study, or the Proponent must revise the traffic study to reflect the maximum proposed Site traffic flow rate.

If you have any questions regarding the Solid Waste Management Program comments above, please contact Mark Dakers at (508) 946-2847 or Cynthia Baran at (508) 946-2887.

BAW Business Compliance and Recycling Comments: Massachusetts and the New England Region have had a difficult time finding outlets for recycling container glass after the Ardagh Glass plant (Milford, MA) closed in early 2018. The result has been a significant price swing driving costs up for municipal recycling programs. MassDEP has been actively trying to identify and support new markets for container glass working with municipalities and recycling businesses. The Parallel Products of New England, Inc. Phase I project will enhance glass processing in the region offering alternative markets for those collecting and diverting container glass from disposal. Parallel Products extensive background in handling, processing and marketing recycled container glass will increase competition in a currently oversupplied market resulting in lower costs for those entities looking to recycle the material.

Environmental Justice Comments:

After reviewing relevant Environmental Justice analyses presented in the Expanded ENF, MassDEP offers the following comments.

As stated in the report the city of New Bedford is an environmental justice community meeting all three criteria (M/I/E) with 69.6% or 66,180 residents residing in an EJ block group. The total population of the city of New Bedford based on the 2010 U.S. Census is 95,072.¹

The Expanded ENF states that the proposed PPNE Project exceeds the MEPA threshold for new solid waste processing capacity of 150 or more tons per day, and the wastewater mandatory threshold of 150 or more of sewage sludge, triggering the requirement for filing an Environmental Notification Form and a mandatory Environmental Impact Report. Pursuant to the 2017 EEA EJ Policy any Project that exceeds the ENF thresholds for solid waste or wastewater and involves a Project Site located within one mile of an EJ population will be required to implement enhanced public participation under MEPA. The proposed outreach as written in the report meets some of the requirements in the EJ Policy. However MassDEP recommends the following additional outreach tools listed below:

- Non-Traditional Information Repositories (houses of worship, community centers, along with the traditional repositories – libraries, government offices)
- Contact EJ Community Leaders
- Ensure notice to the community prior to and during the public meeting and permitting process to ensure the community has opportunities to get involved.

Many EJ populations are located in densely populated urban neighborhoods, in and around the state's oldest industrial sites (i.e., New Bedford) while some are located in suburban and rural communities. These high –minority, low income neighborhoods are host to or are in close proximity to many of the states contaminated and abandoned sites, regulated facilities and sources of pollution.

The Environmental Justice Areas Criteria by Block Group map (Figure 3 in the Expanded ENF) indicates that there are two daycares and one school located within the one-mile buffer zone of the Site and another school located just outside of the one-mile buffer zone. It is noted in the report using MassDPH's Environmental Public Health Tracker that New Bedford has statistically higher rates of environmentally-related health outcomes including but not limited to pediatric asthma, COPD, asthma related ED visits. The close proximity of the school and daycares to the Project site and the Project's potential increase in truck traffic, air pollution (emissions) and potential noise and odor pollution raises a concern of the potential impact, to these vulnerable populations (children and the elderly). Potential Project-related impacts to these populations should be discussed in the EIR and addressed during this permitting process.

Additionally, MassDEP recommends that Project-related air pollution and environmental impact information be shared with EJ communities in alternative format (translation, interpreter services) if applicable. This information should be provided using terms that are easily understood in an effort to ensure the community understands the Project, its potential impacts, and can provide meaningful input.

¹ Data provided by the 2010 United States Census – American Fact Finder at https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml.

Proposed s.61 Findings

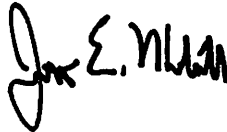
The "Certificate of the Secretary of Energy and Environmental Affairs on the Environmental Notification Form" may indicate that this Project requires further MEPA review and the preparation of an Environmental Impact Report. Pursuant to MEPA Regulations 301 CMR 11.12(5)(d), the Proponent will prepare Proposed Section 61 Findings to be included in the EIR in a separate chapter updating and summarizing proposed mitigation measures. In accordance with 301 CMR 11.07(6)(k), this chapter should also include separate updated draft Section 61 Findings for each State agency that will issue permits for the Project. The draft Section 61 Findings should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

Other Comments/Guidance

MassDEP supports the Proponents request for the Secretary to grant a Phase I waiver.

The MassDEP Southeast Regional Office appreciates the opportunity to comment on this proposed Project. If you have any questions regarding these comments, please contact George Zoto at (508) 946-2820.

Very truly yours,



Jonathan E. Hobill,
Regional Engineer,
Bureau of Water Resources

JH/GZ

Cc: DEP/SERO

ATTN: Millie Garcia-Serrano, Regional Director and Acting BAW Deputy Regional Director
David Johnston, Deputy Regional Director, BWR
Gerard Martin, Deputy Regional Director, BWSC
Jennifer Viveiros, Deputy Regional Director, ADMIN
Jim Mahala, Chief, Wetlands and Waterways, BWR
Holly Johnson, Assistant Director for Operations and Special Projects/Boston
Deneen M. Simpson, Environmental Justice Director & Program Manager/Boston
Greg Cooper, Deputy Director - Consumer Programs/Boston
Daniel Gilmore, Wetlands and Waterways, BWR
Mark Dakers, Chief, Solid Waste, BAW
Alison Cochrane, Solid Waste, BAW
Douglas Coppi, Solid Waste, BAW
Daniel Connick, Solid Waste, BAW
Duane LeVangie, Chief, Water Management Act, BWR/Boston
Shi Chen, Water Management Act, BWR/Boston
Joseph Cerutti, Underground Injection Control Program, BWR/Boston
Allen Hemberger, Site Management, BWSC

Czepiga, Page (EEA)

From: Gilmore, Daniel (DEP)
Sent: Friday, April 05, 2019 9:42 AM
To: Czepiga, Page (EEA); Mahala, Jim (DEP)
Cc: Zoto, George (DEP); Hobill, Jonathan (DEP)
Subject: RE: Response to MassDEP comments

Hi Page,

The response letter addresses the alternative designs for the proposed crossing. That information should be clearly and concisely included in the NOI. The response states the stream crossing will be designed in accordance with the Stream Crossing Standards. The NOI plans should clearly demonstrate the design meets the standards. The response letter states that the Riverfront Area in New Bedford is only 25 feet which is accurate. However, I believe that the alternatives analysis should be augmented when the NOI is filed. If the proponent is contending that the site is previously developed or degraded and that the project is a Redevelopment Project, then the NOI should include information on how the proposal will meet the requirements of 310 CMR 10.58(5).

Dan

Daniel F. Gilmore
MassDEP Wetlands & Waterways Program
Southeast Regional Office
20 Riverside Drive
Lakeville, Massachusetts 02347

Telephone: 508-946-2808
FAX: 508-947-6557



Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, MassDOT Secretary & CEO



March 29, 2019

Matthew Beaton, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114-2150

RE: New Bedford – Parallel Products of New England, Inc. - EENF
(EEA #15990)

ATTN: MEPA Unit
Page Czepiga

Dear Secretary Beaton:

On behalf of the Massachusetts Department of Transportation, I am submitting comments regarding the proposed Parallel Products of New England, Inc project in New Bedford, as prepared by the Office of Transportation Planning. If you have any questions regarding these comments, please contact J. Lionel Lucien, P.E., Manager of the Public/Private Development Unit, at (857) 368-8862.

Sincerely,

David J. Mohler
Executive Director
Office of Transportation Planning

DJM/jll

cc: Jonathan Gulliver, Administrator, Highway Division
Astrid Glynn, Administrator, Rail and Transit
Patricia Leavenworth, P.E., Chief Engineer, Highway Division
Mary-Joe Perry, District 5 Highway Director
Neil Boudreau, Assistant Administrator of Traffic and Safety Engineering
Planning Department, City of New Bedford
Southeastern Regional Transit Authority
Southeast Regional Planning and Economic Development District
PPDU Files



Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, MassDOT Secretary & CEO

massDOT
Massachusetts Department of Transportation

MEMORANDUM

TO: David Mohler, Executive Director
Office of Transportation Planning

FROM: J. Lionel Lucien, P.E, Manager
Public/Private Development Unit

DATE: March 29, 2019

RE: New Bedford: Parallel Products of New England – EENF
(EEA #15990)

The Public/Private Development Unit (PPDU) has reviewed the Expanded Environmental Notification Form (EENF) for the Parallel Products of New England, Inc. project in New Bedford. The project entails the construction of a solid waste facility to process municipal solid waste (MSW) and construction and demolition (C&D) of materials. The existing site consists of the NWD Trucking facility located at 100 Duchaine Boulevard and is bounded by a CSX rail line to the east, Phillips Road to the west, industrial properties to the north and undeveloped land to the south. The project is expected to be built over time in two phases. Phase I development consists of building a glass Beneficiation operation and the construction of approximately 1.9 MW of solar power energy generation. Phase II entails the construction of a MSW transfer station and biosolids drying facility. Phase II is expected to be constructed approximately two years after the construction of Phase I.

The project is expected to generate approximately 418 new truck trips per day (209 truck trips entering, 209 truck trips existing) based on empirical data collected from a similar solid waste facility operations. In addition, employees will contribute approximately 150 vehicle trips (75 entering, 75 exiting) for a total of 568 vehicle trips accessing the site on an average weekday.

The project does not exceed any transportation thresholds but exceeds MEPA thresholds for wastewater and solid waste and therefore is required to prepare an Environment Impact Report (EIR). The Proponent has requested a waiver to proceed with the construction of Phase I, pending the completion of the Environment Impact Report (EIR) for the project.

The project does not require a Vehicular Access Permit from MassDOT but has applied for an Industrial Rail Access Program (IRAP) grant in the amount of \$500,000. The grant will be used for the construction of a rail side track along the CSX Transportation line to meet the needs of the glass processing facilities as part of Phase I. The rail side will be expanded in Phase II to meet the needs for transport of solid waste. The Proponent will use the rail side for the outbound shipment of MSW, glass and dried biosolids.

The facility, when at full capacity, expects to ship 1200 tons per day (tpd) of MSW residuals, 50 tpd of dried biosolids and 250 tpd of glass. The rail side track at full operations could reduce by up to 110 the number of truck trips in and out of the site.

The EENF includes a Transportation Impact Assessment (TIA) that includes an evaluation of the study area transportation network and presents an analysis of existing and future build conditions for each intersection. The TIA is in general conformance with MassDOT/EOEEA Guidelines for *EIR/EIS Traffic Impact Assessment*.

Study Area

The study locations for which traffic analyses were conducted are as follows:

- Route 140 Northbound on/off Ramps/Braley Road intersection;
- Route 140 Southbound on/off Ramps/Braley Road intersection;
- Braley Road/Theodore Rice Boulevard at Phillip Road intersection;
- Theodore Rice Boulevard/Duchaine Road intersection;
- Duchaine Boulevard/Samuel Barner Boulevard intersection;
- Phillips Road/Samuel Barner Boulevard intersection; and
- Duchaine Boulevard/Site Driveway intersection.

The study area is adequate for capturing the traffic impacts of this development.

Trip Distribution

The project trip distribution on the study area network was based on expected access to/from Route 140. The majority of traffic entering the site is expected to use Route 140 to Braley Road with a small portion of traffic coming from the site expected to use Phillips Road to access the proposed site.

Safety

Crash rates for the study area intersection were calculated using MassDOT data for the five-year period from 2011-2015. Based on the data, the crash rates for all study area intersections are below the state and district averages for signalized intersection. Two unsignalized intersections are experienced crash rates slightly higher than the state and district averages. The additional traffic volumes associated with the project is not expected to significantly impact safety at these intersections. There are no Highway Safety Improvement Program (HSIP) high crash cluster intersections in the study area.

Traffic Operations

Capacity analyses were conducted for the weekday AM and PM peak hours for 2018 Existing, 2025 No-Build, and 2025 Build (full build) conditions, for the study area intersections.

In the 2025 No-Build, traffic operating conditions at most intersections are expected to experience no significant changes, except for one approach movement where level of service will worsen from B to C. Likewise, 2025 Build conditions experience slightly increased delays compared to the 2025 No-Build conditions, but the delays were not significant enough to impact LOS in most cases.

Parking

The project will provide 428 parking spaces to accommodate both trucks and employees on site. The proposed number of parking spaces is a reduction from the current number of existing parking spaces.

Multimodal Access and Facilities

Despite the proposed land use primarily oriented towards truck traffic, the Proponent should seek the opportunity to provide multimodal accommodations to access the site. The roadway network in the vicinity of the site provide sufficient shoulder widths to encourage bicycle travel. We note that the Southeastern Regional Transit Authority (SRTA) provides bus service along Duchaine Boulevard and Phillips Road, with bus stops located within walking distance to the site along Duchaine Boulevard and at the intersection of Phillips Road with Heritage Court. Pedestrian accommodations exist along Phillips Boulevard. We encourage the Proponent to design their site drive in accordance to Complete Streets standards to facilitate opportunities to walk and bike to the site.

Transportation Demand Management Program

The Proponent should develop a Transportation Demand Management (TDM) program aimed at reducing site trip generation. MassDOT understands that the project primarily generate truck traffic; nevertheless, the following TDM measures are recommended with the goal of reducing vehicle trips by employees of the development:

- Offer direct deposit for payroll transactions;
- Implement off-peak shift start/end times for employees;
- Provide preferential parking for carpools and vanpools;
- Offer onsite employee services such as a cafeteria.
- Provide information on transit options as a mean of travel to the site.

MassDOT does not object to the Proponent's request for a Phase I waiver for the project. The proponent should address the details of the above comments in the SEIR and submit a copy of the MEPA Certificate for this project as part of their grant application for the IRAP funding. If you have any questions regarding these comments, please contact me at (857) 368-8862.

Secretary of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston Ma.02114
Attn: Page Czepiga, MEPA

Parallel Products of New England, LLC
file No. 15990

Dear MEPA Officials, my wife and I are 52 yr residents of a residential area that is located within a few hundred feet of the property of the proposed project. I have read the Expanded Environmental Notification report submitted by Green Seal Environmental Inc. on behalf of the petitioner.

I understand that the petitioner is requesting 1. waiver to begin immediate construction on a portion of the Phase1, glass recycling facility before submittal or receipt of permits of approval, 2. approval of the environmental permit for the complete construction and operation of Phase 1., and 3. the approval and permits for future construction and operation of a regional Municipal Solid Waste Plant and Bio-solids Drying facility. Some construction has already begun on Phase 1 as noted in the report and is readily observable at the site today.

It appears to me that the report is incomplete as it does not present enough information For MEPA to evaluate the requirements for site suitability as stated in 310CMR 16.40 which requires a 500 Foot clearance for the proposed facility from occupied residences. The map shown on report insert 3A obtained from the city of New Bedford published in 2015 shows that 500 Foot clearance from the facility property boundary encompasses 44 houses east of Phillips Rd. and another 6 that have been built since, on the west side of Phillips Rd. south of the facility. While some may argue that the operation of the facility will not occur on the facility boundary line, the access roads into the glass delivery area of the site are close enough to the eastern edge of the property boundary to still encompass at least half of the houses identified above.

These issues are affected by the infringement of the 500 foot clearance requirement. One is noise. Second is dust. Third is odor.

NOISE

In Phase 1., noise will be generated by truck traffic at the glass handling facility, and by the front end loaders that move the open dumping of glass into the glass crushing and classification building, as well as the unloading of the processed glass to trucks, and the movement of rail cars (future). The traffic study projected 108 trucks per day for the glass plant which drops to 54 once the rail is operational shown Appendix E of the Trip Generation study.

A noise analysis and evaluation was conducted. It included baseline measurements in 4 receptor locations: at the southeast property line and three locations east and north east at or near the residences. Modeling was used to project upon the baseline noise the additive effect of the proposed facility operation. Results showed a 3 to 8 Db rise in noise at some of the receptor locations. Equipment similar to that proposed for the facility were used together with noise studies done in other waste handling sites together with assumptions, stated that the 10 Db criteria will be met.

Now, the nature of the noisiest part of the proposed plant occurs in the receipt and handling in the glass in Phase 1. which is located on the east side of the property, the area closest to the residences. Noise is generated by trucks dumping on the pavement, followed by the scraping of a front end loader bucket. This operation occurs in an open area covered only with a roof canopy to house the solar panels.

Two operating issues arise; 1. the sporadic and frequent nature of the 'bang and clank' equipment that may continue as late as 10Pm, 2. the probable magnification and echo effect of this noise generated in the canyon where this unloading operation takes place, which is about 30' below the residences east of Phillips Rd. AND inside the 500' clearance requirement.

When these two issue are taken into account, it is questionable that the modeling predictions of noise at the residences affected are within the 10Db requirements. Additionally the unloading operation noise is not steady but sporadic; composed of frequently variable sound changing in pitch and frequency, which increases its annoyance to the human ear. It is easier to fall asleep to a quiet bedroom fan than to a noisy party outside your bedroom window.

DUST

Dust will be generated by all phases of the proposed facility, dust that is now not present in our neighborhood. About 50% of the winds in our area blow from the southwestern to the western sector, which will carry dust and aerosols north and mostly east into the nearby residences. Mitigation strategies have been proposed that include housing the Phase 2 operations inside buildings. However, the Phase 1. truck unloading and reloading of glass and front end loading does not take place inside a building.

It is probable that some of this dust will be blown into the nearby residences as a nuisance, falling on parked automobiles, drying clothes, open decks, swimming pools, and outdoor play equipment. Even if the analysis show that no air quality requirements are breached, other mitigation efforts should be done to minimize this nuisance. Likely, spillage from glass carrying dump trucks along the eastern boundary access and egress roadway will generate unmitigated additional dust.

ODOR

An analysis of odor was submitted with the report which stated that odor is mostly a subjective measure. One human's nose may be more sensitive than another nose, and as such, a proxy metric has been used to evaluated the impact of odor. Dilution of the odorous air with equal or multiple volumes of air are the criteria used. Highly odorous emissions need up to 5 volumes of air as opposed to only one volume for slightly odorous emissions, according to the science presented, to reach an acceptable level. Some mitigation is offered for the emissions of the proposed bio-solids drying plant with a scrubber.

Questions arise about whether this strategy, or analysis is adequate, given that the noxious odors travel the same ambient wind currents that move the dust from the site to the residences. Will the bio_solids drying plant shut down when the scrubber is not in service? As a frequent user of the recycle facility at Shawmut Ave. in New Bedford, I can personally attest to the noxious and pungent odor emanating from the simple off loading of sludge waste water trailers discharging into underground tanks. This odor permeates the entire recycle area.

Keeping in mind that the proposed bio-solids facility is on the property that is not 500 ' from the residences and that it is proposed as a regional facility to operate 24 hours a day, it is questionable that the nearby residences will avoid receiving objectionable odors.

ENVIRONMENTAL JUSTICE

In order to protect the minority and under served population, an analysis of environmental justice is presented in the report . It focused on the health statistics of the New Bedford population as compared to the surrounding towns. The results showed that New Bedford has statistically higher incidences of cancer, heart disease, COPD and asthma than do either the state average or the surrounding towns. Both environmental and lifestyle factors are postulated as the reason for New Bedford's higher than average disease rate.

When an additional burden of noise, dust and odor is imposed on a community with compromised health to begin with, it is questionable that the minor benefit of a few new jobs of the proposed regional facility outweighs the health costs borne by its citizens. As shown in the preceding discussion, the 500' clearance requirement, has approximately 100 homes whose occupants are exposed to the environmental impacts of the proposed facility.

SITE HISTORY AND COURT CHALLENGE

Although not included in the report, it is instructional to know about the history of the site and adjacent areas. The building directly west of the site now owned by Eversource, was formally a film winding facility. Originally it was owned by the bankrupt Polaroid Corp. until the late 90's. Later owned by another firm for the same purpose.

In 1990 a developer proposed to locate a 250Mw coal fired power plant about ½ mile west of the present Eversource building to serve the Polaroid plant and to sell the extra capacity to the electric utility. A construction permit was issued by MEPA over the objections of the local GNB-NO-COAL group of citizens and the Massachusetts Attorney Generals Office.

The Massachusetts Supreme Court rescinded the permit based on lack of need. The developer appealed the Court decision and reapplied for the permit. Again both GNB-NO-COAL, and the Attorney Generals Office objected to the issuance of the permit for the same reason. About 4 years passed since the permit was first requested. While preparing for another trip to the Supreme Court, the developer withdrew his application for the permit. As it turned out, the Polaroid Corporation went bankrupt and the electric utility was able to meet the electrical system demand without the unneeded Coal Fired power plant.

PRESENT SITE ACTUAL CONDITIONS

On March 17, 2019 I walked around most of the Eastern portions of the site in order to compare the maps presented in the report to the actual existing conditions. A large pile of crushed glass has already been stored under the north open canopy at the south eastern corner of the site. The pile occupies the entire area of the 100' by 275' area with heights from 6' to 12' in height. Using conservative estimates of 75lb/ft³ and a median height of 9', the pile contains approximately 9000 tons

of crushed glass. A photo is attached. Solar panels are in operation on the roof of this canopy as well as the identical south canopy about 70' away. No glass is currently stored under the south canopy.

The open space between the canopy storage areas is not shown on the maps C1, C2 and C2A but appear as parking lots. In order to move the pile to another facility or through the future proposed glass processing facility over 750,12 yd trucks are needed or an even greater number of front end loader trips. These operations are not described in the report. Additionally, the need to provide glass storage in the future is likely due to outages that interrupt operations in the processing building. This adds noise and dust beyond what is reported.

Presently there is some demolition and other activity around the area of the proposed glass processing building during the week which I can hear from the outside of my house. Has approval been given for this storage and construction before the public comment period is over?

RECOMMENDATIONS

1. All MEPA officials responsible for approving this proposed regional waste handling project need to visit the site and the surrounding residential areas. This licensing process is more about minimizing the impact on the community than on protecting the environment. Since 100 residences are within 500', as shown in the report, of the site boundary and are 30' above the site, residents have visual impact in addition to the environmental ones reported using projections, modeling and assumptions. When at the site, ask yourself honestly, would you buy any of the houses presently for sale on the west side of Phillips Rd. south of the site? I would appreciate being invited for any planned site visit.

2. Phase 1 is separable and distinct from Phase 2. Set aside the permitting process for Phase2. Delay MSW and Bio-solids drying portion, which have Air quality requirements of Phase2, until there is a demonstrated need. Does Parallel Products have signed contracts for the waste deliveries? The report states that the city of New Bedford does not plan to use this proposed regional MSW & Bio-solids facility. The need for the proposed regional MSW and Bio-solids waste handling facility is questionable since the petitioner does not have a firm construction schedule. As was the case in the history of the proposed unneeded Coal-fired power plant, a large capacity regional facility is proposed to enhance economic viability for owners at odds with residence concerns.

3. Delay the waiver to construct the regional glass processing facility. Address the site suitability requirements which were stated to be preliminary until the air quality permit was received. No waiver was requested for relief from the 500' clearance required between the site and occupied houses by Massachusetts law.310CMR16.40

Early construction before permit receipt was requested so that the petitioner could receive approval to construct solar power qualified under the new SMART incentive program. According to the list of applicants to this program dated March 15, 2019, application nos. 65 and 68 for a total of 1.346Mw have already been approved. My site visit confirmed that the largest part of the solar power associated with Phase 1 is in service. The Solar Power is no longer an issue when Phase 1, is separated from Phase 2.

Closure of existing glass processing facilities in Massachusetts that received glass from recycling centers was stated as another reason that immediate construction approval was requested to avoid the longer haul to other facilities much further away. It is evident considerable storage of crushed glass now exists on the proposed site and should not be used as pressure for MEPA to approve the facility. The petitioner has other options that may be costly, but it is not the responsibility of MEPA to protect the petitioner's profit, poor planning or business model.

FINALLY

In closing, I pray that MEPA would not place proposed large regional projects higher in value than local concerns which impacts its citizens. I see the purpose of respecting the environment, codified in numerous laws and requirements, as important to protect the humans living on the planet from harmful competing interests. A peaceful and pleasant residential neighborhood environment is a treasure. Unfortunately there are no scientific metrics to establish its worth when only the environment is measured.

It is interesting to note that Massachusetts has the oldest State Constitution. Together with the National Constitution, these documents stem from the individual rights of the people to life, liberty and the pursuit of happiness and authorize the Government to protect these rights by establishing just laws. Our Judiciary system is established not only to judge if laws are breached but to test that the laws are just.

MEPA, as an executive agency, can and should take a reasoned approach in this instance to judge the merit of this petition before you; and to exercise its authority to benefit the citizens of Massachusetts.

ATTACHMENTS

1. Older satellite image of proposed site showing adjacent residential area east of Phillips Rd. Note the blue 500's scale at the lower right of the image and the houses along Ridgewood Road. The south eastern part of the site appears as a parking lot, which it is today, with a canopy over the lots and solar panels on the roof. Not shown in this image are the 8 houses built on the west side of Phillips rd. One house is less than 100 feet from the south east bend on the access road, which remains unsold nearly one year after completion.

2. 9000 ton crushed glass pile taken 3-17-2019, located under the northern part of the southern lot.

Respectfully,

Robert H. Ladino 3-18-19

Robert H. Ladino

bobladino@comcast.net

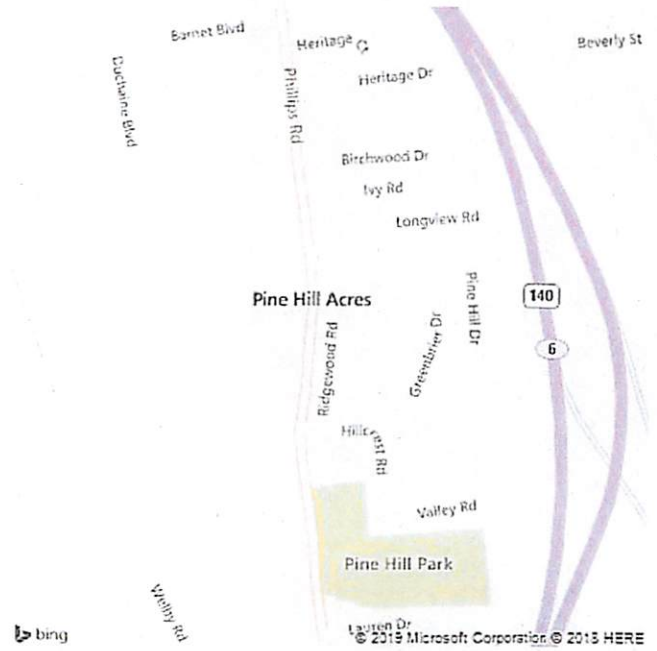
508-269-9120

bing maps

ATTACHMENT NO.1

Notes

old satellite image



ATTACHMENT NO.2



Czepiga, Page (EEA)

From: Roger A. Cabral <rogercabral@comcast.net>
Sent: Tuesday, March 26, 2019 7:05 PM
To: Czepiga, Page (EEA)
Subject: Parallel Products / New Bedford industrial Park

I just learned of this project which is proposed for the New Bedford Industrial Park. I'm very concerned by the fact that this project has not received a lot of attention and that many of the neighbors are unaware of what is proposed. Given the nature of this proposed project I think that a WELL PUBLICIZED public meeting is appropriate. I also think that all neighbors within a mile of the site should be notified by mail about the meeting. I believe that the New Bedford Industrial Park is the wrong place for a business of this nature.

Roger A. Cabral
9 Bow Drive
Acushnet, MA
508-642-9173

Czepiga, Page (EEA)

From: Ron <rrcrt@aol.com>
Sent: Tuesday, April 02, 2019 6:09 PM
To: cstrupczewski@verizon.net; Czepiga, Page (EEA)
Cc: cbostiguy@gmail.com; ritalapre@gmail.com; brad.markey@newbedford-ma.gov; desk@wpri.com; kjohnston@abc6.com; 5investigates@wcvb.com; antonio.cabral@mahouse.gov; chris.hendricks@mahouse.gov; christopher.markey@mahouse.gov; paul.schmid@mahouse.gov; william.straus@mahouse.gov; lan.Abreu@newbedford-ma.gov; Naomi.Carney@newbedford-ma.gov; Debora.Coelho@newbedford-ma.gov; Hugh.Dunn@newbedford-ma.gov; Brian.Gomes@newbedford-ma.gov; Dana.Rebeiro@newbedford-ma.gov; Linda.Morad@newbedford-ma.gov; Joseph.Lopes@newbedford-ma.gov; Maria.Giesta@newbedford-ma.gov; Scott.Lima@newbedford-ma.gov; Jon.Mitchell@newbedford-ma.gov
Subject: Re: EEA15990 Paralles Products - New Bedford Business Park

It is my understanding that Secretary Matthew Beaton has allowed residents till April 05, 2019 to write their opposition for Parallel Products, Inc. of New England for its expansion in the New Bedford Business Park and also their considering of adding a Wastewater Sludge Facility.

I reside in the Briarwood development which there are approximately 300 homes, there are two entrances from Braley Road into Briarwood and two exits from Briarwood onto Braley Road, Braley Road is a highly used thoroughfare going to and from Route 140, Acushnet Avenue and Phillips Road.

In the mornings starting at 7 AM we have a traffic problem on Braley Road with school buses, vehicles, parents dropping their children off for school at the Pulaski School, vehicles parked on both sides of Braley Road. It is a problem exiting from Briarwood onto Braley Road.

We have two large nursing homes and the VIBRA Hospital of S.E. MA in the Sassaquin area throughout the day ambulances are going back and forth, we have a Fire Station on Acushnet Avenue south of Braley Road. These emergency vehicles are always using Braley Road because of Route 140.

There will be a problem at Parallel Products, Inc we will have with garbage trucks and trailer trucks coming off of route 140 North and South bound it will be a nightmare, traffic will be backed up on Rt 140 North and South bound exit 7 as vehicles, garbage trucks, and 18 wheeler's are trying to exit off the highway onto Braley Road on the way to the Parallel Products Inc property, then they will be returning back to Route 140.

There will be Garbage trucks and 18 wheeler's to avoid the traffic jam off of exit 7 North bound they will use exit 5, they will proceed north on Phillips Road to enter the unnamed road of the New Bedford Business Park, south of Braley Road entrance closer to the Parallel Products, Inc property, this will now cause another traffic jam.

The study evaluated traffic impacts based on 284 inbound trips and 284 outbound trips (trucks carrying material and employee trips traveling to and from work). This is on Route 140 North and South as well as our streets leading to the Industrial Park.

I would not be surprise if fatalities could occur because of the numerous amount of garbage trucks and trailer trucks coming off of Rt 140 North and South bound onto Braley Road from 6 AM to 6 PM Monday to Saturday, and possibly on Sunday's going to Parallel Products, Inc.

As it is the New Bedford Business Park is a busy area with numerous businesses such as the large Service Center, Dunkin Donuts, Titleist Golf Ball, MA Registry of Motor Vehicles, Acushnet Co., American Circuit Breaker, Alberox Corp, N.E. Plastics, Milhench, AFC Cable, Epec, etc, etc.

Here in Briarwood we pay high house taxes, as does Pine Hill Acres and other housing developments off of Phillips Road, and other homes in the area, imagine the smell of garbage, imagine the rats we will have. Yes they will invade the businesses in the New Bedford Business Park, Briarwood, Pine Hill Acres, homes off of Phillips Road, homes in Freetown, Sassaquin, Acushnet Ave here in the far North End, lets not forget the Seagulls flying over dropping their poop on our homes and back yards where children will be playing, a child possibly being bitten by a rat.

There is the old N-Star building and property at the waterfront, garbage can come in by boats, barges, Trucks off of I-195 to Rt 18, and by Rail. There is the Building 19 property that trucks can come in, there is the railroad tracks next to the property, and the property is across the street from Parallel Products, Inc property at 969 Shawmut Avenue on Hathaway Road. These are one of two excellent locations for Parallel to be located.

Please stop Parallel from coming into the New Bedford Business Park.

Ron R. Cabral
67 Blaze Road
New Bedford, MA 02745
E-mail: RRCRT@aol.com

Page Czepiga
Environmental Analyst
(617) 626-1021
page.czepiga@mass.gov

MEPA Office
100 Cambridge St., Suite 900, Boston, MA 02114

Re: Parallel Products



Dear Ms. Czepiga

My name is Claire B.W. Miller and I am the lead community organizer for Toxics Action Center. We are a 32-year old public health and environmental non-profit. We work in all six north-eastern states side by side with communities to clean up and prevent pollution. I am writing in concern about construction of glass processing, a MSW processing and handling facility, biosolids drying & gasification facility, and railside track in a designated Environmental Justice neighborhood. This facility plans to process 1,500 tons per day of municipal solid waste, receive construction and demolition, and process biosolids 24 hours a day, with an expected 418 new truck trips- all next to a residential neighborhood.

We firmly believe that community involvement in decisions is key. **Please consider granting a significant and fair extension to the deadline for public comments.**

As I'm sure you know, this location is a designated Environmental Justice neighborhood. As part of the Environmental Justice Policy of 2017, MEPA has obligations. These are screenshots from the EJ Policy:

Enhancing the Review of New MEPA Projects in EJ Populations

17. Enhanced Analysis of Impacts and Mitigation Under MEPA.³ In addition to the enhanced public participation requirements specified in section 16 above, enhanced analysis will be required as part of the Environmental Impact Report (EIR) scope for projects that:

- (1) Exceed a mandatory EIR threshold for air, solid and hazardous waste (other than remediation projects), or wastewater and sewage sludge treatment and disposal; *and*
- (2) Are located within one mile of an EJ Population (or in the case of projects exceeding a mandatory EIR threshold for air, within five miles of an EJ Population)⁴. The project proponent may submit actual air modeling data on the project's area of potential air impacts in its EIR scope to modify the presumed five-mile impact area referred to in condition (2) above.

Enhanced analysis of impacts and mitigation may include analysis of multiple air impacts; data on baseline public health conditions within the affected EJ population; analysis of technological, site planning, and operational alternatives to reduce impacts; and proposed on-site and off-site mitigation measures to reduce multiple impacts and increase environmental and energy benefits for the affected EJ Population.

18. Review of Thresholds. As required by Executive Order 552, MEPA shall seek and consider stakeholder input on which thresholds are appropriate for enhanced participation and/or enhanced analysis.

19. Collaboration with the Director of EJ. For any projects triggering the MEPA EJ thresholds, as defined by this Policy, the MEPA Office shall collaborate with the Director of Environmental Justice to

ensure that appropriate measures are taken by project proponents to address any potential environmental impacts the project may have on the existing EJ population. This will include, but not be limited to

16. Enhanced Public Participation Under MEPA.¹ As part of the Secretary's commitment to Environmental Justice, enhanced public participation will be required for the following projects as they undergo review in accordance with MEPA:

- (1) Any project that exceeds an Environmental Notification Form (ENF) threshold for air, solid and hazardous waste (other than remediation projects), or wastewater and sewage sludge treatment and disposal²; and
- (2) The project site is located within one mile of an EJ Population (or in the case of projects exceeding an ENF threshold for air, within five miles of an EJ Population).

Enhanced public participation may include use of alternative media outlets such as community or ethnic newspapers, use of alternative information repositories, and translation of materials or interpretation services prior to and during public meetings where the relevant EJ Population uses a primary language other than English in the home.

When scheduling public meetings, EEA shall recommend that project proponents consider the time of the meeting, availability of public transportation to locations, and whether locations are child-friendly and culturally appropriate. To the extent feasible, meetings should be held in places that community members already routinely use and feel comfortable visiting. Additionally, EEA shall recommend that project proponents consider whether outreach efforts need to include an educational component to ensure that community members have the information necessary to evaluate a project's potential impacts.

I would appreciate a phone call to discuss the way that these measure- particularly the public meetings have been/will be met- especially given that the EJ Director Position is currently vacant. Thank you for your consideration of these comments and for your service to all the residents of the Commonwealth.

Respectfully,

Claire B.W. Miller
Lead Community Organizer
Toxics Action Center

Czepiga, Page (EEA)

From: Tracy Wallace <wallacetracy99@gmail.com>
Sent: Wednesday, March 27, 2019 8:41 AM
To: Czepiga, Page (EEA)
Subject: Re: Parallel Products proposed project

Hello Page,

Thank you very much for this information. I would like to add some additional comments in regards to the MEPA EENF complete report. Within the project description, it states that the site is zoned Industrial C, page 67 (page 28). That is not entirely true, the site is also zoned residential and zoned mixed business. There is no mention of the residential zoning of abutting properties, of which Parallel Products purchased two newly built homes. The full site is not zoned industrial C when consulting the site plan presented to the planning board of New Bedford in January 2017. During the presentation on March 7th the presenter indicted no production of Methane gas, however on page 13 of the complete report states the PPNE may decide to add gasification in the future to the site. The gasification process creates syn gas. Syn gas composition is known to be 7% Methane, when Methane mixes with other gases hydrogen sulfide is created, which is the rotten egg odor. Due to the location of several residential neighborhoods being within meters of the facility, this would have a dramatic impact on the community and its quality of life. This is fairly new technology and its effects on the surrounding communities are unknown. I would also like to call your attention to the Waste to Energy Project in Stamford, CT that was voted down by the Waste Pollution Control Authority in early 2010 after losing faith in its technical and economic feasibility, finding the drier itself produces significant emissions and there would be negligible economic benefit. The supervising engineer of Stamford's Water Pollution Control Authority stated that the overwhelmingly unpleasant smell that wafted in the air was due to the trucks that were parked carrying the waste. He stated in winter months, it's bad. In summer months, it'll be even more exaggerated. The complete report states that odor from the MSW and bio solids site will be minimized with ionization and wet scrubbing and by stacks ten feet above the bio solids facility and stacks from the MSW building. The study within the report mentions odor is subjective. There is no real way to know if the odor will be a nuisance or not. It also appears the stacks will be visible from the surrounding residential neighborhoods, this can decrease a property value of up to 13%. A collection of property value impacts is available from the Center for Health, Environment and Justice. The noise from heavy truck traffic lowers property value at a rate of 30 to 50 times greater than cars. This is because at 50 feet heavy trucks emit noise 16 times louder than car traffic. With regard to accidents, a fatality is twice as likely when a car is involved in a crash with a truck vs. another car. The studies included in the complete report regarding traffic, noise, odor and air quality impacts were done using conservative assumptions and computer modeling, which often does not translate to reality. The creation of waste sites tends to be around lower socio-economic communities and it seems this is of no exception. Environmental racism is environmental injustice that occurs in practice and in policy within a racialized context, exposing neighborhoods that are economically and racially disadvantaged to hazardous waste. This facility would never be put next to residents of a wealthier community. I ask you this, would you want to live within 500m or 1000m of a MSW and Bio Solids facility?

Sincerely,

Tracy L. Wallace M.Ed
Resident of New Bedford

On Mon, Mar 11, 2019 at 5:00 PM Czepiga, Page (ENV) <page.czepiga@state.ma.us> wrote:

Tracy,

Czepiga, Page (EEA)

From: Tracy Wallace <wallacetracy99@gmail.com>
Sent: Friday, March 08, 2019 12:43 PM
To: Czepiga, Page (EEA)
Subject: Parallel Products proposed project

Hello Page,

I would like to take this opportunity to thank you and everyone who attended the meeting yesterday March 7, 2019. Everyone was very nice and welcoming. I would also like to take this opportunity to express my concern with Phase 2 of the proposed project by Parallel Products at the Industrial Park in the City of New Bedford. I would first like to bring your attention to the original site plan proposed by Parallel Products in January 2017, and approved on March 21, 2017 with conditions. Mr. Cusson, of Parallel Products, stated in the meeting yesterday that the intention of the site was always to have been a waste site. That is not indicated in the original site plan. The site plan is for cooler storage/warehouse and additional parking, etc.... The original proposed plan also brings attention to the inadequacy of the storm drains and the undersized stormwater basins that were to be addressed when the Certificate of Compliance was applied for. There is no statement within the site plan that indicates Parallel Products intent to move their entire operation from the Shawmut Ave location to the proposed Duchaine Blvd location. I find this to be in direct contrast to the statement made by Mr. Cusson. Regarding the MSW transfer location being moved to Duchaine Blvd, there is cause for concern due to the proximity of the residential developments in the area. The Shawmut Ave location is not in as close proximity to residential areas as the proposed Duchaine location would be. I also encourage you to visit the Shawmut Ave location. If you drive down Shawmut Ave toward the airport, there is a distinct amount of trash deposited over the roads as well as an odor. There are also concerns regarding health risks when living in close proximity to a transfer station, those include, asthma, shortness of breath, respiratory disease, cardiac disease, stroke, allergies, etc.... The proposed bio solids facility that is also part of the Phase 2 portion of the project is cause for concern as well. When researching bio solids, there appears to be much debate over their efficacy. Bio solids could contain heavy metals, hormones, antibiotics, steroids, etc... all that would be reentered into the environment if used. When describing the project the presenter indicated that there would be no methane gas production, it would not be anaerobic, nor would it use flocculants or bugs. It does not appear to be drying beds or an incinerator either, so how is this going to be done? Would there be a way to obtain more information about the process? The presenter also indicated that a chemical scrub would be used to clean the facility and control for odor. Where would these chemicals go after scrubbing the facility? Into the municipal water system? If a cleaning agent is needed, then there is going to be an odor. The presenter also mentioned studies conducted regarding traffic, noise, and odor, all not having a significant impact on the surrounding community. He pointed out that there would be an impact at the stop sign/intersection of Braley Rd. and Phillips Rd. I would like to mention that there is an older condominium complex at that intersection that would be impacted by the increased noise of the addition of 584 trips to the area. Is there a way to obtain copies of the studies which were conducted? A young man attended the meeting yesterday as well, he is a resident of the area. He stated he lives across the street from the current Duchaine location, and indicated that there is already a noise issue. Truck noises that go well past 10pm. Recently, several new homes have been built along Phillips Rd on the same side as the proposed site. Mr. Cusson indicated that Parallel Products bought the two homes closest to the site. Why did they buy the homes? They did not buy the other homes next to those two. Are they going to tell those home owners that their backyards will soon be abutting a waste site? The presenter indicated that the glass plant (part of Phase 1) would be round the clock, but was not sure the hours of operation of the MSW transfer station or bio solids facility. He thought it would be 7am to 6pm, however there seemed to be no confirmation of that. Would there be consequences in place for violations of those hours, if those are in fact the hours? The meeting was absolutely fascinating. It definitely brings to light the amount of waste we as a society produce, and the need for effective waste management. However, it would

be a shame if that need comes at the detriment of the community. I appreciate your time and consideration of my concerns.

Sincerely,

Tracy L Wallace, M.Ed
Resident of New Bedford

Czepiga, Page (EEA)

From: Vincent Carolan <vincent.h.carolan3@gmail.com>
Sent: Friday, March 29, 2019 2:59 PM
To: Czepiga, Page (EEA)
Subject: Industrial Park New Bedford

Greetings,

My name is Vincent Carolan and I am a long time resident of New Bedford and I have major concerns regarding the MSW plant and biosolids facility being built less than a mile from my house off of Exit 7 on route 140 affiliated with Parallel Products in the large Industrial Park on Duchaine Boulevard. It has the potential to effect the quality of life via traffic, odor, noise, and pollutants and there is no upside to having this facility stationed at this location within a residential neighborhood. I strongly urge you to find alternatives. Please consider.

Sincerely,
Vincent H. Carolan III
Resident of New Bedford

Czepiga, Page (EEA)

From: Wendy Graca <wendygraca@aol.com>
Sent: Wednesday, March 27, 2019 10:05 AM
To: Czepiga, Page (EEA)
Subject: Parallel Products NE Project in NB Industrial Park

Hello Page,

I am submitting the following comments regarding the Parallel Products Project, proposed for the New Bedford Industrial Park in the North End of New Bedford. I have just recently learned of this project, and after speaking with a few local residents have found that most people are in the same uninformed "boat" as I.

Please consider granting a significant and fair extension to the deadline for public comments. Residents in the area have little to no knowledge of this project, due to poor outreach and advertisement of public meetings by the company. Also, the one public meeting I was made aware of just a few days prior (due to my making inquiring phone calls), was held at 10:00 AM on a weekday. This is a community of working class citizens. Meetings that are intended to be informative to residents regarding something that could impact their daily lives and homes should be conducted at a time when they would not need to take time off of work to attend. That is not acceptable "outreach" and does not send a message that the company is working in "good faith" and "transparency". For that reason to start, this project does not make me comfortable.

The nature and scope of this project is not to be taken lightly. Little is known about the so-called "cutting edge" technology of this facility, since there are so few of these plants in the US. It is unfair and burdensome to expect the citizens of New Bedford to take on yet another industrial project in their community without giving them all of the information, as well as the opportunity to ask questions and time to submit informed comments.

Sincerely,

Wendy M. Graca
(508) 254-6333

APPENDIX 2

MEPA – FINAL RECORD OF DECISION (FROD)



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Charles D. Baker
GOVERNOR

Karyn E. Polito
LIEUTENANT GOVERNOR

Kathleen A. Theoharides
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
<http://www.mass.gov/eea>

May 15, 2019

FINAL RECORD OF DECISION

PROJECT NAME	: Parallel Products of New England
PROJECT MUNICIPALITY	: New Bedford
PROJECT WATERSHED	: Buzzards Bay
EEA NUMBER	: 15990
PROJECT PROPONENT	: Parallel Products of New England, LLC
DATE NOTICED IN MONITOR	: April 24, 2019

Pursuant to the Massachusetts Environmental Policy Act (MEPA, M.G.L.c.30, ss. 61-62I) and Section 11.11 of the MEPA regulations (301 CMR 11.00), I have reviewed the Expanded Environmental Notification Form (EENF) and hereby **grant** a Phase 1 Waiver that will allow the first phase of development, as described in the EENF, to proceed to permitting prior to completion of the Draft Environmental Impact Report (Draft EIR) and Final EIR (FEIR) for the remaining development.

I received comment letters on the Draft Record of Decision from the City of New Bedford (City) and residents which identify concerns with the project. Comments from the City and City Councilor Brad Markey identify concerns with the noise, odor, traffic, and other cumulative impacts associated with full-build of the project. Comments from the City also request that I deny the Phase 1 Waiver request. I have weighed these concerns and considered the environmental impacts of Phase 1. I note that Phase 1, on its own, would not require MEPA review as it does not meet or exceed any MEPA review thresholds. Additionally, Phase 1 is an allowed use under the Proponent's existing General Permit for recycling operations. The Proponent will prepare Draft and Final EIRs which will provide additional opportunities for public review of the cumulative environmental impacts of the full-build project. Subsequent state and local permitting processes will also include additional meaningful opportunities for

review and refinement of potential environmental impacts and measures to avoid, minimize, and mitigate environmental impacts.

Project Description

As described in the EENF, the project includes the phased construction of a glass recycling/processing facility; a solid waste handling and processing facility that will accept 1,500 tons per day (tpd) of municipal solid waste (MSW) and construction & demolition (C&D) waste; and a biosolids drying facility that will accept 50 dry tpd of biosolids.

Phase 1 includes construction of a glass recycling/processing facility within a 27,500-square foot (sf) building, construction of a railroad (RR) sidetrack from the main RR line to the glass processing facility, and installation of a 1.9 megawatt (MW) solar photovoltaic (PV) array. The glass recycling/processing facility will recycle glass collected through the Massachusetts bottle deposit system. Glass processing will include crushing, sizing and separation of the glass by color. Processed glass will be stored in bunkers until it is loaded into rail cars or trucks to shipment for bottle manufacturers. Phase 1 is proposed to meet an immediate regional need for glass processing in the region by providing an alternative market for glass that would otherwise be disposed.

Phase 2 includes construction of the MSW and C&D transfer station and the biosolids drying facility and extension of the RR sidetrack to service these facilities. Phase 2 will construct a 50,000-sf waste handling building which will be connected to an existing 103,000-sf building. The larger building will house processing equipment which will remove waste ban items and separate out recyclable materials. It also includes construction of a stand-alone 30,000-sf building to house the biosolids processing equipment. Biosolids processing will consist of drying the biosolids to reduce the volume and tonnage of the material prior to off-site disposal. Shipment of all outbound material will primarily occur via rail car.

Project Site

The 71-acre project site is located within the New Bedford Industrial Park at 100 Duchaine Boulevard in New Bedford. The site is generally bounded by industrial properties and Samuel Barnett Boulevard to the north, Phillips Road to the east, undeveloped land to the south, and a rail line and the Acushnet Cedar Swamp State Reservation to the west. The site was previously developed by the Polaroid Corporation and contains access roads, parking areas, stormwater management infrastructure and numerous buildings. The Proponent purchased the site in 2016 and has relocated a portion of its processing and recycling operations from 969 Shawmut Avenue to the project site. The site also contains 1.5 MW of solar PV mounted on a series of carport canopies. Access to the site is provided from Duchaine Boulevard, via an internal one-way loop roadway surrounding the proposed facility. The site has adequate area to support truck movement and access and is easily accessible from Route 140 (Alfred M Bessette Memorial Highway) via Braley Road or Phillips Road.

Wetland resource areas in the vicinity of the project include Bank, Bordering Vegetated Wetlands (BVW), Land under Water (LUW), and Riverfront Area. The project site is not located in Priority and/or Estimated Habitat as mapped by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP) or an Area of Critical Environmental Concern

(ACEC). The site does not contain any structures listed in the State Register of Historic Places or the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth.

Environmental Impacts and Mitigation

According to the EENF, potential environmental impacts of Phase 1 include alteration of 4.6 acres of land, creation of 21,780 sf of impervious area, generation of 108 new average daily trips (adt), consumption of 150 gallons per day (gpd) of potable water, and generation of 150 gpd of wastewater. Phase 1 will impact BVW (4,087 sf), Bank (36 linear feet (lf), and Riverfront Area (900 sf).

The following commitments are proposed to avoid, minimize and mitigate environmental impacts associated with Phase 1 including: limiting all glass processing to an enclosed building; designing the RR crossing to reduce impacts to BVW and RFA; wetland replication; constructing the project on a previously altered site; use of rail to ship glass off-site; construction period erosion and sedimentation control measures; and generating renewable energy with solar PV systems.

Jurisdiction and Permitting

The project is undergoing MEPA review and requires the preparation of a mandatory EIR pursuant to Sections 11.03(5)(a)(6) and 11.03(9)(a) of the MEPA regulations because it requires State Agency Actions and will result in: New Capacity for storage, treatment, processing, combustion or disposal of 150 or more wet tpd of sewage sludge and New Capacity of 150 or more tpd for storage, treatment, processing, or disposal of solid waste (respectively). Because it requires an EIR, the project is subject to review in accordance with the MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol. The project is also subject to the Executive Office of Energy and Environmental Affairs' Environmental Justice (EJ) Policy.

The Proponent consulted with the Massachusetts Department of Environmental Protection (MassDEP) and the MEPA Office regarding the enhanced outreach requirements of the EJ Policy. The Proponent published Spanish and Portuguese language versions of the MEPA Public Notice in El Planeta and the Portuguese Times (respectively) in addition to the New Bedford Times. The Proponent also notified the following organizations of the project and MEPA scoping session and provided them with a copy of the EENF: Coalition for Social Justice, Alternatives for Community & Environment, Hands Across the River Coalition, and Old Bedford Village. These were identified as EJ leaders based on consultation with MassDEP. The comment period was extended for two-weeks at the Proponent's request to provide additional time to review and comment on the EENF. The comment period commenced on February 20, 2019 and concluded on April 5, 2019. I accepted all late comments as allowed in accordance with 301 CMR 11.06(3). A MEPA site visit and scoping session was held on March 7, 2019. Spanish and Portuguese translation services were provided at the MEPA scoping session.

Phase 1 of the project will receive Financial Assistance from the Massachusetts Department of Transportation (MassDOT) Industrial Rail Access Program (IRAP) in the amount of \$500,000. Phase 1 will require an Order of Conditions from the New Bedford Conservation Commission (or in the case of

an appeal, a Superseding Order of Conditions from MassDEP). It may require an amended Site Plan Approval from the New Bedford Planning Board.

Because the Proponent is seeking Financial Assistance, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Phase 1 Waiver Request

The Proponent submitted an EENF in support of its request for a Phase 1 Waiver. Consistent with this request, the EENF was subject to an extended 30-day public comment period. At the Proponent's request, the comment period was extended for an additional two-weeks and closed on April 12, 2019.

On April 12, 2019, I issued a Draft Record of Decision (DROD) proposing to grant a Phase 1 Waiver, provided that the Proponent hold a public meeting prior to the close of the comment period on the DROD. This provided the community with an additional opportunity to learn about and comment on the project. The DROD was published in the Environmental Monitor on April 24, 2019, commencing the 14-day public comment period, which concluded on May 8, 2019. The Proponent held a public meeting on the project on April 29, 2019 at 6:00 PM in the auditorium of the Pulaski Elementary School in New Bedford. The Proponent created and distributed a fact sheet for the project which provided a summary of the project and identified required permits and opportunities for public comment. Spanish and Portuguese translation services were also provided at the public meeting. The Proponent notified the following organizations of the meeting: Coalition for Social Justice, Alternatives for Community & Environment, Hands Across the River Coalition, Old Bedford Village, Conservation Law Foundation, and Toxics Action Center. Notice of the public meeting was also provided on the radio (1420 WBSM), through a Facebook campaign via New Bedford Guide, and published in the Standard Times on April 24th and 26-28th. The Proponent has committed to hold additional public meetings approximately every 30 days. I acknowledge the Proponent's outreach efforts and encourage the Proponent to continue this productive dialogue with stakeholders.

Standards for All Waivers

The MEPA regulations at 301 CMR 11.11(1) state that I may waive any provision or requirement in 301 CMR 11.00 not specifically required by MEPA and may impose appropriate and relevant conditions or restrictions, provided that I find that strict compliance with the provision or requirement would:

- (a) result in an undue hardship for the Proponent, unless based on delay in compliance by the Proponent; and
- (b) not serve to avoid or minimize Damage to the Environment.

Determinations for a Phase 1 Waiver

The MEPA regulations at 301 CMR 11.11(4) state that, in the case of a partial waiver of a mandatory EIR review threshold that will allow the proponent to proceed with Phase 1 of the project

prior to preparing an EIR, I shall base the finding required in accordance with 301 CMR 11.11(1)(b) on a determination that:

- (a) the potential environmental impacts of Phase 1, taken alone, are insignificant;
- (b) ample and unconstrained infrastructure facilities and services exist to support Phase 1;
- (c) the project is severable, such that Phase 1 does not require the implementation of any other future phase of the project or restrict the means by which potential environmental impacts from any other phase of the project may be avoided, minimized or mitigated; and
- (d) the agency action on Phase 1 will contain terms such as a condition or restriction, so as to ensure due compliance with MEPA and 301 CMR 11.00 prior to commencement of any other phase of the project.

Findings

Based upon review of the EENF, consultation with State Agencies, and review of public comments, I find that the Waiver Request has merit and that the Proponent has demonstrated that Phase 1 meets the standards for all waivers at 301 CMR 11.11(1). The EENF provided sufficient information regarding potential impacts for the purpose of MEPA review, it demonstrated that environmental impacts associated with Phase 1 are not significant and it identified measures to avoid, minimize, and mitigate potential impacts.

As noted in the EENF and confirmed by MassDEP's comments on the EENF, there are limited outlets for recycling container glass within the Commonwealth and New England since the last glass bottle production facility in the region closed in 2018. This has resulted in increased shipping distances to bottle production facilities, which combined with a nationwide trucking shortage, has increased costs for recycling programs. Phase 1 will provide a new outlet for processing of glass bottles and will facilitate reliable and economical shipment of the glass to recycling markets and bottle manufacturers via rail car. Comments from MassDEP on the EENF confirm that Phase 1 will enhance glass processing in the region by offering alternative markets for those collecting and diverting container glass from landfills. Phase 1 includes construction of a building and installation of solar PV within previously altered and impervious areas and extension of a RR line using funds from MassDOT's IRAP grant program.

In light of the regional benefits and limited impacts associated with Phase 1, strict compliance with the requirement to prepare a Mandatory EIR for the project prior to Phase 1 would result in undue hardship and would delay the regional benefits to the glass recycling market identified in MassDEP's comment letter on the EENF. The Proponent will redevelop a previously altered site within an industrial park, which has adequate vehicular access and is easily accessible from Route 140 (Alfred M Bessette Memorial Highway). In addition, the Proponent has committed to implement adequate measures to avoid, minimize, and mitigate Phase 1 impacts. Comments from MassDEP and MassDOT on the EENF indicate support for the Waiver. I find that strict compliance with the requirement to submit an EIR prior to completion of Phase 1 of the project would result in an undue hardship and would not serve to avoid or minimize Damage to the Environment.

In accordance with 301 CMR 11.11(4), the latter finding is based on my determination that:

1. The potential environmental impacts of Phase 1, taken alone, are insignificant.

Potential impacts associated with Phase 1 do not exceed ENF thresholds. The majority of development is located within previously altered and impervious areas. Potential environmental impacts of Phase 1 are primarily associated with construction of the RR side track which will alter wetland resource areas. The New Bedford Conservation Commission will review Phase 1 to determine its consistency with the Wetlands Protection Act (WPA), the Wetlands Regulations (310 CMR 10.00), and associated performance standards, including the Stormwater Management Standards (SMS). The Proponent will provide wetland replication and design the crossing to comply with MassDEP's Stream Crossing Standards.

2. Ample and unconstrained infrastructure facilities and services exist to support Phase 1.

The site provides infrastructure necessary to support Phase 1, including access roads, water and sewer, and electricity. Phase 1 will construct a RR extension to facilitate shipment of outbound material via rail car. Existing roadway infrastructure can accommodate traffic generation associated with the project. Based on the foregoing, I find that ample and unconstrained infrastructure exists to support Phase 1.

3. The project is severable, such that Phase 1 does not require the implementation of any other future phase of the project or restrict the means by which potential environmental impacts from any other phase of the project may be avoided, minimized or mitigated.

The Phase 1 project can function independently without the remaining development. Phase 1 does not require the implementation of remaining development phases or restrict the means by which potential environmental impacts from remaining development may be avoided, minimized, or mitigated.

4. The Agency Action(s) on Phase 1 will contain terms such as a condition or restriction, so as to ensure due compliance with MEPA and 301 CMR 11.00 prior to commencement of any other phase of the project.

The Proponent is seeking Financial Assistance from MassDOT for Phase 1. I hereby direct MassDOT to include a condition in their funding agreement that requires compliance with MEPA and 301 CMR 11.00 prior to commencement of Phase 2. Based on the foregoing, I find that Phase 1 of the project can commence prior to the completion of the MEPA review process.

Given the foregoing, and subject to the conditions included herein, I find that a requirement to complete MEPA review prior to Phase 1 is not necessary to demonstrate that it will avoid, minimize, and mitigate potential Damage to the Environment to the maximum extent practicable, and that a requirement to do so would therefore cause undue hardship and would not serve to minimize Damage to the Environment.

Conclusion

Based on these findings, I have determined that this waiver request has merit. A DROD was issued on April 12, 2019 and was published in the Environmental Monitor on April 24, 2019 in accordance with 301 CMR 11.15(2), which began the public comment period. The public comment

period lasted for 14 days and concluded on May 8, 2019. Accordingly, I hereby **grant** a Phase 1 Waiver to allow the Proponent to proceed with Phase 1 of the project prior to completing the EIR process.

May 15, 2019

Date

K. Theoharides

Kathleen A. Theoharides

Comments received on the DROD:

05/02/2019 City Councilor Brad Markey

05/05/2019 Ron Cabral

05/10/2019 Jonathan F. Mitchell, Mayor, City of New Bedford

05/15/2019 Donna Poyant

Form letter beginning "I am strongly opposed to the..." (1 received)

KAT/PRC/prc



City of New Bedford

Office of City Council

133 William Street • New Bedford, Massachusetts 02740
(508) 979-1455 • Fax: 508-979-1451

Brad Markey
Councillor Ward One

RECEIVED

MAY 10 2019

MEPA

May 2, 2019

RE: EEA 15990 Parallel Products

Dear Ms. Czepiga

I am writing you regarding my concerns and the concerns of the residents in the surrounding areas on the Parallel Products project which is a proposed expansion at 100 Duchaine Blvd. in the New Bedford Industrial Park. The Industrial Park as well as the proposed expansion abuts heavily populated neighborhoods and we are concerned that this expansion can have a detrimental effect on these neighborhoods.

There are many concerns with the processing at this facility, health concerns of toxins being emitted into the air, odor, as well as issues with the proximity to wet lands.

Other issues effecting the quality of life in the area from this project would be noise, air pollution from the processing and, with the increase of truck traffic going into this facility every day, air quality from the diesel emissions.

While air quality is a major concern there is also traffic issues. With the many trucks making their way into the facility this is adding more traffic congestion into an already high traffic area.

I ask you to carefully review this project and to consider the neighborhood's concerns which are stated above and to their quality of living.

Sincerely,

Brad Markey

City Councilor Ward 1



CITY OF NEW BEDFORD
JONATHAN F. MITCHELL, MAYOR

May 10, 2012

Executive Office of Energy and Environmental Affairs (EEA)
Attention: MEPA Office
Paige Czepiga: EEA No. 15990
100 Cambridge St, Suite 900
Boston MA 02114

RE: EEA 15990: Parallel Products

Dear Ms. Czepiga,

I write in strong opposition to the establishment of a glass/solid waste/biosolids processing facility to be operated by Parallel Products at 100 Duchaine Boulevard in New Bedford. In addition, I strongly urge MEPA to deny a Phase I Waiver to allow Parallel Products to proceed with the first phase of development as described in the April 12, 2019 Draft Record of Decision.

The company has operated a glass bottle recycling operation at the location for some time in compliance with local zoning, site plan conditions, and conservation restrictions. However, the site as newly conceived, would be an entirely different creature--especially with the inclusion of a biosolids processing facility as detailed in the company's MEPA filing in February.

On March 29 I submitted comments to MEPA regarding the proposed project. The concerns and objections I raised on behalf of the City all remain valid. (I refer you to items 1-7 contained in the letter.) Most important, I made clear then, as well as in several subsequent public remarks, that the burden was on the company to demonstrate that its project would not pose a threat to the quality of life in surrounding neighborhoods.

Since that time, concerns regarding the potential odor, noise, and traffic impacts of the Parallel Products proposal have grown significantly among both neighborhood residents and municipal departments. Based on what we have learned in recent weeks regarding potential odor, noise, and traffic impacts, there is ample evidence to conclude that this project is wrong for New Bedford.

With respect to the company's Waiver request, I believe it important for MEPA to consider the request in the full context of the development proposed at the site. The first development phase is now a part of a much larger, more impactful, multi-faceted project. It is therefore imperative that permitting authorities revise their approach accordingly. For example, at least one component in the first phase (rail access) now also has a direct connection to uses (including biosolid processing) that are being contemplated in future phases. In this broader context, it does not make sense to treat any Phase I component in isolation.

It is therefore wrong and irresponsible to provide a Waiver for certain aspects of the proposed expansion and allow the facility to be effectively approved piecemeal by the state, without adequate analysis and an understanding of the cumulative impact of the project as a whole. On behalf of local residents and businesses, I urge MEPA to refrain from approving any Waivers and instead mandate a full Environmental Impact Report be completed before any state decisions are made on any aspect of development at the site.

Thank you for this opportunity to express my opposition to the Waiver and the project more generally.

Sincerely,



Jon Mitchell

CC: Energy & Environmental Affairs Secretary Kathleen Theoharides
MassDEP Commissioner Martin Suuberg
Senator Mark Montigny
Representative Paul Schmid
Representative Christopher Hendricks
New Bedford City Council
New Bedford Planning Board

Czepiga, Page (EEA)

From: Buckley, Deirdre (EEA)
Sent: Wednesday, May 15, 2019 1:05 PM
To: Czepiga, Page (EEA)
Subject: FW: Parallel products of New Bedford

-----Original Message-----

From: Schwalbert, Nick (EEA) <nick.schwalbert@mass.gov> On Behalf Of internet, env (EEA)
Sent: Wednesday, May 15, 2019 1:01 PM
To: Buckley, Deirdre (EEA) <deirdre.buckley@mass.gov>
Subject: FW: Parallel products of New Bedford

Sending your way per Sarah's request.

Nicholas Schwalbert
617-626-1022

-----Original Message-----

From: Donna [<mailto:dmpeko@comcast.net>]
Sent: Wednesday, May 15, 2019 11:07 AM
To: internet, env (EEA)
Subject: Parallel products of New Bedford

I am writing as I believe the site description in EEA #15990 is deceiving. It does not reflect the hundreds of single family home east of Phillips road. It describes a site surrounded by industrial sites.

It also states that glass processing is limited to enclosed building. Glass processing is occurring under a canopy and residents whose home are only a few hundred feet away are already noting odors and noise issues.

I am writing to request your agency review this decision as well as deny phase 2 which would have a great affect on the adjacent neighborhoods.

Donna Poyant
39 Ridgewood Rd New Bedford MA 02745

Sent from my iPhone

Secretary of Energy & Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114
Attn: MEPA Office

RECEIVED

MAY 02 2019

MEPA

RE: Parallel Products of New England, LLC

I am **strongly opposed** to the Parallel Products of New England, LLC Waste Transfer Station project at 100 Duchaine Boulevard, New Bedford, MA. We do not need this horrendous project in our neighborhood.

There is no good reason to impose a facility like this on a community that has plenty of capacity for the disposal of waste. We do not want to be the dumping ground of Southeastern Massachusetts. As a group we will use whatever means necessary to make sure our neighborhood is not dumped on!!

Sincerely,

Signature Robert E Charon

Name ROBERT E CHARON

Address 3913 ACUSHNET AVE
NEW BEDFORD MA

Czepiga, Page (EEA)

From: Ron <rrcrt@aol.com>
Sent: Sunday, May 05, 2019 11:55 PM
To: antonio.cabral@mahouse.gov; chris.hendricks@mahouse.gov; christopher.markey@mahouse.gov; paul.schmid@mahouse.gov; william.straus@mahouse.gov; michael.moynihan@masenate.gov; mark.montigny@masenate.gov; Ian.Abreu@newbedford-ma.gov; Naomi.Carney@newbedford-ma.gov; Debora.Coelho@newbedford-ma.gov; Hugh.Dunn@newbedford-ma.gov; Brian.Gomes@newbedford-ma.gov; Dana.Rebeiro@newbedford-ma.gov; Linda.Morad@newbedford-ma.gov; Joseph.Lopes@newbedford-ma.gov; Brad.Markey@newbedford-ma.gov; Maria.Giesta@newbedford-ma.gov; Scott.Lima@newbedford-ma.gov; Jon.Mitchell@newbedford-ma.gov; kristine.arsenault@newbedfordma.gov
Cc: Buckley, Deirdre (EEA); Schluter, Eve (EEA); Wixon, Josephine (EEA); Canaday, Anne (EEA); Patel, Purvi (EEA); Czepiga, Page (EEA); Stryisky, Alexander (EEA); Flaherty, Erin (EEA); MEPA (ENV); TimC@parallelproducts.com; newbedford@parallelproducts.com
Subject: Fwd: Attached letter ref Parallel Products, Inc.
Attachments: Draft-Record-of-Decision-April-12-2019.pdf

Follow Up Flag: Follow up
Flag Status: Completed

Good morning

Please read the attached letter regarding Parallel Products and the Commonwealth of Massachusetts Environment and Energy. I was quite surprised when I read the letter in particular Page 3 Paragraph 2 which is copied below.

The Proponent consulted with MassDEP and the MEPA Office regarding the enhanced outreach requirements of the EJ Policy. The Proponent published Spanish and Portuguese language versions of the MEPA Public Notice in El Planeta and the Portuguese Times (respectively) in addition to the New Bedford Standard Times. The Proponent also notified the following organizations of the project and MEPA scoping session and provided them with a copy of the EENF: Coalition for Social Justice, Alternatives for Community & Environment, Hands Across the River Coalition, and Old Bedford Village. These were identified as EJ leaders based on consultation with MassDEP. The comment period was extended for two-weeks at the Proponent's request to provide additional time to review and comment on the EENF. The comment period commenced on February 20, 2019 and concluded on April 5, 2019. I accepted all late comments as allowed in accordance with 301 CMR 11.06(3). A MEPA site visit and scoping session was held on March 7, 2019. Spanish and Portuguese translation services were provided at the MEPA scoping session.

Just wondering if any of the City and State Officials knew about this meeting? If so, why wasn't the residents in the area invited or made aware of this meeting?

Why were the Coalition for Social Justice, Alternatives of Community & Environment, Hands Across the River Coalition, and Old Bedford Village invited?

Also read that the company wants the state to give \$500,000 for a side rail line to the property. This company is privately owned, why should we the taxpayers pay for a side rail line for the Parallel Products, Inc.? We are unable to get a commuter rail line from New Bedford to Boston although the state is working on it, lol.

We the residents/taxpayers, which I have been in contact with many, in the area deserve another meeting to be held at the Pulaski School, Parallel Products, Inc. should post at their expense in all news media a notice of such meeting, and being in large print. Hopefully Mayor Mitchel would be able to attend this meeting, sadly he was unable to attend the April 29th meeting.

Again, I would like to know if anyone of the City Officials, or State Officials knew about this meeting, I would like to hear from City and State Officials, that is if anyone is willing to respond.

My E-mail address is: RRCRT@aol.com

Respectfully,

***Ron R. Cabral
67 Blaze Road
New Bedford, MA 02745***

APPENDIX 3

MEPA SECRETARIES CERTIFICATE FOR THE DEIR



The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
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Boston, MA 02114

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January 30, 2020

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: Parallel Products of New England
PROJECT MUNICIPALITY	: New Bedford
PROJECT WATERSHED	: Buzzards Bay
EEA NUMBER	: 15990
PROJECT PROPONENT	: Parallel Products of New England, LLC
DATE NOTICED IN MONITOR	: November 22, 2019

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62I) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Draft Environmental Impact Report (DEIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations. The Proponent may prepare and submit for review a Final Environmental Impact Report (FEIR).

I received comments from elected officials, the City of New Bedford (City) and residents opposed to the project because of its noise, air quality, odor and traffic and roadway impacts and its proximity to residences and schools. Many commenters are residents of the neighborhood adjacent to the project site and are concerned that the project would affect the quality of life of residents, change the overall character of the neighborhood and impact property values. Many commenters expressed the need for a longer comment period to review the DEIR. The Proponent is required to submit additional analyses in the FEIR documenting the project's impacts and proposed mitigation measures and responding to all comments received on the DEIR. MEPA requires Proponents to prepare documents to provide opportunities for the public to understand a project's impacts, identify additional relevant information and analyses that should be provided, challenge the assumptions of the Proponent's analyses and recommend design revisions and mitigation measures. A key purpose of MEPA is to "assist each Agency in using (in addition to applying any other applicable statutory and regulatory standards and requirements) all feasible means to avoid Damage to the Environment or, to the extent Damage to the Environment cannot

be avoided, to minimize and mitigate Damage to the Environment to the maximum extent practicable.” 301 CMR 11.01(1)(a). However, MEPA does not ultimately approve or deny permits for the project. For this reason, while I expect that the FEIR will serve to provide further transparency and explanations of environmental impacts and mitigation, the many concerns about the design of the project will continue to be reviewed as the final design of the project proceeds to permitting at the conclusion of the MEPA process before the Massachusetts Department of Environmental Protection (MassDEP) and the City. This certificate is not intended to prejudge the outcome of those subsequent permitting procedures.

Project Description

As described in the DEIR, the project includes the construction of a waste management facility comprised of a glass recycling/processing facility; a solid waste handling and processing facility that will accept 1,500 tons per day (tpd) of municipal solid waste (MSW) and construction & demolition (C&D) waste; and a biosolids drying facility that will accept 50 dry tpd of biosolids.

The project will be constructed in two phases. Phase 1 includes construction of: a 27,500-square foot (sf) building for glass recycling/processing, a 23,050-sf bunker building attached to the north side of the new glass recycling/processing building, a 22,819-sf side bunker building southeast of the new glass recycling/processing building, a railroad (RR) sidetrack from the main RR line to the glass processing facility, and installation of a 1.9-megawatt (MW) solar photovoltaic (PV) array. The glass recycling/processing facility will also occupy an approximately 50,000-sf portion of an existing 92,200-sf building (“existing building”). The glass recycling/processing facility will recycle glass collected through the Massachusetts bottle deposit system. Glass processing will include crushing, sizing and separation of the glass by color. Processed glass will be stored in bunkers until it is loaded into rail cars or trucks to shipment for bottle manufacturers. Phase 1 was proposed to meet an immediate regional need for glass processing in the region by providing an alternative market for glass that would otherwise be discarded. The proponent submitted an Expanded Environmental Notification Form (EENF) in February 2019 with a Phase 1 Waiver request to allow Phase 1 to proceed prior to completion of MEPA review of the second phase of the project. A Phase 1 Waiver was granted in a Final Record of Decision (FROD) issued on May 15, 2019 and no further MEPA review of the Phase 1 project components, as described in the EENF, is required. The glass recycling facility is operating in the existing building and the 27,500-sf building has been constructed but is not yet in use. Construction of the other Phase 1 components has not commenced.

The DEIR provided additional information and analysis regarding Phase 2, which includes the MSW and C&D transfer station, the biosolids drying facility and extension of the RR sidetrack to service these facilities. The transfer station will be comprised of a 48,900-sf MSW and C&D tipping and processing building attached to the west side of the existing building, which will house sorting and processing equipment to remove waste ban items and separate out recyclable materials. The MSW tipping building will have four 70-ft high (above ground level) exhaust stacks and the MSW processing building will have three 70-ft high exhaust stacks. The biosolids facility will be constructed as a stand-alone 30,000-sf building northeast of the glass recycling facility. Biosolids processing will consist of drying the biosolids to reduce the volume and tonnage of the material prior to off-site disposal. The biosolids building will include 12 40-ft high exhaust stacks. Shipment of all outbound material will primarily occur via rail car.

Project Site

The 71-acre project site is located within the New Bedford Industrial Park at 100 Duchaine Boulevard in New Bedford. The site is generally bounded by industrial properties and Samuel Barnett Boulevard to the north, Phillips Road to the east, undeveloped land to the south, and RR tracks and the Acushnet Cedar Swamp State Reservation to the west. The site was previously developed by the Polaroid Corporation and contains access roads, parking areas, stormwater management infrastructure and numerous buildings. The Proponent purchased the site in 2016 and has relocated a portion of its processing and recycling operations from 969 Shawmut Avenue in New Bedford to the project site. The site also contains a 1.5-MW solar PV system mounted on a series of carport canopies. Access to the site is provided from Duchaine Boulevard, via an internal one-way loop roadway surrounding the proposed facility.

Most of the northern and western parts of the site are comprised of wetland resource areas, including Bank, Bordering Vegetated Wetlands (BVW), Land Under Water (LUW), and Riverfront Area. The project site is not located in Priority and/or Estimated Habitat as mapped by the Division of Fisheries and Wildlife's (DFW) Natural Heritage and Endangered Species Program (NHESP) or an Area of Critical Environmental Concern (ACEC). The site does not contain any structures listed in the State Register of Historic Places or the Massachusetts Historical Commission's (MHC) Inventory of Historic and Archaeological Assets of the Commonwealth.

Environmental Impacts and Mitigation

Potential environmental impacts associated with full-build of the project include alteration of 2.8 acres of land; creation of 2.2 acres of new impervious area (18.2 acres total at the site); alteration of 4,095 sf of BVW, generation of 568 new average daily trips (adt), use of 70,150 gallons per day (gpd) of potable water, and generation of 113,750 gpd of wastewater. Of these impacts, the following are attributable to Phase 2: alteration of 2.24 acres of land, addition of 2.2 acres of impervious area, generation of 450 adt (including 300 truck trips), use of 70,150 gpd of potable water and generation of 113,750 gpd of wastewater. Construction and operation of the facilities will emit air pollutants and odors and generate noise. The project will also emit Greenhouse Gasses in connection with its energy use and trip generation.

Measures to avoid minimize, and mitigate project impacts include constructing the project on a previously altered site; enclosing all areas where discharge, handling and processing of glass, solid waste and biosolids will occur; use of rail to transport the majority of material from the site; installation of a floor drain collection system that drains to a holding tank or sanitary sewer system to prevent groundwater contamination; operation of a 3.5-megawatt (MW) canopy-mounted solar photovoltaic (PV) generating system; erosion and sedimentation controls; stormwater management controls and implementation of Best Management Practices (BMPs) to minimize odor, dust, noise, and litter impacts.

Jurisdiction and Permitting

The project is undergoing MEPA review and requires the preparation of a mandatory EIR pursuant to Sections 11.03(5)(a)(6) and 11.03(9)(a) of the MEPA regulations because it requires State Agency Actions and will result in: New Capacity for storage, treatment, processing,

combustion or disposal of 150 or more wet tpd of sewage sludge and New Capacity of 150 or more tpd for storage, treatment, processing, or disposal of solid waste (respectively). Because it requires an EIR, the project is subject to review in accordance with the MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol. The project is also subject to the Executive Office of Energy and Environmental Affairs' Environmental Justice (EJ) Policy as it is located within an EJ Population and exceeds mandatory thresholds for sewage and solid waste.

Phase 1 of the project will receive Financial Assistance from the Massachusetts Department of Transportation (MassDOT) Industrial Rail Access Program (IRAP) in the amount of \$500,000. Phase 1 will require an Order of Conditions from the New Bedford Conservation Commission (or in the case of an appeal, a Superseding Order of Conditions from MassDEP) and a new or amended Site Plan Approval from the New Bedford Planning Board.

The remainder of the project will require a Determination of Site Suitability, Authorization to Construct, and Authorization to Operate and may require a Limited Plan Approval (LPA) for air emissions from MassDEP and a NPDES General Permit (GP) for Construction and/or Multi-Sector General Permit (MSGP) for Stormwater Discharges Associated with Industrial Activity from the U.S. Environmental Protection Agency (EPA). The project will also require a number of local permits from the City of New Bedford, including: Site Assignment from the Board of Health, a new and/or Amended Order of Conditions from the Conservation Commission, and a new and/or amended Site Plan Approval from the Planning Board.

Because the Proponent is seeking Financial Assistance, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations. The impacts arising from Phase 2 also are closely related to the required State Permits, including MassDEP's site suitability standards for solid waste handling facilities.

Changes Since the Filing of the EENF

The Proponent identified the following changes to the project design since the filing of the EENF:

- The design of the southwest corner of the MSW building has been modified resulting in a reduction of the area of the building from 50,000 sf to 48,900 sf;
- The solar canopy has been expanded to cover the eastern end of the rail spurs;
- The configuration of the side building building has changed (but not its overall size);
- The bunker buildings will be completely enclosed to minimize noise impacts; and,
- The size of the proposed noise barrier adjacent to the biosolids building has increased to increase its noise mitigation value.

Review of the DEIR

The DEIR provided a detailed description of Phase 2, including plans of existing and proposed conditions, identified potential environmental impacts and described mitigation measures. It included reports documenting the project's air quality, odor, noise, and traffic impacts, its GHG emissions, and public outreach and public health data provided in accordance

with the EEA Environmental Justice Policy. The DEIR included a copy of the Notice of Intent and a detailed drainage study submitted to the New Bedford Conservation Commission and described impacts to wetland resource areas and proposed BVW replication and other mitigation measures. It provided a brief description of applicable statutory and regulatory standards and requirements, reviewed how the project will meet relevant standards and provided an update on the state, federal, and local permitting process. The DEIR included a Response to Comments received on the EENF and provided draft Section 61 Findings identifying the Proponent's mitigation commitments. While providing a substantial amount of information about the project, the DEIR did not follow the format prescribed in the Scope included in the EENF. The Proponent should review the formatting requirements included in the Scope below and consult with the MEPA office prior to completing the FEIR.

Solid Waste

The DEIR provided additional information on the operation of the proposed facilities, including how C&D, baled and loose MSW, and dewatered cake and thickened wet slurry biosolids, will be delivered, transferred from vehicles, processed, and shipped-off site. It described safety measures to be implemented at the facilities and reviewed how the project would seek to meet the Site Suitability criteria. As discussed below, the ultimate determination of whether these criteria are met will be left to local and state agencies at subsequent permitting stages after the conclusion of MEPA review.

Facility Operations

According to the DEIR, MSW, C&D and biosolids will be delivered to the facility by truck between 5:00 AM and 9:00 PM, Monday through Saturday. Biosolids delivery may also occur on Sunday between 6:00 AM and 6:00 PM. The facility will receive C&D, baled MSW, and loose MSW in live floor trailers, transfer trailers, and packer trucks (respectively). All material will be deposited and processed within the tipping and processing building. Trucks will be weighed on a truck scale and backed into the proposed tipping building to tip their load. Processing equipment and manual picking lines will remove waste ban items, including recyclables, from the mixed waste and separate other recyclable materials for recycling or diversionary uses. Extracted recyclables are expected to comprise 20 percent of the MSW throughput and will be sent to recycling markets by rail or truck. The facility will include two processing lines with a total capacity of 40 tons of MSW per hour. Residual waste will be baled, shrink-wrapped, and transported via rail for disposal at off-site locations. The facility will receive Category 2 (pre-processed) and Category 3 (bulky waste with minimal recyclable material) C&D, which will be delivered to the tipping facility by in trailers. According to the DEIR, MSW to be transported by rail is currently required by CSX, the company that will provide rail service to the site, to be placed in intermodal containers that are loaded on flat bed rail cars. The Proponent expects that in the future, CSX will allow MSW that is either baled and shrink-wrapped or baled and bagged to be shipped in open-topped gondola rail cars. If the MSW transport requirements are not changed, the Proponent will not install a baler and will ship all loose material by intermodal containers. The facility is anticipated to generate 1,300 tons per day (tpd) of processed MSW and C&D for disposal, which would fill approximately 14.5 rail cars (each with a capacity of 90 tons) each day.

The biosolids processing facility will accept solids from wastewater treatment plants and will have a maximum processing capacity of 50 dry tpd. All biosolids processing will be done within a separate enclosed building with ionization and biofilter odor control systems. The facility will accept dewatered cake biosolids with a solids content between 15 percent and 30 percent and thickened wet slurry biosolids with a solids content of 5 percent to 10 percent. Wet slurry biosolids will be delivered to the site in tanker trucks, which will discharge the slurry through piping to storage tanks that will be sized to hold a volume equivalent to three days of deliveries. The slurry will be dewatered to produce a biosolids cake with a solids content of 30 percent. Approximately 52,000 gallons of wastewater per day is expected to be extracted from the dewatering process and discharged into the City of New Bedford's Sewer system. The dewatered biosolids cake will be delivered to the site in covered dump trucks. The trucks will drive into the facility and dump the material into a receiving area. The dewatered cake biosolids and dewatered slurry cake will be blended together and directed to a thermal dryer that utilizes a natural gas burner. The facility will be equipped with four dryers arranged in a parallel configuration, three of which will be typically in use and the fourth on standby if another dryer becomes unavailable; if all four dryers are inoperable, the biosolids and cake will be stored within the facility until its storage capacity is reached and no more material can be accepted. Moisture evaporated from the drying process will be condensed at a rate of 30,000 gallons per day and discharged into the City's sewer system. The biosolids will be dried to approximately 90% solids and sent via railcar or truck for disposal or for beneficial reuse as landfill daily cover. According to the DEIR, the facility will include fire alarms and fire suppression systems recommended by the National Fire Protection Association to minimize the potential the risk of fires during drying operations. The dryers will include safety features such as temperature controls, measures to minimize flammable dust from entering the dryers and a fire suppression system, and will be operated to maintain oxygen-deficient conditions within the dryer. Dried biosolids will be cooled before being transferred to storage tanks, stored in oxygen-deficient conditions and monitored for temperature.

The following Best Management Practices (BMP) were incorporated into the project design to minimize potential impacts to the site and surrounding environment:

- All tipping, handling, and loading of MSW/C&D and all biosolids processing will occur within fully enclosed buildings;
- To prevent contamination of groundwater, the tipping floor will be constructed of impervious concrete and include a floor drain collection system that drains to a holding tank, or if permitted, to the sanitary sewer system;
- Use of a fine atomized misting system within the MSW handling and processing buildings to control fugitive dust and odor;
- Regular daily clean-up and sweeping to control fugitive dust on external paved surfaces;
- Use of a negative pressure air collection system, biofilter, and ionization system to reduce odors from the biosolids facility; and
- Designing building stacks with adequate heights and exit velocities to facilitate air dispersion.

On-site Rail System

The DEIR described the movement of empty rail cars from the rail spurs to the MSW facility and of full cars from the MSW facility to the rail system for transport off-site. Five rail spurs will extend onto the site from the RR at the western edge of the property. Rail cars will be delivered and removed from the site by a locomotive and an electric rail car pusher will be used to move rail cars within the site. The southernmost spur (Track 1) will end inside the northern end of the MSW transfer station. The other four spurs (Tracks 2 through 5) will be parallel and to the north of the Track 1 and extend across to the eastern part of the site. Two of the tracks will not have any rail cars in order to receive rail cars once they are filled, and the other two will have 8 to 10 empty rail cars that will be sequentially moved, two at a time, into the MSW transfer station to be filled with waste. Two rail cars will be moved into the transfer station on Track 1, filled, and moved onto an empty track. Two more empty rail cars will then be moved onto Track 1 to be filled within the MSW transfer station, then moved to the track where the two previously-filled rail cars have been stored. This pattern will continue until 10 full cars are located on one track and eight full cars are on another track, at which point a locomotive will deliver 10 empty cars to an empty track and eight empty cars to the other empty track and haul away the 18 filled cars. The DEIR did not describe how the loading and transport of rail cars will occur for the operation of the glass recycling and biosolids processing facilities; this information should be provided in the FEIR.

Site Suitability Criteria

The regulations for siting of solid waste handling facilities (310 CMR 16.00) specify 20 siting criteria that must be evaluated for a proposed facility. The EENF included an analysis of these criteria, which was supplemented in the DEIR. The DEIR asserted that the project will comply with each criterion. However, MassDEP will make the final determination regarding site suitability based on its review of the Proponent's permit application and the New Bedford Board of Health must issue a Site Assignment for the facility.

In the DEIR, the Proponent provided supplemental information regarding the proposed facility's setbacks from residences and the Riverfront Area, and its potential impacts on the Acushnet Cedar Swamp (ACS). The DEIR included land use maps showing that all waste handling facilities will be greater than 500 feet away from residences and other sensitive uses and will not be located in the Riverfront Area. To support the Proponent's finding that the project will not adversely impact the ACS, the DEIR stated that the sites are separated by the RR and a drainage swale, that waste handling will occur within buildings located at least 800 feet away from the ACS and that treated stormwater will be discharged into and will travel through a wetland system for a distance of 4,000 feet before entering another wetland system that is hydraulically connected to the ACS.

Wetlands/Stormwater

According to the DEIR, Phase 2 will not impact wetland resource areas. As previously described in the EENF, Phase 1 includes the construction of a three-sided culvert to provide a stream crossing for the main rail spur in the western part of the site. The DEIR provided updated information about the impacts and proposed mitigation associated with the crossing and included a copy of the Notice of Intent filed with the New Bedford Conservation Commission in October,

2019 (DEP File #049-0831). The proposed stream crossing will impact 4,936 sf of BVW, 60 lf of Bank, 504 sf of LUW and 2,110 sf of Riverfront Area. A BVW replication area of 8,208 sf will be constructed adjacent to the wetland impacted to the crossing. The Proponent will restore a 4,425-sf area of Riverfront Area by planting native vegetation with wildlife habitat value. According to the DEIR, the stream crossing has been designed to conform to the Massachusetts Stream Crossing Standards and will include a span exceeding 1.2 times the bankfull width of the stream, a natural bottom substrate matching adjacent sections of the stream and a wide and tall opening relative to the length of the crossing.

The project will increase impervious area by 2.2 acres. The Notice of Intent included in the DEIR described the proposed stormwater management system and reviewed how it will comply with MassDEP's Stormwater Management Standards (SMS). The stormwater management system will be designed to reduce peak discharge rates and flow volumes under post-development conditions compared to existing conditions, remove at least 80 percent of Total Suspended Solids (TSS) in runoff prior to discharge and infiltrate runoff to recharge groundwater. The project is considered a land use with higher potential pollutant loading (LUHPPL); in addition to standard requirements of the SMS, the stormwater management system must be designed to treat the first inch of runoff and remove 40 percent of the TSS prior to discharge into an infiltration system. Runoff will be directed through new drain pipes to BMPs such as sediment forebays and constructed wetlands. The project also includes Low Impact Design (LID) measures such as rain gardens. The DEIR included a Long-Term Pollution Prevention Plan and a Long Term Operation and Maintenance Plan that described operational measures to minimize release of pollutants and maintenance activities and schedule. The project's compliance with the Wetlands Regulations (310 CMR 10.00), including the SMS, will be determined by the New Bedford Conservation Commission or, upon an appeal of the conservation commission's decision, by MassDEP.

Water/Wastewater

According to the DEIR, the project's water demand will be 70,150 gpd, including approximately 2,250 gpd to be used by employees and 67,900 gpd used for operation of the facility (e.g., biosolids building cooling tower makeup water, misting system and washdown water). The project will generate 113,750 gpd of wastewater, including 2,250 gpd associated with employees, 52,000 gpd from dewatering of biosolids, 53,000 gpd from drying of biosolids and 9,500 gpd from blowdown of the cooling tower at the biosolids building. The site is connected to the City's water and sewer systems as a result of the previous use of the site. In connection with applying for increased water and sewer use, the Proponent has been coordinating with the City to establish the capacity and condition of the water and sewer systems and compliance and mitigation requirements.

The City has expressed concern that the project's wastewater discharges may include concentrations of polyfluoroalkyl substances (PFAS) that would contaminate effluent and solids produced at the City's wastewater treatment plant. According to supplemental information provided by MassDEP, while there are no state or federal effluent standards currently for PFAS, MassDEP is evaluating the implications of PFAS in wastewater, including potential sources of PFAS in the influent from industrial dischargers, and potential effects of elevated PFAS

concentrations in the effluent on downstream water supplies.¹ To the extent these efforts result in new effluent limits or testing requirements, the Proponent should be prepared to comply with those requirements. The project's wastewater discharges must also conform with any requirements the City may impose through its EPA-approved Industrial Wastewater Pretreatment Program (IPP). The Proponent must address potential contamination of wastewater and solids generated by the project in the FEIR by analyzing its ability to conform to any future regulatory requirements through installation of new testing equipment or testing as needed, or other means. More detail on this type of analysis is provided in the Scope below.

Traffic and Transportation

The EENF had previously provided an analysis of the project's transportation impacts, including a review of existing roadway conditions, a summary of crash data and traffic safety concerns and an analysis of traffic operations at area intersections under existing and proposed conditions; in the DEIR, the Proponent provided a transportation analysis that specifically addressed the vehicle trips generated by Phase 2. Because Phase 2 was included as part of the Full Build condition evaluated in the EENF, the results of the traffic study are similar. As required by the Scope for the DEIR, the DEIR provided a revised traffic analysis, including queue lengths, reflecting the four-way stop-sign controlled intersection at Braley Road/Theodore Rice Boulevard at Phillips Road. As noted in the Scope below, a revised analysis must be provided in the FEIR to support the method of calculating truck trip generation, clarify impacts of each phase and review potential mitigation measures.

The analysis in the DEIR was prepared in general conformance with the EEA/Massachusetts Department of Transportation (MassDOT) *Transportation Impact Assessment (TIA) Guidelines* issued in March 2014. It included a detailed description of existing and proposed roadway conditions, traffic patterns and crash data. The DEIR provided traffic counts in the study area, trip generation estimates and likely travel routes for vehicles arriving to and departing from the site under proposed conditions. It described future No Build and Build traffic operations over a seven-year planning period and identified mitigation measures that will be implemented to minimize impacts to the local transportation network, including Transportation Demand Management (TDM) measures. The DEIR analyzed the transportation impacts of the project in a study area including the following intersections:

- Route 140 Northbound Ramps at Braley Road;
- Route 140 Southbound Ramps at Braley Road;
- Braley Road/Theodore Rice Boulevard at Phillips Road;
- Theodore Rice Boulevard at Duchaine Boulevard;
- Duchaine Boulevard at Samuel Barnet Boulevard;
- Phillips Road at Samuel Barnet Boulevard; and,
- Duchaine Boulevard at Site Driveway.

¹ See January 29, 2020 email from Stephanie Cooper to Alex Strycky. MassDEP does plan to finalize standards for drinking water this year, and has already finalized PFAS standards for its c. 21E hazardous waste clean-up program.

Vehicles are expected to travel to the site from Exit 7 on Route 140 to Braley Road/Theodore Rice Boulevard to Duchaine Boulevard and to follow the same route back to Route 140 when leaving the site.

Trip Generation

According to the DEIR, Phase 2 will generate 300 truck trips per day on each day the facility is open, in addition to the 108 truck trips per day generated by Phase 1. Employees of the facility, including Phase 1 and Phase 2 components of the project, will generate 150 adt. Accordingly, at full buildout the project will generate 558 adt, including 408 truck trips. As noted in the DEIR, each trip represents one trip either to or from the site. Estimates of the volume and hourly distribution of truck trips was based on observations of truck traffic patterns and the number of each type (size) of trucks used to deliver and transport waste at a similar facility in Rochester. According to the DEIR, the trip generation estimate is conservative because it assumes that all material will be brought to the site and transported from the site by truck. The actual number of truck trips are expected to be approximately 300 trips per day for the full buildout because most of the material will be transported from the site by rail.

Traffic Operations

The DEIR compared traffic operations in the study area under Existing 2019, No Build 2026 and Build 2026 conditions. The Existing 2019 scenario incorporated traffic counts collected in 2018, a background annual growth rate in traffic volume of one percent per year and the trips generated by Phase 1. The No Build 2026 was based on traffic volumes in the Existing 2019 scenario with added trips due to the background growth rate over the seven-year period. The Build 2026 condition was developed by adding trips generated by Phase 2 to the No Build 2026 traffic volumes.

The DEIR provided a capacity analysis, including volume-to-capacity (v/c) ratios, delay and Level of Service (LOS) designations, under each scenario for intersections in the study area during weekday morning and evening peak periods. The LOS reflects the overall peak period operations based on the average delay per vehicle entering an intersection, including traffic speed, delay, and capacity. In general, LOS D reflects an acceptable level of operations. The analysis indicated that under Existing 2019 conditions, intersections generally operate at an overall LOS D or better, except for the following:

- The northbound movement at the Route 140 Northbound Ramps at Braley Road operates at LOS F in both weekday peak periods;
- The southbound movement at the Route 140 Southbound Ramps at Braley Road operates at LOS F in both weekday peak periods;
- The eastbound movement at the Braley Road/Theodore Rice Boulevard at Phillips Road intersection operates at LOS F in the weekday evening peak period; and,
- The westbound movement at the Braley Road/Theodore Rice Boulevard at Phillips Road intersection operates at LOS F in both weekday peak periods.

Under the No Build 2026 and Build 2026 scenarios, all intersections are expected to operate under the same conditions as the Existing 2019 scenario. Several intersections

experiencing significant delays and congestion under existing conditions (LOS F) will continue to do so under future conditions; project-generated traffic is not expected to cause any additional intersection movements to operate below LOS D. However, queue lengths at the intersection of Braley Road/Theodore Rice Boulevard at Phillips Road appear to extend to the Route 140 ramps under certain conditions. The FEIR should include a more detailed assessment of the project's contribution to lengthened queues at this intersection during peak periods.

Transportation Demand Management (TDM)

The project will implement a TDM plan to minimize single-occupant vehicle (SOV) trips to the site. As proposed in the DEIR, the TDM plan will include the following:

- Transit subsidies and/or reimbursement program for employees;
- Inform employees of transit options and bicycle and pedestrian facilities;
- Work with Southeastern Regional Transit Authority (SRTA) to improve transit service to the site;
- Implement an employee carpool program;
- Offer direct deposit to employees;
- Provide preferential parking for carpools and vanpools;
- Provide bike racks and other bike storage amenities to encourage bicycling to work by employees; and,
- Work with the City of New Bedford to Provide striped bicycle lanes on Duchaine Boulevard and shared bicycle markings along Theodore Rice Boulevard to connect the site to bicycle facilities on Braley Road.

Greenhouse Gas Emissions

The DEIR included a revised GHG analysis based on the updated site plan and comments submitted by the Department of Energy Resources (DOER) on the EENF. Conditioned buildings that must meet Building Code energy requirements include the glass processing building, the glass recycling north bunker building, and the biosolids building. According to the DEIR, the conditioned buildings will meet or exceed the applicable energy requirements of the Building Code, including the following energy-related features:

- Building envelope: Wall and roof insulation with an R-value of R-19; the biosolids will additionally have a roof insulation linear system with R-11;
- Space heating: gas heating systems (82 percent efficiency) in the glass processing and biosolids buildings;
- Ventilation: Variable frequency drives (VFD) will be incorporated into the ventilation system of the biosolids building; and,
- Lighting: LED lighting will be used throughout the site (including non-conditioned spaces) and the buildings will have a lighting power density (LPD) that is at least 20 percent below the Building Code baseline.

If the project includes only the design features listed above, stationary-source GHG emissions generated the project were estimated as 11,241 tons per year (tpy), a reduction of 152 tpy (approximately 1.3 percent) compared to the baseline design corresponding to minimum

Building Code requirements. This reduction is small, given that “stretch code” communities (currently over 275 cities and towns in the Commonwealth) requires 10 percent more reductions in GHG emissions as compared to minimum Building Code levels. The project will include a 3.5-MW solar PV generating system that will offset 1,649 tpy of GHG emissions. The DEIR included an evaluation of the use of electric cold climate heat pumps to provide space heating. The analysis concluded that GHG emissions associated with heating would decrease by up to 42 percent compared to the proposed gas-fired system, but that the system would be too costly to install and operate. Comments from DOER request clarification of several aspects of the project design and GHG modelling, the selection of a biosolids building space heating system of lower efficiency than the one proposed in the EENF and the reduced roof insulation in the glass recycling building under construction. As indicated in the Scope below, the FEIR will be required to address DOER’s comments and provide an updated analysis.

The DEIR calculated the project’s mobile-source emissions associated with vehicle trips to the site associated with hauling of waste and employees and the use of front-end loaders to move waste within the site. These GHG emissions were estimated to be 1,721 tpy. The DEIR also compared GHG emissions associated with the off-site transport of processed waste to out-of-state landfills recycling facilities by truck and rail car. The use of rail for this purpose is estimated to reduce GHG emissions by approximately 60 percent (18,802 tpy) compared to the use of trucks. The FEIR should include a revised mobile-source estimate, as necessary, if the estimate of truck trips increases.

Noise

The DEIR included a revised a Sound Level Assessment Report which provided a description of the applicable noise regulatory requirements including the MassDEP Noise Policy, a brief explanation of noise terminology, a summary of the results of the complete ambient sound level monitoring program, and a discussion of the sound level modeling analysis for the proposed project. The facility will operate 24 hours per day, seven days per week, with waste deliveries to the site from 5:00 AM to 9:00 PM. The revised analysis modelled the following primary noise sources:

- Glass recycling building: eight sidewall inlet and exhaust fans;
- MSW/C&D transfer station: tipping and loading, front-end loaders operating inside the building and seven exhaust fans on the rooftop; and,
- Biosolids facility: two dewatering process exhaust fans on the rooftop, a makeup air fan at ground level, a biofilter exhaust stack equipped with an induced draft fan at ground level and four cooling towers; apart from the rooftop fans, all equipment will be on the west side of the building to provide shielding from the residential neighborhood.

According to the DEIR, noise generated by tipping/dumping and spreading of waste by front end loaders was modelled with three garage doors open at all times to produce a conservative analysis; however, the facility will typically operate with all doors closed. The analysis also modelled updated site conditions that are expected to minimize noise intensity, including enclosing glass recycling operations in two bunker buildings, use of an electric rail car pusher, fan silencers on the inlet/exhaust fans and induced draft fan, use of a low-noise makeup

air handling unit and construction of a 100-ft long, 24-ft high L-shaped sound barrier along the southwestern corner of the biosolids building to shield the residential neighborhood from noise generated by equipment on that side of the building.

Sound levels were measured at four locations at the western and eastern boundaries of the site and at two locations closer the residential neighborhood east of Phillips Road to establish background noise levels. The analysis modelled four sound levels at four nearby residential buildings under facility operating conditions. The model predicts that daytime noise levels at the four residential sites will increase by 2-3 decibels (dBA) over existing sound levels and that nighttime sound levels will increase by 6-8 dBA compared to existing conditions. According to the DEIR, the project will comply with the MassDEP Noise Policy because the increase over background noise levels is modelled as less than 10 dBA. The modeling results also indicated that the project is not expected to create any "pure tone" conditions, as defined by MassDEP, when combined with existing background sound levels at any modeled receptor locations. The project's noise levels modelled in the DEIR are generally less than those modelled in the EENF due to the updated site conditions described above, which have been designed to minimize noise impacts.

The DEIR included an analysis of the noise impacts of on-site truck traffic based on the Federal Highway Administration (FHWA) Traffic Noise Model (TNM). Noise levels were modelled for the peak hour of trucking activity based on the traffic study estimate of the number of truck trips to the site anticipated throughout the day. Modelled noise levels from peak hour on-site trucking activity were compared to modelled existing sound levels at the same four residential locations. Noise levels under operating conditions were modelled to be below FHWA's threshold of 66 dBA and will increase by up to 3 dBA, below the Massachusetts Department of Transportation's significance threshold of a 10dBA increase over existing sound levels. Noise impacts from trucks will be minimized by enforcing a low speed limit on roadway leading to the site and prohibiting truck idling and queuing on the east side of the site closest to residential areas.

Comments from MassDEP note that the Sound Level Assessment Report did not analyze all noise sources. The noise model omitted waste delivery vehicles, processing equipment, tipping and loading of biosolids and glass, loading and movement of rail cars and short duration sounds such as backup alarms. In addition, the DEIR did not evaluate a full range of mitigation measures that could be implemented at the site to minimize noise impacts. The Proponent will be required to provide a revised noise analysis in the FEIR.

Air Quality

The DEIR included an updated analysis of the project's air and odor emissions incorporating design refinements since the EENF was filed. It provided estimates of emissions from the project, included air dispersion modelling based on emission rates, exhaust parameters and weather patterns and compared the results to state and federal standards. According to the DEIR, sources of emissions include boiler and dryer emissions through stacks on the biosolids and glass recycling buildings, vents on the biosolids, glass recycling and transfer station buildings, cooling towers associated with the biosolids building, processing equipment and trucks.

The DEIR summarized the results of an air dispersion model that predicted the spread of air pollutants emitted by the project from both stationary and mobile sources. The analysis used the Environmental Protection Agency's (EPA) AEROMOD model, which incorporates emissions from the site, local meteorological data, orientation of buildings and stacks and surrounding terrain to estimate concentrations of air contaminants outside the site boundary. The analysis modelled criteria air pollutants regulated by the EPA through the National Ambient Air Quality Standards (NAAQS), including carbon monoxide (CO), nitrogen dioxide (NO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}) and sulfur dioxide (SO₂). According to the DEIR, the project's emissions will not contribute to an exceedance of any of the NAAQS established for these criteria pollutants.

The DEIR also included an evaluation of the project's emissions of non-criteria air pollutants using MassDEP Air Toxics Guidelines. MassDEP has established allowable ambient limits (AAL) for chemicals and threshold effect exposure limits (TELs), which are developed through an analysis of health effects of the pollutants. Non-Threshold Effects Exposure Limits (NTELs) are developed to represent exposure limits to carcinogenic chemicals associated with a one in a million excess cancer risk over a lifetime of exposure to the chemical. The TEL addresses non-cancer health effects of a chemical, including impacts to sensitive populations such as children, and takes into account pathways such as indoor air, food, soil and water, in addition to outside air. The AAL corresponds to the lower of either NTEL or TEL, which for this analysis corresponded to the TEL. According to the DEIR, the project will not cause an off-site exceedance of either the AAL or TEL for any of the pollutants. The DEIR identified site design features that will further minimize air quality impacts, including the maintenance of a vegetated buffer between the site and residential areas, support for a truck restriction on Phillips Road, monthly monitoring of air emissions and development of a system to track odor, noise and dust complaints.

The air quality analysis evaluated the maximum 5-minute-averaged odor concentrations associated with the emissions from the biosolids and MSW facilities at on-site and off-site receptors. The analysis included odor mitigation measures to be implemented by the Proponent, including handling material indoors, the use of biofiltration with carbon/zeolite polishing, ionization and the proposed configuration and location of stacks and vents. According to the DEIR, the odor concentrations were below the concentrations identified in MassDEP's draft odor policy. As detailed below in the Scope for Solid Waste, the Proponent should provide supplemental information on air quality impacts, including a plan for ongoing monitoring.

Environmental Justice and Public Outreach

The DEIR described public outreach conducted by the Proponent since the filing of the EENF and included a report providing baseline health data consistent with the enhanced analysis of impacts and mitigation required by the EJ Policy. The Proponent has prepared a project fact sheet, consulted with community groups to expand distribution of information about the project and held community meetings in the evenings of April 29, 2019 and January 6 and 7, 2020 with Portuguese and Spanish language translators in attendance. Many commenters expressed concern that many residents potentially impacted by the project remain unaware of its details. As recommended by MassDEP, the Proponent should continue its outreach efforts by scheduling additional public meetings and site visits. The Proponent requested an extension of the comment period from the standard 30 days to 62 days to facilitate public review of the DEIR, and has

committed to providing notice of the FEIR at least 30 days prior to the comment period to allow for at least a 60 day review period for the FEIR.

The DEIR included an Environmental Justice report that reviewed baseline public health data for areas within one mile of the site, including sections of New Bedford, Acushnet and Dartmouth, available on the Department of Public Health's (DPH) Massachusetts Environmental Public Health Tracking (EPHT) website. The analysis reviewed rates of asthma hospitalizations and emergency room visits for the years 2000-2015; incidences of cancer for the years 2000-2013; rates of Chronic Obstructive Pulmonary Disease (COPD) hospitalizations and emergency room visits for the years 2000-2015; rates of Acute Myocardial Infarction (AMI) hospitalizations for the years 2000-2015; and prevalence of pediatric asthma for the years 2009-2017 (based on data from three schools in New Bedford). According to the DEIR, the data indicate that New Bedford suffers from elevated incidences of these parameters as compared to statewide averages, while Acushnet and Dartmouth have rates similar to or lower than the statewide average. As detailed in the Air Quality section above, the DEIR included analyses of the project's air emissions that indicated that the project will not exceed air quality standards that are protective of human health.

The DEIR Scope required the Proponent to evaluate the future climate conditions, such as extended periods of drought and extreme temperatures, on air quality within the EJ populations. As a potential measure of the effects of extreme temperature, the DEIR summarized EPHT data on incidences of heat-related illness hospitalizations and emergency room visits in the area. Heat-related illness hospitalizations were not statistically elevated at the community and county levels compared to the statewide average; emergency room visits due to heat-related illness were elevated at the county level, but not at the community level. The DEIR also indicated that no air stagnation watches or warnings were issued by the National Weather Service (NWS) for Bristol County from 1986 to 2018. The FEIR should provide a more detailed explanation and analysis of air quality impacts under future climate conditions.

As described in the Scope below, the FEIR should include additional analysis regarding factors related to air quality that may contribute to public health impacts for EJ communities, including a plan for ongoing monitoring of air pollution, noise and odor and supplemental analysis of weather related impacts. The risk of drinking water contamination appears low because all waste processing will occur within buildings equipped with floor drains leading to holding tanks or the sanitary sewer system. However, there is some indication that the presence of PFAS in treated wastewater could pose health risks. For this reason, the FEIR should also include additional analysis of potential measures to address future regulatory changes related to PFAS in wastewater, as described in the Scope below.

Hazardous Waste

The DEIR included a draft Spill Contingency Plan identifying proposed measures to be implemented by the Proponent to prevent and minimize releases of oil and other hazardous materials at the site. Measures to prevent spills include enclosing the facility operations, monitoring loading and refueling operations, and performing daily inspections of equipment and storage containers. Spill containment equipment, such as absorbent booms, spill pillows, wood chips, vermiculite and sand will be stored on-site in well-marked locations. Any used material

will be placed in 55- or 85-gallon drums that will be stored, handled and disposed of as hazardous material.

Construction Period

The FEIR identified construction-period mitigation measures to minimize noise and impacts to air, water, and wetlands. The measures include sedimentation and erosion controls, minimizing emissions from construction equipment using emission control devices such as oxidation catalysts, minimizing idling by construction vehicles and complying with the City's hours of construction and noise limitations.

Conclusion

Based on a review of the DEIR, comments letters and consultation with State Agencies, I have determined that the DEIR adequately and properly complies with MEPA and its implementing regulations. The MEPA regulations indicate that a DEIR can be determined adequate, even if certain aspects of the Project or issues require additional description or analysis in a FEIR, provided that it is generally responsive to 301 CMR 11.07 and the Scope. The DEIR was generally responsive to the Scope included in the EENF Certificate. It provided a detailed description of Phase 2, identified potential environmental impacts and described mitigation measures. As noted above and by several commenters, the FEIR did not provide all of the information and analyses required in the DEIR Scope and included inconsistencies in the description of project components and operations. The Proponent should provide detailed and comprehensive responses to the issues identified in the Scope below in order to avoid the need for foiling supplemental documentation after the FEIR.

SCOPE

General

The FEIR should follow Section 11.07 of the MEPA regulations for outline and content, in addition to the information and analyses identified in this Scope. While providing much of the information and analysis required in the Scope for the DEIR, the DEIR was not prepared in the format specified in the Scope, which required a full and self-contained description and analysis of the project and a comprehensive narrative with a separate chapter for each of the categories in this Scope. Each chapter should provide an overview of the topic, additional information and analysis in response to the Scope, and a narrative to explain and support the analysis of the project's impacts and mitigation. Each chapter should include relevant documentation and tables extracted from technical appendices to supplement the narrative; supporting information should not be presented only in the appendices. Technical documentation, such as drainage calculation, traffic counts and similar data, should be provided in a digital format such as CD-ROM, DVD, flash drives or download. The FEIR should be prepared following these specifications, and those identified in specific sections of the Scope below, in order to facilitate the understanding of the project by agencies and the public, including how the project will meet all relevant regulatory standards and all mitigation measures incorporated into the design of the facility's buildings and operations and exterior features of the site or provided at off-site locations. I encourage the Proponent to consult with the MEPA office prior to filing the FEIR to ensure that it has been

prepared consistent with the MEPA regulations and this Scope to avoid the need for supplemental MEPA review of the project.

Many commenters requested additional extensions of the comment period to provide sufficient time for a detailed review of the extensive technical documentation provided in the DEIR. I note that the MEPA regulations do not provide for an extension of the comment period on a FEIR beyond the 30-day period specified in the statute and regulations. However, the Proponent has agreed to distribute the FEIR at least 30 days prior to the formal start of the comment period to ensure that the public has at least 60 days to review the document.

Project Description and Permitting

The FEIR should include a detailed and consistent description of the project, including existing and proposed conditions at the project site at a legible scale. It should include dimensions of all existing and proposed buildings and structures, including height of buildings and stacks, plans showing the uses of and/or within each existing and proposed structure, a delineation of uses on exterior areas of the site under existing and proposed conditions, a quantification of the existing and proposed uses within each structure and on exterior areas, boundaries of wetland resources area under existing and proposed conditions and graphical and quantitative comparisons of impervious area under existing and proposed conditions. The FEIR should show areas of land alteration for buildings, roadways, parking, wastewater, water and stormwater infrastructure, lawns and landscaping, and other project components. The FEIR should clearly and consistently describe the project, including building designs and other components. All analyses presented in the FEIR should be based on the same structural and operational designs of the project.

The FEIR should include an analysis of the project that demonstrates that the Preferred Alternative includes all feasible means to avoid Damage to the Environment, or to the extent that Damage to the Environment cannot be avoided, that it includes measures to minimize and mitigate Damage to the Environment to the maximum extent practicable. It should clearly describe any changes to structural and operational components of the project from the designs presented in the EENF and the DEIR, including plans illustrating the changes, a narrative describing and quantifying the changes and any associated impacts. The FEIR should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and a description of how the project will meet those standards and provide an update on the state, federal, and local permitting process. It should include a table listing all required state, local and federal permits or other approvals and the status of the permit application. It should specifically identify any changes to the list of required permits since the filing of the EENF and DEIR.

Environmental Justice and Public Outreach

As detailed below, the FEIR must include additional information about the operations of the facility and potential public health, environmental and transportation impacts. The Proponent should continue its public outreach efforts to ensure that the additional information is available and presented to the public. MassDEP recommends that the Proponent schedule additional public meetings and site visits at times that are convenient to the public. Consistent the public outreach efforts already conducted, I commend the Proponent for committing to distribute the

FEIR at least 30 days prior to the start of the MEPA public comment period to facilitate public review of the document.

According to the DEIR, the Proponent will be required by MassDEP to monitor emissions on a monthly basis. In addition, the Proponent will prepare a system to log odor, noise and dust complaints associated with the operation of the facility to be provided to MassDEP and the New Bedford Board of Health. The FEIR should include additional details on the air quality parameters to be monitored, ongoing modelling of the cumulative concentration of contaminants affecting sensitive receptors and the method by which the data will be made available to the public. It should include a draft of the complaint log sheet and describe response measures and mitigation action levels that will be implemented by the Proponent.

The FEIR should expand upon the DEIR's discussion of potential climate-related air quality impacts. It should review NWS data on air quality alerts based on air quality index and discuss how extreme temperatures might affect the frequency and severity of future air quality alerts. As described below, supplemental analysis of odor, noise and wastewater impacts should be provided.

Solid Waste

The FEIR should respond to comments from MassDEP and the City of New Bedford requesting clarification of the delineation of the waste handling site assignment areas on the Land Use plan included in the DEIR. It should review the site assignment boundary relative to adjacent agricultural lands and describe any changes to the site assignment area that may be necessary. The FEIR should explain why the waste handling areas are shown on the plan to include exterior portions of the site despite the Proponent's commitment to limit waste handling operations to enclosed buildings. Any waste handling activities outside of the buildings should be described.

The FEIR should include a revised or supplemental plan of rail car movements showing how loading of material from the glass recycling and biosolids buildings will occur. It should explain and illustrate with plans how the rail cars will be moved from the rail car storage spurs to each of the buildings while all buildings are in operation. The FEIR should explain how long waste material may be stored in rail cars waiting to be transported off site, describe any potential odor, air quality or nuisance impacts that may result and identify mitigation measures.

The City of New Bedford expressed concern that the wastewater discharged into the City's sewer system could add PFAS to its wastewater treatment system. Because PFAS is not removed by wastewater treatment systems, the City notes that the PFAS could impact the environment by its presence in treated wastewater discharges and potentially affect the City's ability to meet future effluent standards. While the Proponent does not state any current plans to land-apply or sell biosolid residuals as fertilizer, the FEIR should review how the biosolids facility may be operated if it is subject to future PFAS standards related to both its wastewater and solids (residuals) imposed by state, federal or City regulations. It should evaluate alternatives for monitoring and managing PFAS, including, at a minimum, refusing to accept biosolids from treatment plants with elevated PFAS levels; on-site testing and treatment of solids and wastewater to achieve PFAS standards; and alternate disposal methods, such as transport of wastewater and dried solids to an off-site treatment facility. The FEIR should describe any

facilities that may be necessary to address PFAS-contaminated biosolids, including expanded or additional buildings.

Traffic

The FEIR should include a revised traffic analysis prepared in accordance with the EEA/MassDOT *Transportation Impact Assessment (TIA) Guidelines* that compares intersection operations under Existing, Phase 1 Build, 2026 Baseline and 2026 Full Build scenarios. In addition to weekday morning and evening peak periods, it should analyze traffic operations for the Saturday midday peak period for all scenarios. The FEIR should discuss how the lengths of project-generated trucks contribute to lengthened queues at study area intersections. It should include diagrams showing queues at the Braley Road/Theodore Rice Boulevard at Phillips Road intersection at all peak periods, describe any impacts to traffic using the Route 140 ramps and identify any necessary mitigation measures. The FEIR should include modelled queue lengths that may be supplemented by field observations.

As requested by MassDEP, the FEIR should include additional documentation and analysis in support of the truck trip generation estimate, including peak hours, used in the DEIR. It should discuss how traffic patterns at the Rochester facility were used to the model the project's volume and hourly distribution of truck trips. The FEIR should provide greater detail on the average truck load used to calculate the number of trucks required to deliver waste to the project site and clarify whether outbound truck trips from the biosolids facility were included. If necessary, the traffic analysis should incorporate this revised data.

The DEIR identified TDM measures to be implemented by the Proponent but did not propose roadway improvements to mitigate the project's traffic impacts. The FEIR should identify any roadway mitigation measures to be implemented by the Proponent based on the results of the revised traffic analysis and/or consultation with MassDOT and the City. According to MassDEP, the FEIR must include commitments to restrict project-generated truck traffic to the truck route identified in the DEIR (Route 140 to Braley Road/Theodore Rice Boulevard to Duchaine Boulevard) or revise the traffic study to evaluate other routes that could be used by trucks. The FEIR should include a commitment by the Proponent to restrict project-generated truck access on Phillips Road and provide a protocol showing how this could be implemented and monitored. It should provide additional detail concerning the Proponent's recommendation that a general truck exclusion be implemented on Phillips Road.

Noise

The FEIR should include a revised analysis that takes into account additional potential sound sources identified by MassDEP, including waste delivery vehicles inside and outside the building; MSW, biosolids and glass processing equipment; biosolid and glass tipping and loading; loading and movement of rail cars; and short duration sounds from the outdoor operation of waste handling equipment, delivery vehicle back-up alarms, and dump truck tailgates. The Proponent should consult with MassDEP prior to completing the FEIR for guidance on establishing the ambient sound level based on the 7-day average of the lowest daytime and nighttime hourly L90 levels, modeling of all potential sound sources as described above, and modeling and analysis of project-generated sound sources using L90 sound levels.

The FEIR should identify measures to be implemented by the Proponent to mitigate project-generated noise to the maximum extent practical using a top-down approach.

Greenhouse Gas Emissions

The FEIR should address the questions and comments in DOER's comment letter, which is incorporated herein by reference. It should clarify which buildings were included in the energy model, the number of ventilation fans on the glass processing building, and the apparent reduction in the energy-efficiency of the biosolids building heating system. The FEIR should provide additional details regarding the lighting needs of the facility in the format specified in DOER's comment letter and explain how the analysis credited LPD with respect to Building Code requirements. It should address DOER's comments concerning the design of the biosolids building envelope and the wall insulation proposed in the conditioned buildings.

The FEIR should include commitments to GHG mitigation measures and provide a revised analysis comparing a Base Case design to the Preferred Alternative incorporating energy-efficient design measures. As requested by DOER, the FEIR should provide a table listing all energy systems, minimum Code requirements for the systems, proposed systems and the difference in performance. According to the DEIR, the Proponent has constructed the roof of the glass recycling building without R-11 linear system insulation committed to in the EENF. The FEIR should address the building's compliance with the Building Code, any necessary changes to the building that may be required to meet Code requirements and mitigation measures to compensate for the elimination of this mitigation measures described in the EENF. At a minimum, the FEIR should commit to GHG mitigation measures included in the EENF. I note that a new Building Code will be in effect by the time the FEIR is filed. The building designs described in the FEIR should be updated to reflect the updated Building Code. The FEIR should provide the additional analyses identified in DOER's comment letter regarding Alternative Energy Credits applicable to heat pumps and opportunities for achieving above-Code building envelopes. It should provide an update on the status of construction of the PV system and, if necessary, provide a revised schedule for its completion. The FEIR should review the proposed biosolids drying equipment and document that energy-efficient models will be used.

Mitigation and Draft Section 61 Findings

The FEIR should include a separate chapter summarizing proposed mitigation measures for both Phase 1 and Phase 2. This chapter should also include draft Section 61 Findings for each State Agency that will issue Permits for the project. The FEIR should contain clear commitments to implement mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation (either funding design and construction or performing actual construction), and contain a schedule for implementation. To ensure that all GHG emissions reduction measures adopted by the Proponent in the Preferred Alternative are actually constructed or performed by the Proponent, the FEIR must include a to self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings.

Response to Comments

The FEIR should contain a copy of this Certificate, and a copy of each comment letter received. Based on the large volume of form letters received, copies of form letters may be provided electronically. To ensure that the issues raised by commenters are addressed, the FEIR should include a separate chapter with direct responses to comments to the extent that they are within MEPA jurisdiction. A single response to form letters can be provided. This directive is not intended, and shall not be construed, to enlarge the scope of the FEIR beyond what has been expressly identified in this certificate. The Proponent should provide a direct response to individual responses or to groups of indexed comments raising the same issue. Responses must specifically address each comment letter on the DEIR; references to a chapter or extensive section of the FEIR are not adequate.

Circulation

The Proponent should circulate a hard copy of the FEIR to any State and City Agencies from which the Proponent will seek permits or approvals, and to any parties specified in Section 11.16 of the MEPA regulations. The Proponent must circulate a copy of the FEIR to all other parties that submitted individual written comments. In accordance with 301 CMR 11.16(5), the Proponent may circulate copies of the FEIR to these other parties in CD-ROM format or by directing commenters to a project website address. However, the Proponent should make available a reasonable number of hard copies to accommodate those without convenient access to a computer and distribute these upon request on a first-come, first-served basis. The Proponent should send correspondence accompanying the CD-ROM or website address indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. In addition, a hard copy of the FEIR should be made available for review at the New Bedford Public Library. The FEIR submitted to the MEPA office should include a digital copy (e.g., CD-ROM, USB drive) of the complete document.

January 30, 2020

Date

Kathleen A. Theoharides

Comments received:

62 form letters expressing concern about the project beginning “In early February of this year...”

21 form letters expressing concern about the project beginning with “First, let me thank you...”

10/31/2019	William J. Pires
11/22/2019	Charles Kennedy
11/25/2019	Tracy Wallace
11/26/2019	Sharon Pickering
12/01/2019	Vincent Carolan
12/01/2019	Claudia B. Ostiguy
12/01/2019	Ken Costa
12/03/2019	Robert H. Ladino
12/04/2019	Nelson Ostiguy
12/06/2019	Paul Schofield
12/07/2019	Michael J. McHugh
12/08/2019	David Amaral
12/09/2019	Carol Strupczewski
12/11/2019	Wendy M. Graça
12/13/2019	Senator Mark Montigny, Second Bristol and Plymouth District
12/16/2019	Claudia B. Ostiguy
12/18/2019	Robert H. Ladino
12/23/2019	Richard W. Fournier
12/23/2019	Jennifer Silva
12/26/2019	Kayla Trahan
12/27/2019	Claudia and Stanley Koska
12/30/2019	William Andrews
01/02/2020	Karen A. Chin
01/03/2020	Michelle T. Roza
01/03/2020	Carl E. Roza
01/03/2020	William Andrews
01/05/2020	Carl P. Anctil
01/05/2020	Corine Anctil
01/05/2020	Jenna Anctil
01/06/2020	Thomas Grota
01/06/2020	Betty Grota
01/07/2020	Richard Hatten
01/08/2020	Becca Kurie
01/09/2020	Donna Poyant
01/10/2020	Thomas Rua
01/12/2020	Jose Da Costa
01/13/2020	Brittany Furtado
01/14/2020	Kenneth Costa
01/14/2020	Deborah J. Fleet
01/15/2020	Eileen S. Dunleavy
01/15/2020	Giselda Rodrigues
01/15/2020	Robert H. Ladino
01/16/2020	Barbara J. Bouchard

01/17/2020	Carole Sherman
01/20/2020	Roger Cabral
01/20/2020	Charles F. Kennedy
01/20/2020	Susana Carreiro
01/20/2020	Manuel Carreiro
01/20/2020	Frances Heggie
01/21/2020	Rita Lizotte
01/22/2020	Tracy L. Wallace
01/22/2020	William Andrews
01/22/2020	Brad Markey, New Bedford City Council
01/22/2019	Elizabeth Saulnier
01/22/2020	Town of Acushnet Board of Selectmen
01/22/2020	Lisa Marie Andrews
01/23/2020	Representative Paul A. Schmid, 8 th Bristol District
01/23/2020	Ariane Lambert
01/23/2020	KP Law on behalf of the City of New Bedford
01/23/2020	Massachusetts Department of Environmental Protection (MassDEP)/Southeast Regional Office (SERO)
01/23/2020	Elizabeth Isherwood
01/23/2020	Wallace A. Greely
01/23/2020	Alexia Orphanides
01/23/2020	Rick Kidder
01/23/2020	Department of Energy Resources (DOER)
01/29/2020	Massachusetts Department of Environmental Protection (MassDEP)

KAT/AJS/ajs

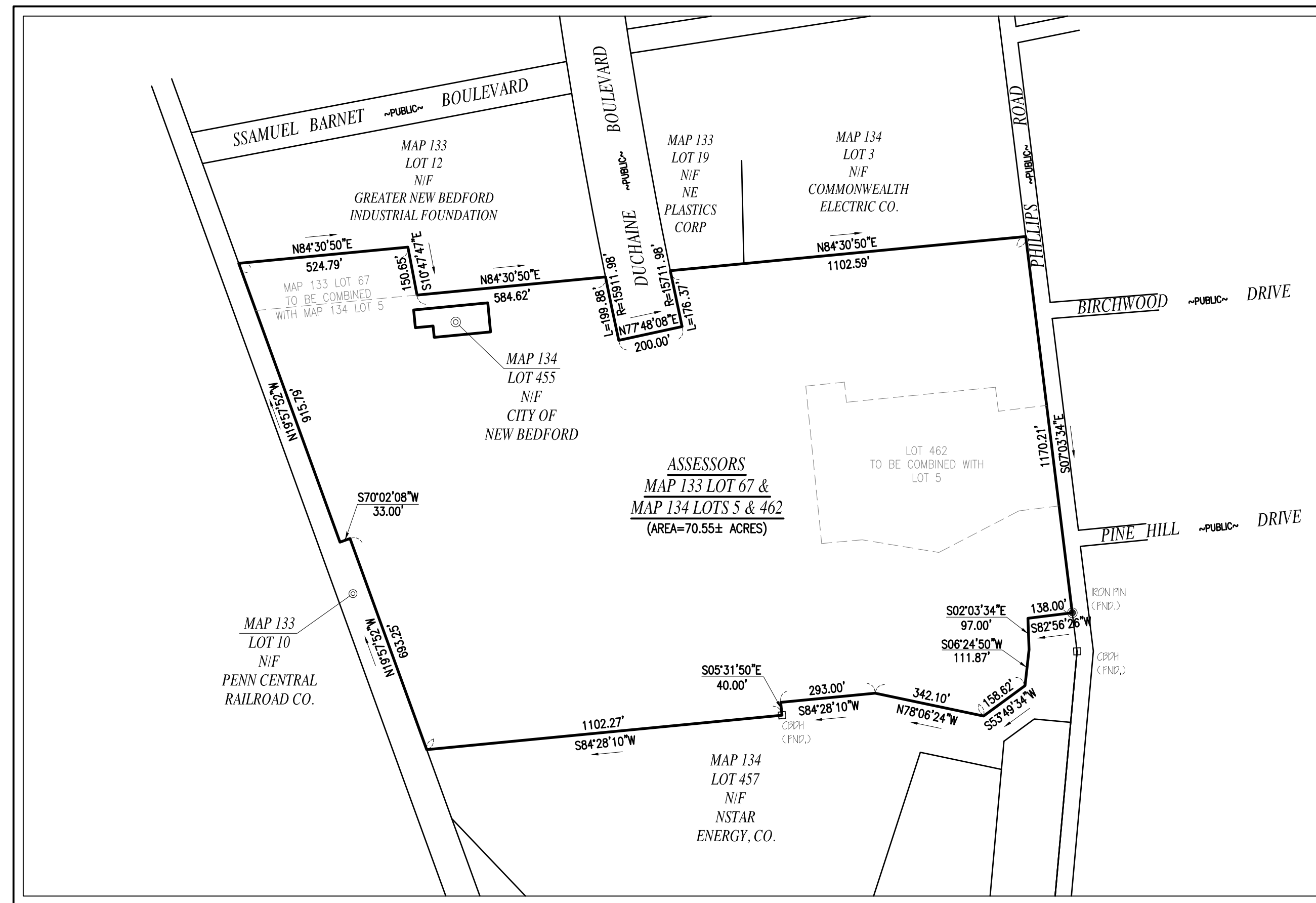
APPENDIX 4
SITE PLANS

PROPOSED PROJECT DEVELOPMENT

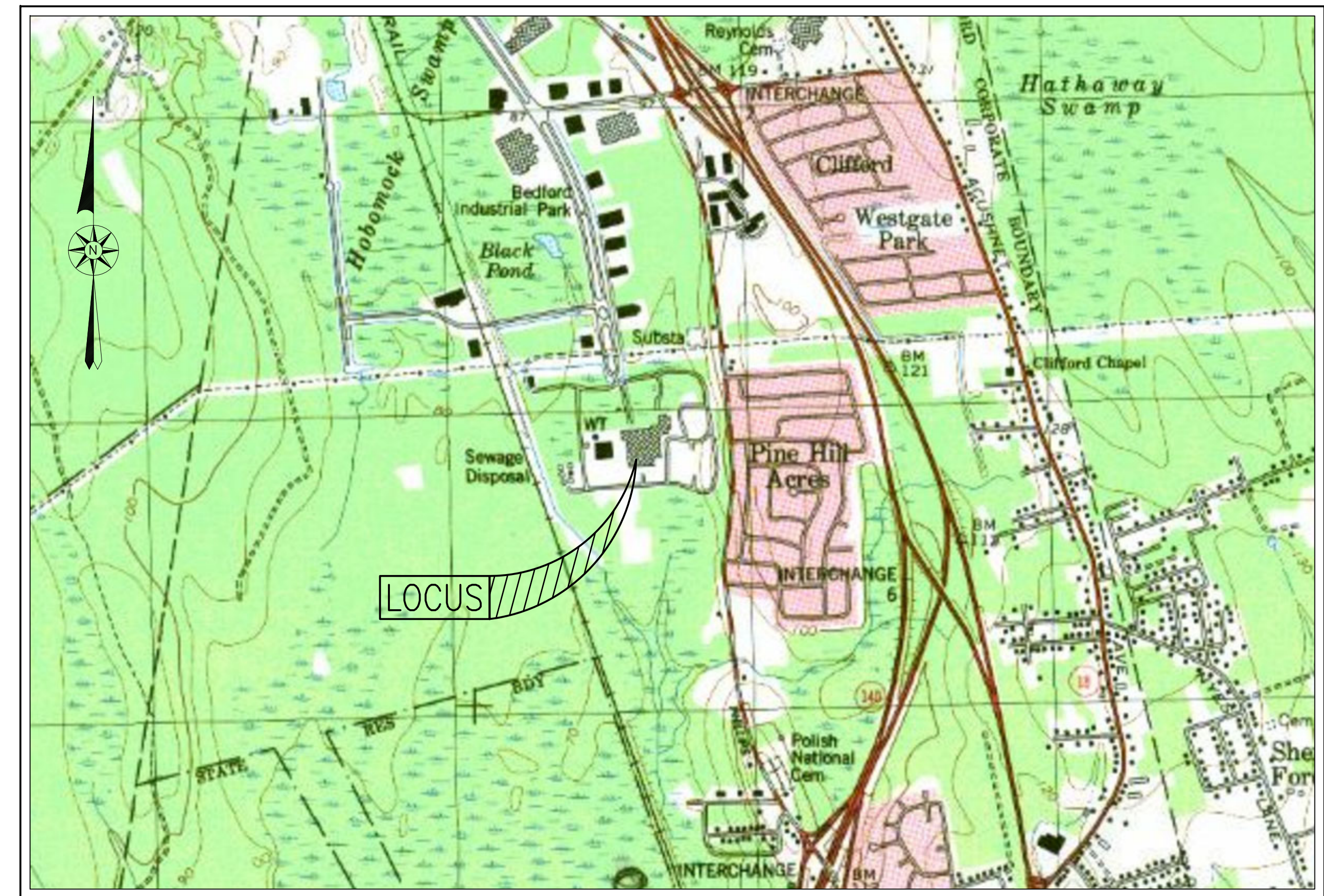
100 DUCHAINE BOULEVARD

ASSESSORS MAP 133 LOT 67 AND MAP 134 LOTS 5 & 462

NEW BEDFORD, MASSACHUSETTS



— OVERALL SITE MAP —
SCALE: 1"=300'



— AREA MAP —
SCALE: 1"=1,000'±

— ZONING DATA —

DESCRIPTION	REQUIRED	EXISTING	PROVIDED
LOT AREA	0 S.F.	61.96± AC	70.55± AC
LOT FRONTAGE	0 FT	976.17 FT	576.17 FT
FRONT SETBACK	25 FT	642.3± FT	582.0± FT
SIDE SETBACK	25 FT	758.9± FT	674.9± FT
REAR SETBACK	25 FT	192.3± FT	86.8± FT
BUILDING HEIGHT (MAXIMUM)	100 FT	100 FT	<100 FT
BUILDING COVERAGE (MAXIMUM)	50 %	4.0± %	6.8± %
LOT COVERAGE (MAXIMUM)	80 %	22.2± %	25.8± %

— INDEX —

SHEET	DESCRIPTION
1	COVER
2-4	EXISTING CONDITIONS
5-7	LAYOUT PHASE I
8-10	LAYOUT PHASE I AND II
11	TRAFFIC CIRCULATION
12-13	UTILITIES, GRADING & DRAINAGE
14-16	LIGHTING & LANDSCAPING
17	NOTES & LEGEND
18-22	DETAILS

— PARKING & LOADING REQUIREMENTS —

PRINCIPAL USE: RECYCLING FACILITY (FOR PARKING REGULATION PURPOSES: BUSINESS ENGAGED IN WAREHOUSING & DISTRIBUTION)		
REQUIREMENT	REQUIRED	PROVIDED
1 SPACE PER 1,500 S.F. OF G.F.A. UP TO 15,000 S.F. THEREAFTER, ONE ADDITIONAL SPACE FOR EACH 5,000 S.F. OR PORTION THEREOF IN EXCESS OF 15,000 S.F., PLUS ONE SPACE FOR EACH VEHICLE UTILIZED IN THE BUSINESS.	47 STANDARD SPACES PLUS FLEET VEHICLES	189 TOTAL SPACES
WHEN 26-50 TOTAL PARKING SPACES ARE REQUIRED, 2 MUST BE ACCESSIBLE SPACES. ONE IN EVERY EIGHT ACCESSIBLE SPACES, BUT NOT LESS THAN ONE, SHALL BE VAN ACCESSIBLE	2 TOTAL SPACES (2 VAN)	2 TOTAL SPACES (2 VAN)
TWO (2) LOADING SPACES FOR EACH BUILDING CONTAINING 10,000 S.F. OF GROSS FLOOR AREA. THEREAFTER, ONE (1) ADDITIONAL LOADING SPACE SHALL BE REQUIRED FOR EACH FIFTEEN (15) FEET OF DOCK, PLATFORM, OR OPENING IN THE BUILDING WHERE THE LOADING OR UNLOADING OF COMMODITIES IS INTENDED TO OCCUR.	18 LOADING SPACES	20 LOADING SPACES

REVISIONS

1	9/13/19	CONSERVATION COMMENTS
2	10/15/19	PHASE I AND II
3	1/10/20	CONSERVATION COMMENTS
4	6/8/20	CONSERVATION COMMENTS
5	12/16/20	GREEN SEAL COMMENTS



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P.508.717.3479
OFFICES IN:
• TAUNTON
• MARLBOROUGH
• WARWICK, RI

DRAWN BY: MJW

DESIGNED BY: CAF

CHECKED BY: CAF

PROPOSED PROJECT DEVELOPMENT

— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR:
PARALLEL PRODUCTS OF NEW ENGLAND
401 INDUSTRY ROAD
LOUISVILLE, KY 40208

JULY 3, 2019

SCALE: AS NOTED

JOB NO. 15-500.2

LATEST REVISION:
DECEMBER 16, 2020

COVER

SHEET 1 OF 22

RECORD OWNER:

REGISTERED:
ASSESSORS MAP 134 LOT 5
SMRE 100, LLC
255 STATE STREET, 7TH FLOOR
BOSTON, MA 02109
L.C. CERTIFICATE No. 24201
LOT 8 ON L.C. PLAN 36318D

ASSESSORS MAP 134 LOT 462
SMRE SUBLOT 20 LLC
401 INDUSTRY ROAD - SUITE 100
LOUISVILLE, KY 40208
L.C. CERTIFICATE No. 24417
LOT 7 ON L.C. PLAN 36318D

UNREGISTERED:

ASSESSORS MAP 133 LOT 67
SMRE 100, LLC
50 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745
DEED BOOK 12378 PAGE 314
PARCEL B ON PLAN BOOK 177 PAGE 55

MATCH LINE

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CHRISTIAN ALBERT FARLAND
No. 47544
CIVIL
REGISTERED PROFESSIONAL

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PROPOSED PROJECT DEVELOPMENT
— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS
PREPARED FOR:
PARALLEL PRODUCTS OF NEW ENGLAND
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LOUISVILLE, KY 40208

JULY 3, 2019
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EXISTING CONDITIONS

SHEET 3 OF 22

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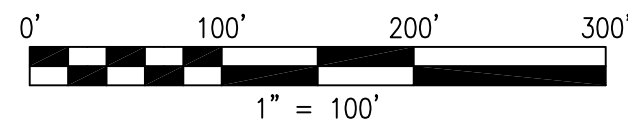
PROPOSED PROJECT DEVELOPMENT

— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS




PREPARED FOR:
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JULY 3, 2019
SCALE: 1"=50'
JOB NO. 15-500.2
LATEST REVISION:
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EXISTING CONDITIONS CONT.
SHEET 4 OF 22



COLOR KEY

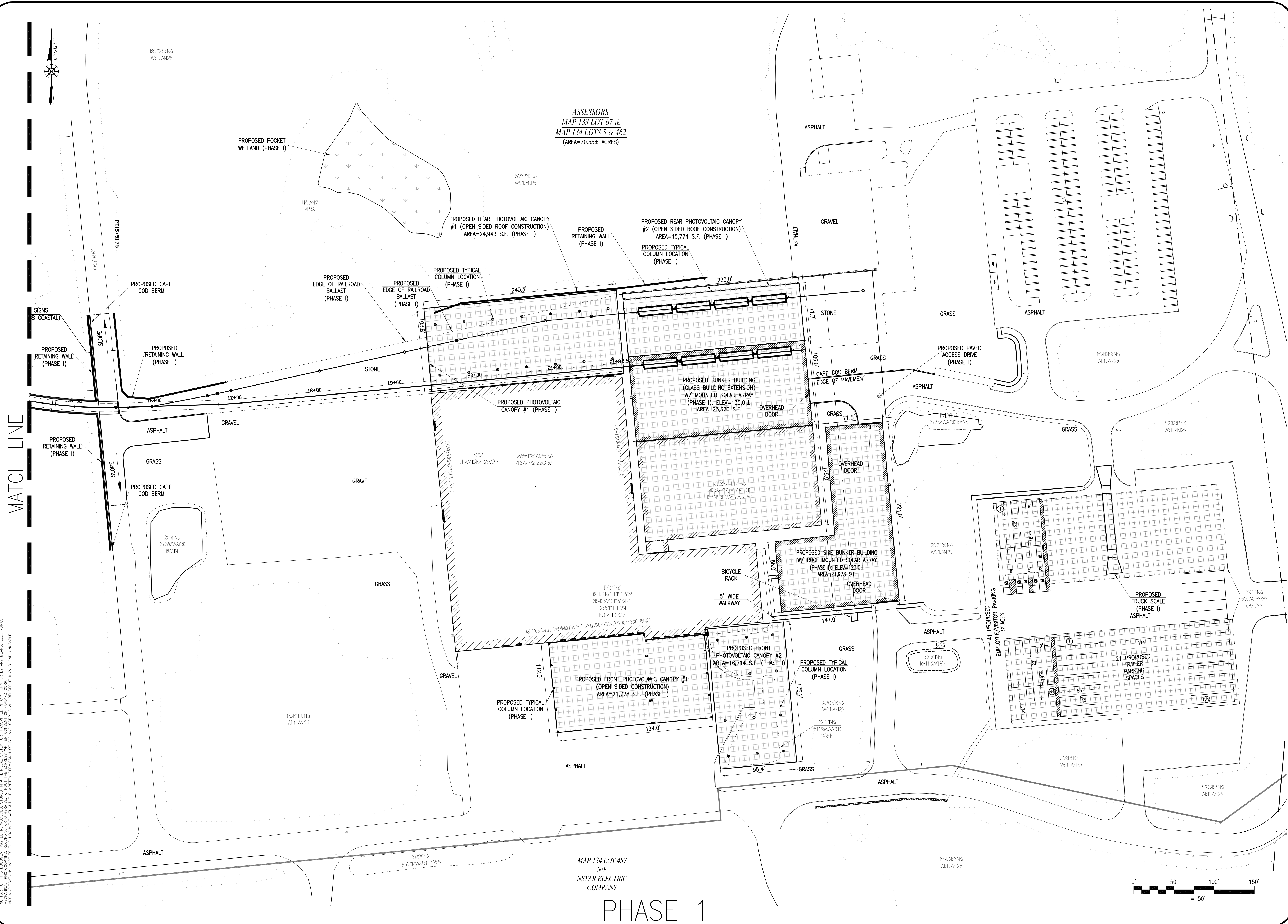
	= WETLANDS TOTAL AREA (879,702 +/- S.F.)
	= IMPERVIOUS COVERAGE TOTAL AREA (696,119 +/- S.F.)
	= WETLAND REPLICATION AREA (8,281 S.F.)

IMPERVIOUS LOT COVERAGE = 22.7%

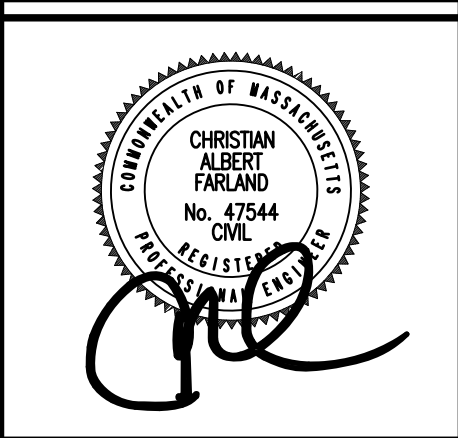
NOTE: SOLAR CANOPIES ARE NOT INCLUDED IN PROPOSED BUILDING AREAS

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LAYOUT
ALL SITE - PHASE 1
SHEET 5 OF 22



REVISIONS		
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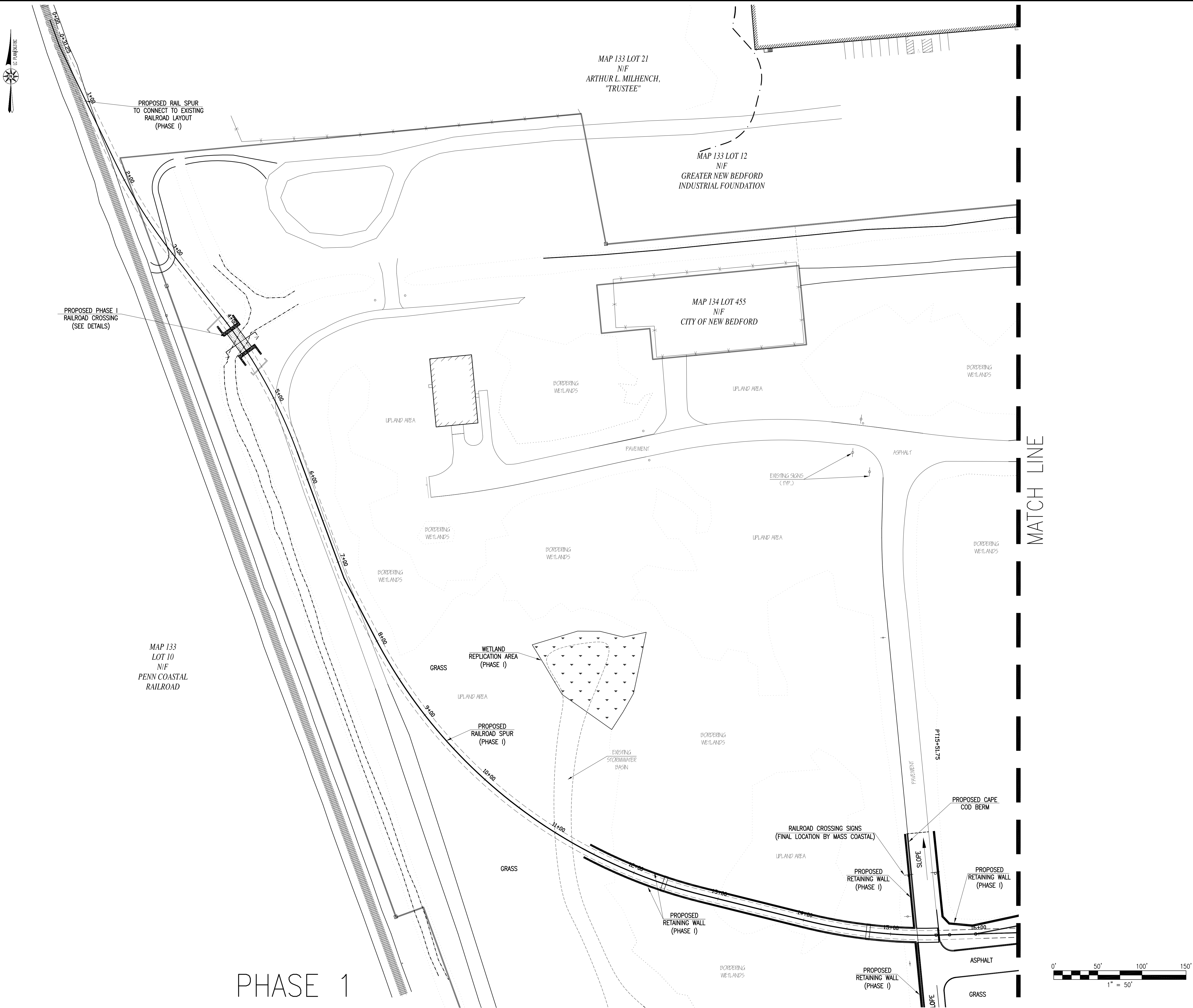
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PROPOSED PROJECT DEVELOPMENT
100 DUCHÂNE BOULEVARD

 PARALLEL PRODUCTS OF NEW ENGLAND
 401 INDUSTRY ROAD
 LOUISVILLE, KY 40208
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LAYOUT - PHASE 1
SHEET 6 OF 22

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PROPOSED PROJECT DEVELOPMENT

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ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR:
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JULY 3, 2019
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JOB NO. 15-500.2
LATEST REVISION:
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LAYOUT -- PHASE 1
CONT.
SHEET 7 OF 22

REVISIONS

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SEAL

VERIFICATION OF MATERIALS
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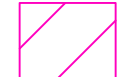

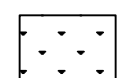
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PHASE 2 LAND ALTERATIONS	
	AREA (± S.F.)
DISTURBED WETLANDS	0
PROPOSED WETLANDS	0
PROPOSED BUILDINGS	90,032
PROP. ROADWAY/PARKING	29,400
GREEN SPACE	1,246,178
WASTEWATER	N/A
WATER	N/A
LANDSCAPING	0
RAIL SPUR	0

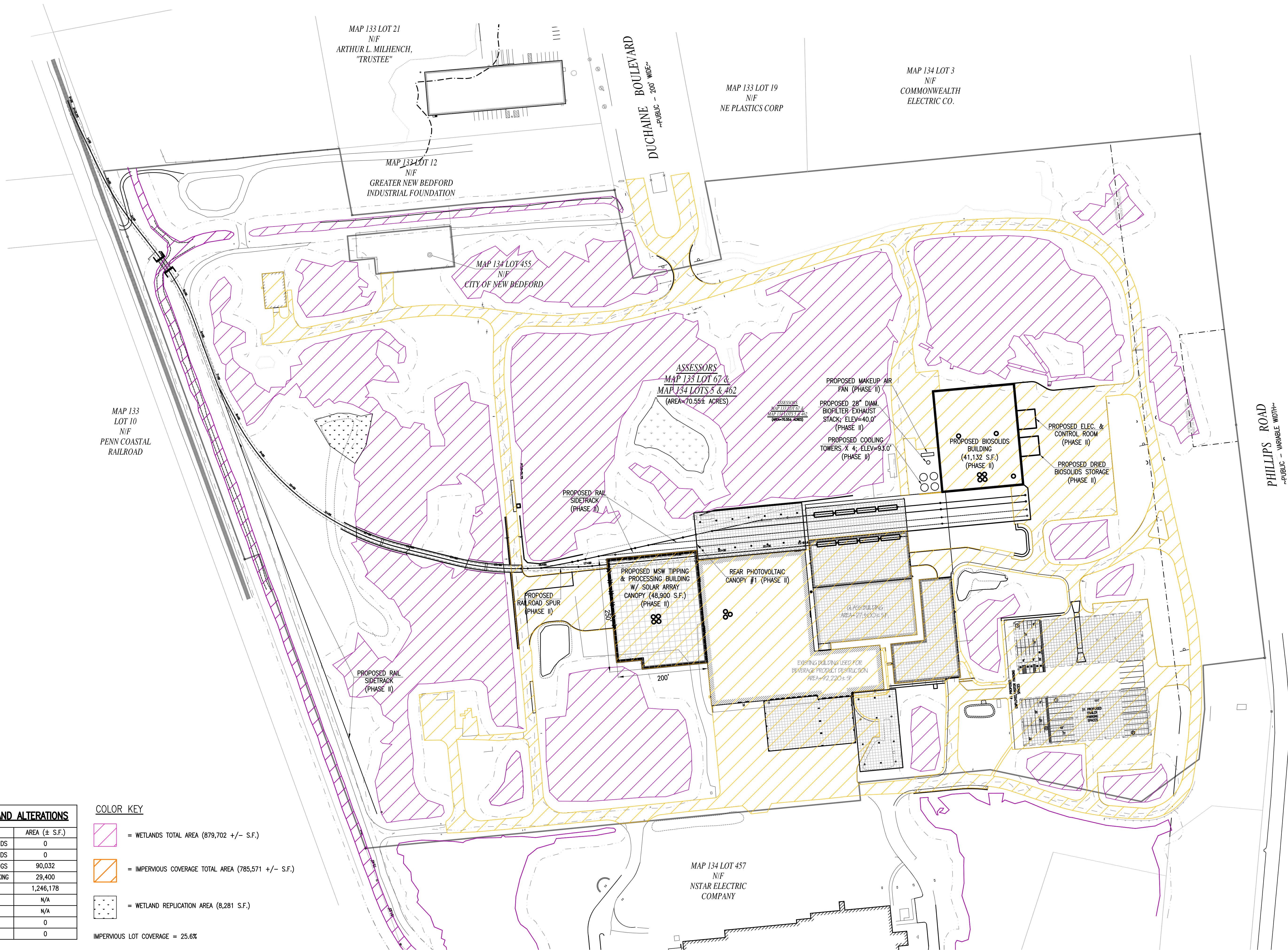
COLOR KEY

-  = WETLANDS TOTAL AREA (879,702 +/- S.F.)
-  = IMPERVIOUS COVERAGE TOTAL AREA (785,571 +/- S.F.)
-  = WETLAND REPLICATION AREA (8,281 S.F.)

IMPERVIOUS LOT COVERAGE = 25.6%

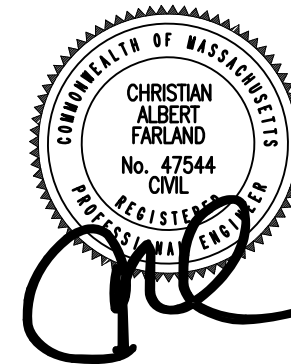
NOTE: SOLAR CANOPIES ARE NOT INCLUDED IN PROPOSED BUILDING AREAS

PHASE 1 & 2



REVISIONS

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PROPOSED PROJECT DEVELOPMENT

— 100 DUCHANE BOULEVARD —
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ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR:
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LOUISVILLE, KY 40208

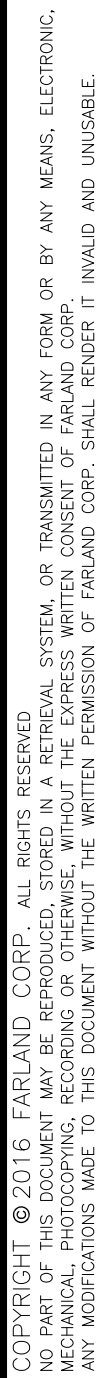
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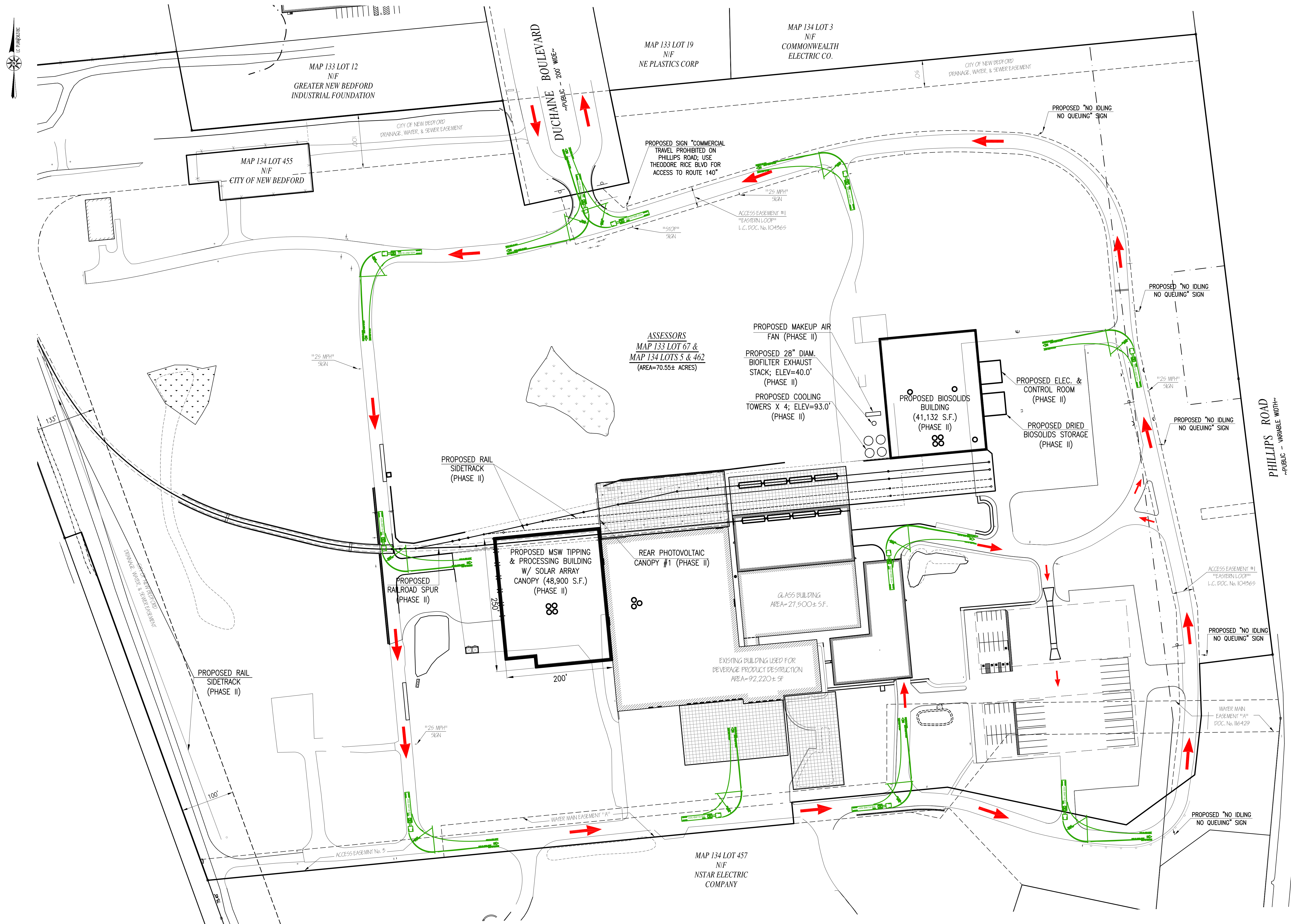
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LAYOUT — PHASE 1 & 2
OVERALL SITE
SHEET 8 OF 22

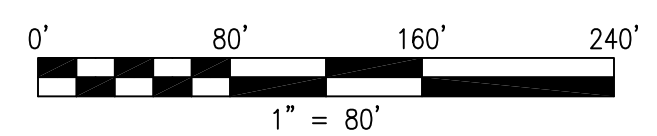


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PHASE 1 & 2



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PROPOSED PROJECT DEVELOPMENT

— 100 DUCHAÎNE BOULEVARD —

ASSESSORS MAP 133 LOT 67

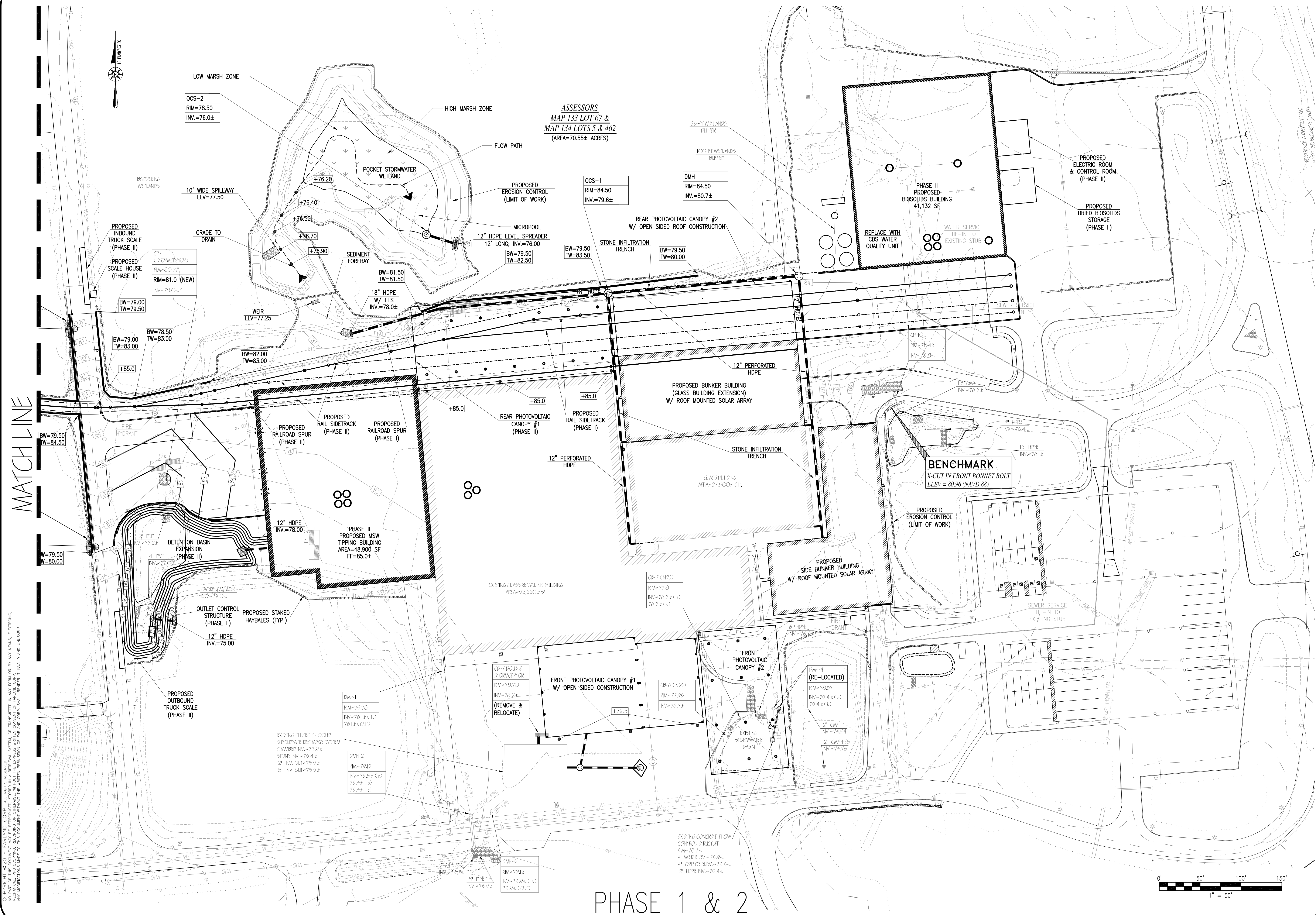
ASSESSORS MAP 134 LOTS 5 & 462

NEW BEDFORD, MASSACHUSETTS

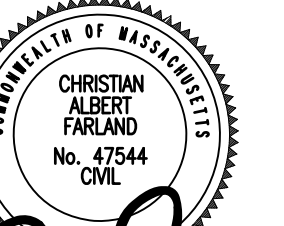
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TRAFFIC CIRCULATION PHASE 1 & 2 SHEET 11 OF 22



REVISIONS		
1	9/13/19	CONSERVATION COMMENTS
2	10/15/19	PHASE I AND II
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— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
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NEW BEDFORD, MASSACHUSETTS

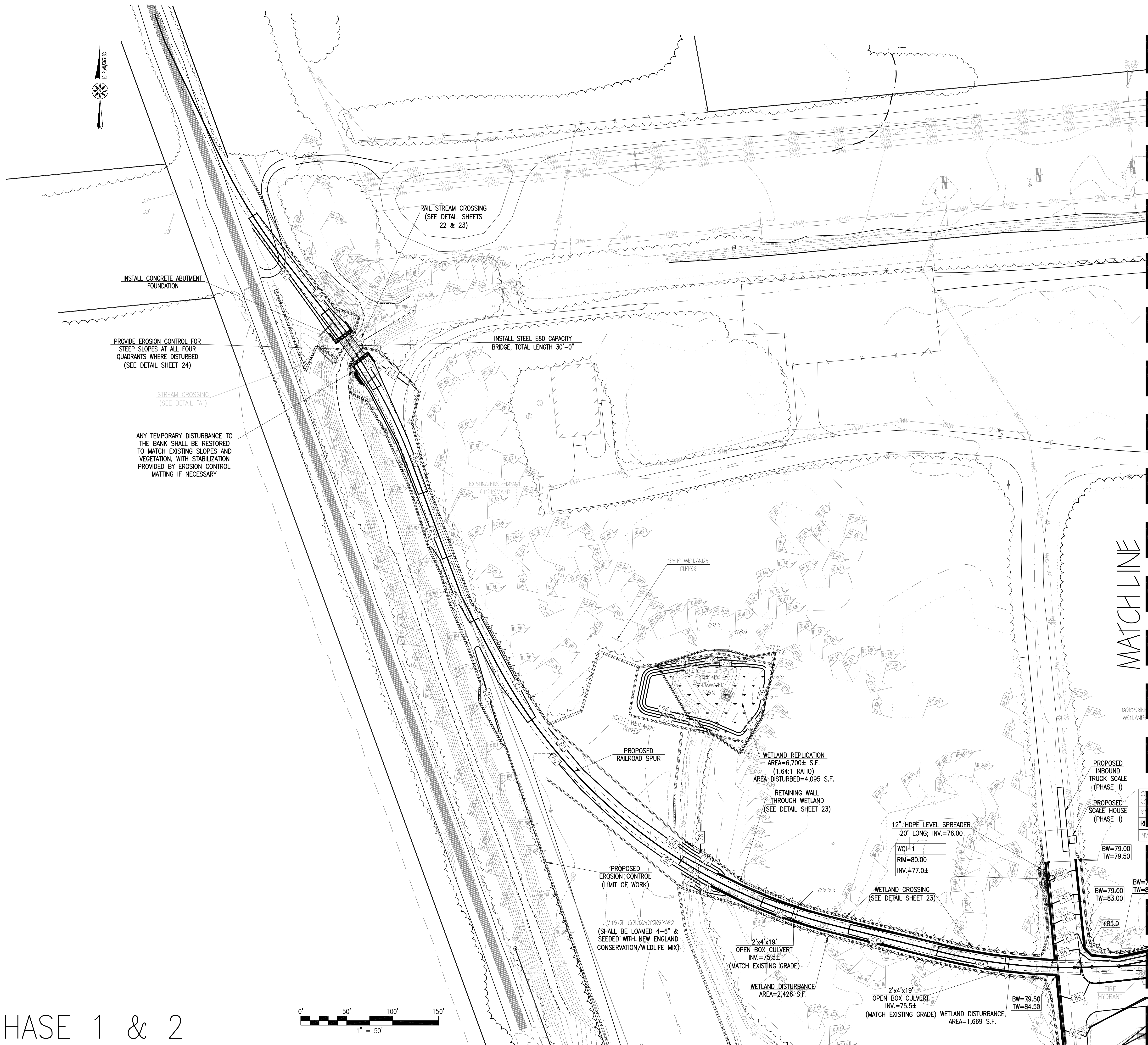
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GRADING, DRAINAGE & UTILITIES - PHASE 1 & 2 SHEET 12 OF 22

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PHASE 1 & 2



PROPOSED PROJECT DEVELOPMENT

— 100 DUCHAINE BOULEVARD —
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

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GRADING & DRAINAGE
CONT. - PHASE 1 & 2
SHEET 13 OF 22

REVISIONS

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2	10/15/19	PHASE 1 AND 2
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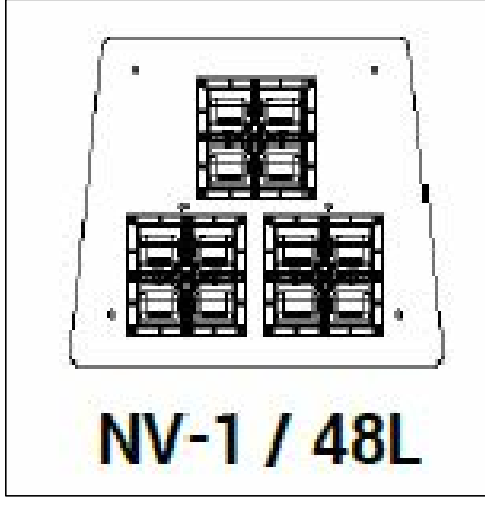
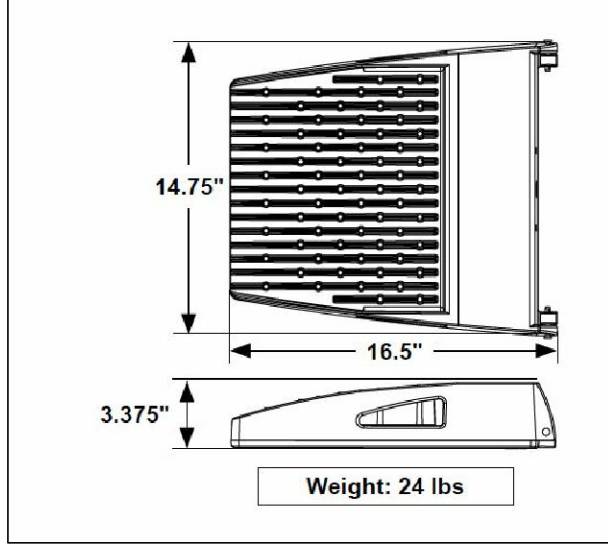
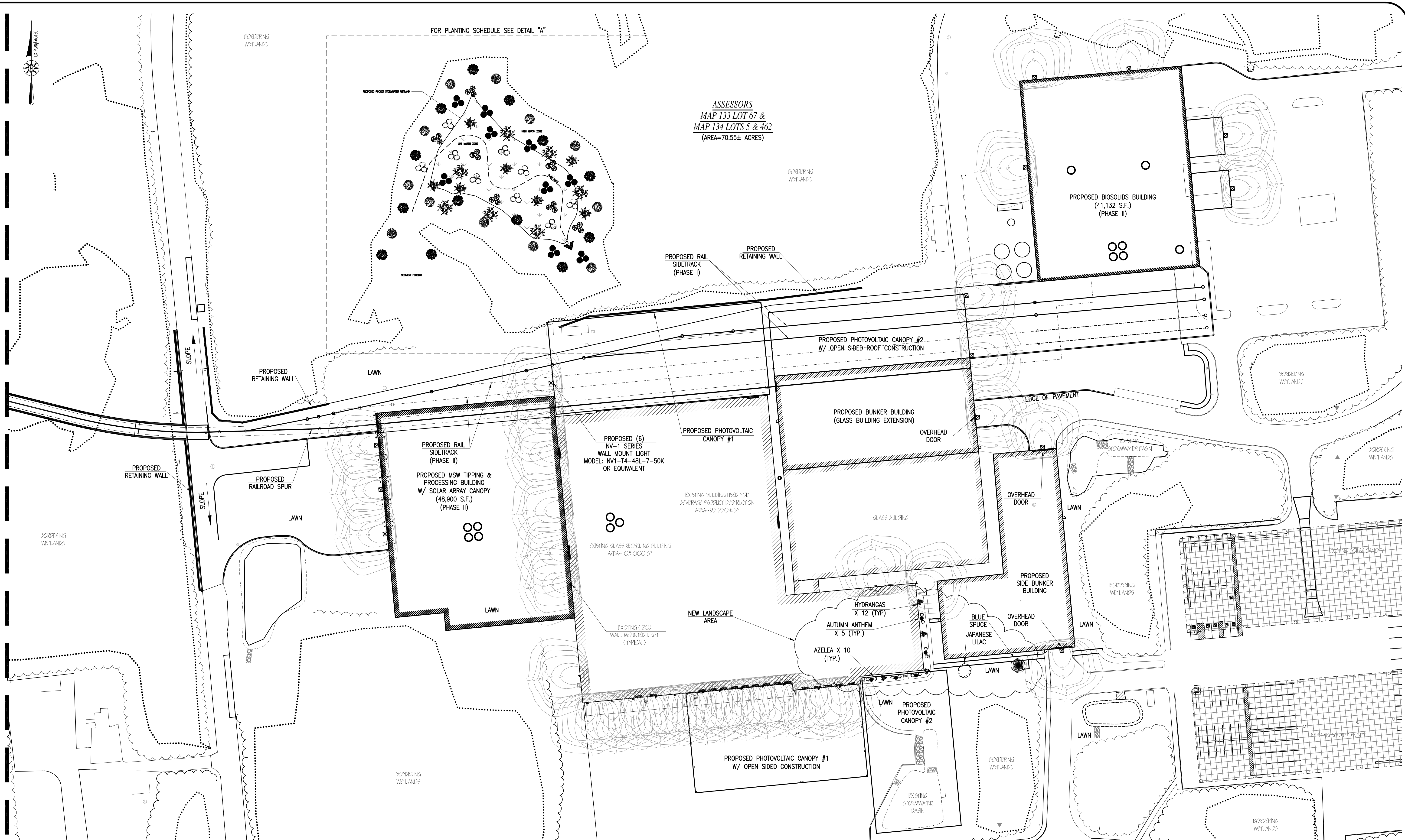
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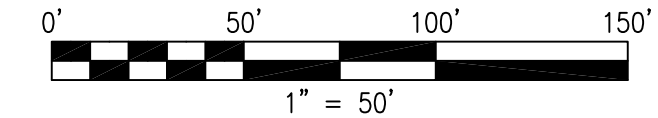


WALL MOUNT (WM)
Cast Aluminum Plate for direct wall mount. 3" extruded aluminum arm mounts directly to a cast wall mount box.

1.25" THK

WALL MOUNT LIGHT (NV1-T4-48L-7-50K)
NOT TO SCALE

PHASE 1 & 2



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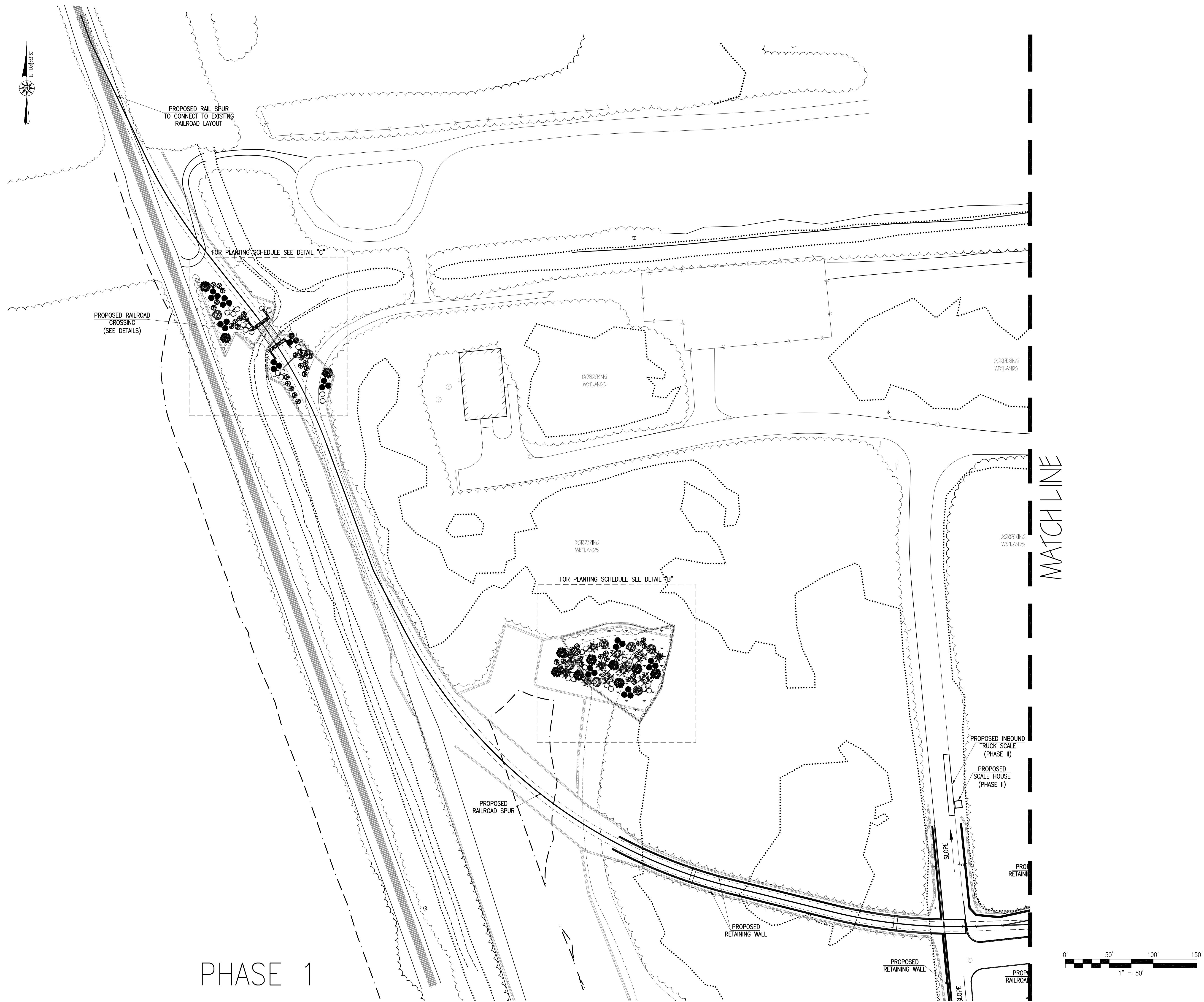
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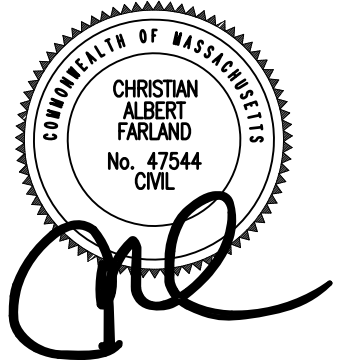
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LIGHTING & LANDSCAPING
PHASE 1 & 2
SHEET 14 OF 22

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LIGHTING & LANDSCAPING
CONT. - PHASE 1
SHEET 15 OF 22

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POCKET WETLAND SEEDMIXES

New England Province OBL Mix
Ernst Seeds Item Number: ERNMX-252
Seeding Rate: 20 lb per acre

Mix Composition
27.5% Carex vulpinoidea, PA Ecotype (Fox Sedge, PA Ecotype)
11.0% Carex lupulina, PA Ecotype (Hop Sedge, PA Ecotype)
11.0% Carex lurida, PA Ecotype (Lurid Sedge, PA Ecotype)
10.0% Carex scoparia, PA Ecotype (Blunt Broom Sedge, PA Ecotype)
6.2% Sparganium americanum (Eastern Bur Reed)
5.0% Elymus virginicus, PA Ecotype (Virginia Wildrye, PA Ecotype)
5.0% Panicum rigidulum, PA Ecotype (Redtop Panicgrass, PA Ecotype)
4.0% Verbena hastata, PA Ecotype (Blue Vervain, PA Ecotype)
3.0% Cinna arundinacea, PA Ecotype (Wood Reedgrass, PA Ecotype)
3.0% Juncus effusus (Soft Rush)
2.0% Alisma subcordatum, PA Ecotype (Mud Plantain, PA Ecotype)
2.0% Asclepias incarnata, PA Ecotype (Swamp Milkweed, PA Ecotype)
2.0% Carex intumescens, PA Ecotype (Star Sedge, PA Ecotype)
2.0% Sparganium eurycarpum, PA Ecotype (Giant Bur Reed, PA Ecotype)
1.0% Aster umbellatus, PA Ecotype (Flat Topped White Aster, PA Ecotype)
1.0% Eupatorium perfoliatum, PA Ecotype (Boneset, PA Ecotype)
1.0% Iris versicolor, PA Ecotype (Blueflag, PA Ecotype)
0.5% Carex stricta, PA Ecotype (Tussock Sedge, PA Ecotype)
0.5% Eupatorium fistulosum, PA Ecotype (Joe Pye Weed, PA Ecotype)
0.5% Helenium autumnale, PA Ecotype (Common Sneezeweed, PA Ecotype)
0.5% Lobelia siphilitica, PA Ecotype (Great Blue Lobelia, PA Ecotype)
0.5% Scirpus cyperinus, PA Ecotype (Woolgrass, PA Ecotype)
0.5% Scirpus validus, PA Ecotype (Softstem Bulrush, PA Ecotype)
0.3% Chelone glabra, PA Ecotype (Turtlehead, PA Ecotype)

Northeast Wetland Rush/Bulrush Mix

(Application Rate: 1 pound for 43,560 sq. ft. @ 230+ seeds per sq. ft.
(Southern Tier Consulting, Inc.)

Soft Rush	Juncus effusus
Green Bulrush	Scirpus atrovirens
Wool Grass	Scirpus cyperinus
Soft Stem Bulrush	Scirpus tabernaemontanii
Common Three Square	Scirpus pungens

New England Erosion Control and Restoration Mix
for Detention Basins and Moist Sites

(35 lbs/acre 1250 sq ft/lb)
(New England Wetland Plants, Inc.)

Virginia Wild Rye, (Elymus virginicus), Creeping Red Fescue, (Festuca rubra), Little Bluestem, (Schizachyrium scoparium), Fox Sedge, (Carex vulpinoidea), Big Bluestem, (Andropogon gerardii), Switch Grass, (Panicum virgatum), Rough Bentgrass/Ticklegrass, (Agrostis scabra), Blue Vervain, (Verbena hastata), New England Aster, (Symphytrichum novaeangliae), Boneset, (Eupatorium perfoliatum), Green Bulrush, (Scirpus atrovirens), Flat-top Goldentop, (Euthamia graminifolia), Soft Rush, (Juncus effusus), Wool Grass, (Scirpus cyperinus).

POCKET WETLAND PLUG PLANTING SPECIFICATIONS

HIGH MARSH
AREAS OF HIGH MARSH TO BE PLANTED WITH MINIMUM 200 2" PLUGS FROM THE BELOW LIST.

INCLUDE TWO OF THE FOLLOWING:

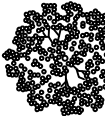

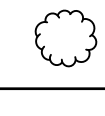


SCIRPUS CYPERINUS (WOOLGRASS)
CAREX LURIDA (LURID SEDGE)
JUNCUS EFFUSUS (SOFT RUSH)
PELTANDRA VIRGINICA (ARROW ARUM)

AND TWO OF THE FOLLOWING SPECIES:

THREE-SQUARE BULRUSH (SCIRPUS PUNGENS)
SCIRPUS ATROVIRENS (GREEN BULRUSH)
JUNCUS CANADENSIS (CANADA RUSH)
BLUE FLAG IRIS (IRIS VERSICOLOR)
ACORUS AMERICANA (SWEETFLAG)
CAREX STRICTA (TUSSOCK SEDGE)

MICROPOOL AND LOW MARSH
MICROPOOL AND LOW MARSH TO BE PLANTED WITH MINIMUM 300 2" PLUGS OR CELLS FROM THE BELOW LIST.

SCHOENOPLECTUS ACUTUS (HARD-STEM BULRUSH)
SCHOENOPLECTUS TABERNAEMONTANI (SOFT-STEM BULRUSH)
PICKERELWEED (PONTEDERIA CORDATA)
THREE-SQUARE BULRUSH (SCIRPUS PUNGENS)
NORTHERN ARROWHEAD (SAGITTARIA LATIFOLIA)

RIVERFRONT RESTORATION PLANTING TABLE				
SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
TREES				
	ACER RUBRUM	RED MAPLE	3 INCH CALIPER	3
	BETULA POPULIFOLIA	GRAY BIRCH	3 INCH CALIPER	2
SHRUBS				
	CLETHRA ALNIFOLIA	SWEET PEPPERBUSH	24 INCH	18
	VACCINIUM CONYMBOSIUM	HIGHBUSH BLUEBERRY	24 INCH	23
	ILEX VERTICILLATA	WINTERBERRY	24 INCH	18

GENERAL NOTES

- ALL PLANTINGS SHALL BE NATIVE VARIETIES WITH NO LANDSCAPE CULTIVARS INSTALLED.
- SPECIFIC PLACEMENT OF SHRUBS AND TREES ALONG THE EDGES OF THE POCKET WETLAND SHALL BE CARRIED OUT BY A QUALIFIED WETLAND SCIENTIST BASED ON ANTICIPATED WATER LEVELS & WETLAND INDICATOR STATUS. THE WETLAND SCIENTIST SHALL OVERSEE APPLICATION OF SEEDMIX AND GENERAL PLUG INSTALLATION LOCATIONS & WATER DEPTH ELEVATIONS.
- IF NECESSARY, ANY REQUIRED SUBSTITUTE NATIVE WOODY PLANTINGS OR NATIVE GROUNDCOVER SPECIES SHALL BE REVIEWED BY THE WETLAND SCIENTIST PRIOR TO INSTALLATION.
- INSTALLATION OF PLANTINGS IS RECOMMENDED IN THE SPRING OR FALL SEASON.
- SEEDMIXES SHALL BE APPLIED ACCORDING TO THE SUPPLIERS INSTRUCTIONS.
- APPROXIMATELY 6 INCHES OF ORGANIC RICH TOP SOIL SHALL BE ESTABLISHED THROUGHOUT.
- THE PROPOSED SOIL SHALL BE COMPRISED OF CLEAN LEAF COMPOST AND LOAM MIXTURE.
- ANY NECESSARY DEWATERING DURING PLANTING WILL BE CARRIED OUT USING CONSTRUCTION BEST MANAGEMENT PRACTICES.
- SHOULD DURING CONSTRUCTION STORMWATER INPUTS OCCUR IN THE POCKET WETLAND, PLANTINGS ARE RECOMMENDED TO BE INSTALLED AFTER THIS CONSTRUCTION PERIOD.
- THE ANTICIPATED MEAN WATER LEVELS TO BE CONFIRMED/ESTIMATED PRIOR TO PLANTING BY THE MONITORING WETLAND SCIENTIST AND/OR ENGINEER TO GUIDE PLANT INSTALLATION ELEVATIONS.
- IT IS RECOMMENDED THAT PLUGS BE SECURED WITH BIODEGRADABLE STAKES, STAPLES OR SMALL STONES TO PREVENT FLOATING WITHIN SURFACE WATER.
- POCKET WETLANDS TO BE SEEDED WITH 50/50 MIX COMPRISED OF NORTHEAST WETLAND NATIVE RUSH/BULRUSH MIX & THE NEW ENGLAND OBLIGATE SEED MIX. THE UPLAND WETLAND EDGE PERIMETER OF THE POCKET WETLAND AREA TO BE SEEDED WITH THE NEW ENGLAND EROSION CONTROL AND RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES.

POCKET WETLAND GENERAL NOTES

- THE PROPOSED SHRUBS AND TREES IN THE POCKET WETLAND PLANTING SPECIFICATIONS LIST SHALL BE EQUALLY DISTRIBUTED ALONG THE PERIMETER OF THE POCKET WETLAND ON THE EMBANKMENTS AND WITHIN THE EDGES OF THE HIGH MARSH. THE SPECIFIC LOCATIONS OF THE PLANTINGS SHALL BE OVERSEEN BY THE MONITORING WETLAND SCIENTIST TO ENSURE PROPER TARGET HYDROLOGY FOR EACH SPECIES (E.G. WILLOWS, BUTTONBUSH AND SWAMP ROSE TO BE PLACED AT OR A FEW INCHES ABOVE THE OUTERMOST EDGE OF TARGETED MEAN SURFACE WATER LEVEL. RED MAPLE AND TUPELO TO BE PLACED ANYWHERE ABOVE MEAN SURFACE WATER. REMAINDER OF PROPOSED WOODY PLANTINGS TO BE SITUATED 1-2 FEET ABOVE INTENDED SURFACE WATER LEVELS).

WETLAND REPLICATION AREA

- APPROXIMATELY 12 INCHES OF ORGANIC TOP SOIL SHALL BE ESTABLISHED IN THE WETLAND REPLICATION AREA.
- THE PROPOSED SOIL SHALL BE COMPRISED OF CLEAN LEAF COMPOST AND LOAM MIXTURE, AND SHALL HAVE APPROXIMATELY 20% ORGANIC MATTER CONTENT. THE IMPORTED SOIL SHALL BE INSPECTED BY THE WETLAND SCIENTIST BEFORE PLACEMENT IN THE REPLICATION AREA.
- PIT AND MOUND MICRO-TOPOGRAPHY SHALL BE ESTABLISHED IN THE WETLAND REPLICATION AREA UNDER THE OVERSIGHT OF THE WETLAND SCIENTIST.
- EFFORT SHALL BE MADE TO MINIMIZE SOIL COMPACTION DURING CONSTRUCTION.

POCKET WETLAND PLANT LIST

COMMON NAME	BOTANICAL NAME	SIZE	PLANTING SPECIFICATIONS	NO.
TREES				
PUSSY WILLOW	SALIX DISCOLOR	4-6' MIN.	SINGLES, 10-20 FEET O.C.	7
BLACK WILLOW	SALIX NIGRA	4-6' MIN.	SINGLES, 10-20 FEET O.C.	7
BLACK GUM	NYSSA SYLVATICA	4-6' MIN.	SINGLES, 10-20 FEET O.C.	7
RED MAPLE	ACER RUBRUM	4-6' MIN.	SINGLES, 10-20 FEET O.C.	7
SWAMP WHITE OAK	QUERCUS BICOLOR	4-6' MIN.	SINGLES, 10-20 FEET O.C.	7
SHRUBS				
HIGHBUSH BLUEBERRY	VACCINIUM CORYMBOSUM	2-3' MIN.	CLUSTERS 3-5, 4-6' O.C.	7
BUTTONBUSH	CEPHALANSIS OCCIDENTALIS	2-3' MIN.	CLUSTERS 3-5, 4-6' O.C.	7
COMMON ELDERBERRY	SAMBUSCUS CANADENSIS	2-3' MIN.	CLUSTERS 3-5, 4-6' O.C.	7
SWAMP ROSE	ROSA PALUSTRIS	2-3' MIN.	CLUSTERS 3-5, 4-6' O.C.	7
WINTERBERRY	ILEX VERTICILLATA	2-3' MIN.	CLUSTERS 3-5, 4-6' O.C.	7

SURROUNDING UPLAND PLANT SPECIES

Tree layer
Red maple (Acer rubrum)
White pine (Pinus strobus)
Gray birch (Betula populifolia)
White oak (Quercus alba)
Eastern hemlock (Tsuga canadensis)

Shrub layer
White pine (Pinus strobus)
Gray birch (Betula populifolia)
Black gum (Nyssa sylvatica)
Sweet pepperbush (Clethra alnifolia)
American holly (Ilex opaca)
American beech (Fagus grandifolia)

Climbing woody vines
Round-leaved greenbrier (Smilax rotundifolia)

Herbaceous
Broom sedge (Andropogon virginicus)
Little bluestem (Schizachyrium scoparium)
Unspecified sedge species (Carex sp.)
Trailing raspberry (Rubus sp.)

SURROUNDING WETLAND PLANT SPECIES

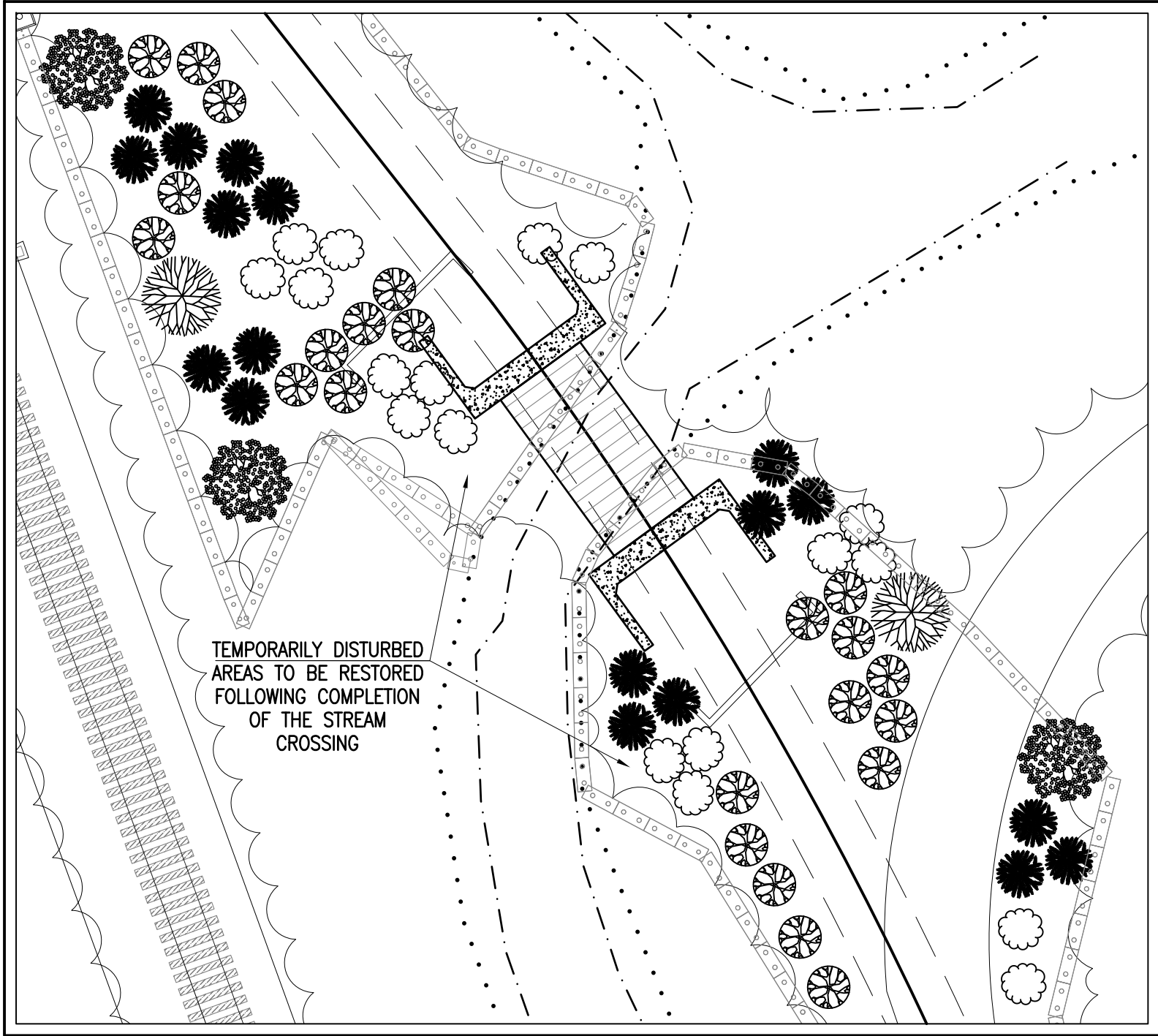
Tree layer
Gray birch (Betula populifolia)

Shrub layer
Red maple (Acer rubrum)
Sweet pepperbush (Clethra alnifolia)
Multiflora rose (Rosa multiflora)
Highbush blueberry (Vaccinium corymbosum)
Maleberrry (Lyonia ligustrina)
Arrowwood (Viburnum recognitum)

Climbing woody vines
Oriental bittersweet (Celastrus orbiculatus)

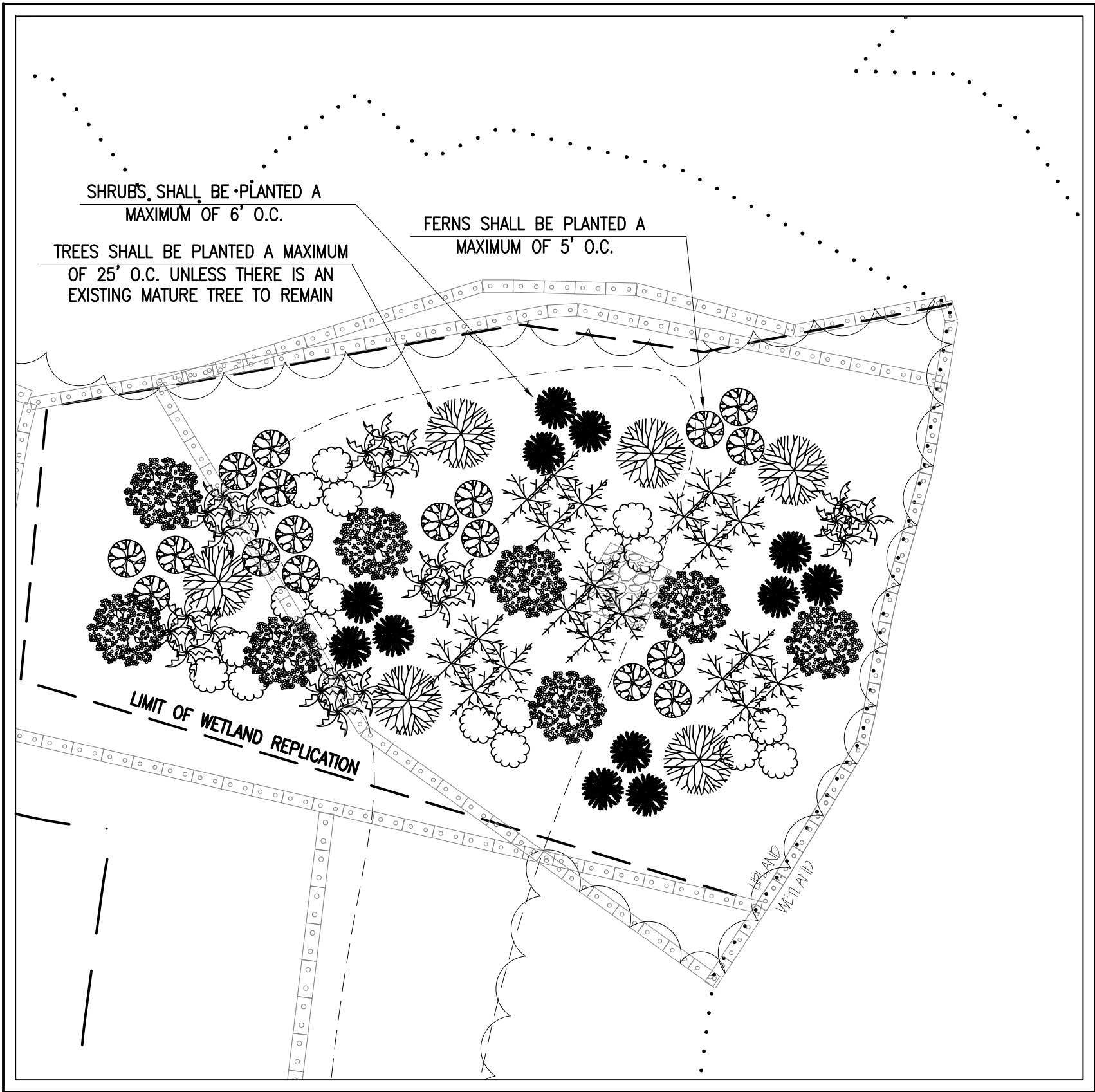
Herbaceous layer
Sensitive fern (Onoclea sensibilis)
Cinnamon fern (Osmunda cinnamomea)
Soft rush (Juncus effusus)
Reed canary-grass (Phalaris arundinacea)

Pennsylvania smartweed (Polygonum pennsylvanicum)
Arrow-leaved tearthumb (Polygonum cuspidatum)



RIVERFRONT AREA RESTORATION (DETAIL "C")

SCALE: 1"=20'



WETLAND REPLICATION (DETAIL "B")

SCALE: 1"=20'

REVISIONS

1	9/13/19	CONSERVATION COMMENTS
2	10/15/19	PHASE 1 AND II
3	1/10/20	CONSERVATION COMMENTS
4	6/8/20	CONSERVATION COMMENTS
5	12/16/20	GREEN SEAL COMMENTS



www.FarlandCorp.com

401 COUNTY STREET
NEW BEDFORD, MA 02740
P.508.717.3479

OFFICES IN:

- TAUNTON
- MARLBOROUGH
- WARWICK, RI

DRAWN BY: MJW

DESIGNED BY: CAF

CHECKED BY: CAF

PROPOSED PROJECT DEVELOPMENT

100 DUCHAINE BOULEVARD
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PARALLEL PRODUCTS OF NEW ENGLAND
401 INDUSTRY ROAD
LOUISVILLE, KY 40208

PREPARED FOR:

JULY 3, 2019

SCALE: AS NOTED

JOB NO. 15-500.2

LATEST REVISION:
DECEMBER 16, 2020

LANDSCAPING &
PLANTING SCHEDULES
PHASE 1
SHEET 16 OF 22

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AND STRUCTURES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANY, ANY GOVERNING PERMITTING AUTHORITY, AND "DIG SAFE" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION WORK TO REQUEST EXACT FIELD LOCATION OF UTILITIES INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION TAKEN BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLAN.
2. TOPOGRAPHIC AND PROPERTY LINE SURVEY PERFORMED BY FARLAND CORP. IN APRIL OF 2019.
3. VERTICAL ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 AND HORIZONTAL LOCATIONS REFER TO THE NORTH AMERICAN DATUM (NAD) OF 1983.
4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL STANDARDS AND REGULATIONS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL CONTROL POINTS AND BENCH MARKS NECESSARY FOR THE WORK.
6. ALL BENCHMARKS SHOWN ON THIS PLAN ARE TO BE CHECKED FOR CONSISTENCY BY THE CONTRACTOR. ANY DISCREPANCIES MUST BE RESOLVED BY THIS OFFICE PRIOR TO CONSTRUCTION.
7. WHERE PROPOSED PAVEMENT AND WALKS ARE TO MEET EXISTING, THE CONTRACTOR SHALL SAWCUT A NEAT LINE AND MATCH GRADE. SEAL ALL JOINTS WITH HOT BITUMINOUS ASPHALT JOINT SEALER.
8. CURBING TO BE AS INDICATED ON THE PLANS.
9. ALL EXISTING TREES, SHRUBS AND GROUND COVER WHERE NATURAL GRADE IS TO BE RETAINED SHALL BE KEPT IN THEIR EXISTING STATE UNLESS REMOVAL IS REQUIRED FOR CONSTRUCTION PURPOSES.
10. ALL AREAS DISTURBED BY CONSTRUCTION AND NOT TO BE PAVED OR OTHERWISE TREATED AS NOTED ON PLAN SHALL BE TREATED WITH 4" OF LOAM, SEEDED AND HAY MULCHED FOR EROSION CONTROL.
11. SITE IMPROVEMENTS SHALL CONFORM TO A.D.A. SPECIFICATIONS.
12. LIGHTING SHALL BE DIRECTED ON SITE AND AWAY FROM TRAFFIC INTERFERENCE.
13. TEST PITS AND/OR BORINGS WERE TAKEN FOR THE PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY. THEY DO NOT NECESSARILY SHOW THE NATURE OF ALL MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
14. THE CONTRACTOR SHALL PROTECT AND/OR CAP OFF ALL EXISTING ON-SITE UTILITY SERVICES ACCORDING TO THE LOCAL AUTHORITY'S SPECIFICATIONS. SERVICES SHALL BE CAPPED OFF WHERE SAME ENTER THE PERIMETER OF THE PROPERTY LINE.
15. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
16. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION.
17. THESE PLANS ARE PERMITTING PLANS AND SHALL NOT TO BE USED FOR CONSTRUCTION. A FINAL SET OF STAMPED PLANS FOR CONSTRUCTION WILL BE ISSUED AFTER RECEIVING FINAL APPROVAL FROM THE LOCAL AND/OR STATE DEPARTMENTS.

CONSTRUCTION SEQUENCING NOTES

1. CONSTRUCT TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES. EROSION CONTROL FACILITIES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING.
2. TREE PROTECTION FENCE SHALL BE INSTALLED AND APPROVED BY THE OWNER REPRESENTATIVE PRIOR TO ANY EARTH MOVING.
3. ALL PERMANENT DITCHES AND SWALES ARE TO BE STABILIZED WITH VEGETATION OR RIP RAP PRIOR TO DIRECTING RUNOFF TO THEM.
4. CLEAR CUT, DEMOLISH AND DISPOSE OF EXISTING SITE ELEMENTS NOT TO REMAIN.
5. STORMWATER SHALL NOT BE DIRECTED TOWARDS THE INFILTRATION BASINS UNTIL THE ENTIRE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
6. GRADE AND GRAVEL ALL PAVED AREAS. ALL PROPOSED PAVED AREAS SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
7. BEGIN ALL PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED IMMEDIATELY AFTER THEIR CONSTRUCTION.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES AND MULCH AND SEED AS REQUIRED.
9. FINISH PAVING ALL HARD SURFACE AREAS.
10. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
11. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
12. REMOVE TEMPORARY EROSION CONTROL MEASURES.
13. THE CONSTRUCTION SEQUENCE SHALL BE CONFINED TO THE LIMIT OF WORK AS SHOWN ON THE DRAWINGS.
14. UPON COMPLETION OF CONSTRUCTION THE OWNER SHALL AGREE TO MAINTAIN AND CLEAN ALL DRAINAGE STRUCTURES AS REQUIRED.

SITE PREPARATION NOTES

1. WITHIN THE LIMIT OF WORK LINE AS NOTED ON THE SITE PLANS, REMOVE AND DISCARD ALL CONCRETE PAVEMENT, BITUMINOUS CONCRETE PAVEMENT, BRICK PAVEMENT, TOP SOIL, MULCH, TRASH, DEAD TREES AND STUMPS, SHRUBBERY, CHAIN LINK FENCE POSTS, RAILS, FABRIC, GATES, FOOTINGS AND ALL APPURTENANCES, BOLLARDS, POSTS, CONCRETE FOOTINGS AND FOUNDATIONS, WALLS AND CURBS UNLESS OTHERWISE NOTED.
2. THE OWNER'S REPRESENTATIVE SHALL BE CONSULTED AND WILL REVIEW THE WORK ON SITE WITH THE CONTRACTOR BEFORE ANY WORK SHALL COMMENCE.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES BETWEEN PLANS AND ACTUAL CONDITIONS TO THE OWNER'S REPRESENTATIVE PRIOR TO STARTING WORK.
4. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING CONDITIONS TO REMAIN THAT ARE DUE TO CONTRACTOR OPERATIONS.
5. ALL ITEMS TO BE REMOVED THAT ARE NOT STOCKPILED FOR LATER REUSE ON THE PROJECT OR DELIVERED TO THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS EFFORTS OF THE DEMOLITION WITH ALL TRADES.
7. THE CONTRACTOR SHALL COORDINATE ALL ADJUSTMENT OR ABANDONMENT OF UTILITIES WITH THE RESPECTIVE UTILITY COMPANY.
8. THE CONTRACTOR SHALL MAINTAIN OR ADJUST TO NEW FINISH GRADES AS NECESSARY ALL UTILITY AND SITE STRUCTURES SUCH AS LIGHT POLES, SIGN POLES, MANHOLES, CATCH BASINS, HAND HOLES, WATER AND GAS GATES, HYDRANTS, ETC., FROM MAINTAINED UTILITY AND SITE SYSTEMS UNLESS OTHERWISE NOTED OR DIRECTED BY THE OWNER'S REPRESENTATIVE.

UTILITY AND GRADING NOTES

1. ALL ON-SITE STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE PIPE (HDPE) OR RCP, UNLESS NOTED OTHERWISE.
2. HDPE PIPE SHALL CONFORM WITH ASHTO DESIGNATIONS M294 AND M252, SHALL BE MANUFACTURED WITH HIGH DENSITY POLYETHYLENE PLASTIC AND SHALL BE ADS N-12 PIPE AS MANUFACTURED BY ADVANCE DRAINAGE SYSTEM, INC. OR HANCOR HI Q PIPE AS MANUFACTURED BY HANCOR, INC. OR APPROVED EQUAL UNLESS OTHERWISE NOTED OR DETAILED.
3. A MINIMUM OF 18" VERTICAL CLEARANCE SHALL BE MAINTAINED WHERE WATER SERVICES CROSS STORM DRAIN LINES.
4. ALL SERVICE CONNECTIONS SHALL BE INSTALLED TO A POINT OF 10 FEET FROM THE BUILDING WALL UNLESS OTHERWISE NOTED OR DETAILED.
5. ALL WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 5 FEET OF COVER AND A MAXIMUM OF 6 FEET OF COVER EXCEPT AS NOTED OR DETAILED OTHERWISE. GREATER DEPTHS ARE PERMITTED WHERE REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES.
6. GENERALLY, WATER MAIN FITTINGS IDENTIFIED ON THIS DRAWING ARE SHOWN FOR INSTALLATION LOCATION PURPOSE. THE CONTRACTOR SHALL NOTE THAT NOT ALL FITTINGS ARE NOTED, SHOWN OR INDICATED.
7. ALL WATER MAIN FITTINGS, TEES, BENDS, HYDRANTS, ETC. SHALL BE RESTRAINED WITH CONCRETE THRUST BLOCKS.
8. ALL HYDRANTS SHALL BE INSTALLED WITH A 6" C.L.D.I. RUNOUT AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED GATE VALVE, BOX, AND TEE FITTING. ALL HYDRANTS SHALL MEET LOCAL MUNICIPAL SPECIFICATION REQUIREMENTS AND SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL MUNICIPAL REQUIREMENTS.
9. DOMESTIC WATER SERVICES 2.5" AND SMALLER SHALL BE TYPE K COPPER TUBING AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED CORPORATION STOP AND APPROVED SADDLE CURB STOP, AND BOX, USING MATERIALS SPECIFIED BY THE MUNICIPAL WATER DEPARTMENT OR COMPANY.
10. ALL WATER MAINS 3" AND LARGER SHALL BE CEMENT LINED DUCTILE IRON - CLASS 52, AND SHALL BE INSTALLED WITH APPROPRIATELY SIZED FITTINGS AND GATE VALVES.
11. ALL WATER MAIN APPURTENANCES, MATERIALS, METHODS OF INSTALLATION AND TESTING REQUIREMENTS SHALL MEET OR EXCEED ALL LOCAL MUNICIPAL REQUIREMENTS.
12. PRESSURE AND LEAKAGE TEST, DISINFECTION AND FLUSHING SHALL BE IN ACCORDANCE WITH ALL LOCAL MUNICIPAL STANDARDS AND REQUIREMENTS. CONTRACTORS SHALL BE RESPONSIBLE FOR ALL COSTS IN CONNECTION WITH UTILITY TESTS, FLUSHING AND INSPECTIONS AS REQUIRED BY THE LOCAL MUNICIPALITY.
13. PRIMARY WATER METER AND BACKFLOW PREVENTER SHALL BE LOCATED AT THE POINT WHERE THE WATER LINE ENTERS THE BUILDING UNLESS OTHERWISE NOTED OR DETAILED ON THE DRAWINGS.
14. ALL GRAVITY SEWER PIPE SHALL BE PVC PER ASTM D3034, SDR-35 AND ASTM D1784 WITH RUBBER GASKET JOINTS.
15. WHERE SANITARY SEWERS CROSS WATER LINES, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST EIGHTEEN INCHES BELOW THE INVERT OF THE WATER MAIN. IF THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THIS REQUIREMENT, THE WATER MAIN SHALL BE RELOCATED TO PROVIDE THIS SEPARATION OR CONSTRUCTED WITH MECHANICAL JOINT PIPE FOR A DISTANCE OF TEN FEET ON EACH SIDE OF THE SEWER. ONE FULL LENGTH OF WATER MAIN SHALL BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR AS POSSIBLE. IF MECHANICAL JOINT PIPE IS NOT USED THAN BOTH THE WATER MAIN AND SANITARY SEWER SHALL BE ENCASED IN CONCRETE FOR A MINIMUM DISTANCE OF 10 FEET FROM THE CROSSING POINT OF THE OTHER PIPE AS MEASURED NORMALLY FROM ALL POINTS ALONG THE PIPE.
16. DUE TO THE SMALL SCALE OF THE SITE WORK DRAWINGS, EXACT LOCATION OF UTILITY STUBS FOR BUILDING CONNECTIONS SHALL BE VERIFIED WITH THE BUILDING DRAWINGS. SERVICE STUBS TO THE BUILDING SHALL BE INSTALLED TO A POINT 10 FEET FROM THE BUILDING WALL UNLESS OTHERWISE NOTED OR DETAILED.
17. BEFORE THE DEVELOPMENT SITE IS GRADED, THE AREA OF THE DRAINAGE BASINS SHOULD BE FENCED OFF TO PREVENT HEAVY EQUIPMENT FROM COMPACTING THE UNDERLYING SOIL.
18. WHERE PROPOSED GRADES MEET EXISTING GRADES, CONTRACTOR SHALL BLEND GRADES TO PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING AND NEW WORK. PONDING AT TRANSITION AREAS WILL NOT BE ALLOWED.
19. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING FOUNDATIONS AND STRUCTURES.
20. MAXIMUM SLOPE IN DISTURBED AREAS SHALL NOT EXCEED 3:1, UNLESS OTHERWISE NOTED.
21. CONTRACTOR SHALL VERIFY EXISTING GRADES AND NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES.
22. CONTRACTOR SHALL ADJUST UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.
23. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE OWNER'S REPRESENTATIVE FOR RESOLUTION OF THE CONFLICT.
24. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF ALL GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
25. ELECTRICAL DUCT BANK LOCATION IS SHOWN FOR COORDINATION PURPOSES, REFER TO ELECTRICAL PLANS FOR SECTIONS AND DETAILS OF THE UTILITY DUCT BANK.
26. THE LOCATION, SIZE, DEPTH AND SPECIFICATIONS FOR CONSTRUCTION OF PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY AND APPROVED BY THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE AND ELECTRICAL). FINAL DESIGN AND LOCATIONS AT THE BUILDING WILL BE PROVIDED BY THE ARCHITECT. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE UTILITY CONNECTIONS WITH THE RESPECTIVE COMPANIES PRIOR TO ANY UTILITY CONSTRUCTION.

LAYOUT AND MATERIAL NOTES

1. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL CONSTRUCTION DOCUMENTS, SPECIFICATIONS AND SITE CONDITIONS PRIOR TO BIDDING AND PRIOR TO CONSTRUCTION.
2. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS AND SITE CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE OWNER'S REPRESENTATIVE FOR CLARIFICATION AND RESOLUTION PRIOR TO BIDDING OR CONSTRUCTION. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND ALL DETAILS CONTIGUOUS TO THE BUILDING INCLUDING SIDEWALKS, RAMPS, UTILITY ENTRANCE LOCATIONS, WALL PACKS, CONCRETE DOOR PADS, ROOF DRAINS, ETC.
4. ACCESSIBLE CURB RAMPS SHALL BE PER THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD AND THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES, WHICH IS MORE STRINGENT.
5. THE FOLLOWING LAYOUT CRITERIA SHALL CONTROL UNLESS OTHERWISE NOTED ON THE PLAN:
ALL DIMENSIONS ARE TO OUTSIDE FACE OF BUILDING.
ALL DIMENSIONS ARE TO FACE OF CURB AT GUTTER LINE.
ALL DIMENSIONS ARE TO CENTER OF PAVEMENT MARKINGS.
ALL TIES TO PROPERTY LINES ARE PERPENDICULAR TO THE PROPERTY LINE UNLESS OTHERWISE NOTED.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. THE CONSERVATION COMMISSION SHALL BE NOTIFIED, AT LEAST 72 HOURS PRIOR TO ANY LAND DISTURBANCE.
2. A COPY OF THE SOIL EROSION AND SEDIMENT CONTROL PLAN MUST BE MAINTAINED ON THE PROJECT SITE DURING CONSTRUCTION.
3. SOIL EROSION AND SEDIMENT CONTROL PRACTICES IN THE PLAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
4. ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN PLACE PRIOR TO ANY DEMOLITION GRADING OPERATIONS AND/OR INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES.
5. ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE LEFT IN PLACE UNTIL CONSTRUCTION IS COMPLETED AND/OR THE AREA IS STABILIZED.
6. ALL SOIL EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSPECTED AND MAINTAINED ON A REGULAR BASIS AND AFTER EVERY STORM EVENT.
7. THE MAINTENANCE OF SOIL EROSION AND SEDIMENT CONTROL MEASURES AND FACILITIES DURING AND IMMEDIATELY AFTER CONSTRUCTION RESTS WITH THE GENERAL CONTRACTOR. UPON ACCEPTANCE OF THE PROJECT, THE OWNER SHALL BECOME RESPONSIBLE FOR MAINTENANCE OF ANY REMAINING MEASURES AND FACILITIES.
8. OFF SITE SEDIMENT DISTURBANCE MAY REQUIRE ADDITIONAL CONTROL MEASURES TO BE DETERMINED BY THE ENGINEER.
9. THE CONSERVATION COMMISSION AND/OR ENGINEER MAY REQUIRE ADDITIONAL SOIL EROSION MEASURES TO BE INSTALLED, AS DIRECTED BY THE DISTRICT INSPECTOR.
10. ADJOINING PROPERTIES SHALL BE PROTECTED FROM EXCAVATION AND FILLING OPERATIONS AT ALL TIMES.
11. THE CONTRACTOR SHALL UTILIZE ALL METHODS NECESSARY TO PREVENT BLOWING AND MOVEMENT OF DUST FROM THE EXPOSED SOIL SURFACES.
12. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
13. A CRUSHED STONE TIRE CLEANING PAD WILL BE INSTALLED WHEREVER A CONSTRUCTION ENTRANCE EXISTS. SEE LOCATION DETAIL ON PLAN.
14. ALL CATCH BASIN INLETS SHALL BE PROTECTED DURING CONSTRUCTION AS DETAILED ON THE PLAN, IF APPLICABLE.
15. ALL STORM DRAINAGE OUTLETS SHALL BE PROTECTED AS REQUIRED HEREON BEFORE DISCHARGE POINTS BECOME OPERATIONAL.
16. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SUCH THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
17. LAND AREAS EXPOSED AT ANY ONE TIME AND THE LENGTH OF EXPOSURE SHALL BE KEPT TO A PRACTICAL MINIMUM. THEY SHALL BE LEFT IN A NEAT AND FINISHED APPEARANCE AND PROTECTED FROM EROSION.
18. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN SIXTY (60) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING AND FERTILIZATION. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTRIBUTED AREAS SHALL BE MULCHED.
19. ALL CRITICAL AREAS SUBJECT TO EROSION SHALL RECEIVE A TEMPORARY SEEDING AND BE MULCHED IN ACCORDANCE WITH THE SPECIFICATIONS IMMEDIATELY FOLLOWING ROUGH GRADING.
20. IMMEDIATELY AFTER COMPLETION OF STRIPPING AND STOCKPILING OF TOPSOIL, SEED THE STOCKPILE WITH ANNUAL RYE GRASS. STABILIZE TOPSOIL STOCKPILES WITH STRAW MULCH FOR PROTECTION IF THE SEASON DOES NOT PERMIT THE APPLICATION AND ESTABLISHMENT OF TEMPORARY SEEDING.
21. SOIL STOCKPILES ARE NOT TO BE LOCATED WITHIN FIFTY (50) FEET OF WETLANDS, THE FLOODPLAIN, SLOPE, ROADWAY OR DRAINAGE FACILITIES. THE BASE OF ALL STOCKPILES SHALL BE PROTECTED BY A HAY BALE BARRIER OR SEDIMENT FENCE. LOCATIONS ARE DELINEATED ON THE PLAN.
22. MAXIMUM SIDE SLOPES OF ALL EXPOSED SURFACES SHALL NOT BE CONSTRUCTED STEEPER THAN 3:1 UNLESS OTHERWISE APPROVED BY THE DISTRICT.
23. ALL AREAS NOT STABILIZED BY CONSTRUCTION, SODDING OR LANDSCAPING SHALL BE SEEDED AND STABILIZED IN ACCORDANCE WITH THE SEEDING AND MULCHING SPECIFICATIONS.
24. MULCHING IS REQUIRED ON ALL SEEDED AREAS TO INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED TO PROMOTE EARLIER VEGETATIVE COVER.
25. ALL DEWATERING OPERATIONS MUST DISCHARGE DIRECTLY INTO A SEDIMENT FILTRATION DEVICE, THE SEDIMENT FILTER MUST BE CAPABLE OF FILTERING THE SEDIMENT AND BE PLACED SO AS NOT TO CAUSE EROSION OF THE DOWNSTREAM AREA.

GENERAL PLANTING NOTES

1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN OR THE PLANT MATERIAL WILL BE UNACCEPTABLE. ALL PLANT MATERIAL SHALL BE TRUE TO SPECIES, VARIETY, SIZE AND BE CERTIFIED DISEASE AND INSECT FREE. THE OWNER AND/OR THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO APPROVE ALL PLANT MATERIAL ON SITE PRIOR TO INSTALLATION.
2. ALL PLANT MATERIAL SHALL BE PROPERLY GUYED, STAKED, WRAPPED, AND PLANTED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS. GUY WIRES SHALL BE ATTACHED TO THE TREE AT A HEIGHT OF TWO-THIRDS THE HEIGHT OF THE TREE AND SHOULD BE LOCATED AT POINTS SO AS NOT TO SPLIT THE TRUNK OF MULTI-STEMMED TREES. PROVIDE THREE STAKES PER TREE UNLESS NOTED OTHERWISE. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. PROVIDE BURLAP WRAPPING WITH A 50% OVERLAP. CUT AND REMOVE BURLAP FROM TOP ONE-THIRD OF THE ROOT BALL.
3. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACH OF TOP SOIL, PEAT MOSS, AND PARENT MATERIAL. IF WET SOIL CONDITIONS EXIST THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH SAND.
4. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION AND SHALL BE SUBSEQUENTLY FLOODED TWICE WITHIN TWENTY-FOUR (24) HOURS OF PLANTING. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER THE DATE OF FINAL ACCEPTANCE. ANY PLANT MATERIAL THAT DIES WITHIN THAT TIME PERIOD SHALL BE REMOVED, INCLUDING THE STUMP, AND REPLACED WITH MATERIAL OF SIMILAR SIZE AND SPECIES AT THE EXPENSE OF THE DEVELOPER. THE REPLACED PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER THE REPLACEMENT DATE.
6. THE LANDSCAPE CONTRACTOR SHALL PROVIDE A MINIMUM 4" LAYER OF TOPSOIL IN ALL LAWN AREAS AND A MINIMUM OF 6" OF TOPSOIL IN ALL PLANTING AREAS. A FULL SOIL ANALYSIS SHALL BE CONDUCTED AFTER CONSTRUCTION AND PRIOR TO PLANTING TO DETERMINE THE EXTENT OF SOIL AMENDMENT REQUIRED.
7. ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH EITHER SOD OR SEED AS INDICATED ON THE LANDSCAPE PLANS. SEED SHALL CONSIST OF THE MIXTURE LISTED IN THE GENERAL SEEDING NOTES. ALL DISTURBED LAWN AREAS SHALL BE TOP SOILED, LIMED, FERTILIZED, AND FINE GRADED PRIOR TO LAWN INSTALLATION.
8. ALL PLANTING BEDS SHALL RECEIVE 3" OF SHREDDED PINE, CEDAR OR HEMLOCK BARK.
9. ALL SHRUB MASSES SHALL BE PLANTED IN CONTINUOUS MULCHED BEDS.
10. ALL TREES ARE TO BE GUYED, 3 EACH, UNLESS OTHERWISE NOTED ON PLAN.
11. ALL DECIDUOUS TREES ARE TO BE WRAPPED, WITH TREE WRAP, UP TO THE FIRST BRANCHING AND SECURED.
12. THE LANDSCAPE CONTRACTOR IS TO PERFORM ALL CONTRACTED WORK IN A REASONABLE PERIOD OF CONTINUOUS WORK.
13. THE LANDSCAPE CONTRACTOR IS TO MAINTAIN PLANT MATERIAL WHILE THE PROJECT IS UNDERWAY AND FOR A PERIOD OF TWO WEEKS AFTER THE COMPLETION OF THE PROJECT UNLESS OTHERWISE SPECIFIED.
14. THE CONTRACTOR IS TO CLEAN UP AND REMOVE ANY DEBRIS FROM THE SITE, CAUSED BY THE LANDSCAPE CONTRACTOR.

LEGEND

EXISTING		PROPOSED
-----	CONTOUR LINE	-----100-----
HOI	SPOT GRADE	+101.1
EOP	EDGE OF PAVEMENT	EOP
VGC	VERTICAL GRANITE CURB	VGC
SGC	SLOPED GRANITE CURB	SGC
VCC	VERTICAL CONCRETE CURB	VCC
BCC	BITUMINOUS CONCRETE CURB	BCC
CCB	CAPE COD BERM	CCB
-----	STONE WALL	-----
X	CHAIN LINK FENCE	X
△	IRON FENCE	△
○	POST & RAIL FENCE	○
□	STOCKADE FENCE	□
-----	GUARD RAIL	-----
-----	HAY BALES	-----
-W-----	WATER LINE	-W-----
⊙	FIRE HYDRANT	⊙
⊞	POST INDICATOR VALVE	⊞
⊞	WATER GATE	⊞
⊞	WATER METER PIT	⊞
⊞	IRRIGATION HAND HOLE	⊞
○	WELL	○
⊞	SEWER LINE	⊞
⊞	SEWER MANHOLE	⊞
⊞	GAS LINE	⊞
⊞	GAS METER	⊞
⊞	GAS GATE	⊞
⊞	DRAIN LINE	⊞
⊞	DRAIN MANHOLE	⊞
⊞	CATCH BASIN	⊞
⊞	OVERHEAD WIRES	⊞
⊞	ELECTRIC, TELEPHONE & CABLE	⊞
⊞	UTILITY POLE	⊞
⊞	GUY WIRE	⊞
-----	BORDERING VEGETATED WETLANDS	-----
-----	STREAM	-----
-----	25' WETLAND BUFFER	-----
-----	100' WETLAND BUFFER	-----
⊞	WETLAND FLAG	⊞

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3	1/10/20	CONSERVATION COMMENTS
4	6/8/20	CONSERVATION COMMENTS
5	12/16/20	GREEN SEAL COMMENTS



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NEW BEDFORD, MA 02740
P.508.717.3479
OFFICES IN:
● TAUNTON
● MARLBOROUGH
● WARWICK, RI

DRAWN BY: MJW

DESIGNED BY: CAF

CHECKED BY: CAF

PROPOSED PROJECT DEVELOPMENT

100 DUCHAINE BOULEVARD
ASSESSORS MAP 133 LOT 67
ASSESSORS MAP 134 LOTS 5 & 462
NEW BEDFORD, MASSACHUSETTS

PREPARED FOR:
PARALLEL PRODUCTS OF NEW ENGLAND
401 INDUSTRY ROAD
LOUISVILLE, KY 40208

JULY 3, 2019

SCALE: AS NOTED

JOB NO. 15-500.2

LATEST REVISION:
DECEMBER 16, 2020

NOTES & LEGEND

SHEET 17 OF 22

NOT TO SCALE

NOT TO SCALE

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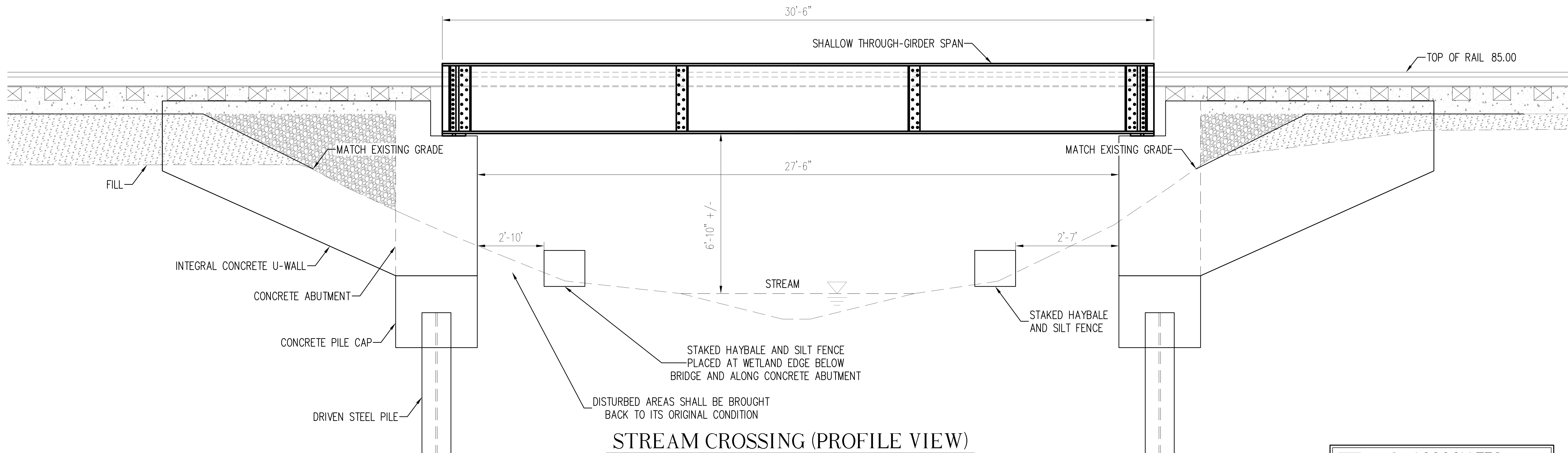
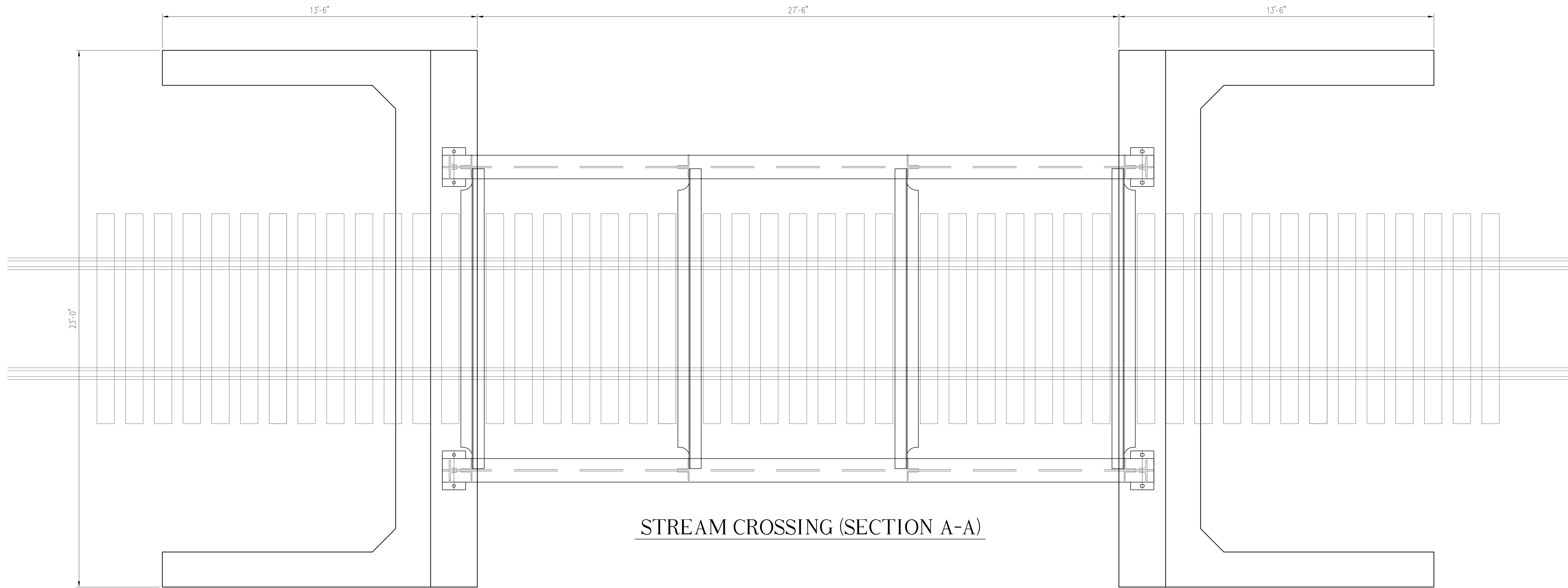
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DETAILS CONT.

SHEET 19 OF 22

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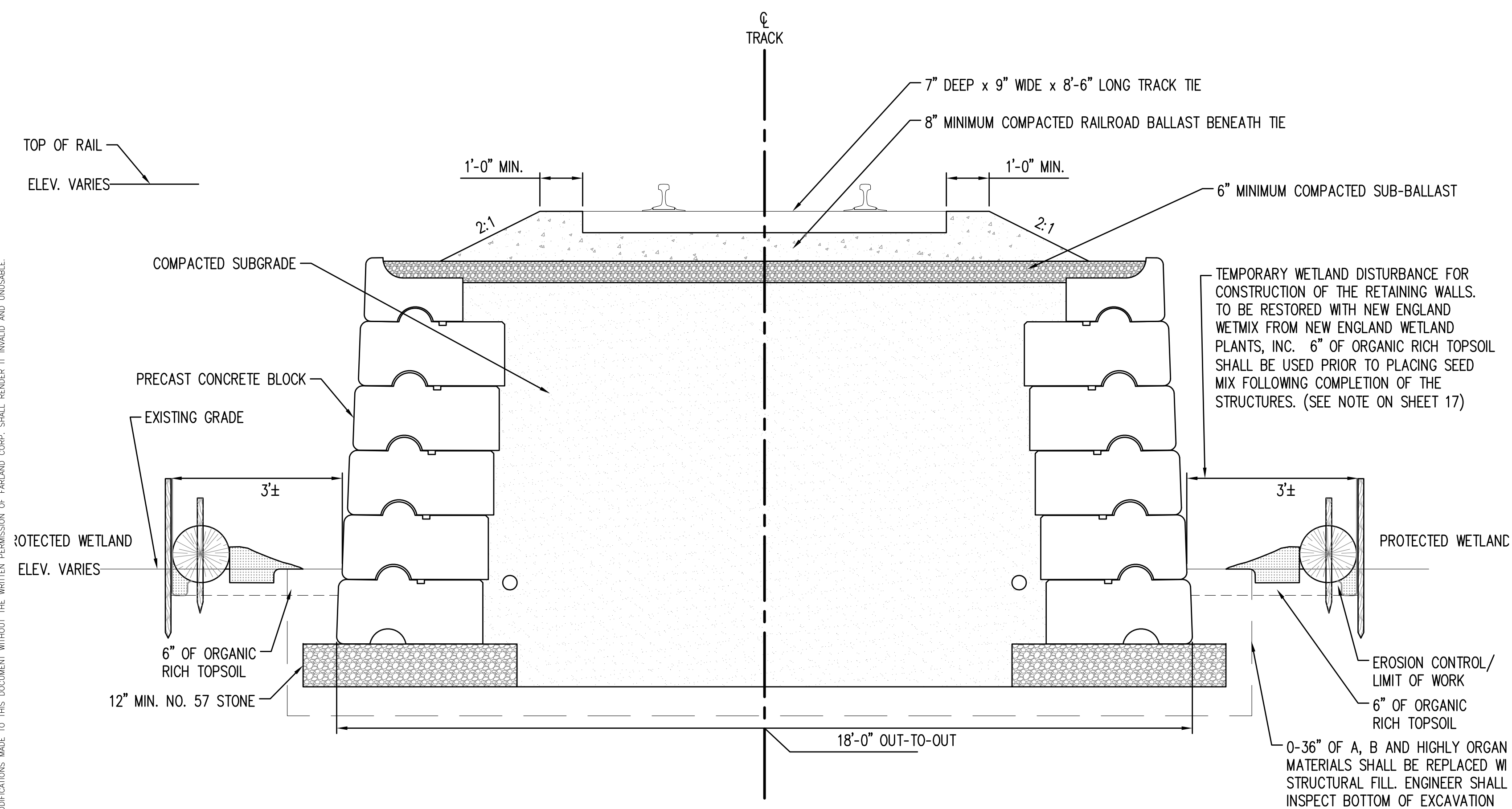
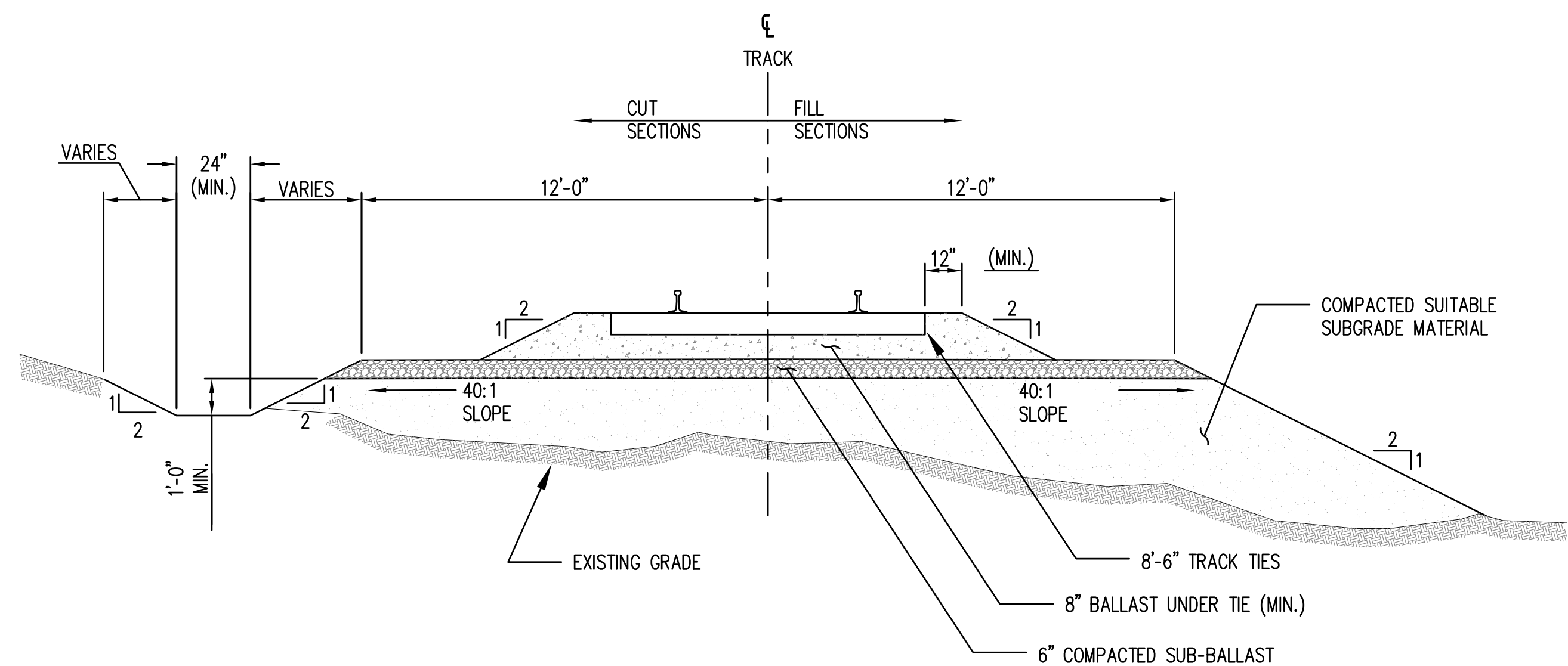
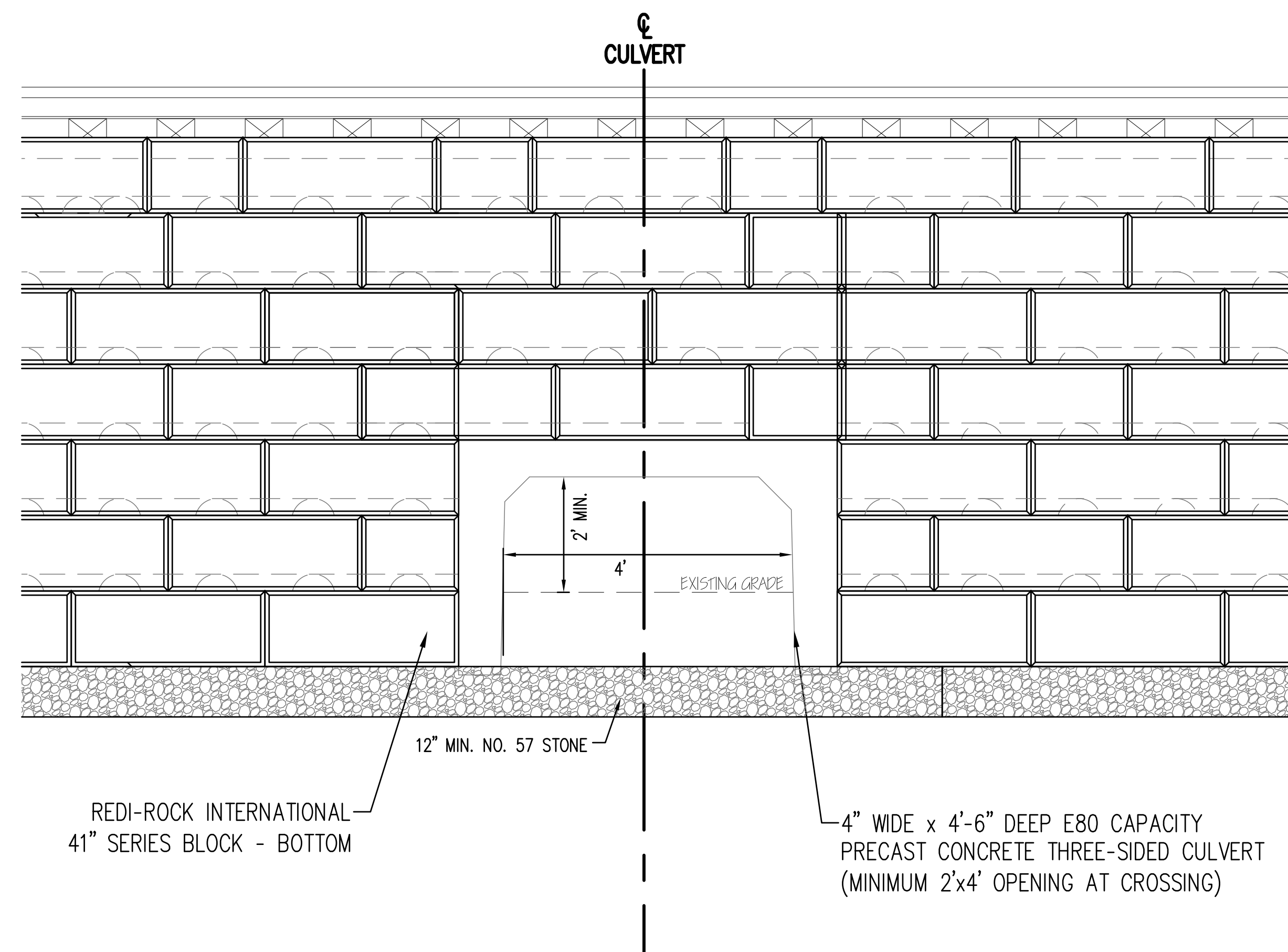
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SHEET 20 OF 22



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SHEET 21 OF 22



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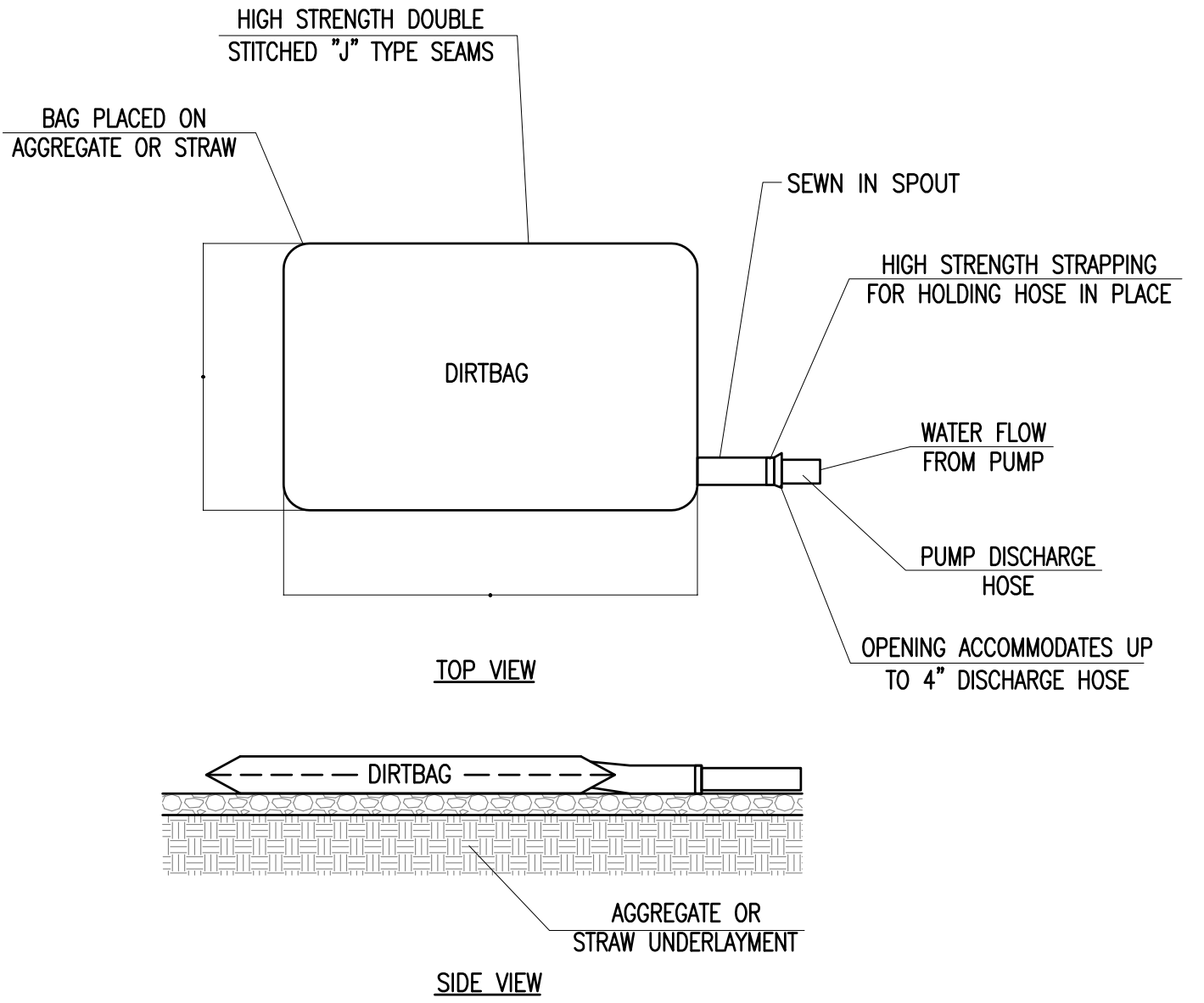
INSTALLATION

TO USE, PLACE WETLAND BAG ON A BED OF COURSE AGGREGATE OR STRAW. THE COURSE BEDDING MATERIAL WILL PROVIDE INCREASED FLOW FROM THE PUMPING ACTIVITY. INSERT THE DISCHARGE PUMP HOSE IN THE SPOUT OF THE BAG AND SECURELY FASTEN. DO NOT EXCEED INITIAL RECOMMENDED PUMPING RATES.

AS THE PUMPING ACTIVITY CONTINUES, THE FLOW FROM THE BAG WILL BE GREATLY REDUCED DEPENDING ON THE AMOUNT AND TYPE OF SEDIMENTS BEING PUMPED. DO NOT OVERFILL. AS THE BAG COLLECTS PARTICLES, IT WILL EVENTUALLY BURST AT THE SEWN SEAMS AND CAN CAUSE DAMAGE TO THE PUMP.

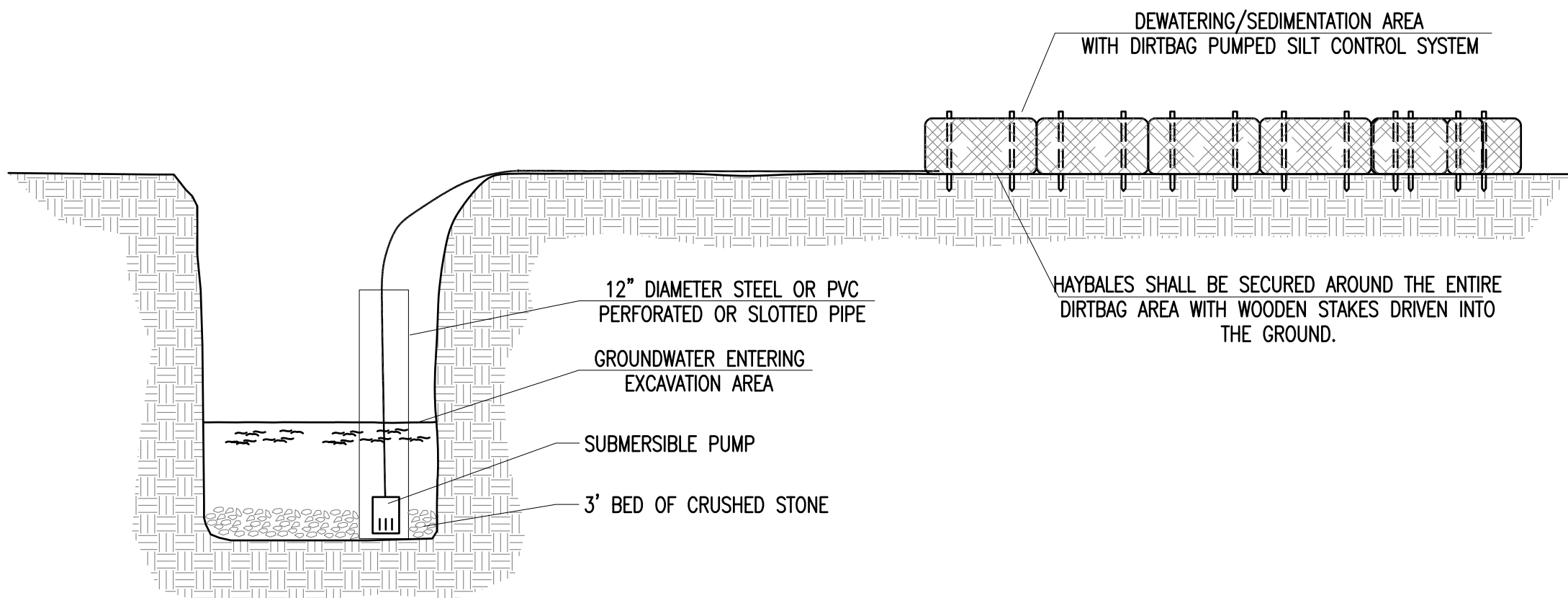
DISPOSAL

THE ENTIRE BAG SHALL BE LOADED AND DISPOSED OF OFFSITE AS DIRECTED BY THE SITE ENGINEER.



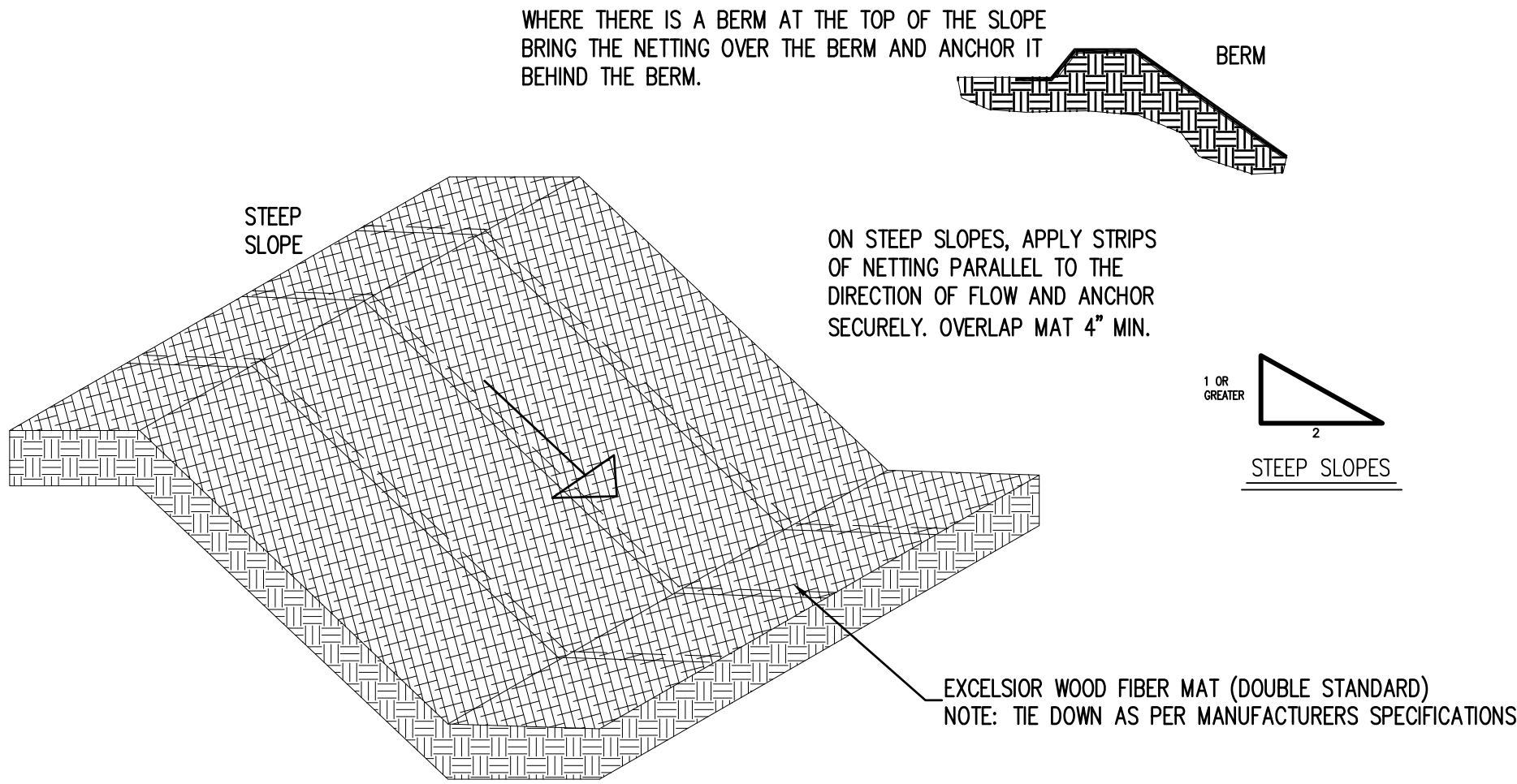
DIRTBAG

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DEWATERING/SEDIMENTATION CONTROL

NOT TO SCALE



EROSION CONTROL - STEEP SLOPES

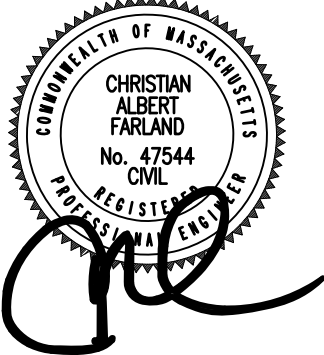
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TEC ASSOCIATES
46 SAWYER STREET
SOUTH PORTLAND, MAINE 04106

CONSULTING
ENGINEERS

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SHEET 22 OF 22

APPENDIX 5

MSW PROCESSING FLOW DIAGRAMS AND SPECIFICATIONS



Parallel Products New Bedford MA

MSW Processing System *Equipment Detail*

Confidential Proposal # 17-0289 DV2
17 July 2018



What's next.

Equipment Detail Diagram

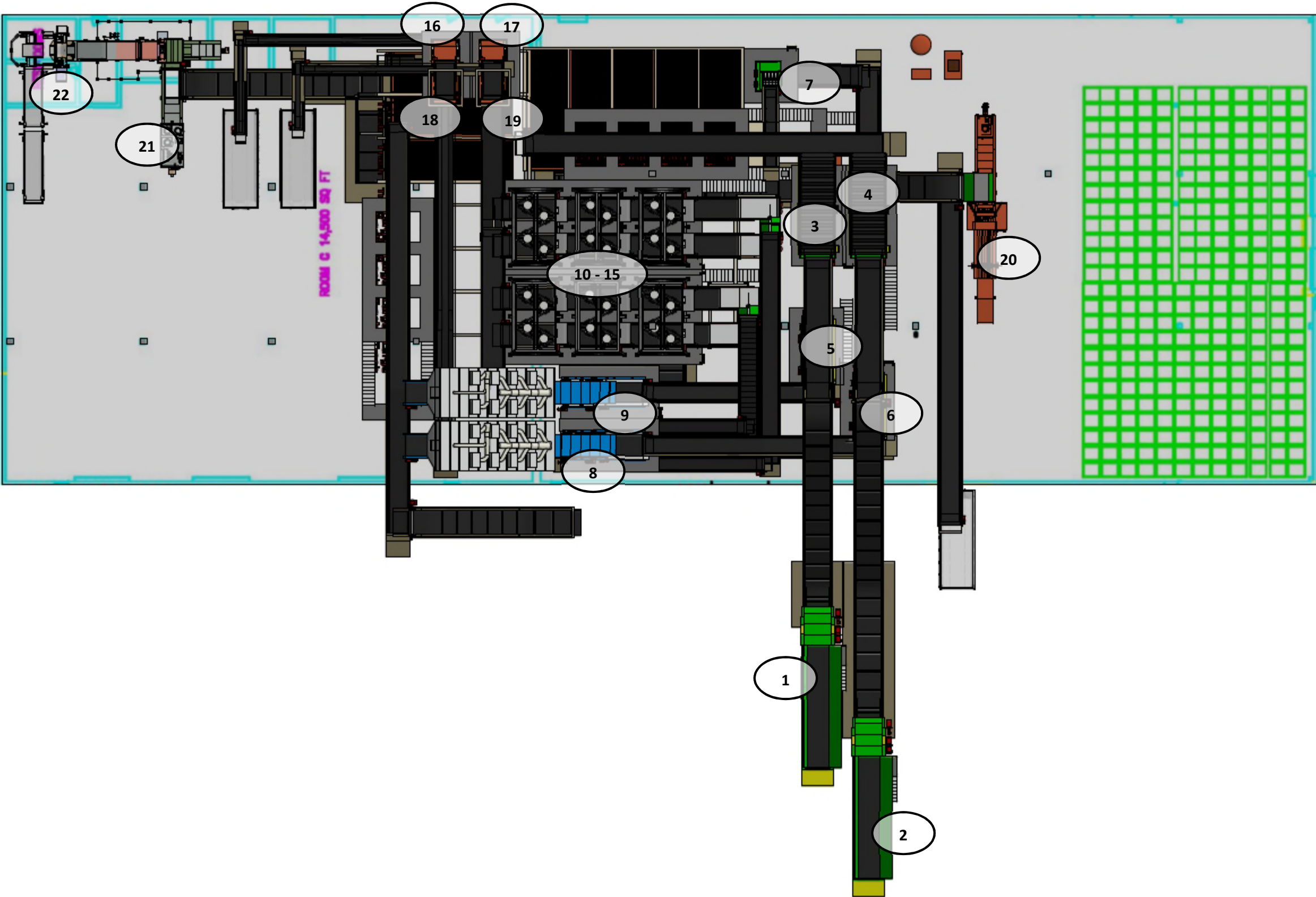


Table of Contents

Equipment	Model	Diagram #	Page
BHS Metering Bin - Liberator Class	MB-50 L	1, 2	4
BHS Scalping Screen	DRS98-15-762	3, 4	7
BHS Debris Roll Screen®	DRS84-11-11-236	5, 6	8
BHS Bag Breaker®	BB-48	7	11
Nihot Double Drum Separator	DDS1600	8, 9	14
Max-AI™ Autonomous QC	AQC-4	10 - 15	16
Eddy Current Separator	NES150	16, 17	20
Magnet	UME 115 150 R	18, 19	21
Paal Baler - Commodity Baler	KONTI 425-H	20	23
Paal Baler - MSW Baler	HTR700 B2	21	25
Cross Wrap - Bale Wrapper	CW 2200-SW-750-1-5	22	27

Equipment Detail

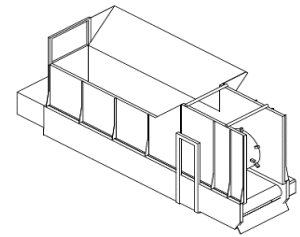
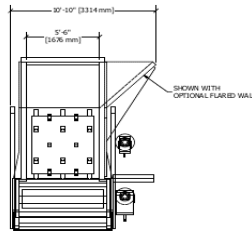
17 July 2018

BHS Metering Bin: Liberator Class

Application: Liberator Class Metering Bin provides regulated flow of material to the system equipped with ripper teeth to open large bags

Manufacturer: BHS

Model: MB-50 L



Width: Approximately 2.9m [9' 8"]

Length: Approximately 13.4m [44']

Installed Weight: Approximately 23,000 kg [51,000 lbs]

Infeed Lip: 10'-4-1/8" (3150 mm) high, stiffened with 8" (203 mm) structural channel

Wall Construction: Front and rear wall construction is 3/8 formed channel shaped pans

Bearings: CRS 1045 Dodge S-2000 roller bearing pillow blocks with triple lip seal

Drive Shaft: CRS 1045 4-7/16" (113 mm) diameter with reducer

Tail Shaft: CRS 1045 2-7/16" (62 mm) diameter with Dodge S-2000 bearings and take-ups

Chain: Webster Chain, 9" (229 mm) pitch, RS 932F

Access: Includes rear door, side door, maintenance platform, flared back wall

Motors: SEW-EURODRIVE Premium Efficiency Motor: 45 kW [60HP] Drum Drive

Design Speed: 64 RPM, 5.2 FPM

Ship Method: 20' HC & 40' HC

Conveyor Type: Steel Chainbelt

Teeth: 36 replaceable tungsten carbide-tipped teeth - Optional ripper teeth to open bags included

BHS Paint Specification

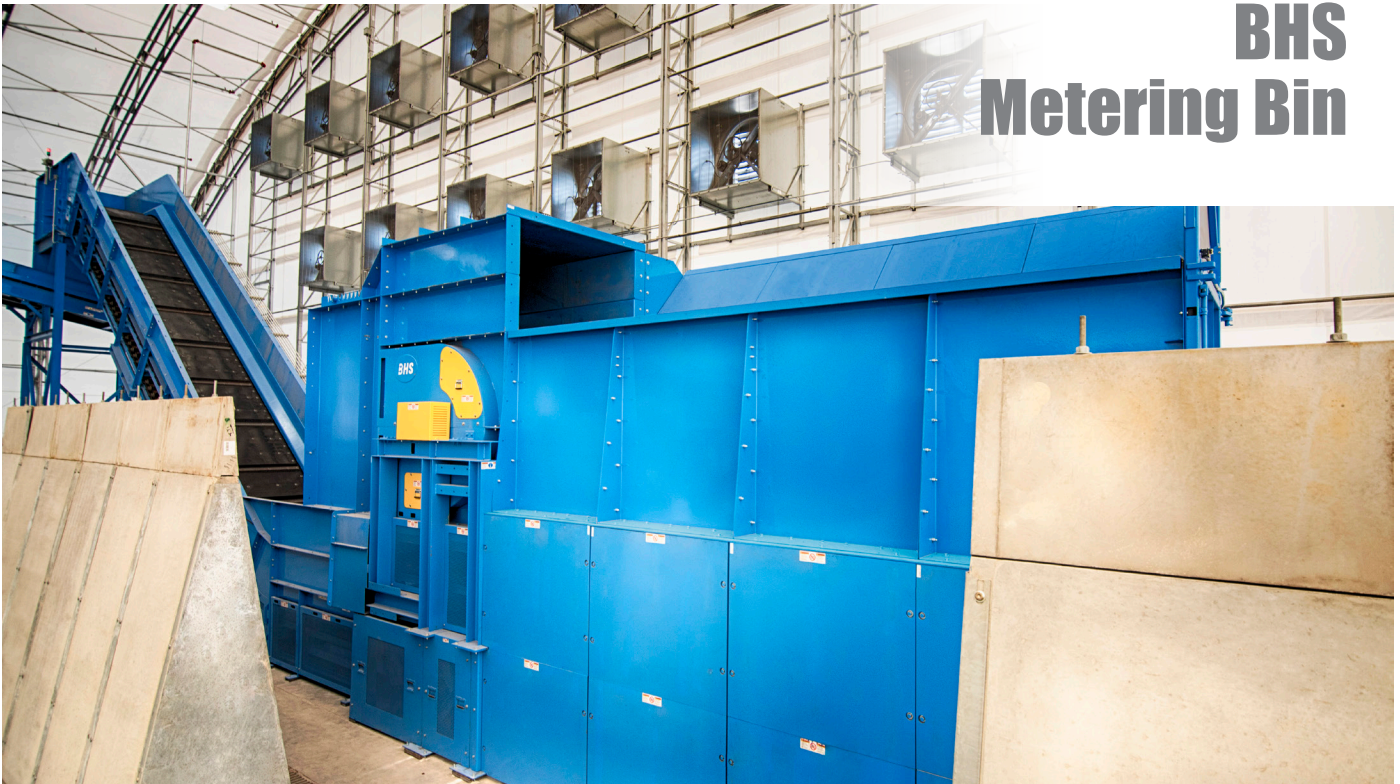
Our standard BHS paint system will meet ISO 12944-5: 1998, corrosivity categories C2 and C3.

Our paint system consists of the following steps:

- Surface Preparation: ISO ST-2 thorough hand and power tool cleaning to remove unwanted and/or foreign matter.
- Primer: One coat of Rodda 733823x Low HAP Metal Primer II
- Topcoat: Two coats Rodda 758001x Quick Drying Equipment Enamel

The total paint system as described above will achieve 120 microns NDFT, 4.7 mils.

BHS Metering Bin



The new **BHS Metering Bin** and **Metering Bin Liberator Class** provide numerous features that increase performance and decrease maintenance requirements. BHS has developed a strong platform to precisely regulate material flow through the combination of a variable speed conveyor and a counter-rotating drum at the discharge end, eliminating black-belt and keeping your system operating at peak levels. The new design's hallmark is its modularity: the design allows a wide range of mix-and match features which can transform the Metering Bin to match your own operational demands. From base features such as extra thick walls to the steel belt and bag-ripping teeth of the Liberator Class, BHS offers a bin without equal in the market.

FEATURES & BENEFITS

Increases throughput and system capacity up to 20%

Eliminates need for costly pits and additional civil work

Quick, easy retrofit into existing facilities

Rear door allows for easy removal of bulky items from bin

New seal design provides protection from material interference

Available with 60-HP driven drum to power through the toughest loads

Reinforced load side and flared back walls for ease of loading and durability with minimal spillage

THE MODULAR ADVANTAGE

Four-week typical lead time on standard design

Ambidextrous load side and rear door allows for variable loading and access

Interchangeable belts, drums & teeth

Reinforced side wall panels

Can be easily retrofitted to increase capacity

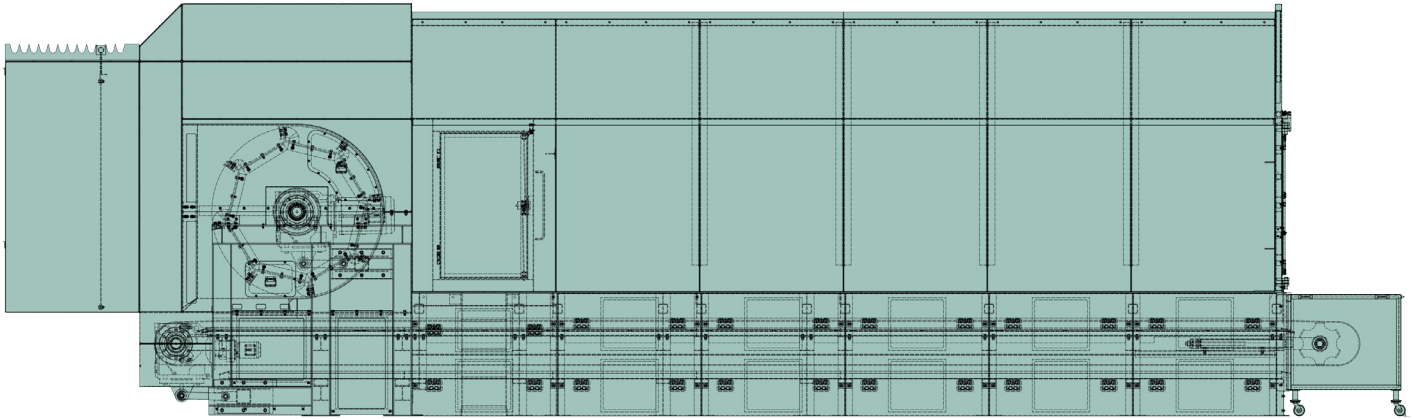
AR-plated octagonal drum agitates material, opens bags and is easier to clean & repair

36 replaceable tungsten carbide-tipped teeth and optional ripper teeth to open bags



What's next.

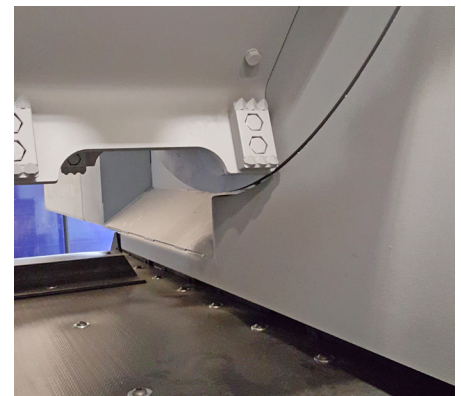
BHS Metering Bin



Technical Specifications

Model	MB 30	MB 40	MB 50	MB 60
Capacity	30 yd.3 (23 m3)	40 yd.3 (31 m3)	50 yd.3 (38 m3)	60 yd.3 (46 m3)
Dimensions	W 9'-8" (2.9 m) L 34'-0" (10.4 m) H 14'-4" (4.3 m)	W 9'-8" (2.9 m) L 39'-0" (11.9 m) H 14'-4" (4.3 m)	W 9'-8" (2.9 m) L 44'-0" (13.4 m) H 14'-4" (4.3 m)	W 9'-8" (2.9 m) L 49'-0" (14.9 m) H 14'-4" (4.3 m)
Installed weight	43,682 lbs (19,814 kg)	44,096 lbs (20,002 kg)	45,842 lbs (20,794 kg)	47,588 lbs (21,586 kg)
Installed weight (Liberator Class)	47,284 lbs (21,448 kg)	48,479 lbs (21,990 kg)	51,006 lbs (23,136 kg)	53,533 lbs (24,282 kg)

Infeed Lip	10'-4-1/8" (3150 mm) high, stiffened with 8" (203 mm) structural channel
Wall Construction	Front and rear wall construction is 3/8 formed channel shaped pans
Teeth	36 tungsten carbide tipped
Drum	Heavy Duty Abrasion Resistant (AR) plates, replaceable
Bearings	CRS 1045 Dodge S-2000 roller bearing pillow blocks with triple lip seal
Drum Drive	SEW-EURODRIVE Premium Efficiency Motor Horsepower: 25 HP, 40HP, 60HP
Drive Shaft	CRS 1045 4-7/16" (113 mm) diameter with reducer
Tail Shaft	CRS 1045 2-7/16" (62 mm) diameter with Dodge S-2000 bearings and take-ups
Chain	Webster Chain, 9" (229 mm) pitch, RS 932F
Belt	PVC 350, with angle iron flights 3" tall (76 mm) Steel belting also available
Oil	Standard Synthetic
Liberator Package	Steel belt; ripper teeth; 60 HP drum drive





What's next.

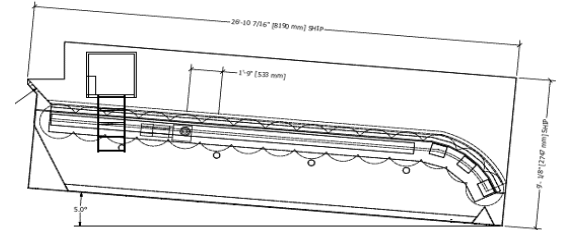
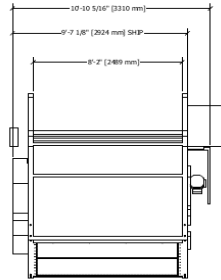
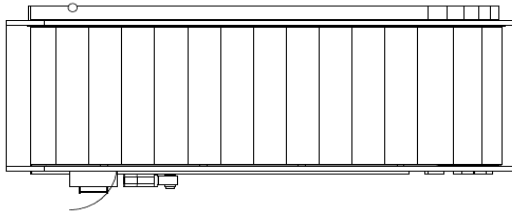
Confidential

Equipment Detail

17 July 2018

BHS Scalping Screen

Application: Separate large material from waste stream
 Manufacturer: Bulk Handling Systems
 Model: DRS98-15-762



Screen width: 2500mm [98"] wide screening surface
 Screen Length: Approximately 8.19m [26' - 11"] long
 Shipping Weight: Approximately 11,340 kg [25,000 lbs]
 Discs: Patented rubber tri-disc A1-762 on fifteen shafts
 IFO: Variable by fixed increments, suggested openings of 178mm x 254mm [7" x 10"]
 Shafts: Fifteen (15) total shafts on one (1) deck on 533 mm [21"] shaft centers
 Bearings: Pillow block bearings
 Sprockets: Hardened double-single timed sprockets with split taper bushings
 Drive Chain: RC 80
 Motors: One (1) 7.5 kW [10 HP] SEW energy efficient motor directly coupled to gear reducer
 Noise: <85 dB(a)
 Reducers: Shaft mounted reducer
 VFD: Variable frequency drives for operating flexibility are recommended
 Drive Guards: Drive system is enclosed in a solid guard with lift off door for easy removal and replacement. Grease fittings are plumbed to a common point outside guard for convenient bearing maintenance

Angle: Fixed 5 degree decline
 Auto-lube: Automatic oiler system for the drive chain, which includes: reservoir, solenoid, distribution manifold, flexible tubing and adjustable brush applicators
 Chutes: Included

BHS Paint Specification

Our standard BHS paint system will meet ISO 12944-5: 1998, corrosivity categories C2 and C3.

Our paint system consists of the following steps:

- Surface Preparation: ISO ST-2 thorough hand and power tool cleaning to remove unwanted and/or foreign matter.
- Primer: One coat of Rodda 733823x Low HAP Metal Primer II
- Topcoat: Two coats Rodda 758001x Quick Drying Equipment Enamel

The total paint system as described above will achieve 120 microns NDFT, 4.7 mils.

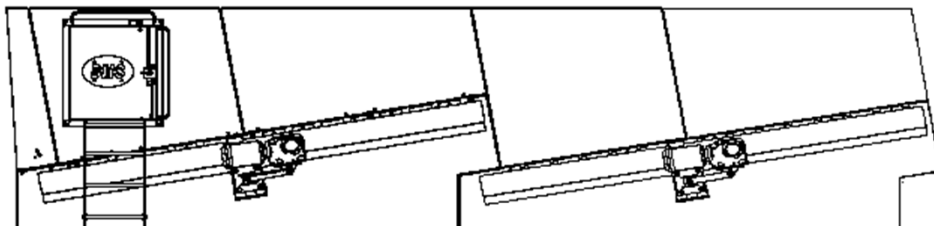


Equipment Detail

17 July 2018

BHS Debris Roll Screen®

Application:	The Inter-Face Opening (IFO) of the DRS is specifically designed to maximize the removal of fines without the loss of valuable single serve containers.
Manufacturer:	Bulk Handling Systems
Model:	DRS84-11-11-236



Screen width:	2130mm [84"] wide screening surface
Screen Length:	Approximately 5.4m [17' 9"] long
Shipping Weight:	Approximately 4000 kg [9000 lbs]
Discs:	BHS patented in-line compound tri-disc design with BHS disc 2-233 / 2-236 on all shafts. Discs hardened to 400+ Brinell for long wear life
IFO:	2-233 / 2-236 with openings of 32mm x 57mm [1 ¼" x 2 ¼"]
Shafts:	Thirty (30) total shafts on two (2) decks with two (2) rollover shafts at the tail section on 222 mm [8 ¾"] shaft centers
Bearings:	Pillow block bearings
Sprockets:	Hardened double-single timed sprockets with split taper bushings
Drive Chain:	RC 80
Motors:	Two (2) 5.5 kW [7.5 HP] SEW energy efficient motor directly coupled to gear reducer
Noise:	<85 dB(a)
Reducers:	Shaft mounted reducer
VFD:	Not Included - Variable frequency drives for operating flexibility are recommended <i>(By Customer)</i>
Drive Guards:	Drive system is enclosed in a solid guard with lift off door for easy removal and replacement. Grease fittings are plumbed to a common point outside guard for convenient bearing maintenance
Angle:	Fixed 0 degree incline
Auto-lube:	Automatic oiler system for the drive chain, which includes: reservoir, solenoid, distribution manifold, flexible tubing and adjustable brush applicators
Chutes	Included

BHS Paint Specification

Our standard BHS paint system will meet ISO 12944-5: 1998, corrosivity categories C2 and C3.

Our paint system consists of the following steps:

- Surface Preparation: ISO ST-2 thorough hand and power tool cleaning to remove unwanted and/or foreign matter.
- Primer: One coat of Rodda 733823x Low HAP Metal Primer II
- Topcoat: Two coats Rodda 758001x Quick Drying Equipment Enamel

The total paint system as described above will achieve 120 microns NDFT, 4.7 mils.

BHS Debris Roll Screen®



The **BHS Debris Roll Screen®** is the industry's flagship disc screen. This proven, patented technology is the premiere sizing tool for Single Stream, Municipal Solid Waste (MSW), Construction and Demolition (C&D) waste, wood waste, compost, green waste, plastics, glass, tires and various other materials.

The unique Tri-Discs™ are in-line from shaft-to-shaft, creating a precise opening for highly-accurate material sizing. Their hardened steel, triangular shape provides superior material agitation and true sizing in a small footprint.

The compound disc design provides precise sizing far superior to other disc or "star" screens. Patented gear timing paired with variable speed drives allows for fine tuning for varying material conditions.

Excellent material agitation and separation

Patented in-line discs provide accurate sizing of material, reducing product loss

Disc and shaft design reduces material wrap, increasing uptime

Heavy-duty discs ensure long disc life and reduced maintenance



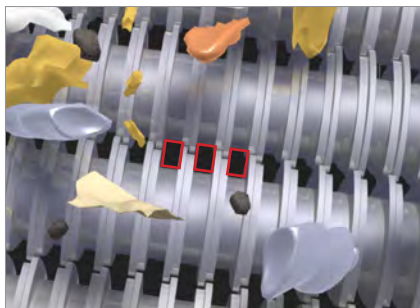
What's next.

BHS Debris Roll Screen®

The Difference is the Discs

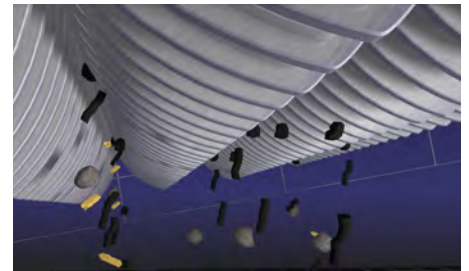
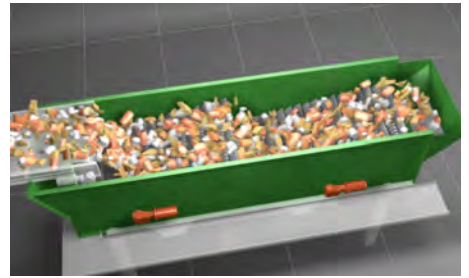
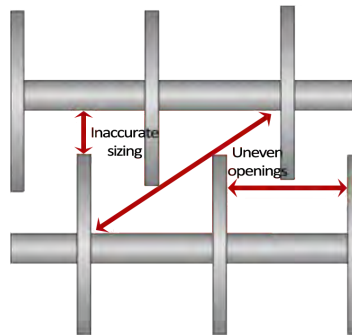
Our patented discs deliver superior sorting efficiency, material quality and throughput rates versus other screens. The BHS Debris Roll Screen® is unmatched in its ability to accurately sort a wide range of material from a variety of applications. The BHS' Tri Disc™ imparts a wavelike action into the material stream, efficiently and precisely sizing material and minimizing wrapping and jamming. Typical disc screens have uneven openings, allowing for inexact sizing and material wrapping and jamming.

BHS DRS Screen



Precise openings

Conventional Disc Screen



General Specifications

Screen width	Varies according to application
Inter-Face Openings	Varies according to application
Screen Angles	Varies according to application
Motors	SEW-EURODRIVE high efficiency gear motors
Reducers	Shaft mounted
Drive Guards	Drive system is enclosed in a solid guard with lift off door for easy removal and replacement. Grease fittings are plumbed to a common point outside guard for easy bearing maintenance.
Bearings	Dodge SC Tapped Base
Sprockets	80Q17 hardened double-single timed sprockets with split taper bushing.
Drives	RC 80 Chain-driven. Variable frequency drives recommended for operating flexibility, included with controls system.
Auto Lube	Automatic oiler system for the drive chain including reservoir, solenoid, distribution manifold, copper plumbing and adjustable brush applicators; easy sprocket, chain and bearing maintenance.





What's next.

Confidential

Equipment Detail

17 July 2018

BHS Bag Breaker®

Application:

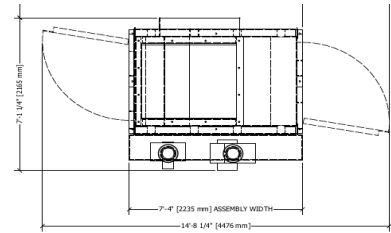
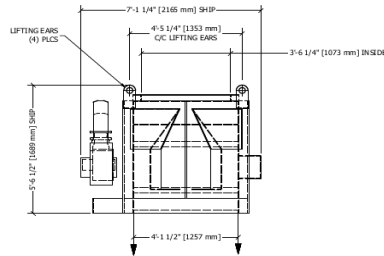
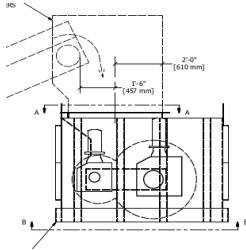
The BHS Bag Breaker® is designed to minimize shredding of the bags to allow efficient recovery of film. The majority of the empty bags remain in one to three elongated pieces. The bags exit the machine with the released material.

Manufacturer:

Bulk Handling Systems

Model:

BB48



Width:

1220 mm [48"] wide

Length:

Approximately 2.11m [83"] long

Shipping Weight:

Approximately 3600 kg [8000 lbs]

Shafts:

Two (2) counter-rotating shafts with heavy-duty double row spherical roller bearings

Motors:

One (1) 7.5 kW [10 HP] and one (1) 1.5 kW [1 HP] SEW motor with Class II reducers

Noise:

<85 dB(a)

Controls:

Integrated into BHS System Controls

Access doors:

Two (2) large access doors reinforced with steel bracing with Signal latches

VFD:

Variable frequency drives for operating flexibility

Chutes

Included

BHS Paint Specification

Our standard BHS paint system will meet ISO 12944-5: 1998, corrosivity categories C2 and C3.

Our paint system consists of the following steps:

- Surface Preparation: ISO ST-2 thorough hand and power tool cleaning to remove unwanted and/or foreign matter.
- Primer: One coat of Rodda 733823x Low HAP Metal Primer II
- Topcoat: Two coats Rodda 758001x Quick Drying Equipment Enamel

The total paint system as described above will achieve 120 microns NDFT, 4.7 mils.



BHS Bag Breaker®



The **BHS Bag Breaker®** opens bags at high volumes without damaging content, ensuring maximum recovery of valuable recyclables. The patented Bag Breaker® uses large, counter-rotating drums to efficiently open the bags and release the contents, discharging them from the bottom of the machine. Bags are torn into large pieces for easy removal.

Bagged material can be fed directly into the BHS Bag Breaker® with an infeed conveyor to achieve an evenly-metered flow rate.

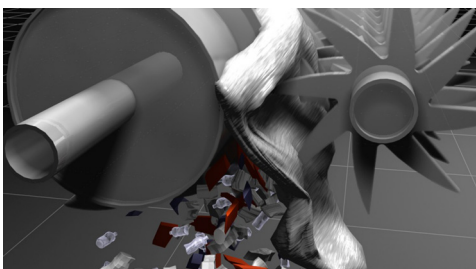
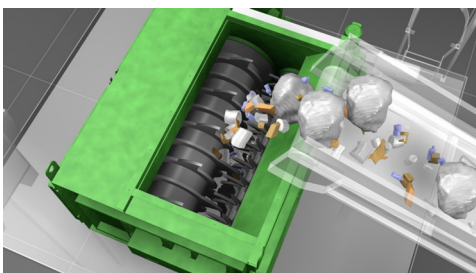
Clean-out doors on two sides for easy access and maintenance

Easy to retrofit into existing facility

Opens bags without damaging valuable recyclables

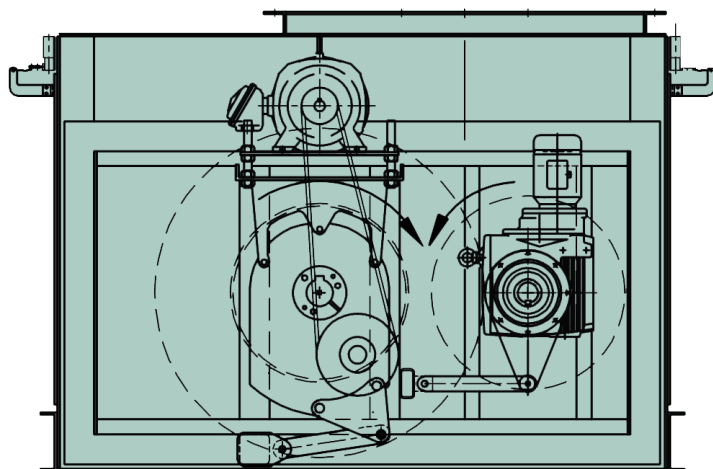
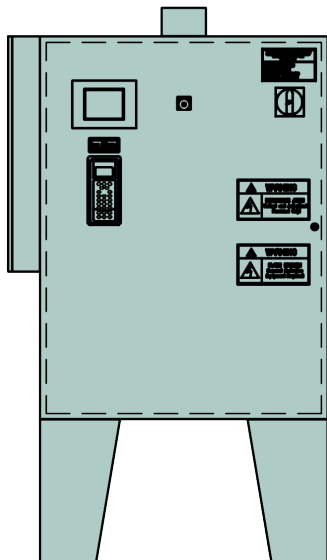
Bags are torn to large pieces rather than shredded for easy removal

Heavy-duty construction for decreased downtime and long-operating life



What's next.

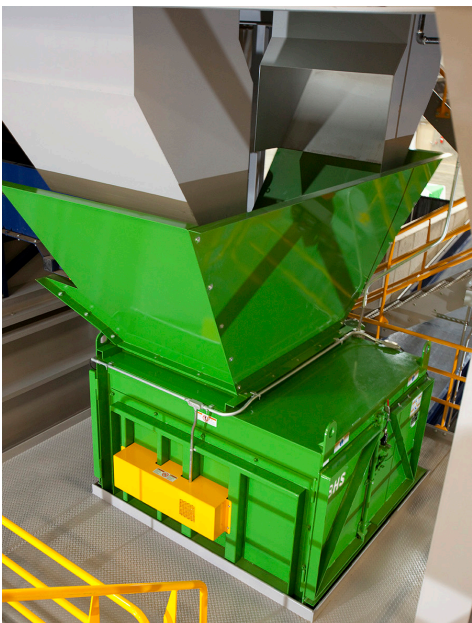
BHS Bag Breaker®



Technical Specifications

Model	BB-60	BB-72	BB-90
Capacity	up to 22 tph	up to 30 tph	up to 35 tph
Motors	10 hp, 1 hp (7.5 kW, 0.75 kW)	20 hp, 3 hp (15 kW, 2.2 kW)	20 hp, 3 hp (15 kW, 2.2 kW)
Access Doors	43"x 36" (1090 mm x 910 mm)	43"x 43" (1090 mm x 1090 mm)	43"x 52" (1090 mm x 1320 mm)
Dimensions	W 7'-7" (2.3 m) L 8'-1" (2.5 m) H 5'-2" (1.6 M)	W 8'- 1" (2.5 m) L 10'- 4" (3.1 m) H 5'-2" (1.6 m)	W 8'- 1" (2.5 m) L 11'-10" (3.6 m) H 5'-2" (1.6 m)
Shipping weight	7,900 lbs. (3,600 kg.)	10,100 lbs. (4,600 kg.)	13,100 lbs. (5,950 kg.)

Motors	Energy efficient motor with Class II gear reducer
Shafts	Two (2) counter-rotating shafts with heavy-duty double row spherical roller bearings; 3-15/16" (100mm)
Drum	Constructed of heavy-duty rolled plate with 3-15/16"(100mm) diameter, C1045 head shaft
Bearings	Dodge Type E
Controls	Control panel in NEMA 12 enclosure
Access Doors	Two (2) large access doors reinforced with steel bracing with signal latches



Equipment Detail

17 July 2018

Nihot Double Drum Separator

Application:

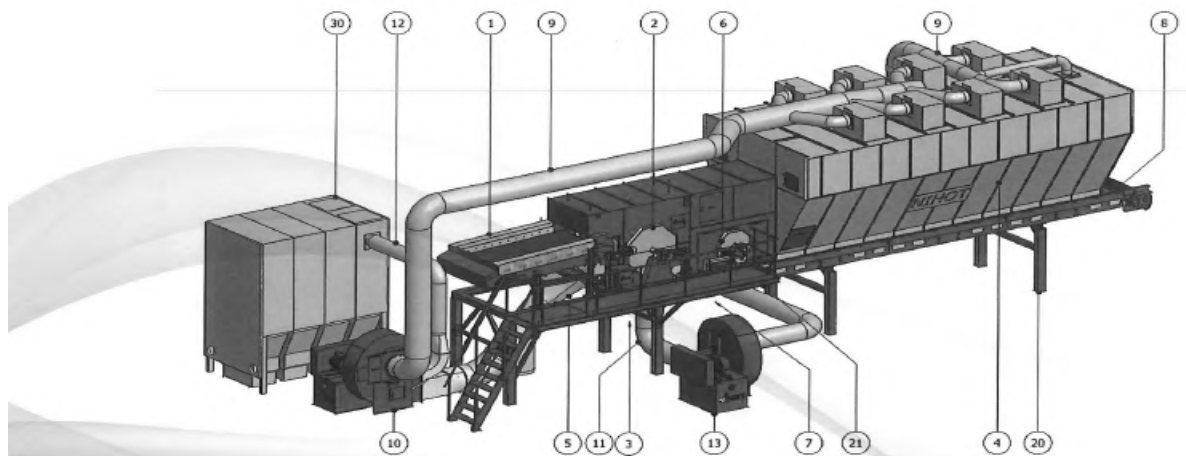
Input material is separated into a heavy, mid-heavy and light fraction due to an installed second rotating splitter drum and second fan with blow nozzle.

Manufacturer:

Nihot

Model:

DDS1600



		<u>Installed Power</u>
1. Product Input Conveyor (PIC)	1600x 2750mm	5.5 kW
2. First splitter drum		2.2 kW
3. Discharge heavy fraction		
4. Expansion Room	3600x 9000mm	
5. First air inlet		
6. Second splitter drum		2.2 kW
7. Discharge mid fraction		
8. Light Fraction Discharge Conveyor	1600x 11,250mm	9.2 kW
9. Air return duct		
10. First recirculation fan	2x RF(I) 60	2x 30 kW
11. Second air inlet		
12. Dust duct		
13. Second recirculation fan	RF 50	18.5 kW
14. Support construction		
15. Stairs and maintenance platform		
30. Filter unit	Included	

Nihot Coating Specification

Nihot equipment is built using blank-stained and galvanized plates. Blank-stained steel plates are degreased with Sigma Thinner 91-80. The layer is treated with Sigma Steel QD which consists of a zinc phosphate primer (1x 40µm).

The finishing layer is 1x Sigma Steel QD Finish and can be applied in any RAL color according to customer specification (1x 40µm).

Drum Separators

Besides the superior separation efficiency, the Nihot Drum Separators are well known for their ability of handling large volumes of light fractions. The robust construction and foolproof functionality guarantee a long lasting and trouble free operation.

SDS: Single Drum Separators

The Single Drum Separator is a highly versatile separator that processes a large variety of waste streams into two fractions; heavy and light. This high capacity separator system is capable of processing e.g.:

- Bad shredded materials
- Waste containing large materials
- A high volume percentage of light materials
- Hard and bulky soft materials

DDS: Double Drum Separators

When a three-way separation is desired or a volume separation is required, the Nihot Double Drum Separator is a good solution. The input material is separated into a heavy, mid-heavy and light fraction due to an installed second rotating splitter drum and second fan with blow nozzle.

Advantages SDS & DDS

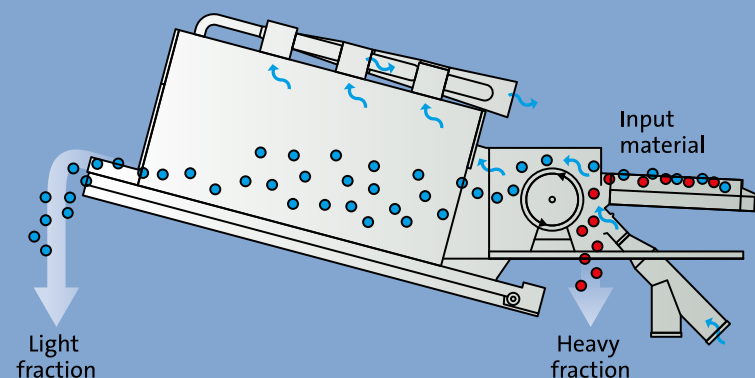
- Versatile – processes many different waste streams, including high moisture content input
- Gives control of the caloric value of the output
- Removes interferants from input, thus protecting the granulators in RDF refinement
- Low maintenance and few wear parts i.e. reduced downtime
- Can handle large fraction sizes (plastics and film)
- Low dust emission

These benefits result in fast return on investment, low operating costs and superior reliability.

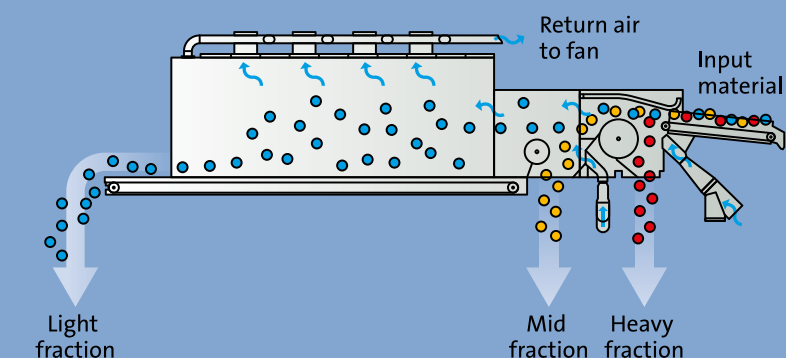


The operating principles

SDS: Single Drum Separator



DDS: Double Drum Separator





What's next.

Confidential

Equipment Detail

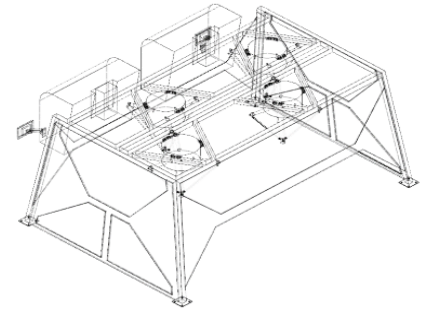
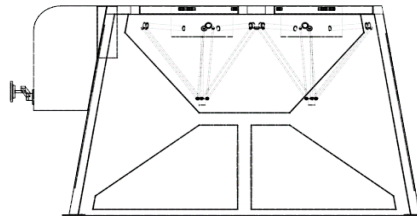
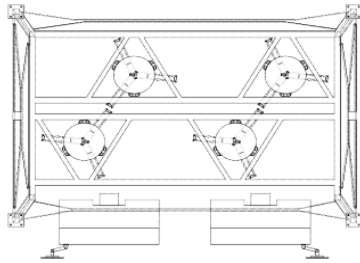
17 July 2018

Max-AI™ Autonomous QC

Application: Identification and sorting of recyclable containers for recovery. Dual-frame, quad-robot configuration for sorting from two parallel conveyors with common chutes in between.

Manufacturer: NRT

Model: AQC-4



Approx. Dimensions (L x W x H)	10' x 20' x 9' (2.9m x 5.8m x 2.6m)
Machine Weight	Approx. 14,000 lbs. (6,400 kg)
Picking Rate	up to 240 picks/minute
Max Object Weight	1 lb. (0.5 kg)
Coating	powder coated with a textured finish
Structure Color	RAL 7012 (dark gray)
Conveyor Speed	180 ft./min (55 m/min)
Air Supply	160 scfm @100psig (4.5 m ³ /min @ 6.9 BAR) per arm
Power Supply (By Customer)	40A 230V 50/60Hz
Delta bot robotic sorter	4x Included
UL or CE Certification	Included
Vision system and enclosure	Included
Max-AI™ neural network license	Included
Suction based grasping system	Included



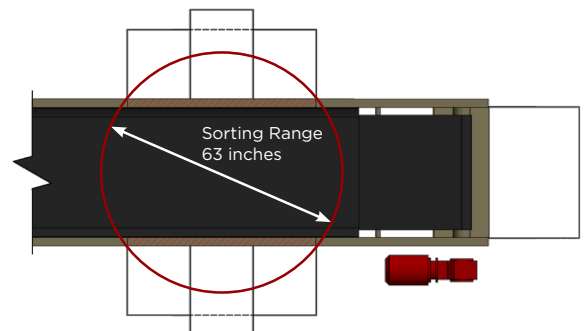
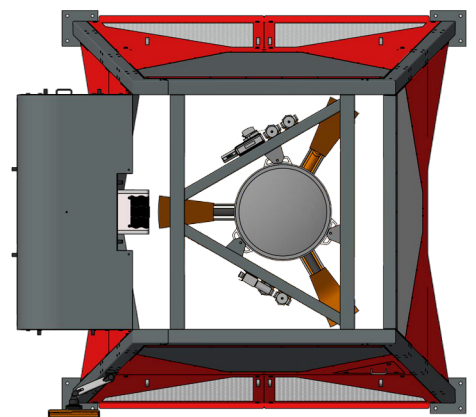


MAX-AI[®]
AUTONOMOUS QC

Max-AI[®] Autonomous Quality Control (AQC) sorters are the ultimate in post-sort automation. When combined with NRT optical sorters, the container sorting process is 100% autonomous and the need for human contact with waste is eliminated.

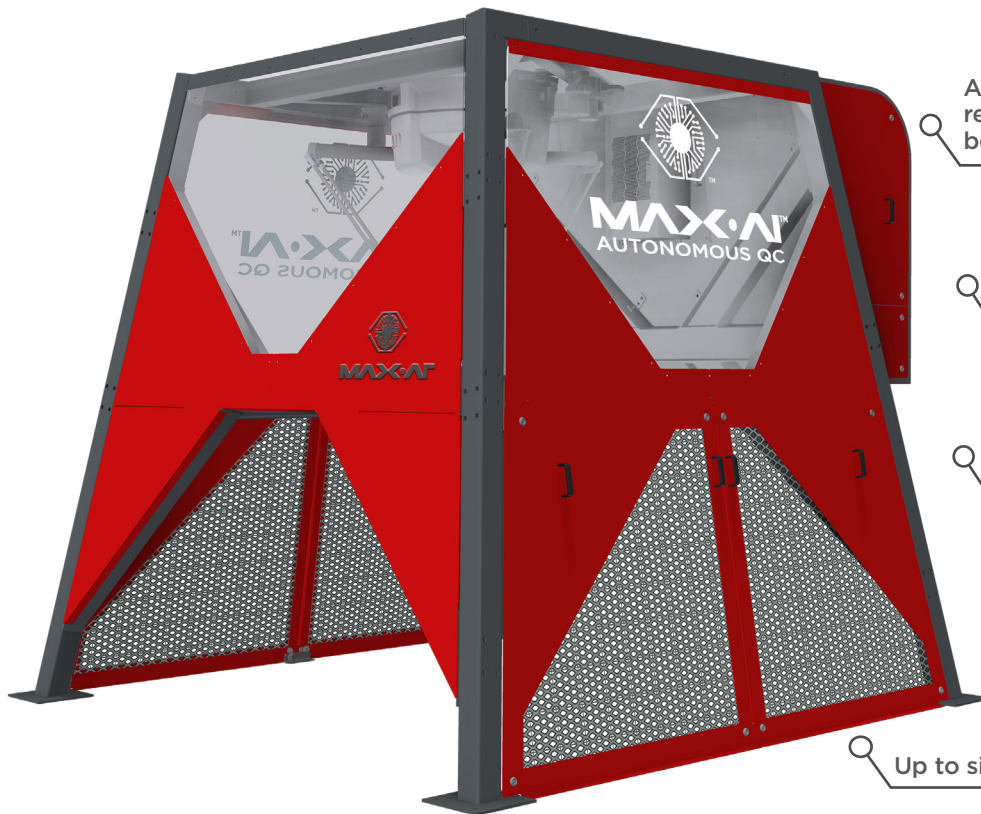
The AQC makes multiple sorting decisions autonomously; for example separating thermoform trays, aluminum, 3D fiber and residue from a stream of optically-sorted PET bottles. All of this is done at rates exceeding human capabilities and each pick is prioritized for profitability.

This advanced technology uses a machine vision system to see the material, specialized artificial intelligence to think and identify each item, and a robot to pick targeted items or contamination. Max-AI AQC sorters provide MRF operators with sustained and consistent sorting performance while improving MRF safety, recovery, product quality and operational expenses.



Max Autonomous QC

The Max AQC automates QC positions and positively recovers recyclables



A completely autonomous high-volume recovery solution. Provides additional benefit when paired with NRT sorters.

Advanced neural networks can be retrained to identify new materials as waste streams change.

Exceeds human capabilities in every metric including pick rate, accuracy, & uptime; and sustains those capabilities every minute of the day.

Picks are prioritized by value, weight, or other operator specifications. Priorities are easily adjusted when market conditions change.

Up to six discrete sorts from a single unit.

CONTAINER LINE SORTS

PET BOTTLES
PET TRAYS



HDPE-N
HDPE-C



MIXED PLASTICS



CARDBOARD



ASEPTICS/
CARTONS



ALUMINUM



MIXED PAPER



BLACK PLASTICS



FIBER LINE SORTS AVAILABLE SOON

CONTAINERS



CARDBOARD



RESIDUE



I am Max. I was created to do this job.



“I don’t get sick. I don’t need breaks, lunches or days off. I work harder, longer and better than anyone else. I’m more accurate and more efficient than anyone could be. Thanks to my intelligent neural network, I’m capable of learning on the job so I can adapt to changing conditions and variables. I was created to do this job and I look forward every day to fulfilling my promise while lowering costs, improving productivity and delivering higher profits for my employers.”

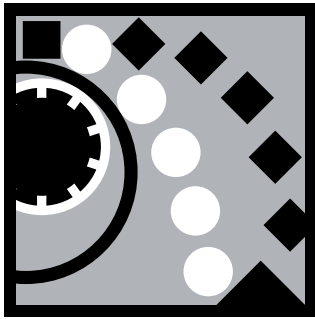
max-ai.com

BULK HANDLING SYSTEMS | Eugene, Oregon USA | 866.688.2066 | bulkhandlingsystems.com



19





Einbauvorschlag für Nichteisenmetallscheider Mounting-Proposal for Non-Ferrous Metals Separator Proposition de montage pour séparateur de métaux non-ferreux

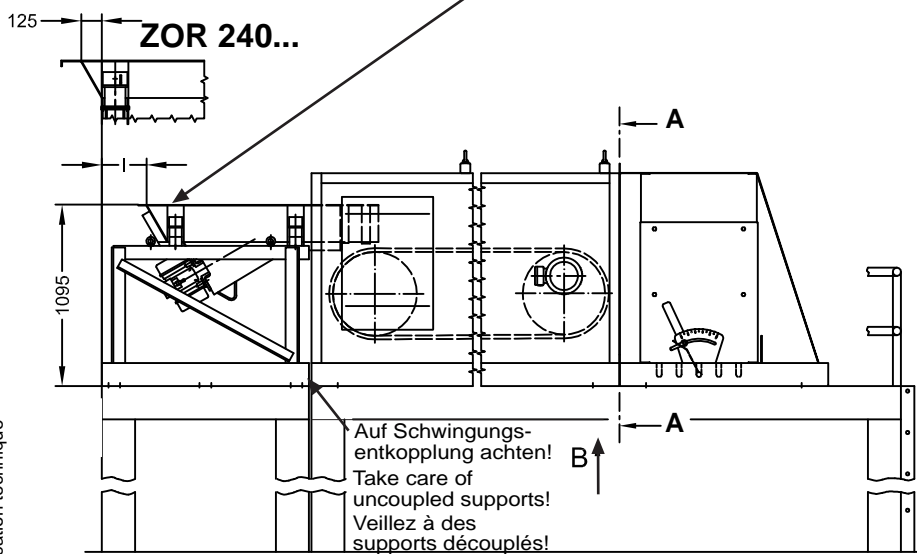
STEINERT Elektromagnetbau GmbH • Widdersdorfer Str. 329-331, D-50933 Köln • Tel.+49 (0) 221 49 84 0 • Fax +49 (0) 221 49 84 102 • sales@steinert.de
Mitgeltende Datenblätter / See additional Technical Data / Voir aussi fiches techniques: **TD ZOR • TD NES • TD ALK**

Die Materialbreite an der Übergabe darf ein Maß von Rinnenbreite -200 mm nicht unterschreiten.

The material width at the material handoff must not remain under the dimension of the pan width (-200 mm).

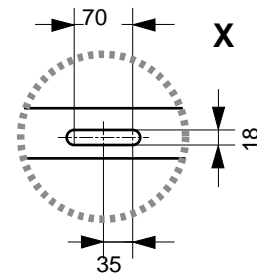
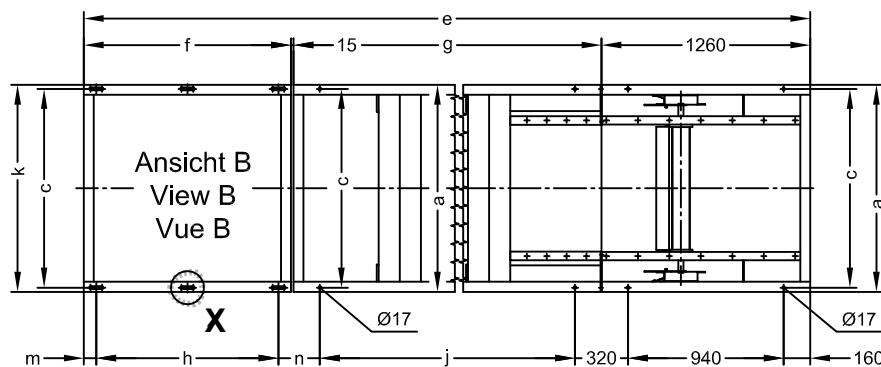
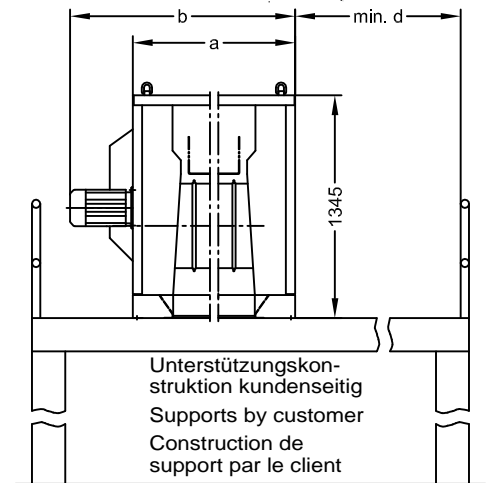
La largeur des produits au point de transfert des matières ne doit pas être inférieure à la largeur de la goulotte -200 mm.

125
ZOR 240...

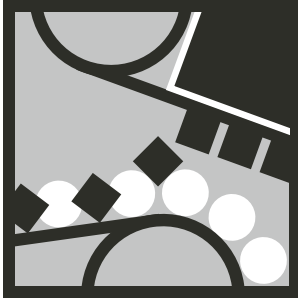


A – A

für Gurtwechsel
for belt change
pour changement
de la bande

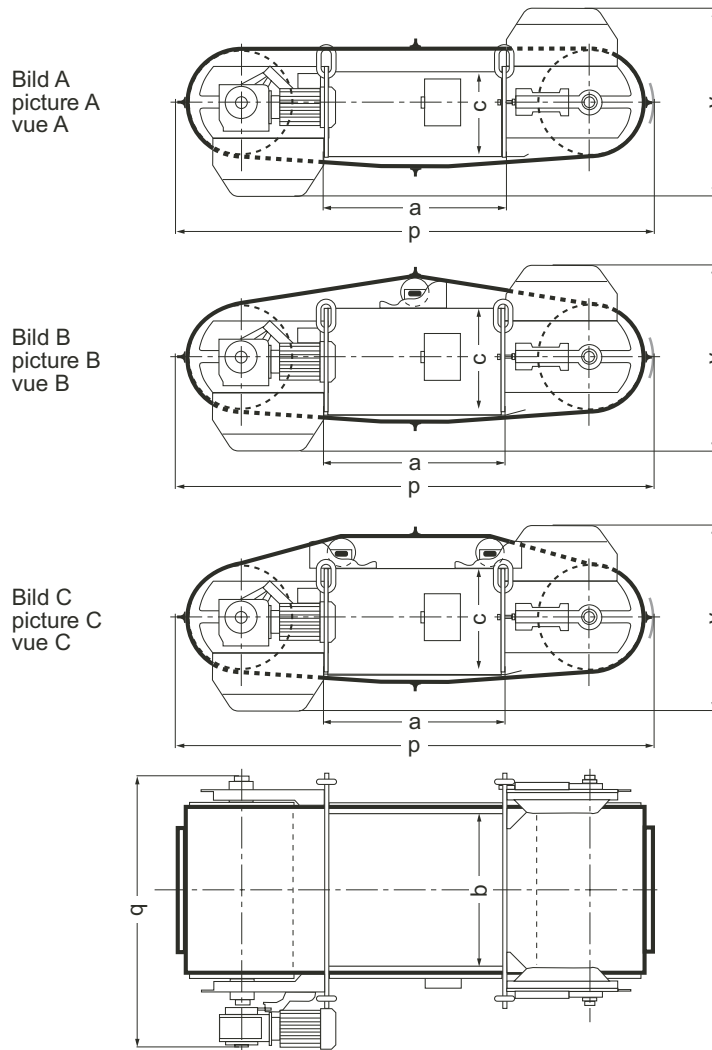


Typ Type Type	Abmessungen Dimensions Dimensions															Antriebe Drives Entraînement				
	E 36...			E 50...			E 61...									Vibr. Rinne Vibr. feeder couloir vibrant	Band belt courroie	Polysystem Pole system système polaire		
	a	b	b	b	c	d	e	f	g	h	j	k	l	m	n			E 36...	E 50...	E 61...
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kW	kW	kW	kW	kW
NES 50 1.0 E...	1250	-	1560	1622	1200	1000	4625	1250	2100	2x550	2x890	1250				2 x 0,4	2,2	-	4,0	5,5
NES 75 1.0 E...	1380	-	1695	1766	1330	1250						1380				2 x 0,6	2,2	-	4,0	7,5
NES 100 2.0 E...	1630	2083	1944	2078	1580	1500						1630	270	75	250	2 x 0,8	2,2	5,5	4,0	9,2
NES 125 2.0 E...	1880	2333	2060	2328	1830	1750	5675	1500	2900	2x675	3x860	1880				2 x 1,2	2,2	5,5	5,5	9,2
NES 150 2.0 E...	2130	2583	2510	2578	2080	2000						2130				2 x 1,2	3,0	5,5	5,5	9,2
NES 200 2.0 E...	2630	-	3010	3078	2580	2500	6375	2200		3x680		2650	120	80	255	2 x 1,6	3,0	-	5,5	9,2
NES 250 300 E...	3130	-	-	3610	3080	3000	7630	2455	3900	3X765	5X720	3150	-	80	245	2 x 3,0	3,0	-	-	7,5



Überbandmagnetscheider UME...R **Overband Magnetic Separator UME...R** **Séparateur magnétique de type „Overband“ UME...R**

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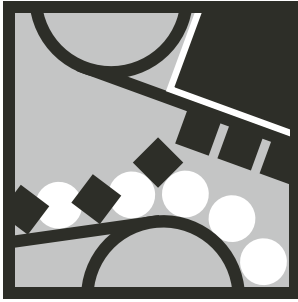


Technische Änderungen vorbehalten • Subject to technical alterations • Sous réserve d'éventuelle modification technique

Typ Type Type	Nenn- leistungs- aufnahme Rated power input Puissance nominale	Anschluß- spannung Operating voltage Tension de service	Abstand max. Maximum clearance Distance max. re- coman- dée**	Anordnung über Förderband* Arrangement over belt width * Disposition au-dessus de la largeur de la bande* quer across trans- versale		Abmessungen Dimensions Dimensions						Bild picture vue	Motor- leistung Motor capacity Puissance du moteur	Austrags- band- geschwin- digkeit Speed of discharge belt Vitesse de la bande de debit	Gewicht ca. Weight approx. Poids env.
	kW	Volt	mm	mm	mm	a	b	c	p	q	v		kW	ca. m/s	kg
UME 75 90 RF	2,7	80	330	1000	800	915	760	430	2295	1327		A	3	2,1	1550
UME 90 105 RF	3,2		360	1200	1000	1060	910	400	2440	1507	910				1850
UME 125 140 RF	5,2		470	1400	1200	1370	1220	435	2744	1807		B			3150
UME 75 90 R	3,1	63	350	1000	800	880	740	415	2290	1322		A	3	2,1	1600
UME 75 110 R	3,5	75		1200		1080			2490						1850
UME 95 110 R	4,1	95	420		1000		940	425		1522	910				2250
UME 95 130 R	4,3	105		1400		1280			2690			B		2,1	2700
UME 115 130 R	6,1	95	490		1200		1140	500		1722					3550
UME 115 150 R	6,9	108		1600		1480			2890						4200
UME 135 150 R	7,8	126	560		1400	1500	1350	510	3170	2046	1000	C	4	1,7	6300
UME 135 170 R	8,3	138		1800		1700			3370		1000				6900
UME 160 175 R	12,3	208	680		1700	1725	1600	666	3395	2300	1150				10 000
UME 180 195 R	14,7	192	730	2000	2000	1950	1800	786	3620	2500	1270				15 500

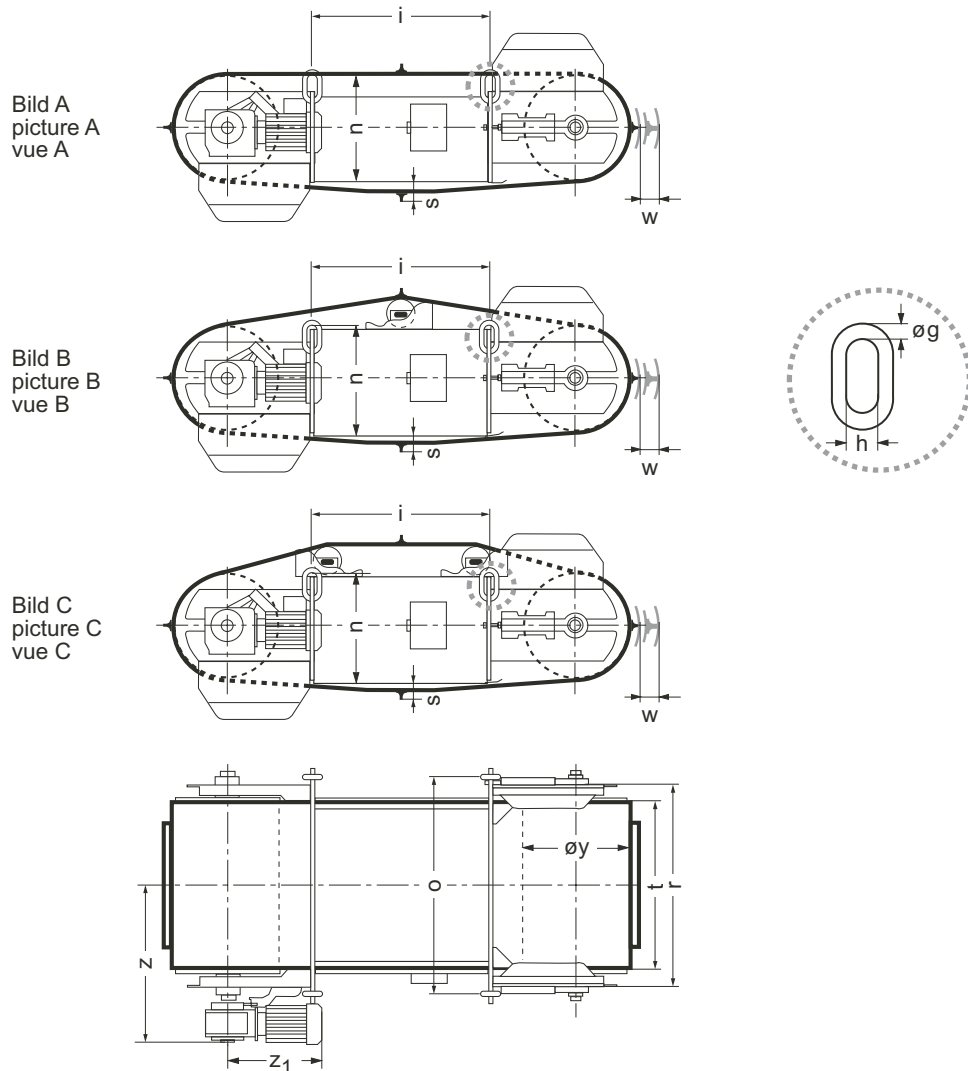
* Gemuldetes Band nach DIN 22101. / * Belt with throughing angle acc. DIN 22101. / * Bande en auge selon DIN 22101.

**Abst. zwischen Polfläche und Oberkante Förderband / **Clear. between pole surface and conveyour belt / **Dist. entre surface de pôle et courroie du convoyeur



Überbandmagnetscheider UME...R Overband Magnetic Separator UME...R Séparateur magnétique de type „Overband“ UME...R

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Typ Type Type	Abmessungen Dimensions Dimensions												Bild picture vue
	g	h	i	n	o	r	s	t	w	y	z	z ₁	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
UME 75 90 RF			900		1100	970	84	800			753		A
UME 90 105 RF	22	50	1045	520	1280	1150		950	50	506	843	454	
UME 125 140 RF			1350		1530	1450	124	1250			993		B
UME 75 90 R			860		1050	970	80	800			764		
UME 75 110 R			1060				85		50				A
UME 95 110 R	22	50		524	1250	1170		1000			864	454	
UME 95 130 R			1260				95						B
UME 115 130 R					1450	1370		1200		506	964		
UME 115 150 R			1460	639			100						
UME 135 150 R	22	50	1480	524	1760	1630		1400	80		1139	509	
UME 135 170 R			1680										C
UME 160 175 R	26	100	1685	814	2000	1880	110	1600			1266		
UME 180 195 R			1910	934	2200	2080		1800			1366		

PAAL Konti™ Baler

275 H to 425 H Series



Kadant PAAL's Konti H channel baler features high throughput and bale weights with low energy consumption.

Features of the PAAL Konti H channel baler

- ▶ Optimized knife, stamper, and channel design
- ▶ Modern axial piston pumps with low drive power
- ▶ Advanced positional ram measurement system
- ▶ Large door at rear section of baler
- ▶ PLC offering remote access and service as well as high resolution operator panel

Benefits of the PAAL Konti H channel baler

- ▶ High throughput and bale weights
- ▶ Low energy consumption
- ▶ Easy access to tying unit via optional ladder to three-sided platform
- ▶ Simple operation and maintenance
- ▶ Low total cost of ownership

Kadant PAAL was founded in 1854 in Osnabrück, Germany. Since its introduction of the first continuously operated horizontal baler in 1960, PAAL has delivered more than 30,000 machines and today is the #1 channel baler manufacturer in Europe.

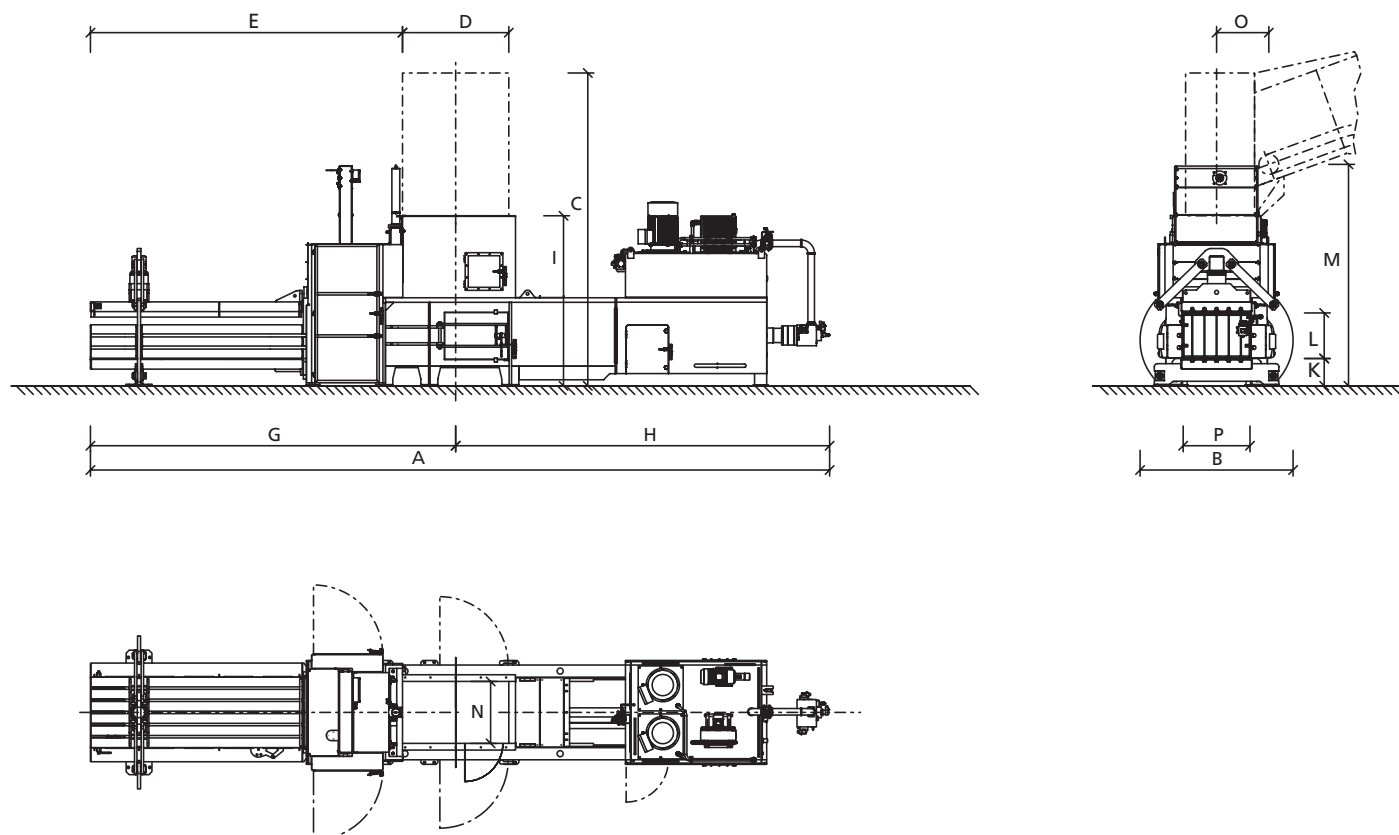
KĀDANT

PAAL KONTI BALER 275 H TO 425 H SERIES

Technical data and measurements

PAAL KONTI H SERIES		275 H			325 H				425 H				
Pressing force	US tons	90			111				134				
Spec. pressing force	psi	141			174				210				
Tunnel cross section	inch	30 x 44			30 x 44				30 x 44				
Hopper opening	inch	63 x 41			69 x 41				79 x 41				
Feeding volume	yd ³	2.62			2.81				3.10				
Number of wires	pieces	5			5				5				
Driving power	HP	50	74	2x 50	50	74	2x 50	2x 74	60	74	2x 50	2x 74	3x 74
Press output (ideal)	max. yd ³ /h	543	798	942	458	680	811	1,151	386	589	706	1,027	1,373
Press output (under load)	max. yd ³ /h	327	477	589	275	405	504	713	262	360	451	647	876
Press capacity (weight)													
• 59 lb/yd ³ (e.g., flattened OCC)	US t/h	9.4	13.8	17.1	8.3	12.1	14.9	20.9	7.7	10.5	13.2	18.7	25.9
• 101 lb/yd ³ (e.g., mixed paper)	US t/h	16.0	23.1	28.1	13.2	19.8	24.3	33.6	12.7	17.6	21.5	30.9	41.9
• 169 lb/yd ³ (e.g., newspaper, magazines)	US t/h	23.7	33.6	40.8	19.8	28.7	35.3	48.0	19.8	25.9	32.5	44.6	58.4
Baler weight	US tons	28			31				39				

Dimensions are in inches.



	A*	B	C	D	E	G	H*	I	K	L	M	N	O	P
KONTI 275 H	433.5	87.8	202.8	63.0	174.7	206.2	227.3	110.2	17.7	29.5	144.5	40.2	33.9	43.3
KONTI 325 H	476.0	99.6	202.8	68.9	202.2	236.7	239.3	110.2	17.7	29.5	144.5	40.2	33.9	43.3
KONTI 425 H	523.4	104.3	202.8	78.7	225.9	265.2	258.2	110.2	17.7	29.5	144.5	40.2	33.9	43.3

*Maximum length for specified hopper opening

Dimensions are in inches.



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EXCLUSIVE DISTRIBUTOR OF PAAL BALERS TO MRFs IN THE U.S. & CANADA

PAAL Konti Baler 275 H to 425 H Series-1000 (BHS US) 04/2017
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HTR-B

NEW

**HIGH COMPRESSION TWO-RAM BALER
WITH PLASTIC TYING SYSTEM**

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PAAL®

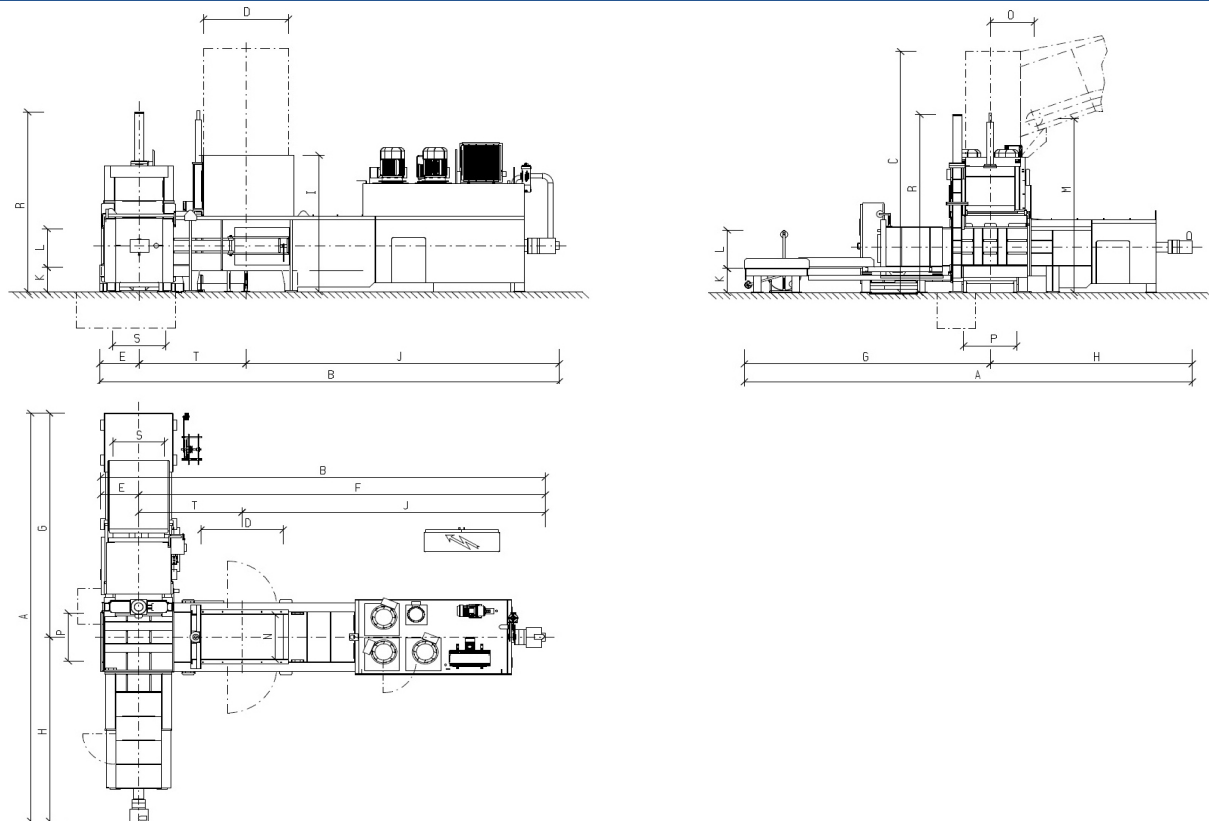
Technical data and measurements

HTR		425			700		
pressing force	t (kN)	122 (1197)			198 (1940)		
spec. pressing force	N/cm ²	136			160		
press box dimension	cm	80 x 110 x 94			110 x 110 x 94		
hopper opening	cm	175 x 102			200 x 102		
number of tyings	pieces	6 or more			6 or more		
driving power	kW	55	2x 55	3x 55	2x 55	3x 55	
press output (at input density of 80 kg/m ³)	max. m ³ /h	170	255	295	280	345	
press output (at input density of 150 kg/m ³)	max. m ³ /h	145	225	270	235	300	
press output (at input density of 200 kg/m ³)	max. m ³ /h	135	205	245	220	275	
press capacity (weight)							
• 80 kg/m ³ e.g. alfalfa or grass	ca. t/h	14	20	24	22	27	
• 150 kg/m ³ e.g. RDF	ca. t/h	22	34	40	35	45	
• 200 kg/m ³ e.g. MSW	ca. t/h	27	41	49	44	55	
baler weight (according to equipment)	ca. t	40			50		

Dimensions in mm	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T
HTR 425	9239	9459	5360	1750	808	8651	5100	4139	3010	6451	535	800	3835	1020	920	1100	3963	940	2200
HTR 700	9423	10211	5640	2000	908	9303	5205	4218	3290	6813	535	1080	4115	1020	920	1100	4908	940	2490

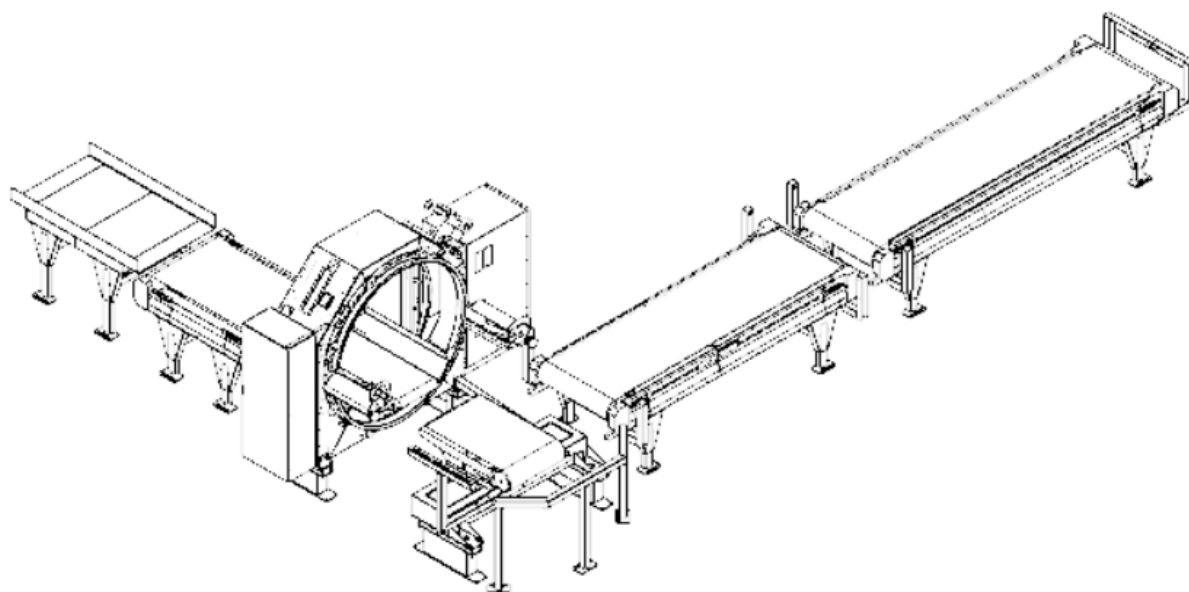
Special FEATURES of the new HTR two-ram baler:

- Multipurpose baler for compacting municipal solid waste (MSW), refuse derived fuel (RDF), recyclable material like plastic, carton, paper, etc. and agriculture material like alfalfa, grass, straw, etc. into high density bales
- Automatic binding with polyester straps incorporated on the telescopic tunnel
- Reduces operating cost: lower transportation (high bale density) and lower consumables (binding with polyester straps)
- Bales tied with polyester straps are ideal for incineration because plastic does not damage the incineration equipment as it is burned during the process
- Binding process is carried out during compaction process of next bale
- Easy operation by a new multi-functional 9" Touch-Panel with recipe management and comprehensive display of functions and data including data transfer



CW 2200-SW-750-1-5 wrapping line

Front conveyor (L=1900 mm)	1 pc
Wrapping unit	1 pc
Rear conveyor (L=4900 mm)	1 pc
Standard safety fences	1 set
Remote access device for a 3G/4G/network cable/WLAN connection	1 pc
Hydraulic system	1 pc
Electric system	1 pc
Control system	1 pc
Oil cooler	1 pc
Operation manual in English	2 pc on paper, 1 CD



TECHNICAL INFORMATION

Features

Capacity

Wrapping cycle speed is ca. 60 seconds per bale

Baler HTR 700

Bale dimensions

Width: 1200 mm

Height: 1200 mm

Lengths (min-max): 1300 mm

Weight max: 2000 kg

Weight min: 400 kg

Baled material: RDF/MSW

Wrapping film

Cross Wrap recommends stretch film 25 micron, width 750 mm, max Ø 240 mm, weight max 25 kg.

Wrapping process description

- * The wrapping line recognises a bale when it is coming to the first conveyor after the baler.
- * The wrapping line measures the length of the bales and starts wrapping them automatically.
- * After wrapping, the wrapped bale waits for the next bale on the rotation table. When the new bale has reached a certain place, the wrapped bale moves forward to the store conveyor and the new bale is wrapped vertically at the same time. Wrapping film is transferred to the next bale automatically, no manual operations are needed.
- * The automatic wrapping process is optimized so that extra film is only wrapped where strongest protection is needed. The number of layers can be modified.
- * When the bale has been wrapped, it can be lifted from the store conveyor with a forklift equipped with a bale clamp.
- * Wrapping cycle speed is approximately 60 seconds per bale when using 5 layers of film per bale (does not include film roll change or downtime).
- * The machine is designed to handle bales consisting of waste material.
- * If the shape of the waste bale is not optimal, the system needs an operator to control the wrapping process.



What's next.

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APPENDIX 6

BIOSOLIDS PROCESS FLOW DIAGRAM AND PRELIMINARY BASIS OF DESIGN AND PRELIMINARY EQUIPMENT SIZING

Appendix A: Process Flow and Preliminary Basis of Design

The Facility will include the following five major processes:

- Liquid/Thickened Sludge Receiving and Storage System
- Dewatering System
- Dewatered Cake Receiving and Storage System
- Cake Mixing System
- Drying System

Sources of Solids

The facility will receive both thickened sludge and dewatered cake. The thickened sludge will be generated from New Bedford. The dewatered cake will be generated from Brockton and Fall River. Refer to **Table 1**.

Table 1: Solid Generation

Type	Source	Total Solids (%)	Solids Load (DTPD)	Mass (DTPY)	Comments
Thickened Sludge	New Bedford	7	19.5	7,132	Annual Average (2017)
Dewatered Cake	Brockton	28.5	11.9	4,328	Average (2015-2017)
Dewatered Cake	Fall River	20	13.7	5,000	Annual Average (2016)
TOTAL		-	45.1	16,460	

Table 2: Peaking Factor Assumptions

Condition	Peaking Factor (PF)
Annual Average: Max Week	1.8
Annual Average: Max Month	1.5

Refer to **Figure 1** for a preliminary process flow diagram and mass balance.

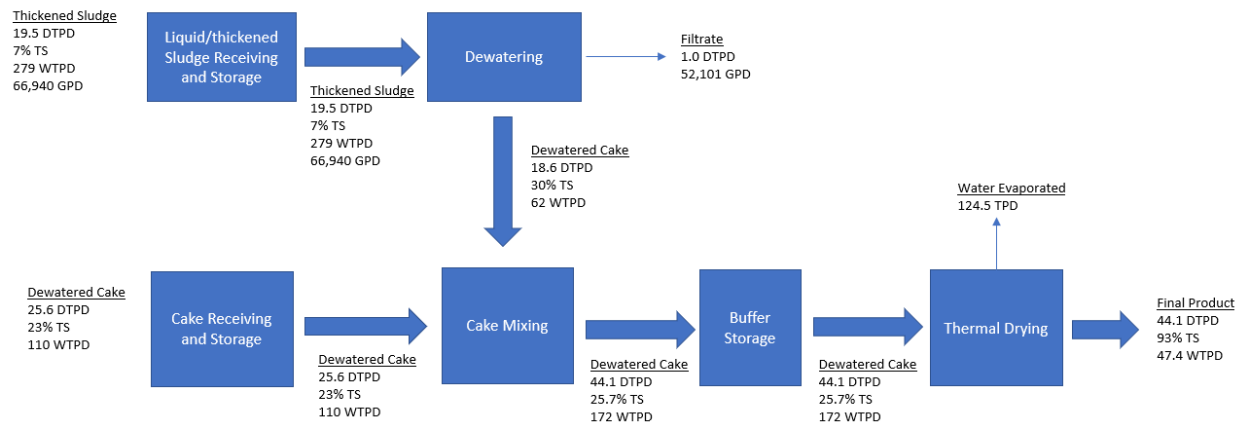


Figure 1: Preliminary Process Flow Diagram and Mass Balance

The following describes sizing assumptions regarding the various processes used to develop information included in this memorandum:

- Liquid/Thickened Sludge Receiving and Storage System:** The system will be designed to receive approximately 20 DTPD, at an assumed total solids percent (TS%) of 7%. This is the equivalent of approximately 67,000 gallons per day (GPD). The system will include the following:
 - Three days of storage capacity via buried concrete tanks
 - Tank mixing system
 - Rotary lobe pumps to transfer sludge to the dewatering system
 - Odorous air take-offs from tank headspace
- Dewatering System:** Dewatering system will produce cake with a minimum TS% of 30% (based on input received from TCR). The dewatering system will be required to have a minimum solid capture rate of 95%. The filtrate/centrate produced from the dewatering system will be conveyed to the municipal sewer. A polymer system will be provided and include polymer blending systems and polymer storage. Overall, the system will include the following:
 - 2 dewatering units (duty/standby)
 - 2 polymer storage tanks and recirculation pumps
 - 2 polymer make-up units
 - Odorous air take-offs from dewatering equipment headspace near the discharge chute
 - Constructed in a building with odor control provided
- Dewatered Cake Receiving and Storage System:** The system will receive approximately 25 DTPD and have a storage capacity of approximately 3 days. The system will include the following components:
 -

- 2 receiving silo/hoppers
 - Conveyance equipment
 - Odorous air take-offs from hopper headspace
 - Constructed in a building with odor control provided
- **Cake Mixing System:** The cake mixing system will receive cake from the dewatering system as well as the dewatered cake from the Dewatered Cake Receiving and Storage Facility and have a design capacity of up to 50 DTPD. The cake mixing system will provide mixing of the various cake sources and provide buffer storage to the drying unit.
- **Drying System:** A thermal dryer system will be provided with a capacity of 50 DTPD, with an influent cake TS% ranging from 25% to 30%. The final product will have a TS% greater than 90%. The drying facility will include the following:
 - Belt dryers
 - Constructed in building with odor control provided
 - Upstream buffer storage of 8 hours provided
 - Final product storage silos to provide 7 days of storage

Appendix B: Preliminary Equipment Sizing

Liquid Receiving and Storage

Parameter	Annual Average Conditions	Max Month Conditions	Max Week Conditions
Received Volume, gal/day	66,940	100,410	120,492
Received Mass, lbs (dry)/day	39,079	58,619	70,343
TS%	7%	7%	7%

Parameter	Assumption	Note
Tank Type	Buried	
Tank Material	concrete	
Tank Mixing Provided	Yes	Chopper Pumps
No of Tanks	Two	
Required Storage, days	3	Sized for Max month
Volume per Tank, gal	190,000	Assuming 80% usable volume
Transfer pump type to Dewatering	Rotary Lobe Pump	Duty/Standby at MW condition
Odor Control	Yes, for headspace	Sized for two tanks, half-full
Total Electrical usage per year, kWh	587,910	Assume 24 hour per day operation

Dewatering

Parameter	Annual Average Conditions	Max Week Conditions	Max Month Conditions
Received Volume, gal/day	66,940	120,492	100,410
Received Mass, lbs (dry)/day	39,079	70,343	58,619
TS%	7%	7%	7%

Parameter	Assumption	Note
Min. solids capture	95%	
Manufacturer and Model	Schwing Model 11.03 Screw Press	
Duty Units	1	
Standby Units	1	
Location	Inside Building	
Min. TS%	30%	Based on input provided by TCR. TCR conducted dewatered pilot tests using the

		Schwing dewatering screw press.
Filtrate/centrate	Gravity to sewer	
Washwater	Potable Water	Assumed washwater booster pumps not required
Odor Control Provided	Yes	
HVAC required	Yes	Per NFPA 820 Requirements
Operating time	168 hours/week	7 days/week, 24 hours/day
Total Electrical usage per year, kWh	192,175	

Cake Receiving and Storage

Parameter	Annual Average Conditions	Max Week Conditions	Max Month Conditions
Received Mass, lbs (dry)/day	51,112	92,002	76,668
TS%	23%	23%	23%

Parameter	Assumption	Note
Manufacturer	Schwing	
Required Storage, days	3	At AA conditions
Location	Inside	For freezing and odor considerations
No of Silos	2	
Volume per silo, CF	2,450	
Transfer type to cake mixing	Screw conveyor	
Odor Control	Yes	
Building	enclosed	
Total electrical usage per year, kWh	422,425	Assume 24 hour per day operation

Cake Mixing

Parameter	Annual Average Conditions	Max Week Conditions	Max Month Conditions
Cake Mass, lbs (dry)/day	88,238	158,828	132,357
Cake Volume, CY	196	352	294

Parameter	Assumption	Note
Manufacturer and Model	Schwing 350 mm mixer	
Transfer type to buffer storage/Drying	Screw conveyor	Sized for MW condition
Odor Control	Yes	
Total Electrical usage per year, kWh	424,600	Assume 24 hour per day operation

Drying

Parameter	Annual Average Conditions	Max Week Conditions	Max Month Conditions
Cake Mass, lbs (dry)/day	88,238	158,828	132,357
Cake Volume, CY	196	353	294

Parameter	Assumption	Note
Upstream Buffer Storage, hours	8	
Buffer Storage Silo Volume, CY	30	At MW conditions
Dryer Manufacturer and Model	Gryphon Model 1060U	
Duty Units required	4	
Location	Inside Building	
Min. TS%	93%	
Condensate	Gravity to sewer	
Final conveyance	Belt conveyor	
Building	Yes	Shared with other unit processes (dewatering, cake receiving, etc)
HVAC required	Yes	Per NFPA 820 requirements
Final Product storage	7 days	At MW conditions
Final Product storage silo Volume, CY	1,110	At MW conditions
Operating time	168 hours/week	7 days/week, 24 hours/day
Total Electrical usage per year, kWh	3,409,125	

APPENDIX 7

CDM SMITH WASTEWATER ASSESSMENT



Memorandum

*To: Jamie Ponte, Commissioner of Public Infrastructure
Justin Chicca, Superintendent of Wastewater
Shawn Syde, P.E., City Engineer*

*From: Jesse Herman
Chad Kershaw, P.E.*

Date: January 23, 2020

Subject: Industrial Park Pumping Station Draw Down Test and Capacity Assessment

The City of New Bedford, Massachusetts (City) requested the services of CDM Smith Inc. (CDM Smith) to complete a drawdown test and capacity assessment of the Industrial Park Pumping Station (Industrial Park PS). For this assessment, CDM Smith utilized 2017 flow monitoring data, SCADA data and pumping station information to determine the pumping station's existing capacity, estimate the existing wastewater flow, and determine if sufficient capacity exists for the proposed Parallel Products development. The development is expected to generate an average daily flow of 82,000 gallons per day (gpd) based on information provided by the City from an Environmental Impact Report (EIR). An excerpt from the EIR with the anticipated discharges to the City's sewer collection system is included in **Attachment 1**.

Industrial Park Pumping Station Description

The Industrial Park PS is located at 107 Duchaine Boulevard, in an easement approximately 500 feet west of Duchaine Boulevard (see **Figure 1** for exact location). The pumping station is a multi-story, above ground and below ground structure and is accessible from Duchaine Boulevard via a dirt driveway. It was originally constructed in 1996 as part of the Industrial Park expansion project.

The pumping station includes three Ingersoll-Dresser centrifugal dry pit pumps, each with a design flow rate of 4.82 million gallons per day (mgd) that are configured to operate as lead/lag/standby. The pumps are cycled manually by City crews. The pumps are equipped with 150 HP motors and can be operated in either slow stage or fast stage. Current operation of the pumping station consists of operating the pumps in slow stage only. A Mission alarm control system communicates operating conditions to the Department of Public Infrastructure (DPI) wastewater division personnel via SCADA. The wet well can be accessed from the pumping station "wet side", located on the north side

of the building. A manual bar rack is located in the pumping station on the influent line. The pumping station receives flow from a 36-inch-diameter sewer main from Duchaine Boulevard and an 18-inch diameter sewer main from the former Polaroid facility, which combine into a common influent line before entering the wet well. The wet well consists of two separate areas with a common dividing wall and 18-inch gate valve connecting the two sides. Flow can be diverted to each of the sides using a series of gates along the influent channel. Pumps 1 and 2 draw from the same side and Pump No. 3 draws from the other. The pumping station services the City's industrial park and a large residential and commercial area in the north end of the City. Flow from the station is conveyed via an approximately 13,000-foot-long, 24-inch diameter force main that discharges to the upstream end of the North End Relief Interceptor.

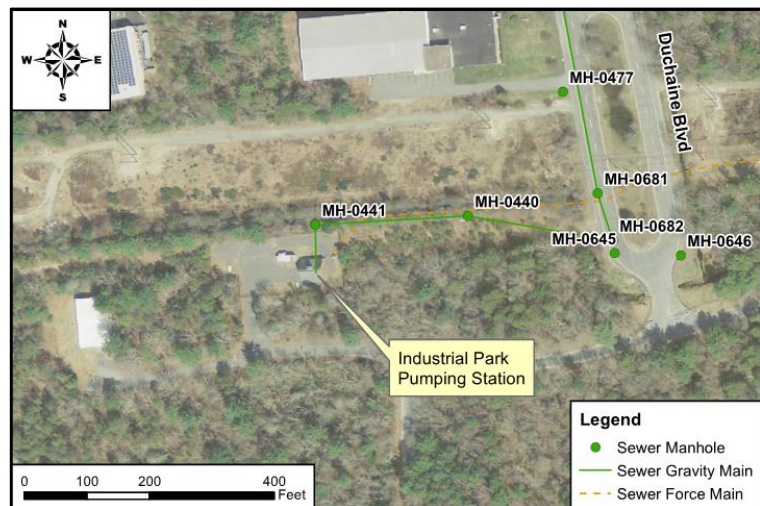


Figure 1: Industrial Park Pumping Station Location

The wet well operating points are controlled by pressure transducers with the lead pump starting once the water level reaches a depth of approximately 9.5 feet and the lag pump starting at a water depth of approximately 10 feet. The lead and lag pumps will shut off once the water level returns to 6.0 feet and 6.2 feet, respectively. A photo of the pump room is shown in **Figure 2**.

Pump Drawdown Field Test

On October 22, 2019, CDM Smith, with assistance from the City, conducted a pump drawdown analysis at the Industrial Park PS to confirm the pumping capacity of each pump, running



Figure 2: Industrial Park PS Pump Nos. 1, 2 and 3

separately and in combination. Note that at the time of the assessment, Pump No. 2 was inoperable and was not included in this analysis. The drawdown tests were conducted between the normal operating range (wet well levels were 6.0 feet to 10.0 feet from the floor) to replicate typical head pressure. During the drawdown tests, the pumps were manually operated by City personnel. Pump No. 1 and Pump No. 3 were each operated separately and then operated together to determine the time required to pump down the wet well 1.5 feet (from wet well elevation 9.0 feet to 7.5 feet). This range and depth were selected to avoid

interference from the 18-inch connecting pipe and wet well sloped sidewalls. The volumetric flow rate was then calculated for each pump using the change in water level and interior geometry of the wet well within the operating zone. Prior to and following each drawdown test, the time required for the wet well to return to elevation 9.0 feet was measured to determine the pumping station influent rate.

Pumping Station Capacity

Based on the results of the drawdown test, a pumping rate of approximately 3.25 mgd was measured for Pump No. 1 and a rate of approximately 2.51 mgd was measured for Pump No. 3 (at low speed). When operating simultaneously, a pumping rate of approximately 3.94 mgd was achieved (at low speed). For the purposes of this analysis, it was assumed this pumping station operates strictly on a lead-lag-standby configuration (currently with Pump 1 and Pump 3 alternating pumping cycles); therefore the pumping station capacity is dictated by two pumps running at a time. Therefore, the current capacity of the Industrial Park PS is estimated to be 3.94 mgd. **Table 1** below summarizes the current capacity for Industrial Park PS.

Table 1 Existing Pumping Station Capacity

Pump 1 Capacity (mgd)	Pump 3 Capacity (mgd)	Pump 1 + Pump 3 (mgd)
3.25	2.51	3.94

Existing Wastewater Flows

CDM Smith reviewed pump run time data between September 30, 2018 and September 30, 2019 using data from the City's Mission alarm control system (i.e., SCADA). Daily flows were calculated using the recorded daily pump run time data in minutes and the measured capacity of each pump from the drawdown test as discussed above.

For this time period, the average daily pump run time was 10.21 hours. The maximum daily pump run time occurred on February 26, 2019, which was 23.99 hours (13.05 hours for Pump No. 1, 10.12 hours for Pump No. 3, and 0.82 hours simultaneous pumping). This is approximately 2.4 times higher than the average daily pump run time of 10.21 hours. Based on this information and the pump drawdown test results, the influent average daily flow was calculated to be approximately 1.23 mgd and the influent maximum daily flow was calculated to be 2.96 mgd.

Since the pump run time data only summarizes daily information, the City's 2017 flow monitoring data was used to determine the peak hourly flow entering the Industrial Park PS. The flow monitoring program was conducted to identify the amount of flow (sanitary, inflow, and infiltration) entering the City's wastewater collection system. For this program, two flow meters were installed upstream of the Industrial Park PS. A depth-velocity flow meter was installed in the 36-inch reinforced concrete (RC) sewer and a Palmer-Bowlus and ultrasonic depth sensor were used to measure flow from the 18-inch sewer. The 2017 flow data, which includes flow information

from March 7, 2017 to June 6, 2017, indicated a peak hourly flow of 3.74 mgd on April 6, 2017 at 8:00 PM. Additional information from the flow monitoring program is discussed in the City's *Infiltration/Inflow Analysis Flow Monitoring Summary Report* (Flow Monitoring Report) dated December 2017 and updated October 2019. **Table 2** summarizes the existing influent average day, maximum day, and peak hourly flow based on the 2017 flow monitoring program.

Table 2 Existing Wastewater Flow Summary

Average Daily Flow (mgd)	Maximum Daily Flow (mgd)	Peak Hourly Flow (mgd)
1.23	2.96	3.74

From this information, with Pumps 1 and 3 running simultaneously (3.94 mgd capacity) the pumping station has sufficient capacity to convey the existing average daily flow (1.23 mgd), existing maximum daily flow (2.96 mgd) and existing peak hourly flow (3.74 mgd). There is approximately 0.20 mgd (139 gpm) remaining capacity at the pumping station during the existing peak hourly flow scenario. Furthermore, Pump 1 and Pump 3 each have the capacity to convey the average daily flow and Pump 1 has the capacity to convey the existing maximum daily flow.

Infiltration

Infiltration enters the sewer system through defects in pipelines, manholes and other structures. The primary source of infiltration is groundwater which can occur throughout the year but is particularly the highest during late winter and early spring (i.e., March through June) when groundwater levels are high. Using the 2017 flow monitoring data collected by both meters, the average infiltration rate from March 7 to June 6, 2017 entering the Industrial Park PS was approximately 1.01 mgd. See the Flow Monitoring Report for additional details.

Parallel Products Estimated Flows

Based on information from the EIR, the Parallel Products development is expected to discharge approximately 52,000 gpd from the dewatering system and 30,000 gpd from condensate, totaling 82,000 gpd, or 56.9 gpm. For this study, it was assumed that the dewatering and drying stages will be a consistent process, running 24 hours a day, 7 days a week. As a result, the maximum daily flow is assumed to be the same as the average daily flow and the peak hourly flow is assumed to be twice the average daily flow (164,000 gpd). **Table 3** presents a summary of Parallel Products estimated flows and total estimated future wastewater flows (existing wastewater flows plus Parallel Products estimated flows) at the pumping station.

Table 3 Parallel Products Estimated Flows and Future Wastewater Flows

Scenario	Average Daily Flow (mgd)	Maximum Daily Flow (mgd)	Peak Hourly Flow (mgd)
Parallel Products	0.082	0.082	0.164
Existing Flow	1.23	2.96	3.74
Future (Parallel Products + Existing)	1.312	3.042	3.904
Remaining Capacity	2.628	0.898	0.036

From this information, with Pumps 1 and 3 running simultaneously (3.94 mgd) the pumping station has sufficient capacity to convey the future average daily flow (1.312 mgd), future maximum daily flow (3.042 mgd), and future peak hourly flow (3.904 mgd). During the peak hourly flow scenario, the Industrial Park PS will have approximately 0.036 mgd, or 25 gpm, remaining capacity.

Summary and Conclusions

Based on the results of the pump drawdown tests, 2018-2019 pump run time data, 2017 flow monitoring data, and estimated flows for the Parallel Products development, it was determined that Pumps 1 and 3 running simultaneously (3.94 mgd) have enough capacity to convey the existing peak hourly flow (3.74 mgd) and future peak hourly flow (3.904 mgd), assuming no other new flows are added to the Industrial Park PS (e.g. future development in the service area). However, the future remaining pumping station capacity during the peak hourly flow reduces from 139 gpm to 25 gpm, approximately an 82 percent reduction.

MassDEP regulations 314 CMR 12 require for any new sewer connection in excess of 15,000 gpd in NPDES permitted combined sewer systems, that a 4:1 removal rate of I/I sources be completed. Code of Massachusetts Regulations Title 314, 314 CMR 12.04(2)(d), states

All sewer system authorities shall include provisions in their I/I plan for mitigating impacts from any new connections or extensions where proposed flows exceed 15,000 gallons per day. Such mitigation shall require that four gallons of infiltration and/or inflow be removed for each gallon of new flow to be generated by the new sewer connection or extension, unless otherwise approved by the Department.

To mitigate the loss in remaining pumping station capacity and address results, CDM Smith recommends performing sewer rehabilitation tributary to the Industrial Park PS to remove infiltration and inflow. As summarized above, approximately 1.01 mgd of infiltration was measured entering the sewer system tributary to the Industrial Park PS from March 7, 2017 to June 6, 2017. Per 314 CMR 12.04(2)(d), Parallel Products shall meet the 4:1 flow removal requirement. Sewer rehabilitation techniques to remove infiltration may include but are not limited to such activities as cured-in-place pipe lining, manhole lining, service lining, and open-cut replacement.

Also, in order to maintain/improve available pumping capacity and pump reliability at the Industrial Park PS, CDM Smith recommends the following:

- Rebuild/replace Pump 3 to restore its original design pumping capacity. Currently, Pump 3 only has approximately 77 percent of the pumping capacity of Pump 1 (2.51 mgd vs. 3.25 mgd). If Pump 3 is rebuilt or replaced to a pumping capacity of approximately 3.25 mgd, the pumping capacity of Pump 1 and Pump 3 running simultaneously is expected to be at least 4.5 mgd; well above the future peak flow of 3.904 mgd.
- Rebuild/replace Pump 2 to put pump back in service and restore its original design capacity. As described above, the Industrial Park PS was designed as a lead-lag-standby pumping station and the capacity is representative of two pumps running at a time. The pumping station currently does not have a standby pump. Pump 2 shall be rebuilt or replaced to restore redundancy at the pumping station should Pump 1 or Pump 3 fail and need to be taken out of service for maintenance and allow the City to run all three pumps simultaneously, in the case of an emergency.

cc: Stephanie Crampton, City of New Bedford DPI
Brendan Ennis, P.E., CDM Smith

Attachment 1

Pertinent Page from Development's
Environmental Impact Report

this is the largest size facility under consideration.

Biosolids delivered as a thickened wet slurry will be dewatered by centrifuge or screw press to produce biosolids cake with an expected solids content of 30%. The dewatering system will be designed to process 20 dry tons per day of wet slurry. Wastewater extracted in the dewatering process will be directed to the New Bedford sewer system. The dewatering system will be designed to have a solids capture rate of 95%. It is expected that the discharge to the New Bedford sewer system from the dewatering system will be 52,000 gallons per day. The dewatered slurry biosolids cake and the biosolids cake delivered to the facility will then be blended together. The blending area will include sufficient storage capacity for eight hours of production/processing.

The blended cake will then be directed to a thermal dryer that utilizes a natural gas burner. The biosolids will be dried to approximately 90% solids. Moisture evaporated from the biosolids during the drying process will be condensed with the condensate water discharged to the New Bedford sewer system. It is expected that the daily discharge of condensate to the sewer system will be 30,000 gallons per day. Drying will significantly reduce the weight and volume of the biosolids. The dried biosolids will be sent for disposal via railcar or truck or beneficially for purposes such as alternative daily landfill cover if the required Beneficial Use Determination permits are obtained. The facility will have the capability of storing seven days of dried sludge production.

The proposed facility will be designed to control odors generated by the biosolids processing. All processing will be done within an enclosed building. Two odor control systems will be provided to control odor. A scrubber will process foul air associated with the sludge and cake storage, transfer, dewatering and drying processes. These areas will be operated under negative pressure with the extracted air directed to the scrubber. Air from low odor areas of the processing building will be treated with an ionization system to provide odor control through the HVAC system.

After construction of the proposed drying facility, PPNE may at some point modify the facility to include gasification of the dried biosolids. The gasification system will consist of a gasifier and thermal oxidizer. Heat generated in the thermal oxidizer will be used to dry the biosolids reducing or eliminating the need for natural gas. The ash produced in the gasification process would be sent for disposal by rail or by truck.

Greenhouse Gas Analysis

A greenhouse gas (GHG) analysis that complies with the MEPA Greenhouse Gas Emissions Policy and Protocol (GHF Policy) has been prepared and is included in Appendix C. The analysis addresses GHG emissions generated by operation of the project and associated traffic and includes commitments to mitigate GHG emissions that will result due to development and operation of the project.

NOTE: The project description should summarize both the project's direct and indirect impacts (including construction period impacts) in terms of their magnitude, geographic extent, duration and frequency, and reversibility, as applicable. It should also discuss the infrastructure requirements of the project and the capacity of the municipal and/or regional infrastructure to sustain these requirements into the future.

Describe the on-site project alternatives (and alternative off-site locations, if applicable), considered by the proponent, including at least one feasible alternative that is allowed under current zoning, and the reasons(s) that they were not selected as the preferred alternative:

APPENDIX 8
NEW BEDFORD CONSERVATION COMMISSION
ORDER OF CONDITIONS



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

A. General Information

Please note:
this form has
been modified
with added
space to
accommodate
the Registry
of Deeds
Requirements

Important:
When filling
out forms on
the
computer,
use only the
tab key to
move your
cursor - do
not use the
return key.



1. From: New Bedford
Conservation Commission
2. This issuance is for
(check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions
3. To: Applicant:

<p><u>Tim</u> a. First Name</p> <p><u>Parallel Products of New England</u> c. Organization</p> <p><u>100 Duchaine Blvd.</u> d. Mailing Address</p> <p><u>New Bedford</u> e. City/Town</p>	<p><u>Cusson</u> b. Last Name</p> <p><u>MA</u> f. State</p> <p><u>02745</u> g. Zip Code</p>
---	---
4. Property Owner (if different from applicant):

<p><u>SMRE 100, LLC c/o Ruberto, Israel & Weiner</u> c. Organization</p> <p><u>225 State St., 7th Floor</u> d. Mailing Address</p> <p><u>Boston</u> e. City/Town</p>	<p><u>MA</u> f. State</p> <p><u>02109</u> g. Zip Code</p>
---	---
5. Project Location:

<p><u>100 Duchaine Blvd.</u> a. Street Address</p> <p><u>Map 133; Map 134</u> c. Assessors Map/Plat Number</p>	<p><u>New Bedford</u> b. City/Town</p> <p><u>Lot 67; Lots 5 & 462</u> d. Parcel/Lot Number</p>
--	--

Latitude and Longitude, if known: d m s d m s

d. Latitude e. Longitude



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Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
 Bristol (S.D.) 24201
 a. County b. Certificate Number (if registered land)
- c. Book d. Page
7. Dates: 10/3/2019 7/21/2020 7/30/2020
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
 Phase I & Phase II Site Plan 100 Duchaine Blvd. Assessors Map 133 Lot 67 & Assessors Map 134 Lots 5 & 462. Sheets 1 through 24 of 26.
- Farland Corp. Christian Farland, P.E.
 b. Prepared By c. Signed and Stamped by
06/26/2020 various
 d. Final Revision Date e. Scale
- Long Term Operation & Maintenance Plan revised 3/4/2020
 f. Additional Plan or Document Title g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. ☒ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution
 d. ☒ Private Water Supply e. ☒ Fisheries f. ☒ Protection of Wildlife Habitat
 g. ☒ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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SE49-0831
MassDEP File #

eDEP Transaction #
New Bedford
City/Town

B. Findings (cont.)

Denied because:

- b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input checked="" type="checkbox"/> Bank	45 a. linear feet	45 b. linear feet	 c. linear feet	 d. linear feet
5. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	4,095 perm 1,209 temp	4,095 perm 1,209 temp	6,700 c. square feet	6,700 d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	 a. square feet e. c/y dredged	 b. square feet f. c/y dredged	 c. square feet	 d. square feet
7. <input type="checkbox"/> Bordering Land Subject to Flooding	 a. square feet	 b. square feet	 c. square feet	 d. square feet
Cubic Feet Flood Storage	 e. cubic feet	 f. cubic feet	 g. cubic feet	 h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	 a. square feet	 b. square feet		
Cubic Feet Flood Storage	 c. cubic feet	 d. cubic feet	 e. cubic feet	 f. cubic feet
9. <input checked="" type="checkbox"/> Riverfront Area	4,700 a. total sq. feet 4,700 c. square feet	4,700 b. total sq. feet 4,700 d. square feet	4,700 s. f. (restored)	4,700 s.f. (restored)
Sq ft within 100 ft	 c. square feet	 d. square feet	 (restored)	 (restored)
Sq ft between 100-200 ft	 g. square feet	 h. square feet	 i. square feet	 j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
14. <input type="checkbox"/> Coastal Dunes	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
15. <input type="checkbox"/> Coastal Banks	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		
22. <input type="checkbox"/> Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

24. ☒ Stream Crossing(s):

a. number of new stream crossings

1

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 7/30/2023 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]

"File Number SE49-0831 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
 - (1) ☒ is subject to the Massachusetts Stormwater Standards
 - (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
 - i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
 - 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 - 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 - 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See attached Special Conditions 21 through 55

- 20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No
2. The New Bedford hereby finds (check one that applies):
Conservation Commission

- a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. ☒ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

Wetlands Ordinance

1. Municipal Ordinance or Bylaw

Sec. 15-101
thru 15-112

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

MADEP General Conditions 1 through 20 are Special Conditions pursuant to the City of New Bedford Wetlands Ordinance (Sec. 15-101 through 15-112). In addition, see attached Special Conditions 21 through 55.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

7/30/2020
 1. Date of Issuance

Please indicate the number of members who will sign this form.

3
 2. Number of Signers

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

☐ by hand delivery on

☒ by certified mail, return receipt requested, on

7/30/2020

Date

Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



CITY OF NEW BEDFORD
JONATHAN F. MITCHELL, MAYOR

PARALLEL PRODUCTS SPECIAL CONDITIONS
RAIL AND RECYCLING FACILITIES
100 DUCHAINE BOULEVARD
APPLICANT: Parallel Products of New England
OWNER: SMRE 100, LLC

SE49-0831 SPECIAL CONDITIONS

21. No activity shall occur prior to obtaining all necessary and required permits, licenses and approvals; and until copies of the same have been furnished to the Conservation Commission.
22. Any design modifications, alterations, amendments, or additions shall be subject to the approval of the New Bedford Conservation Commission. Requests for any changes shall be made in writing and shall be accompanied by a revised plan.
23. No modification to surface features, drainage or topography shall be permitted except as indicated by this Order of Conditions.
24. Contours shall remain unchanged except as permitted by this Order of Conditions.
25. There shall be no construction other than that proposed by the Notice of Intent and included on the plans.
26. Immediately following completion of construction and grading, permanent stabilization shall be carried out to minimize erosion.
27. All wetland areas not to be altered shall be kept clear of rubbish, debris, and construction material.
28. All exposed soil or subsoil shall be replanted with vegetation such as grass, groundcover, shrubs or a wetland seed mix so as to minimize erosion.
29. There shall be minimum disruption of existing grades and vegetation in order to minimize erosion.

30. No runoff shall be caused to drain on adjacent property.
31. All excess material shall be removed from the site.
32. The owners shall notify the Conservation Commission of the work start date prior to its commencement so that regular inspections may be made.
33. The inspector and/or Commission members shall have the right to enter upon the land for the purpose of the inspection and/or the taking of pictures to determine and evaluate compliance with this Order.
34. All facilities and equipment shall be continually maintained so as to comply with this Order of Conditions and M.G.L. Ch. 131 S40, the Wetlands Protection Act and Regulations 310 CMR 10.00 et seq.
35. Certain conditions such as maintenance or monitoring are on-going and are not to expire at the end of three years or with the issuance of a Certificate of Compliance.
36. This Order of Conditions shall apply to any successor in interest or successor in control.
37. Any changes required by any other board or authority may require a new filing with the Conservation Commission.
38. It is the responsibility of the applicant to complete the review required by agencies with jurisdiction over the activity that is subject to this Order of Conditions and procure all required permits or approvals before work commences. These reviews, permits, and approvals may include but are not limited to:
 - The Army Corps of Engineers
 - The MA Department of Environmental Protection
 - The MA Natural Heritage and Endangered Species Program
 - Review by local Planning Boards, Zoning Boards, Board of Health and Building Inspector.
39. The Conservation Commission shall not be responsible or liable for the construction, operation, or maintenance of any part of this project and does not warrant the safety of same.
40. Any fill or construction materials shall be placed in upland areas.
41. Any mitigation and resource protection devices and measures, e.g. straw bales, siltation fence or compost tubes are to be installed prior to the initiation of work under this Order of Conditions. Silt fence and straw bales shall be trenched into the ground. The Conservation Agent is to be notified when in place for inspection and verification. No work is to be undertaken until written or verbal approval is received from the Conservation Commission or its Agent.
42. In accordance with Condition number fourteen (14), no activity shall take place until the applicant has furnished written documentation that the plans on file with the Conservation Commission are consistent with permits and approvals of other City Boards.
43. Prior to any construction, an on-site inspection is to be held between the proposed contractor, the

engineer, and the Conservation Commission Agent to go over the sequence of construction and all other restrictions and requirements as noted on the Order of Conditions. A written construction schedule is to be received at that time.

44. Any changes in proposed drainage patterns shall require the written approval of the Conservation Commission.
45. Wetland flagging to remain in place until the project has been completed and a Certificate of Compliance issued.
46. Notice of Intent, Order of Conditions and approved plans shall be retained on the site during construction and made available to all contractors.
47. All conditions are on going and do not expire until the issuance of a Certificate of Compliance.
48. An as-built plan including utilities, grading and 25' No Disturb Zone shall be submitted upon completion of construction.
49. The Stormwater Pollution Prevention Plan (SWPPP) shall be submitted two weeks prior to construction start up.
50. The applicant shall maintain vegetative growth in the stormwater pond where Front voltaic canopy # 2 is proposed. Failure to maintain vegetative growth in the stormwater pond shall result in removal of the photovoltaic canopy and restoration of the vegetation in the stormwater pond.
51. The Conservation Commission's consulting engineer shall conduct inspections at a minimum of the following times: 1) at the pre-construction meeting. 2) When the proposed stormwater wetland subgrade has been established. 3) At the time of installation of the two equalizing culverts in the wetland impact area. 4) when the locations of the level spreaders are staked out in the field.
52. The Conservation Agent shall conduct inspections at a minimum of the following times: 1) at the pre - construction meeting. 2) when the erosion controls are installed. 3) when the wetland replication area has been excavated to subgrade. 4) when the wetland replication area has been planted. 5) when the wetland restoration areas have been restored.
53. The resume of the wetland scientist to oversee construction of the wetland replication area, the restoration of the temporarily impacted wetlands, the riverfront restorations and bridge crossing construction shall be sent to the Conservation Commission two weeks prior to construction commencement.
54. Two annual wetland monitoring reports shall be submitted to the Conservation Commission following the initial year of construction. They shall document the at least 75% of the surface of the wetland replication areas and wetland restoration areas are vegetated with indigenous wetland plant species. Documentation that the riverfront restoration areas has been completed in compliance with the approved plans shall also be included in the annual wetland monitoring reports.
55. An as-built of the wetland replication, riverfront restoration, and the wetland and stream crossing shall be submitted to the Conservation Commission at the completion of construction. The as-built

shall provide, at a minimum, the bottom elevation of the wetland replication area, the square footages of the replication area and the wetland impact areas. The wetland impact area as-built shall also include showing the size and restoration of the temporarily impacted wetlands, including the elevation of the restored wetlands and the elevation of the adjacent wetlands. The stream crossing as-built shall include the limits of the bridge, the entire slope leading to the stream and the distance from the limit of construction on the slope and the stream.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

SE49-0831

MassDEP File #

eDEP Transaction #

New Bedford

City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

New Bedford

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

New Bedford

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

100 Duchaine Blvd

Project Location

SE49-0831

MassDEP File Number

Has been recorded at the Registry of Deeds of:

Bristol (S.D.)

County

Book

Page

for:

SMRE 100, LLC

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

7/30/2023

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

APPENDIX 9

AIR EMISSION TRACKING WORKBOOK EXAMPLE

Parallel Products New England
12-Month Rolling Emissions Tracking Sheet
Facility Wide Summary

Month	Volatile Organic Compounds		Particulate Matter				
	Biosolids Processing (TPM)	Rolling 12 Month VOC (TPY)	MSW Tipping (TPM)	MSW Processing (TPM)	Glass Processing (TPM)	Total PM10 (TPM)	Rolling 12 Month PM10 (TPY)
Jul-21	0.08	--	0.03	0.03	0.01	0.07	--
Aug-21	0.08	--	0.03	0.03	0.01	0.07	--
Sep-21	0.08	--	0.02	0.02	0.01	0.06	--
Oct-21	0.08	--	0.03	0.03	0.01	0.07	--
Nov-21	0.08	--	0.02	0.02	0.01	0.06	--
Dec-21	0.08	--	0.03	0.03	0.01	0.07	--
Jan-22	0.08	--	0.03	0.03	0.01	0.07	--
Feb-22	0.07	--	0.02	0.02	0.01	0.06	--
Mar-22	0.08	--	0.03	0.03	0.01	0.07	--
Apr-22	0.08	--	0.02	0.02	0.01	0.06	--
May-22	0.08	--	0.03	0.03	0.01	0.07	--
Jun-22	0.08	0.91	0.02	0.02	0.01	0.06	0.77
Jul-22	0.08	0.91	0.03	0.03	0.01	0.07	0.77
Aug-22	0.08	0.91	0.03	0.03	0.01	0.07	0.77
Sep-22	0.08	0.91	0.02	0.02	0.01	0.06	0.77
Oct-22	0.08	0.91	0.03	0.03	0.01	0.07	0.77
Nov-22	0.08	0.91	0.02	0.02	0.01	0.06	0.77
Dec-22	0.08	0.91	0.03	0.03	0.01	0.07	0.77
Jan-23	0.08	0.91	0.03	0.03	0.01	0.07	0.77
Feb-23	0.07	0.91	0.02	0.02	0.01	0.06	0.77
Mar-23	0.08	0.91	0.03	0.03	0.01	0.07	0.77
Apr-23	0.08	0.91	0.02	0.02	0.01	0.06	0.77
May-23	0.08	0.91	0.03	0.03	0.01	0.07	0.77
Jun-23	0.08	0.91	0.02	0.02	0.01	0.06	0.77

*PM2.5 is a subset of PM10 and thus will have equal or lower emissions than PM10.

Parallel Products New England
12-Month Rolling Emissions Tracking Sheet
MSW Tipping PM10 Emissions

Month	Days	Tons MSW Processed	PM10 Emission Factor (lb/Ton MSW)	PM10 Emissions (lb/month)	Conversion Factor (lb/ton)	PM10 Emissions (TPM10)
Jul-21	31	46,500	0.0011	51.15	2,000	0.03
Aug-21	31	46,500	0.0011	51.15	2,000	0.03
Sep-21	30	45,000	0.0011	49.50	2,000	0.02
Oct-21	31	46,500	0.0011	51.15	2,000	0.03
Nov-21	30	45,000	0.0011	49.50	2,000	0.02
Dec-21	31	46,500	0.0011	51.15	2,000	0.03
Jan-22	31	46,500	0.0011	51.15	2,000	0.03
Feb-22	28	42,000	0.0011	46.20	2,000	0.02
Mar-22	31	46,500	0.0011	51.15	2,000	0.03
Apr-22	30	45,000	0.0011	49.50	2,000	0.02
May-22	31	46,500	0.0011	51.15	2,000	0.03
Jun-22	30	45,000	0.0011	49.50	2,000	0.02
Jul-22	31	46,500	0.0011	51.15	2,000	0.03
Aug-22	31	46,500	0.0011	51.15	2,000	0.03
Sep-22	30	45,000	0.0011	49.50	2,000	0.02
Oct-22	31	46,500	0.0011	51.15	2,000	0.03
Nov-22	30	45,000	0.0011	49.50	2,000	0.02
Dec-22	31	46,500	0.0011	51.15	2,000	0.03
Jan-23	31	46,500	0.0011	51.15	2,000	0.03
Feb-23	28	42,000	0.0011	46.20	2,000	0.02
Mar-23	31	46,500	0.0011	51.15	2,000	0.03
Apr-23	30	45,000	0.0011	49.50	2,000	0.02
May-23	31	46,500	0.0011	51.15	2,000	0.03
Jun-23	30	45,000	0.0011	49.50	2,000	0.02

*PM2.5 is a subset of PM10 and thus will have equal or lower emissions than PM10.

Parallel Products New England
12-Month Rolling Emissions Tracking Sheet
MSW Processing PM10 Emissions

Month	Days	Tons MSW Processed	PM10 Emission Factor (lb/Ton MSW)	PM10 Emissions (lb/month)	Conversion Factor (lb/ton)	PM10 Emissions (TPM10)
Jul-21	31	46,500	0.0011	51.15	2,000	0.03
Aug-21	31	46,500	0.0011	51.15	2,000	0.03
Sep-21	30	45,000	0.0011	49.50	2,000	0.02
Oct-21	31	46,500	0.0011	51.15	2,000	0.03
Nov-21	30	45,000	0.0011	49.50	2,000	0.02
Dec-21	31	46,500	0.0011	51.15	2,000	0.03
Jan-22	31	46,500	0.0011	51.15	2,000	0.03
Feb-22	28	42,000	0.0011	46.20	2,000	0.02
Mar-22	31	46,500	0.0011	51.15	2,000	0.03
Apr-22	30	45,000	0.0011	49.50	2,000	0.02
May-22	31	46,500	0.0011	51.15	2,000	0.03
Jun-22	30	45,000	0.0011	49.50	2,000	0.02
Jul-22	31	46,500	0.0011	51.15	2,000	0.03
Aug-22	31	46,500	0.0011	51.15	2,000	0.03
Sep-22	30	45,000	0.0011	49.50	2,000	0.02
Oct-22	31	46,500	0.0011	51.15	2,000	0.03
Nov-22	30	45,000	0.0011	49.50	2,000	0.02
Dec-22	31	46,500	0.0011	51.15	2,000	0.03
Jan-23	31	46,500	0.0011	51.15	2,000	0.03
Feb-23	28	42,000	0.0011	46.20	2,000	0.02
Mar-23	31	46,500	0.0011	51.15	2,000	0.03
Apr-23	30	45,000	0.0011	49.50	2,000	0.02
May-23	31	46,500	0.0011	51.15	2,000	0.03
Jun-23	30	45,000	0.0011	49.50	2,000	0.02

*PM2.5 is a subset of PM10 and thus will have equal or lower emissions than PM10.

Parallel Products New England
12-Month Rolling Emissions Tracking Sheet
Glass Processing PM10 Emissions

Month	Days	Tons Glass Processed	PM10 Emission Factor (Ton PM10/Ton Glass)	PM10 Emissions (TPM10)
Jul-21	31	6,352	0.0000022	0.01
Aug-21	31	6,352	0.0000022	0.01
Sep-21	30	6,148	0.0000022	0.01
Oct-21	31	6,352	0.0000022	0.01
Nov-21	30	6,148	0.0000022	0.01
Dec-21	31	6,352	0.0000022	0.01
Jan-22	31	6,352	0.0000022	0.01
Feb-22	28	5,738	0.0000022	0.01
Mar-22	31	6,352	0.0000022	0.01
Apr-22	30	6,148	0.0000022	0.01
May-22	31	6,352	0.0000022	0.01
Jun-22	30	6,148	0.0000022	0.01
Jul-22	31	6,370	0.0000022	0.01
Aug-22	31	6,370	0.0000022	0.01
Sep-22	30	6,164	0.0000022	0.01
Oct-22	31	6,370	0.0000022	0.01
Nov-22	30	6,164	0.0000022	0.01
Dec-22	31	6,370	0.0000022	0.01
Jan-23	31	6,370	0.0000022	0.01
Feb-23	28	5,753	0.0000022	0.01
Mar-23	31	6,370	0.0000022	0.01
Apr-23	30	6,164	0.0000022	0.01
May-23	31	6,370	0.0000022	0.01
Jun-23	30	6,164	0.0000022	0.01

*PM2.5 is a subset of PM10 and thus will have equal or lower emissions than PM10.

Parallel Products New England
12-Month Rolling Emissions Tracking Sheet
Biosolids Processing VOC Emissions

Month	Days	Tons Biosolids Processed	VOC Emission Factor (lb/Dry Ton Biosolids)	VOC Emissions (lb/month)	Conversion Factor (lb/ton)	VOC Emissions (TPM)
Jul-21	31	1,550	0.10	155.0	2,000	0.08
Aug-21	31	1,550	0.10	155.0	2,000	0.08
Sep-21	30	1,500	0.10	150.0	2,000	0.08
Oct-21	31	1,550	0.10	155.0	2,000	0.08
Nov-21	30	1,500	0.10	150.0	2,000	0.08
Dec-21	31	1,550	0.10	155.0	2,000	0.08
Jan-22	31	1,550	0.10	155.0	2,000	0.08
Feb-22	28	1,400	0.10	140.0	2,000	0.07
Mar-22	31	1,550	0.10	155.0	2,000	0.08
Apr-22	30	1,500	0.10	150.0	2,000	0.08
May-22	31	1,550	0.10	155.0	2,000	0.08
Jun-22	30	1,500	0.10	150.0	2,000	0.08
Jul-22	31	1,550	0.10	155.0	2,000	0.08
Aug-22	31	1,550	0.10	155.0	2,000	0.08
Sep-22	30	1,500	0.10	150.0	2,000	0.08
Oct-22	31	1,550	0.10	155.0	2,000	0.08
Nov-22	30	1,500	0.10	150.0	2,000	0.08
Dec-22	31	1,550	0.10	155.0	2,000	0.08
Jan-23	31	1,550	0.10	155.0	2,000	0.08
Feb-23	28	1,400	0.10	140.0	2,000	0.07
Mar-23	31	1,550	0.10	155.0	2,000	0.08
Apr-23	30	1,500	0.10	150.0	2,000	0.08
May-23	31	1,550	0.10	155.0	2,000	0.08
Jun-23	30	1,500	0.10	150.0	2,000	0.08

Biosolids VOC Emissions			
Parameter	Value	Units	Source
Total VOC Emissions	0.2177	lb VOC/hr	EIR Air Emissions from Attachment B03b
Biosolids Sludge Throughput	50	DTPD	EIR Air Emissions from Attachment B03b
Conversion Factor	24	hr/day	Known Conversion Value
Biosolids Sludge Throughput	2.083	Dry Tons per Hour	DTPD throughput divided by 24 hr/day
Emission Factor	0.10	lb VOC/DT of sludge	Total VOC Emissions divided by Biosolids Sludge Throughput

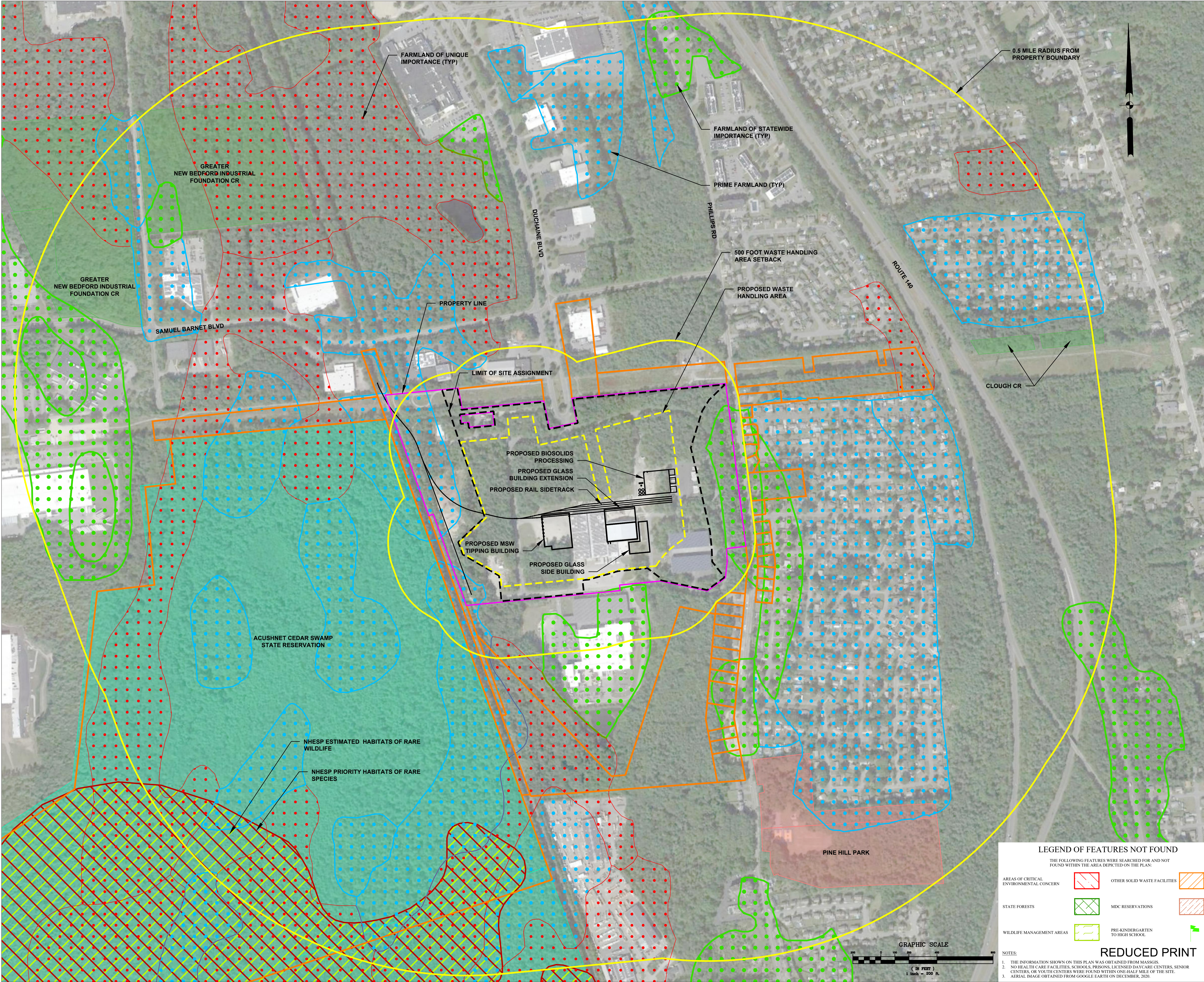
Glass PM10 Emissions			
Parameter	Value	Units	Source
Glass Throughput	75,000	Tons per Year of Glass	EIR Air Emissions from Attachment B07
Total PM10 Emissions	0.164	Tons per Year of PM10	PM10 Air Emissions based on 75,000 TPY throughput
Emission Factor	0.0000022	Tons PM10/Tons Glass	Divide Tons per year of PM10 by Tons per year of Glass

MSW Tipping			
Parameter	Value	Units	Source
Total MSW Throughput	1500	Tons MSW per Day	EIR Air Emissions from Attachment B06
Total PM10 Emissions 24-hr average	0.07165	lb PM10/hr	EIR Air Emissions from Attachment B06
Conversion Factor	24	hr/day	Known Conversion Value
Total PM10 Emissions	1.7196	lb PM10/day	Multiply 24-hr average lb PM10/hr by 24 hr/day
Emission Factor	0.0011	lb PM10/Ton MSW	Divide Total PM10 Emissions by Total MSW Throughput

MSW Processing			
Parameter	Value	Units	Source
Total MSW Throughput	1500	Tons MSW per Day	EIR Air Emissions from Attachment B06
Total PM10 Emissions 24-hr average	0.07165	lb PM10/hr	EIR Air Emissions from Attachment B06 - same as tipping
Conversion Factor	24	hr/day	Known Conversion Value
Total PM10 Emissions	1.7196	lb PM10/day	Multiply 24-hr average lb PM10/hr by 24 hr/day
Emission Factor	0.0011	lb PM10/Ton MSW	Divide Total PM10 Emissions by Total MSW Throughput

*PM2.5 is a subset of PM10 and thus will have equal or lower emissions than PM10.

APPENDIX 10
LAND USE MAP



LEGEND

PRIME FARMLAND

FARMLAND OF UNIQUE IMPORTANCE

FARMLAND OF STATEWIDE IMPORTANCE

CONSERVATION AREA

RECREATION AREA

CONSERVATION AND RECREATION AREA

NHESP PRIORITY HABITATS OF RARE SPECIES

NHESP ESTIMATED HABITATS OF RARE WILDLIFE

500 FOOT SETBACK FROM WASTE HANDLING AREA AND 0.5 MILE RADIUS FROM PROPERTY BOUNDARY

WASTE HANDLING AREA

SITE ASSIGNMENT LINE

SITE PROPERTY LINES

ADJUTTER PROPERTY LINE

Green Seal Environmental, Inc.
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.greensv.com

These drawings are the property of the Design Engineer, Green Seal Environmental, Inc. Uncontrolled reproduction for any purpose is an infringement upon copyright laws. Visitors will be subject to prosecution. Drawings are as indicated. Use of this plan constitutes acceptance of terms and conditions set forth in accompanying project documentation. It is the responsibility of the user to confirm discrepancies with the Engineer prior to use.

REVISIONS		
NO.	DATE	COMMENT
A	2/1/2019	ISSUED FOR PERMITTING
B	12/14/2019	INCORPORATED MASSDEP COMMENTS
C	12/28/2020	INCORPORATED MASSDEP COMMENTS

PURPOSE:

SITE SUITABILITY

LOCUS:

NEW BEDFORD
INDUSTRIAL PARK
100 DUCHAINE BOULEVARD
NEW BEDFORD, MA 02745

PREPARED FOR:

PARALLEL PRODUCTS OF
NEW ENGLAND, INC.
989 SHAWMUT AVENUE
NEW BEDFORD, MA 02746

DRAWING TITLE:

LAND USE PLAN

LEGEND OF FEATURES NOT FOUND

THE FOLLOWING FEATURES WERE SEARCHED FOR AND NOT FOUND WITHIN THE AREA DEPICTED ON THE PLAN:

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

STATE FORESTS

WILDLIFE MANAGEMENT AREAS

OTHER SOLID WASTE FACILITIES

MDC RESERVATIONS

PRE-KINDERGARTEN TO HIGH SCHOOL

NOTES:

1. THE INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM MASSGIS.

2. NO HEALTH CARE FACILITIES, SCHOOLS, PRISONS, LICENSED DAYCARE CENTERS, SENIOR CENTERS, OR YOUTH CENTERS WERE FOUND WITHIN ONE-HALF MILE OF THE SITE.

3. AERIAL IMAGE OBTAINED FROM GOOGLE EARTH ON DECEMBER, 2020.

GRAPHIC SCALE

1" = 200'

REDUCED PRINT

FIGURE 6

CAD TECH:

T. JANICKI

ENGINEER:

W. HALL

CHECKED BY:

G. WIRSEN

DATE:

2/1/2019

SCALE:

1" = 200'

SHEET:

FIGURE 6

APPENDIX 11

MASS COASTAL RAILROAD COMMUNICATION



Parallel Products
100 Duchaine Boulevard
New Bedford, MA 02745
Attention: Mr. Timothy Cusson

July 22nd, 2019

Project Description: Proposed Recycled Glass and MSW Railcar Loading Tracks

Project Location: New Bedford, MA

Tim,

I have reviewed the Rail Movement Study that was prepared by Green Seal Environmental dated 5/14/19. Mass Coastal (MC) takes no exception to the proposed “inter-plant” switching of railcars to facilitate loading. Please take note that the Track Mobile that is owned by Parallel Products is not permitted to operate past the split-rail derail that will be located past the clearance point of the mainline turnout.

MC currently operates MC-4 to New Bedford Tuesdays and Thursdays but is prepared to service the facility up to 6 days per week once traffic levels demand it. The train operates to New Bedford and is on duty 7AM to 7PM. Parallel Products would typically serviced between 10-11AM.

As you are aware, the South Coast Rail Project is underway, and frankly one bi-product will be increased speeds. Consequently, MC may be able to serve Parallel daily.

MC works with it's Class I partner, CSX Transportation for its connection to the National Rail Network. MC will work with the CSX startup team to assure that their train schedules are prepared for the traffic demand.

Should you have any further questions please contact me directly.

P. Christopher Podgurski



President & COO

cpodgurski@masscoastal.com

Tel: 508-291-7116

APPENDIX 12
COMMENT LETTERS

January 23, 2020

Mark R. Reich
mreich@k-plaw.com

BY ELECTRONIC MAIL (MEPA@mass.gov)
AND FIRST CLASS MAIL

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Attn. MEPA Office
EEA No. 15990
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Parallel Products of New England, LLC
100 Duchaine Boulevard, New Bedford, MA
Draft Environmental Impact Report - EEA No. 15990

Dear Secretary Theoharides:

This firm serves as special counsel to the City of New Bedford (the "City"). On behalf of the City and Mayor Jonathan F. Mitchell, the following comments are hereby submitted with regard to the Parallel Products of New England, LLC Draft Environmental Impact Report ("DEIR"), EEA No. 15990.

Project Overview

As you are aware, the Parallel Products project site at 100 Duchaine Boulevard in the City of New Bedford comprises 71 acres and currently contains 92,220 square feet of building space. The proposed project will include 150,175 square feet of additional building space and canopy space of 75,525 square feet, in addition to a 27,500 square foot glass handling building currently under construction. As noted in the DEIR, this will result in a two-acre increase in impervious area at the project site, or a total of 25.8% impervious surface lot coverage. Phase 1 of the projects consists of construction of a recycled glass handling facility, an associated rail spur for disposition of the glass product, and solar panels for generation of 1.9 MW of power. Phase 1 is currently proceeding under a waiver included in the Final Record of Decision.

Phase 2 of the project consists of construction of a municipal solid waste ("MSW") and construction and demolition debris ("C&D") processing and handling facility as well as a biosolids facility. A 5000 square foot handling building will be constructed into which material will be delivered by truck in either baled or unbaled form, as well as loose material in trucks. C&D material and bulky waste will also be accepted. MSW will be processed in an existing building to allow for extraction of recyclable materials. Materials will be shipped from the facility by rail. At full capacity the facility would produce 1300 tons per day of residual waste and up to 50 tons per day of

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 2

dried biosolids, to be shipped from the site in rail cars. Up to 250 tons per day of recycled glass will also be shipped from the site by rail.

The size and impact of this project will be significant and has prompted an extensive review by the City. In its review, the City has determined that the project description and analysis, as provided in the DEIR, raise a number of questions and concerns regarding the siting of and planning for this project. The proposed site is within a business park occupied by existing businesses. The proposed facility would have a detrimental impact on existing users of the park, which is an important economic resource for the City. Further, the traffic, noise, and odors would have a decidedly negative impact upon the residents in the area who will have to live with this operation on a daily basis. The mitigation measures proposed by the applicant simply do not address the project scale in comparison to the weight of the project upon this community.

The City strongly objects to this project as it will have a clear negative impact on public health, safety, and the environment based upon the noise, odors, and traffic impacts, as well as wetlands and soils impacts. The DEIR itself demonstrates a lack of attention to these concerns, requiring additional review, clarification, and correction before a certificate can be issued.

Inappropriate and Premature Discussion of Site Suitability Criteria

It is notable that the DEIR, in discussing the solid waste issues, seeks to address Department of Environmental Protection ("DEP") site suitability criteria to assess whether the proposed site is suitable for the handling of solid waste materials. The siting of a solid waste transfer station is subject to the requirements of state statute (G.L. c. 111, §150A and regulation (310 CMR 16.000). This highly regulated process includes review by the DEP as well as the local Board of Health, with each having a distinct and significant role in the approval process. Before the local Board of Health undertakes its review through a public hearing process, the DEP must undertake its review and approval. A Site Suitability Report submission is a DEP requirement for permitting of a solid waste handling facility in order to demonstrate that the site is appropriate for such use. Once site suitability is determined by the DEP, the applicant will need to apply to the Board of Health for a site assignment. This analysis is therefore premature and inappropriate for a DEIR. The conclusions reached by the applicant in this regard are of no substantive value as they will be subject to DEP, and ultimately New Bedford Board of Health, review. The City objects to their inclusion in the DEIR as they are subject to review under a separate regulatory scheme.

Waste Handling Area Enclosure Requirement

The City is particularly concerned with the depiction of the waste handling area for the project and how this waste handling will be undertaken. While the applicant states that waste handling activities will not take place outside of enclosed building structures, the Waste Handling

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 3

Area as defined in the DEIR extends beyond those building, leading to a concern that waste handling may be expanded beyond the enclosed buildings. Such activities should not be permitted as the waste will be exposed to the elements and rendered uncontrolled, leading to inevitable off-site impacts. All waste handling should be confined within enclosed areas so as to prevent the uncontrolled migration of waste materials which would negatively impact public health and safety. The definition of the Waste Handling Area should be revised to restrict it to the enclosed buildings.

Further, the DEIR does not specify what waste handling activities, if any, may be proposed in areas and locations outside of the proposed facility buildings. A Waste Handling Area boundary that encompasses general open areas around the site could facilitate the introduction of future waste handling activities outside of enclosed buildings (such as open-air stockpiling of waste materials) that are not addressed in this DEIR. The Waste Handling Area should specifically and clearly reflect the actual intended areas and locations where waste handling activities are proposed. If waste handling activities are proposed for areas outside of facility buildings, these activities and their associated environmental impacts should be addressed and discussed in the DEIR. It is the City's position that waste handling outside of site buildings should be prohibited, given the availability of enclosed space on the site, so as to properly protect public health and safety. There is simply no reason why waste handling should be permitted to occur outside the buildings.

The Waste Handling Area boundary appears arbitrarily based upon a 500 foot off-set distance from adjacent residences in order to satisfy the regulatory requirement. The Land Use Plan incorporated into the DEIR shows houses located on the east side of Philips Road. The Land Use Plan should also show the houses located on the west side of Philips Road, which are shown on Figure 12 (Residential Sound Modeling Locations) of the DEIR, to confirm their minimum 500-foot setback from the proposed waste handling area. The applicant should not be simply drawing a line based upon the 500-foot setback requirement but should clearly identify all houses within the setback area. Further, since the site is located just over 500 feet from a NHESP Priority Habitat, a site-specific evaluation should be undertaken and/or consideration given to potential for impacts to that habitat due to wetland connectivity. Once again, the City objects to any waste handling within the set-back area that is outside of enclosed buildings, as such activities would adversely impact health and safety.

Significant Concerns about PFAS Contamination

A major component of the project, and a major concern of the City, is the processing of biosolids. Significant concerns not adequately addressed by the applicant are the potential for polyfluoroalkyl substance (PFAS) contamination of the site as a result of that processing and contamination of the City of New Bedford's wastewater and biosolids as a result of the large volume of PFAS-bearing wastewater that will be discharged to the City. Perhaps most important, the

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 4

project's concentration of PFAS wastes in the City is a further imposition on a fiscally constrained City that already is managing a disproportionately large share of environmental burdens.

Recognizing that PFAS compounds can pose health risks but are largely unregulated, EPA issued its comprehensive *PFAS Action Plan* on February 14, 2019. The federal action plan is an accelerated program designed to limit human exposure to potentially harmful levels of PFAS in the environment by, among other means, developing federal drinking water standards for those substances. Not content to wait for EPA, Massachusetts proposed its own PFAS drinking water standard on December 27, 2019. Moreover, proposed federal legislation would add certain PFAS compounds to the list of "hazardous substances," which would place them under the jurisdiction of the Superfund Program and require public disclosure under one or more toxic release inventory programs. These rapidly advancing legislative and regulatory initiatives at both the state and federal levels enjoy bipartisan support owing to their focus on public health. This project's effect of concentrating PFAS from biosolids generated elsewhere in the region in the City is inadvisable, inappropriate and, likely, unsustainable.

There is a significant potential for PFAS and other contaminants to be enter groundwater and potentially drinking water, as the property is located on a potentially productive aquifer. PFAS compounds in particular are highly mobile and persistent in the environment. The state's concern on this issue is reflected by its proposal just last month of a very low 20 ng/L Maximum Contaminant Level for drinking water. The substantial threat to drinking water and the public health, not to mention liability for groundwater contamination, has not been addressed.

The discharge to the City of wastewater from the biosolids digester is also of grave concern. As proposed, wastewater contaminated with PFAS from other communities' biosolids will be discharged to the City of New Bedford municipal wastewater treatment plant. These discharges could have two adverse effects as discussed below, both of which would be exacerbated by the expected tightening of regulatory control on PFAS compounds.

No publicly owned treatment works is designed to or capable of destroying PFAS in wastewater. As a result, substantial discharges of PFAS to the City's collection system would pose a risk of noncompliance with any new PFAS-specific effluent limitation imposed on its treatment plant. Noncompliance brings with it enforcement, resulting in costly injunctive relief and, often, penalties. The City's alternative to facing such liability is to act pursuant to its Industrial Pretreatment ordinance, either by establishing local limits requiring the project to adopt as-yet unidentified and un-evaluated treatment technologies, or by prohibiting or terminating PFAS discharges to its system based on a finding that they "reasonably [appear] to present an imminent endangerment to the health and welfare of persons, or any discharge presenting, or which may present, an endangerment to the environment." None of these issues are evaluated in the DEIR.

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 5

Beyond the quality of the discharge from the City's treatment plant, introduction of PFAS from the processing of other communities' biosolids risks raising levels of PFAS in the City's own biosolids to a level that precludes use of one or more otherwise lawful disposal or reuse options. MassDEP, which regulates biosolids applications through the issuance of Approvals of Suitability (AOS), is already moving to address PFAS in biosolids. Since January of 2019, the Department has been incorporating a requirement for PFAS testing in all new or renewed AOSs. Regulatory constraints on those compounds is the logical next step following this data collection effort, and the proposal to concentrate PFAS from other communities in the City's biosolids will place the City squarely in the path of and likely at odds with those constraints. The DEIR fails to evaluate or account for this substantial risk.

For all of these reasons, the biosolids component of the project should not proceed without a PFAS mitigation plan that removes PFAS from the wastewater stream to concentrations suitable for acceptance at the municipal treatment facility under current and future discharge criteria, or that provides for a bond of sufficient value to protect the City from foreseeable adverse consequences of becoming the destination of PFAS wastes from throughout the region. The DEIR, while acknowledging the release of PFAS into the wastewater system, should address the issue of PFAS contamination in the environment and present proposed mitigation measures including wastewater pretreatment systems. As it stands, this portion of the DEIR is woefully inadequate in failing to properly address a known threat to public health, safety, and the environment. As a result, the biosolids portion of the project should not be allowed to proceed.

Wetland Concerns

A primary wetland concern is the installation of the retaining wall for the rail spur and the associated wetlands impacts that will occur as part of this work. Although the applicant has identified impacts associated with the actual construction footprint of this work, it has neglected to account for the bordering vegetated wetland that the applicant will be semi-isolating with its retaining wall. It is therefore necessary for the applicant to conduct an evaluation of impacts to the wetland areas south of the crossing. This analysis should consider the ecological, wildlife habitat, wetland function, flood storage and hydraulic impacts created by the retaining wall. Based on this analysis, the applicant should provide calculations on culvert sizing to ensure that the retaining wall will not act as a restriction to any of the factors listed above. This is of utmost importance, especially considering the site is within a Zone X of the floodplain. Since precipitation rates are increasing, it will be important to ensure that the wetlands throughout the site continue to drain as they do under existing conditions.

The alternative analysis for the culverted stream crossing is limited. The preferred alternative from a wetland perspective would be a bridge span of the stream crossing, not a 3-sided or 4-sided box culvert. No information was provided as to the sizing of the culverts within the

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 6

retaining wall and why they were selected. The analysis briefly discusses the preferred wetland alternative (bridge span), only saying that approach would cause more disturbance. No supporting calculation is included in the DEIR, and it remains unclear how abutments built in the upland with the only wetland impact being driven piles would be a greater disturbance than the selected box culvert. The alternative analysis should evaluate aesthetic and biological impacts of each alternative to determine whether a box culvert or bridge span is preferred, and provide additional information within the alternative analysis specific to ecological, wetland and hydrological impacts, as well as cost estimations of each alternative.

Traffic Concerns and Discrepancies

The applicant estimates that the project will result in an addition of 300 new truck trips per day and 150 new employee trips per day into an already stressed traffic environment. From a traffic standpoint, the most significant issue that has not been fully analyzed is the high crash rate at the intersection of Theodore Rice Boulevard and Duchaine Boulevard which currently exceeds both the District and Statewide crash rates for unsignalized intersections. The traffic added to this intersection during the peak hours would exacerbate the crash risk at this problematic intersection. A full crash analysis is required for this junction, to include police crash reports, current geometry, lighting, signing, and pavement markings. The applicant should provide plans and details for improvements to this intersection necessary to make it safer and mitigate the impact from the added traffic resulting from the project. This significant threat to public safety must be addressed before the project may proceed.

The Site-Generated trip section of the DEIR includes a descriptive breakdown of the expected trip generation and indicates that the trip generation calculations are provided in Appendix E; however, some of the data provided does not appear to match the trip generation section in the report. Specifically, while the report text states there will be 26 tons per day arriving in roll off containers, it also states that the applicant conservatively assumes 4 tons per truck, which equates to almost 7 trucks per day, and not the 4 shown. This is a significant discrepancy which may have a serious impact on the overall operation of roadways and intersections and should be corrected as it is a cause of confusion and concern. A thorough review of the Traffic Impact Study and supporting calculations should be performed to identify and correct any similar discrepancies.

Noise Concerns

Noise is, of course, a significant concern with such a substantial operation. Noise controls described on page 28 of the DEIR include a 50-foot long, 15-foot tall sound barrier along the southern edge of the biosolids building; however, residences are located to the east. Clarification is required regarding the effectiveness of the sound barrier wall as a noise control measure for ground level equipment located on the west side of the biosolids building and an explanation of the level of

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 7

attenuation it will achieve. Also, while the wall is described as L-shaped, the wall is not shown as L-shaped in the Project Plan set (included as Attachment 8). This will need to be explained. In addition, nuisance noise disturbances from equipment and truck back-up alarms are a common complaint of residents located close to facilities such as the proposed project. The DEIR lacks discussion on how nuisance impacts from back-up alarms will be addressed.

Environmental Justice

The DEIR reviews the applicant's attempts to address Environmental Justice. While the DEIR outlines that all meeting requirements have been satisfied, meetings with local citizens' advocacy groups have revealed ongoing concerns with the outreach performed, as well as maintaining biodiversity and habitat in the area, potential impacts to air quality created during construction and ongoing operations, noise and odor from the facility. Southcoast Neighbors United, c/o Wendy Graça and Tracy Wallace should be added to the Environmental Justice groups for notice purposes.

Soil and Water Analysis, Visual Buffer, Climate Change

The DEIR states that soil and water were not evaluated during the multi-pollutant analysis due to the enclosed operation design of the facility. This analysis should include all environmental media as a contingency in case of a release prior to unloading or subsequent to loading in the enclosed facility. Simply stating that handling will occur indoors does not address the very real possibility that material will migrate outside those buildings, causing impacts to soil and water which would not otherwise be planned for. This analysis should be required in order to anticipate and address unanticipated impacts to all environmental media.

Further, while the existing tree line may provide for visual buffer "during non-winter months", consideration should be given to adding understory native evergreen plantings for year-round visual buffer which may provide additional noise, odor, and air quality mitigation. The DEIR cites climate change impacts to urban areas in the northeast as presented in the Fourth National Climate Assessment as including extreme temperature events, episodes of poor air quality, recurrent waterfront and coastal flooding and intense precipitation events that can lead to increased flooding. While the DEIR notes that the understanding of climate change is incomplete, this underscores the need to plan for the extremes in design and operational contingency plans.

This letter merely summarizes the host of concerns the City has for this project. The City believes that the applicant has not adequately addressed the health, safety, and environmental impacts of this project, a project that is not in the best interest of the City of New Bedford. The City requests that the applicant be asked to address these and all comments submitted with respect to the DEIR, and that the applicant be denied the requested certificate based upon the deficiencies of its



Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 8

filing. The City stands strongly opposed to this project and the significant negative impacts it will bring to the City and the region.

Your attention in this matter is greatly appreciated.

Very truly yours,

A handwritten signature in blue ink that reads "Mark R. Reich".

Mark R. Reich

MRR/cqm
cc: Mayor Mitchell
709655/NBED/0041

Greg Wirsén

From: William Andrews <andrews941@aol.com>
Sent: Wednesday, January 22, 2020 9:35 PM
To: MEPA (ENV)
Subject: Comments on project number: EEA#15990

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Dec 30 2019

Dear Secretary Theoharides,

My name is Lisa Andrews, 941 Pine Hill Drive, New Bedford, MA 02745 and I am a homeowner/resident of Pine Hill Acres which abuts the proposed site of Parallel Products Projects. I have resided here for 20 plus years and this development was built in 1965, well before the Industrial Park was built and/or developed.

I am greatly opposed to this Parallel Projects site due to the hazards of what they will be processing. My personal main concern is what happens if they end up taking in an extremely hazardous substance in the municipal waste stream. This could very well happen as they would be accepting waste from other communities. This was deemed the best site out of the three of their proposed sites, but in reality not one of the proposed sites should have been ever considered. They are all poor location sites collectively. This particular site is literally 300 feet away from houses. Children are waiting on the street for the school buses in the morning while these tanker trucks of sludge will be transported in to be processed. They figure approximately 400 a day. This is minimal before they start accepting waste from the surrounding communities as they are eager to do. Certainly not a win for the City, environment, neighborhoods or the children. We are just learning the effects and detriments to air quality in other sites that are no even located in a residential area. This does not belong here.

1-1
1-2
1-3

Kindly take my concerns under advisement.

Sincerely,

Lisa Marie Andrews



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Southeast Regional Office • 20 Riverside Drive, Lakeville MA 02347 • 508-946-2700

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

January 23, 2020

Mathew A. Beaton,
Secretary of Environment and Energy
Executive Office of Energy &
Environmental Affairs
100 Cambridge Street, Suite 900,
ATTN: MEPA Office,
Boston, MA 02114

RE: DEIR Review EOEEA #15990
NEW BEDFORD.Parallel Products of New
England (PPNE) at 100 Duchaine Boulevard

Dear Secretary Beaton,

The Southeast Regional Office of the Department of Environmental Protection (MassDEP) has reviewed the Draft Environmental Impact Report n Form (ENF) for the Parallel Products of New England (PPNE) Project at 100 Duchaine Boulevard, New Bedford, Massachusetts (EOEEA # 15990). The Project Proponent provides the following information for the Project:

The Site is an industrially zoned, approximately 71-acre parcel, located within the New Bedford Business Park. The Site location and property boundaries are shown in Figure 1 using an aerial view. The Site was previously developed by Polaroid and already includes access roads, parking areas, and various buildings. Much of the existing infrastructure will be used in developing the proposed Project. New buildings will be constructed for glass processing, municipal solid waste (MSW) and construction and demolition (C&D) waste tipping, and biosolids drying.

PPNE is proposing to develop the Site in two phases. Phase 1 construction will consist of the construction of a glass processing building and equipment and construction of a rail sidetrack from the main line rail to the 100 Duchaine Boulevard Site. The glass processing area will consist of a 27,500 sf building to house the processing equipment.

Phase 2 of the Project includes the construction of a municipal solid waste (MSW) processing/handling facility and the biosolids processing facility. Currently, significant quantities of MSW and biosolids are being trucked out of state for treatment and disposal. PPNE will construct a facility to collect and process this material in Massachusetts and then ship the residual waste out of state by rail for disposal.

The processing proposed will also significantly increase transportation efficiencies and reduce greenhouse gas emissions. The proposed solid waste handling facility will accept up to 1,500 tons per

day of MSW delivered to the facility by truck. The proposed facility will process the MSW to extract recyclable material from the MSW. PPNE expects to recover and recycle approximately 20% of the MSW received, which supports the Massachusetts solid Waste Master Plan and is state-of-the-art for the Commonwealth. The non-recyclable fraction of the MSW along with the C&D residuals/bulky waste will be then loaded in rail cars for transport to out of state disposal sites, primarily landfills.

Bureau of Water Resources Comments

Wetlands and Waterways. The DEIR has responded to the Wetlands Program's comments on the EENF. The DEIR includes a copy of the Notice of Intent that was filed with MassDEP on July 3, 2019.

Underground Injection Control. The Proponent acknowledges that Project is subject to the requirements of the Underground Injection Program.

Industrial Stormwater, Sector N - Recycling Facilities. The Proponent is reminded that this Project is subject to the EPA permitting requirements under the 2015 Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity (MSGP), Sector N (SIC code 5093) recycling centers, commonly referred to as material recovery facilities (MRF), that accept waste for sorting and distribution, including material recovery facilities that receive paper, glass, plastic, and aluminum from non-industrial sources are required to apply for industrial stormwater permit coverage.

2-1

Bureau of Waste Site Cleanup Comments

Based upon the information provided, the Bureau of Waste Site Cleanup (BWSC) searched its databases for disposal sites and release notifications that have occurred at or might impact the proposed Project area. A disposal site is a location where there has been a release to the environment of oil and/or hazardous material that is regulated under M.G.L. c. 21E, and the Massachusetts Contingency Plan [MCP – 310 CMR 40.0000].

There are no listed MCP disposal sites located at or in the vicinity of the site that would appear to impact the proposed Project area. Interested parties may view a map showing the location of BWSC disposal sites using the MassGIS data viewer (Oliver) at:

http://maps.massgis.state.ma.us/map_ol/oliver.php Under "Available Data Layers" select "Regulated Areas", and then "DEP Tier Classified 21E Sites". MCP reports and the compliance status of specific disposal sites may be viewed using the BWSC Waste Sites/Reportable Release Lookup at: <https://eeaonline.eea.state.ma.us/portal#!/search/wastesite>

The Project Proponent is advised that if oil and/or hazardous material are identified during the implementation of this Project, notification pursuant to the Massachusetts Contingency Plan (310 CMR 40.0000) must be made to MassDEP, if necessary. A Licensed Site Professional (LSP) should be retained to determine if notification is required and, if need be, to render appropriate opinions. The LSP may evaluate whether risk reduction measures are necessary if contamination is present. The BWSC may be contacted for guidance if questions arise regarding cleanup

2-2

Bureau and Air and Waste Comments

Air Quality. With the exception of the Sound Report, the DEIR has responded to the Air Quality's comments on the EENF. In the absence of seeing the DEIR's proposed mitigations for noise in its Sound Report, the Department's solid waste comments address its expectations in the subsequent FEIR MEPA filing.

2-3

Solid Waste. MassDEP Solid Waste staff (Solid Waste) has reviewed the Draft Environmental Impact Report ("DEIR") for the Parallel Products of New England Project at 100 Duchaine Blvd in New Bedford ("Project" or "Site" or "facility") EEA No. 15990.

Solid Waste Comments:

1. The site contains agricultural lands classified by the USDA as prime farmland and farmland of statewide importance. The Land Use Map submitted within the DEIR depicted the proposed areas of waste handling setback a minimum of 100-feet from the agricultural lands; however, the proposed limit of site assignment is shown bordering the areas of agricultural lands. The Proponent may need to modify the boundaries of the proposed area to be site assigned pursuant to 310 CMR 16.40(4)(a). 2-4
2. MassDEP has comments on the assumptions presented within the Traffic Impact Study (TIS) regarding the distribution of incoming waste volume by vehicle capacity which directly affected the predicted Project related traffic volume. The Department recommends that the Proponent revise the traffic study in the subsequent MEPA filing and requests that the Proponent schedule a scoping meeting to discuss revisions to the Traffic Impact Study. MassDEP comments on the traffic study are summarized below:
 - The Traffic Impact Study estimated the Project related traffic volumes and the hourly distribution of trucks accessing the site, including the Project related peak hour traffic volumes, on data collected from a comparable site in Rochester, MA. The TIS estimated that 1,500 tons per day (tpd) of material (MSW and C&D) will arrive in trucks carrying an average of 19.7 tons per truck. It appears that the comparable site referenced in the DEIR is the Southeastern Massachusetts Resource Recovery Facility (SEMASS) in Rochester, which is a 3,000 tpd waste to energy disposal facility. The Proponent should provide rationale to explain how SEMASS is an appropriate comparable site or revise the traffic study in the subsequent MEPA filing. In addition, the Proponent should provide more information to support the Project related peak hour traffic volumes. It should be noted that MassDEP has analyzed data from existing solid waste facilities for incoming waste volume by vehicle capacity and the data indicates that an average load of 19.7 tons per truck is high compared to other solid waste transfer stations. 2-5
 - The Traffic Impact Study estimated the site-generated trips for the biosolid processing facility on the assumptions that biosolids will arrive in trucks with a 24-ton capacity. The Proponent should provide supporting information to justify the assumption that biosolids will arrive in trucks with a 24-ton capacity. In addition, the TIS did not appear to evaluate outbound trips associated with the biosolid processing facility. 2-6
 - The Traffic Impact Study within the DEIR adjusted the existing traffic volume to account for vehicle trips associated with the glass facility (Phase 1) and estimated site-generated traffic for the solid waste transfer station and biosolid facility (Phase 2). MassDEP recommends that the Proponent provide supporting information to justify the adjustment to existing traffic volumes and to demonstrate that the methods used to estimate the site-generated traffic comply with MassDOT's Transportation Impact Assessment Guidelines. 2-7

- The Traffic Impact Study assumes that “all truck traffic entering the site will utilize Route 140 to Braley Road.” Because the TIS assumed all truck traffic will utilize Route 140 to Braley Road, the Proponent should commit to the truck routes as presented in the traffic study, or the Proponent must revise the traffic study. In addition to recommending a truck exclusion route along Phillips Road, the Proponent should implement an internal protocol that prohibits trucks accessing their facility from using Phillips Road. The Department recommends that the Proponent provide information on a protocol in the subsequent MEPA filing.

2-8

It should also be noted that During the ENF filing, Solid Waste provided comments on the Traffic Impact Study suggesting the Proponent should discuss mitigation measures with MassDOT or the City of New Bedford. The Proponent has not proposed or recommended any mitigation measures and the DEIR did not appear to contain information on discussions with MassDOT or the City of New Bedford. In addition, Solid Waste provided comments stating that the Proponent must commit to limiting the maximum number of vehicles utilizing the site to that presented in the traffic study. The DEIR did not appear to contain a commitment to a maximum number of vehicles utilizing the site per day.

2-9

3. During the ENF filing, Solid Waste commented that the Proponent’s Sound Level Assessment Report (“Sound Report”) has not considered all potential sound sources from proposed facility operations. The revised Sound Report included in the DEIR also has not considered all potential sound sources from proposed facility operations. The Sound Report considered the following potential sound sources: general rooftop exhaust fans, biosolids exhaust fans, biofilter stack exhaust and ID fan, cooling towers, makeup air fan, MSW tipping and loading, glass intake fan, and glass exhaust fan. Pursuant to 310 CMR 7.00 Air Pollution Control Section 7.10: U Noise, MassDEP regulates all sounds emanating from a solid waste facility operation. The Sound Report did not consider the following potential sound sources:

2-10

- Waste delivery vehicles on-Site inside and outside the building;
- MSW processing equipment, biosolid processing equipment, and glass processing equipment;
- Biosolid tipping and loading and glass tipping and loading;
- Loading of rail cars and movement of railcars; and
- Short duration sounds from the outdoor operation of waste handling equipment, delivery vehicle back-up alarms, and dump truck tailgates.

The Department recommends that the Proponent revise the Sound Report in the subsequent MEPA filing. Solid Waste requests that the Proponent schedule a scoping meeting prior to the next revision to the Sound Report to discuss the following:

- Establishment of the ambient sound level based on the 7-day average of the lowest daytime and nighttime hourly L_{90} levels;
- Modeling of all potential sound sources as described above; and
- Modeling and analysis of Project generated sound sources using L_{90} sound levels.

The Proponent is advised that MassDEP’s Noise Pollution Policy Interpretation document does not establish a design standard. The Proponent must mitigate Project generated sound to the maximum extent practical using a top-down approach.

If you have any questions regarding the Solid Waste Management Program comments above, please contact Mark Dakers at (508) 946-2847.

Environmental Justice Comments

After reviewing the Secretary's Final Record of Decision (FROD) dated May 15, 2019 granting a Phase I Waiver and the comments submitted by residents and local officials, I offer the following comments regarding environmental justice: 2-11

The city of New Bedford is an Environmental Justice (EJ) community meeting all three criteria (minority, income and English isolation) with 69.6% or 66,180 residents residing in an EJ block group. The total population of the city of New Bedford based on the 2010 U.S. Census is 95,072.¹

Public participation and community engagement are key when conducting activities in an environmental justice community, providing the residents of the community an opportunity to be heard as well as learn about proposed activities is crucial. According to the FROD, the community groups and other environmental justice groups were invited to site visits and meetings.

Pursuant to the Executive Office of Energy and Environmental Affairs 2017 EJ Policy – all EEA agencies shall enhance public participation... some considerations are:

- Scheduling public meetings or hearings at locations and times convenient for neighborhood stakeholders, and in consideration of public transportation availability;

On a case by case basis the Proponent should consider:

- Providing timely notices to neighborhoods potentially impacted by a decision, and providing clear guidance on applicable grievance/appeal procedures;
- Encouraging permit applicants to hold pre-application meetings with the local community and providing them with EJ Fact Sheets and EJ Organization contact lists.

Outreach:

The Department acknowledges outreach performed on behalf of the Project to community groups and EJ organizations however notes that MassDEP also recommended in previous comments of the Executive Summary and the Environmental Justice Populations sections found on pages 572-574 that notices be posted in community locations frequented by residents (shopping centers, houses of worship, community/cultural centers). Community outreach can also include publishing notices in local newspapers and alternative media outlets familiar to the community. As well as ensuring notice to the community prior to and during the public meeting and permitting process to ensure the community has opportunities to participate. 2-12

Comments appended to the DROD included concerns that some local officials and residents who could be impacted by the proposed Project were unaware of opportunities for public participation in the Project review. To respond to these comments, the Department recommends the Project Proponent consider holding an additional site visit or public meeting on the Project proposal. 2-13

¹ Data provided by the 2010 United States Census – American Fact Finder at https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml.

Additional EENF EJ Comments:

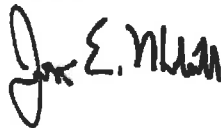
It is recommended that plans are in place that support the development and implementation of best management practices (BMPs) to alleviate the potential impacts of additional pollution from traffic, air quality emissions, and other air quality concerns and nuisances that affect the residents of New Bedford. When implemented, the proposed BMPs should help to alleviate the statistically higher rates of environmentally-related health outcomes that MassDPH's Environmental Public Health Tracker has identified for New Bedford.

2-14

Other Comments/Guidance

The MassDEP Southeast Regional Office appreciates the opportunity to comment on this proposed Project. If you have any questions regarding these comments, please contact George Zoto at (508) 946-2820.

Very truly yours,



Jonathan E. Hobill,
Regional Engineer,
Bureau of Water Resources

JH/GZ

Cc: DEP/SERO

ATTN: Millie Garcia-Serrano, Regional Director

David Johnston, Deputy Regional Director, BWR

Gerard Martin, Deputy Regional Director, BWSC

Seth Pickering, Deputy Regional Director, BAW

Jennifer Viveiros, Deputy Regional Director, ADMIN

Jim Mahala, Chief, Wetlands and Waterways, BWR

Deneen M. Simpson, Environmental Justice Director & Program Manager/Boston

Daniel Gilmore, Wetlands and Waterways, BWR

Mark Dakers, Chief, Solid Waste, BAW

Alison Cochrane, Solid Waste, BAW

Thomas Cushing, Chief, Air Quality Permitting, BAW

Allen Hemberger, Site Management, BWSC

From: mimchugh1
To: Ron; cstrupczewski@verizon.net; wallacetracy99@gmail.com; angelo89rossi@gmail.com; athenatetrault@yahoo.com; auracorr@aol.com; becca.kurie@gmail.com; bobladino@comcast.net; bookwithrosa@yahoo.com; bricketh@aol.com; bsmrc@aol.com; c.kelley3917@gmail.com; cah3156@yahoo.com; camaral1789@gmail.com; carolgorman3830@aol.com; cbostiguy@gmail.com; cfkennedy1956@gmail.com; cidaliamt@hotmail.com; davealves@hotmail.com; deannakelly07@comcast.net; debhops2397@aol.com; dletendre@middleboro.k12.ma.us; dmpoko@comcast.net; Donnamarie1960@comcast.net; dotdjr@aol.com; eraposa68@gmail.com; fernandesrose83@yahoo.com; fmbelmiro@comcast.net; garyjsantos@msn.com; gborden83@comcast.net; gertie456@comcast.net; gmap5@aol.com; htavares1@comcast.net; hughcd33@gmail.com; iredupreygutierrez@gmail.com; izzyb7@comcast.net; Jacobandcolin@aol.com; jaimechris23@comcast.net; jdsnrs@comcast.net; jeanmotyl@hotmail.com; Jmarques1980@yahoo.com; jpspickering@comcast.net; jrod11758@gmail.com; karen.a.chin@gmail.com; kennethrap@aol.com; kensouthcoast@gmail.com; kfg57@comcast.net; kqqlss@icloud.com; ks7585@aol.com; ldyred1@comcast.net; lennv.catojo@yahoo.com; leo1choquette@gmail.com; magenaguilar@yahoo.com; martinsward2@aol.com; medeirosstephen@yahoo.com; melissab8122@yahoo.com; melissacosta4NB@gmail.com; MIMIDACOSTA77@gmail.com; msc.barbosa91@gmail.com; nfeeney123@gmail.com; niemczyk5282@gmail.com; nsbulhoes00@hotmail.com; ostiguyml@comcast.net; pattycake159@msn.com; piostiguy@gmail.com; prptaxservice@yahoo.com; regor100@comcast.net; ricardorosa1973@yahoo.com; ricof4@comcast.net; mperone1@verizon.net
Cc: zzzBuckley, Deirdre (FEA); Schluter, Eve (FWE); Wixon, Josephine (FEA); Canaday, Anne (FEA); Patel, Purvi (FEA); Czepiga, Page (FEA); Strysky, Alexander (FEA); Flaherty, Erin (FEA); MEPA (ENV); TimC@parallelproducts.com
Subject: Re: Parallel Products, Inc.
Date: Monday, November 25, 2019 8:45:41 AM

Thanks Ron. I believe the takeaway from your response is that if one has no facts, what is the study based on. They have done a "study" on traffic, noise, odor, air quality and greenhouse gas. Without facts based upon a running operation, what are they dealing with? My answer would be guesses. And who might be supplying these guesses? Oh yeah! Parallel Products. What happens when after they start up operations and they determine that they might have been a little off (or a lot off) on their guesses? Well, I would suggest that that's just 'too bad for you'. Let's fight this problem with facts.

3-1

Mike McHugh
 Pine Hill Acres

Oh, and thank you Tracy for carrying the torch.

Sent from my Verizon, Samsung Galaxy smartphone

----- Original message -----

From: Ron <rrcrt@aol.com>

Date: 11/24/19 12:19 PM (GMT-05:00)

To: cstrupczewski@verizon.net, wallacetracy99@gmail.com, angelo89rossi@gmail.com, athenatetrault@yahoo.com, auracorr@aol.com, becca.kurie@gmail.com, bobladino@comcast.net, bookwithrosa@yahoo.com, bricketh@aol.com, bsmrc@aol.com, c.kelley3917@gmail.com, cah3156@yahoo.com, camaral1789@gmail.com, carolgorman3830@aol.com, cbostiguy@gmail.com, cfkennedy1956@gmail.com, cidaliamt@hotmail.com, davealves@hotmail.com, deannakelly07@comcast.net, debhops2397@aol.com, dletendre@middleboro.k12.ma.us, dmpoko@comcast.net, Donnamarie1960@comcast.net, dotdjr@aol.com, eraposa68@gmail.com, fernandesrose83@yahoo.com, fmbelmiro@comcast.net, garyjsantos@msn.com, gborden83@comcast.net, gertie456@comcast.net, gmap5@aol.com, htavares1@comcast.net, hughcd33@gmail.com, iredupreygutierrez@gmail.com, izzyb7@comcast.net, Jacobandcolin@aol.com, jaimechris23@comcast.net, jdsnrs@comcast.net,

jeanmotyl@hotmail.com, Jmarques1980@yahoo.com, jpspickering@comcast.net, jrod11758@gmail.com, karen.a.chin@gmail.com, kennethrap@aol.com, kensouthcoast@gmail.com, kfg57@comcast.net, kqqlss@icloud.com, ks7585@aol.com, ldyred1@comcast.net, lenny.catojo@yahoo.com, leolchoquette@gmail.com, magenaguair@yahoo.com, martinsward2@aol.com, medeirosstephen@yahoo.com, melissab8122@yahoo.com, melissacosta4NB@gmail.com, MIMIDACOSTA77@gmail.com, mjmchugh1@comcast.net, msc.barbosa91@gmail.com, nfeeney123@gmail.com, niemczyk5282@gmail.com, nsbulhoes00@hotmail.com, ostiguym1@comcast.net, pattycake159@msn.com, piostiguy@gmail.com, prptaxservice@yahoo.com, regor100@comcast.net, ricardorosa1973@yahoo.com, ricof4@comcast.net, mperonel@verizon.net

Cc: deirdre.buckley@mass.gov, eve.schluter@mass.gov, josephine.wixon@mass.gov, anne.canaday@mass.gov, purvi.patel@mass.gov, page.czepiga@mass.gov, alexander.strysky@mass.gov, erin.flaherty@mass.gov, mepa@mass.gov, TimC@parallelproducts.com

Subject: Re: Parallel Products, Inc.

After reading the article "Parallel Products would slow traffic, but only slightly" on November 19, 2019, the article states that the report concludes that Parallel Products would not have a major effect on traffic. Information in this article was based on the report prepared by Green Seal Environment, Inc., from Sagamore Beach, MA a company hired and paid for by Parallel Products (many of the residents in my area received a six page letter from Green Seal Environmental, Inc., with Parallel Products footer on each page).

In the article, I did not read anything that states the survey was conducted at the Exit 5 ramp exiting from Rte. 140 going onto Phillips Road nor does the survey indicate that monitoring was done at both Exit 7 ramps exiting from Rte. 140 onto Braley Road. Was this survey done during the school year, the fall, winter, or summer? Did the Commonwealth of Massachusetts or City of New Bedford conduct a traffic study at Exits 5 and 7 from Route 140, the intersection of Braley Road and Phillips Road at the main entrance to the New Bedford Business Park, or on Phillips Road where the second entrance to the Business Park is located? Whenever there is a request for a traffic light or stop sign, the State or City collects traffic data to approve or reject the request.

Here are some other important pieces of information not addressed in the article or letter:

- What time or times of day was the data collected? Did this survey include the workers going into the Business Park for the morning shift beginning around 6:30 a.m. Traffic is often backed up on the ramps from Route 140 entering onto Braley Road. At the end of the day shift, once again, traffic is bumper to bumper exiting from the Park.
- What day or days of the week was the data collected? Hopefully the survey was not conducted on a weekend or holiday.
- Did the survey gather data during the time of day when school buses for the high schools, middle school, special needs, and elementary schools are picking up and dropping students off? As most area residents of the far North End know, Braley Road is gridlock in the morning for the Pulaski School opening as well as in the afternoon.
- Some drivers opt not stop behind other vehicles and 18 wheeler's taking a left turn off the north bound ramp of Exit 7 exiting onto Braley Road waiting to make their way to the Business Park. Instead, those drivers stay on the right side, take a right turn onto Braley Road, right onto Briarwood Drive, do a turnaround at a homeowners' driveway, back up, and re-enter to make a left turn onto Braley Road to get to the Business Park. Meantime the

traffic is backed up on the ramp to the highway.

- With all of this going on, there are many vehicles entering and exiting the Dunkin Donuts located near the exit ramps on Braley Road. Once, one enters the main entrance of the Business Park, there is a second Dunkin Donuts with a convenience store and multi service gas station. So once again, additional traffic from that location slowing down the flow of traffic.

If I understand correctly, McMahon Associates, Inc., at 300 Myles Standish Blvd., Suite 201, Taunton, MA 02780 was the company that prepared the traffic study for Green Seal. Did McMahon Associates, Inc., receive most of their data from Transportation Data Corp.? I believe Mario Perone is connected with Transportation Data Corp.

I feel that Brad Markey my Ward One Councilor should have a public community meeting with McMahon Associates, Inc., Mario Perone of Transportation Data Corp, Gregory C. Wirsén, Msc., Executive Vice President of Green Seal Environmental, Inc., Tim Cusson of Parallel Products, our State Representatives, Senator Montigny, Mass DEP, MEPA, Secretary of Energy and Environmental Affairs, Mayor Jon Mitchell, and all City Councilors as invitees so that residents and the community can ask questions, voice our concerns, and have our questions and issues answered.

The residents of the far North End have been dealing with major traffic issues on Braley Road at the Route 140 exits and entrance to the Business Park as well as the Pulaski School for decades. Braley Road is a major thoroughfare connecting Route 18/Acushnet Avenue to Route 140 and Phillips Road. This street is used for emergency vehicles from New Bedford, Acushnet and Freetown. Now with the possibility of the future expansion of Parallel Products, the traffic situation will be at a standstill, in my opinion.

So many question so few answers. Remember anticipating 209 trucks in 209 trucks out, Parallel Products 6 days a week possibly Sundays included.

Ron R. Cabral
Briarwood Resident

December 7, 2019

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No. 15990
100 Cambridge St. Suite 900
Boston, MA 02114

RECEIVED

DEC 12 2019

MEPA

Dear Secretary Theoharides,

My name is Michael McHugh. My family and I have been living at 86 Ridgewood Road in New Bedford since 1962. I am writing to the MEPA office to express my opposition to permitting of Parallel Products of New England, (EEA No. 15990) a bio-waste sludge processing plant, from operating in my neighborhood. Our residence is located within 500 feet of the Parallel Products property. I'm asking that you closely review the environmental impacts of this bio-waste facility and address my concerns in your evaluation of the Draft Environmental Impact Report.

My concerns for consideration are as follows:

1. Official maps that designate the planned area as 'NHESP Estimated Habitat of Rare Wildlife' as found on website <http://massgis.mass.gov> 4-1
2. Official maps that designate the planned area as 'Priority Habitats of Rare Species' as found on website <http://massgis.mass.gov>. 4-2
3. 'Protected Wetlands' (Acushnet Cedar Swamp State Reservation) as found on official website maps.massgis.state.ma.us. 4-3
4. 'DCR Areas of Critical Environmental Concern' as found on official website maps.massgis.state.ma.us/map_ol/acecs.php 4-4
5. The increase of 400 additional industrial trucks passing our neighborhood to access the most convenient entrance to the proposed plant. 4-5
6. Noise nuisance produced by these trucks. 4-6
7. Oder. This is a real concern. I spent 42 years driving to my job in Attleboro, MA. For several of those years I drove through Taunton on my way to work. Every morning on my ride on Rt. 140 I would pass within one half mile of the former Parallel Products plant. The stench of human waste was nauseating. Our community lies due east of the proposed bio-waste plant. As you may know, the prevailing wind is from the west. Could you imagine sitting in your backyard with your family enjoying (or not) a hamburger with the scent of human waste? 4-7

8. Impact on property value.

The City of New Bedford has been hard hit over the years by heavy polluters. Aerovox, just to name one of such polluters, has left us with a significant legacy pollution problem in Buzzards Bay and on many tracks of land. The ongoing cleanup has cost our local, state and federal governments millions of dollars. Why? Was this an oversight on the part of those who are tasked with the protection of the environment? Not only has it been costly in terms of dollars but the health impact has been devastating. Areas around New Bedford where PCBs have been buried (the site of the New Bedford High School and Keith Junior High to name a few) have had clusters of cancer. I believe that once the ball gets rolling on a project like this, it's hard to stop.

4-8

As you read through the D.E.I.R. that Parallel Products paid for, I would ask you to keep this in mind. The New Bedford Conservation Committee served a cease and desist order on the company concerning Parallel Products phase one project. They were dumping broken glass for their glass recycling business in a parking lot exposed to the elements. EXPOSED TO THE ELEMENTS! Rainwater runoff was washing the pollutants (of unknown origin) off the glass and into the Acushnet Cedar Swamp State Reservation. Does this strike you as a responsible, conservation minded company?

4-9

When I was a young boy, my friends and I would romp through the woods where the factory now stands. We would build forts and also build our love for nature. It was really all we had back then considering we lived so far out in the "country". There was a big field of sundews. The small ponds and adjacent swamps were loaded with pitcher plants. We would catch ringneck snakes, green pine snakes and so many other kinds. Box turtles as well. We would camp out down there and fall asleep to the sound of wip-o-wills and bob whites. No more. All gone.

4-10

I'm just one of many who will be asking that we preserve what may be left and possibly return some that have left or were destroyed. PLEASE help us.

I look forward to your response in addressing our concerns.

Thank You,

Sincerely,

Michael J McHugh

P.S. Happy Holidays

86 RIDGEWOOD RD
NEW BEDFORD, MA
02745

January 3, 2020

Executive Office of Energy and Environmental Affairs
Attn: MEPA Office EEA No 15990
100 Cambridge Street, Suite 900
Boston, MA 02114

RECEIVED

JAN 08 2019

MEPA

Subject Line: EEA No. 15990

Dear Secretary Theoharides;

I am writing to express my concerns regarding the Parallel Products Biosolids Processing facility proposed for the Business Park in New Bedford. My first concern is the current deadline citizens have been given to respond to the Draft Environmental Impact Report submitted for this project. This report is more than 1300 pages long, containing technical information that most citizens cannot comprehend. To expect people who have jobs and responsibilities to also find the time to read through such a comprehensive document and provide informed feedback in such a short period of time is unrealistic and unfair. Therefore, I am requesting that the deadline for the public comment period be extended 90 days to April 2020.

5-1

Other concerns I have pertaining to this project include the proximity to the surrounding residential neighborhoods. The processing of biosolids should not take place near people's homes or children's schools. I'm sure there are many businesses in the park that would also not appreciate that proximity. The construction and operation of this business will be a detriment to species of plants and wildlife in the area, many of which are already endangered.

5-2

The open-air trucks and containers in which the materials will be transported and stored cannot be healthy for the people living, working and attending school in the area. Additional traffic will be added to an already congested area, which will create significant inconvenience and health issues, as well as concerns for who will ultimately pay the cost for the repair and maintenance of these public roads upon which they will travel. I am also worried about the impact of additional wastewater on the city's sewage system, which as I understand it, backs up on Welby Road during periods of heavy rain. And who will be burdened with paying for the cost of repairing and maintaining the public roads they will be using? Not them! I'm worried we will see those costs reflected in raised taxes.

5-3

Residents in the area are already complaining about the noise pollution caused by the existing traffic, as well as Parallel Products glass bottle recycling operations, and that will only get worse with the addition of 400+ truck trips each day, as well as the rail coming in and out of the area. This will only hurt our property values.

5-4

5-5

I know that Polaroid occupied that space previously and that there were chemicals dumped in the area, so I am concerned about not only the continued contamination of that land and its natural resources, but the impact excavating that property will have on the local residents and air quality. Considering the kind of materials and waste they plan to process at this site, noxious odors and vermin and pest infestations are inevitable. I am concerned about the air and water pollution the operations of this business will render.

5-6

Kindly take all this into account when reviewing this project and place my name on file as an objection to this project. I appreciate your time and hope that you receive additional objections and that we have a say in this matter.

Respectfully



Michelle T. Roza
28 Angelica Avenue
New Bedford, MA 02745

RECEIVED

DEC 04 2019

MEPA

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date:

Dear Secretary Theoharides,

First, let me thank you for extending the comment time regarding the DEIR. (Draft Environmental Impact Report) This tome takes much time to read, research and digest, particularly during this very hectic and stressful time of year.

I believe in saving our planet. I believe in being GREEN:
RECYCLING REUSE REPURPOSING BIO-DEGRADABLES NO MORE LANDFILLS NO INCINERATION
REGULATING EMISSIONS RENEWABLE ENERGIES COMPOSTING CONSERVATION
PROTECTING LAND, ANIMALS, WATERS REFORESTING ZERO WASTE

What I have difficulty comprehending is how an industry that is proposing to pursue and achieve these ideals, omits supporting what should be a top priority, the reason for all these regulations and legislations, and that is; to support the well being, safety and health of HOMO SAPIENS.

When industries crop up, wild life is impacted. Animals are displaced and trees and plants are destroyed. Acceptable levels of noise, pollution, carcinogens, increase in large vehicular traffic, become the norm. Is this to be the fate of the people who have worked hard to buy and up keep homes? Quality of life issues are ignored. Properties lose their value, the choice is stick it out and take a chance that it won't be too bad or move away. It seems animals and plants receive more protection than people!

6-1

Does it make sense to have these GREEN INDUSTRIES invade and displace those who have settled here for many decades?

Wouldn't it make sense to have these industries locate in areas that would be far removed from communities? Sometimes good ideas are put in the wrong place.

6-2

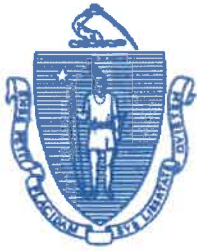
We are counting on MEPA investigators to see the discrepancies in the DEIR. It seems implausible that correct measurements can be obtained when the industry is not even operational. It is also sobering to realize that the DEIR was assigned to The GREEN MEDAL ENVIRONMENTAL, INC. and paid for by Parallel Products of New England, the industry in question. PPNE and Green Medal are strangers to the area. They impact, worry about their bottom line and move on.

6-3

Thank you for the opportunity to voice my concerns regarding quality of life issues for family, neighbors and community.

Respectfully submitted,

Nelson Styring
PO Box 50065
New Bedford, MA
02745



The Commonwealth of Massachusetts

HOUSE OF REPRESENTATIVES
STATE HOUSE, BOSTON, MA 02133-1054

PAUL A. SCHMID
STATE REPRESENTATIVE
8TH BRISTOL DISTRICT

Vice Chairman
Committee on Revenue
Committees:
Redistricting
Ways and Means
Public Health

STATE HOUSE, ROOM 466
TEL: (617) 722-2017
Paul.Schmid@MAhouse.gov

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

January 23, 2019

Dear Secretary Theoharides,

I write regarding the proposed expansion of Parallel Products (100 Duchaine Blvd., New Bedford, 02745). At present, I cannot support this project despite the potential job growth and tax revenue.

For the average working person, a home is a major investment. There are too many constituents within a half mile radius who are concerned their property values will decrease substantially. My understanding is that there are no other plants of this size and operational capacity in such close proximity to residential neighborhoods in Massachusetts. That said, at this point we are not equipped to understand what, if any, affects operations may have on residents.

7-1

For this reason, I do not support the expansion of Parallel Products at present. If you have any additional questions, please do not hesitate to contact my office.

Sincerely,

A handwritten signature in blue ink that reads "Paul Schmid".

PAUL SCHMID
State Representative
8th Bristol

Greg Wirsen

From: Paul Schofield <ptschofield@comcast.net>
Sent: Friday, December 6, 2019 7:32 AM
To: MEPA (ENV)
Subject: Secretary Kathleen Theoharides EEA#15990

Dear Secretary Theoharides,

My name is Paul Schofield and I have been a resident of New Bedford for almost 30 years now, I am writing this letter to express my opposition to Parallel Products of New England, a sludge plant operating in my neighborhood. I am asking MEPA to do due diligence in studying the impact of the PPNE project and to address my concerns in your evaluation of PPNE and the Draft Environmental Impact Report.

I stand with hundreds of New Bedford residents in my area against this project. I am asking the MEPA to reject the DEIR report submitted by Green Seal Environmental hired by PPNE.

I am specifically concerned about the following, the air pollution and smell possible and the added noise from the plant and the added trucks entering and exiting along with the traffic increase. I moved to this neighborhood about a year ago with my wife to retire and we bought our forever home here, we love New Bedford and particularly this area and would hate to have to move because of the unfavorable impact the plant would have here, thank you for considering my concerns and would love to hear back from you on any information pertaining to this matter 8-1

Sincerely
Paul Schofield

881 Pine Hill Drive- 508-984-5201

Greg Wirsén

From: JENNIFER L <Jennifinha@comcast.net>
Sent: Monday, December 23, 2019 10:20 AM
To: MEPA (ENV)
Subject: EEA#15990

Dear Kathleen Theoharides,

I strongly oppose the Parallel Products expansion in New Bedford. If phase two is approved, it will be an immediate assault on the health of neighboring residents. New Bedford residents are sick and tired of being the dump site for the state of Massachusetts. Please do all that is in your power to oppose this project. I for one have major allergies and have a special needs child with several health problems. I like my home here, but will be forced to move if phase two is approved. Please email me any updates. Let me know what government officials I can contact that would be of any help. 9-1

Thank you,

Jennifer Silva

Sent from Xfinity Connect App

Greg Wirsén

From: Richard Fournier <ricof4@comcast.net>
Sent: Monday, December 23, 2019 11:42 AM
To: MEPA (ENV)
Subject: EEA #15990

Dear Secretary Theoharides,

I would like to strongly request an extension of the deadline for the comment period. It is unacceptable to have a deadline of January 23rd due to the length of the Draft Environmental Impact Report and the time of year, being around the holidays. An additional 60 should be granted. 10-1

This project is worse than a dump. The fact that MSW, C&D, and biosolids are going to be located within this community is horrifying. Sewage waste presents extreme health risks to the community. The globe recently reported the existence of forever chemicals (PFAS) in fertilizer made from sewage sludge on Dec 1st in Quincy, this can leach into ground water and harm all of us. The construction of this facility should not be located in a residential community and less than a mile from an elementary school. The amount of traffic that would increase around the surrounding community would put the safety of everyone who lives within the general facility at risk. An additional 200+ trucks per day would endanger the children that walk to the elementary school and travel to and from the school. The risk of a fatality increases with trucks on the road and would endanger all of us. There will be no way to enforce the trucks to not use Phillips Rd as it says in the report. 10-2 10-3 10-4

In conclusion: This project puts all of our health, safety and quality of life at risk and in jeopardy. I would appreciate your support in stopping this sewage and waste facility from moving forward by denying the permit necessary and by taking the people's health into consideration rather than their corporate greed.

Sincerely,
 Richard W. Fournier
 862 Pine Hill Drive
 New Bedford, MA 02745

Greg Wirsen

From: rmajor27@aol.com
Sent: Tuesday, January 7, 2020 6:45 PM
To: MEPA (ENV)
Subject: EEA #15990

Being a close resident of the New Bedford Industrial Park, I am very disturbed by the Parallel Products issue.

1. Traffic is my biggest concern. The study showed an average of 4,150 vehicles daily. Now lets add another 300 trucks per day and another 150 cars per day. These totals will not have any appreciable impact on the intersection. 11-1

Who, what, where and how did this study? With the added daily vehicle increase, " was any consideration given for cars entering or exiting the Industrial park , to use Phillips road, adding more vehicles to this road. 11-2

Would like to see or hear about this extensive study!

2. The rail sidetrack will be going thru wetlands. What conservation groups have been consulted? Has Save the Bay been involved? Who is paying for the rail system? Who will be cleaning the main rail line if there is spillage? Will the freight trains using the main line inhibited the commuter rail once it becomes available. 11-3

I would like to see or have these concerns answered.

Thank you

Richard Hatten

Secretary Kathleen Theoharides

Executive Office of Energy and Environmental Affairs (EEA)

Attn. MEPA Office

EEA No. 15990

100 Cambridge Street, Suite 900

Boston, Ma. 02114

RECEIVED

MEPA

Dear Secretary Theoharides,

My name is Rita Lizotte and I have been a resident in the North End of New Bedford all my life. (I'm 82) I am writing to beg you to stop Parallel Products from operating a sludge plant in New Bedford . Please reject the Draft Environmental Draft Report (DEIR) submitted by Green Seal Environmental Inc. hired by PPNE. I am very concerned about the negative impact this will have on all my neighbors.

12-1

I worry about air pollution, and odors from the plant and the trucks. School children waiting for buses will be inhaling these toxic fumes.

12-2

We already have traffic problems with workers coming and returning from the Business Park, adding over 400 trips a day of smelly trucks is just wrong!

12-3

I am concerned my property value will decrease , and my taxes will increase. (Parallel has already advised us that the city will be responsible for repairing the wear and tear of the roads from the Over 400 trucks on the road daily.

12-4

I moved to the condo unit I presently live in because they have a pool and for the six years I've lived here I have enjoyed the pool and sitting out there with my neighbors enjoying the fresh air. Please let all of us enjoy what years we have left to do this and not have to stay in because of the foul air

12-5

and noisy traffic.

This business belongs in an unpopulated area where it will not negatively impact so many people. 12-6

I look forward to your response in addressing my concerns.

1481 Phillips Rd. Apt. 1205

New Bedford, Ma. 02745

508-99-51972

December 3, 2019

Secretary Kathleen Theoharides,
Executive Office of Energy and Environmental Affairs,
Attn: MEPA Office EEA No. 15990, Parallel Products of New England
100 Cambridge St. Suite 900
Boston, Ma. 02114

Dear Regulating Agencies;

After reviewing the Draft Environmental Impact Report issued November 22, 2019, by the Mass. Dept. of Environmental Protection, it becomes clear to me that the above regional waste facility will be approved by MEPA either as described in this report or approved with conditions throughout the licensing process.

MEPA is the agency with the jurisdiction for the Commonwealth of Massachusetts to license proposed facilities to meet environmental criteria stipulated in the Commonwealth laws. However the City of New Bedford also have local ordinances which give them jurisdiction over property in New Bedford.

The Mayor and the City Council of New Bedford, our State Senator and dozens of citizens have expressed opposition to the construction and operation of the proposed regional waste transfer & processing facility because it negatively impacts the quality of life in a densely populated residential community in many ways. These community leaders and citizens have legitimate concerns that, are not, and can not, be properly addressed in the State's environmental laws. The proposed regional waste processing facility burdens our community with losses of our peaceful well being and quality of life not measured and beyond the scope of the DEIR. The City of New Bedford does not plan to use the waste transfer, processing or disposal services offered in this proposed regional facility. 13-1

One of the inadequacies in this report is the assumed character of the of the inputs of the municipal solid wastes and the of waste water sludge, which have no legally enforced standards. These assumptions are used to calculate the assumed physical environmental impacts of the proposed facility. Therefore, how much confidence can be put in the results when unknowns are processed with calculations which are offered as proof of acceptable impacts to either the adjacent residences or the environment? Also MEPA imposes no monitoring requirements and associated operating restrictions if the facility is in violation of calculated emission impacts. 13-2

In addition the DEIR states that Municipal Solid Waste, MSW, and dried waste water sludge will be transported to unidentified out-of-state sites. Hmm-- Does MEPA realistically think that other states are ready and willing to accept and properly dispose of these wastes? Are the regulating agencies willing to license a regional waste project without setting a condition of disposal in the permit to operate? PP of NE is proposing a processing and transfer facility, not a disposal site for the regions Glass cull, MSW and dried waster water sludge. The proposed facility will NOT reduce the need to dispose of these wastes generated by the region; these wastes will still require ultimate disposal. 13-3

These uncertainties together with the fact that the property boundary of the Proposed facility fails to meet the 500' setback from the property boundary of residences required in CMR310.16. These demonstrate that this proposed facility has failed to meet the tests of the law and the reasonableness of common sense, to burden the community with an unneeded facility for the gain of a national conglomerate company. 13-4

MEPA issued a waiver of the site suitability demonstration. This demonstration, which includes requirements to prevent waste processing facilities from being located adjacent to residential housing. By issuing this waiver, MEPA has allowed the construction of the Phase 1 glass recycling plant to proceed, to be quickly followed by Phase 2 to process and transfer MSW and waste water sludge. Only then does PP of NE propose to submit a site suitability demonstration. If the site does not meet the setback requirements now, it never will. The adjacent houses as well as the PP of NE property are not going to move. Wow! Why should anyone ever bother to meet the laws of the Commonwealth if the enforcement agency does not enforce? Who Will? 13-5

The answer to that question and the other incomplete demonstrations in the DEIR dictate that the truant agency be challenged in Court by the City of New Bedford its citizens and activists to demand justice for an unneeded and illegally licensed facility. In the meantime I suggest that the City of New Bedford petition the Court for a stay be imposed on the construction of the Glass recycling plant, Phase 1, of the DEIR until a legally acceptable demonstration is submitted for the Site suitability requirements. 13-6

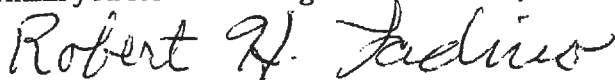
Furthermore, the stay should also be imposed on the release of any taxpayer funds from the \$500,000 State's Inter modal Railroad Assistance Program, IRAP, that PP of NE requested to construct the rail spur, until all issues have been adjudicated that the facility is in full compliance with the Law. 13-7

But if---

1. MEPA have the courage to stand against the pressure to approve PPofNE's DEIR application;
 2. uphold the law and its intent to;
 - A. protect the citizens of this Commonwealth
 - B. deny the construction of unneeded waste transfer and processing facilities.
 - C. provide a protective zone between nuisance industries and densely populated residences.
- Justice will have been served.

Denial of the DEIR would demonstrate to other nuisance industries not to consider building any facility that does not meet the intent of the Law. PPofNE's proposed regional facility inflicts undue burdens on the community, is an unsuitable site, has no benefit to New Bedford for waste disposal, is in a community that has struggled socio-economically, and has above average chronic health issues. 13-8

Thank you for considering these comments,



Robert H. Ladino , New Bedford resident

cc; Mayor Jonathan Mitchell, City of New Bedford, 133 William St., New Bedford Ma., 02740

Dennis Farias, City Clerk of New Bedford

Linda Morad, President, City Council of New Bedford,

Brad Markey, Ward 1 City Councilor, of New Bedford,

Mark. Montigny, State Senator, Mass General Court, State House, Boston, Ma.02133-1053

SC

December 18, 2019
81 Longview Rd.
New Bedford, Ma 02745-1918

Secretary Kathleen Theoharides,
Executive Office of Energy and Environmental Affairs,
Attn: MEPA Office EEA No. 15990, Parallel Products of New England
100 Cambridge St. Suite 900
Boston, Ma. 02114

Dear Regulating Agencies;

Please refer to my previous comment letter dated Dec 3, 2019. Because MEPA has excluded from the DEIR the necessary and required Site Suitability demonstration of 310CMR16 by waiver, the protections guaranteed the citizens of Massachusetts have been denied.

Specifically the proponent's description of the important issues have been excluded from public review, comment and analysis:

1. The incoming specifications of the waste materials are not described in detail. These assumed materials are the basis for computer modeling that allegedly meet environmental impact requirements. 14-1
2. The destination and the customers for the products that are produced from the handling and classification, of recycled Glass, Municipal Solid Waste and dried waste water sludge are not identified. The only information provided is that these product materials, which are significant in volume and toxicity, are transported off site possibly out of the State. Where?, To whom?, How if the present method of shipment is not in accord with rail requirements? 14-2
3. The proponent has no previous experience in constructing or operating a facility that receives sludge from waste water treatment plants and septage at any of their 5 other plants. The process description has a proposed layout and list of equipment that will be used. Further it is stated that Best Available Technology, BACT, will be employed in the operation to dry the material. Have PP of NE, LLC sought or included results of an independent expert able to testify to the probability that the chosen technology Meets BACT. Since drying sludge from waste water treatment facilities is the most noxious activity that is proposed, it should receive the most scrutiny. The proponents lack of experience as well as the industry experience of companies like Synagro in handling, drying, transporting and land application of this material have failed to protect the communities from the negative issues that have resulted. Will our community also suffer from these unintended but likely consequences? 14-3
4. The security of financial assurance which requires the proponent to protect the city of New Bedford from costly liabilities by default, should the construction or operation of the facility be terminated or abandoned or by a bankrupt operator, has not been demonstrated. In addition this assurance must include set aside funds that will be available to immediately correct community nuisances from operation of the facility that may appear during the course of any activity on the site should it become licensed to operate. 14-4

5. Site appropriate distances to residences, schools, hospitals, water wells, rivers, wetlands have not been demonstrated. Many residences are closer than the 500' setback stipulated from the property boundary of the proposed facility. Plans the proponent submitted do show the mandatory 100' artificial setback from the property boundary proposed limit of activity on the site. However once operation begins, no enforcement or operating limitations will be imposed if this make-believe barrier is breached which could result from backed up truck deliveries, spillage or lack of storage prior to export of dried sludge. Uncovered dried sludge quickly becomes noxious that would affect many of the several hundred homes within one half mile of the facility. Further more operation of the facility is planned for 24hr/day in order to achieve production goals. Even if sufficient spare capacity is designed into every component in the handling, receiving, storage and discharge to export; unplanned interruptions will occur that may expose the workers and the community to the odors associated with exposed sewage sludge. The proposed location for a sewage sludge drying facility is just wrong and does not meet the site appropriate distances. 14-5


6. For all the above reasons and uncertainties that the facility will meet the environmental requirements, neither the proponent nor the regulating agencies have given the community assurances in the licensing requirements that this regional glass cull handling, Municipal Solid Waste transfer and waste water sludge treatment facility will not become a significant nuisance if operation is allowed to proceed. 14-6

MEPA has the authority to vigorously pursue the answers that will be developed in the Site Suitability demonstration that has been omitted in the DEIR documents it has issued. It should be abundantly clear that without that demonstration, licensing this facility is premature and does not meet the intent of the Law which protects the citizens from the poor choices nuisance industries make for their facilities. 14-7

The approval of the DEIR should not be given, and an immediate stop ordered for the previously approved Phase 1 construction of the glass handling facility and associated railroad spur track, pending demonstration of the Site Suitability requirements, followed by a public hearing, allowing all interested parties to intervene.

Parallel Products of N.E. have had access to the regulating agencies to date, and the public directly affected have not, except through written comments. It is time to bring this licensing process into the public arena with all parties present, and at a location that is convenient for the community that is asked to host a nuisance industry.

Thank you for considering the necessity of the issues I have raised.



Robert H. Ladino
bobladino@comcast.net

cc; Mayor Jonathan Mitchell, City of New Bedford, 133 William St., New Bedford Ma. 02740
Dennis Farias, City Clerk of New Bedford " "
Linda Morad, President, City Council of New Bedford " "
Brad Markey, Ward no.1 City Councilor of New Bedford " "
Mark Montigny, State Senator, Mass General Court, State House, Boston, Ma. 02133-1053
Tracy Wallace, C/o SCNU, box 123 E Freetown Ma. 02717

Jan 15,2020, 81 Longview Rd.
New Bedford, Ma 02745-1918

Secretary Kathleen Theoharides,
Executive Office of Energy and Environmental Affairs,
Attn: MEPA Office EEA No. 15990, Parallel Products of New England
100 Cambridge St. Suite 900
Boston, Ma. 02114

RECEIVED

MEPA

Dear Regulating Agencies;

This letter supplements my previous comment letters dated Dec 3, 2019. and Dec. 18, 2019. with additional important information that should be considered to protect the health and safety of the public from toxic PFAS.

PFAS: A KNOWN TOXIN

As MEPA is aware there are toxic PFAS chemicals which are long-lived and harmful to health are present in drinking water and in Sewage Sludge; and that they are not regulated. 15-1

First, In March 2019 it was discovered that PFAS, Polyfluoroalkyls, and Polyflouralkyls, are present in levels that may be unsafe in Boston Sewage Sludge that is processed into fertilizer at the Quincy facility. The product is still sold as New England Fertilizer, has no application restrictions and is available locally for use on vegetable gardens.(see Boston Globe ,Dec. 1, 2019.)

Second, A mapping project by the Environmental Working Group/Social Science Environmental Health Research Institute/ Northeastern University in 2018 identified 15 drinking water sites and 7 Military sites in Massachusetts that are contaminated with PFAS which are not regulated. PFAS are used to manufacture household products, stain and fire repellents, non-stick utensils, food packaging, and cleaners. Residue and discarded portions of these products can end up in the Sewage, and ground water that leach into river based drinking water sources. The EPA set an advisory limit of 70,000 parts per trillion for these toxic chemicals which has also been adopted by Mass. DEP in 2018, as a health advisory but not regulated.

The Environmental Working Group, EWG, is a nonprofit agency that pursues Environmental Justice and monitors air, water and Sewage. They have a national database for the contaminants in drinking water for all the municipal water utilities. They recommend that a safe level to avoid adverse health consequences, is much less than the EPA health advisory limit.

Third, A report by EWG in May 2018 said that while the EPA mandated a national testing of PFAS in drinking water in 2013 to 2015, they had not publicly released the utilities that had 10 to 90 parts per trillion concentrations in their water. These reporting levels are about 1000 times more restrictive than EPA'S advisory level. EWG in their water report estimated that 36 utilities in Mass. had levels above 5 parts per trillion which they suggest is safe for human health.

So what is the point? If PFAS do not degrade, are toxic to humans and wildlife, and are present in drinking water, they are also present in Sewage. They are not monitored or regulated.

Why is that important? PFAS are not only toxic but are bio accumulative-they build up in the body-and are known to adversely affect vital organs and systems and may be carcinogenic.

EPA AND BIOSOLIDS

The Federal Environmental Protection Agency established in 1993 under 40CFR503 limits of contaminants in Sewage Sludge when spread on farm crops and now called it Biosolids. This strategy was thought to be the solution to disposal of Sewage Sludge that was previously dumped into the oceans miles from shore. The limits were controversial because scientists knew that not all the toxins and other pharmaceuticals that are found in Sewage Sludge had been tested for adverse health reactions when applied to food crops. However the EPA in cooperation with the Water Environmental Federation, a private industry trade organization, decided to override the scientists caution with the promise to study the problem, after the sludge rule was law. The idea was to establish a national data base with taxpayer funding that would track any negative effects of using Sewage Sludge on food crops.

The die was cast. Now instead of a national data base, the funding was used to support the policy of sewage sludge spread on farm crops. Those who would disagree or question the safety for human health were trampled under the weight of this conspiracy to the advantage of the private industry. Well meaning, honest scientists lost their job; people and animals died who lived on or near farms that used Sewage Sludge as fertilizer.(see Science for Sale by David L. Lewis, Skyhorse Publications)

In 2002 a study by the Independent National Research Council found that there was no documented evidence that the 503 rule has failed to protect the public based. In other words "Biosolids" are safe? But also subject to continued study to track adverse health incidents and further analysis of contaminants. However the over arching mandate in the EPA's response to the NRC's recommendation was to "strengthen the land application of sewage sludge." EPA is only committed to more study and development of better tests for certain chemicals. EPA will not set more protective limits on whatever might be in sewage sludge beyond what has been identified in the 503 rule for the present. It is important to note that, of the 40 chemicals to be examined in the EPA review, none of them were the toxic PFAS. Public Health consequences take a back seat to policy. Again! PFAS remain unregulated.

NOW WHAT

How do we protect ourselves against the existing regulations that do not fully address the chemicals in sewage sludge that have adverse health consequences? 15-2

BREAK THE CYCLE!

Stop recirculating water that itself has contaminants into Sewage with additional contaminants turned into dried Sewage Sludge that can be applied to our food crops, that we consume. Some estimate that 50% of our produce in America comes from sewage fertilized food. Whole Foods about 4 years ago stopped accepting produce grown with Sewage Sludge fertilizers. As knowledge is gained about toxic chemicals that are unregulated, which may enter our bodies through Sludge fertilized produce, growers, marketers and consumers will begin to reject these food products. Since a major portion of Sludge waste is destined for fertilizer, Sludge drying practices as presently regulated and practiced will no longer be accepted. As our Country experiences more adverse health consequences already experienced by some farmers and farm animals, these causes will become appropriately assigned to insufficient regulations of crops grown in Sewage fertilized soils. Why wait until more people suffer these health consequences that was first analyzed by scientists in the 1990's, who proposed that additional testing was needed to assure public safety. 15-3

PARALLEL PRODUCTS OF NEW ENGLAND

So what does this mean for P.P.ofN E.'s proposal? They propose a regional facility as part of phase 2 in their DEIR to accept Sewage Sludge from unknown and unidentified sources, reduce the volume of water with natural gas heating, sell and deliver the dried Sludge to unknown and unidentified customers. These customers could be applying the Sludge to farm crops as fertilizer. Additionally toxins present in the emissions by heating sludge in the proposed facility, will be dispersed to the adjacent residential neighborhoods.

LEGAL DOES NOT EQUAL SAFE

What controls have the EPA placed on these Sludge wastes and emissions? They limit some of the contaminants but they do not yet limit the toxic PFAS. Therefore PP of NE may satisfy legal requirements presently in place; but not be fully protective of public health if their proposed facility is allowed to proceed as presently planned.

15-4

PEOPLE FIRST

Fortunately State and City regulatory agencies have the authority to protect the public and take actions necessary to do so. This protection goes beyond the Federal guidelines and health advisories. The history of drying and using Sewage Sludge has already produced adverse health consequences including fatalities as demonstrated above. Agencies can kick the can down the road and wait until the problems fall on the next administration or they can value people over the near term small monetary gain that new projects may bring. That gain is dwarfed compared to the potential cost to treat adverse expensive health consequences on wide spread populations. Standing up and being courageous is never easy. However, there is no reason to rush into a project that has as many unanswered questions as the Sewage Sludge drying and transportation hub proposed by PP of NE.

PLAN OF ACTION

1. Separate and remove from the DEIR any further consideration of the proposed sewage Sludge facility by PP of NE

15-5

~~2. If PP of NE request in a future application, a sludge drying facility, they should develop with independent outside agencies such as EWG, health based restrictions of contaminants of the dried Sludge and emissions from the facility for the complete process from the receipt of the raw sewage to its exit of the facility.~~

~~15-6~~

3. Establish continuous on line, enforceable parameters monitored by the agencies and accessible by the public, of the health based contaminant restrictions in the dried Sludge and in the emissions from the facility. Infractions will stop production.

15-7

4. Establish a fund, paid for by PP of NE, managed by an independent party, to treat any person who has adverse health issues that have been linked to the operation of the sewage plant.

15-8

Yes, these are bold and far reaching actions. I pray that they will be considered necessary to address PP of NE's bold proposed regional sewage facility in a densely populated residential neighborhood when existing regulations are not protective of potential adverse health consequences.

Robert H. Ladino

Robert H. Ladino

bobladino@comcast.net

cc; Mayor Jonathan Mitchell, City of New Bedford, 133 William St., New Bedford Ma. 02740

Dennis Farias, City Clerk of New Bedford “

Brian Gomes, President, City Council of New Bedford “

Brad Markey, Ward no.1 City Councilor of New Bedford “

Mark Montigny, State Senator, Mass General Court, State House, Boston, Ma. 02133-1053

Tracy Wallace, C/o SCNU, box 123 E Freetown Ma. 02717

From: Ron
To: cstrupczewski@verizon.net; wallacetracy99@gmail.com; angelo89rossi@gmail.com; athenatetrault@yahoo.com; auracorr@aol.com; becca.kurie@gmail.com; bobladino@comcast.net; bookwithbrosa@yahoo.com; bricketh@aol.com; bsmrc@aol.com; c.kelley3917@gmail.com; cah3156@yahoo.com; camaral1789@gmail.com; carolgorman3830@aol.com; cbostiguiv@gmail.com; cfkenedy1956@gmail.com; cidaliamt@hotmail.com; davealves@hotmail.com; deannakelly07@comcast.net; debhob2397@aol.com; dletendre@middleboro.k12.ma.us; dmpeko@comcast.net; Donnamarie1960@comcast.net; dotdir@aol.com; eraposa68@gmail.com; fernandesrose83@yahoo.com; fmbelmiro@comcast.net; qarvisantos@msn.com; gborden83@comcast.net; gertie456@comcast.net; gmap5@aol.com; htavares1@comcast.net; hughcd33@gmail.com; irenedupreygutierrez@gmail.com; izzyb7@comcast.net; jacobandcolin@aol.com; jaimechris23@comcast.net; jdsnrs@comcast.net; jeanmotyl@hotmail.com; jmarques1980@yahoo.com; jospickering@comcast.net; jrod11758@gmail.com; karen.a.chin@gmail.com; kennethrap@aol.com; kensouthcoast@gmail.com; kfg57@comcast.net; kqqlss@icloud.com; ks7585@aol.com; ldyred1@comcast.net; lenny.catojo@yahoo.com; leo1choquette@gmail.com; magenaguilar@yahoo.com; martinsward2@aol.com; medeirosstephen@yahoo.com; melissab8122@yahoo.com; melissacosta4NB@gmail.com; MIMIDACOSTA77@gmail.com; mjmchugh1@comcast.net; msc.barbosa91@gmail.com; nfeeney123@gmail.com; niemczyk5282@gmail.com; nsbulhoes00@hotmail.com; ostiguym@comcast.net; pattyckake159@msn.com; plostiguiv@gmail.com; prptaxservice@yahoo.com; regor100@comcast.net; ricardorosa1973@yahoo.com; ricof4@comcast.net; mperone1@verizon.net
Cc: zzzBuckley.Deirdre@EEA; Wixon.Josephine@EEA; Canaday.Anne@EEA; Patel.Purvi@EEA; Czepiga.Page@EEA; Strvsky.Alexander@EEA; Flaherty.Erin@EEA; MEPA@ENV; jspillane@s-t.com; antonio.cabral@mahouse.gov; chris.hendricks@mahouse.gov; christopher.markey@mahouse.gov; paul.schmid@mahouse.gov; william.straus@mahouse.gov; michael.moynihan@masenate.gov; mark.montigny@masenate.gov
Subject: Re: Parallel Products, Inc
Date: Monday, November 25, 2019 7:52:38 PM

Received the following E-mail from Tim Cusson from Parallel Products, this afternoon, I would assume that our Ward One Councilor Brad Markey will call for a meeting at the Pulaski School for our Ward One residents. Our Mayor, City Councilors, Area Town Selectmen, State Representative's, Senator Montigny, New Bedford School Superintendent, School Committee Member's, Business Management of the New Bedford Business Park Companies should also be notified to attend.

Hopefully Mayor Mitchell will not be a no show again, Mayor Mitchell was voted for 4 years hopefully he will not send someone from his office to represent him again as he claims he is against Parallel, the same with Senator Montigny not showing up, we need them and all at our meeting.

Parallel Products matter affects all in the New Bedford area, those working in the Business Park traveling to work from our city or from area towns, businesses in the Business Park, buses traveling to and from the Pulaski School, Peoples College, Emergency Vehicles traveling on Braley Road. Residents living in the area of the Parallel Products, being affected by the possible smell, the traffic, the 209 trucks exiting and entering Rt 140 going and coming from Parallel Products.

16-1

This meeting should be called before the January 6th and 7th meeting scheduled by Parallel Products, Inc.

Following Email from Tim Cusson sent to me.

Ron R.Cabral

Hi Ron

"Thank you for sending me your email, public meetings are scheduled for the 6th and 7th of January. The meetings will be held at Voce Tech, information about the meeting as well as the full traffic report can be found on our website, I have attached two links below. If I can be of any further assistance please let me know?"

<http://parallelproductssustainability.com/>

<http://parallelproductssustainability.com/category/audio/>

Thank You

Tim Cusson

From: Ron [mailto:rrcrt@aol.com]
Sent: Sunday, November 24, 2019 12:25 PM
To: jspillane@s-t.com
Subject: Re: Parallel Products, Inc

After reading the article "Parallel Products would slow traffic, but only slightly" on November 19, 2019, the article states that the report concludes that Parallel Products would not have a major effect on traffic. Information in this article was based on the report prepared by Green Seal Environment, Inc., from Sagamore Beach, MA a company hired and paid for by Parallel Products (many of the residents in my area received a six page letter from Green Seal Environmental, Inc., with Parallel Products footer on each page).

In the article, I did not read anything that states the survey was conducted at the Exit 5 ramp exiting from Rte. 140 going onto Phillips Road nor does the survey indicate that monitoring was done at both Exit 7 ramps exiting from Rte. 140 onto Braley Road. Was this survey done during the school year, the fall, winter, or summer? Did the Commonwealth of Massachusetts or City of New Bedford conduct a traffic study at Exits 5 and 7 from Route 140, the intersection of Braley Road and Phillips Road at the main entrance to the New Bedford Business Park, or on Phillips Road where the second entrance to the Business Park is located? Whenever there is a request for a traffic light or stop sign, the State or City collects traffic data to approve or reject the request.

Here are some other important pieces of information not addressed in the article or letter:

- • What time or times of day was the data collected? Did this survey include the workers going into the Business Park for the morning shift beginning around 6:30 a.m. Traffic is often backed up on the ramps from Route 140 entering onto Braley Road. At the end of the day shift, once again, traffic is bumper to bumper exiting from the Park.
- • What day or days of the week was the data collected? Hopefully the survey was not conducted on a weekend or holiday.
- • Did the survey gather data during the time of day when school buses for the high schools, middle school, special needs, and elementary schools are picking up and dropping students off? As most area residents of the far North End know, Braley Road is gridlock in the morning for the Pulaski School opening as well as in the afternoon.
- • Some drivers opt not stop behind other vehicles and 18 wheeler's taking a left turn off the north bound ramp of Exit 7 exiting onto Braley Road waiting to make their way to the Business Park. Instead, those drivers stay on the right side, take a right turn onto Braley Road, right onto Briarwood Drive, do a turnaround at a homeowners' driveway, back up, and re-enter to make a left turn onto Braley Road to get to the Business Park. Meantime the traffic is backed up on the ramp to the highway.
- • With all of this going on, there are many vehicles entering and exiting the Dunkin Donuts

located near the exit ramps on Braley Road. Once, one enters the main entrance of the Business Park, there is a second Dunkin Donuts with a convenience store and multi service gas station. So once again, additional traffic from that location slowing down the flow of traffic.

If I understand correctly, McMahon Associates, Inc., at 300 Myles Standish Blvd., Suite 201, Taunton, MA 02780 was the company that prepared the traffic study for Green Seal. Did McMahon Associates, Inc., receive most of their data from Transportation Data Corp.? I believe Mario Perone is connected with Transportation Data Corp.

I feel that Brad Markey my Ward One Councilor should have a public community meeting with McMahon Associates, Inc., Mario Perone of Transportation Data Corp, Gregory C. Wirsén, Msc., Executive Vice President of Green Seal Environmental, Inc., Tim Cusson of Parallel Products, our State Representatives, Senator Montigny, Mass DEP, MEPA, Secretary of Energy and Environmental Affairs, Mayor Jon Mitchell, and all City Councilors as invitees so that residents and the community can ask questions, voice our concerns, and have our questions and issues answered.

The residents of the far North End have been dealing with major traffic issues on Braley Road at the Route 140 exits and entrance to the Business Park as well as the Pulaski School for decades. Braley Road is a major thoroughfare connecting Route 18/Acushnet Avenue to Route 140 and Phillips Road. This street is used for emergency vehicles from New Bedford, Acushnet and Freetown. Now with the possibility of the future expansion of Parallel Products, the traffic situation will be at a standstill, in my opinion.

So many question so few answers. Remember anticipating 209 trucks in 209 trucks out, Parallel Products 6 days a week possibly Sundays included.

Ron R. Cabral
Briarwood Resident

From: Karen Chin
To: Tracy
Cc: Sharon Pickering; Ron; cstruczewski@verizon.net; angelo89rossi@gmail.com; athenatetrault@yahoo.com; auracorr@aol.com; becca.kurie@gmail.com; bobladino@comcast.net; bookwithrosa@yahoo.com; bricketh@aol.com; bsmrc@aol.com; c.kelley3917@gmail.com; cah3156@yahoo.com; camara1789@gmail.com; carolgorman3830@aol.com; cboostiguy@gmail.com; cfkennedy1956@gmail.com; cidaliamt@hotmail.com; davealves@hotmail.com; deannakelly07@comcast.net; debhop2397@aol.com; dletendre@middleboro.k12.ma.us; dmpeko@comcast.net; Donnamarie1960@comcast.net; dotdir@aol.com; eraposa68@gmail.com; fernandesrose83@yahoo.com; fmbelmiro@comcast.net; garysantos@msn.com; gborden83@comcast.net; gertie456@comcast.net; gmap5@aol.com; htavares1@comcast.net; hughcd33@gmail.com; irenedupreygutierrez@gmail.com; izzyb7@comcast.net; Jacobandcolin@aol.com; jaimechris23@comcast.net; jdsnrs@comcast.net; jeanmotyl@hotmail.com; jmarques1980@yahoo.com; jrod11758@gmail.com; kennethrap@aol.com; kensouthcoast@gmail.com; kfg57@comcast.net; kqqlss@icloud.com; ks7585@aol.com; ldyled1@comcast.net; lenny.catoio@yahoo.com; leo1choquette@gmail.com; magenaquiar@yahoo.com; martinsward2@aol.com; medeirosstephen@yahoo.com; melissab8122@yahoo.com; melissacosta4nb@gmail.com; MIIMIDACOSTA77@gmail.com; mimchuah1@comcast.net; msc.barbosa91@gmail.com; nfeeney123@gmail.com; niemczyk5282@gmail.com; nsbulhoes00@hotmail.com; ostiguym1@comcast.net; pattycake159@msn.com; piostiguy@gmail.com; prptaxservice@yahoo.com; regor100@comcast.net; ricardorosa1973@yahoo.com; ricof4@comcast.net; mperone1@verizon.net; zzzBuckley, Deirdre (EEA); Schluter, Eve (FWF); Wixon, Josephine (EEA); Canaday, Anne (EEA); Patel, Purvi (EEA); Czepiga, Page (EEA); Strysky, Alexander (EEA); Flaherty, Erin (EEA); MEPA (ENV); TimC@parallelproducts.com
Subject: Re: Parallel Products, Inc.
Date: Monday, November 25, 2019 2:58:16 PM

Maybe it would be a good idea if people would submit 2 to 3 questions each in the email and we can consolidate it to ask at the meeting on next week

Sent from my iPhone

On Nov 25, 2019, at 2:39 PM, Tracy <wallacetracy99@gmail.com> wrote:

Hi Sharon,

We requested a meeting with Mayor Mitchell and the law firm to specifically address those questions. We got a response from the Planning Board Director saying she would meet with us to discuss permits (not what we asked for). Plus, we are already well informed about the permitting process. I do feel an independent traffic study should be done. It would be nice if the law firm pursues this, and if we could get communication from the mayor as to an update on the status.

Thanks,
Tracy

Sent from my iPhone

On Nov 25, 2019, at 2:21 PM, Sharon Pickering <jpspickering@comcast.net> wrote:

So I wonder, should we demand another study be contacted impartial to Parallel Products?

Shouldn't it be a local SouthRegion company conducting these studies.

If Mayor Mitchell supposedly received a grant to hire a legal team

what are they doing to present our issues?
Shouldn't Mayor Mitchell be letting the Residents know where we
stand and what his office is doing to combat this nightmare

Sent from my iPhone

On Nov 24, 2019, at 12:19 PM, Ron <rrcrt@aol.com>
wrote:

After reading the article "Parallel Products would slow traffic, but only slightly" on November 19, 2019, the article states that the report concludes that Parallel Products would not have a major effect on traffic. Information in this article was based on the report prepared by Green Seal Environment, Inc., from Sagamore Beach, MA a company hired and paid for by Parallel Products (many of the residents in my area received a six page letter from Green Seal Environmental, Inc., with Parallel Products footer on each page).

In the article, I did not read anything that states the survey was conducted at the Exit 5 ramp exiting from Rte. 140 going onto Phillips Road nor does the survey indicate that monitoring was done at both Exit 7 ramps exiting from Rte. 140 onto Braley Road. Was this survey done during the school year, the fall, winter, or summer? Did the Commonwealth of Massachusetts or City of New Bedford conduct a traffic study at Exits 5 and 7 from Route 140, the intersection of Braley Road and Phillips Road at the main entrance to the New Bedford Business Park, or on Phillips Road where the second entrance to the Business Park is located? Whenever there is a request for a traffic light or stop sign, the State or City collects traffic data to approve or reject the request.

17-1

Here are some other important pieces of information not addressed in the article or letter:

- **What time or times of day was the data collected? Did this survey include the workers going into the Business Park for the morning shift beginning around 6:30 a.m. Traffic is often backed up on the ramps from Route 140 entering onto Braley Road. At the end of the day shift, once again, traffic is bumper to bumper exiting from the Park.**
- **What day or days of the week was the data collected? Hopefully the survey was not conducted on a weekend or holiday.**
- **Did the survey gather data during the time of day when school buses for the high schools, middle**

17-2

17-3

17-4

From: Ron
To: MEPA (ENV); Czepiga, Page (FEA); Strysky, Alexander (FEA)
Cc: sandrasylvia21@yahoo.com; ritalapre@gmail.com; araujotheresa@yahoo.com; gertie456@comcast.net; cboostiguy@gmail.com; dds52@comcast.net; jbarnes@s-t.com; Canaday, Anne (FEA); wallacetracy99@gmail.com; graca1030@hotmail.com; claire@toxicsaction.org; macarocos@yahoo.com; mommymelo05@yahoo.com; anisagrace@yahoo.com; cstrupczewski@verizon.net; margaretjohn1015@aol.com; antonio.cabral@mahouse.gov; chris.hendricks@mahouse.gov; christopher.markey@mahouse.gov; paul.schmid@mahouse.gov; william.straus@mahouse.gov; michael.moynihan@masenate.gov; mark.montigny@masenate.gov; Ian.Abreu@newbedford-ma.gov; Naomi.Carney@newbedford-ma.gov; Debora.Coelho@newbedford-ma.gov; Hugh.Dunn@newbedford-ma.gov; Brian.Gomes@newbedford-ma.gov; Dana.Rebeiro@newbedford-ma.gov; Linda.Morad@newbedford-ma.gov; Joseph.Lopes@newbedford-ma.gov; Brad.Markey@newbedford-ma.gov; Maria.Giesta@newbedford-ma.gov; Scott.Lima@newbedford-ma.gov; Jon.Mitchell@newbedford-ma.gov; kristine.arsenault@newbedford-ma.gov; MEPA (ENV); zzzBuckley, Deirdre (FEA); Schluter, Eve (FWE); Wixon, Josephine (FEA); alexander.stryski@mass.gov; Patel, Purvi (FEA); Czepiga, Page (FEA); Strysky, Alexander (FEA); Flaherty, Erin (FEA); sandrasylvia21@yahoo.com; ritalapre@gmail.com; araujotheresa@yahoo.com; gertie456@comcast.net; cboostiguy@gmail.com; dds52@comcast.net; macarocos@yahoo.com; mommymelo05@yahoo.com; anisagrace@yahoo.com; cstrupczewski@verizon.net; margaretjohn1015@aol.com
Subject: Re: Parallel Products - Greasy Hands I Bet
Date: Tuesday, November 19, 2019 12:25:02 AM

Did they do a traffic study of the traffic coming off of the ramps of route 140, and when school is in session? Of course not.

18-1

Looks like a FIX, you Boston folks do not reside here, come and do the traffic study during a school day.

God forbid a 18 wheeler coming off the ramp brakes are not working hits a school bus with a bunch of school children, lost of lives, all because someone or other got paid off and that is what it looks like.

We need a rally at the State House get a bus and have the folks go to the State House.

***Ron R. Cabral
 New Bedford, MA***

Parallel Products would slow traffic, but only slightly, report says ~ Ya Right Only Slightly

NEW BEDFORD — Parallel Products' proposed waste facility would slow the movement of traffic on weekday mornings at two intersections, but only slightly, and would meet state standards for noise, air quality and odor, according to a new draft report.

The Draft Environmental Impact Report, required for state permitting, [shows](#) that certain drivers at the entrance to the New Bedford Business Park at Theodore Rice Boulevard could experience longer wait times during peak weekday-morning traffic.

Parallel already handles plastic waste in the business park. The company is planning a \$50 million expansion to recycle glass, turn pre-treated sewage into fertilizer, and handle municipal waste.

Ratings of traffic function, or “level of service,” are expected to drop from a “B” to a “C” for northbound vehicles and for eastbound vehicles turning left or driving straight, with delays increasing by about one second.

The report compares current traffic function at each intersection with two future scenarios: traffic in the year 2026 if Parallel Products’ facility gets built, and traffic the same year if it does not.

The westbound approach to Theodore Rice Boulevard already operates at an “F” rating during peak hours, with delays greater than 50 seconds. If Parallel Products goes forward, the report predicts delays would remain greater than 50 seconds but does not indicate how high they would go.

Inside the park, southbound drivers turning left at the intersection of Theodore Rice Boulevard and Duchaine Boulevard would experience a traffic downgrade from a “C” to a “D” from Parallel Products during peak traffic on weekday mornings. The delay is predicted to increase from 23.8 seconds to 25.4.

Green Seal Environmental prepared the report on behalf of Parallel Products. It consists of two parts totaling more than 1,300 pages, including charts, maps and attachments.

Despite the downgrades in levels of service, the report concludes that Parallel Products would not have a major effect on traffic.

“Overall, traffic operations within the study area are not expected to be significantly impacted by the proposed project,” the report says.

New Bedford Mayor Jon Mitchell and the City Council have said they oppose the project.

City officials received the report Friday and are working to prepare a response, City Solicitor Mikaela McDermott said.

“The City remains committed to a robust opposition of the project and intends to closely scrutinize every aspect of the report,” she said in an email.

Tim Cusson, a vice president at Parallel Products, said his company is pleased with the draft report and looks forward to discussing it with the community.

“We want to be a good community partner and have worked closely with our team of engineers to design a project that contributes to New Bedford’s economy and sustainable practices without impacting the quality of life of our neighbors,” he said.

Regarding the traffic, Cusson pointed out that the greatest delay is 1.6 seconds. Parallel Products would be happy to work with the city to improve the traffic situation around the business park, he said.

To evaluate noise, Green Seal conducted testing at four residential locations. The company determined that noise levels would meet Massachusetts Department of Environmental Protection policy.

The company evaluated potential air pollution from the boiler, dryers, diesel trucks, and other sources, plus potential odor from the proposed biosolids and municipal waste processing. According to the report, emissions and odor would comply with all applicable standards.

The report says the size of the site is “exceptionally suitable” for a solid waste facility.

Roger A. Cabral
9 Bow Drive
Acushnet, MA 02743
selectmancabral@acushnet.ma.us
TEL: 508-642-9173

January 20, 2020

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No.15990
100 Cambridge Street Suite 900
Boston, MA 02114

VIA EMAIL ONLY TO: MEPA@mass.gov

Dear Secretary Theoharides,

My name is Roger A. Cabral and I am a resident of the Town of Acushnet and I also currently serve as the Chair of the Acushnet Board of Selectmen. I'm writing to express my concern over the Parallel Products project proposed for the New Bedford Industrial Park.

As best I can determine, the project is proposed in a location that is less than half a mile from the Acushnet Town line and the homes of Acushnet residents. For this reason, I have been following the project closely and attended a recent public hearing sponsored by the company.

19-1

The company believes that the majority of the truck traffic which will serve the facility will use the Braley Road New Bedford exit and that this roadway will easily be able to handle the additional vehicle traffic. Important to understand is that there is no interchange at this exit and all vehicles using the exit come to a stop sign at a heavily traveled roadway. (neither of the exits north or south of Braley Road have an interchange either and are in even more densely populated areas). As someone who travels this roadway 2-4 times EVERY DAY, as many Acushnet residents do, I can attest to the fact that the roadway will have difficulty handling the level of additional truck traffic that is projected. I heard the presentation by the traffic engineer that was hired by Parallel Products and his conclusions seem to be out of touch with the realities of Braley Road.

19-2

The environmental justice issues associated with this project are clear as well and need to be considered. I am extremely concerned about the impacts to local air quality both from the additional vehicle traffic and the normal operations of the facility. The proposed site is in very close proximity to densely populated resident areas.

19-3

Thank you for your attention and I would urge you to carefully consider if this is really the best possible location for a facility of this nature?

Sincerely,

Roger A. Cabral
Chairman
Acushnet Board of Selectmen



OFFICE OF THE BOARD OF SELECTMEN
TOWN OF ACUSHNET
www.acushnet.ma.us
122 MAIN STREET
ACUSHNET, MASSACHUSETTS 02743-1548

BOARD OF SELECTMEN
Roger A. Cabral, Chairman
Kevin Gaspar, Sr.
David Desroches

Telephone: 508-998-0200
Facsimile: 508-998-0203

January 22, 2020

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No.15990
100 Cambridge Street Suite 900
Boston, MA 02114

VIA EMAIL ONLY TO: MEPA@mass.gov

Dear Secretary Theoharides,

I am writing on behalf of the Acushnet Board of Selectmen and the interests of our community to express concern over the Parallel Products project that has been proposed in the New Bedford Industrial Park. Specifically, we would like to request an extension of the comment period deadline so concerned citizens have time to read through the Draft Environmental Impact Report that was submitted to MEPA. We also have major concerns over the public safety and environmental threats that this project would impose on neighboring residents.

20-1

The project is proposed in a location that is less than half of a mile from the Acushnet Town line and the homes of Acushnet residents. For this reason, we have been following the project closely, attending a recent public hearing sponsored by the company, and having residents involved in South Coast Neighbors United present information at our last Selectmen's Meeting.

We have serious concerns about the environmental dangers related to this project. The Environmental Protection Agency has worked with Buzzards Bay Coalition and various neighboring communities to clean up the local waterways, including the Acushnet River and New Bedford Harbor. It appears that any excess waste from Parallel Products will dump into the New Bedford Sewer System, which overflows directly into the Acushnet River. We would be reversing years of joint clean-up efforts by permitting this additional overflow; efforts that have cost millions of dollars and that have had a direct impact on wildlife conservation, climate control, and the health of neighboring residents.

20-2

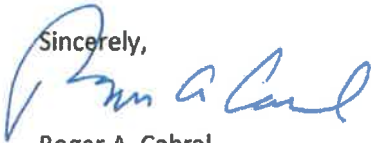
The Board of Selectmen would also like to acknowledge the incredible public safety hazards that are imminent if this project is approved. According to the information we have received, there will be about 400 truck trips entering and exiting the facility on a daily basis. While the Parallel Products company believes that the majority of the truck traffic will easily use the Braley Road exit without any additional vehicle traffic, it is important to understand that all vehicles using the exit come to a stop sign at a

20-3

heavily traveled roadway. Many Acushnet residents use this roadway multiple time a day, and can attest to the difficulty of traveling through the intersection on a regular day, nevermind adding several hundred trucks into the equation. We believe the presentation and conclusion by the traffic engineer that was hired by Parallel Products is extremely out of touch with the realities of this roadway. As a major highway route connecting to Acushnet, we believe the project will negatively impact the commute for our residents, increase the possibility of traffic collisions, and reduce the local air quality due to increased vehicle emissions.

Thank you for your attention to this important matter. We are certain that, while we touched upon a few issues in this letter, there are many other important facets of this project that should be considered before the project is approved. Please feel free to reach out if you need any additional information from our Board.

Sincerely,



Roger A. Cabral
Chairman
Acushnet Board of Selectmen



The Commonwealth of Massachusetts
MASSACHUSETTS SENATE

SENATOR MARK MONTIGNY
Second Bristol and Plymouth District

STATE HOUSE, ROOM 312C
BOSTON, MA 02133-1053

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Chair
SENATE COMMITTEE ON
STEERING AND POLICY

Vice Chair
EXPORT DEVELOPMENT

HEALTH CARE FINANCING

PUBLIC SAFETY
AND HOMELAND SECURITY

SENATE COMMITTEE ON
INTERGOVERNMENTAL AFFAIRS

December 13, 2019

Honorable Kathleen A. Theoharides
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Parallel Products of New England, LLC – EEA No. 15990

Dear Secretary Theoharides:

I am writing to you as a follow up to my May 14th letter regarding the proposed expansion of Parallel Products in the New Bedford Business Park. As I stated previously, the project's proponent has failed to adequately address the significant concerns from nearby residents, including anticipated noise, air pollution, odors, and traffic congestion. Therefore, I remain unequivocally against this project.

Furthermore, I urge your office to extend the 30 day public comment period by no less than 90 days. It is imperative that nearby residents and local officials have adequate time to review the 1300-plus page DEIR published in the November 22nd Environmental Monitor.

21-1

Phase 2 of this project is particularly troublesome as it involves the construction of Municipal Solid Waste (MSW), Construction and Demolition (C&D), and Biosolids facilities in very close proximity to a dense residential neighborhood. As you are aware, state law requires every solid waste facility to receive a site assignment from a local board of health to ensure the integrity of public health and safety.¹ The local board's decision to deny or suspend a site assignment must be based on site suitability criteria developed by MassDEP in order to protect the public from any threat to health or safety. These criteria must consider the nature and extent of residential areas in proximity to the project site as well as the potential impact on air quality, health, and safety.²

21-2

¹ M.G.L. c.111, §150A.

² M.G.L. c.111, §150A½.

Buffer Zone

No site shall be deemed suitable where impacts from the solid waste facility will constitute a danger to public health or safety.³ Specifically, no site shall be determined to be suitable as a solid waste handling facility where the facility is 500 feet from an occupied residential dwelling.⁴ Parallel Products has proposed a facility that is in very close proximity to this 500 foot buffer zone. While the proponent has skillfully attempted to draw its plans to fall just within this minimal buffer, it must do far more to assure the safety and wellbeing of nearby residences. There are hundreds of homes situated right next to this proposed development. As such, the New Bedford Board of Health as well as MassDEP should deny any request for a solid waste site assignment and this project should not be allowed to move forward.

21-3


Endangered & Threatened Species

In addition to the minimal buffer zone, this project may also affect certain endangered species and associated habitats. Under current law, no site shall be determined to be suitable as a solid waste management facility where such a siting would have an adverse impact on endangered or threatened species. A review of the project's location using the U.S. Fish and Wildlife On-Line mapping tool (iPAC) indicates that the Northern Long-eared Bat could be affected.⁵ Therefore, the proponent should engage with the Division of Fisheries and Wildlife and the National Heritage and Endangered Species Program, which is charged with overseeing the Massachusetts Endangered Species Act (MESA) Project Review process. An independent review must ensure that endangered species and their habitats will not be adversely affected by this project. A similar effort has been required to protect turtles within nearby priority habitats affected by the ongoing South Coast Rail project⁶. Coincidentally, Parallel Products also seeks to make use of this nearby rail line, further emphasizing the need to make absolutely certain that this project will not adversely affect any endangered species or their habitat.

21-4

As I stated previously, the New Bedford Business Park was never intended to serve waste processing operations. Its close proximity to a dense residential neighborhood along with significant potential impacts to noise, odors, and traffic make this an unsuitable location for a waste handling facility. My office will continue to review the various components to this project and listen to the concerns of residents. In the meantime, I urge your office to extend the public comment period by no less than 90 days to give adequate time for public scrutiny and transparency.

Sincerely,



Mark Montigny
SENATOR

cc: Commissioner Martin Suuberg, MassDEP
Mayor Jonathan F. Mitchell, City of New Bedford
Council President Linda Morad, New Bedford City Council
Dr. Patricia L. Andrade, M.D., New Bedford Board of Health
Sarah Morris, New Bedford Board of Health
Dr. Craig Longo, New Bedford Board of Health

³ 310 CMR 16.40.

⁴ *Id.*

⁵ <https://ecos.fws.gov/ipac/location/53WKU24U5BAGNN4UR7JTUY3KUE/resources#endangered-species>

⁶ <http://www.newbedford-ma.gov/environmental-stewardship/wp-content/uploads/sites/39/conservation/packets/2018/08-07-2018/SouthCoastRail-NHESP-CMP.pdf>

**Energy & Environmental Affairs**
Public Comments Portal

alexander.stryisky@mass.gov

View Comment

Comment Details

EEA #/MEPA ID*	First Name	Address Line 1	Organization
15990	Sharon	97 Longview rd	--
Comments Submit Date	Last Name	Address Line 2	Affiliation Description
11-26-2019	Pickering	--	--
Review Due By	Phone	State	Status
1-15-2020	--	MASSACHUSETTS	Opened
Reviewer	Email	Zip Code	
Alex Stryisky 617-626-1025	jpspickering@comcast.net	02745	

Comments

Topic: Parallel Products

Our entire neighborhood will be compromised with Toby bringing in Parallel Products to New Bedford. There are many neighborhoods, including a school that will be impacted by this Company... They have not done a proper traffic impact study using appropriate times in our area. It will bring it neighborhood down and destroy it

22-1

Attachments

Update Status

Status

Opened ▼

SUBMIT

Share Comment

SHARE WITH A REGISTERED USER

[BACK TO SEARCH RESULTS](#)

From: [Tracy](#)
To: [Sharon Pickering](#)
Cc: [Ron](#); [cstrupczewski@verizon.net](#); [angelo89rossi@gmail.com](#); [athenatetrault@yahoo.com](#); [auracorr@aol.com](#); [becca.kurie@gmail.com](#); [bobladino@comcast.net](#); [bookwithrosa@yahoo.com](#); [brickettth@aol.com](#); [bsmrc@aol.com](#); [c.kelley3917@gmail.com](#); [cah3156@yahoo.com](#); [camaral1789@gmail.com](#); [carolgorman3830@aol.com](#); [chostiguy@gmail.com](#); [cfkennedy1956@gmail.com](#); [cidaliamt@hotmail.com](#); [davealves@hotmail.com](#); [deannakelly07@comcast.net](#); [debhob2397@aol.com](#); [dletendre@middleboro.k12.ma.us](#); [dmpeko@comcast.net](#); [Donnamarie1960@comcast.net](#); [dotdir@aol.com](#); [eraposa68@gmail.com](#); [fernandesrose83@yahoo.com](#); [fmbelmiro@comcast.net](#); [garysantos@msn.com](#); [gborden83@comcast.net](#); [gertie456@comcast.net](#); [gmap5@aol.com](#); [htavares1@comcast.net](#); [hughcd33@gmail.com](#); [iredupreygutierrez@gmail.com](#); [izzyb7@comcast.net](#); [jacobandcolin@aol.com](#); [jaimechris23@comcast.net](#); [idsnrs@comcast.net](#); [jeanmotyl@hotmail.com](#); [imarques1980@yahoo.com](#); [jrod11758@gmail.com](#); [karen.a.chin@gmail.com](#); [kennethrap@aol.com](#); [kensouthcoast@gmail.com](#); [kfg57@comcast.net](#); [kqdlss@icloud.com](#); [ks7585@aol.com](#); [ldvred1@comcast.net](#); [lennv.catoio@yahoo.com](#); [leo1choquette@gmail.com](#); [magenaguilar@yahoo.com](#); [martinsward2@aol.com](#); [medeirosstephen@yahoo.com](#); [melissab8122@yahoo.com](#); [melissacosta4nb@gmail.com](#); [MIMIDACOSTA77@gmail.com](#); [mjmchugh1@comcast.net](#); [msc.barbosa91@gmail.com](#); [nfeeney123@gmail.com](#); [niemczyk5282@gmail.com](#); [nsbulhoes00@hotmail.com](#); [ostiquyml@comcast.net](#); [pattycake159@msn.com](#); [piostiguy@gmail.com](#); [prptaxservice@yahoo.com](#); [regor100@comcast.net](#); [ricardorosa1973@yahoo.com](#); [ricof4@comcast.net](#); [mperone1@verizon.net](#); [zzzBuckley_Deirdre \(FEA\)](#); [Schluter_Eve \(FWE\)](#); [Wixon_Josephine \(FEA\)](#); [Canaday_Anne \(FEA\)](#); [Patel_Purvi \(FEA\)](#); [Czepiga_Page \(FEA\)](#); [Strysky_Alexander \(FEA\)](#); [Flaherty_Erin \(FEA\)](#); [MEPA \(ENV\)](#); [TimC@parallelproducts.com](#)
Subject: Re: Parallel Products, Inc.
Date: Monday, November 25, 2019 2:41:14 PM

Hi Sharon,

We requested a meeting with Mayor Mitchell and the law firm to specifically address those questions. We got a response from the Planning Board Director saying she would meet with us to discuss permits (not what we asked for). Plus, we are already well informed about the permitting process. I do feel an independent traffic study should be done. It would be nice if the law firm pursues this, and if we could get communication from the mayor as to an update on the status.

Thanks,
 Tracy

Sent from my iPhone

23-1

On Nov 25, 2019, at 2:21 PM, Sharon Pickering <jpspickering@comcast.net> wrote:

So I wonder, should we demand another study be contacted impartial to Parallel Products?

Shouldn't it be a local SouthRegion company conducting these studies.

If Mayor Mitchell supposedly received a grant to hire a legal team what are they doing to present our issues?

Shouldn't Mayor Mitchell be letting the Residents know where we stand and what his office is doing to combat this nightmare

Sent from my iPhone

On Nov 24, 2019, at 12:19 PM, Ron <rrcrt@aol.com> wrote:

After reading the article "Parallel Products would slow traffic, but only

slightly" on November 19, 2019, the article states that the report concludes that Parallel Products would not have a major effect on traffic. Information in this article was based on the report prepared by Green Seal Environment, Inc., from Sagamore Beach, MA a company hired and paid for by Parallel Products (many of the residents in my area received a six page letter from Green Seal Environmental, Inc., with Parallel Products footer on each page).

In the article, I did not read anything that states the survey was conducted at the Exit 5 ramp exiting from Rte. 140 going onto Phillips Road nor does the survey indicate that monitoring was done at both Exit 7 ramps exiting from Rte. 140 onto Braley Road. Was this survey done during the school year, the fall, winter, or summer? Did the Commonwealth of Massachusetts or City of New Bedford conduct a traffic study at Exits 5 and 7 from Route 140, the intersection of Braley Road and Phillips Road at the main entrance to the New Bedford Business Park, or on Phillips Road where the second entrance to the Business Park is located? Whenever there is a request for a traffic light or stop sign, the State or City collects traffic data to approve or reject the request.

Here are some other important pieces of information not addressed in the article or letter:

- What time or times of day was the data collected? Did this survey include the workers going into the Business Park for the morning shift beginning around 6:30 a.m. Traffic is often backed up on the ramps from Route 140 entering onto Braley Road. At the end of the day shift, once again, traffic is bumper to bumper exiting from the Park.
- What day or days of the week was the data collected? Hopefully the survey was not conducted on a weekend or holiday.
- Did the survey gather data during the time of day when school buses for the high schools, middle school, special needs, and elementary schools are picking up and dropping students off? As most area residents of the far North End know, Braley Road is gridlock in the morning for the Pulaski School opening as well as in the afternoon.
- Some drivers opt not stop behind other vehicles and 18 wheeler's taking a left turn off the north bound ramp of Exit 7 exiting onto Braley Road waiting to make their way to the Business Park. Instead, those drivers stay on the right side, take a right turn onto Braley Road, right onto Briarwood Drive, do a turnaround at a homeowners' driveway, back up, and re-enter to make a left turn onto Braley Road to get to the Business Park. Meantime the traffic is backed up on the ramp to the highway.
- With all of this going on, there are many vehicles entering and exiting the Dunkin Donuts located near the exit ramps on Braley Road. Once, one enters the main entrance of the Business Park, there is a second Dunkin Donuts with a convenience store and multi service gas station. So once again, additional traffic from that location slowing down the flow of traffic.

If I understand correctly, McMahon Associates, Inc., at 300 Myles Standish Blvd., Suite 201, Taunton, MA 02780 was the company that prepared the traffic study for Green Seal. Did McMahon Associates, Inc., receive most of their data from Transportation Data Corp.? I believe Mario Perone is connected with Transportation Data Corp.

I feel that Brad Markey my Ward One Councilor should have a public community meeting with McMahon Associates, Inc., Mario Perone of Transportation Data Corp, Gregory C. Wirsen, Msc., Executive Vice President of Green Seal Environmental, Inc., Tim Cusson of Parallel Products, our State Representatives, Senator Montigny, Mass DEP, MEPA, Secretary of Energy and Environmental Affairs, Mayor Jon Mitchell, and all City Councilors as invitees so that residents and the community can ask questions, voice our concerns, and have our questions and issues answered.

The residents of the far North End have been dealing with major traffic issues on Braley Road at the Route 140 exits and entrance to the Business Park as well as the Pulaski School for decades. Braley Road is a major thoroughfare connecting Route 18/Acushnet Avenue to Route 140 and Phillips Road. This street is used for emergency vehicles from New Bedford, Acushnet and Freetown. Now with the possibility of the future expansion of Parallel Products, the traffic situation will be at a standstill, in my opinion.

So many question so few answers. Remember anticipating 209 trucks in 209 trucks out, Parallel Products 6 days a week possibly Sundays included.

**Ron R. Cabral
Briarwood Resident**

Greg Wirsén

From: Bull Dogs For life <mimidacosta77@gmail.com>
Sent: Saturday, November 30, 2019 5:01 PM
To: MEPA (ENV)
Subject: So so against this

15990 My Family and I are so so against this ... my son goes to Pulaski School
Witch he has to take a bus !!! And we live less than a mile away Due to traffic ... Please please listen to the neighbor 24-1
people

Strysky, Alexander (EEA)

From: Cooper, Stephanie (DEP)
Sent: Wednesday, January 29, 2020 4:14 PM
To: Kim, Tori (EEA); Strysky, Alexander (EEA)
Subject: Parallel Products & MassDEP PFAS Activities

Dear Tori and Alex,

MassDEP would like to submit the following addendum to our comment letter on this project. I am writing about PFAS as a contaminant of emerging concern as it relates to the proposed Parallel Products development in New Bedford, and offer the following information about the agency's work addressing PFAS.

As context, for the past few years, MassDEP has been actively engaged in addressing PFAS contamination. The Department is reducing a major source of contamination through its program to collect fire-fighting foam from facilities that formerly trained with such foams. MassDEP is protecting public health and the environment by regulating PFAS contamination of drinking water and waste site cleanup. MassDEP's Office of Research and Standards has conducted a health assessment that led to the establishment of its guidance on concentrations of PFAS that pose unacceptable health risks, particularly to infants and fetuses. MassDEP has conducted monitoring, or required the monitoring of, PFAS in drinking water, wastewater, residuals, and rivers and is developing a strategy to address PFAS in wastewater and residuals. Finally, the Department is developing support systems, through the establishment of laboratory certification for PFAS analyses and by funding for infrastructure improvements to promote discovery and remediation of PFAS contamination. Below are highlights of MassDEP's activity related to tackling the PFAS problem.

25-1

Source Control

- Firefighting foam collection and disposal – 200,000 pounds collected to date

Water Supply – Public, Private and Bottled Water

- Outreach to all Public Water Systems (PWS) encouraging voluntary sampling
- Outreach to PWS that tested during UCMR3 encouraging them to request the laboratory that conducted its analyses re-report the results using lower detection limits, if available
- Targeted monitoring of Public Water System sources within two miles of known sites with contamination
- Testing of new public water supply sources through new requirements in the New Source Approval process
- Sampling of Public Water Systems and private wells (Supplemental Budget)
- Pursuing drinking water MCL - draft regulations issued December 27, 2019
- Establishment of an Office of Research and Standards Guideline for PFAS in June 2018, with a revised ORSG issued on January 27, 2020
- Request to water bottlers and bulk suppliers for sampling results
- Sanitary surveys of MA water bottling/ice making sources

Waste Site Cleanup

- BWSC investigation of contaminated sites, issuance of Notices of Responsibility

- Waste Site Cleanup/GW standard regulations – final regulations promulgated on December 27, 2019

Wastewater and Residuals

- Evaluating implications of PFAS in wastewater, including potential sources of PFAS in the influent from industrial dischargers, and potential effects of elevated PFAS concentrations in the effluent on downstream water supplies
- Require testing of wastewater residuals subject to Approval of Suitability (renewed every 5 years)

Funding for Infrastructure

- High Priority status for treatment projects for State Revolving Fund loans

Laboratory Analyses

- Pursuing laboratory certification regulations and certification program for PFAS analysis

Monitoring

- Conducted monitoring in the Merrimack River, and at a wastewater treatment plant and four public water supplies along the river
- Developing a statewide riverine monitoring project

Stephanie Cooper

Secretary Kathleen Theoharides
 Executive Office of Energy and Environmental Affairs
 Atten: MEPA Office
 No. EEA 15990
 100 Cambridge Street Suite 900
 Boston, MA 02114
 DATE 1-26-20

RECEIVED
 JAN 28 2020
 Executive Office of Energy
 & Environmental Affairs

Dear Secretary Theoharides,

In early February of this year, the discovery through an anonymous mailing, that a recycling operation was slated to develop in our residential area was shocking. In addition, it was revealed that the industry included a Sludge/Bio-Solid processing project. This news set off alarms of concern and fear. The company in question, Parallel Products of New England, (PPNE), 100 Duchaine Blvd. New Bedford, MA 02745, was expanding their glass and can recycling business into the Business Park.

A community meeting was held in the nearby elementary school, and an invitation to PPNE Vice President, Tim Cusson, was sent to have him educate the community about his project. It is more than fair to state that this tutorial was less than adequate. It did nothing to allay our concerns, but in fact create more concerns, anxiety and questions. It was evident that the presenters were not familiar with the area.

26-1

This spawned the development of grassroots groups which:

- Held their own researched informational meetings
- The development of a petition
- Letter writing to environmental agencies
- A rally
- Meetings with local and state legislators,
- Flyers and yard signs
- Social media sites, newspaper and radio announcements

to create awareness of this invasive, noisome, noxious, industry that would ruining our lives.

These above mentioned activities led us to realize, with great relief, that a DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) would be filed and sent to MEPA for evaluation of the proposed industry. It was widely believed that PPNE would be deemed unsuitable for certification in their desired location, due to the fact that it would be adjacent to residential housing, many established businesses and two elementary schools and for the following

Quality of Life Negative Impacting Reasons:

INDUSTRIAL NOISES

ODORS and TOXIC AIR, POLLUTION

INCREASED TRAFFIC (350-400 big trucks a day) diesel fumes, back up bells, idling

The ROUTE these trucks would be utilizing which will interfere with already compromised school bus routes, trucks would prefer to use an exit that would have these 18 wheelers passing through residential areas

RAIL noises, train whistles

The very real possibility of ACCIDENTS involving these trucks and trains that would spill volumes of toxic liquids

DEVALUE PROPERTIES

HOURS AND DAYS OF OPERATION YET TO BE DETERMINED!

26-2

The DEIR investigation is suspect for at least two reasons:

1. Since the plant is not operational, the data and measurements can only be **SPECULATIVE AND A QUESSTIMATE**.
2. This "research" was written by THE GREEN MEDAL ENVIRONMENTAL, Inc. and paid for by PPNE. Could this be a bit prejudicial?

26-3

We implore MEPA to scrutinize this DEIR report and peruse each line of the 1,300+ page report.

We are counting on our protective environmental agencies to do just that, protect and support the hardworking residents of a community that has had more than its share of toxic clean ups and environmental issues.

We are aware of your heavy responsibility and appreciate the extension time allotted to write you.

We pray that you will be guided with wisdom and fairness.

Thank you for your attention to these matters.

Name: Susana Camacho Address: 6 Ridgewood
 City: New Bedford State: Mass. Zip Code: 02745
 Phone (H): _____ (Cell) 774-218-5552
 E-Mail: _____

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
No. EEA 15990
100 Cambridge Street Suite 900
Boston, MA 02114
DATE 1-20-20

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We pray that you will be guided with wisdom and fairness.

Thank you for your attention to these matters.

Name: Yannuel Carreno Address 6 Ridgewood Rd
City New Bedford State Mass. Zip Code 02745
Phone (H) _____ (Cell) 774-226-0078
E-Mail _____

Secretary Kathleen Theoharides

Executive Office of Energy and Environmental Affairs

ATTEN: MEPA Office

EEA NO 15990

100 Cambridge Street, Suite 900

Boston, MA 02114

RECEIVED

JAN 10 2019

MEPA

January 7, 2020

Dear Secretary Theoharides,

My name is Thomas Rua and I have owned my residence in New Bedford for 5 years. I am writing the MEPA office to express my opposition to Parallel Products of New England - a sludge plant operating in my neighborhood. I am asking that MEPA to do its diligence in studying the environmental impacts of the PPNE project and take into consideration my concerns when you do your evaluation of PPNE and the Draft Environmental Impact Report.

I am asking MEPA to reject the Draft Environmental Impact Report submitted by Green Seal Environmental, Inc which was hired by Pararell Products. Parallel Products of New England will have a negative impact in New Bedford. My concerns with Parallel Products is that with all the trucks that will be entering in and out daily, that it will affect the roads, add extra traffic and be dangerous for children. The entrance to this project is off of a busy main street where children wait for school buses. This road is highly travelled and there is usually a wait to get on and off exits now without the extra traffic this business will bring. Excessive heavy trucks will cause damage to roads which will result in higher taxes for us residents to help pay for those repairs. Our taxes in New Bedford is already high and with this project it will decrease our values of our homes. Since these trucks are open-aired I also feel that this project will result in bad air quality because of the odors and pollution of the trucks.

27-1

27-2

27-3

I feel that Pararell Products has not done enough research about this neighborhood. I feel that all their studies were not done at busy times (mornings for school and business workers and afternoons for school and business workers). As an owner of a New Bedford Residence, I feel that we deserve to keep our neighborhood safe for our families. I look forward to your response in addressing my concerns.

27-4

Sincerely,



Thomas Rua

1481 Phillips Road, Unit 1206, New Bedford, MA 02745

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date: 1/6/2020

Secretary Theoharides,

I appreciate the expanded response time you have given us to make our concerns known regarding the recently released **Draft Environmental Impact Report (DEIR) EEA No 15990**, which assesses **Parallel Products of New England, (PPNE) of 100 Duchaine Ave, New Bedford, MA 02745**, an industry proposing to do recycling of cans, bottles and a Waste Plant involving /sludge/Bio-solids and the real possibility of gasification and ethanol production.

IMMEDIATE IMPRESSIONS/CONCERNS

Since the plant is not operational, how can the resulting data, measurements and times be accurate?
This "research" was developed by The Green Medal Environmental, Inc., a company hired by and paid for by PPNE. It gives the sense that the report is biased.

28-1

MEPA be conducting and independent evaluation of their own?

28-2

QUALITY OF LIFE ISSUES

Industrial Noises

28-3

Unpleasant Odors (the smell of alcohol already present).

Air and Environmental Pollution with the release of toxins through plumes and dumping.

Creating and worsening already existing health issues.

Increased Traffic utilizing infrastructure designed for passenger cars.

Over 350 big trucks utilizing neighborhood roads daily.

Idling trucks, back up bells, uncovered loads.

Already compromised highway exit ramps leading into the Industrial Park which results in traffic congestion that involves school buses and Emergency Vehicles from Ambulances, Police and Fire.

Increased rail disturbances; whistles, vibrations, traffic delays at rail crossings, accident potentials with signal failures

The very real possibility of truck and train accidents resulting in toxic spills

Devaluation of properties; residential and business.

Unable to use our outdoors for recreation and relaxation. (Backyards and Park)

HOURS AND DAYS OF OPERATION YET TO BE DETERMINED.

THIS IS A PROPOSAL THAT WILL RUIN OUR LIVES ON MANY LEVELS.

I look forward to a reply from MEPA that will be favorable to a community who works hard to improve its city and has suffered way too many environmental setbacks.

Respectfully submitted,

Thomas Green
20 Greenbrier Ct
New Bedford MA
02745

**Energy & Environmental Affairs**
Public Comments Portal

alexander.strysky@mass.gov

View Comment

Comment Details

EEA #/MEPA ID*	First Name	Address Line 1	Organization
15990	Tracy	75 Stephanie Place	--
Comments Submit Date	Last Name	Address Line 2	Affiliation Description
11-25-2019	Wallace	--	Individual
Review Due By	Phone	State	Status
1-15-2020	--	MASSACHUSETTS	Opened
Reviewer	Email	Zip Code	
Alex Strysky 617-626-1025	wallacetracy99@gmail.com	02745	

Comments**Topic:** Request of Extension of Comment Period

To Whom it May Concern, I would like to request an additional 30 day extension to the comment period, bringing the deadline to February 23, 2020. I realize Parallel Products requested a 30 day extension from the original deadline of December 23rd, which based on what has been published in the November 22 Environmental Monitor issue, has been granted. However, due to the length of the DEIR document, 60 days over the course of the holidays and potential winter weather is not enough time for the community to digest and become fully aware of the project in order to make informed comments. On the last page of the DEIR, it states Parallel Products will hold meetings on Dec 3 and 4, to date there has been no mention of those meetings in any news, media, or social media outlets. Nor is it mentioned on their website. Please consider the additional 30 day extension bringing the deadline to February 23rd. Sincerely, Tracy L. Wallace Resident of New Bedford

29-1

Attachments**Update Status**

Status

Opened ▼

SUBMIT

Share Comment

SHARE WITH A REGISTERED USER

[BACK TO SEARCH RESULTS](#)

I would like to express my opposition to this project and recommend that MEPA Office does not further approve the development of this facility. Several issues can be raised and there is currently too much variability and unknowns regarding the project. The city of New Bedford does not have the services or infrastructure to handle a facility of this magnitude. Regarding the Draft Environmental Impact Report and the site suitability criteria a number of inconsistencies can be raised. First beginning with the site location. When described within the DEIR three locations were presented with 100 Duchaine being the chosen location. The Church St location proved that according to the DEIR "Access to the site requires truck traffic to pass numerous residential homes and the New Bedford Vocational Technical High School. This traffic situation is likely to be considered a nuisance and or public safety condition and as such would not meet the MassDEP criterion for a solid waste facility. As such, this site was not considered a viable site for the proposed project.", however these same statements could be applied to 100 Duchaine as well, trucks will pass numerous residential homes, this will impact an elementary school, and the traffic situation will be a nuisance and public safety condition. 30-1

Wetlands and Protected Areas: The site borders the Acushnet Cedar Swamp State Reservation, much of the area waterways flow into a greater body of the Acushnet Cedar Swamp, polluted discharge could seep into this area, the biosolids trucks will connect to piping outside of the facility in the truck bay which could spill and/or leak. MSW can contain dangerous substances including, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), heavy metals, radioactive materials, and pharmaceuticals. MSW sites are known to affect water quality, air quality, produce smoke and dust, and create pest infestations. The site is within feet of Pine Hill Park and conservation land owned by the city. No entity can test for or prevent the pollution of all the pathogens and thousands of contaminants in MSW and biosolids. The project would also be in violation of the City of New Bedford's 25 foot wetland setback policy. 30-2 30-3 30-4

Existing Facilities: The DEIR states "MassDEP and the local Board of Health shall give preferential consideration to sites located in municipalities in which no existing landfill or solid waste combustion facilities are located, a preference that will be applied only to new facilities that will not be for the exclusive use of the municipality in which the Site is located." Crapo Hill Landfill does sit on land bordering Dartmouth, Freetown, and New Bedford, the landfill also has a New Bedford address - 300 Samuel Barnet Blvd New Bedford, it was purchased by both Dartmouth and New Bedford. New Bedford is also home to the New Bedford Landfill on Shawmut Ave, which is closed, but is a source of significant pollution, therefore this site does not constitute preferential consideration. 30-5

The full site is within 500 ft of an occupied dwelling. The full site is zone Industrial C, Mixed Business, and Residential. When referred to in the DEIR, the fact that the site is multi-zoned is omitted from several areas of reference and referred to as only zoned Industrial C, both misleading and erroneous. 30-6

Traffic: the traffic study was conducted only over a one day period (June 13th) at intersections including route 140, Theodore Rice Blvd, and Braley Rd; and a 48 hour period on Duchaine Blvd. Given the location of several residential neighborhoods and an elementary school in such close proximity, one day of analysis is not sufficient data for a traffic impact study. McMahon's associate did state that the intersection is bad currently at the community 30-7

meeting held on January 7th, and from his day's worth of data said the study would predict an 11% increase. A bad intersection would remain bad with an 11% increase. Traffic will be diverted from Philips Rd says the company, and it stated that it will help create a traffic ordinance for Phillips Rd. There is currently no ordinance that exists to prevent trucks from utilizing Phillips Rd, no telling how long an ordinance would take to pass, and only a verbal statement from company saying they will do so. The traffic study also included data for the intersection of Samuel Barnet Blvd and Phillips Rd (the secondary access to the Business Park). Currently, Eversource uses this intersection at a nuisance to the adjacent neighborhood. Enbridge is making illegal left hand turns in Weymouth while constructing the compression station, all fully documented. There is no way to enforce restrictions completely and the trucks will use the intersection of Samuel Barnet Blvd and Phillips Rd, again putting residential neighborhoods safety at risk. No further approvals should be given until ordinances and or laws are in place.

30-8

The company stated at the community meeting on January 7th that waste will be coming from 75 to 100 miles away with a significant amount from within 25 miles, this would put an additional burden on the junction of route 24 and 140, as well as the junction of 140 and 195, both extremely dangerous intersections. These meetings were recorded and can be accessed for viewing. Traffic impacts for both these interchanges should be conducted, as an increase in truck traffic would be significant.

30-9

Attached (pic 5, 6, 7, 8) are pictures taken at 1:43pm on Sept 13, 2019 illustrating the lineup of traffic at the on and off ramps of 140 and Theodore Rice Blvd and Braley Rd. The study states "traffic counts were conducted at the study area intersections on Wednesday, June 13, 2018. The traffic counts were conducted during the weekday morning peak period from 7:00 AM to 9:00 AM, and the weekday afternoon peak period from 3:00 PM to 6:00 PM." Further data is needed over multiple days and during more time periods to be able to make a valid and reliable conclusion on whether traffic will be impacted. Research done by the CEDS (Community & Environmental Defense Services) have shown that noise from heavy truck traffic lowers property value at a rate of 30 to 50 times greater than cars. This is because at 50 feet heavy trucks emit noise 16 times louder than car traffic. With regard to accidents, a fatality is twice as likely when a car is involved in a crash with a truck vs. another car.

30-10

Property Value Impact: In addition to the noise of trucks lowering property value, The Epsilon associate stated that the stacks on the MSW plant will be 70 feet above ground level, and the biosolids facility stacks will be 40 ft above ground level. Parallel Products has stated that the stacks will not be visible from Philips Road, however they plan to level trees to recreate wetlands from uplands all around the facility, there is no way the stacks will not be visible with the removal of several trees and especially when foliage is lost over the fall and winter months, attached are pictures (pic 9, 10, 11) of Quincy's biosolids processing plant, a structure like this will be 500 ft from a residential neighborhood. A decrease of property value of up to 13% occurs when stacks are visible from a home. A collection of property value impacts is available

30-11

from the Center for Health, Environment and Justice. All the stacks are removed and not shown on any of the renderings of the facility the company displays and submits. The company has purchased two of the recently built houses on Phillips Rd, to which they are not maintaining one of them and the community has had to call the city on several occasions, (See attached pic 1, 2, 3, and 4). This lack of maintenance of a property brings down all the surrounding properties value.

30-12

Consideration of Other Sources of Contamination: The site is proposed to be located on the old Polaroid Company location. Considerable contamination of this site has occurred over the past 7 decades. A full list of that was submitted in the EENF, which shows that in some cases the remediation is “unknown”. By developing this site, any disturbance of this contaminated land puts the health and welfare of the surrounding community and environment at a considerable risk.

30-13

Environmental Justice: The company is doing the bare minimum when it comes to notifying the public. March 7th I was the only member of the community in attendance for the entire meeting. Two additional community residents came in late, due to last minute changing of the meeting location by the company, for a total of three residents of New Bedford in attendance. The meeting was in the morning at 10am making it impossible for anyone who has a job to attend. I used personal time to attend. The meeting on April 27th at Pulaski School was well attended by the community, however this meeting was coordinated by the Ward 1 City Councilman, who did a mailing to the community. The company had three “open houses” at their location, over the summer, not highly publicized or well attended, and one on January 2 and January 3, again not well publicized or well attended, and back to back right after the holidays. They advertised community meetings the Vocational High School for January 6th and 7th, again not well publicized and back to back after the holidays. The meeting on the 6th was scheduled the same day as the Mayor’s inauguration, and the meeting on the 7th was scheduled the same night as the city’s Conservation Commission meeting, in which the company was presenting for a certificate of compliance and notice of intent. The company has had six “open houses” and three community meetings, the only one well attended was the one the city councilor organized and out reached for. This shows a significant lack on the company’s part to notify the community. The community does not feel comfortable going to 100 Duchaine nor is it convenient for anyone to attend right after the holidays when everyone is back to school and back to work. The DEIR states that the company will have community meetings in December, which it did not. The DEIR was also submitted less than a week before Thanksgiving, making the comment period all over the holidays.

30-14

Biosolids Processing: High levels of PFAS (forever chemicals) known to cause cancer and other health problems, have been found in biosolids. Recently, the Boston Globe reported on December 1, 2019 significant issues with the MWRA. “Quincy’s biosolids processing plant showed 18,000 parts per trillion of just three chemicals, US Environmental Protection Agency

30-15

recommends that municipalities alert the public if two of the most common chemicals add up to 70 parts per trillion. Massachusetts uses the same level for five PFAS chemicals". The DEIR states the processing of biosolids will add discharge into the New Bedford sewer system. The discharge from dewatering of 52,000 gallons a day, as well as the discharge of condensate from thermal drying of 30,000 gallons a day into the New Bedford sewer system will put the whole municipality at a significant health risk.

It is currently unknown if the city's pump stations will be able to handle the additional discharge into the city's sewer system that the company will create. If the city can't, it is unknown if the city and tax payers will be responsible for the upgrade that Parallel Products will need to conduct business creating an additional potential burden on the city and its tax payers. A pump station was removed from the area over two decades ago and since then sewage issues have occurred at the houses that were newly built along Phillips Rd, and at the Chinese food restaurant and 7-eleven on Phillips Rd as well. Sewage has backed up and overflowed in these locations several times already.

30-16

The company stated originally that it would be making fertilizer with its Class A biosolids, however now they have been stating it will just be sent for disposal in other states like Ohio, Pennsylvania, and New York. The DEIR says the biosolids will be "beneficially reused" in direct contrast to what the company is saying to the public and putting everyone's health at risk. The company has stated several times that it will not pursue gasification with its processing of biosolids, however stated on page 35 (pg32) is specific language on how the building will be built for gasification purposes, "The building has been sized for the currently proposed drying facility and has included sufficient indoor space to accommodate the addition of biosolids gasification equipment in the future." The company submitted an RFEI to the city of New Bedford in July 2018, stating how they intended to develop 100 Duchaine and partner with Aries Clean Energy for gasification (see Attachment A).

30-17

30-18

In 2010, Stamford, CT's Waste-to-Energy project, which included gasification, was voted down by the Waste Pollution Control Authority after losing faith in its technical and economic feasibility, finding the drier itself produces significant emissions and there would be negligible economic benefit. The supervising engineer stated that the overwhelming unpleasant smell that wafted in the air was due to the trucks that were parked carrying the waste. He stated in winter months its bad in summer months its even worse. The failed project ended up costing the city of Stamford 10 million dollars.

The company originally stated that the biosolids will be transported in by two ways, liquids and open air trucks, please refer to the EENF. They are now telling the community that the trucks will be enclosed, however the DEIR only refers to trucks being "covered". Does that mean a tarp that sits on top and blows around during transportation? A definition of "covered" needs to be included in the DEIR. A tarp on top of a truck will not stop odor or sludge from potentially leaking out.

30-19

Odor: To minimize odor the company will be using an ionization system, air ionizers give off dangerous levels of ozone which is not only harmful to the environment, but can be equally as hazardous to your health. When inhaled in high enough doses, ozone can have harmful effects- including damage to your lungs, chest pain, coughing, or shortness of breath.

30-20

Notification to Abutter: A signed affidavit stated that the company notified all the abutters, but the map that is included in the DEIR, p577-581 of part 1, shows lot 134-459 (which

30-21

has now been subdivided, and developed into houses on Phillips Rd) as one big lot. Lot 134-459 is not listed as there having been any notification done. The map is out dated.

Fire Potential: There is no evacuation plan that the company has provided for the area, and their facility will be conducting extremely dangerous and explosive operations. As recent as August, the Thompson Brothers facility caught fire on the north shore of MA, it took emergency personnel two days to put out the fire and roads were shut down. This facility was not close to residential neighborhoods like this one will be. With no proper evacuation plan for the surrounding community, nor roads that could handle proper evacuation, everyone's life is being put in serious danger. New Bedford fire department shift closures and delayed response time in the city is already an issue due to a blackout policy. The blackout policy refers to a policy where a vehicle at a particular fire station is inactive for a shift in order to save money. Firefighters took renewed issue with the policy after two fires resulted in fatalities in recent months. LNG tanks, another major explosive danger, are approximately 3 miles away. The city cannot handle, an operation of this magnitude, and guarantee its residents safety.

30-22

Noise and Vectors: According to the DEIR trucks will be backing into the biosolids building, the building closest to Phillips Rd and the residential community. The backup beeping will be heard. The fact that the DEIR states that the company plans to contract with a vector control management firm proves that problems with vermin will occur and there is nothing to prevent that vermin from walking or migrating less than 500ft to the residential homes. How will this vermin be controlled? With chemicals? That will be sprayed around the facility for homes less than 500ft away to breath in? What kind of pollution will that do to the land and other animals?

30-23

Endangered Species: DEIR lists no endangered or threatened species, however a Stormwater Pollution Prevention Plan prepared by Farland Corp. for Parallel Products for the 20 Duchaine Blvd location, adjacent to 100 Duchaine, submitted November 2017 states "Farland Corp. has reviewed the potential for endangered or threatened species and critical habitats by using the Fish and Wildlife Services On-line mapping tool (iPaC) located at <https://ecos.fws.gov/ipac/> (accessed on 11/28/17) to determine if any exist on or around the project site, and that they might be affected by any construction activities. It was determined that there is one (1) species of threated wildlife that may be affected by said construction activitied. The species found on the above referenced database is the Northern Long-Eared Bat. This species is classified as "threatened", and does not have a designated critical habitat." (see Attachment B, pg 10-11)

30-24

Massachusetts Waste Crisis: New England Waste Disposal in Taunton, MA and New Bedford Waste Services in Rochester, MA have both recently put in requests for increased capacity of MSW. These two facilities in addition to the proposed Parallel Products facility

30-25

would put three facilities all within a 25 mile triangle of one another. Currently, at the Rochester location, bails of MSW are sitting with no place to be shipped to, will the same happen at 100 Duchaine? Parallel Products has stated that the waste will be coming from a 75 mile radius. The company keeps saying "well if not here then where?" siting the state's waste crisis. These two other companies are facilitating this, it is not appropriate for an additional facility in such close proximity, with also one of the only operating landfills left in the state, to be located in the region. The region is currently doing its part. In regards to the waste crisis faced by the state, and the State's Solid Waste Master Plan, waste could be reduced by 40% if MassDEP simply enforced the State's existing waste bans.

Conclusion: The company has not been forthcoming with the community, multiple statements have been made that are misleading or vague. The company consistently changes its story, and has already been found in violation by the Conservation Commission of the City of New Bedford for dumping piles of glass in the buffer zone. There have also, already been complications with work not being done properly by Farland Corp., Parallel Products construction contractor. The independent engineers hired by the city have requested corrections in which the company has had to comply. If they are doing this now, the risk with MSW, C&D, and biosolids are much greater. New Bedford is one of the most burdened cities in Massachusetts. The city is home to several superfund sites (one of the first and biggest in the nation) and as many as 572 former (cleaned up) or current "brownfields sites". To approve this facility in this location would put an additional burden on the city and its residents. Too many things need to be addressed, and it will all be at the expense of the community of New Bedford and the South Coast. New Bedford does not have the services nor the infrastructure to deal with this type of operation being located in its perimeters.

30-26

There is major concern over the company now calling its project the South Coast Green Energy Center. This facility is not green. It is a waste to energy facility that will be dealing with several volatile compounds, toxins, and releasing syngas. The statement of "green" is misleading to the public. A company cannot call itself green because it has solar panels and says it will reduce emissions. The reduction of said emissions is also debatable, engineers for the proposed Stamford CT location, stated those reductions would be minimal at best if any. The facility will pollute at a detriment to the South Coast. Waste to energy solutions are a regrets solution, with several social and environmental negative effects.

Sincerely,

Tracy L. Wallace, M.Ed.







Greg Wirsén

From: Vincent Carolan <vincent.h.carolan3@gmail.com>
Sent: Sunday, December 1, 2019 3:33 PM
To: MEPA (ENV)
Subject: EEA #15990

To the Secretary of Energy and Environmental Affairs:

I am a resident of New Bedford and I am strongly opposed to the Parallel Products Waste and Biosolids project proposed for the north end business park, which is located adjacent to Phillips Road.

First and foremost, please consider an extension for the comment period deadline, which is currently set for January 23rd, according to the Environmental Monitor. 31-1

The fact that this project is proposed adjacent to the business park located right off of Phillips Road, which is an antiquated pedestrian street in a residential neighborhood exposes the fact that not a lot of thought has been given by Parallel Products and their associates regarding this location. 31-2

Parallel Products wants to maneuver wetlands, knock down acres of land and build a biosolids sludge facility literally next to a residential neighborhood, not aware of what adverse effects the emissions being released in the air and remnants of sludge running off from the facility into the wetlands/wildlife will have on the residents of the area. It is, quite simply a bad idea not surprisingly motivated by money as the owners simply don't want to lease land anymore for a recycling plant but instead want to purchase land to expand their plans for this facility. 31-3

Parallel Products has stated that hundreds of truck stops, coming and going into the area to dump off sludge and MSW would be taking place. There are residential homes located just feet away from where this proposed location is aimed at. 31-4

Between the traffic congestion on these residential streets, noise pollution, air pollution, odor issues, water quality and numerous other concerns from road repairs from these trucks to vermin and pests, this proposed project is simply an awful idea for the city and I strongly suggest that this project not acquire the respective permits needed to move forward with the process. 31-5

Sincerely,
Vincent Carolan

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No.15990
100 Cambridge Street Suite 900
Boston, MA 02114

January 23, 2020

Dear Secretary Theoharides,

My name is Wallace Greely and I have been a resident of New Bedford for 40 years. I am writing the MEPA office to express my opposition to Parallel Products of New England (PPNE)- a sludge plant operating in my neighborhood. I am asking MEPA to do its due diligence in studying the environmental impacts of the PPNE project and to address my concerns in your evaluation of PPNE and the Draft Environmental Impact Report (DEIR).

As a resident of New Bedford, and a community member, I stand with the hundreds of New Bedford residents against this project. New Bedford has dealt with numerous environmental justice issues, and I implore MEPA not to make the same mistake with PPNE.

I am asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental, Inc. hired by PPNE. In MEPA's study of the environmental impacts of PPNE and I am specifically concerned with following:

Air pollution & odors from both the plant and the trucks - I have resided at my current address for 33 years, am within 2 years of retiring, and plan to remain in my home for several years afterward. I am concerned that the quality of life in my neighborhood will be compromised by the inevitable exhaust and foul odors that would emanate from this kind of plant as well as the trucks hauling the material it would process, at all hours of the day and night.

32-1

I look forward to your response in addressing my concerns.

Sincerely,

Wallace A. Greely
438 Valley Rd.
New Bedford, MA 02745
(508) 995-3008

From: [Wendy Graça](#)
To: [MEPA \(ENV\)](#)
Subject: EEA #15990
Date: Wednesday, December 11, 2019 1:34:44 PM

Dear Mr. Fischer,

I am writing as a concerned resident of the New Bedford area to request a reasonable extension of the public comment period deadline for project EEA # 15990. The Draft Environmental Impact Report issued for Parallel Products is more than 1300 pages long and was released just prior to Thanksgiving. This community is comprised primarily of working class citizens. To expect citizens to read through such a lengthy, technical report and provide informed feedback by January 23, especially during the holiday season, is not just unfair and unreasonable, it's discriminatory! This is a project that will have a HUGE impact on them, their homes, families, health and quality of life. It's an unrealistic ask to expect people to find the time in their busy lives to read through something like that in such a short period of time. If I were a gambler, I'd bet that the timing of this is not a coincidence, just like the siting selection for a business of this nature is most certainly not. I never hear of affluent communities dealing with projects or businesses like this being imposed on their communities.

33-1

I ask that you take all of that into consideration when deciding to grant an extension of the public comment period deadline. Between now and January, the folks in this area will be focused on working to put food on the table, providing nice holidays for their families, and paying the bills to keep their families warm. I think that the residents of this community deserve more respect than they've been shown by Parallel Products, and at least another 90 days to review the report of a project that will have major impacts on them and submit their comments. In my opinion, anything less will just lend to the feeling of perpetual exploitation they have experienced.

Thank you for your time.

Wendy M. Graça

**Energy & Environmental Affairs**
Public Comments Portal

alexander.strysky@mass.gov

View Comment

Comment Details

EEA #/MEPA ID* 15990	First Name William	Address Line 1 941 pine hill drive	Organization --
Comments Submit Date 1-3-2020	Last Name Andrews	Address Line 2 --	Affiliation Description --
Review Due By 1-15-2020	Phone --	State MASSACHUSETTS	Status Opened
Reviewer Alex Strysky 617-626-1025	Email bdbew@yahoo.com	Zip Code 02745	

Comments

Topic: eea #15990

I would like to request an extension of 60 days as many of my neighbors are away during this time of the year and do not have time to review all of the information regarding the permit. Please allow for an extension so all those affected can review the permit. Thank you, William Andrews , 941 Pine Hill Drive, New Bedford, MA 02745

34-1

Attachments**Update Status**

Status

Opened ▼

SUBMIT

Share Comment

SHARE WITH A REGISTERED USER

[BACK TO SEARCH RESULTS](#)

Secretary Kathleen Theoharides

Executive Office of Energy and Environmental Affairs

Atten: MEPA Office

EEA No. 15990

100 Cambridge Street Suite 900

Boston, MA 02114

Dec 30 2019

Dear Secretary Theoharides,

My name is William Andrews. My address is 941 Pine Hill Drive and have lived in the city for over 50 years and at this address for over twenty years. My home is within sight of the proposed plant. I am very much opposed to the location for this sludge plant/ trash sorting facility. I understand that it is in the early stages of the permitting process and would like to voice my concerns and would hope that the Department would consider the concerns of the citizens in its decisions.

The area residents are very much opposed to this planned project for many reasons. Several neighborhood organizations have formed and are working to ensure that the safety and welfare of the citizens effected is not jeopardized.

The proposed project will place a noxious, hazardous and potentially toxic health risk not more than 300 feet from residential neighborhoods. My home and the 400 like it in the development have been here for over 50 years. We have lived next to the business park and understand, that with the park comes traffic, noise, and issues associated with industry. Never has the potential for odors, pollution, disease, and worse, been such a great threat to our homes and families. The prevailing winds will bring any mistake or release they have to our homes, as the plant will be 300 feet west of the neighborhood. The Parallel Products plan to control the emissions will not be foolproof. It never is. I have worked in industry for my entire working career, and rest assured, the fan will break down on a Friday afternoon. The scrubber will loose a pump or a line will break and the people in the area will be dealing with the worst. They cannot guarantee our safety unless they do not build there ! 35-1

Also, there will be over 400 semi tractor trailers coming and going into the park on top of the current traffic that the park has ! There is a grade school within an eighth of a mile from the entrance to the park which already is congested at shift changes and school times. The trucks will be in queue while waiting to unload at the site. This is according to their plan, which would further add to congestion in 35-2

the park. Not all the traffic will go directly to the plant from the highway exit closest, as many truck now using the park go over city roads by residential homes. This increase in truck traffic will be a safety problem for the area and notably for the school close by.

The area is also part of the Acushnet Cedar Swamp aquifer which is designated as a National Natural Landmark by the National Park Service. Any spills in this area will migrate to the swamp. Leaks will happen and many will not be reported. The area will be polluted. The trash brought in to be sorted may contain any type of hazardous waste. Any one of these trucks transporting this hazardous waste has the potential to leak. Any rain event that occurs will wash this hazardous waste into the wetlands. All of the roads on the Parallel Products site run adjacent and through wetlands. This is the wrong area for a hazardous plant to be located. A manufacturing or normal industrial plant would not have the hazards a trash/sludge facility would. Parallel Products cannot have a contingency plan for a hazardous spill or event because they have no idea what they might be! They will be accepting raw trash and sewage , not an industrial material that is tested or spec'ed for manufacturing, but end of cycle waste. Toxic chemicals, medical waste, bio hazards, radio-active waste, explosives , all could be mixed in the waste stream. Again all this within sight of a 400 home residential neighborhood.

35-3

The area of the city this is in is also one of the nicest. This will do nothing good for the property values.

Pumps will break down, scrubbers will fail, trucks will leak, spills will occur, hazardous material will come in with the garbage, and there is no way to prevent these things from happening within sight of a major residential area. This is the wrong place for the project !

35-4

I have lived in the area here for over twenty years and have worked in the area and the Business Park for longer. This is a wonderful place to live and raise a family, and the Park is a great neighbor. We all implore you to deny the permitting for Parallel Products Project. If you came and saw the area it would be obvious that it is not safe for the citizens and the state should protect it residents from the risks the approval would place on the people of New Bedford.

Sincerely,

William Andrews

941 Pine Hill Drive

New Bedford, MA 02745

Greg Wirsen

From: bdb ew <bdbew@yahoo.com>
Sent: Wednesday, January 22, 2020 9:42 PM
To: MEPA (ENV)
Subject: EEA#15990

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Dec 30 2019

Dear Secretary Theoharides,

I am requesting an extension on the permit review time for comments,,, we need more time to review the information and many residents are still finding out about this now. 60 days is a reasonable request. 36-1

Thank you,,,

William Andrews
941 Pine Hill Drive
New Bedford, Mass 02745

Secretary of Energy & Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114
Attn: MEPA Office

RECEIVED
OCT 31 2019
MEPA

RE: Parallel Products of New England, LLC

I am **strongly opposed** to the Parallel Products of New England, LLC Waste Transfer Station project at 100 Duchaine Boulevard, New Bedford, MA. We do not need this horrendous project in our neighborhood.

There is no good reason to impose a facility like this on a community that has plenty of capacity for the disposal of waste. We do not want to be the dumping ground of Southeastern Massachusetts. As a group we will use whatever means necessary to make sure our neighborhood is not dumped on!!

Sincerely,

Signature

William J. Pires

Name

WILLIAM J. PIRES

Address

1481 PHILLIPS RD. UNIT 1004 (NEW) MA 02745

Greg Wirsén

From: Alexia Orphanides <alexia_orphanides@yahoo.com>
Sent: Thursday, January 23, 2020 10:24 AM
To: MEPA (ENV)
Subject: EEA #15990

To Whom It May Concern:

I'm writing to express my serious concern about the Parallel Products proposed site. I have two children and live in New Bedford. My son received a heart transplant last year at the age of 5.5 months and suffers from severe susceptibility to illness and disease due to the immune-suppressants he must remain on for life. I am very concerned the toxic nature of the processing of biosolids for his sake and the rest of ours and our community. These are dangerous chemicals that pollute and contaminate for years. The city of New Bedford has been the dumping ground for so many manufacturers over the centuries--why should we allow this to continue? There are many other ways to generate real renewable energy, but the city, state, and nation need to focus more on promoting reduction in waste. 39-1

All of our property values will be seriously affected by this site due to contamination, noise, smell, vermin, and potential additional tax burden due to unknown volume of sewage discharge. We are already considering moving our family out of the city, and if this project continues, our decision to leave would be made much easier. A project like this impacts the national and international view of the state of Massachusetts as well. We will be seen as an example of what NOT to do to a community. 39-2

Thank you for your time,
Alexia Orphanides

Wixon, Josephine (EEA)

From: Ariane Lambert <arianemarie65@gmail.com>
Sent: Thursday, January 23, 2020 3:57 PM
To: MEPA (ENV)
Subject: EEA No.15990

Dear Secretary Theoharides,

My name is Ariane Lambert and I have been a resident of New Bedford for 31 years. I am writing to the MEPA office to express my full support of Parallel Products of New England, and their plan to develop a new industrial recycling and processing facility in the New Bedford Business Park. I am asking MEPA to observe the positive impacts the Parallel Products New England project can have on New Bedford and the Commonwealth of Massachusetts. 40-1

I stand in support of the Parallel Products South Coast Green Energy Center. New Bedford is in dire need of an efficient recycling facility, and I urge MEPA to understand such a need when evaluating the PPNE project.

I am asking MEPA to approve the Parallel Products New England Project. I am specifically supportive of the \$50 million dollar investment in the facility to ensure there are no environmental issues. I also support the PPNE project would create 75-100 jobs, will generate an additional 2.6 million dollars in wages to hourly workers, and 1 million dollars in taxes to the City of New Bedford.

I'm excited for the possibility of such a large economic investment into the community as well as, the economic and environmental benefits of such a facility.

I look forward to your response in addressing my support.

Sincerely,
Ariane Lambert
705 Coggeshall St.
New Bedford, MA 02746
508-717-7726

1481 Phillips Rd # 1407
New Bedford MA 02745
Jan 16 2020

Letter no. 41

RECEIVED

Secretary Kathleen Theoharides
Executive Office of Energy & Environmental Affairs
COTM: MEPA Office
SEA #15990
100 Cambridge St Suite 900
Boston, MA 02114
01/16/2020

MEPA

Dear Secretary Theoharides:

My name is Barbara J. Bauckard and I have lived in New Bedford for the past 8 1/2 years at 414 Phillips Road.

I am writing to the MEPA office to express my opposition to Parallel Products of New England (PPNE), a sludge plant operating in my neighborhood.

I am asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental, Inc. hired by PPNE. I am concerned with the excessive traffic, noise pollution & speed of three vehicles going down Phillips Rd at well above the speed limit of 25 MPH as there is a school nearby, children crossing the road, school buses stopped to allow the children to safely cross the road. Also I am concerned for the ecological impact to wetlands in the area.

I look forward to your response in addressing my concerns.

Sincerely,

Barbara J. Bauckard
(508) 997 2106

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114

RECEIVED

JAN 13 2019

MEPA

January 8, 2020

Dear Secretary Theoharides,

My name is Becca Kurie and I have been a resident of New Bedford for more than six years. Last fall, my husband and I purchased a home on Phillips Road, right next to the Parallel Products facility and proposed expansion. Of course, at the time we did not know of Parallel Products plans nor of the fact that our homebuilder was working directly with the Parallel Products leaders to build homes for their employees that would be hired as part of this proposed expansion. Now I know why they so eagerly agreed to our requests to install a fence and a patio area for us – they wanted the house agreed to and sold before the plans became public.

I am writing the MEPA office to express my opposition to Parallel Products of New England (PPNE)- a sludge plant operating in my neighborhood. I am asking MEPA to do its due diligence in studying the environmental impacts of the PPNE project and to address my concerns in your evaluation of PPNE and the Draft Environmental Impact Report (DEIR).

As a resident of New Bedford, and a community member, I stand with the hundreds of residents against this project. New Bedford has dealt with numerous environmental justice issues, and I implore MEPA not to make the same mistake with PPNE.

I am asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental, Inc. hired by PPNE. In MEPA's study of the environmental impacts of PPNE and I am specifically concerned with following:

1. Odors and noises from both the plant and the trucks; which I've now learned will be running around the clock, 7 days a week, essentially in my family home's backyard 42-1
2. The impact on property values as the Far North End has always been a highly-desired place to live 42-2

I am a mother of a young son who will attend Pulaski School and am expecting a daughter in the spring. I'm deeply concerned about the pollution that will affect my children's education, health and well-being. When we bought our home, we envisioned our children exploring the woods behind our home for hours on end, like my husband and I both did at our respective family homes in Minnesota and New Hampshire. If this project goes through, I will not feel comfortable sending my children outside, on our own land, for their health and safety's sake. 42-3

I look forward to your response in addressing my concerns.

Sincerely,
Becca Kurie
1687 Phillips Road, New Bedford, MA 02745
612-390-0457



Thank you.

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date: 1/6/2020

RECEIVED

JAN 29 2020

MEPA

Secretary Theoharides,

I appreciate the expanded response time you have given us to make our concerns known regarding the recently released **Draft Environmental Impact Report (DEIR) EEA No 15990**, which assesses **Parallel Products of New England, (PPNE)** of 100 Duchaine Ave, New Bedford, MA 02745, an industry proposing to do recycling of cans, bottles and a Waste Plant involving /sludge/Bio-solids and the real possibility of gasification and ethanol production.

IMMEDIATE IMPRESSIONS/CONCERNS

Since the plant is not operational, how can the resulting data, measurements and times be accurate? This "research" was developed by The Green Medal Environmental, Inc., a company hired by and paid for by PPNE. It gives the sense that the report is biased.

43-1

MEPA be conducting an independent evaluation of their own?

QUALITY OF LIFE ISSUES

Industrial Noises

Unpleasant Odors (the smell of alcohol already present).

Air and Environmental Pollution with the release of toxins through plumes and dumping.

Creating and worsening already existing health issues.

Increased Traffic utilizing infrastructure designed for passenger cars.

Over 350 big trucks utilizing neighborhood roads daily.

Idling trucks, back up bells, uncovered loads.

Already compromised highway exit ramps leading into the Industrial Park which results in traffic congestion that involves school buses and Emergency Vehicles from Ambulances, Police and Fire.

Increased rail disturbances; whistles, vibrations, traffic delays at rail crossings, accident potentials with signal failures

The very real possibility of truck and train accidents resulting in toxic spills

Devaluation of properties; residential and business.

Unable to use our outdoors for recreation and relaxation. (Backyards and Park)

43-2

HOURS AND DAYS OF OPERATION YET TO BE DETERMINED.

THIS IS A PROPOSAL THAT WILL RUIN OUR LIVES ON MANY LEVELS.

I look forward to a reply from MEPA that will be favorable to a community who works hard to improve its city and has suffered way too many environmental setbacks.

Respectfully submitted,

Betty G. G. G.
20 Greenfield St
New Bedford, MA 01913

January 22, 2019

RE: EEA 15990 Parallel Products

I am writing in regards to my concerns and the concerns of the residents in the surrounding areas on the Parallel Products project which is a proposed expansion at 100 Duchaine Blvd. in the New Bedford Industrial Park. The Industrial Park as well as the proposed expansion abuts heavily populated neighborhoods, in which is an elementary school, and we are concerned that this expansion will have a detrimental effect on this community.

44-1

There are many concerns with the processing of MSW and biosolids at this facility, health concerns of toxins being emitted into the air, odor, as well as issues with the proximity to wet lands.

44-2

Other issues effecting the quality of life in the area from this project would be noise, air pollution from the processing and, with the increase of truck traffic going into this facility every day, air quality from the diesel emissions.

44-3

While air quality is a major concern there is also traffic issues. With the many trucks making their way into the facility this is adding more traffic congestion into an already high traffic area.

44-4

Due to the fact the DEIR is more than 1300 pages I ask that you consider a 60 – 90 day extension so concerned citizens have time to read the document in order to make informed comments.

44-5

I ask you to carefully review this project and to consider the neighborhood's concerns which are stated above and to their quality of living.

Sincerely,

Brad Markey

City Councilor Ward 1

Secretary Kathleen Theoharides
 Executive Office of Energy and Environmental Affairs
 Atten: MEPA Office
 EEA No.15990
 100 Cambridge Street Suite 900
 Boston, MA 02114
 DATE 1/13/2020

RECEIVED

JAN 16 2020

Executive Office of Energy
 & Environmental Affairs

Dear Secretary Theoharides,

In early February of this year, the discovery through an anonymous mailing, that a recycling operation was slated to develop in our residential area was shocking. In addition, it was revealed that the Industry included a Sludge/Bio-Solid processing project. This news set off alarms of concern and fear. The company in question, Parallel Products of New England,(PPNE), 100 Duchaine Blvd. New Bedford, MA 02745, was expanding their glass and can recycling business into the Business Park.

A community meeting was held in the nearby elementary school, and an invitation to PPNE Vice President, Tim Cusson, was sent to have him educate the community about his project. It is more than fair to state that this tutorial was less than adequate. It did nothing to allay our concerns, but in fact create more concerns, anxiety and questions. It was evident that the presenters were not familiar with the area.

45-1

This spawned the development of grassroots groups which:

- Held their own researched informational meetings
- The development of a petition
- Letter writing to environmental agencies
- A rally
- Meetings with local and state legislators,
- Flyers and yard signs
- Social media sites, newspaper and radio announcements

to create awareness of this invasive, noisome, noxious, industry that would ruining our lives.

These above mentioned activities led us to realize, with great relief, that a DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) would be filed and sent to MEPA for evaluation of the proposed industry. It was widely believed that PPNE would be deemed unsuitable for certification in their desired location, due to the fact that it would be adjacent to residential housing, many established businesses and two elementary schools and for the following

Quality of Life Negative Impacting Reasons:

INDUSTRIAL NOISES

ODORS and TOXIC AIR, POLLUTION

INCREASED TRAFFIC (350-400 big trucks a day) diesel fumes, back up bells, idling

The ROUTE these trucks would be utilizing which will interfere with already compromised school bus routes, trucks would prefer to use an exit that would have these 18 wheelers passing through residential areas

RAIL noises, train whistles

The very real possibility of ACCIDENTS involving these trucks and trains that would spill volumes of toxic liquids

DEVALUE PROPERTIES

HOURS AND DAYS OF OPERATION YET TO BE DETERMINED!

45-2

The DEIR investigation is suspect for at least two reasons:

1. Since the plant is not operational, the data and measurements can only be **SPECULATIVE AND A QUESSTIMATE**.
2. This "research" was written by THE GREEN MEDAL ENVIRONMENTAL, Inc. and **paid for by PPNE**. Could this be a bit prejudicial?

45-3

We implore MEPA to scrutinize this DEIR report and peruse each line of the 1,300+ page report.

We are counting on our protective environmental agencies to do just that, protect and support the hardworking residents of a community that has had more than its share of toxic clean ups and environmental issues.

We are aware of your heavy responsibility and appreciate the extension time allotted to write you.

We pray that you will be guided with wisdom and fairness.

Thank you for your attention to these matters.

Name: Brittney Furtado Address: 118 Greenbrier Drive
 City: New Bedford State: MA Zip Code: 02745
 Phone (H): _____ (Cell) 774 301 6090
 E-Mail: Brittney.furtado.1@apl.com

RECEIVED

JAN 13 2019

MEPA

Carl Anctil
86 Mate Drive
New Bedford, MA 02745

January 5, 2020

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
EEA No. 15990
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Theoharides,

I **strongly oppose** the waste, recycling, trash, and sludge facility proposed by Parallel Products of New England moving into the New Bedford business park. This move would have a hugely negative effect on our neighborhood. We do not want the air pollution, the smell, the noise, the traffic, and/or to be a dumping ground for surrounding areas.

46-1

My Neighbors and I do not want this facility!

Thank You for your time and consideration!

Carl Anctil



86 Mate Drive
New Bedford, MA 02745

January 3, 2020

Executive Office of Energy and Environmental Affairs
Attn: MEPA Office EEA No 15990
100 Cambridge Street, Suite 900
Boston, MA 02114

RECEIVED

JAN 07 2019

MEPA

Subject Line: EEA No. 15990

Dear Secretary Theoharides;

I am writing to express my concerns regarding the Parallel Products Biosolids Processing facility proposed for the Business Park in New Bedford.

My first concern is the current deadline citizens have been given to respond to the Draft Environmental Impact Report submitted for this project. I am requesting that the deadline for the public comment period be extended 90 days to April 2020.

47-1

The main concern that I have regarding this project is the proximity to the surrounding residential neighborhoods. The processing of biosolids should not take place near people's homes or children's schools. This proposed project is TOO CLOSE to the buffer zone and too many people will be affected by the proposed operations.

47-2


The open-air trucks and containers in which the materials will be transported and stored and additional traffic that will be added to an already congested area will create significant inconvenience and health issues as well as additional road damage requiring maintenance and repairs. I'm worried we will see those costs reflected in our taxes and this will decrease our property values.

47-3

47-4

Please take a site visit and drive on Phillips Road, New Bedford MA and see these concerns for yourself. You will also see at least a dozen signs on the abutting neighbor's properties objecting to this project. Please ADD my name on file as an objection to this project.

Thank You.


Carl E. Roza
28 Angelica Avenue
New Bedford, MA 02745

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date: 1/17/20

RECEIVED

MEPA

Dear Secretary Theoharides,

First, let me thank you for extending the comment time regarding the DEIR. (Draft Environmental Impact Report) This tome takes much time to read, research and digest, particularly during this very hectic and stressful time of year.

I believe in saving our planet. I believe in being GREEN:
RECYCLING REUSE REPURPOSING BIO-DEGRADABLES NO MORE LANDFILLS NO INCINERATION
REGULATING EMISSIONS RENEWABLE ENERGIES COMPOSTING CONSERVATION
PROTECTING LAND, ANIMALS, WATERS REFORESTING ZERO WASTE

What I have difficulty comprehending is how an industry that is proposing to pursue and achieve these ideals, omits supporting what should be a top priority, the reason for all these regulations and legislations, and that is; to support the well being, safety and health of HOMO SAPIENS.

When industries crop up, wild life is impacted. Animals are displaced and trees and plants are destroyed. Acceptable levels of noise, pollution, carcinogens, increase in large vehicular traffic, become the norm. Is this to be the fate of the people who have worked hard to buy and up keep homes? Quality of life issues are ignored. Properties lose their value, the choice is stick it out and take a chance that it won't be too bad or move away. It seems animals and plants receive more protection than people!

Does it make sense to have these GREEN INDUSTRIES invade and displace those who have settled here for many decades?

Wouldn't it make sense to have these industries locate in areas that would be far removed from communities? Sometimes good ideas are put in the wrong place.

48-1

We are counting on MEPA investigators to see the discrepancies in the DEIR. It seems implausible that correct measurements can be obtained when the industry is not even operational. It is also sobering to realize that the DEIR was assigned to The GREEN MEDAL ENVIRONMENTAL, INC. and paid for by Parallel Products of New England, the industry in question. PPNE and Green Medal are strangers to the area. They impact, worry about their bottom line and move on.

48-2

Thank you for the opportunity to voice my concerns regarding quality of life issues for family, neighbors and community.

Respectfully submitted,

Name: Carol Sherman Address: 19 Greenbrier Ct
City: New Bedford State: MA Zip Code: 02745
Telephone (H): _____ Cell: _____
E-Mail: _____

1075 Braley Road
New Bedford, MA 02745
December 9, 2019

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office
EEA No. 15990
100 Cambridge Street, Suite 900
Boston, MA 02114

RECEIVED

DEC 16 2019

MEPA

Dear Secretary Theoharides

Reference: EEA No. 15990

I am once again writing to the Commonwealth Office of Energy and Environmental Affairs regarding Parallel Products of New England located here in New Bedford, Massachusetts. I am adamantly opposed to Parallel Products receiving ANY Certificates to expand their operations.

I have lived in my home here on Braley Road since 1972 (47 years). Less than a month ago, I, along with other area residents, received a letter from Green Seal Environmental, Inc., located in Sagamore Beach, Mass. dealing with Phase 1—Construction of a Glass Recycling Facility; Phase 2—Construction of MSW Processing Facility and a Biosolids Facility; Traffic Impact Study; Air Emissions Mitigation Design and Impacts Analysis, etc. This report was done, paid for, and written by Green Seal Environmental, Inc., who is working for Parallel Products of New England (footer on each page has Parallel's corporate office home address, phone number, and website). To me, this entire report is askew. The data on the impact of traffic here is laughable. There is no reference as to the time of day or times of day the study was conducted. What time of year was the traffic study done? I can tell you first hand that it, depending on the time of day, can take me a good 3 to 5 minutes to back out of my driveway. When school (about 700 students) is opening in the morning, the street is gridlock for at least 45 minutes, and if there is snow, the crawl up and down the street is even worse. In the afternoon, once again with the school traffic, Braley Road is a slow crawl. From the exit ramp to my house can take me a good 5 to 7 minutes—I do not live at the intersection of Braley Road and Acushnet Avenue; I live half way up the street.

49-1

Did the Commonwealth of Massachusetts do a traffic study? I certainly know that when cities or town request a traffic light for an intersection the Commonwealth does a study to see if the conditions deem the light is necessary. If a city or town wishes to put a "Stop Sign" at an intersection, the city or town, once again, collects the necessary data to grant or reject the "Stop Sign."

49-2

For this report to state that there is very little impact on the traffic, is just plain wrong. With the possibility of 209 trucks entering and 209 trucks exiting the Business Park and taking the Exit 7

ramp onto Route 140 will, without a doubt, slow the traffic to crawl during the morning and afternoon shifts.

The next major issue is dealing with the Municipal Sewage Waste some of which or most of which will be transported via truck. What environmental impact will happen if a truck or trucks are involved in an accident and the contents of the truck spill onto the roadways, residents' property, or into the wetlands—remember, the New Bedford Business Park is built on the Great Cedar Swamp? This would be a huge health and environmental issue.

49-3

Air quality. When time of day or times of day did the Green Seal Environmental conduct the air quality testing? What season was the testing done? Parallel Products of New England is located close to residential properties. There are presently new houses built abutting the company's land. Did the Commonwealth of Massachusetts' EPA conduct any air quality testing? If so when?

49-4

For all the reasons I have stated here, I am hoping that your agency will not grant Parallel Products of New England any licenses. I also feel that your agency, Office of Energy and Environmental Affairs, MEPA, and Mass DEP come to New Bedford to have a meeting with the residents of the city to hear our concerns and complaints.

Sincerely



Carol Strupczewski

From: cstrupczewski@verizon.net
To: rrcrt@aol.com; sandrasylvia21@yahoo.com; ritalapre@gmail.com; arauiotheresa@yahoo.com; gertie456@comcast.net; cbostiguy@gmail.com; dds52@comcast.net; jbarnes@s-t.com; [Canaday, Anne \(EEA\)](mailto:Canaday, Anne (EEA)); wallacetracy99@gmail.com; graca1030@hotmail.com; claire@toxicsaction.org; macarocos@yahoo.com; mommymelo05@yahoo.com; anisagrace@yahoo.com; margaretjohn1015@aol.com; antonio.cabral@mahouse.gov; chris.hendricks@mahouse.gov; christopher.markey@mahouse.gov; paul.schmid@mahouse.gov; william.straus@mahouse.gov; michael.moynihan@masenate.gov; mark.montigny@masenate.gov; Ian.Abreu@newbedford-ma.gov; Naomi.Carney@newbedford-ma.gov; Debora.Coelho@newbedford-ma.gov; Hugh.Dunn@newbedford-ma.gov; Brian.Gomes@newbedford-ma.gov; Dana.Rebeiro@newbedford-ma.gov; Linda.Morad@newbedford-ma.gov; Joseph.Lopes@newbedford-ma.gov; Brad.Markey@newbedford-ma.gov; Maria.Giesta@newbedford-ma.gov; Scott.Lima@newbedford-ma.gov; Jon.Mitchell@newbedford-ma.gov; kristine.arsenault@newbedford-ma.gov; [MEPA \(ENV\)](mailto:MEPA (ENV)); [zzzBuckley, Deirdre \(EEA\)](mailto:zzzBuckley, Deirdre (EEA)); [Schluter, Eve \(FWE\)](mailto:Schluter, Eve (FWE)); [Wixon, Josephine \(EEA\)](mailto:Wixon, Josephine (EEA)); alexander.stryski@mass.gov; [Patel, Purvi \(EEA\)](mailto:Patel, Purvi (EEA)); [Czepiga, Page \(EEA\)](mailto:Czepiga, Page (EEA)); [Strysky, Alexander \(EEA\)](mailto:Strysky, Alexander (EEA)); [Flaherty, Erin \(EEA\)](mailto:Flaherty, Erin (EEA))
Subject: Re: Parallel
Date: Tuesday, November 19, 2019 8:10:42 AM

I also read the article and realized that much of the information in it was from the letter that I received along with my neighbor as well as others. Remember the company, Green Seal Environmental, Inc., who conducted the study, report and wrote the letter, was paid by Parallel Products whose Corporate Office address and website are clearly indicated on all pages of the letter and pages of the brief breakdowns of Project Description and Phases. What didn't come out in the report and when Parallel Products of New England hosted a public community meeting in the Spring of the year was what time or times of day did the traffic study occur, what time or times of day did the air quality testing occur--remember the weather was still cold compared to summer with those hazy hot and humid days. The sad thing is that the residents and taxpayers of the city never had the opportunity to meet with and expresses their concerns, quality of life issues, and get answers from the Mass DEP officials. We, residents of the Far North End some who live closer to Parallel Products than I do, will be the ones living with this company's operations which was stated is in operation 24 hours daily. I rather doubt that ALL those trucks making deliveries to Parallel will be using Exit 7 even with signage at Exit 5--signs mean NOTHING WITHOUT ENFORCEMENT, I see it here on Braley Road daily.

50-1

-----Original Message-----

From: Ron <rrcrt@aol.com>
To: sandrasylvia21@yahoo.com; ritalapre@gmail.com; arauiotheresa@yahoo.com; gertie456@comcast.net; cbostiguy@gmail.com; dds52@comcast.net; jbarnes@s-t.com; anne.canaday@mass.gov; wallacetracy99@gmail.com; graca1030@hotmail.com; claire@toxicsaction.org; macarocos@yahoo.com; mommymelo05@yahoo.com; anisagrace@yahoo.com; cstrupczewski@verizon.net; margaretjohn1015@aol.com; Antonio.Cabral@mahouse.gov; Chris.Hendricks@mahouse.gov; Christopher.Markey@mahouse.gov; Paul.Schmid@mahouse.gov; William.Straus@mahouse.gov; Michael.Moynihan@masenate.gov; Mark.Montigny@masenate.gov; Ian.Abreu@newbedford-ma.gov; Naomi.Carney@newbedford-ma.gov; Debora.Coelho@newbedford-ma.gov; Hugh.Dunn@newbedford-ma.gov; Brian.Gomes@newbedford-ma.gov; Dana.Rebeiro@newbedford-ma.gov; Linda.Morad@newbedford-ma.gov; Joseph.Lopes@newbedford-ma.gov; Brad.Markey@newbedford-ma.gov; Maria.Giesta@newbedford-ma.gov; Scott.Lima@newbedford-ma.gov; Jon.Mitchell@newbedford-ma.gov; kristine.arsenault@newbedford-ma.gov; mepa@mass.gov; deirdre.buckley@mass.gov; eve.schluter@mass.gov; josephine.wixon@mass.gov; alexander.stryski@mass.gov; purvi.patel@mass.gov; page.czepiga@mass.gov; alexander.stryski@mass.gov

<alexander.strysky@mass.gov>; erin.flaherty <erin.flaherty@mass.gov>; sandrasylvia21
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<araujotheresa@yahoo.com>; gertie456 <gertie456@comcast.net>; cbostiguy <cbostiguy@gmail.com>;
dds52 <dds52@comcast.net>; macarocos <macarocos@yahoo.com>; mommymelo05
<mommymelo05@yahoo.com>; anisagrace <anisagrace@yahoo.com>; cstrupczewski
<cstrupczewski@verizon.net>; margarejohn1015 <margarejohn1015@aol.com>
Sent: Tue, Nov 19, 2019 12:00 am
Subject: Re: Parallel

Did they do a traffic study off of the ramps of route 140, and when school is in session?

Looks like a FIX

Ron R. Cabral

Parallel Products would slow traffic, but only slightly, report says

NEW BEDFORD — Parallel Products' proposed waste facility would slow the movement of traffic on weekday mornings at two intersections, but only slightly, and would meet state standards for noise, air quality and odor, according to a new draft report.

The Draft Environmental Impact Report, required for state permitting, [shows](#) that certain drivers at the entrance to the New Bedford Business Park at Theodore Rice Boulevard could experience longer wait times during peak weekday-morning traffic.

Parallel already handles plastic waste in the business park. The company is planning a \$50 million expansion to recycle glass, turn pre-treated sewage into fertilizer, and handle municipal waste.

Ratings of traffic function, or "level of service," are expected to drop from a "B" to a "C" for northbound vehicles and for eastbound vehicles turning left or driving straight, with delays increasing by about one second.

The report compares current traffic function at each intersection with two future scenarios: traffic in the year 2026 if Parallel Products' facility gets built, and

traffic the same year if it does not.

The westbound approach to Theodore Rice Boulevard already operates at an “F” rating during peak hours, with delays greater than 50 seconds. If Parallel Products goes forward, the report predicts delays would remain greater than 50 seconds but does not indicate how high they would go.

Inside the park, southbound drivers turning left at the intersection of Theodore Rice Boulevard and Duchaine Boulevard would experience a traffic downgrade from a “C” to a “D” from Parallel Products during peak traffic on weekday mornings. The delay is predicted to increase from 23.8 seconds to 25.4.

Green Seal Environmental prepared the report on behalf of Parallel Products. It consists of two parts totaling more than 1,300 pages, including charts, maps and attachments.

Despite the downgrades in levels of service, the report concludes that Parallel Products would not have a major effect on traffic.

“Overall, traffic operations within the study area are not expected to be significantly impacted by the proposed project,” the report says.

New Bedford Mayor Jon Mitchell and the City Council have said they oppose the project.

City officials received the report Friday and are working to prepare a response, City Solicitor Mikaela McDermott said.

“The City remains committed to a robust opposition of the project and intends to closely scrutinize every aspect of the report,” she said in an email.

Tim Cusson, a vice president at Parallel Products, said his company is pleased with the draft report and looks forward to discussing it with the community.

“We want to be a good community partner and have worked closely with our team of engineers to design a project that contributes to New Bedford’s economy and sustainable practices without impacting the quality of life of our neighbors,” he said.

Regarding the traffic, Cusson pointed out that the greatest delay is 1.6 seconds. Parallel Products would be happy to work with the city to improve the traffic situation around the business park, he said.

To evaluate noise, Green Seal conducted testing at four residential locations. The company determined that noise levels would meet Massachusetts Department of Environmental Protection policy.

The company evaluated potential air pollution from the boiler, dryers, diesel trucks, and other sources, plus potential odor from the proposed biosolids and municipal waste processing. According to the report, emissions and odor would comply with all applicable standards.

The report says the size of the site is “exceptionally suitable” for a solid waste facility.

From: [Czepiga, Page \(FEA\)](#) on behalf of [MEPA \(ENV\)](#)
To: [Stryky, Alexander \(FEA\)](#)
Subject: Fwd: EEA #15990
Date: Thursday, January 23, 2020 7:46:19 PM

From: bricketth@aol.com <bricketth@aol.com>
Sent: Thursday, January 23, 2020 4:22 PM
To: MEPA (ENV)
Subject: EEA #15990

I wish to comment about the proposed expansion of the Parallel Products company in the New Bedford MA business park.

First, I ask that you consider extending the comment period which ends today since I know quite a few New Bedford residents that wish to be heard on this matter, and haven't had time to gather all their info due to the holidays and their work schedules. 51-1

Traffic: I am opposed to this proposed expansion on many grounds. One is the extreme increase in truck traffic it would cause. Traffic reports used in the proposal were based on erroneous analysis comparing this situation to Rochester. This is NOT a valid comparison in my view. Traffic backups are already a daily problem in our nearby neighborhood, and adding many trucks a day would be horrible. 51-2

Odor: the company's ideas for odor control still present causes for concern. The odor from sludge burning will permeate our neighborhood. Chemicals will be used to wash the buildings, and then will be in the air and business park woods, as well as our beautiful new playground on Phillips Rd. 51-3

Property value decrease: When proposed smokestacks are visible, that as well as traffic and especially odor, will significantly lower our property values, as well as our quality of life here in the north of New Bedford. 51-4

Health risks: I am extremely concerned about the added risk of asthma and respiratory disease. 51-5

Wetlands: Side rail construction through our wetlands poses possibilities of spills and dangerous contamination. 51-6

Parallel Products has proven to be a repeat violator of nuisance contracts and cleanliness rules when they were in Taunton, and also in their existing operation in new Bedford (so called "Phase ONE") I don't trust this company to keep to the rules in the business park, and am afraid we might lose some other good businesses there due to these same concerns (odor, traffic, etc). 51-7

Waste and recycling problems should NOT be addressed by bandaids solutions that cause more longstanding damage.

Thank you for your consideration.

Sincerely, Catherine Brickett Hatten

**Energy & Environmental Affairs**
Public Comments Portal

alexander.stryisky@mass.gov

View Comment

Comment Details

EEA #/MEPA ID*	First Name	Address Line 1	Organization
15990	Charles	106 Birchwood Drive	--
Comments Submit Date	Last Name	Address Line 2	Affiliation Description
11-22-2019	Kennedy	--	Individual
Review Due By	Phone	State	Status
1-15-2020	--	MASSACHUSETTS	Opened
Reviewer	Email	Zip Code	
Alex Stryisky 617-626-1025	cfkennedy1956@gmail.com	02745	

Comments

Topic: DEIR comment period

I would like to see the comment period extended by another 60 days. The DEIR is over 1300 pages long and will take a considerable amount of time to be read and digested. This is a detailed report and must be read closely. Most people concerned with this project have full time jobs and are limited on the amount of time they can put into focusing on this document on a daily basis. Thank you for your consideration.

52-1

Attachments**Update Status**

Status

Opened ▼

SUBMIT

Share Comment

SHARE WITH A REGISTERED USER

[BACK TO SEARCH RESULTS](#)

Greg Wirsen

From: Charles Kennedy <cfkennedy1956@gmail.com>
Sent: Monday, January 20, 2020 12:36 PM
To: MEPA (ENV)
Subject: Project# 15990

Dear Secretary Theoharides,

My name is Charles Kennedy. I have been a resident of New Bedford for thirty-seven years. I am writing to express my opposition to Parallel Products of New England, Inc.(PPNE) as they want to construct a municipal solid waste transfer station and a biosolids drying facility in extremely close proximity to several large residential neighborhoods in the city of New Bedford. I am asking the MEPA office to do its due diligence in studying the environmental impacts of the PPNE project and address my concerns in your evaluation of PPNE and the Draft Environmental Impact Report (DEIR).

As a community member I stand with hundreds of residents against this project. New Bedford has dealt with numerous environmental justice issues and I implore the MEPA office not to make the same mistake with PPNE.

I am asking MEPA to reject the DEIR submitted by Green Seal environmental, Inc., hired by PPNE. In MEPA's study of the environmental impacts of the PPNE project, I am specifically concerned with the following issues:

-- Air coming from these facilities, as they are in such close proximity to large residential neighborhoods. 53-1

Baseline health data noted in section 3.0 (Baseline health) of the DEIR, shows the incidence of many forms of cancer, asthma, COPD, and acute myocardial infarctions in New Bedford are significantly higher than the state average for these diseases.

If this project is permitted to move forward it will adversely effect the health of thousands of New Bedford residents living in these neighborhoods. A good percentage of these people are retired and elderly.

Air pollution from the diesel engines driving these rail cars and the hundreds of diesel trucks coming and going to this facility will further reduce the air quality.

It's hard to believe, as stated in the study conclusions of the DEIR, that it will be in compliance with all Mass Dept. of Environmental Protection regulations as pertaining to Air Quality given the type of industry involved, namely, biosolids drying and municipal solid waste! 53-2

--Traffic 53-3

Already a very busy area especially on Braley Road. Three areas on Braley Road are quite frequently congested with traffic; Pulaski School, the junction with Rt. 140, and the intersection with Phillips Road at the entrance to New Bedford Business Park.. The addition of 400 trucks coming and going will significantly hinder traffic flow on Braley Road. The traffic study in the DEIR based their conclusions on existing traffic at a comparable industry in Rochester, MA . That is fundamentally wrong because traffic at that location is no where near as busy as it is on Braley Road in New Bedford.

Truck traffic along Phillips Road will also significantly increase adjacent to residential neighborhoods, and a well used basketball park creating concern for potential vehicular and pedestrian accidents.

PPNE claims trucks will not be allowed to use the Phillips Road exit off Rt. 140 to drive down Phillips Road to enter NB Business Park at Barnett Blvd.. The problem with that is there's no plan in place to enforce it.

-- Adverse impact on Acushnet Cedar Swamp, a large preserve for Atlantic White Cedar Trees and home to abundant wildlife. 53-4

The storm drainage from this facility would ultimately flow into Acushnet Cedar Swamp. Already PPNE has received a Cease and Desist Order from the New Bedford Conservation Commission for not complying with Wetland Protection Act regulations!!! This should be a RED FLAG as to how they will act in the future! To allow this group to build this type of industry in such a sensitive area is WRONG every which way you look at it!

-- Property values

Undoubtedly, property values are going to drop significantly if this project is allowed to go forward. This will drop New Bedford's tax base and make it difficult for residents desiring to move to escape the hazards of living near this industry. 53-5

-- Noise

This facility along with the increased truck traffic and train traffic will significantly increase noise in the residential neighborhoods further diminishing the quality of life. I have already been listening to the increased noise over the last year as PPNE has been demolishing structures on the property and as pay loaders work in their glass recycling business. The noise study in the DEIR claims the increase over existing noise will not be greater than 8 decibels. This is hard to believe. Once again, due diligence needs to be performed in reviewing this DEIR. 53-6
--- RATS!

Another concern with this type of industry is animals such as rats and other scavengers that will be drawn to it. Also, the multitudes of Sea Gulls that will be all around. No doubt they will spread out, carrying diseases with them, and being potentially dangerous to residents nearby. Scavengers such as raccoons and foxes frequently carry the rabies disease and can be a real danger to residents!! 53-7

My wife and I are retired and have lived on Birchwood Drive in Pine Hill Acres for 21 years. We are one house removed from Phillips Road and are literally a "stone's throw" from the PPNE property. I enjoy being outside doing gardening and landscaping and maintaining our property. We truly enjoy our property location. I know that the prevailing wind comes out of the west year round and consequently, we will be getting all the odors, noise and pollutants coming from this industry if allowed to be permitted. Please do not allow this project to be permitted here or in any residential setting. Thank you, in advance, for your due diligence.

Sincerely,
Charles F. Kennedy
106 Birchwood Drive
New Bedford, MA. 02745
508-995-9061

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No.15990
100 Cambridge Street Suite 900
Boston, MA 02114



12-27-2019

Dear Secretary Theoharides,

Our names are Claudia & Stanley Koska and we have been residents of New Bedford for 30 years. We are writing the MEPA office to express our opposition to Parallel Products of New England (PPNE)- a sludge plant operating in our neighborhood. We are asking MEPA to do its due diligence in studying the environmental impacts of the PPNE project and to address our concerns in your evaluation of PPNE and the Draft Environmental Impact Report (DEIR).

As residents of New Bedford, and community members, we stand with the hundreds of New Bedford residents against this project. New Bedford has dealt with numerous environmental justice issues, and we implore MEPA not to make the same mistake with PPNE.

We are asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental, Inc. hired by PPNE. In MEPA's study of the environmental impacts of PPNE and we are specifically concerned with following:

Air pollution, odors, and noises from both the plant and the trucks;
The increased traffic of 400 industrial trucks and the destruction to the environment and roads
Noise and pollution from trains;
The impact on the schools in close proximity;
Adverse impact on Endangered, Threatened or Special Concern species, on Ecologically Significant Natural Communities or on any state Wildlife Management Area (310 CMR 16.00);
Impact on property values and surrounding businesses.
The adverse effects of this plant on community members' physical health

54-1

We look forward to your response in addressing our concerns.

Sincerely,

Claudia Koska
Stanley Koska

79 Angelica Ave.
New Bedford, MA 02745
(508)995-2184

Secretary Kathleen Theoharides
 Executive Office of Energy and Environmental Affairs
 Atten: MEPA Office
 EEA No.15990
 100 Cambridge Street Suite 900
 Boston, MA 02114
 DATE 12/1/2019

RECEIVED
 DEC 06 2019
 MEPA

Dear Secretary Theoharides,

In early February of this year, the discovery through an anonymous mailing, that a recycling operation was slated to develop in our residential area was shocking. In addition, it was revealed that the industry included a Sludge/Bio-Solid processing project. This news set off alarms of concern and fear. The company in question, Parallel Products of New England, (PPNE), 100 Duchaine Blvd. New Bedford, MA 02745, was expanding their glass and can recycling business into the Business Park.

A community meeting was held in the nearby elementary school, and an invitation to PPNE Vice President, Tim Cusson, was sent to have him educate the community about his project. It is more than fair to state that this tutorial was less than adequate. It did nothing to allay our concerns, but in fact create more concerns, anxiety and questions. It was evident that the presenters were not familiar with the area.

55-1

This spawned the development of grassroots groups which:

- Held their own researched informational meetings
 - The development of a petition
 - Letter writing to environmental agencies
 - A rally
 - Meetings with local and state legislators,
 - Flyers and yard signs
 - Social media sites, newspaper and radio announcements
- to create awareness of this invasive, noisome, noxious, industry that would ruin our lives.

These above mentioned activities led us to realize, with great relief, that a DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) would be filed and sent to MEPA for evaluation of the proposed industry. It was widely believed that PPNE would be deemed unsuitable for certification in their desired location, due to the fact that it would be adjacent to residential housing, many established businesses and two elementary schools and for the following

Quality of Life Negative Impacting Reasons:

INDUSTRIAL NOISES

ODORS and TOXIC AIR, POLLUTION

INCREASED TRAFFIC (350-400 big trucks a day) diesel fumes, back up bells, idling

The ROUTE these trucks would be utilizing which will interfere with already compromised school bus routes, trucks would prefer to use an exit that would have these 18 wheelers passing through residential areas

RAIL noises, train whistles

The very real possibility of ACCIDENTS involving these trucks and trains that would spill volumes of toxic liquids

DEVALUE PROPERTIES

HOURS AND DAYS OF OPERATION YET TO BE DETERMINED!

55-2

The DEIR investigation is suspect for at least two reasons:

1. Since the plant is not operational, the data and measurements can only be **SPECULATIVE AND A QUESSTIMATE**.
2. This "research" was written by THE GREEN MEDAL ENVIRONMENTAL, Inc. and paid for by PPNE. Could this be a bit prejudicial?

55-3

We implore MEPA to scrutinize this DEIR report and peruse each line of the 1,300+ page report.

We are counting on our protective environmental agencies to do just that, protect and support the hardworking residents of a community that has had more than its share of toxic clean ups and environmental issues.

We are aware of your heavy responsibility and appreciate the extension time allotted to write you.

We pray that you will be guided with wisdom and fairness.

Thank you for your attention to these matters.

Sincerely,

Glaudia B. Ostiguy

426 Valley Road

New Bedford, MA 02745

CBOSTIGUY@GMAIL.COM

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date: December 16, 2019

Secretary Theoharides,

I appreciate the expanded response time you have given us to make our concerns known regarding the recently released **Draft Environmental Impact Report (DEIR) EEA No 15990**, which assesses **Parallel Products of New England, (PPNE) of 100 Duchaine Ave, New Bedford, MA 02745**, an industry proposing to do recycling of cans, bottles and a Waste Plant involving /sludge/Bio-solids and the real possibility of gasification and ethanol production.

IMMEDIATE IMPRESSIONS/CONCERNS

Since the plant is not operational, how can the resulting data, measurements and times be accurate? This "research" was developed by The Green Medal Environmental, Inc., a company hired by and paid for by PPNE. It gives the sense that the report is biased.

56-1

Will MEPA be conducting and independent evaluation of its own?

QUALITY OF LIFE ISSUES

56-2

Industrial Noises

Unpleasant Odors (the smell of alcohol already present).

Air and Environmental Pollution with the release of toxins through plumes and dumping.

Creating and worsening already existing health issues.

Increased Traffic utilizing infrastructure designed for passenger cars.

Over 350 big trucks utilizing neighborhood roads daily.

Idling trucks, back up bells, uncovered loads.

Already compromised highway exit ramps leading into the Industrial Park which results in traffic congestion that involves school buses and Emergency Vehicles; Ambulances, Police and Fire.

Increased rail disturbances; whistles, vibrations, traffic delays at rail crossings, accident potentials with signal failures

The very real possibility of truck and train accidents resulting in toxic spills

Devaluation of properties; residential and business.

Unable to use our outdoors for recreation and relaxation. (Backyards and Park

HOURS AND DAYS OF OPERATION YET TO BE DETERMINED.

THIS IS A PROPOSAL THAT WILL RUIN OUR LIVES ON MANY LEVELS.

I look forward to a reply from MEPA that will be favorable to a community who works hard to improve its city.

Respectfully submitted,

Claudia B. Ostiguy 426 Valley Road
New Bedford, MA 02745
(508) 9957613
cbostiguy@gmail.com



January 23, 2020

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Regarding: Parallel Products of New England, LLC, 100 Duchaine Boulevard, New Bedford, Massachusetts, Draft Environmental Impact Report, EOEEA No. 15990

To Whom It May Concern:

Conservation Law Foundation ("CLF") would like to express its serious concerns regarding the project proposed by Parallel Products of New England, LLC (the "Proponent") to be sited at 100 Duchaine Boulevard, New Bedford, and described in the Draft Environmental Impact Report ("DEIR") described above (the "Proposed Facility"). The DEIR is inadequate, and CLF requests that the Secretary of the Executive Office of Energy and Environmental Affairs ("EEA") issue a Certificate requiring the Proponent to generate a supplemental EIR, and providing guidance on the scope of additional study and analysis needed.

CLF is a non-profit, member supported regional environmental organization working to conserve natural resources, protect public health, and promote thriving communities in New England. Through CLF's Zero Waste Project, CLF aims to protect New England communities from the dangers posed by unsustainable waste generation and disposal. CLF's Massachusetts members include residents with a deep interest in protecting our natural resources and in reducing the need for landfills and incinerators and promoting Zero Waste programs in the Commonwealth.

The Proposed Facility includes:

- Glass processing plant that will crush, size, and separate glass by color that has been collected through the Massachusetts bottle deposit system.¹ This glass cullet will then be sold for the production of new glass products;
- Rail sidetrack to be built from the existing rail line adjacent to 100 Duchaine Boulevard;²
- Solar canopies to be constructed on a canopy system;³
- Transfer station for Municipal Solid Waste ("MSW") and Construction and Demolition ("C&D") materials, with some processing ("Proposed Transfer Station," or "Proposed

¹ DEIR, page 5.

² DEIR, page 6.

³ DEIR, pages 6-7.



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Dirty MRF”) that will accept 1,500 tons a day and ship most of that waste out for disposal by rail;⁴ and,

- Sewer sludge processing plant.

As per 301 CMR 11.07, the draft EIR should include a “reasonably complete and stand-alone description and analysis of the Project,” as well as an “assessment of its potential environmental impacts and mitigation measures.” Within seven days after the close of the public comment period, the Secretary of the EEA shall determine if the DEIR is adequate or inadequate.⁵ If inadequate, the Secretary shall require the Proponent to file a supplemental draft EIR in accordance with 301 CMR 11.07.⁶

While CLF reserves its right to comment more specifically in the future regarding noise, odor, traffic, vector, water and air pollution, impacts on nearby residents, and greenhouse gas concerns, CLF requests that the Secretary require the Proponent to provide more detailed information in a supplemental DEIR regarding the impact of the Proposed Dirty MRF and rail transport on the Commonwealth’s solid waste system, the Environmental Justice community the Proposed Facility would be located in, and the leachate generated and best treatment options for that leachate for the following reasons:

I. Impact of Proposed Facility on Commonwealth’s Solid Waste System

Right now in Massachusetts, about 690,000 tons of recycling a year is collected and brought to materials recycling facilities, or MRFs.⁷ There, materials collected mainly from curbside recycling systems are sorted manually and by machines. MRFs do not accept trash, but recyclables diverted from the waste stream.

Proponent is proposing to construct a “Transfer Station” and a “Dirty MRF.” 310 CMR 16.00 defines a “Transfer Station,” as a “handling facility where solid waste is brought, stored, and transferred from one vehicle or container to another vehicle or container for transport off-site to a solid waste handling or disposal facility.” Some of the waste would be delivered baled to the Proposed Facility, and then it will be loaded directly onto rail cars to be shipped off-site for disposal. None of the baled MSW would be recycled.⁸ The Proposed Facility would also accept C&D residuals (Construction and Demolition materials that are left over after all of the recyclables have been extracted) and C&D bulky waste, both of which have little or no

⁴ DEIR, pages 7-10.

⁵ 301 CMR 11.08(b) 1-3.

⁶ *Id.*

⁷ Massachusetts Materials Management Capacity Study, MSW Consultants, MassDEP, February, 2019, page 2-5, <https://www.mass.gov/doc/massachusetts-materials-management-capacity-study-february-2019/download>

⁸ DEIR, page 7.



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recyclable value.⁹ In regards to the baled MSW and C&D waste, the Proposed Facility would be a Transfer Station.

A “Dirty MRF” is a MRF that accepts and processes recyclables mixed in trash, including food scraps, household hazardous waste, and the non-recyclable materials commonly found in residential and commercial waste, as well as recyclable materials. Proponent plans to cherry pick recyclables out of the loose MSW -- by hand or mechanization -- to remove recyclable commodities based on changing markets, which Proponent lists as metals, cardboard, aluminum, wood, glass, PET plastic, paper and other plastics.¹⁰ The rest of the MSW would be baled and shipped out on rail cars.

Unfortunately, due to high levels of contamination (materials that are not recyclable) MassDEP estimates that about 25% of materials accepted at MRFs are not recycled, but disposed of in landfills and incinerators.¹¹ Furthermore, due to the mixing of glass, paper, cardboard, and the many types of plastics, etc., the materials that are sorted at MRFs have a very low value, and much also ends up being burned or buried. As a result of high levels of contamination and poor quality materials, recently MRFs have begun charging cities and towns as much as \$145 a ton in tipping fees for recyclables collected curbside - almost 50% more than tipping fees for disposal.¹² If MRFs are not producing clean recyclable materials cheaply, why would the Commonwealth consider allowing a Dirty MRF to be built?

The Proposed Dirty MRF is a highly optimistic, inefficient, misguided, and polluting concept.

Optimistic, because a Dirty MRF is even more unlikely to yield any marketable recyclables than a regular MRF. Proponent estimates that this Dirty MRF would extract about 20%, or more, from the MSW for recycling. The rest would be shipped out of state to be landfilled or burned in an incinerator. The DEIR is unclear on what that 20% recyclable materials actually represents, particularly given how little of the materials will be recyclable as:

57-1

- None of the baled MSW will be recycled.
- Organics like food scraps and yard waste usually comprise about a third of MSW, and none of them are recyclable.
- The type of C&D the Proponent is planning to accept is by definition unrecyclable.

⁹ DEIR, page 8.

¹⁰ DEIR, page 9.

¹¹ Presentation by John Fischer, MassDEP, on Massachusetts Draft 2030 Solid Waste Master Plan, September 26, 2019.

¹² *Recycling is becoming so expensive that some towns don't know what to do*, David Abel, The Boston Globe, January 11, 2020. <https://www.bostonglobe.com/metro/2020/01/11/national-recycling-crisis-hits-hard-western-massachusetts/cn6o05CAvXmYzwyqWFCnIj/story.html>

- Most of the cardboard, paper, and glass will be too contaminated by food and other materials to sell.
- Proponent states that it plans on processing Bottle Bill glass at their glass facility, not glass from their own Dirty MRF, probably because it would contaminate the cullet they will produce.
- Metal (including aluminum) is only about 4% of the waste stream.¹³ Currently there is no market for most plastic – only PET and HDPE plastics are getting recycled, and only then if they are well-sorted and clean. According to the most recent 2016 Waste Characterization Studies, they account for about 5% of the waste stream.¹⁴

Inefficient, because the expense of processing the materials is unlikely to pay for itself. It would be much more efficient if materials were sorted and diverted up front before they went into the trash or single-stream containers. Even in the current depressed markets places like the Towns of Wellesley or Sturbridge that deep sort their recyclables still can sell much of their cardboard/paper and containers for a profit, because they are clean and uncontaminated. In fact, if the food scraps, yard waste, and recyclable materials like containers, cardboard, and textiles were not initially commingled, somewhere between 70%-80% of the Commonwealth's MSW could be composted or recycled.¹⁵ 57-2

Misguided, because while the DEIR states, "The proposed project is being developed to fill a need in the Commonwealth for processing and economical transfer to out of state proposal sites," in accordance with the Massachusetts 2010-2020 Solid Waste Master Plan, in actuality that plan was called "A Pathway to Zero Waste," because it prioritized the reduction, recycling, and composting of solid waste. Shipping solid waste out of Massachusetts was never the goal of MassDEP, in fact over the last ten years it has been viewed as a policy failure at Solid Waste Action Committee meetings held at MassDEP. 57-3

Polluting, because investing in the Proposed Dirty MRF may seem like investing in recycling infrastructure, when in actuality it will be an investment in polluting landfills to accept our surfeit of solid waste in states with less rigorous siting regulations, like New Hampshire, Ohio, or 57-4

¹³ Overall Waste Composition by Detailed Material Category, 2016 Sampling Excel Spreadsheet, <https://www.mass.gov/guides/solid-waste-master-plan#waste-characterization-&capacity-studies>

¹⁴ Overall Waste Composition by Detailed Material Category, 2016 Sampling Excel Spreadsheet, <https://www.mass.gov/guides/solid-waste-master-plan#waste-characterization-&capacity-studies>

¹⁵ Overall Waste Composition by Detailed Material Category, 2016 Sampling Excel Spreadsheet, <https://www.mass.gov/guides/solid-waste-master-plan#waste-characterization-&capacity-studies>



Virginia. Given that all landfills leak toxic leachate¹⁶ and emit toxic landfill gas,¹⁷ this is polluting and morally reprehensible.

The Proposed Dirty MRF will result in no reduction, no composting, and little, if any, recycling of the Commonwealth's waste. It will also exacerbate two major impediments to the evolution of Massachusetts' solid waste system: 1) Cheap out of state disposal has allowed us to avoid adopting programs to incentivize waste reduction; and, 2) Poor recycling systems that generate poor quality recyclables, moving us no closer to circular production systems.

57-5

II. Environmental Justice Impacts of the Proposed Facility

Waste transfer stations like this one have long been recognized as a health and environmental burden when located in dense, low-income communities. In 2000, a report prepared for the U.S. Environmental Protection Agency ("EPA") by the National Environmental Justice Advisory Council ("NEJAC") found that transfer stations "are disproportionately clustered in low-income communities and communities of color," and that these stations "can bring many problems to a community if they are not managed correctly," including "quality of life issues such as noise, odor, litter, and traffic, . . . environmental concerns associated with poor air quality (from idling diesel-fueled trucks and from particulate matter such as dust and glass)."¹⁸ In its analysis for EPA, NEJAC also found that "when issuing permits for [transfer stations], local permitting agencies typically fail to consult with potentially impacted neighborhoods regarding the environmental impact of proposed [transfer stations]."¹⁹

57-6

Proponent recognizes that "EJ populations are those segments of the population that the Executive Office of Environmental Affairs has determined to be most at risk of being unaware of or unable to participate in environmental decision-making or to gain access to state environmental resources or are especially vulnerable."²⁰ Figure 2 of the DEIR (on page 41) indicates that the "Project Site" is actually *in* the EJ Criteria Area, not near it, so it meets the first condition necessary to trigger additional procedural requirements, as well as enhanced analysis. The Proposed Facility also exceeds "a mandatory EIR threshold for air, solid and hazardous waste. . . or wastewater sewage sludge treatment and disposal," and as such, the EJ Policy requires not only enhanced public participation through, "use of alternative media outlets such as community or ethnic newspapers. . . and translation of materials or interpretation services at

57-7

¹⁶ All Landfills Leak, and Our Health and Environment Pay the Toxic Price, Kirstie Pecci, <https://www.clf.org/blog/all-landfills-leak-and-our-health-and-environment-pay-the-toxic-price/>

¹⁷ Landfills Have a Huge Greenhouse Gas Problem. Here's What We Can Do About It, Erica Gies, Ensia, October 25, 2016, <https://ensia.com/features/methane-landfills/>

¹⁸ NEJAC, A Regulatory Strategy for Siting and Operating Waste Transfer Stations, v (2000), https://www.epa.gov/sites/production/files/2016-03/documents/waste-trans-reg-strategy_1.pdf

¹⁹ *Id.* at 27.

²⁰ DEIR, page 42.



public meetings,”²¹ but also “substantively provides for enhanced analysis and review of impacts and mitigation in relation to projects that meet both conditions.”²²

This is appropriate, because for each of the Baseline Health indicators listed in the DEIR – Asthma Hospitalizations, Asthma Emergency Department Visits, Pediatric Asthma, Cancer, Chronic Obstructive Pulmonary Disease, Chronic Obstructive Pulmonary Hospitalization, Chronic Obstructive Pulmonary Emergency Department Visits, Acute Myocardial Infarction Hospitalizations, etc., -- New Bedford’s rates are statistically elevated when compared to the statewide rates.²³

57-8

Given the burdens the community is already laboring under, the Secretary should require an enhanced environmental review and analysis of impacts which should include, at a minimum, baseline public health conditions within New Bedford and nearby communities, and on-site and off-site mitigation to reduce impacts on this frontline population.²⁴ A more comprehensive review of the Commonwealth’s solid waste infrastructure is also warranted before siting yet another large facility in an EJ community, especially considering that six of the state’s seven solid waste incinerators are already in EJ communities.²⁵

III. Leachate-Contaminated Wastewater at the Proposed Transfer Station Poses a Risk to Water Quality.

The Proposed Transfer Station will collect waste liquids, including leachate, from the tipping floor and processing areas in a “floor drain system” and thence it will be trucked for disposal into a waste water treatment plant, or, if allowed, the New Bedford Sanitary Sewer.²⁶ The “fresh” leachate found at waste transfer stations contains high concentrations of heavy metals and nitrogen, high chemical oxygen demand values, and has a strong odor.²⁷ Leachate has also been found to contain Per- and Polyfluoroalkyl Substances (“PFAS”),²⁸ highly toxic human-made contaminants of emerging concern that pose a wide array of health risks, including cancer;

57-9

²¹ City of Brockton v. Energy Facilities Site Bd., 49 Mass. 196 (2014), page 4.

²² *Id.*

²³ DEIR, page 42-49

²⁴ Environmental Justice Policy of the Executive Office of Energy and Environmental Affairs, Nos. 16 & 17, page 10. https://www.mass.gov/files/documents/2017/11/29/2017-environmental-justice-policy_0.pdf

²⁵ Aging Waste Incinerators Pose a Danger to New Englanders, Kevin Budris December 9, 2019, <https://www.clf.org/blog/aging-incinerators-pose-a-danger/>

²⁶ DEIR, page 10.

²⁷ Seyed Mohammad Dara Ghasimi, Batch Anaerobic Treatment of Fresh Leachate from Transfer Station, 3 Journal of Engineering Science and Technology 3, 257 (2008).

²⁸ Jessie J. O. King, Emerging Contaminants & Landfill Leachate, 30-48 (2019), <http://www.scswana.org/resources/Documents/2019%20Spring%20Conference/08%20-%20King%20-%20Emerging%20Contaminants%20and%20LF%20Leachate.pdf>.

growth, learning, and behavioral problems; infertility; and impaired immune, liver, thyroid, and pancreatic function.²⁹ Collecting the leachate and sending it to New Bedford and other waste water treatment plants will not “treat” or remove these contaminants from the leachate, instead the PFAS and other “forever chemicals” are released into our rivers and ocean.³⁰ Some waste water treatment plants have become so concerned about this prospect that they have canceled contracts to accept untreated leachate.³¹ Given this, the leachate at the Proposed Facility should be tested and treated prior to sending it into a waste water treatment plant, and the Secretary should require that a supplemental Environmental Impact Report detail how the leachate would be tested and handled.

IV. Conclusion

Proponent defined this Proposed Facility as a Processing Facility that would divert recyclables in large numbers from disposal. In reality, it is a Transfer Station as it pertains to the baled MSW and C&D it accepts, and a Dirty MRF that will yield very little material that is actually recycled, just disposal for almost all of the loose MSW it accepts. This mischaracterization resulted in insufficient information and analysis in the DEIR. Given that, and the additional procedural requirements, as well as enhanced analysis due this Proposed Facility under the Environmental Justice Policy, CLF respectfully requests that the Secretary issue a Certificate requiring the Proponent to generate a supplemental EIR, and providing guidance on the scope of additional study and analysis needed. Specifically:

1. The Proposed Facility will accept up to 1,500 tons per day of MSW and C&D, but it is unclear what the limit would be for tons accepted a year. 57-10
2. The DEIR states that some MSW will be accepted baled in plastic. How much and from where? For how long will they have been baled? How large are the bales? How large will stacks of bales be, and how long will they be stored for at a maximum (fires notoriously start in baled MSW)? Are they entirely sealed, or open on the ends (this will impact odors)? 57-11
3. Given that no recyclables will be recovered from baled MSW, does the recycling recovery rate (20%) include baled and non-baled MSW? 57-12
4. The DEIR states that metals, cardboard, aluminum, wood, glass, PET plastic, paper and other plastic will be recovered from unbaled MSW, based on market conditions, and that

²⁹ See generally U.S. Dept. of Health and Human Servs., Toxicological Profile for Perfluoroalkyls (2018), <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.

³⁰ *Toxic PFAS chemicals can be dumped into Merrimack River, federal and state officials say*, Cole Alder, November 6, 2019, <https://pfasproject.com/2019/11/06/toxic-pfas-chemicals-can-be-dumped-into-merrimack-river-federal-and-state-officials-say/>

³¹ *Lowell water treatment plant to stop accepting toxic water from N.H. landfill*, *The Boston Globe*, David Abel, November 7, 2019, <https://www.bostonglobe.com/metro/2019/11/07/lowell-water-treatment-plant-stop-accepting-toxic-water-from-landfill/tmXpsDYICl6Bow0rovemkj/story.html>



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- the Applicant expects to extract 20% or more for recycling. This incredibly optimistic estimate requires much more explanation, including markets that actually exist that would purchase materials of this low quality for recycling. 57-13
5. A baseline health study for New Bedford and surrounding communities should be required. 57-14
6. A more comprehensive review of the Commonwealth's solid waste infrastructure is also warranted before siting yet another large facility in an EJ community, especially considering that six of the state's seven solid waste incinerators are already in EJ communities.
7. The DEIR states homes are at least 500 feet from the Proposed Dirty MRF. How many homes are how far from the Proposed Dirty MRF? What plans are in place to minimize the impact on those neighbors? Given the size of the parcel, could the Proposed Dirty MRF be located further from homes? 57-15
8. What mitigation is being proposed to measure hydrogen sulfide emissions from C&D (C&D residuals, like those that would be accepted at the Proposed Facility, emit hydrogen sulfide, an odorous and dangerous gas)? 57-16
9. The Secretary should require that a supplemental Environmental Impact Report detail how the leachate will be tested for PFAS and other forever contaminants, and pretreated before being trucked or pumped into a waste water treatment plant. 57-17

Thank you for your consideration.

Respectfully submitted,

Kirstie L. Pecci, Director
Zero Waste Program

Corine Anctil
86 Mate Drive
New Bedford, MA 02745

January 5, 2020

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs (EEA)
Attn: MEPA Office
EEA No. 15990
100 Cambridge Street, Suite 900
Boston, MA 02114




Dear Secretary Theoharides,

I **strongly oppose** the waste, recycling, trash, and sludge facility proposed by Parallel Products of New England moving into the New Bedford business park. This move would have a hugely negative effect on our neighborhood. We do not want the air pollution, the smell, the noise, the traffic, and/or to be a dumping ground for surrounding areas.

58-1

My Neighbors and I do not want this facility!

Thank You for your time and consideration!

Corine Anctil

86 Mate Drive
New Bedford, MA 02745

RECEIVED

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
EEA No 15990
100 Cambridge Street, Suite 900
Boston, MA 02114

MEPA

Dec 8, 2019

Dear Secretary Theoharides,

My name is David Amaral and I have been a resident of New Bedford for the last 31 years, I am also non ambulatory due to a debilitating disease I am writing the MEPA office to express my opposition to Parallel Products of New England (PPNE)- a sludge plant operating in my neighborhood

As a resident of New Bedford, and a community member, I stand with the hundreds of New Bedford residents against this project. New Bedford has dealt with numerous environmental injustice issues, and I implore MEPA not to make the same mistake with PPNE. 59-1

I am also urging you to extend the 30 day comment period to 90 days to give us all a decent chance to go through this 1300 + page DIER report that was only published at the end of November(which may or may not have purposely done)right through the busiest holiday season and toughest weather period. 59-2

I am a person with serious medical conditions, and I am concerned with my ability to get to my medical appointments and access of EMS and medical personnel when needed to my home. 59-3

With my disease I am also unable to enjoy leisure time out into the city and elsewhere, one thing I do look forward to is being able to go out on my deck and enjoy the spring and summer time weather, I however fear that due to the emissions of the trucks and the toxic air quality that I will no longer be able to enjoy this one thing that is very important in my world now. Please consider rejecting this report 59-4

and having your own report completed since the Green Seal Environmental, INC Report was paid for by Parallel Products. This report can not be accurate due to Facility is only operating partly with recycling the Sludge and Bio Solid Plant is not in operation as of yet.

59-5

I am asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental, Inc. hired by PPNE. In MEPA's study of the environmental impacts of PPNE and I am specifically concerned with following:

59-6

- Air pollution, odors, and noises from both the plant and the trucks;
- The increased traffic of 400 industrial trucks and the destruction to the environment and roads
- Noise and pollution from trains;
- The adverse effects of this plant on community members' physical health

I look forward to your response in addressing my concerns.

Sincerely,



David Amaral
26 Garrison Rd
New Bedford, MA 02745

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
January 14, 2020

RECEIVED

JAN 30 2020

MEPA

Dear Secretary Theoharides,

My name is Deborah J Fleet and I have lived at Schooner Cove condos on Phillips Rd in New Bedford for 12 years.

I'm requesting that MEPA study the environmental impacts of the PPNE project presented in the Draft and Environmental Impact Report (DEIR) submitted by Green Seal Environmental, (procured by PPNE), with due diligence.

I stand firmly with fellow New Bedford residents who oppose this project whose environmental impacts are truly unknown. The unknown is what is so frightening about it. I plead with MEPA to prevent this from happening to us. I'm very skeptical about the report submitted by Green Seal. I think their projections and estimates are biased or distorted in a way that is inaccurate, unfair and misleading. 60-1

Our quality of life is in jeopardy should this project get the green light! Increased traffic and exhaust fumes from heavyweight, noisy trucks alone is cause for concern. Add to that a multitude of additional environmental factors and it's a recipe for trouble, an accident waiting to happen. 60-2

I have been a wheelchair bound spinal cord injured person for 38 years and have a compromised immune system along with secondary health issues caused by the injury. I am fearful of any negative impact this project would have on my health, along with members of my immediate community and surrounding areas. If this project were to come to fruition and did cause us harm some of us would be forced to leave. Because of my disability, I am extremely limited in housing options. 60-3

Please reject the DEIR submitted by Green Seal Environmental, Inc. Please do not allow PPNE in our community. "Not in my backyard", not in New Bedford!!

Thank you for your time and consideration.

Deborah J Fleet
1481 Phillips Rd
Unit 1102
New Bedford, MA
02745

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No. 15990
100 Cambridge ST Suite 900
Boston, MA 02114

RECEIVED

MEPA

1/9/20

My name is Donna Poyant and I have been a resident of New Bedford for 60 years. I am writing the MEPA office in opposition to Parallel Products of New England (PPNE) – proposed plan to operate a plant processing waste sludge and municipal solid waste in my backyard. I am asking MEPA to protect our neighborhood by studying the environmental impacts of the PPNE project, and to address my concerns in your evaluation of the PPNE and the Draft Environmental Impact Report (DEIR).

I stand with the Thousands of New Bedford of New Bedford residents that live within a few miles radius of the proposed project. New Bedford residents have shared their burden of environmental injustice already and don't need to bear anymore.

61-1

I am asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental Inc. Hired by PPNE. In MEPA's study of the environmental impacts of PPNE I ask that the following concerns be evaluated. Air pollution, odors, and noises from both the plant and trucks used to transport of the MSW. The effect of increased traffic on the community and nearby school. I am also concerned about the effect on property values. Our family has owned our home on Ridgewood Rd for 57 years. This neighborhood is populated by families with vulnerable children and elderly residents who are in need of protection.

61-2

I look forward to your response in addressing my concerns.

Sincerely,



Donna Poyant
39 Ridgewood RD
New Bedford MA 02745

509-971-774 6

Eileen S. Dunleavy
1481 Phillips Rd unit 1406
New Bedford, Mass 02745
508 993 4753

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January 15, 2020

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Attention : MEPA Office
EEA No.15990
100 Cambridge Street Suite 900
Boston, MA 0211

Dear Secretary Theoharides,

I have been a resident of New Bedford for 26 years. I am writing to express my concern and opposition to Parallel Products of New England operating a sludge plant in my neighborhood. I am asking the MEPA to do its due diligence and study the environmental impact of the PPNE project and to address my concerns in your evaluation of PPNE and the draft Environmental Impact Report (DEIR).

As a tax paying resident of New Bedford, and a community member, I stand with the hundreds of New Bedford residents against this project. New Bedford has dealt with numerous environmental justice issues, and I implore MEPA not to make the same mistake with PPNE. I am asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental, Inc. hired by PPNE. Living in close proximity of the plant and on the main road to the plant, I am very concerned about the increased traffic on an already very busy street. The thought of additional Industrial trucks on Phillips Road is overwhelming for both the noise pollution and truck fumes. I am also concerned about the pollution from the plant and the odor that this will create in my neighborhood.

62-1

62-2

I am a 70 year old soon to be retired social worker who has worked my entire career helping people obtain a better quality of life. This past year I bought a condo at Schooner's Cove to begin preparing for retirement. It is in very close proximity to the plant. The condo building has small balconies attached to each unit. Mine faces Phillips Rd. This plant expansion will greatly impact the quality of my life by both the traffic and the air quality. It will also impact my ability to have my very young grandchildren visiting and using the condo community space and pool. I would not want to expose their young lungs to the air quality or the odors that will exist once this plant is fully functioning.

62-3

The majority of my neighbors in my condo building are retired. Some are in their 80's and 90's. They utilize their balconies to get outside and enjoy the fresh air. I am concerned that the quality of their lives will be greatly impacted by both the air and noise pollution. Please be thoughtful in your plan to approve this plant. I believe in recycling and carbon foot prints. I drive a small car and I have been very aware of environmental issues for over 50 years. I am sure that your passion is to have a cleaner environment. Please consider how this plant will impact the environment of the people in my community and the people in New Bedford. Consider if you would you want this in your neighborhood. Would you want it to effect the quality of life that your children, parents or grandparents deserve? New Bedford families deserve that same quality of life. I look forward to your response in addressing my concerns.

Sincerely yours,



Eileen S. Dunleavy MA., MSW, LICSW

January 23, 2020

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No.15990
100 Cambridge Street Suite 900
Boston, MA 02114

Dear Secretary Theoharides,

I am writing to the MEPA office to convey my support for Parallel Products of New England to develop a new industrial recycling and processing facility in the New Bedford Business Park. MEPA has the ability to analyze the numerous benefits of such a project, and to take into account the positive impact the project will have on the community.

Having taken into account all economic and environmental factors of such a project, I am voicing my full support for a new industrial recycling and processing facility in the New Bedford Business Park.

I am asking MEPA to approve *this phase* of the Parallel Products New England project, for the following reasons: Not only are the environmental benefits clear, but the economically, the facility will provide 75-100 new good paying jobs, and \$1 million in new taxes to the City of New Bedford.

63-1

The concerns of odor and noise have been addressed with Parallel Product's \$50 million investment in the state-of-the-art facility that will be vacuumed sealed and enclosed, equipped with solar panels, a railway, and odor eliminating technology.

This facility would have a positive economic and environmental benefit to the city of New Bedford

I look forward to your response in addressing my support.

Sincerely,

Elizabeth Isherwood
128 Union Street
New Bedford, MA 02740
508-996-3946

Greg Wirsen

From: bsmrc@aol.com
Sent: Wednesday, January 22, 2020 9:57 AM
To: MEPA (ENV)
Subject: Comments re EAA # 15990

I have additional comments about EAA#15990

I am requesting an extension of the deadline for comments on DEIR about EAA# 15990. The report is lengthy, (1300 + pages) and I haven't been able to read it all yet. I commented before Christmas and I have additional comments that I would like to make. 64-1

The traffic study was inadequate. It measured traffic on only one day, June 13, 2019 from 7:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM. Most of the businesses in the park have a start time of 7:00 AM so the traffic study would only catch those employees that were late for their shift. If you ask residents in the area, the traffic is heavy before 7:00 AM when traffic is trying to arrive for the 7:00 - 3:00 shift and the school buses are making stops to pick up students on their way to school. The traffic gets heavy again when the school buses are returning from school after 2 PM and commuters are traveling to arrive for their 3:00 PM start. The study missed those heavy traffic hours. They might catch the commuters that they missed on their morning count when these people leave work. 64-2

The report indicates that the truck traffic hours has changed to 5:00 AM to 9:00 PM six days a week and for biosolids seven days a week. The size of the trucks for the MSW would be 100 cubic yards and weigh about 28 tons and will significantly increase the noise in my residential neighborhood. There is no indication of how the trucks would be covered to prevent dispersion of material on the road. Parallel Products indicates that biosolids will be transported in a vehicle that transports liquids such as petroleum. 64-3

The DEIR report indicates that " DEP and the local Board of Health shall give preferential consideration to sites located in municipalities in which no existing landfill or solid waste combustion facilities are located, a preference that will be applied only to new facilities that will not be for the exclusive use of the municipality in which the site is located. 64-4

New Bedford already has a capped landfill on Shawmut Ave. The Crapo Landfill is located in the New Bedford Business Park with a business address of 300 Samuel Barnett Blvd located in the same Business Park as Parallel Products. The old Parker Street dump caused problems with the New Bedford High School, Keith Middle School, and resulted in the city having to buy 6 residential properties around 2010. New Bedford has its own sewerage treatment plant in the south end of the city and this proposed project would not handle New Bedford biosolids. Those are documented landfills. The City incinerator closed years ago. There are two facilities within a 25 mile radius: New Bedford Waste Services (formerly SEMASS) in Rochester, MA and New England Waste Disposal in Taunton, MA. Further, the full site is within 500 feet of occupied dwellings in violation of waste facility zoning. New Bedford Zoning is archaic from the times when people wanted to walk to work so lived near their employment. The zoning has not changed. The New Bedford Business Park borders Phillips Rd and the residences are located on that road.

In my previous comments, I was concerned about access and egress from Phillips Rd. Rt 140 runs parallel to Phillips Rd so the only outlets to the rest of the city are by using Braley Rd or Phillips Rd to reach Acushnet Ave. There is an elementary School, Campbell School on Phillips Rd where it bends to Acushnet Ave, and another elementary school, Pulaski School on Braley Rd. In the event of a disaster like a fire in the Business Park, it would be impossible to get out quickly. There was a massive 4 alarm fire at Thompson Bros in Andover that processed C&D materials located in an industrial area and that fire burned for over 48 hours. This was the 2nd fire at this location. The first occurred in 2006 and was extinguished within hours. The 2019 fire resulted in demolition of the business. Parallel Products proposes to handle C&D materials as part of this business. If a fire were to break out at Parallel Products, it would be impossible to evacuate everyone safely without loss of life. The location of this Business Park is in a densely populated area. 64-5

Thank you for hearing my concerns.
 Elizabeth Saulnier

Greg Wirsen

From: bsmrc@aol.com
Sent: Sunday, December 1, 2019 11:58 AM
To: MEPA (ENV)
Subject: EAA # 15990 Comments

I am writing to request a 90 extension to the comments period. My name is Elizabeth Saulnier and I live 65-1 at 94 Birchwood Dr. New Bedford, Ma. I purchased the property on 12/4/1985 and have lived there ever since. Since this project, if approved, will greatly impact the quality of my life, I would like the time to read the entire 1300+ pages. I reserve the right to make additional comments as I read the report.

1. Birchwood Dr is one of the 4 entrances into Pine Hill Acres development off Phillips Rd. Phillips Rd is landlocked for 1.8 miles because the New Bedford Business Park (formerly called the NB Industrial Park) abuts one side of Phillips Rd and Rt 140 is on the other side. Traffic must use Braley Rd or Phillips Rd which bends and eventually intersects Acushnet Ave to evacuate the area. After that bend the road becomes Church St.

A recent 4 alarm fire on 8/20/19 at Thompson Bros, 210 Holt St. No Andover that was a MSW 65-2 construction debris facility burned for 18 hours before the fire could be fully extinguished and the business was demolished. Parallel Products is proposing such a facility as one of their 3 proposals for their property. This fire closed Rt 125 to enable fire fighters to enough water to the supply the 4 alarm crews. There was a similar fire in Oaktie so Carolina that burned for at least 2 months. In addition to trying to evacuate the residents, there are two elementary schools in the area. Pulaski Elementary School is located on Braley Rd 1/2 mile up the road from the Braley Rd Entrance to the Park and just over 1 mile from Parallel Products. Campbell Elementary School, 145 Essex St. is 2.3 miles south from Parallel Products. Both schools are located on the only evacuation routes from Phillips Rd.

In addition to the potential risks of evacuation, there will be toxic fumes emanating from the fire. Within the document, it states that there are several potential fire risks which include fire within the dryer during dryer operations, fire resulting from dust generated from the dried material and fire associated with storage of dried biosolids in silos, there is no real way to prevent a fire, as seen by these two recent events in MA and SC. We know history has a way of repeating itself.

2 The report states that construction is underway for the glass recycling facility, however the beginning 65-3 stage of that operation was already found in violation by the Conservation Commission for the City of New Bedford, the company was found dumping glass into the buffer zone. If this occurs with glass, why won't it happen with waste? If this is being done during the permitting process when evaluation of processing is being closely monitored, what will happen when things are not being closely monitored. The report states that the company will do self-certifications in regards to emissions, etc.... The company has proven it is already untrustworthy and cannot be relied on to abide by the regulations.

3. Traffic - transfer trailers and packer trucks will be delivering baled MSW and loose MSW, trucks 65-4 bringing in C&D, and truck bringing in biosolids. These trucks will have to arrive and leave via one on and off ramp at exit 7 (Braley Rd), the company has stated that trucks will not be allowed to utilize Phillips Rd, however there is no way to control for that nor enforce it. Sludge will be transported via covered dump trucks, which is basically a truck with a tarp on the top. The area traffic is already congested. It is difficult to get out of Birchwood Dr already due to workers driving to and from work, school buses, and residents trying to leave their property. Parallel Products estimates an additional

300 truck trips and another 150 trips for employees. Braley Rd is backed up significantly most hours of the day especially between 7am and 4pm. One stop sign will not be able to manage 400+ truck trips. The Pulaski elementary School has existing traffic problems which also utilizes Braley Road and this will exacerbate the problems there. An independent traffic study needs to be conducted. Data from a report in which Parallel Products paid for cannot be relied upon or considered unbiased or impartial. Trucks will back up, trucks will idol, and air quality will be impacted. Will there be odors waiting behind a sludge damp truck?

4 Stormwater problems. Phillips Rd already floods by the creek near Pine Hill Park during a storm. I have 65-5 witnessed water pouring out of the manhole cover at the top of the hill close to exit 5. I don't know whether the water discharged from the biosolids process will exacerbate this problem.

These are just some of my thoughts from my own experiences and from talking with my neighbors about their own concerns. I will send additional comments after I have the opportunity to read and digest your report.

Thank you for taking the time to read my concerns and I hope you will take them as seriously as I do.

Elizabeth Saulnier

Letter no. 66

Form letter, several received

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
No. EEA 15990
100 Cambridge Street Suite 900
Boston, MA 02114
DATE 1/21/20

RECEIVED

JAN 23 2020

MEPA

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A community meeting was held in the nearby elementary school, and an invitation to PPNE Vice President, Tim Cusson, was sent to have him educate the community about his project. It is more than fair to state that this tutorial was less than adequate. It did nothing to allay our concerns, but in fact create more concerns, anxiety and questions. It was evident that the presenters were not familiar with the area. 66-1

This spawned the development of grassroots groups which:

- Held their own researched informational meetings
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These above mentioned activities led us to realize, with great relief, that a DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) would be filed and sent to MEPA for evaluation of the proposed industry. It was widely believed that PPNE would be deemed unsuitable for certification in their desired location, due to the fact that it would be adjacent to residential housing, many established businesses and two elementary schools and for the following

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66-2

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66-3

We implore MEPA to scrutinize this DEIR report and peruse each line of the 1,300+ page report.

We are counting on our protective environmental agencies to do just that, protect and support the hardworking residents of a community that has had more than its share of toxic clean ups and environmental issues.

We are aware of your heavy responsibility and appreciate the extension time allotted to write you.

We pray that you will be guided with wisdom and fairness.

Thank you for your attention to these matters.

Name: FRANK D. BELMIRO Address 17 BIRCHWOOD DR.
City NEW BEDFORD State MA Zip Code 02745
Phone (H) 508-998-1867 (Cell) 774-271-0117
E-Mail FMBELMIRO@COMCAST.NET

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
No. EEA 15990
100 Cambridge Street Suite 900
Boston, MA 02114
DATE 1/21/20

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Name: MARIA F. BELMIRO Address 17 BIRCHWOOD DR
City NEW BEDFORD State MA Zip Code 02745
Phone (H) 508-998-1867 (Cell) 774-271-0116
E-Mail mariabel@comcast.net

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
No. EEA 15990
100 Cambridge Street Suite 900
Boston, MA 02114
DATE 1/18/20

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Name: Manuel R. Pardo Address 483 Blumberry Ter.
City New Bedford State Mass Zip Code 02745
Phone (H) 508-9954713 (Cell) _____
E-Mail _____

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
No. EEA 15990
100 Cambridge Street Suite 900
Boston, MA 02114
DATE JAN 21, 2020

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Name: JOAN POISSON Address 37 Ivy Road
City NEW BEDFORD State MA. Zip Code 02745
Phone (H) 508-9956544 (Cell) _____
E-Mail _____

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
No. EEA 15990
100 Cambridge Street Suite 900
Boston, MA 02114
DATE 1-20-2020

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Name: Lionel Grace Address: 67 Katelyn Way
City: New Bedford State: MA Zip Code: 02745
Phone (H): _____ (Cell): 508 265 8240
E-Mail: Agnara4@aol.com

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
No. EEA 15990
100 Cambridge Street Suite 900
Boston, MA 02114
DATE 1-20-2020

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Name: Monty Grace Address: 67 KATELYN WAY
City: New Bedford State: MA Zip Code: 02745
Phone (H): _____ (Cell) 508-765-8239
E-Mail: agrace4@aol.com

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
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We implore MEPA to scrutinize this DEIR report and peruse each line of the 1,300+ page report.

We are counting on our protective environmental agencies to do just that, protect and support the hardworking residents of a community that has had more than its share of toxic clean ups and environmental issues.

We are aware of your heavy responsibility and appreciate the extension time allotted to write you.

We pray that you will be guided with wisdom and fairness.

Thank you for your attention to these matters.

Name: Mary Ducharme Address 888 Hillcrest Rd.
City New Bedford State MA Zip Code 02745
Phone (H) 508-998-1334 (Cell) _____
E-Mail _____

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
No. EEA 15990
100 Cambridge Street Suite 900
Boston, MA 02114
DATE 1/30/2020

Dear Secretary Theoharides,

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This spawned the development of grassroots groups which:

- Held their own researched informational meetings
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to create awareness of this invasive, noisome, noxious, industry that would ruin our lives.

These above mentioned activities led us to realize, with great relief, that a DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) would be filed and sent to MEPA for evaluation of the proposed industry. It was widely believed that PPNE would be deemed unsuitable for certification in their desired location, due to the fact that it would be adjacent to residential housing, many established businesses and two elementary schools and for the following

Quality of Life Negative Impacting Reasons:

INDUSTRIAL NOISES

ODORS and TOXIC AIR, POLLUTION

INCREASED TRAFFIC (350-400 big trucks a day) diesel fumes, back up bells, idling

The ROUTE these trucks would be utilizing which will interfere with already compromised school bus routes, trucks would prefer to use an exit that would have these 18 wheelers passing through residential areas

RAIL noises, train whistles

The very real possibility of ACCIDENTS involving these trucks and trains that would spill volumes of toxic liquids

DEVALUE PROPERTIES

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Name: Carol Fortin Address 18 Blueberry Terrace
City New Bedford State MA Zip Code 02745
Phone (H) 508 995 5744 (Cell) 774-526-3823
E-Mail carol.fortin@yahoo.com

Secretary Kathleen Theoharides
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Atten: MEPA Office
No. EEA 15990
100 Cambridge Street Suite 900
Boston, MA 02114
DATE 01/20/2020

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Name: KATHLEEN GREELY Address: 438 Valley Road
City: NEW BEDFORD State: MA Zip Code: 02745
Phone (H): 508-995-3008 (Cell): 508-558-0407
E-Mail: Kfg57@Comcast.net

Secretary Kathleen Theoharides
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Name: NALLACE GREELY Address 438 VALLEY RD.
City NEW BEDFORD State MA Zip Code 02745
Phone (H) 508-995-3008 (Cell) 508-558-0408
E-Mail WGREELY@COMCAST.NET

Secretary Kathleen Theoharides
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ATTN: MEPA Office
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100 Cambridge Street Suite 900
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Date: 1/20/20

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Thank you for the opportunity to voice my concerns regarding quality of life issues for family, neighbors and community.

Respectfully submitted,

Name: JOSE L. DEALBA Address: 810 PINE HILL AVE
City: N. BEDFORD State: MA Zip Code: 02745
Telephone (H): (508) 995-5476 Cell: _____
E-Mail: BIGRED@FRIONB@COMCAST.NET

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office
EEA No. 15990
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Boston, MA 02114
Date: 1/20/20

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City: N. BEDFORD State: MA Zip Code: 02745
Telephone (H): (508) 995-5470 Cell: _____
E-Mail: BIGRED OF 810 NB B COM. CAST. NCT

Secretary Kathleen Theoharides
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ATTN: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date: 1-22-2020

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Name: NORBERTO DE VMEDEIRO Address: 380 VALLEY ROAD
City: NEW BEDFORD State: MA Zip Code: 02745
Telephone (H) 774-2027101 Cell: _____
E-Mail: _____

Secretary Kathleen Theoharides
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ATTN: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date: 1/20/2020

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Respectfully submitted, Norman P Letendre (NPL)

Name: NORMAN P Letendre Address: 66 Holly Tree Ln.
City: New Bedford State: MA Zip Code: 02745
Telephone (H): _____ Cell: 774-263-5558
E-Mail: nletendre@middleboro.k12.ma.us

Secretary Kathleen Theoharides
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ATTN: MEPA Office
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Date: 1/20/2020

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Name: Jaelyn Guilbert Address: 34 Little Oak Road
City: New Bedford State: MA Zip Code: 02745
Telephone (H): _____ Cell: 928-895-2738
E-Mail: Jaelyn-guilbert@gmail.com

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office
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Name: Elizabeth Carroll Address: 64 Blueberry Terr
City: New Bedford State: MASS Zip Code: 02745
Telephone (H): 508-995-2448 Cell: _____
E-Mail: THEWINEASSN@AOL.COM

Secretary Kathleen Theoharides
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ATTN: MEPA Office
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Respectfully submitted,

Name: John Hatcher Address: 57 Holly Tree Lane
City: New Bedford State: ma Zip Code: 02745
Telephone (H): 508-995-9317 Cell: _____
E-Mail: _____

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Name: Doreen E. Hachey Address: 57 Hally Tree Lane
City: New Bedford State: Ma Zip Code: 02745
Telephone (H): 508-995-9317 Cell: _____
E-Mail: _____

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RECYCLING REUSE REPURPOSING BIO-DEGRADABLES NO MORE LANDFILLS NO INCINERATION
REGULATING EMISSIONS RENEWABLE ENERGIES COMPOSTING CONSERVATION
PROTECTING LAND, ANIMALS, WATERS REFORESTING ZERO WASTE

What I have difficulty comprehending is how an industry that is proposing to pursue and achieve these ideals, omits supporting what should be a top priority, the reason for all these regulations and legislations, and that is; to support the well being, safety and health of HOMO SAPIENS.

When industries crop up, wild life is impacted. Animals are displaced and trees and plants are destroyed. Acceptable levels of noise, pollution, carcinogens, increase in large vehicular traffic, become the norm. Is this to be the fate of the people who have worked hard to buy and up keep homes? Quality of life issues are ignored. Properties lose their value, the choice is stick it out and take a chance that it won't be too bad or move away. It seems animals and plants receive more protection than people!

Does it make sense to have these GREEN INDUSTRIES invade and displace those who have settled here for many decades?

Wouldn't it make sense to have these industries locate in areas that would be far removed from communities? Sometimes good ideas are put in the wrong place.

We are counting on MEPA investigators to see the discrepancies in the DEIR. It seems implausible that correct measurements can be obtained when the industry is not even operational. It is also sobering to realize that the DEIR was assigned to The GREEN MEDAL ENVIRONMENTAL, INC. and paid for by Parallel Products of New England, the industry in question. PPNE and Green Medal are strangers to the area. They impact, worry about their bottom line and move on.

Thank you for the opportunity to voice my concerns regarding quality of life issues for family, neighbors and community.

Respectfully submitted,

Name: Patricia Hachey Address: 57 Holly Lee Lane
City: New Bedford State: ma Zip Code: 02745
Telephone (H) 508-9959317 Cell: _____
E-Mail: _____

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date: 1/20/2020

Dear Secretary Theoharides,

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Respectfully submitted,

Debra J. Letendre
Name: Debra Letendre Address: 66 Holly Tree Ln.
City: New Bedford State: MA Zip Code: 02745
Telephone (H): _____ Cell: 774-263-5558
E-Mail: dletendre@middleboro.k12.ma.us
dletendre@middleboro.k12.ma.us

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date: 1/19/2020

Dear Secretary Theoharides,

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I believe in saving our planet. I believe in being GREEN:
RECYCLING REUSE REPURPOSING BIO-DEGRADABLES NO MORE LANDFILLS NO INCINERATION
REGULATING EMISSIONS RENEWABLE ENERGIES COMPOSTING CONSERVATION
PROTECTING LAND, ANIMALS, WATERS REFORESTING ZERO WASTE

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Thank you for the opportunity to voice my concerns regarding quality of life issues for family, neighbors and community.

Respectfully submitted,

Name: Margaret E. Rudolph Address: 64 Blueberry Dr.
City: New Bedford, MA State: MA Zip Code: 02745
Telephone (H): 508 995-2448 Cell: 774-644-0964
E-Mail: BIGM570@COMCAST.NET

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114
Date: 1/20/20

Secretary Theoharides,

I appreciate the expanded response time you have given us to make our concerns known regarding the recently released **Draft Environmental Impact Report (DEIR) EEA No 15990**, which assesses **Parallel Products of New England, (PPNE)** of 100 Duchaine Ave, New Bedford, MA 02745, an industry proposing to do recycling of cans, bottles and a Waste Plant involving /sludge/Bio-solids and the real possibility of gasification and ethanol production.

IMMEDIATE IMPRESSIONS/CONCERNS

Since the plant is not operational, how can the resulting data, measurements and times be accurate?
This "research" was developed by The Green Medal Environmental, Inc., a company hired by and paid for by PPNE. It gives the sense that the report is biased.

68-1

MEPA be conducting and independent evaluation of their own?

QUALITY OF LIFE ISSUES

Industrial Noises

Unpleasant Odors (the smell of alcohol already present).

Air and Environmental Pollution with the release of toxins through plumes and dumping.

Creating and worsening already existing health issues.

Increased Traffic utilizing infrastructure designed for passenger cars.

Over 350 big trucks utilizing neighborhood roads daily.

Idling trucks, back up bells, uncovered loads.

Already compromised highway exit ramps leading into the Industrial Park which results in traffic congestion that involves school buses and Emergency Vehicles from Ambulances, Police and Fire.

Increased rail disturbances; whistles, vibrations, traffic delays at rail crossings; accident potentials with signal failures

The very real possibility of truck and train accidents resulting in toxic spills

Devaluation of properties; residential and business.

Unable to use our outdoors for recreation and relaxation. (Backyards and Park)

68-2

HOURS AND DAYS OF OPERATION YET TO BE DETERMINED.

68-3

THIS IS A PROPOSAL THAT WILL RUIN OUR LIVES ON MANY LEVELS.

I look forward to a reply from MEPA that will be favorable to a community who works hard to improve its city and has suffered way too many environmental setbacks.

Respectfully submitted,

Frances Heggie
1978 Phillips Rd
New Bedford MA 02745

From: [George Faria](#)
To: mepa@mass.gov
Cc: [Greg Wirsen](#)
Subject: EEA#15990
Date: Sunday, November 17, 2019 10:03:16 PM

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

To whom it may concern

Just wanted to write my input towards this project, while I believe parallel prods provides a valuable service and have first hand knowledge of their operation I would not be against their move to the new address. I ve seen their operation in Taunton down to their operation on shawmut ave. It is a fairly clean operation considering the work that is being done. I don't really see a market for the recycling of glass but that's not my area.

I am however opposed to phase 2 of the project. First is location which is too close to Phillips rd in which the city is allowing building of new homes which directly abut this property. If it were to be located about a mile away near the current landfill would probably be better. Secondly That old Polaroid property was always well kept and heavily wooded area that should not have been disturbed. You re about to put a trash facility in what was the best land in that industrial park. Third if you go to the site of current msw facility on shawmut ave you can see what it's like literally a dump but at least it's located near a dump and you want to bring this to the most pristine area of the New Bedford industrial park I'm against phase 2 of this project but ok with phase 1

Thanks for your time

George Faria
1043 Sheffield st
New Bedford ma
Sent from my iPad

69-1

69-2

69-3

Secretary Kathleen Theoharides

RECEIVED

Executive Office of Energy and Environmental Affairs

Attn: MEPA Office, EEA No. 15990

MEPA

100 Cambridge St. Suite 900

Boston, Ma. 02114

Jan. 15, 2020

Dear Secretary Theoharides,

My name is Giselda Rodrigues and I have been a resident of New Bedford for 50 years, the last twelve in the far North End of the city. I am writing to the MEPA office to express my opposition to Parallel Products operating a sludge plant in this area. I am very worried about the environmental impact this will have on this very populated area. We already have traffic problems and adding over 400 trucks on the roads daily will impact people trying to get out of their driveways to go to work and school buses trying to get students to school. This business belongs in a non populated area. I am retired and would like to spend my free time outdoors especially in the summer without the odor and all the noise from the plant and the massive trucks. There is not any good reason to allow this company to ruin the lives of so many people.

70-1

70-2

I look forward to your response in addressing my concerns.

Sincerely,

1481 Phillips Rd. apt. 1307

New Bedford, Ma 02745

Wixon, Josephine (EEA)

From: JENNIFER L <Jennifinha@comcast.net>
Sent: Monday, December 23, 2019 10:20 AM
To: MEPA (ENV)
Subject: EEA#15990

Dear Kathleen Theoharides,

I strongly oppose the Parallel Products expansion in New Bedford. If phase two is approved, it will be an immediate 71-1 assault on the health of neighboring residents. New Bedford residents are sick and tired of being the dump site for the state of Massachusetts. Please do all that is in your power to oppose this project. I for one have major allergies and have a special needs child with several health problems. I like my home here, but will be forced to move if phase two is approved. Please email me any updates. Let me know what government officials I can contact that would be of any help.

Thank you,

Jennifer Silva

Sent from Xfinity Connect App



Energy & Environmental Affairs Public Comments Portal

Letter no. 72

alexander.strysky@mass.gov

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Comment Details

EEA #/MEPA ID*	First Name	Address Line 1	Organization
15990	Jim	47 Stephanie Place	--
Comments Submit Date	Last Name	Address Line 2	Affiliation Description
1-22-2020	Niland	--	Individual
Review Due By	Phone	State	Status
2-10-2020	--	MASSACHUSETTS	Opened
Reviewer	Email	Zip Code	
Alex Strysky 617-626-1025	nilandjim@yahoo.com	02745-1952	

Comments

Topic: Opposition to Parallel Products New Bedford Expansion

Thank you for the opportunity to be involved in the process. I am submitting this comment in opposition to the expansion of the Parallel Product site in New Bedford, Massachusetts. The site is not the right site for such a business and the negatives far surpass the positives. In the public meetings some state officials and consultants have mentioned there will be no health issues, no odor in the community, no impact to the surrounding conservation areas and no traffic issues with the proposed expansion. The arguments simply put do not hold much weight and they should be challenged. The number of low noise fans, scrubbers, walls will not prevent odor from simply handing over the surrounding areas during the extended hours the site will operate. If you start processing glass, sorting MSW and drying bio solids 12 hours a day, 7 days a week the odor and smell will have an immediate impact on the quality of life both short term and long term. There will be trucks in a constant flow in and out of the facility, idling and spreading the smell of whatever they are hauling. No one can tell anyone that lives within 2 miles of the site the odor from processing, delivering or storage will not be evident. The long term impact of such a facility are unknown and when reading the report it seems New Bedford is deemed okay since there are known economic and known health issues. This is very concerning and should not be looked at so lightly. This facility would not reach this stage if proposed in surrounding communities and certainly not closer to Boston. Traffic study was written to clearly benefit this proposal. The potential number of trucks entering the site from Phillips Road was not addressed and anyone who thinks no one will use Phillips for more than 50% of the routes is kidding themselves. No impact was the conclusion and it was sad to read ("Overall, traffic operations within the study area are not expected to be significantly impacted by the proposed project"). The roads are already at capacity and at peak times the road is a raceway ranging from cars, buses and trucks of all kinds. I would encourage and challenge the committee to hold a meeting between 3pm and 4pm and as a mock example interject the proposed trucks to the flow and see if the same conclusions are arrived at. The impact on the residents health and the traffic will be a major driving force in lowering property values in the area. Who will want to purchase a home if you cannot open a window or sit on your deck due to the pollution? Who will want to purchase a home with declining value, rising taxes and the inability to leave your road due to the traffic of trucks hauling in bio solids? It is simply not the appropriate site so close to residential areas. Additionally it is mentioned about the evacuation of a contaminated site. Should we not learn from past mistakes and not foster future contamination? If you walk along the roads in the office park the water run off basins are full of standing water and full of color, stained unhealthy substance - has that been addressed? Or is it okay since the executives and consultants do not live near by? Please do not approve this site and if you are considering please ask yourselves would you want to live nearby? Would you go for a jog and breathe in the neighborhood's air? I bet the answers are no. I ask you to do protect my family and the great community in which we love and vote no on this proposal.

72-1

72-2

72-3

72-4

72-5

Attachments

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Secretary Kathleen Theoharides

Executive Office of Energy and Environmental Affairs

Atten:MEPA Office

EEA No.15990

100 Cambridge Street Suite 900

January 12th 2020

RECEIVED

Dear Secretary Theoharides ,

My name is Jose Da Costa and I have been a resident of New Bedford for 12 years. I am writing the MEPA office to express my opposition to Parallel Products of New England (PPNE)-a sludge

Plant operating in my neighborhood. I am asking MEPA to do its due diligence in studying the environmental impacts of the PPNE project and to address my concerns in your evaluation of PPNE and the Draft environmental impact Report (DEIR) .

As a resident of New Bedford, and a community member, I stand with hundreds of new Bedford residents against this project. New Bedford has dealt with numerous environmental justice issues, and I implore MEPA not to make the same mistake with PPNE.

73-1

I am asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental, Inc. Hired by PPNE. In MEPA's study of the environmental impacts of PPNE and I am specifically concerned with following

Air pollution ,odors,and noises from both the plant and the trucks.

73-2

The increased traffic of 400 industrial trucks daily and the destruction to the environment and roads.

I look forward to your response in addressing my concerns.

Sincerely



1481 PHILLIPS RD. APT. #1401
NEW BEDFORD MA 02745

Honorable Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Atten: MEPA Office
EEA No.15990
100 Cambridge Street Suite 900
Boston, MA 02114

RECEIVED

MEPA

January 2,,2020

Dear Secretary Theoharides,

Let me first start off letting you know I'm a concerned citizen of New Bedford, I'm a mother , an educator and a caregiver. My name is Karen Chin and I have been a resident of New Bedford for sixty three years. I am writing the MEPA office to express my opposition to Parallel Products of New England (PPNE)- a sludge plant operating in my neighborhood. I am asking MEPA to due its due diligence in studying the environmental impacts of the PPNE project and to address my concerns in your evaluation of PPNE and the Draft Environmental Impact Report (DEIR).

I am also urging an extension of the 30 day public comment to at least 90 days, giving local residents and city officials to have time to read through a very lengthy 1300 page DIER report that was published and sent out the end of November. 74-1

As a life-long resident of New Bedford, and a community member who has researched and organized about this issue with PPNE, I stand with the hundreds of New Bedford residents against this project. New Bedford has dealt with numerous environmental justice issues, and I implore MEPA not to make the same mistake with PPNE.

In MEPA's study of the environmental impacts of PPNE ,I am specifically concerned with following:

1. Air pollution, odors, and noises from both the plant and the trucks; 74-2
2. The increased traffic of 300-400 industrial trucks daily and the destruction to the environment and roads
3. Noise and pollution from trains; (being brought into PPNE property)(being across the street for a thickly settled residential area)
4. The impact on the schools in close proximity;
5. Adverse impact on Endangered, Threatened or Special Concern species, on Ecologically Significant Natural Communities or on any state Wildlife Management Area (310 CMR 16.00);
6. Impact on property values and surrounding businesses.
7. The adverse effects of this plant on community members' physical health

I am asking MEPA to do their independent evaluation and answer the following questions: 74-3

1. What is the estimated air pollution from the trucks and from the plant? What is the estimated noise pollution and odors emissions?

2. What is the impact of 300 -400 industrial trucks on traffic and on the roads daily? What is the delay time in traffic during peak hours in the morning (6-9a) and afternoon (2:30-5:30pm)?
3. What is the environmental impact of the trains?
4. What is the impact on safety to our schools?
5. What is the impact on the endangered species and natural communities?
6. What is the impact on property values and surrounding businesses?
7. What are the potential health risks and hazards on community members' physical health and wellbeing?

Personally

as an educator I am concerned with the impact on the surrounding schools, busing, children in this vicinity going to the neighborhood park (which is directly impacted by this plant and its traffic)

74-4

I am also personally concerned, living with a person who has a neurological disease and is nonambulatory with serious health issues having access to emergency care (due to traffic congestion) and the effects on him to be able to sit outside to enjoy the nice weather (odors and noise pollution will affect his health condition)

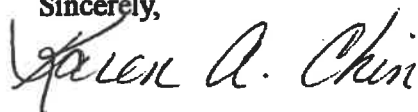
I am asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental, Inc. hired by PPNE. Green Seal is a bias organization who's goal is to highlight the proponent PPNE in the most favorable light. However, MEPA should consider that all of Green Seal Environment's projections are not based in fact since PPNE is not up and running in their Phase 2 -Solid Waste/Bio Solid Plant.

Additionally the DEIR report states:

1. A rail will reduce greenhouse gas emissions (p. 6). However, the rail, plant, and trucks will have all additional greenhouse gas emissions that currently do not exist in the proposed site and proposed neighborhood.
2. Stored glass will be not be enclosed but stored in a solar canopy and a wall will be built to control noise emissions (p. 6). How effective is a wall controlling the noise emissions?

Thank you for your time and consideration. I look forward to your response to my comment.

Sincerely,



Karen Chin

26 Garrison Rd

New Bedford ,MA 02745



View Comment

Comment Details

EEA #/MEPA ID*	First Name	Address Line 1	Organization
15990	kayla	1112 Braley Rd	--
Comments Submit Date	Last Name	Address Line 2	Affiliation Description
12-26-2019	trahan	--	Individual
Review Due By	Phone	State	Status
1-15-2020	--	MASSACHUSETTS	Opened
Reviewer	Email	Zip Code	
Alex Strysky 617-626-1025	kaylaatrahan123@gmail.com	02745	

Comments

Topic: Please do not let Parallel Products follow through with their plan...

I live almost directly across the street from Pulaski school here on Braley Rd. My Fiance and I purchased our house almost one year ago and when we did we knew we were signing up to live on a main road with traffic from the school. However, we would have NEVER purchased this house knowing there would be a trash facility that would stink AND increase traffic flow DRAMATICALLY. Our street is already busy now factor in these large amounts of smelly tractor trailers flying down our street along with all the other traffic flow... Please do not let Parallel Products continue with this horrible plan they have for here in New Bedford. Advise them to take there business to Freetown (just one more exit down) where the population is low and there isn't a school located EXTREMELY close by. We are first time home buyers who were looking for a cute house that needed some TLC and we found exactly what we needed/wanted hear on Braley RD in New Bedford and now unfortunately we are thinking that its time to start looking for a new home were we wont have to breathe in horrid smelling chemicals and deal with the excessive loudness of tractor trailers 24 hours a day. Please just put yourself in our situation or imagine if this was your son or daughter or even grandchildren in this area. No one wants to smell this, no one wants to get sick from these air born chemicals, no one wants to hear these trucks at all hours of the day, and lets face it NO ONE in this area wants parallel products to continue with this plan. The only people who want this to continue are the people working for parallel products. Not a single person in our neighborhood(s) is welcoming parallel products we are all AGAINST this... that should say something right there. Take a drive down Braley road, industrial park, and through the neighborhoods surrounding you will see the BEAUTIFUL signs we have on our front yards saying "NO TO PARALLEL PRODUCTS". Please whatever you do please reconsider this project and find parallel products a new home AWAY from schools, families, children, and the elderly.

75-1

Attachments

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Status

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Letter no. 76

alexander.stryisky@mass.gov

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Comment Details

EEA #/MEPA ID* 15990	First Name ken	Address Line 1 --	Organization --
Comments Submit Date 12-1-2019	Last Name costa	Address Line 2 --	Affiliation Description Individual
Review Due By 1-15-2020	Phone +15089909002	State --	Status Opened
Reviewer Alex Stryisky 617-626-1025	Email kensouthcoast@gmail.com	Zip Code --	

Comments

Topic: re 15990 Request for extension for 90 days after deadline

Hello, I am requesting an extension of 90 days to the deadline in order for me to fully review and check the data in the DEIR that was submitted. Thanks, Ken Costa 76-1

Attachments**Update Status**

Status

Opened ▼

SUBMIT

Share Comment

SHARE WITH A REGISTERED USER

[BACK TO SEARCH RESULTS](#)

Greg Wirsén

From: k Costa <kensouthcoast@gmail.com>
Sent: Tuesday, January 14, 2020 8:44 PM
To: MEPA (ENV)
Subject: EEA #15990 Attn: MEPA Office EEA No 15990
Attachments: The case against the proposed Parallel Products trash transfer station and Biosolids facility 2 1 1
1.docx

Executive Office of Energy and Environmental Affairs,
Attn: MEPA Office EEA No 15990
100 Cambridge St. Suite 900
Boston, MA 02114.

January 14, 2020
Dear Secretary, Theoharides,

My name is Kenneth Costa and attached is my report against the approval of this proposed transfer station / biosolids processing facility. This is a dangerous proposal for the health of the residents of New Bedford.

I look forward to your response to each and every issue that I highlight in the attached report.

Sincerely,
Kenneth Costa
148 Greenbrier Drive
New Bedford

**The Case Against the Proposed Parallel Products Trash Transfer
Station and Toxic Sludge (Biosolids) Facility**



CONTENTS

Introduction.....3

Environmental Justice Community.....3

Transfer Station.....7

 Odors.....7

 Vectors.....8

Noise.....	8
Pollutants.....	9
Traffic.....	9
Toxic Sludge (Biosolids)Recycling.....	11
Odors.....	11
Pollutants.....	11
PFAS (Per and Polyalkyl Substances).....	12
Vulnerable Community in Effected Area.....	13
Schools.....	13
Day Care.....	13
Residential Area.....	13
Economical Impact In the affected area	
Property Values.....	14
Conclusion	15

INTRODUCTION

Parallel Products is proposing to operate a bottle recycling center, trash transfer center and toxic sludge (Biosolids) recycling facility at the New Bedford Industrial Park at 100 Duchaine Blvd. Parallel Products is an International corporation with its headquarters in Louisville,Ky, five locations in the USA and one in Canada¹. The company has extensive bottle recycling experience. However, they have zero experience in handling municipal solid waste or biosolids according to their

77-1

¹ <http://www.parallelproducts.com/facilities>

website listing the locations and processes at each facility. On January 13, 2016 a 77-2
planning board meeting² was held during the morning hours regarding a site
approval for 50 Duchaine Blvd by applicant Parallel Products of New England Inc.
The application for that location lists a request for a liquid waste disposal and
recycling facility. It is worth noting that the proposed site in the application is not
the site that they are now seeking to build on. The first public community meeting
was started by Councilor at Large Brian Gomes and Brad Markey at the Pulaski
School auditorium on April 29, 2019 at 6pm to 9pm. The meeting was well
attended by approximately 300 concerned residents voicing their concerns. A
draft environmental Report for Parallel Products was also conducted by Green
Seal Environmental, Inc. and submitted to the Executive Office of Energy and
Environmental Affairs (EOEEA) on November 15, 2019.

ENVIRONMENT JUSTICE COMMUNITY

77-3

On February 11, 1994, President Clinton signed Executive Order 12898³
known as the Federal Executive Order on Environmental Justice. The E.O. directs
federal agencies to identify and address the disproportionately high and adverse
human health or environmental effects of their actions on minority and low-
income populations, to the greatest extent practicable and permitted by law. The
order also directs each agency to develop a strategy for implementing
environmental justice. The order is also intended to promote nondiscrimination in
federal programs that affect human health and the environment, as well as
provide minority and low-income communities access to public information and
public participation.

In 2014 Governor Deval Patrick signed Executive Order 553. This EO 552
extended environmental justice obligations to all executive branch agencies. The
existing state EJ policy, EO 552 calls for, among other things, the formulation of EJ
strategies by all executive branch agencies.⁴

A community in Massachusetts is determined to be
an "Environmental Justice Community" if it meets at least one of three criteria:

- Has one or more Census block groups whose annual median household

² New Bedford Planning Board Case 03-16

³ <https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf>

⁴ <https://www.mass.gov/files/documents/2016/07/ul/ej-2010-communitystatistics.pdf>

income is equal to or less than 65 percent of the statewide median (\$62,072 in 2010, which would be \$40,347);

or

- Has one or more Census block groups where 25% or more of the residents identify as minority;

or

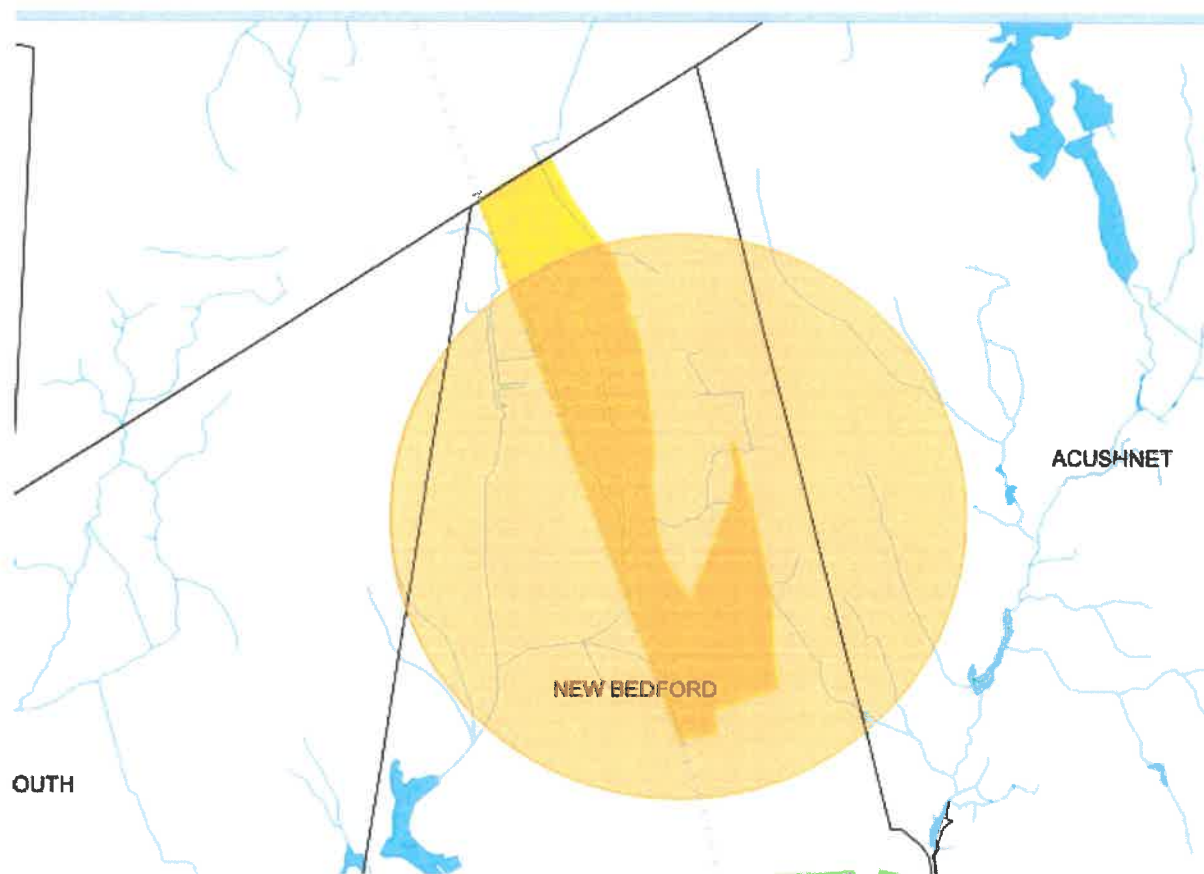
- Has one or more Census block groups where 25% or more of households have no one over the age of 14 who speaks English only or very well (i.e., Limited English Proficiency (LEP)).

The EPA makes a strong case for this policy in their document *Waste Transfer Stations: A Manual for Decision-Making* pg 11 “During the site selection process, steps should be taken to ensure that siting decisions are not imposing a disproportionate burden upon low-income or minority communities. Overburdening a community with negative impact facilities can create health, environmental, and quality of living concerns. It can also have a negative economic impact by lowering property values and hindering community revitalization plans. These are just a few of the reasons environmental justice concerns need to be addressed when selecting a site for a waste transfer station.”⁵

Sixty-two of New Bedford’s 87 census block groups (71.3 percent) meet the definition of an Environmental Justice Community. That covers 66,180 of New Bedford’s total population of 95,072. According to 2010 U.S. Census data, 38 percent of New Bedford’s residents speak a language other than English at home, compared to a statewide average of 21 percent. Its Native American population is four times the state average, and New Bedford’s African American and Latino populations grew by 48 and 66 percent, respectively, between 2000 and 2010. The median household income is \$36,000, with 23.5 percent of New Bedford’s population living below the poverty line.⁶

⁵ <https://www.epa.gov/sites/production/files/2016-03/documents/r02002.pdf>

⁶ Data from this report <https://www.clf.org/wp-content/uploads/2016/08/New-Bedford-EJ-Assessment-2016.pdf>



Map of circle of direct impact from proposed facility. The yellow area impacted is the Environment Justice Minority population.⁷ Note the 1.0 mile circle is the impact area around the proposed site.

Within the 1.0 mile zone of impact there are two schools (Pulaski & Campbell), an active day health center for adults and many apartment buildings, condos, and single-family homes in the affected zone. New Bedford has historically been disproportionately affected by pollution from business. The cities environmental contamination issues have levied emotional and public health impacts on New Bedford residents. New Bedford is also the location of one of the nation's earliest Superfund site designations, New Bedford hosts as many as 572⁸ former (cleaned up) or current "brownfields sites" – properties that are abandoned or underused due to contamination present potential public health impacts. In a study by Northeastern University titled "Unequal Exposure to

⁷ http://maps.massgis.state.ma.us/map_ol/ej.php

⁸ <https://www.clf.org/wp-content/uploads/2016/08/New-Bedford-EJ-Assessment-2016.pdf>

Ecological Hazards: Environmental Injustices in the Commonwealth of Massachusetts” it reviewed all 351 cities and towns in Massachusetts for how overburdened they were with ecological hazards (industrial facilities, power plants, toxic waste sites, trash transfer stations, landfills, and incinerators). The report placed New Bedford as the #6 worst overburdened town in Massachusetts⁹. The only other local town that even made the top twenty was Fall River at #15.

In Parallel Products DEIR Part 2 page 262 under the Avoided impact section it states that the site was picked to avoid impacts to the public. This is not accurate as it is directly in a heavily populated residential area with a public park a stone’s throw away from the proposed site. The placement of a toxic sludge processing and municipal trash transfer station in an environmental justice area and in a city that is already overburdened with toxic sites is criminal. Our harbors are being dredged of PCB’s now from the perils of past businesses that ruined our environment to make people rich. Now a new proposal is being made for the residents of New Bedford to be poisoned and our land toxified to make massive profits while jeopardizing resident’s health.

One of the key points and frightening statement to the EJ community in the toxic fallout zone from that proposed plant is statement on DEIR part2 page 284. It states that the facility does not plan on monitoring emissions on a monthly basis for the purpose of documenting compliance with the permitted air emission limits. This is completely unacceptable as Parallel Products has had violations with the Conservation Commission. Their own hired Engineering firm admitted during a public Conservation Commission meeting that employees were digging trenches to remove water runoff without commission approval. They were in violation for using the area designated for employee parking and dumping broken bottles for recycling in that area (see photo marked attachment 2 on DEIR Part2 page 373). They had another violation as the dumped broken bottles over spilled into the storm water catch basins. The fact that they have already had violations should be a warning that future events may continue which could cause tremendous damage to the environment or residents health. As we have seen with the

77-4

⁹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1241174/>

damage from the PCB's in New Bedford, once the mess is made it is too late to go back and correct the damage to the health of the residents and the environment.

TRANSFER STATION

The proposal as explained at the April 29, 2019 meeting at the Pulaski school called for a transfer station that would receive 15 tons of MSW daily from many outside communities at the rate of 218 trucks a day. The work hours of truck operations were stated from 6am to 7pm. The panel stated that there would be a potential for small nuisance odor from the trash truck and railroad cars. When the panel was asked about pollutants, they stated this would not be an issue. They did not mention any issues with rodents, birds or insects.

ODORS: Mr. Tim Cusson, vice president of business development, stated that odors would not be a problem with either the Biosolid or transfer station. This completely defies logic and common sense. Mr. Cusson's Parallel Products has zero experience in MSW transfer process according to their website with descriptions of their facilities. The thought that 436 trips by garbage truck in the warm months would not present a large odor problem does not appear plausible. Their plan also calls for the hauling of the sorted MSW to its destination by railroad car. They stated that there would be 33 railroad cars with 15 being filled and sent out daily while the other 18 would remain on site. They didn't specify but it would seem that another 15 railroad cars would also return sometime during that same day to replenish the amount that was depleted. Now these empty railroad cars will smell terrible as they sit stationary during the day and heat up via solar radiation. One of the many examples of an indoor transfer station producing horrific odors was ABC 7 news from Brooklyn¹⁰. The indoor transfer station was responsible for horrifically offensive odors day and night effecting the entire surrounding residents.

77-5

VECTORS (PESTS): As described by the EPA, Vectors are organisms, such as rodents and insects that can spread disease by carrying and transferring pathogens. The EPA document Waste Transfer Stations: A Manual for Decision-

77-6

¹⁰ <https://abc7ny.com/neighbors-raising-a-stink-over-smelly-garbage-transfer-station/2367624/>

Making highlights the fact that these will draw vectors to the location and list various techniques to reduce the impact. The facts currently in this area of the city is there are no issues with any of the vectors listed (rodents, birds, insects). If this facility was allowed to be built the health consequences of these vectors would be a severe impact on the community. An example of an indoor transfer station ravaging a community is highlighted in the article in wastedive.com¹¹. The pests from the facility caused many issues and ruined quality of life and threatened the children's health in that neighborhood.

NOISE: This constant noise so close to a residential area starting at 6am and going into the night will destroy the normal quality of life in that area. 77-7

During the public meeting on April 29, 2019 Mr. Cusson mentioned that the noise cannot be more than 10 decibels above the normal sound at that location during nighttime operation. The decibel of backup alarms alone is in the range of 97 to 112 decibels these backup alarms are not even addressed in the DEIR. In addition, the DEIR2 lists 25 fans with an average of 97 decibels. When you compare the biosolid exhaust fan and the Biosolids stack exhaust and ID fan in Table 6-2 with the decibel reduction for those two fans (in DEIR Table 6-3) they only reduce to 75 and 72 decibels respectively. The assumption that these reduced fans of 73 decibels with the average 99 decibel backup alarms and the other fans that average 97 dB ONLY increasing residential levels by 8 decibels above normal background is ridiculous.

The National Institute of Environmental Health Science reports that tens of millions of Americans suffer from a range of adverse health outcomes due to noise exposure, including cardiovascular disease, sleep disturbance, endocrine effects, and increased incidence of diabetes. This is also highlighted and explained in the World Health Organizations report on noise pollution¹²

TRAFFIC: 77-8

¹¹ <https://www.wastedive.com/news/eminant-domain-waste-transfer-station-DC/543107/>

¹² https://www.who.int/quantifying_ehimpacts/publications/e94888.pdf?ua=1

Since the trucks must arrive and then drop off and finally leave that would mean 218 trucks times 2 for arrival and departure. This means 436 trips per day were planned. With their expected truck delivery times of 6am to 7pm works out to 13 hours or 780 minutes in a scheduled day. By dividing the 780 minutes by the 436 truck movements works out to a truck at the 4-way Industrial Park entrance every 1.79 minutes. As listed in the DEIR Part 2 page 351, the intersections are already at a greater traffic flow than capacity. One of the intersections has a crash ratio higher than state average. This already congested road with hundreds of garbage trucks a day will lead to massive grid lock and deadly accidents.

POLLUTION: The health effects from the operation will be extremely damaging to the affected area from this proposed facility. The diesel exhaust pollution alone would increase from the 436 planned individual truck trips on any given day not to mention the diesel train engines for the railcars. Diesel exhaust is produced when an engine burns diesel fuel. It is a complex mixture of thousands of gases and fine particles (commonly known as soot) that contains more than 40 toxic air contaminants. These include many known or suspected cancer-causing substances, such as benzene, arsenic and formaldehyde.

77-9

New Bedford already has an elevated rate of cancer for laryngeal, liver, bile duct, lung, bronchus, pancreatic and stomach. It also contains other harmful pollutants, including nitrogen oxides (a component of urban smog). As we breathe, the toxic gases and small particles of diesel exhaust are drawn into the lungs. The microscopic particles in diesel exhaust are less than one-fifth the thickness of a human hair and are small enough to penetrate deep into the lungs, where they contribute to a range of health problems.

One of the most acute hazards from this transfer station is mercury. Mercury is a potent neurotoxin that can affect the brain, liver and kidneys, and cause developmental disorders in children. Young children and fetuses are especially at risk. Mercury from the transfer station comes from many forms of trash such as batteries, electrical switches, fluorescent bulbs, barometers, and thermometers. The product breaks in the waste stream the mercury escapes and begins to evaporate. This will then pollute the air in the area around the facility.

Children, older adults, people with preexisting cardiopulmonary disease, and people of low socioeconomic status are among those at higher risk for health impacts associated with living near: busy highways, rail yards and industries where pollutants are emitted from multiple sources¹³ In a study by the California Department of Environmental Protection they laid out the impact from living near a busy road¹⁴. This study was following a group of children for age 10 to 18 and the air pollution effects on them. The report found a 36% increase in low birth weight, a 27% increase in premature births and a 3X increase in cardiac birth defects. The report also found an 89% increase in Asthma and a 5-8% increase in acute respiratory symptoms in schools near the roadway.

Now the most troubling statement in the DIER 2 is on page 170 section 5.12 Operating Permit and Compliance Assurance Monitoring. The Compliance Assurance Monitoring (CAM) would not be required based on Green Seal Environmental, Inc assessment. Their analysis is based on estimations and specifications from the equipment. As we all know, estimations and specifications are wonderful but as we have seen from estimations before (the Titanic can never sink) they often don't live up to expectations. Without the CAM to continually monitor the toxic emissions from this proposed facility the residents and especially the children will be contaminated daily.

77-10

TOXIC SLUDGE (BIOSOLIDS) PLANT

The proposal as explained at the April 29, 2019 meeting at the Pulaski school and the DEIR called for a Toxic Sludge (Biosolid) facility that would receive 36 trucks daily from many outside communities with the toxic sludge (biosolids) to be dried. The work hours of truck operations were stated from 6am to 7pm. The panel stated that there would be a potential for small nuisance odor. When the panel

¹³ <https://www.epa.gov/air-research/research-near-roadway-and-other-near-source-air-pollution>

¹⁴ <https://ww3.arb.ca.gov/research/health/healthup/march07.pdf>

was asked about pollutants, they stated they would have scrubbers and the process would be inside buildings. They did not mention any issues with rodents, birds or insects.

ODORS: Nuisance odors can have detrimental effects on aesthetics, property values, and the quality of life in communities subjected to them. An odorous toxic sludge (biosolids) product, or a toxic sludge (biosolids) treatment process that results in odor emissions, may be perceived as unhealthy due to the origin of the solids. The cause of health complaints in the absence of irritation or toxicity is poorly understood. (Schiffman et, al.) Tangential information is available from other industries but there is no necessarily direct relevance to toxic sludge (biosolids) odors. More research is needed to identify potential health effects of toxic sludge (biosolids) odors.¹⁵ The plant operating in Upper Holmesburg PA is an indoor toxic sludge (biosolids) recycle plant and the smell is making neighbors sick as outlined in a Northeast Times article¹⁶ The EPA also clearly states that toxic sludge (biosolids) do have a smell that range from an ammonia smell to a stronger odor that may be offensive to people.¹⁷ Another example of an indoor toxic sludge (biosolids) plant with a horrible smell issue is Journal Sentinel from Detroit Michigan¹⁸

77-11

POLLUTION: A toxic sludge drying plant uses heat to dry the sludge. A byproduct of the drying process is dust. The dust is combustible and is an explosion risk. Contaminants including heat-resistant pathogens, can bind to the dust, producing toxic dust. This dust is supposed to be captured by filters, but the question is how well they work to remove the tiny particles that can be inhaled and lodged in the lungs or deposited on surface water. The disturbing fact is that even the EPA's inspector general admitted that they don't know enough about the hundreds of pollutants found in the toxic sludge (biosolids) material. Jill Trynosky, a project manager with the inspector general's office state "The EPA is unable to state

77-12

¹⁵ <https://www.epa.gov/sites/production/files/2018-11/documents/order-control-biosolids-management-factsheet.pdf>

¹⁶ <https://northeasttimes.com/2017/09/13/stink-city/>

¹⁷ <https://www.epa.gov/biosolids/frequent-questions-about-biosolids>

¹⁸ <https://www.jsonline.com/story/news/local/milwaukee/2018/03/12/relief-sight-walkers-point-residmsd-block-odors-jones-island-sludge-tanks-after-complaints-walkers/404243002/>

whether, and at what level, the pollutants found in biosolids pose a risk to human health and environment.”¹⁹

The full EPA inspector general report states that it lacks the data needed to make a determination on the safety of 352 pollutants found in biosolids. Of the 352 pollutants, 61 are designated as acutely hazardous, hazardous or priority pollutants in other programs.²⁰

PFAS (Perfluoroalkyl and Polyfluoroalkyl Substances)

77-13

A special pollutant that the EPA is starting to roll out testing for is PFAS or Perfluoroalkyl and Polyfluoroalkyl Substances. PFAS chemicals have been widely used since the 1940's and were used in many industrial and consumer products. The chemical bonds are so strong with these chemicals that they are called “forever chemicals” and can bioaccumulate in the human body. These chemicals are dangerous to human health and the EPA set a health advisory level of 70 parts per trillion (ppt). These forever chemicals have been linked to kidney cancer and a range of other diseases. These toxic chemicals in biosolids are such a threat that the Maine DEP shut down the production of toxic sludge (biosolids) in 2019 and set a deadline for PFAS test of May 7. This was due to the fact that PFAS from toxic sludge (biosolids) completely polluted a dairy farm and now it was forced out of business.²¹

Recently Boston Globe did a story on Deer Island biosolids plant and found that the sludge tested positive for PFAS at a level of 18,000 parts per trillion²². The EPA recommends alerting the public for levels in drinking water at 70 parts per trillion. This is being found nationwide when the biosolid sludge is tested. The biosolids that this proposed site would bring could be highly polluted with PFAS and could

¹⁹ <https://www.bloomberqint.com/business/safety-of-sewage-used-as-fertilizer-questioned-by-epa-watchdog#gs.2L3XaME>

²⁰ <https://www.epa.gov/office-inspector-general/report-epa-unable-assess-impact-hundreds-unregulated-pollutants-land>

²¹ <https://www.pressherald.com/2019/04/02/treatment-plants-scramble-to-meet-new-dep-sludge-testing-edict/>

²² <https://www.bostonglobe.com/metro/2019/12/01/levels-toxic-chemicals-mwra-fertilizer-found-tests-are-raising-concern/tlnN0BffuygFKCweSpFq5J/story.html>

make the PCB's in New Bedford harbor pale in comparison to this newly created brownfield site.

The Baker-Polito Administration on December 13, 2019 filing draft regulations on PFAS regulations. This is a serious issue as dangerous forever chemical is found routinely in high concentrations in biosolid sludge. Certainly treating this sludge with this chemical in a densely populated and Environmental Justice designated neighborhood is not a safe combination. The neighborhood should not be medical test subjects to the long term exposure to these dangerous chemicals.

VULNERABLE COMMUNITY IN THE AFFECTED AREA

77-14

SCHOOLS: There are two schools in the affected area that will have the student's health impacted by the proposed plants. Studies have found that the added impact from additional diesel truck exhaust will increase acute respiratory symptoms and Asthma by 89%. Pollutants have a far greater impact on children as they are more susceptible as they grow and develop.

ADULT DAYCARE: The adult day care center is bordering right on the industrial park boundary and the pollutants and smell will be detrimental to these residents. The EPA document states that even low-level air pollutants lead to a higher risk to the elderly²³

RESIDENTIAL AREAS: The residents (some that would have the plant LITERALLY in their backyard) will have their health, quality of life and economics negatively affected by this proposed plant. A large amount of homes are within a half a mile

²³ <https://www.epa.gov/sciencematters/study-shows-low-levels-air-pollution-pose-risk-older-adults>

of the proposed location.



(Photo shows homes with part of the proposed plant directly behind these homes.)

ECONOMICAL IMPACT ON THE AFFECTED AREA

77-15

Studies have shown that living near a trash facility that can be seen or smelled will have a negative impact on property values. A study by the center for Health, environment & justice found a reduction of property value from 2.5% to 12.9% near trash facilities. The houses living the closest to the transfer station had the greatest reduction in property value. The impact to other businesses in the

industrial park should also be addressed as the impact of smelly garbage trucks and pollutants may cause businesses to leave which would impact tax revenues to the city.

CONCLUSION

The City and Mass DEP should reject this proposed plant based on the health, safety and environment justice factors that were listed. The fact that the EPA's inspector general admits that they are unable to ensure the health and environment from toxic sludge (biosolids) is a big red flag. The revelation recently that the biosolids at the Deere Island treatment plant is contaminated with PFAS levels 257 times the level the EPA recommends notifying the public is frightening. The fact that toxic sludge (biosolids) with PFAS's caused the Maine DEP to shut down and require further test on biosolids should block any attempt at a new proposed plant. The health of the residents in New Bedford should not be reduced to a scientific experiment to determine the impact of pollution on human beings. The state is also creating draft regulations on PFAS now.

The City of New Bedford has long suffered from numerous hazardous waste sites and has borne a large brunt of the health impacts. The City of New Bedford is already the 6th most overburdened town in the Commonwealth of Massachusetts with Ecological Hazards. Many of the residents do not have the economic means to move if this gets approved or if they do manage to move will take a loss in market value and further exacerbate their financial stability. Why should the minority community in this New Bedford area affected by this proposed plant be victimized emotionally, financially and quality of life wise? The fact that Parallel Products has zero experience in running a toxic sludge (biosolids) plant or a MSW facility is also a huge factor. An experiment for a large financial gain should not place vulnerable residents at risk. This company had violations with the Conservation Commission already for failure to follow procedures. In the past manufacturing was booming but at what cost to our environment? PCB's ruined our river our local waterway and land. We don't need this business creating a new contamination sites like the PCB businesses created.

Greg Wirsen

From: k Costa <kensouthcoast@gmail.com>
Sent: Tuesday, January 14, 2020 8:35 PM
To: MEPA (ENV)
Subject: Executive Office of Energy and Environmental Affairs, Attn: MEPA Office EEA No 15990 100 Cambridge St. Suite 900 Boston, MA 02114.

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
ATTN: MEPA Office
EEA No. 15990
100 Cambridge Street Suite 900
Boston, MA 02114

January 14, 2020
Dear Secretary, Theoharides,

My name is Kenneth Costa and I am a resident of New Bedford and I am writing the MEPA office to express my opposition to Parallel Products of New England (PPNE) proposed transfer station and sludge treatment plant. The area for the proposal is heavily residential and it would be too dangerous to site it there. New Bedford is the 6th most overburdened city with ecological hazards according to a Northeastern study. This proposed project is impacting an Environmental Justice zone as defined by Federal Executive Order 12898 and Massachusetts Executive Order 553. New Bedford has been impacted with many toxic sites from past businesses and we don't need another one creating the next new Superfund site. I am asking MEPA to reject the Draft Environmental Impact Report (DEIR) submitted by Green Seal Environmental, Inc hired by PPNE. In MEPA's study of the environmental impacts of PPNE and I am specifically concerned with the following:

78-1

- Air pollution, noise pollution, rodents and odors from the plant and the trucks
- The increase of traffic to the already overburden roads near the business park
- The detrimental impact to the health and welfare of the adults and children that live and go to school nearby
- The impact on endangered species in the area around the proposed plant and wetlands

I look forward to your response in addressing my concerns.

Sincerely,
Kenneth Costa
148 Greenbrier Drive
New Bedford



January 23, 2020

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
EEA No.15990
100 Cambridge Street, Suite 900
Boston, MA 02114

Dear Secretary Theoharides,

My name is Rick Kidder and I have been a resident of and have worked in New Bedford for five years. I currently serve as Co-CEO of One SouthCoast Chamber, the second largest Chamber of Commerce organization in the Commonwealth. The Chamber represents 1500 businesses in the South Coast region, with offices in New Bedford and Fall River.

I am writing to the MEPA office to express my full support of Parallel Products of New England, and their plan to develop a new industrial recycling and processing facility in the New Bedford Business Park. I am asking MEPA to observe the positive impacts the Parallel Products New England project can have on New Bedford and the Commonwealth of Massachusetts. 78-1

I stand in support of the Parallel Products South Coast Green Energy Center. New Bedford is in dire need of an efficient recycling facility, and I urge MEPA to understand such a need when evaluating the PPNE project.

I am asking MEPA to approve the Parallel Products New England Project. I am specifically supportive of the following reasons:

- The entire facility will be enclosed and vacuum sealed to ensure that no odor or noise escapes.
- The shipping of some materials by rail and trucks utilizing the Braley Road exit to limit traffic congestion.
- The recyclables taken would have otherwise gone to landfills.
- The \$50 million dollar investment in the facility to ensure there are no environmental issues.
- The PPNE project would create 75-100 jobs, and will generate an additional \$2.6 million in wages to hourly workers, and \$1 million in taxes to the City of New Bedford.

- Parallel Product's efforts and commitment to reach out to engineers and professionals to assess and address any potential issues.
- Parallel Products will be accepting 70% of the glass and plastics in the state.

I am a resident of New Bedford and keenly interested in maintaining a quality environment in our community. I have a firm belief that the company has a commitment to the community in the long term, as is warranted for an investment this high, and I have been impressed with the strong efforts that Parallel Products has made to reach out to the community, even in the face of challenging and misleading rhetoric. I understand the concern of citizens for their quality of life, but I firmly believe that under MEPA guidelines that Parallel Products will consistently work to be a positive corporate citizen in our community and will treat our environment as they would wish theirs be treated.

I look forward to your response in addressing my support.

Sincerely,

A handwritten signature in black ink, appearing to read "Rick Kidder", with a stylized, cursive script.

Rick Kidder

Co-CEO

One South Coast Chamber

227 Union Street, Mezzanine 2

New Bedford, MA 02740

508-999-5231



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF
ENERGY AND ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENERGY RESOURCES
100 CAMBRIDGE ST., SUITE 1020
BOSTON, MA 02114
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Charles D. Baker
Governor

Karyn E. Polito
Lt. Governor

**Kathleen A.
Theoharides**
Secretary

Patrick C. Woodcock
Acting Commissioner

24 January 2020

Kathleen Theoharides, Secretary
Executive Office of Energy & Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02114
Attn: MEPA Unit

RE: Parallel Products, New Bedford, Massachusetts, EEA #15990

Cc: Maggie McCarey, Director of Efficiency Programs, Department of Energy Resources
Patrick Woodcock, Acting Commissioner, Department of Energy Resources

Dear Secretary Theoharides:

We've reviewed the Draft Environmental Impact Report (DEIR) for the above project. The proposed project includes the following facilities:

Conditioned:

- 50,820-sf Glass Handling facility & Bunker;
- 30,000-sf Biosolids processing facility w/ 1,500-sf office/restroom suite.

Unconditioned:

- 87,000-sf Municipal Solid Waste (MSW) tipping and processing facility;
- 22,592-sf Side Bunker Building;

Clarifications Required

The DOER is seeking the clarifications below in order to better evaluate proposed envelope performance and other key code issues:

- a. The energy modeling section (Tables 4, 5, and 6) of the greenhouse gas (GHG) analyses does not appear to contain the 22,592-sf Side Bunker Building. This building is included in the WSP “New Lighting Requirements and Reduction” section of the report. Please clarify. 80-1
- b. Since the EENF, the project has reduced the proposed heating efficiency in the Biosolids processing facility from 90% to 82%. Why was this mitigation measure reduced? 80-2
- c. The project appears to be underestimating heat pump Alternative Energy Credit (AEC) value. Please include supporting calculations. 80-3
- d. The lighting end use for all buildings appears unusually high compared to reference buildings. This appears to primarily be due to continuous operation for the entire year. 80-4
 - Please confirm lighting operating schedule by hour, day, season.
 - Referencing the table below, Table 5 of the GHG analysis presents a lighting end use that appears to correlate to a Lighting Power Density (LPD) much higher than that reported in the WSP “New Lighting Requirements and Reduction” report. Please check the energy model to confirm that this LPD is correct.

	Table 5 (W/sf)	WSP Report (W/sf)
Baseline	1.73	1.19
Proposed	1.37	0.95

- e. Page 96 of the Noise Impacts section of the DEIR states that the Glass Processing facility will have eight (8) ventilation fans. However, the energy model for the Glass Handling (Processing & Bunker) facility (Table 5) of the GHG analysis does not contain any ventilation load. Please clarify. 80-5
- f. Section 2.2.2 on Page 3 of the GHG analysis states that the base of the biosolids building will be 15’ of exposed concrete with a metal wall above. Please provide a UA analysis for the vertical walls to compare the proposed envelope performance to code requirements. This UA analysis should include all necessary dimensions (exposed concrete wall height; total building height, total vertical surface area, etc). 80-6
- g. Page 2 of the GHG Analysis states that “the project will comply with the mandatory and prescriptive requirement of ASHRAE 90.1 2013”. However, it appears that the conditioned buildings are not achieving the ASHREA 90.1 2013 Section 5 – Building Envelope measures as follows: 80=7
 - Sections 2.2.1 & 2.2.2 on page 3 of the GHG Analysis state that both conditioned buildings will achieve a wall insulation value of R-19 (R19+R-0c.i.). ASHREA 90.1 2013 Table 5.5.5 requires R-0+R-19c.i for a metal building. Ensure that the walls are achieving the code minimum continuous insulation requirement, or better.

- We understand that the proponent has started construction on the Glass Handling building and has completed the roof without including R-11 L.S. It is unclear from the submission that they are maintaining the commitment to code level envelope. 80-8
- Section 5.4.3.1 on page 2 of the WSP Report states that “Continuous Air Barrier / Only the conditioned space of the Glass Building will be required to comply with Section 5.4.2.1, all other buildings are unconditioned.”. A continuous air barrier should be applied to all conditioned buildings, including the Biosolids building. 80-9
- h. The project has elected to incorporate C406.1 measure 2 “Reduced Lighting Power Density” as one of the two C406.1 measures. Table 4, 5, and 6 of the GHG analysis and the “New Lighting Requirements and Reduction” section of the WSP Report do not appear to incorporate the C406.1 measure in the baseline building, however. Please clarify. 80-10
- i. Clarify that the 20% LPD reduction is being applied after accounting for C406.1 measures. The 10% reduction required by C406.1 cannot be counted toward mitigation. 80-11

Recommendations for subsequent Submissions

Recommendations are as follows:

1. Provide clarifications for the items above.
2. The project should meet the heating system efficiency commitment in the EENF of 90% for the biosolids building and increase the efficiency to 90% for all conditioned areas. 80-12
3. Meet with MassSave® electric and gas Program Administrators for the project. Estimate MassSave incentives based on meeting. 80-13
4. The proponent plans to complete construction of on-site PV by January 2020. Please confirm that this was completed or present a detailed schedule for installation. 80-14
5. Above-code envelope should be used throughout. In summary: 80-15
 - a. Above Code-threshold envelope is recommended (vertical walls, windows, roofs and exposed floors). Priority should be given to increasing continuous insulation. Distinguish between R value of batt and R value of continuous insulation. Indicate planned wall assembly U value and wall construction type (mass, wood, metal stud, etc). Confirm that the relationship between R-value and assembly U-factor conform to Appendix A of the Code.
 - b. Analyze opportunities for above code envelope improvements.
6. Include a table similar to the example below. For “code value” ensure that the value incorporates any improved efficiency per requirements of Section C406.1 of the Massachusetts’ amendments. 80-16

Parallel Products, EEA #15990
New Bedford, Massachusetts

Measure/Area	Base Code	Proposed	% Change	Comment
AC Efficiency (EER)				
Bldg 1	code value	design value	%	
Bldg 2	code value	design value	%	
ERV Effectiveness (%)				
Bldg 1	code value	design value	%	
Bldg 2	code value	design value	%	
Boiler (% efficiency)				
Bldg 1	code value	design value	%	
Bldg 2	code value	design value	%	
LPD (Watts/sq ft)				
Bldg 1	code value	design value	%	
Bldg 2	code value	design value	%	
(continue to include service water, equipment, etc)				

Sincerely,



Paul F. Ormond, P.E.
Energy Efficiency Engineer
Massachusetts Department of Energy Resources



Brendan Place
Clean Energy Engineer
Massachusetts Department of Energy Resources



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January 23, 2020

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BY ELECTRONIC MAIL (MEPA@mass.gov)
AND FIRST CLASS MAIL

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
Attn. MEPA Office
EEA No. 15990
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: Parallel Products of New England, LLC
100 Duchaine Boulevard, New Bedford, MA
Draft Environmental Impact Report - EEA No. 15990

Dear Secretary Theoharides:

This firm serves as special counsel to the City of New Bedford (the "City"). On behalf of the City and Mayor Jonathan F. Mitchell, the following comments are hereby submitted with regard to the Parallel Products of New England, LLC Draft Environmental Impact Report ("DEIR"), EEA No. 15990.

Project Overview

As you are aware, the Parallel Products project site at 100 Duchaine Boulevard in the City of New Bedford comprises 71 acres and currently contains 92,220 square feet of building space. The proposed project will include 150,175 square feet of additional building space and canopy space of 75,525 square feet, in addition to a 27,500 square foot glass handling building currently under construction. As noted in the DEIR, this will result in a two-acre increase in impervious area at the project site, or a total of 25.8% impervious surface lot coverage. Phase 1 of the projects consists of construction of a recycled glass handling facility, an associated rail spur for disposition of the glass product, and solar panels for generation of 1.9 MW of power. Phase 1 is currently proceeding under a waiver included in the Final Record of Decision.

Phase 2 of the project consists of construction of a municipal solid waste ("MSW") and construction and demolition debris ("C&D") processing and handling facility as well as a biosolids facility. A 5000 square foot handling building will be constructed into which material will be delivered by truck in either baled or unbaled form, as well as loose material in trucks. C&D material and bulky waste will also be accepted. MSW will be processed in an existing building to allow for extraction of recyclable materials. Materials will be shipped from the facility by rail. At full capacity the facility would produce 1300 tons per day of residual waste and up to 50 tons per day of



Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 2

dried biosolids, to be shipped from the site in rail cars. Up to 250 tons per day of recycled glass will also be shipped from the site by rail.

The size and impact of this project will be significant and has prompted an extensive review by the City. In its review, the City has determined that the project description and analysis, as provided in the DEIR, raise a number of questions and concerns regarding the siting of and planning for this project. The proposed site is within a business park occupied by existing businesses. The proposed facility would have a detrimental impact on existing users of the park, which is an important economic resource for the City. Further, the traffic, noise, and odors would have a decidedly negative impact upon the residents in the area who will have to live with this operation on a daily basis. The mitigation measures proposed by the applicant simply do not address the project scale in comparison to the weight of the project upon this community.

The City strongly objects to this project as it will have a clear negative impact on public health, safety, and the environment based upon the noise, odors, and traffic impacts, as well as wetlands and soils impacts. The DEIR itself demonstrates a lack of attention to these concerns, requiring additional review, clarification, and correction before a certificate can be issued.

Inappropriate and Premature Discussion of Site Suitability Criteria

81-1

It is notable that the DEIR, in discussing the solid waste issues, seeks to address Department of Environmental Protection ("DEP") site suitability criteria to assess whether the proposed site is suitable for the handling of solid waste materials. The siting of a solid waste transfer station is subject to the requirements of state statute (G.L. c. 111, §150A and regulation (310 CMR 16.000). This highly regulated process includes review by the DEP as well as the local Board of Health, with each having a distinct and significant role in the approval process. Before the local Board of Health undertakes its review through a public hearing process, the DEP must undertake its review and approval. A Site Suitability Report submission is a DEP requirement for permitting of a solid waste handling facility in order to demonstrate that the site is appropriate for such use. Once site suitability is determined by the DEP, the applicant will need to apply to the Board of Health for a site assignment. This analysis is therefore premature and inappropriate for a DEIR. The conclusions reached by the applicant in this regard are of no substantive value as they will be subject to DEP, and ultimately New Bedford Board of Health, review. The City objects to their inclusion in the DEIR as they are subject to review under a separate regulatory scheme.

Waste Handling Area Enclosure Requirement

81-2

The City is particularly concerned with the depiction of the waste handling area for the project and how this waste handling will be undertaken. While the applicant states that waste handling activities will not take place outside of enclosed building structures, the Waste Handling

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 3

Area as defined in the DEIR extends beyond those building, leading to a concern that waste handling may be expanded beyond the enclosed buildings. Such activities should not be permitted as the waste will be exposed to the elements and rendered uncontrolled, leading to inevitable off-site impacts. All waste handling should be confined within enclosed areas so as to prevent the uncontrolled migration of waste materials which would negatively impact public health and safety. The definition of the Waste Handling Area should be revised to restrict it to the enclosed buildings.

Further, the DEIR does not specify what waste handling activities, if any, may be proposed in areas and locations outside of the proposed facility buildings. A Waste Handling Area boundary that encompasses general open areas around the site could facilitate the introduction of future waste handling activities outside of enclosed buildings (such as open-air stockpiling of waste materials) that are not addressed in this DEIR. The Waste Handling Area should specifically and clearly reflect the actual intended areas and locations where waste handling activities are proposed. If waste handling activities are proposed for areas outside of facility buildings, these activities and their associated environmental impacts should be addressed and discussed in the DEIR. It is the City's position that waste handling outside of site buildings should be prohibited, given the availability of enclosed space on the site, so as to properly protect public health and safety. There is simply no reason why waste handling should be permitted to occur outside the buildings.

The Waste Handling Area boundary appears arbitrarily based upon a 500 foot off-set distance from adjacent residences in order to satisfy the regulatory requirement. The Land Use Plan incorporated into the DEIR shows houses located on the east side of Philips Road. The Land Use Plan should also show the houses located on the west side of Philips Road, which are shown on Figure 12 (Residential Sound Modeling Locations) of the DEIR, to confirm their minimum 500-foot setback from the proposed waste handling area. The applicant should not be simply drawing a line based upon the 500-foot setback requirement but should clearly identify all houses within the setback area. Further, since the site is located just over 500 feet from a NHESP Priority Habitat, a site-specific evaluation should be undertaken and/or consideration given to potential for impacts to that habitat due to wetland connectivity. Once again, the City objects to any waste handling within the set-back area that is outside of enclosed buildings, as such activities would adversely impact health and safety.

Significant Concerns about PFAS Contamination

81-3

A major component of the project, and a major concern of the City, is the processing of biosolids. Significant concerns not adequately addressed by the applicant are the potential for polyfluoroalkyl substance (PFAS) contamination of the site as a result of that processing and contamination of the City of New Bedford's wastewater and biosolids as a result of the large volume of PFAS-bearing wastewater that will be discharged to the City. Perhaps most important, the

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 4

project's concentration of PFAS wastes in the City is a further imposition on a fiscally constrained City that already is managing a disproportionately large share of environmental burdens.

Recognizing that PFAS compounds can pose health risks but are largely unregulated, EPA issued its comprehensive *PFAS Action Plan* on February 14, 2019. The federal action plan is an accelerated program designed to limit human exposure to potentially harmful levels of PFAS in the environment by, among other means, developing federal drinking water standards for those substances. Not content to wait for EPA, Massachusetts proposed its own PFAS drinking water standard on December 27, 2019. Moreover, proposed federal legislation would add certain PFAS compounds to the list of "hazardous substances," which would place them under the jurisdiction of the Superfund Program and require public disclosure under one or more toxic release inventory programs. These rapidly advancing legislative and regulatory initiatives at both the state and federal levels enjoy bipartisan support owing to their focus on public health. This project's effect of concentrating PFAS from biosolids generated elsewhere in the region in the City is inadvisable, inappropriate and, likely, unsustainable.

There is a significant potential for PFAS and other contaminants to be enter groundwater and potentially drinking water, as the property is located on a potentially productive aquifer. PFAS compounds in particular are highly mobile and persistent in the environment. The state's concern on this issue is reflected by its proposal just last month of a very low 20 ng/L Maximum Contaminant Level for drinking water. The substantial threat to drinking water and the public health, not to mention liability for groundwater contamination, has not been addressed.

The discharge to the City of wastewater from the biosolids digester is also of grave concern. As proposed, wastewater contaminated with PFAS from other communities' biosolids will be discharged to the City of New Bedford municipal wastewater treatment plant. These discharges could have two adverse effects as discussed below, both of which would be exacerbated by the expected tightening of regulatory control on PFAS compounds.

No publicly owned treatment works is designed to or capable of destroying PFAS in wastewater. As a result, substantial discharges of PFAS to the City's collection system would pose a risk of noncompliance with any new PFAS-specific effluent limitation imposed on its treatment plant. Noncompliance brings with it enforcement, resulting in costly injunctive relief and, often, penalties. The City's alternative to facing such liability is to act pursuant to its Industrial Pretreatment ordinance, either by establishing local limits requiring the project to adopt as-yet unidentified and un-evaluated treatment technologies, or by prohibiting or terminating PFAS discharges to its system based on a finding that they "reasonably [appear] to present an imminent endangerment to the health and welfare of persons, or any discharge presenting, or which may present, an endangerment to the environment." None of these issues are evaluated in the DEIR.

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 5

Beyond the quality of the discharge from the City's treatment plant, introduction of PFAS from the processing of other communities' biosolids risks raising levels of PFAS in the City's own biosolids to a level that precludes use of one or more otherwise lawful disposal or reuse options. MassDEP, which regulates biosolids applications through the issuance of Approvals of Suitability (AOS), is already moving to address PFAS in biosolids. Since January of 2019, the Department has been incorporating a requirement for PFAS testing in all new or renewed AOSs. Regulatory constraints on those compounds is the logical next step following this data collection effort, and the proposal to concentrate PFAS from other communities in the City's biosolids will place the City squarely in the path of and likely at odds with those constraints. The DEIR fails to evaluate or account for this substantial risk.

For all of these reasons, the biosolids component of the project should not proceed without a PFAS mitigation plan that removes PFAS from the wastewater stream to concentrations suitable for acceptance at the municipal treatment facility under current and future discharge criteria, or that provides for a bond of sufficient value to protect the City from foreseeable adverse consequences of becoming the destination of PFAS wastes from throughout the region. The DEIR, while acknowledging the release of PFAS into the wastewater system, should address the issue of PFAS contamination in the environment and present proposed mitigation measures including wastewater pretreatment systems. As it stands, this portion of the DEIR is woefully inadequate in failing to properly address a known threat to public health, safety, and the environment. As a result, the biosolids portion of the project should not be allowed to proceed.

Wetland Concerns

81-4

A primary wetland concern is the installation of the retaining wall for the rail spur and the associated wetlands impacts that will occur as part of this work. Although the applicant has identified impacts associated with the actual construction footprint of this work, it has neglected to account for the bordering vegetated wetland that the applicant will be semi-isolating with its retaining wall. It is therefore necessary for the applicant to conduct an evaluation of impacts to the wetland areas south of the crossing. This analysis should consider the ecological, wildlife habitat, wetland function, flood storage and hydraulic impacts created by the retaining wall. Based on this analysis, the applicant should provide calculations on culvert sizing to ensure that the retaining wall will not act as a restriction to any of the factors listed above. This is of utmost importance, especially considering the site is within a Zone X of the floodplain. Since precipitation rates are increasing, it will be important to ensure that the wetlands throughout the site continue to drain as they do under existing conditions.

The alternative analysis for the culverted stream crossing is limited. The preferred alternative from a wetland perspective would be a bridge span of the stream crossing, not a 3-sided or 4-sided box culvert. No information was provided as to the sizing of the culverts within the

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 6

retaining wall and why they were selected. The analysis briefly discusses the preferred wetland alternative (bridge span), only saying that approach would cause more disturbance. No supporting calculation is included in the DEIR, and it remains unclear how abutments built in the upland with the only wetland impact being driven piles would be a greater disturbance than the selected box culvert. The alternative analysis should evaluate aesthetic and biological impacts of each alternative to determine whether a box culvert or bridge span is preferred, and provide additional information within the alternative analysis specific to ecological, wetland and hydrological impacts, as well as cost estimations of each alternative.

Traffic Concerns and Discrepancies

81-5

The applicant estimates that the project will result in an addition of 300 new truck trips per day and 150 new employee trips per day into an already stressed traffic environment. From a traffic standpoint, the most significant issue that has not been fully analyzed is the high crash rate at the intersection of Theodore Rice Boulevard and Duchaine Boulevard which currently exceeds both the District and Statewide crash rates for unsignalized intersections. The traffic added to this intersection during the peak hours would exacerbate the crash risk at this problematic intersection. A full crash analysis is required for this junction, to include police crash reports, current geometry, lighting, signing, and pavement markings. The applicant should provide plans and details for improvements to this intersection necessary to make it safer and mitigate the impact from the added traffic resulting from the project. This significant threat to public safety must be addressed before the project may proceed.

The Site-Generated trip section of the DEIR includes a descriptive breakdown of the expected trip generation and indicates that the trip generation calculations are provided in Appendix E; however, some of the data provided does not appear to match the trip generation section in the report. Specifically, while the report text states there will be 26 tons per day arriving in roll off containers, it also states that the applicant conservatively assumes 4 tons per truck, which equates to almost 7 trucks per day, and not the 4 shown. This is a significant discrepancy which may have a serious impact on the overall operation of roadways and intersections and should be corrected as it a cause of confusion and concern. A thorough review of the Traffic Impact Study and supporting calculations should be performed to identify and correct any similar discrepancies.

Noise Concerns

81-6

Noise is, of course, a significant concern with such a substantial operation. Noise controls described on page 28 of the DEIR include a 50-foot long, 15-foot tall sound barrier along the southern edge of the biosolids building; however, residences are located to the east. Clarification is required regarding the effectiveness of the sound barrier wall as a noise control measure for ground level equipment located on the west side of the biosolids building and an explanation of the level of

Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 7

attenuation it will achieve. Also, while the wall is described as L-shaped, the wall is not shown as L-shaped in the Project Plan set (included as Attachment 8). This will need to be explained. In addition, nuisance noise disturbances from equipment and truck back-up alarms are a common complaint of residents located close to facilities such as the proposed project. The DEIR lacks discussion on how nuisance impacts from back-up alarms will be addressed.

Environmental Justice

81-7

The DEIR reviews the applicant's attempts to address Environmental Justice. While the DEIR outlines that all meeting requirements have been satisfied, meetings with local citizens' advocacy groups have revealed ongoing concerns with the outreach performed, as well as maintaining biodiversity and habitat in the area, potential impacts to air quality created during construction and ongoing operations, noise and odor from the facility. Southcoast Neighbors United, c/o Wendy Graça and Tracy Wallace should be added to the Environmental Justice groups for notice purposes.

Soil and Water Analysis, Visual Buffer, Climate Change

81-8

The DEIR states that soil and water were not evaluated during the multi-pollutant analysis due to the enclosed operation design of the facility. This analysis should include all environmental media as a contingency in case of a release prior to unloading or subsequent to loading in the enclosed facility. Simply stating that handling will occur indoors does not address the very real possibility that material will migrate outside those buildings, causing impacts to soil and water which would not otherwise be planned for. This analysis should be required in order to anticipate and address unanticipated impacts to all environmental media.

Further, while the existing tree line may provide for visual buffer "during non-winter months", consideration should be given to adding understory native evergreen plantings for year-round visual buffer which may provide additional noise, odor, and air quality mitigation. The DEIR cites climate change impacts to urban areas in the northeast as presented in the Fourth National Climate Assessment as including extreme temperature events, episodes of poor air quality, recurrent waterfront and coastal flooding and intense precipitation events that can lead to increased flooding. While the DEIR notes that the understanding of climate change is incomplete, this underscores the need to plan for the extremes in design and operational contingency plans.

This letter merely summarizes the host of concerns the City has for this project. The City believes that the applicant has not adequately addressed the health, safety, and environmental impacts of this project, a project that is not in the best interest of the City of New Bedford. The City requests that the applicant be asked to address these and all comments submitted with respect to the DEIR, and that the applicant be denied the requested certificate based upon the deficiencies of its



Secretary Kathleen Theoharides
Executive Office of Energy and Environmental Affairs
January 23, 2020
Page 8

filing. The City stands strongly opposed to this project and the significant negative impacts it will bring to the City and the region.

Your attention in this matter is greatly appreciated.

Very truly yours,

A handwritten signature in blue ink, appearing to read "Mark R. Reich".

Mark R. Reich

MRR/cqm
cc: Mayor Mitchell
709655/NBED/0041

APPENDIX 13
TRAFFIC STUDY

Updated Traffic Impact Study

Solid Waste Handling Facility

100 Duchaine Boulevard
New Bedford, MA

Prepared by
McMahon Associates, Inc.
350 Myles Standish Boulevard, Suite 103
Taunton, MA 02780
508.823.2245

Prepared for
Green Seal Environmental, Inc.

July 2018
Revised December 2020

TABLE OF CONTENTS

INTRODUCTION.....	4
<i>PROJECT DESCRIPTION</i>	<i>4</i>
<i>STUDY AREA INTERSECTIONS.....</i>	<i>5</i>
EXISTING CONDITIONS	7
<i>ROADWAY NETWORK</i>	<i>7</i>
<i>PUBLIC TRANSPORTATION.....</i>	<i>8</i>
<i>EXISTING TRAFFIC VOLUMES</i>	<i>9</i>
Existing Peak Hour Traffic Volumes	9
Seasonal Variation	9
Adjustment to 2020 Traffic Volumes	9
<i>CRASH SUMMARY</i>	<i>17</i>
FUTURE CONDITIONS	18
<i>FUTURE ROADWAY IMPROVEMENTS.....</i>	<i>19</i>
<i>BACKGROUND TRAFFIC GROWTH</i>	<i>19</i>
Historic Traffic Growth.....	19
Site-Specific Growth.....	19
<i>SITE-GENERATED TRAFFIC</i>	<i>22</i>
<i>PROJECT TRIP DISTRIBUTION AND ASSIGNMENT</i>	<i>25</i>
<i>2027 FUTURE BUILD PEAK HOUR TRAFFIC VOLUMES</i>	<i>25</i>
TRAFFIC OPERATIONS ANALYSIS	30
<i>LEVEL-OF-SERVICE CRITERIA</i>	<i>30</i>
<i>CAPACITY ANALYSIS RESULTS.....</i>	<i>30</i>
POTENTIAL MITIGATION.....	34
<i>TRAFFIC SIGNAL WARRANT ANALYSIS</i>	<i>34</i>
<i>TRANSPORTATION DEMAND MANAGEMENT.....</i>	<i>36</i>
CONCLUSION AND RECOMMENDATIONS	37

LIST OF TABLES

Table 1: June 2018 to February 2020 Volume Comparison	9
Table 2: Route 140 Northbound at Kings Highway Volumes	10
Table 3: ATR Summary	11
Table 4: Vehicular Trip Generation, Existing Site Operations.....	12
Table 5: Hourly Distribution of Truck Trips	23
Table 6: Vehicular Trip Generation	24
Table 7: Capacity Analysis Results.....	31
Table 8: Traffic Signal Warrant Summary	35

LIST OF FIGURES

Figure 1: Site Location	6
Figure 2: 2020 Base Weekday Morning Peak Hour Traffic	13
Figure 3: 2020 Base Weekday Afternoon Peak Hour Traffic	14
Figure 4: 2020 Existing Weekday Morning Peak Hour Traffic.....	15
Figure 5: 2020 Existing Weekday Afternoon Peak Hour Traffic	16
Figure 6: Crash Summary	17
Figure 7: 2027 No Build Weekday Morning Peak Hour Traffic.....	20
Figure 8: 2027 No Build Weekday Afternoon Peak Hour Traffic	21
Figure 9: Directions of Arrival and Departure	26
Figure 10: Projected New Truck Trips	27
Figure 11: 2027 Build Weekday Morning Peak Hour Traffic	28
Figure 12: 2027 Build Weekday Afternoon Peak Hour Traffic.....	29

LIST OF APPENDICES

Appendix A: Manual Turning Movement Count Data
Appendix B: MassDOT TDMS Count Data
Appendix C: Automatic Traffic Recorder Count Data
Appendix D: Crash Summary
Appendix E: Traffic Projection Model
Appendix F: Hourly Distribution Data
Appendix G: Trip Generation Calculations
Appendix H: Highway Capacity Manual Methodologies
Appendix I: 2020 Base Capacity/Level-of-Service Analysis
Appendix J: 2020 Existing Capacity/Level-of-Service Analysis
Appendix K: 2027 No Build Capacity/Level-of-Service Analysis
Appendix L: 2027 Build Capacity/Level-of-Service Analysis
Appendix M: Capacity/Level-of-Service Analysis
Appendix N: Queue Graphics
Appendix O: Traffic Signal Warrant Analysis

INTRODUCTION

McMahon Associates, Inc. has reviewed the existing traffic operations and potential traffic impacts associated with the proposed solid waste facility expansion at 100 Duchaine Boulevard in New Bedford, Massachusetts, as shown in Figure 1. The purpose of this study was to evaluate existing and projected traffic operational and safety conditions in the vicinity of the site and identify mitigating measures to offset potential project-related traffic impacts on the surrounding roadways, if determined to be necessary based on safety and/or operational conditions. This study has determined that the proposed project, when developed and operational will allow for safe and efficient access to and from the facility.

Our assessment is based on a review of current traffic volumes and crash data collected for this study, a review of readily accessible traffic analyses, and the anticipated traffic generating characteristics of the proposed development. This study examines existing and projected traffic operations (both with and without the proposed project) at key intersections in the vicinity of the project site. The study area was chosen based on a review of the surrounding roadway network and anticipated traffic generating characteristics of the proposed project. It provides a detailed analysis of traffic operations during the weekday morning and weekday afternoon peak hours, when the combination of adjacent roadway volumes and potential traffic increases associated with the project would be greatest.

Based on the analysis presented in this study, McMahon Associates concludes that the projected traffic increases associated with both the background traffic growth and the project-related traffic generated by the proposed facility do not result in a significant impact to the operations of the surrounding roadway network. This report documents our findings and recommendations. It should be noted that these conclusions conservatively base all inbound and outbound traffic via truck without incorporating alternative modes or methods of waste disposal.

Project Description

The project site is bounded by a rail line to the west, Philips Road to the east, industrial properties to the north and property owned by Eversource to the south. The project is expected to be completed in two phases. Phase 1 includes the construction of glass processing facilities, construction of 1.9MW of rooftop and canopy solar power installation and the construction of a rail sidetrack to service the site. Phase 2 includes the constructing of a solid waste facility that will accept municipal solid waste (MSW) and construction and demolition (C&D) materials for handling a proposed maximum of 1,500 tons per day (tpd), and 400 tpd of biosolids. Access to the proposed site would be provided by one full-access driveway from Duchaine Boulevard, which leads to an internal one-way loop roadway surrounding the proposed facility. To date, Phase 1 of the project is partially completed, with plastic, aluminum, and glass processing operations taking place at the site. Glass beneficiating, which is allowed in Phase 1 under the MEPA waiver, is projected to be implemented in Phase 2.

Study Methodology

This study evaluates existing and projected traffic operations at study area intersections for the weekday morning and weekday afternoon peak hour traffic conditions when the combination of adjacent roadway volumes and potential traffic increases associated with the project would be greatest.

The study was conducted in three steps. The first step involved an inventory of existing traffic conditions in the vicinity of the site. As part of this inventory, traffic counts were collected at key intersections during the weekday morning and weekday afternoon peak periods and adjusted to reflect the Base 2020 conditions prior to the completion of Phase 1 of the project, and to reflect the Existing 2020 conditions with Phase 1 included. Crash data was obtained from the Massachusetts Department of Transportation (MassDOT) to evaluate existing safety conditions within the study area.

The second step of the study builds upon data collected in the first phase and establishes the basis for evaluating the transportation impacts associated with future conditions. In this step, the Existing 2020 traffic volumes were projected to 2027 No Build (without Phase 2 of the project) conditions and 2026 Build (with Phase 2 of the project) conditions. In this phase, the projected traffic demands of other future developments that could influence traffic volumes at the study area intersections were assessed.

The final step identifies measures, if necessary, to improve existing and future traffic operations and safety, minimize potential traffic impacts, and provide safe and efficient access to the project site.

Study Area Intersections

The area identified for detailed analysis in this study was determined based on a review of the anticipated traffic generating characteristics of the proposed project, a review of the surrounding roadway network serving the project site. The study area intersections include:

- Route 140 Northbound on/off-ramp at Braley Road
- Route 140 Southbound on/off-ramp at Braley Road
- Braley Road/Theodore Rice Boulevard at Phillips Road
- Theodore Rice Boulevard at Duchaine Boulevard
- Duchaine Boulevard at Samuel Barnet Boulevard
- Phillips Road at Samuel Barnet Boulevard
- Duchaine Boulevard at Site Driveway



Figure 1
Study Intersections
Solid Waste Handling Facility
New Bedford, MA

EXISTING CONDITIONS

Effective evaluation of potential traffic impacts associated with the proposed development requires a thorough understanding of the existing traffic conditions on the roadways and intersections serving the project site. The assessment of existing conditions consists of an inventory of the roadway and intersection geometries and traffic control devices, collection of peak-period traffic volumes, and a review of recent crash history. A discussion of this information is presented below.

Roadway Network

The project site benefits from access via the local and regional roadway systems. A brief description of the principal roadways serving the project site is presented below.

Alfred Bessette Memorial Highway (Route 140)

Alfred Bessette Memorial Highway (Route 140) is a limited access roadway that is classified as an urban principal arterial under MassDOT jurisdiction. Route 140 runs in the north-south direction throughout southeastern Massachusetts, providing two lanes of travel in each direction separated by a grass median. Route 140 has exits adjacent to the study area at Philips Road (Exit 5) and Braley Road (Exit 7). Route 140 northbound and southbound ramps are under two-way stop sign control with both Philips Road and Braley Road.

Braley Road

Braley Road is classified as an urban minor arterial under City of New Bedford jurisdiction within the study area, and primarily provides access to residential and industrial properties, Casimir Pulaski Elementary School, and to Route 140 via a diamond interchange. Braley Road generally runs in the east-west direction between Acushnet Avenue to the east and Phillips Road to the west, providing a single travel lane measuring 12 feet in width and a bicycle lane measuring 6.5 feet in width in each direction. At its intersection with Phillips Road and Theodore Rice Boulevard, Braley Road continues to the north toward the Freetown Town Line. North of the Phillips Road/Theodore Rice Boulevard intersection, Braley Road is approximately 40 feet in width with a double yellow center line and no striped travel lanes or shoulders. A cement concrete sidewalk is provided along the south side of Braley Road east of the Phillips Road/Theodore Rice Boulevard intersection.

Theodore Rice Boulevard

Theodore Rice Boulevard continues west from the intersection of Braley Road and Phillips Road as the east-west connection between Route 140 and Philips Road to the east and Duchaine Boulevard to the west, which provides access to industrial and commercial land uses within the New Bedford Business Park. Theodore Rice Boulevard is classified as a local roadway under City of New Bedford jurisdiction and provides a 20-foot wide travel lane in each direction, separated by a 12-foot wide raised, grass median. There are no sidewalks

provided on either side of the roadway. The posted speed limit on Theodore Rice Boulevard is 30 mph, which does not appear to be supported by an approved Special Speed Regulation.

Phillips Road

Phillips Road is classified as an urban collector under City of New Bedford jurisdiction and runs in the north-south direction between Braley Road/Theodore Rice Boulevard to the north and Church Street to the south. Phillips Road is a two lane, two-way roadway, providing a 15-foot wide travel lane and 5-foot wide bicycle lane in each direction. Within the study area, a four-foot wide cement concrete sidewalk is provided on the east side of the roadway. The posted speed limit on Phillips Road is 30 mph; however, according to MassDOT Special Speed Regulation No. 4044, the approved speed limit is 25 mph northbound approaching the Braley Road/Theodore Rice Boulevard intersection, and otherwise 40 mph between Braley Road and Church Street.

Duchaine Boulevard

Duchaine Boulevard is classified as a local roadway under City of New Bedford jurisdiction and provides access to industrial and commercial land uses within the New Bedford Business Park. Duchaine Boulevard runs in the north-south direction and provides two 14-foot wide travel lanes in each direction separated by a grass median. Shoulders measuring 11 feet in width are provided on both sides of the roadway. Since the roadway is median divided, there are multiple U-turns locations along the corridor. The posted speed limit on Duchaine Boulevard is 30 mph, which does not appear to be supported by an approved Special Speed Regulation.

Samuel Barnet Boulevard

Samuel Barnet Boulevard is a local roadway under City of New Bedford jurisdiction and runs in the east-west direction, providing a connection between Phillips Road to the east and Duchaine Boulevard to the west. Samuel Barnet Boulevard provides access to industrial and commercial land uses and serves the New Bedford Business Park. Samuel Barnet Boulevard is a two-way, two-lane roadway generally providing a 13-foot wide travel lane in each direction, with seven-foot wide shoulders on either side of the roadway. The posted speed limit on Samuel Barnet Boulevard is 30 mph, which does not appear to be supported by an approved Special Speed Regulation.

Public Transportation

The Southeastern Regional Transit Agency (SRTA) operates two routes within the study area. An extension of Route 4-Ashley Boulevard operates within the New Bedford Business Park twice daily at approximately 6:30 AM and 3:30 PM Monday through Friday. The North End Shuttle operates via westbound Braley Road and southbound Phillips Road every 80 minutes from approximately 9:30 AM to 3:50 PM Monday through Saturday.

Existing Traffic Volumes

Existing Peak Hour Traffic Volumes

Due to COVID-19 conditions traffic volumes are not considered to be normal this time. Therefore, manual turning movement counts (MTMC) initially collected for the project on Wednesday, June 13, 2018, were used as a basis of the analysis and were adjusted to Existing pre-COVID conditions as discussed below. The MTMCs were collected while public schools, including the nearby Casimir Pulaski School, were still in session. The MTMCs were conducted during the weekday morning peak period from 7:00 AM to 9:00 AM and the weekday afternoon peak period from 3:00 PM to 6:00 PM. The traffic counts are summarized in 15-minute intervals and are provided in Appendix A of this report. The four highest consecutive 15-minute intervals during the peak periods constitutes as the peak hour for the study area network. The highest weekday morning peak hour volume was recorded between 7:30 AM and 8:30 AM, and the afternoon peak hour was recorded between 3:00 PM and 4:00 PM.

Seasonal Variation

In order to determine seasonal variation in the area of the project, traffic count data from MassDOT continuous count station 617 on Route 140 just north of the project site was reviewed. Based on this data, traffic volumes in the month of June are higher than an average month. Therefore, to present a conservative analysis, traffic volumes were not adjusted downward to present an average month.

Adjustment to 2020 Traffic Volumes

As noted above, updated traffic count data could not be collected due to the impact of the COVID-19 pandemic on traffic volumes and patterns. To update the June 2018 traffic volume counts previously collected to 2020 pre-COVID conditions, research was conducted to identify recent counts collected within the study area. Two ATR counts collected by MassDOT were identified: on the Route 140 northbound on-ramp from Braley Road on February 4, 2020 (MassDOT count location ID R26011), and on the Route 140 northbound off-ramp to Braley Road (MassDOT count location ID R26010) on February 19, 2020. As the count on the off-ramp was collected during school vacation week, it was not appropriate to use for this study. As a result, the February 4, 2020 count on the Route 140 northbound on-ramp was utilized to develop adjustment factors to adjust the June 2018 collected traffic volumes to Existing 2020 conditions. Table 1 below shows the seasonally-adjusted weekday morning (7:00 AM to 9:00 AM) and weekday afternoon (3:00 PM to 6:00 PM) peak period traffic volumes on the on-ramp collected in June 2018 compared with those collected in February 2020.

Table 1: June 2018 to February 2020 Volume Comparison

Peak Period	June 2018	February 2020	Change
Weekday Morning (7:00-9:00 AM)	235	273	+16%
Weekday Afternoon (3:00-6:00 PM)	357	432	+21%

As shown in Table 1, the seasonally adjusted volumes collected on the ramp in February 2020 are 16 percent higher than those collected in June 2018 during the weekday morning peak period. During the weekday afternoon peak period, volumes were found to be 21 percent higher in 2020 compared with the 2018 counts. Therefore, the peak hour volumes collected in June 2018 were grown by 16 percent in the weekday morning peak hour and by 21 percent in the weekday afternoon peak hour to reflect 2020 existing conditions. The MassDOT count data are included in Appendix B.

It is expected that these adjustments would account for traffic associated with the Parallel Products facility and the glass operations that are currently occupying the site under the Phase 1 Waiver granted by MEPA. Similarly, traffic associated with the New England Farms convenience store/gas station and Dunkin' Donuts at 209 Theodore Rice Boulevard, completed in late 2018, is also expected to be accounted for in these adjustments. A traffic study with the traffic expected to be generated by the New England Farms development was not completed prior to its construction; however, the traffic associated with this development would be captured in the MassDOT ATR volumes and would therefore be accounted for in the calculated growth rate.

Saturday Traffic Volumes

ATR counts were collected by MassDOT from Tuesday, February 4 to Sunday, February 9, 2020 on the Route 140 northbound on- and off-ramps at Kings Highway, located approximately 3.6 miles south of the Route 140 at Braley Road interchange. Table 2 below compares the peak hour and daily counts collected on Saturday, February 8, 2020 with counts collected on Thursday, February 6.

Table 2: Route 140 Northbound at Kings Highway Volumes

	Thursday, 2/6/2020 4:15-5:15 p.m.	Saturday, 2/8/2020 12:00-1:00 p.m.
Route 140 Northbound Off-Ramp		
Peak Hour Traffic Volume	615	551
Daily Traffic Volume	6,448	6,416
Route 140 Northbound On-Ramp		
Peak Hour Traffic Volume	230	205
Daily Traffic Volume	2,649	2,189

As shown in Table 2, Saturday midday peak hour and daily volumes are lower than the weekday afternoon and daily volumes on both the northbound off-ramp and northbound on-ramp at the Route 140 at Kings Highway interchange. Additionally, as Kings Highway is a commercial corridor with a large shopping center located at the interchange, it would be expected to have higher volumes of traffic on Saturdays in comparison to the Braley Road and Phillips Road corridors included in the Parallel Products study area. Based on a review of this available data, the Saturday peak hour traffic volumes in the study area are considered to be lower than the weekday peak hours analyzed, and therefore a Saturday midday peak hour analysis is not required. The

Thursday and Saturday count data collected at the Kings Highway interchange are included in Appendix B.

Automatic Traffic Recorder Data

A 48-hour automatic traffic recorder (ATR) count was conducted on Duchaine Boulevard on Wednesday, June 13, 2018 and Thursday, June 14, 2018. The results of the counts are tabulated in 15-minute periods and are provided in Appendix C of this report. The four highest consecutive 15-minute intervals during the weekday morning and weekday afternoon peak periods constitutes as the peak hours for Duchaine Boulevard. The ATR collected traffic volumes on Duchaine Boulevard near the proposed project site were adjusted to reflect 2020 traffic conditions using the adjustment factors discussed above. The resulting ATR data and peak hourly traffic flows are summarized in Table 3 below.

Table 3: ATR Summary

	ADT ⁽¹⁾	HV% ⁽²⁾	85th %ile Speed ⁽³⁾ (mph)	AM Peak ⁽⁴⁾	PM Peak ⁽⁵⁾
Duchaine Boulevard					
<u>North of Samuel Barnet Boulevard</u>					
Northbound	2,388	25.0	37	158	245
Southbound	<u>2,517</u>	<u>24.0</u>	<u>36</u>	<u>313</u>	<u>147</u>
TOTAL	4,905	24.5	37	471	392

(1) ADT - Average Daily Traffic (Vehicles per Day) adjusted to reflect 2020 volumes

(2) HV% - Percentage of Heavy Vehicles based on TMC completed on June 13, 2018

(3) Based on Field Speed Study completed July 13, 2018

(4) Weekday morning peak hour calculated to occur between 7:00 AM to 8:00 AM

(5) Weekday afternoon peak hour calculated to occur between 3:00 PM to 4:00 PM

To reflect the 2020 Base conditions, prior to the glass operations currently occupying the site under the Phase 1 waiver, the traffic associated with the glass operations were removed from the 2020 Existing traffic volumes to calculate the 2020 Base traffic conditions. The 2020 Base traffic volumes would reflect the operations of the site prior to the Phase 1 waiver, which includes the removal of the trips associated with the trucking facility previously on site, and the addition of plastic, aluminum, and glass operations previously operating at the prior Parallel Products facility at 969 Shawmut Avenue in New Bedford. Information provided by the proponent was utilized to determine the trips associated with the existing glass operations. These trips were then removed from the 2020 Existing traffic volumes to determine the 2020 Base traffic volumes. Employee trips associated with the glass operations were also removed. The facility currently employs 75 daily employees, operating in three 8-hour shifts each consisting of 25 employees. The shifts are scheduled to run from 6:00 AM to 2:30 PM, 2:00 PM to 10:30PM, and 10:00PM to 6:30AM. Based on these shifts, it is expected that all employees will be arriving to the site outside of the peak hour. However, as employees may not depart the site precisely at the end of the assigned shifts, to present a conservative analysis it was assumed that the

employees from 10:00 AM to 6:30 AM shift would leave the site during the weekday morning peak hour, and employees from the 6:00 AM to 2:30 PM shift would leave the site during the weekday afternoon peak hour.

Although the Phase 1 waiver permits expanded glass operations with additional employees, the expansion has not yet taken place, and therefore was assumed to occur with Phase 2 of the project. The data collected at the facility used to determine the trips associated with Phase 1 of the project are provided in Table 4 below.

Table 4: Vehicular Trip Generation, Existing Site Operations

Description	Weekday			Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Parallel Products Existing Truck Trips	45	45	90	4	4	8	4	4	8
NWD Trucking	-38	-38	-76	-3	-3	-6	-3	-3	-6
Net Change vs Baseline	7	7	14	1	1	2	1	1	2
Parallel Products Existing Employee Trips	75	75	150	0	25	25	0	25	25

The resulting 2020 Base traffic conditions for the weekday morning and weekday afternoon peak hours are presented in Figures 2 and 3, respectively. The 2020 Existing traffic peak hour traffic volumes are presented in Figures 4 and 5 for the weekday morning and weekday afternoon peak hours, respectively.

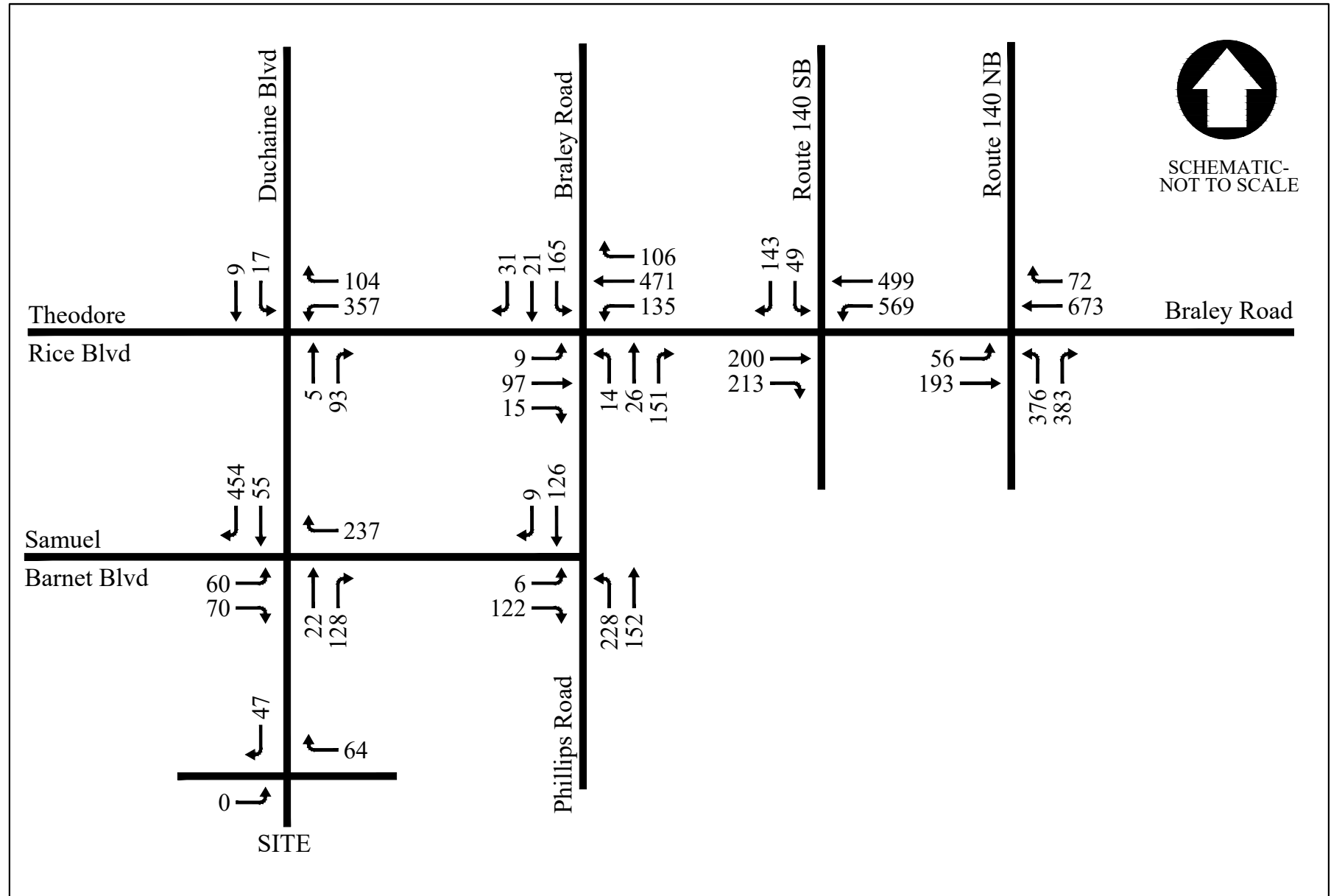
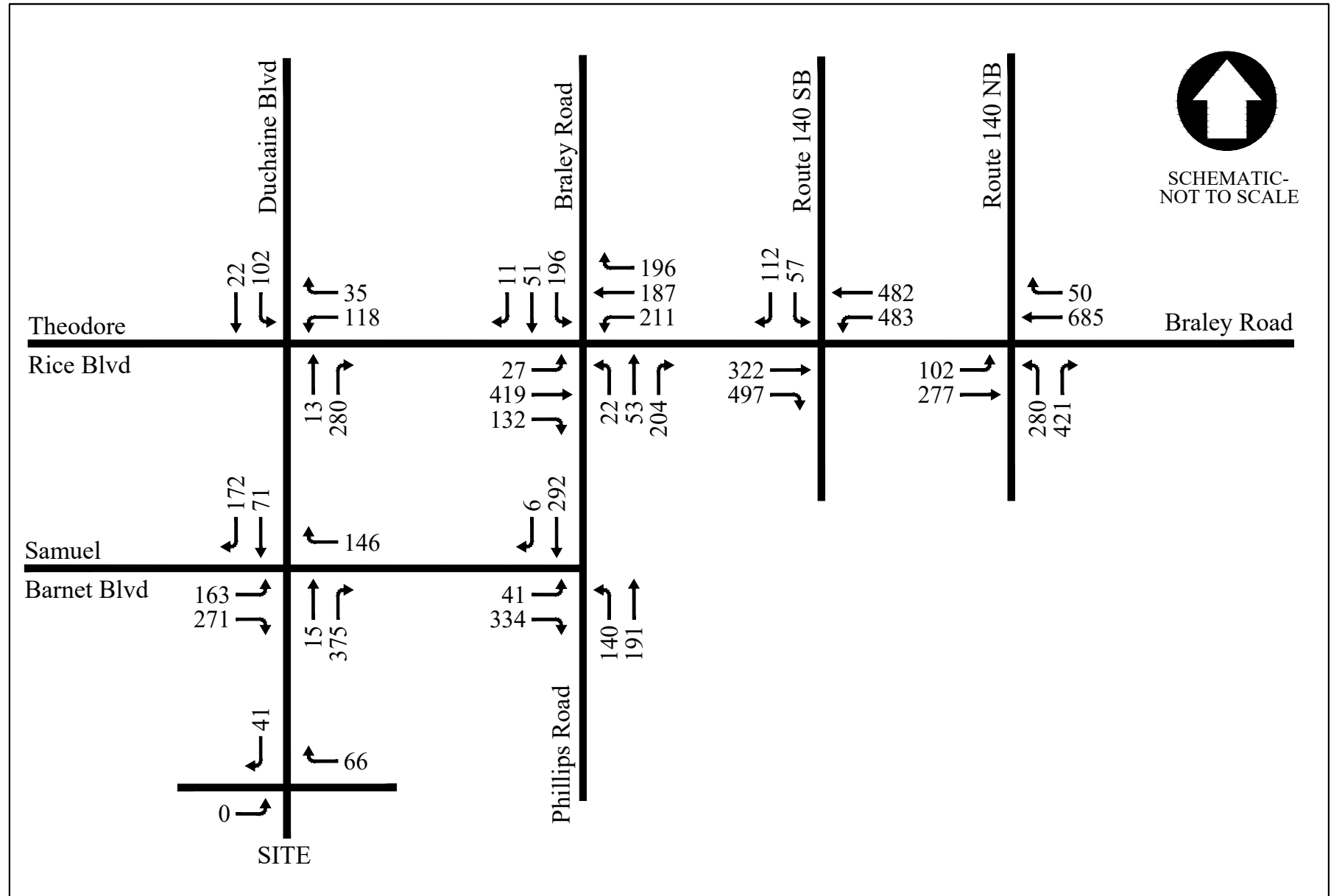


Figure 2
2020 Base Weekday AM
Solid Waste Handling Facility
New Bedford, MA



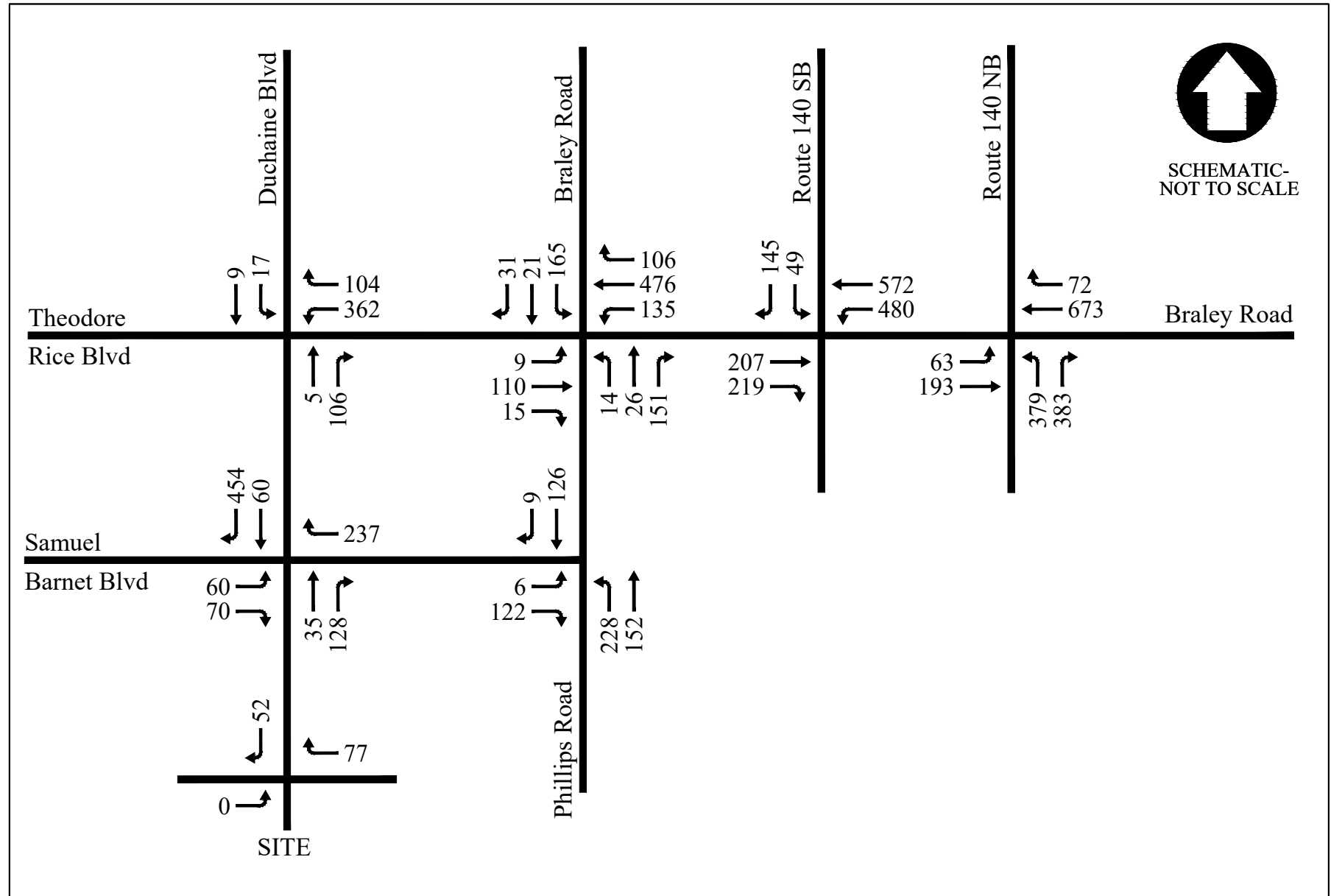


Figure 4
2020 Existing Weekday AM
Solid Waste Handling Facility
New Bedford, MA

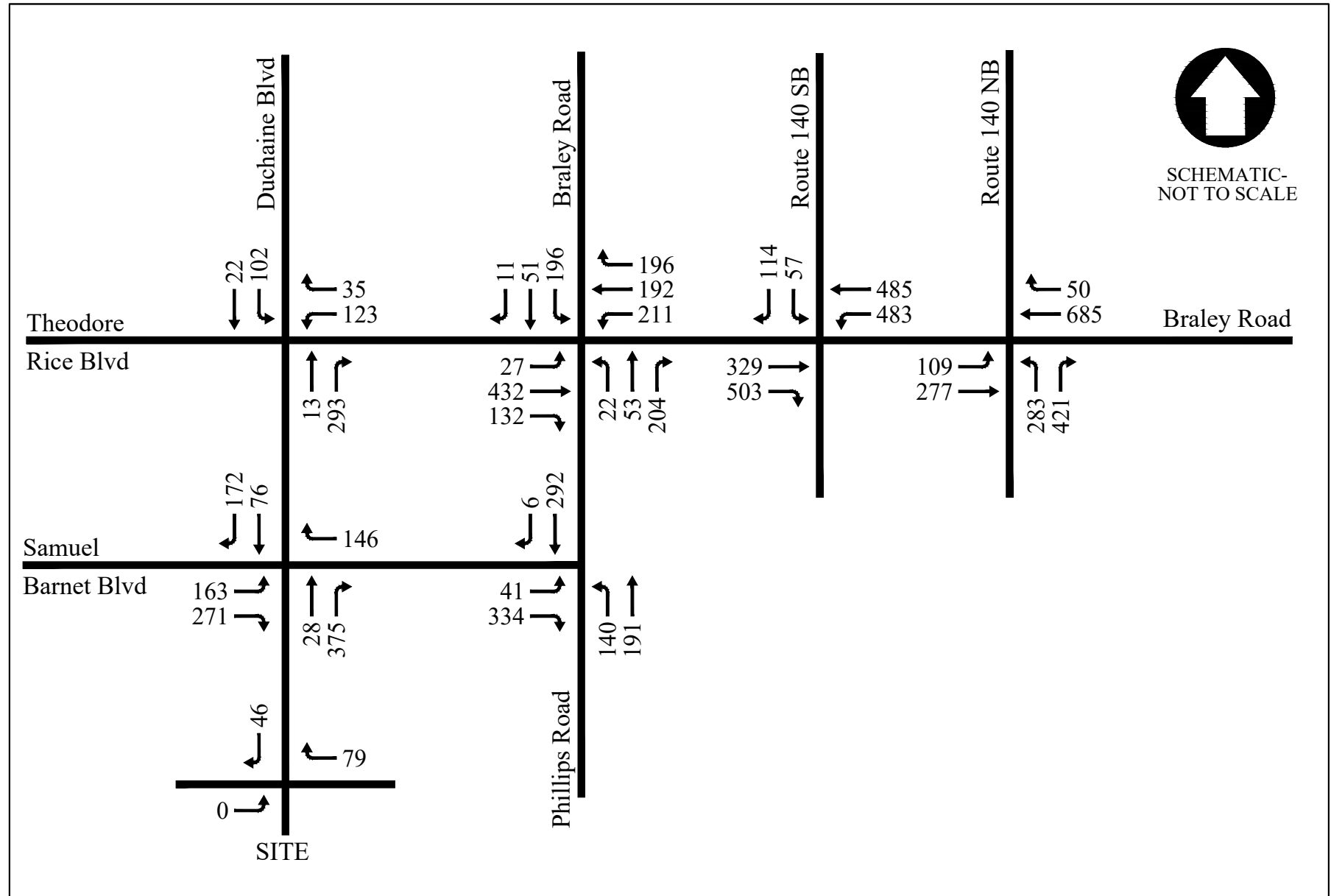


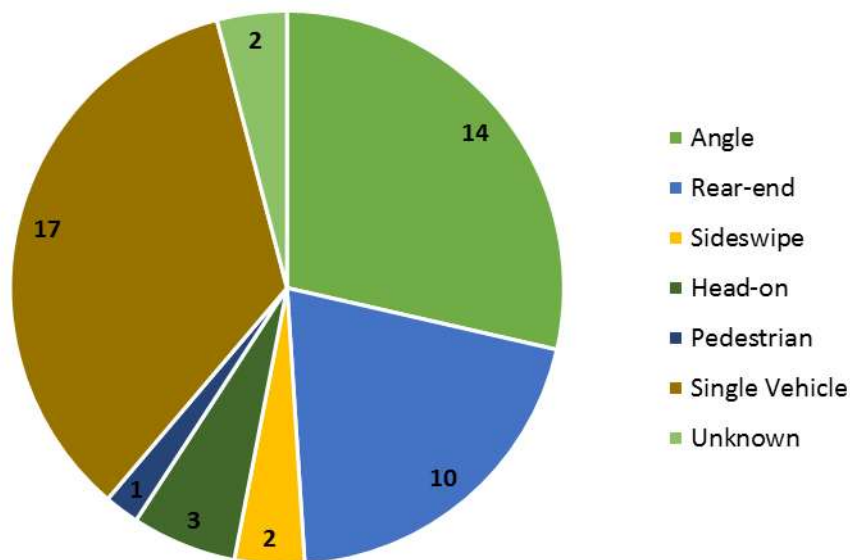
Figure 5
2020 Existing Weekday PM
Solid Waste Handling Facility
New Bedford, MA

Crash Summary

Crash data for the study area intersections was obtained from MassDOT for the most recent five-year period available. This data includes complete yearly crash summaries for 2013, 2014, 2015, 2016, and 2017. The MassDOT Crash Rate Worksheet was used to determine whether the crash frequencies at the study area intersections were unusually high given the travel demands at each location. The MassDOT Crash Rate Worksheet calculates a crash rate expressed in crashes per million entering vehicles. The calculated rate was then compared to the average rate for unsignalized intersections statewide and within MassDOT District 5. For unsignalized intersections, the statewide and MassDOT District 5 average crash rates are 0.57 crashes per million entering vehicles.

The crash data is summarized in Figure 6 below by crash type and a detailed summary is provided in Appendix D.

Figure 6: Crash Summary



Over the five-year period analyzed, the unsignalized intersection of the Route 140 Northbound on/off ramps at Braley Road had a total of 15 reported crashes, resulting in a crash rate of 0.49 crashes per million vehicles entering which is lower than both the District and statewide average. The reported crashes were angle, rear-end, and single vehicle collisions with six of the reported crashes resulting in personal injury.

The unsignalized intersection of the Route 140 Southbound on/off ramps at Braley Road had a total of two reported crashes, resulting in a crash rate of 0.06 crashes per million vehicles entering which is lower than both the District and statewide average. One of the reported crashes was a

single vehicle collision and one was a sideswipe collision. Both of the reported crashes resulted in property damage only.

The unsignalized intersection of Braley Road/Theodore Rice Boulevard at Phillips Road had a total of 14 reported crashes over the five-year period analyzed, resulting in a crash rate of 0.48 crashes per million vehicles entering, which is lower than the statewide and District 5 crash rate. The majority of the 14 reported crashes were single vehicle collisions and rear-end collisions, and five crashes resulted in personal injury.

The unsignalized intersection of Theodore Rice Boulevard at Duchaine Boulevard had a total of ten crashes over the five-year period analyzed resulting in a crash rate of 1.01 crashes per million vehicles entering, which is higher than the statewide and District 5 average crash rate. Four of the 11 reported crashes were single vehicle collisions, one of which, in 2014, resulted in a fatality. Based on reports, speed was a prominent factor in this fatal crash and it is suspected that the operator of the vehicle was street racing and the fatal crash was believed to be an isolated incident.

The intersection of Duchaine Boulevard at Samuel Barnet Boulevard had a total of five reported crashes, resulting in a crash rate of 0.24 crashes per million vehicles entering which is lower than both the District and statewide average. All five reported crashes were single vehicle collisions resulting. One of the reported crashes resulted in personal injury, three resulted in property damage only, and the severity of one of the crashes was not reported.

The intersection of Phillips Road at Samuel Barnet Boulevard had a total of three reported crashes which resulted in a crash rate of 0.18 crashes per million vehicles entering, two of which resulted in personal injury with the third crash involving property damage only. The resulting crash rate is lower than both the statewide and District 5 average crash rate.

FUTURE CONDITIONS

To analyze the traffic impacts associated with the proposed project, MassDOT standards state that future year traffic volumes should be projected based on a seven-year project horizon. The 2020 base year traffic volumes were projected to the future year 2027, when the both phases of the development are expected to be fully built and occupied. Independent of the proposed project, traffic volumes on the roadways in 2027 are assumed to include existing traffic, as well as new traffic resulting from general growth in the study area and from other planned development projects. The potential background traffic growth unrelated to the proposed project was considered in the development of the 2027 No Build (without project) peak hour traffic volumes. The anticipated traffic increases associated with the proposed development were then added to the 2027 No Build volumes to reflect the 2027 Build (with project) traffic conditions. A more detailed description of the development of the 2027 No Build and 2027 Build traffic volume networks follows.

Future Roadway Improvements

Planned roadway improvement projects can affect area travel patterns and future traffic operations. There are no planned roadway improvements that would impact traffic on the study area roadways.

Background Traffic Growth

Traffic growth is primarily a function of changes in motor vehicle use and expected land redevelopment in the region. To predict a rate at which traffic on the roadways in the vicinity of the site can be expected to grow during the seven-year forecast period (2020 to 2027), both historic traffic growth and planned area redevelopments were examined.

Historic Traffic Growth

A background growth rate of one percent per year was confirmed with the Southeastern Regional Planning and Economic Development District (SPREDD) in order to forecast increases in general traffic volumes on the study area roadways and intersections for our future analysis. This rate captures growth associated with general changes in population and accounts for other small developments in the vicinity of the study area.

Site-Specific Growth

There are no planned/permitted developments adjacent to the project study area to be added as site specific growth.

2027 No Build Traffic Volumes

The 2020 Existing peak hour traffic volumes were grown by one percent per year over the seven-year study horizon (2020 to 2027) to establish the 2027 base future traffic volumes. The 2027 No Build weekday morning and weekday afternoon peak hour traffic volume networks are illustrated in Figures 7 and 8, respectively, and are documented in the traffic projection model presented in Appendix E of this report.

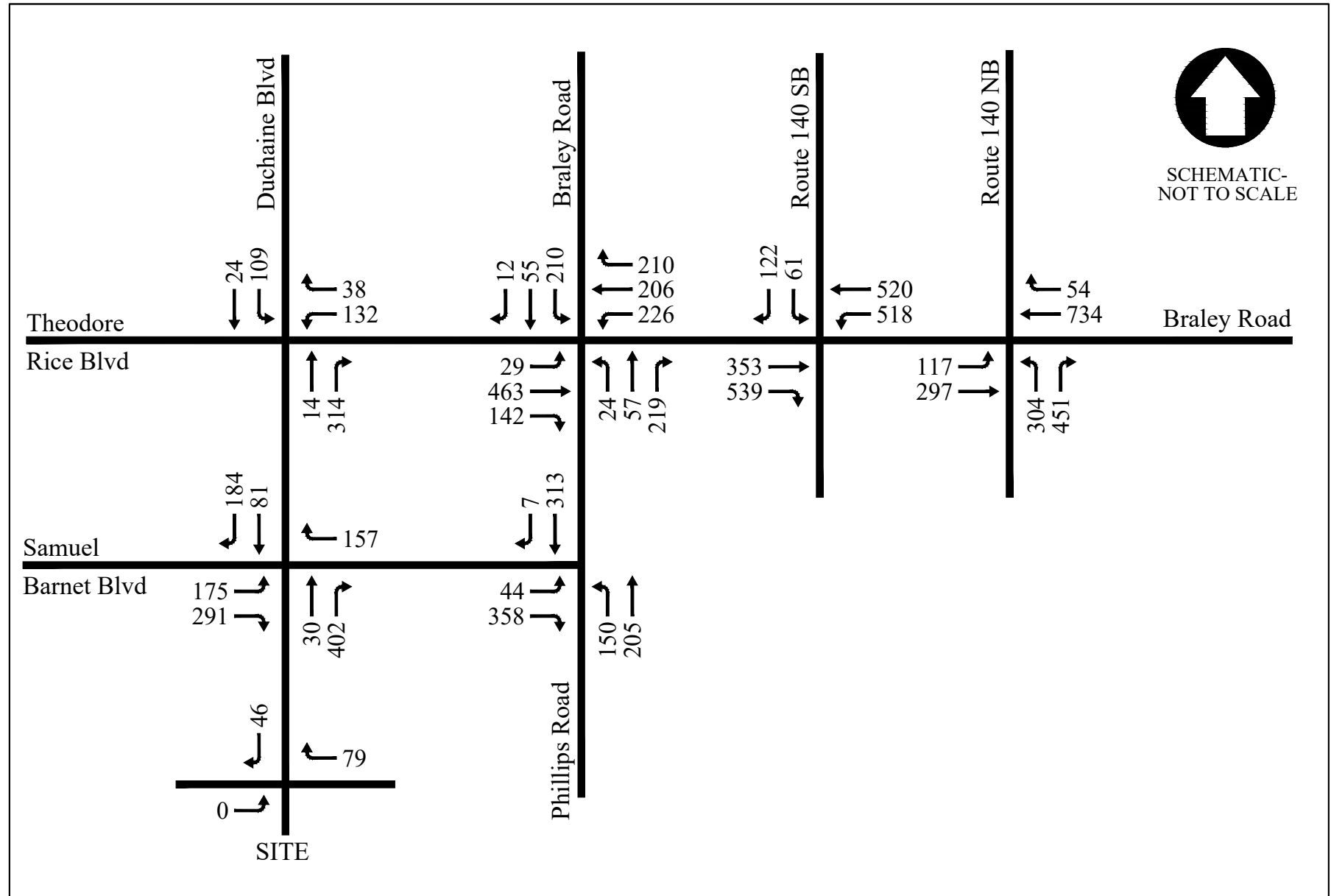


Figure 7
2027 No Build Weekday AM
Solid Waste Handling Facility
New Bedford, MA

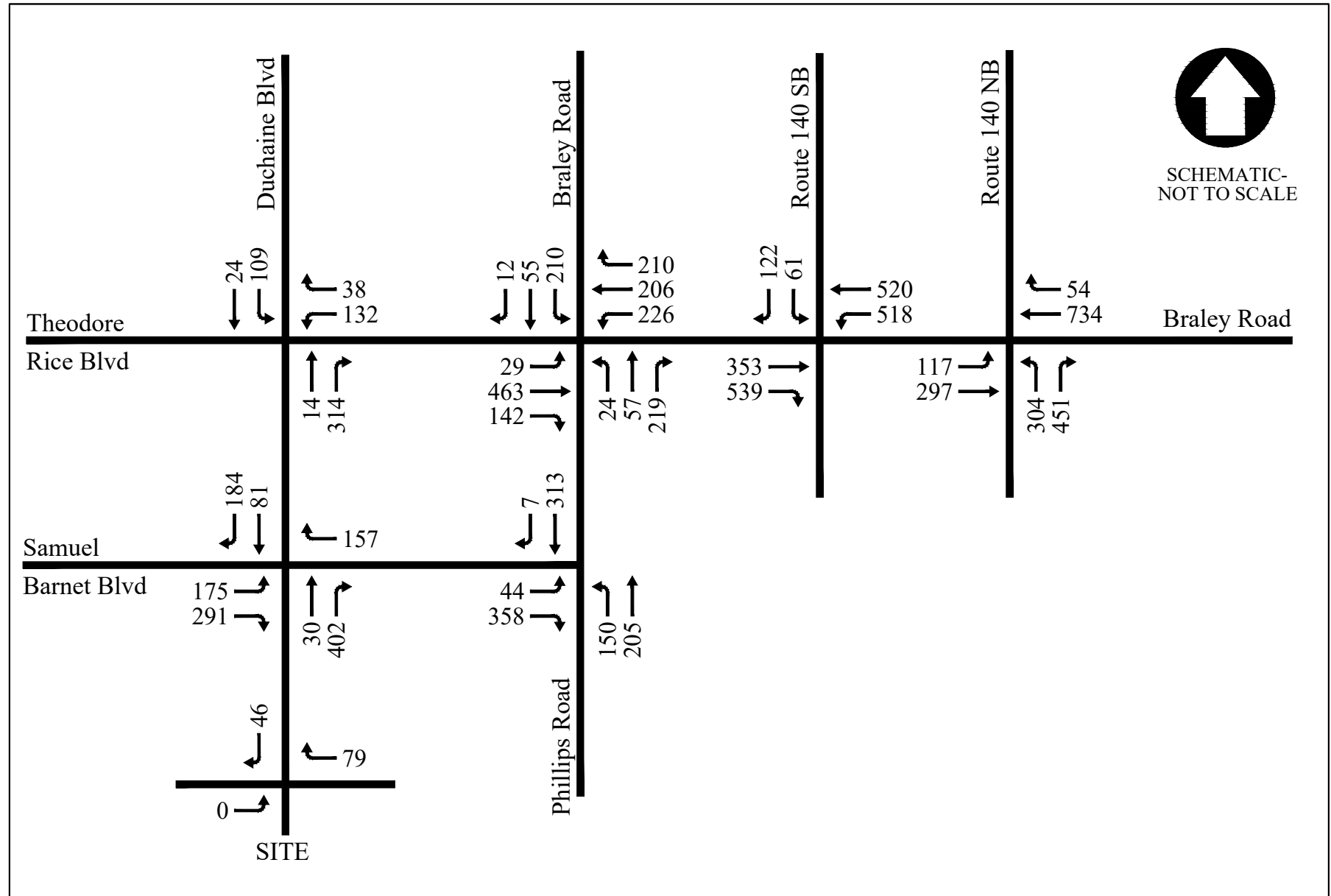


Figure 8
2027 No Build Weekday PM
Solid Waste Handling Facility
New Bedford, MA

Site-Generated Traffic

The site proposes to receive a maximum of 1,500 tpd of solid waste (MSW and C&D) as part of Phase 2 of the project. To estimate the trip generation for the proposed site, data provided by the proponent on the allowable material tonnage and the maximum capacities of delivery vehicles were utilized. Based on information received, the inbound MSW to the proposed site includes approximately 1,065 tons per day in transfer trailers (approximately 28 tons per load), and 295 tons per day in packer trucks (approximately 9 tons per load). Inbound C&D to the proposed site includes approximately 140 tons per day, all of which will be transported in transfer trailers (approximately 28 tons per load). Inbound MSW and C&D is expected to add 152 daily truck trips (76 entering and 76 exiting).

In addition to the 1,500 tpd of solid waste (MSW and C&D), the site proposes to process up to 50 dry tons per day of biosolids. The biosolids accepted is expected to consist of 280 wet tons per day of biosolids slurry and 120 wet tons per day of biosolids cake. The biosolids slurry is expected to be transported primarily in large tanker truck (approximately 28 tons per truck). Smaller tanker trucks with an average capacity of 3,000 gallons (approximately 12 per truck) may also be used. Trip generation for inbound biosolids slurry is based on 9 large tanker trucks and 2 smaller tanker trucks.

Biosolids cake will be transported to the facility in rolloff containers with an average weight of 10-12 tons per truck load. Twelve trucks per day would be required to deliver 120 wet tons per day of biosolids cake. The total number of trucks delivering biosolids slurry and biosolids cake will be 23 trucks per day. After processing the weight of biosolids will be reduced to 44 wet tons per day. The 44 tons of product will be sent for disposal.

Although it is expected that the majority of outbound transportation of materials from the site will be done via rail, outbound materials were conservatively estimated to be transported from the proposed site in transfer trailers. 1,500 tons per day in combined MSW and C&D and 50 tons per day in biosolids would depart the site on a typical day in transfer trailers (approximately 28 tons per load) which would arrive at the site empty. As a result, outbound MSW, C&D, and biosolids would generate 112 truck trips per day (56 entering, 56 exiting).

As previously noted, the proposed facility expansion would also include expanded glass recycling operations already approved under the Phase 1 waiver for the project. The expansion would allow for an additional 20,000 tons of glass processing annually, or approximately 80 tons per day based on an annual operating schedule of 250 operating days. This additional glass would be transported to the site in dump trailers typically carrying 13 to 15 tons per truck. Based on an average capacity of 13.5 tons per truck, the expanded glass operations would result in additional 6 daily inbound truck trips, which would then depart the site empty. Processed glass would typically depart the site via rail; however, as a conservative measure, it can be assumed that material may depart the site via 28-ton dump trailers. This results in an additional 3 daily outbound truckloads, which would arrive at the site empty. In total, the expanded glass processing operation would result in additional 18 daily truck trips (9 entering, 9 exiting).

Employment at the facility is proposed to increase from 75 to approximately 150 daily employees, operating in three 8-hour shifts each consisting of 50 employees. The shifts are scheduled to run from 6:00 AM to 2:30 PM, 2:00 PM to 10:30PM, and 10:00PM to 6:30AM. Based on these shifts, it is expected that all employees will be arriving to the site outside of the peak hour. However, as employees may not depart the site precisely at the end of the assigned shifts, to present a conservative analysis it was assumed that the employees from 10:00 AM to 6:30 AM shift would leave the site during the weekday morning peak hour, and employees from the 6:00 AM to 2:30 PM shift would leave the site during the weekday afternoon peak hour.

The site is proposed to accept truck deliveries between 5:00 AM and 9:00 PM. Data from two comparable sites, one in Rochester, MA and one in Taunton, MA were utilized to determine the hourly distribution of truck traffic entering the site and the estimated number of trips expected to access the site during both the weekday morning and weekday afternoon peak hours. The hourly distribution data is provided in Table 5 below. Additional data used to develop the hourly distribution is provided in Appendix F.

Table 5: Hourly Distribution of Truck Trips

Time	Hourly distribution of trucks (%)
5-6 AM	4%
6-7 AM	6%
7-8 AM	8%
8-9 AM	8%
9-10 AM	9%
10-11 AM	10%
11-12 AM	10%
12-1 PM	11%
1-2 PM	10%
2-3 PM	10%
3-4 PM	7%
4-5 PM	3%
5-6 PM	2%
6-7 PM	1%
7-8 PM	1%
8-9 PM	0%
Total	100%

To present a conservative analysis, the peak hour of the site generated traffic, 11 percent, was applied to the existing peak hour traffic of the surrounding roadways.

A summary of the expected peak hour trip generation for Phase 2 is shown in Table 6 below. Details on the trip generation calculations for Phases 1 and 2 of the project are provided in Appendix G of this report.

Table 6: Vehicular Trip Generation

Description	Weekday			Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total	In	Out	Total
Inbound MSW/C&D Trips									
Packer	33	33	66	4	4	8	4	4	8
Transfer Trailer	43	43	86	4	4	8	4	4	8
Inbound Biosolid Trips	23	23	46	2	2	4	2	2	4
Outbound MSW/C&D/Biosolids	56	56	112	6	6	12	6	6	12
<i>Truck Trip Total (MSW, C&D, and Biosolids)</i>	155	155	310	16	16	32	16	16	32
Expanded Glass Trips (Approved under Phase 1)	9	9	18	1	1	2	1	1	2
<i>Truck Trip Total</i>	164	164	328	17	17	34	17	17	34
Facility Employees	75	75	150	0	25	25	0	25	25
Total	239	239	478	17	42	59	17	42	59

As shown in Table 6, Phase 2 of the proposed facility, including trips associated with expanded glass operations previously approved under the Phase 1 waiver, is expected to generate a total of 59 vehicle trips (17 entering and 42 exiting) during the weekday morning peak hour, and 59 vehicle trips (17 entering and 42 exiting) during the weekday afternoon peak hour. Over the course of an average weekday, the proposed project is estimated to result in approximately 478 vehicle trips (239 entering and 239 exiting) during the typical weekday. As stated in Table 4, the existing facility generates 90 truck trips per day. With the expansion of Phase 1 glass operations and the addition of MSW, C&D, and biosolids processing under Phase 2, the facility is anticipated to generate up to 418 daily truck trips. Per MassDEP, the maximum daily truck trip generation of the facility will not exceed 418 one-way trips.

Project Trip Distribution and Assignment

The traffic expected to be generated by the proposed development was distributed onto the study area roadways and intersections based on expected access to/from Route 140. It was assumed that all of the truck traffic entering the site will utilize Route 140 to Braley Road. A small portion of the employee trips are assumed to access the site from the south, utilizing Phillips Road. The resulting arrival and departure patterns are presented in Figure 9. The resulting distributed new project trips during the weekday morning and afternoon peak hours are shown in Figure 10.

2027 Future Build Peak Hour Traffic Volumes

To establish the 2027 Build peak hour traffic volumes, the project-related traffic was assigned to the surrounding roadway network based on the project distribution patterns discussed above. These project trips were then added to the 2027 No Build peak hour traffic volumes to reflect the 2027 Build peak hour traffic volumes. The resulting 2027 Build weekday morning and weekday afternoon peak hour traffic volumes are presented in Figures 11 and 12, respectively.

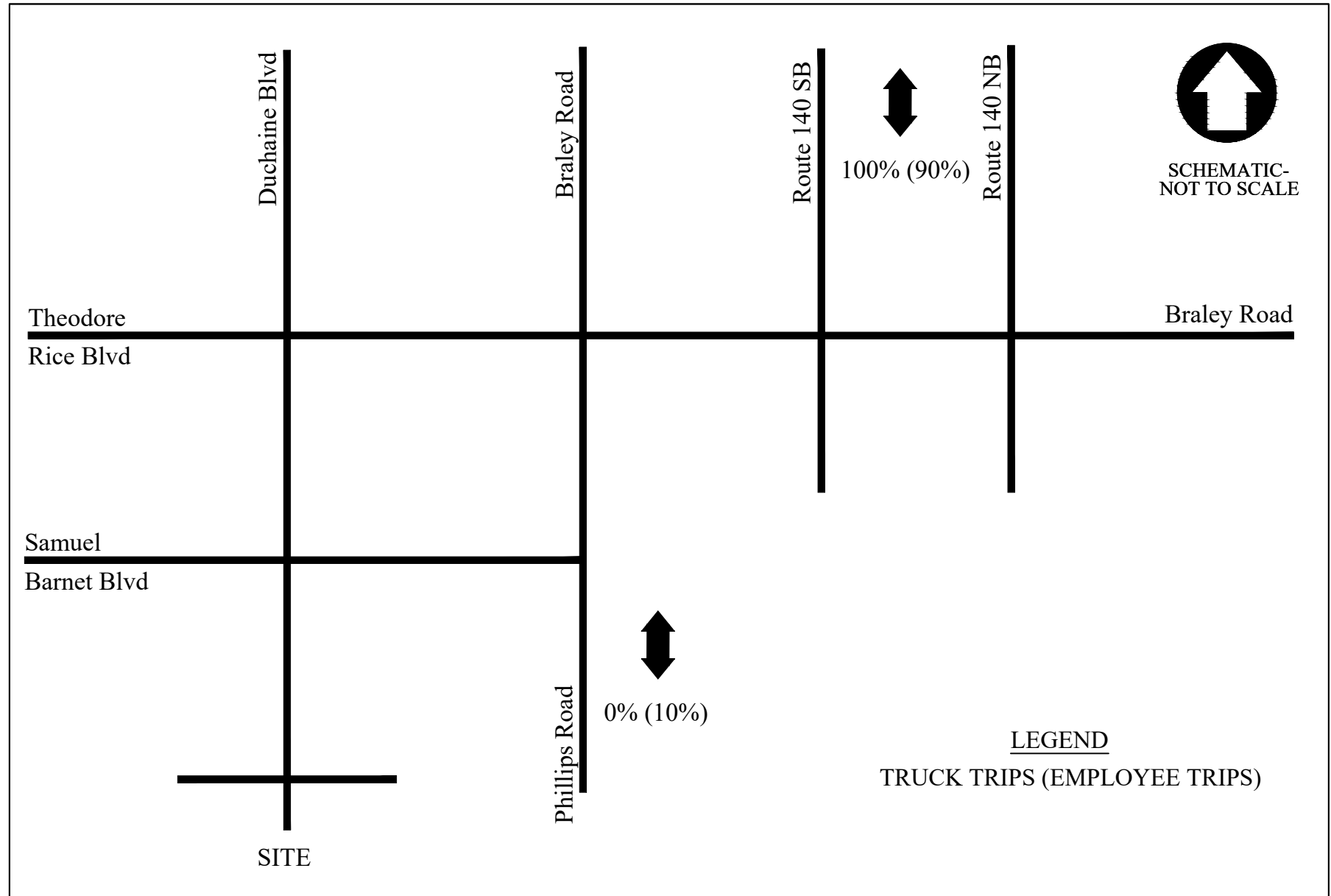


Figure 9
Direction of Arrivals and Departures
Solid Waste Handling Facility
New Bedford, MA

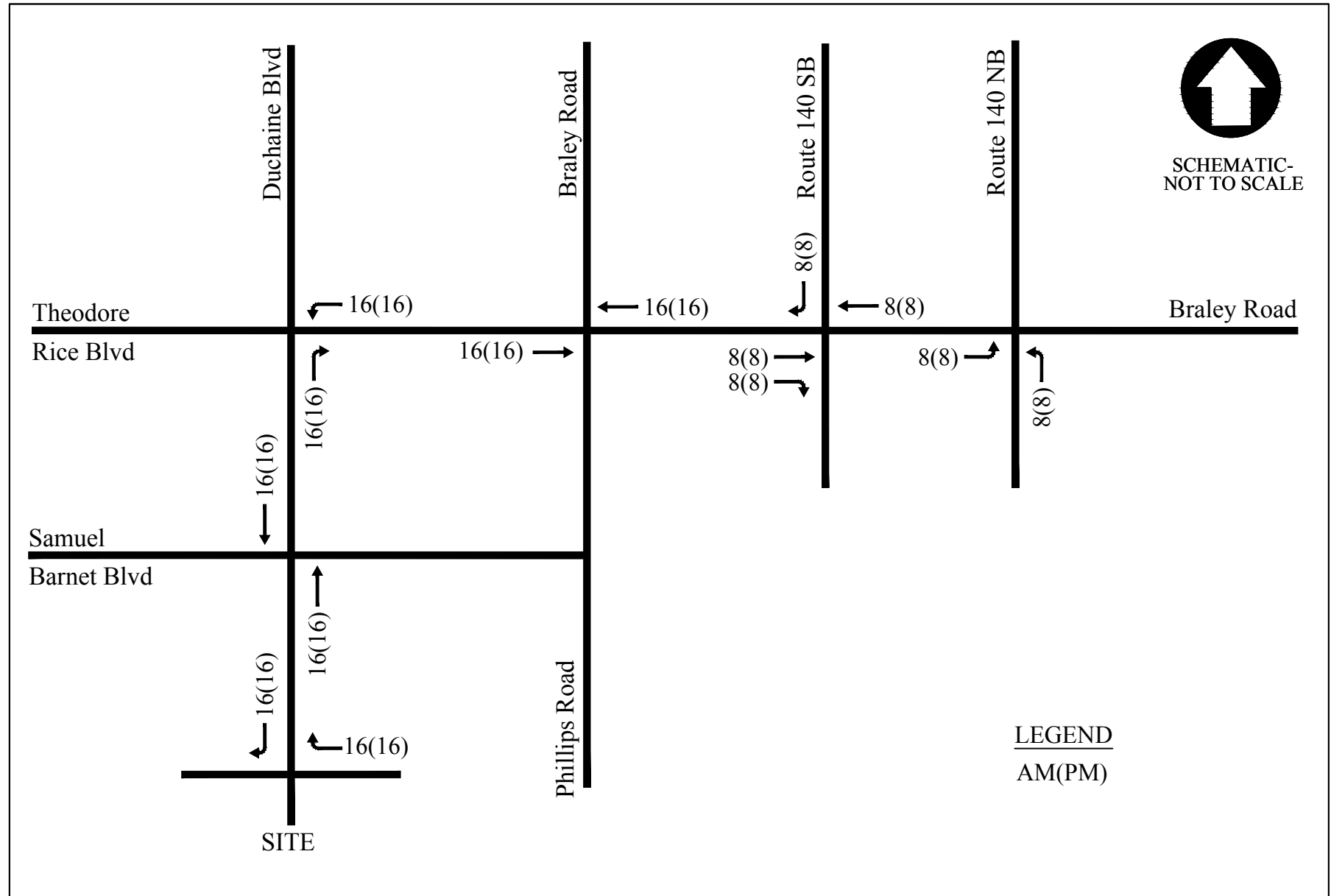


Figure 10
Projected New Truck Trips
Solid Waste Handling Facility
New Bedford, MA

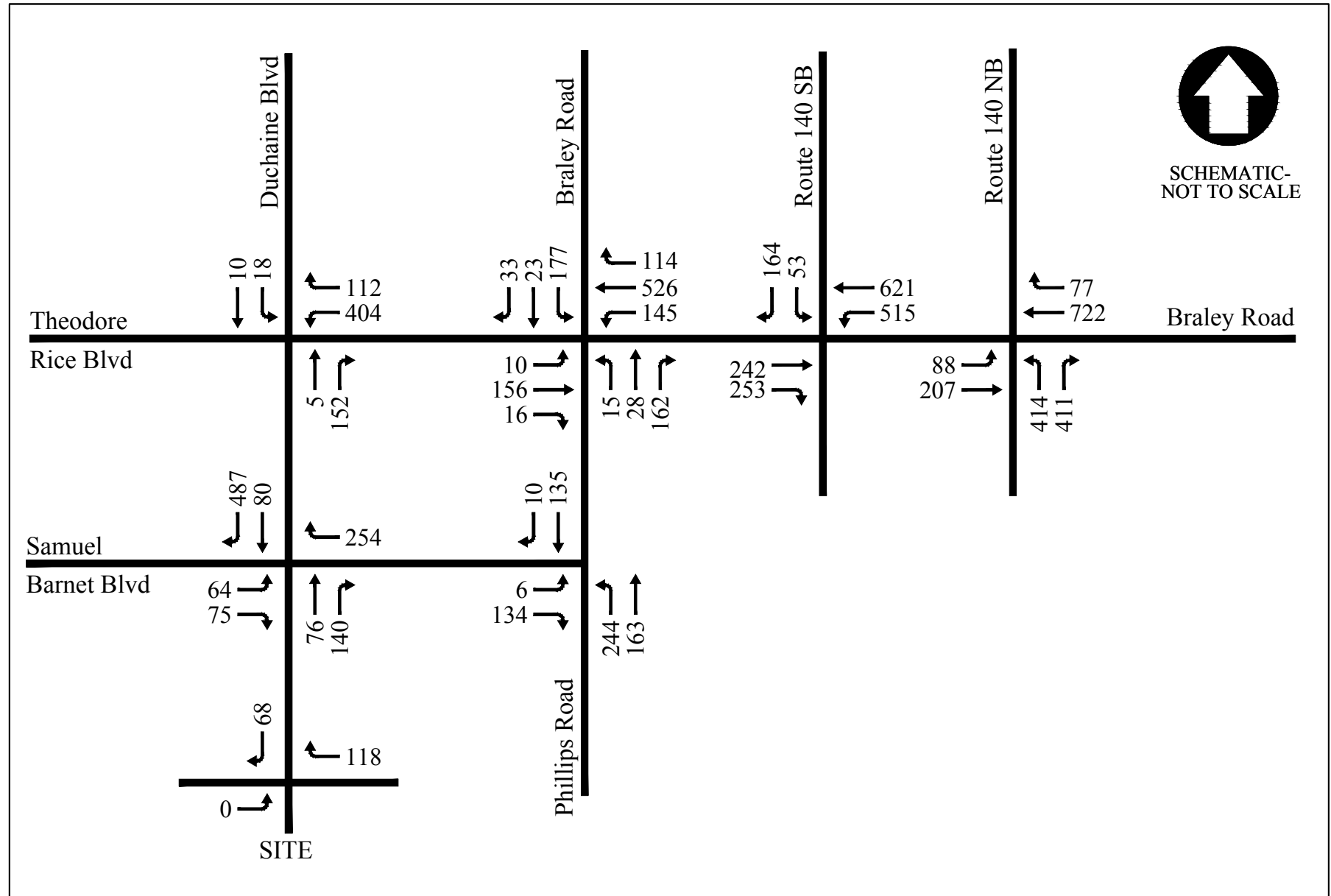


Figure 11
2027 Build Weekday AM
Solid Waste Handling Facility
New Bedford, MA

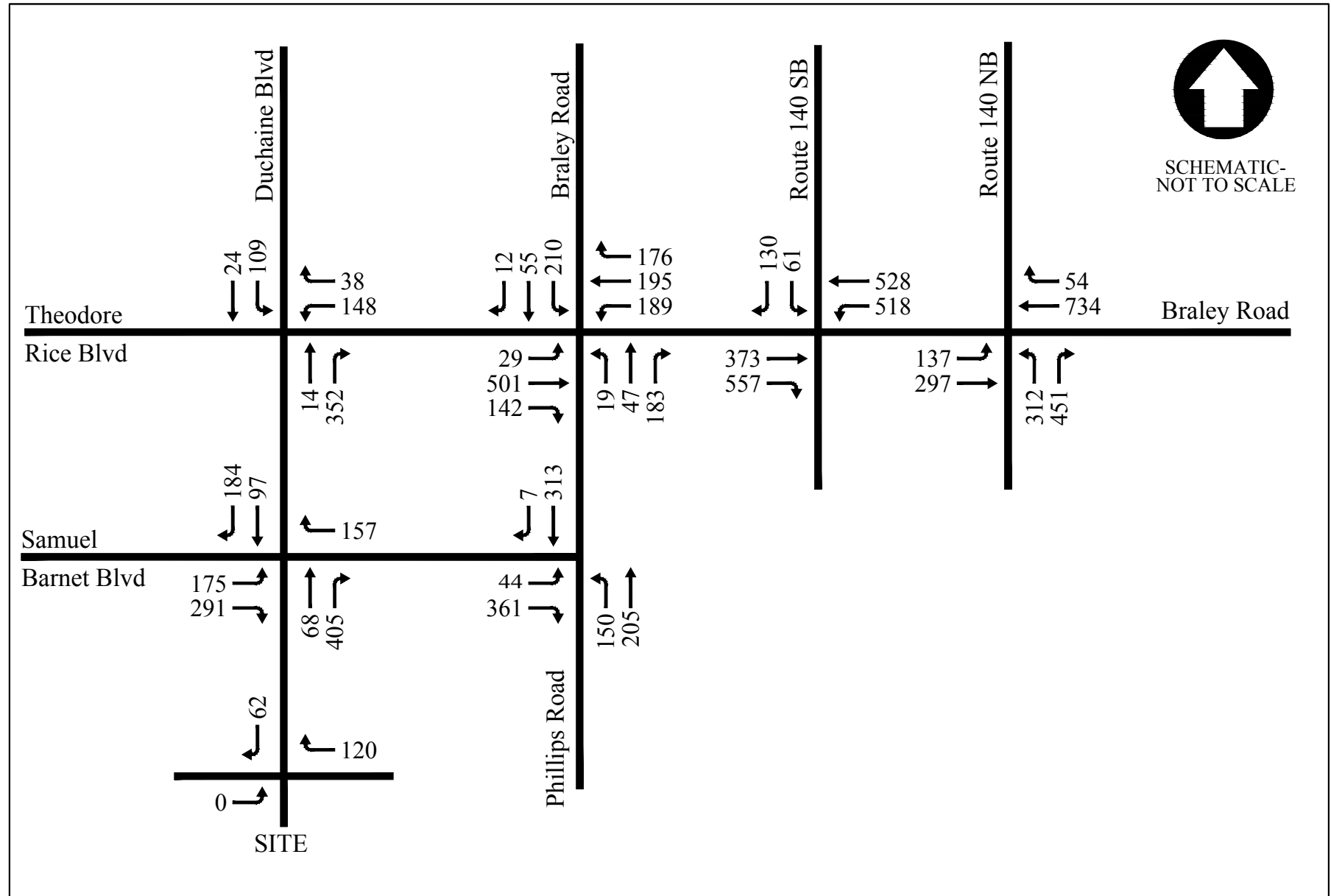


Figure 12
2027 Build Weekday PM
Solid Waste Handling Facility
New Bedford, MA

TRAFFIC OPERATIONS ANALYSIS

In previous sections of this report, the quantity of traffic on the study area roadways was described. The following section describes the quality of traffic flow at the study area intersections for the given travel demands. As a basis for this assessment, intersection capacity analyses were conducted using Synchro capacity analysis software for the study area intersections under the 2020 Base, 2020 Existing, 2027 No Build, and 2027 Build peak hour traffic conditions. The weekday morning and weekday afternoon peak hours were analyzed for the study area intersections under the three conditions. This analysis is based on procedures contained in the *Highway Capacity Manual* (HCM) which are summarized in Appendix H. A discussion of the evaluation criteria and a summary of the results of the capacity analyses are presented below.

Level-of-Service Criteria

Operating levels of service (LOS) are reported on a scale of A to F with A representing the best conditions (with little or no delay) and F representing the worst operating conditions (long delays).

Capacity Analysis Results

Intersection capacity analyses were conducted for the study area intersections to evaluate the 2020 Base, 2020 Existing, 2027 No Build, and 2027 Build peak hour traffic conditions. Based on the analysis, the network peak hour of the adjacent street traffic occurs between 7:30 AM and 8:30 AM for the weekday morning, and 3:00 PM and 4:00 PM for the weekday afternoon.

The capacity analysis results for the 2020 Base, 2020 Existing, 2027 No Build, and 2027 Build conditions are presented in Appendix I, Appendix J, Appendix K, and Appendix L, respectively. The results of the unsignalized intersection capacity analyses for the critical approaches are presented in Table 7 below and in Appendix M. The expected queue lengths were adjusted based on the trucks accessing the site and their respective lengths. The adjusted queues are presented graphically in Appendix N.

Table 7: Capacity Analysis Summary

Intersection			2020 Base						2020 Existing						2027 No Build						2027 Build					
			Weekday AM			Weekday PM			Weekday AM			Weekday PM			Weekday AM			Weekday PM			Weekday AM			Weekday PM		
			LOS ¹	Delay ²	V/C ³	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Route 140 Northbound Ram at Braley Road	EB	LT	B	10.3	0.07	B	10.4	0.14	B	10.5	0.10	B	10.6	0.16	B	10.8	0.11	B	11.0	0.18	B	11.0	0.14	B	11.3	0.21
	WB	TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	NB	L	F	404.4	1.78	F	>500	2.44	F	499.7	1.99	F	>500	2.63	F	>500	2.43	F	>500	3.38	F	>500	2.74	F	>500	3.90
		R	B	13.7	0.50	C	18.9	0.65	B	13.7	0.50	C	18.9	0.65	B	14.8	0.55	C	22.3	0.72	B	14.8	0.55	C	22.3	0.72
Route 140 Southbound Ram at Braley Road	EB	TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	WB	LT	B	11.2	0.48	C	22.7	0.73	B	11.6	0.49	C	24.1	0.75	B	12.6	0.55	D	34.6	0.85	B	13.2	0.57	E	40.1	0.89
	SB	L	F	>500	3.60	B	13.6	0.24	F	>500	4.12	B	13.6	0.24	F	>500	10.39	B	14.4	0.27	F	>500	15.59	B	14.8	0.29
		R	C	16.8	0.36	A	0.0	0.00	C	17.0	0.36	A	0.0	0.00	C	18.8	0.41	A	0.0	0.00	C	19.5	0.44	A	0.0	0.00
Braley Road/ Theodore Rice Boulevard at Phillips Road	EB	LT	B	12.9	0.22	F	205.1	1.47	B	14.3	0.32	F	244.0	1.59	C	15.4	0.36	F	302.3	1.79	C	17.8	0.48	F	355.6	1.92
		R	B	10.3	0.04	C	16.8	0.41	B	10.4	0.04	C	17.4	0.42	B	10.8	0.04	C	19.1	0.48	B	11.0	0.04	C	19.2	0.48
	WB	LTR	F	138.1	1.22	F	257.0	1.56	F	154.4	1.27	F	270.5	1.61	F	211.5	1.39	F	335.3	1.82	F	242.5	1.47	F	354.5	1.89
	NB	LTR	B	15.0	0.46	E	43.9	0.97	C	15.7	0.48	E	48.0	1.01	C	17.4	0.54	F	60.4	1.14	C	18.4	0.56	F	61.6	1.16
	SB	LTR	C	15.8	0.46	E	36.0	0.83	C	16.4	0.48	E	42.1	0.92	C	18.2	0.54	E	46.3	0.98	C	19.2	0.57	E	47.3	1.00
Theodore Rice Boulevard at Duchaine Boulevard	WB	LR	A	8.1	0.28	A	7.6	0.09	A	8.2	0.28	A	7.7	0.09	A	8.2	0.30	A	7.7	0.10	A	8.3	0.31	A	7.7	0.11
	NB	TR	C	24.5	0.02	B	11.7	0.02	C	24.8	0.02	B	11.8	0.02	D	27.4	0.02	B	12.1	0.02	D	29.2	0.02	B	12.5	0.02
	SB	L	D	25.8	0.12	B	12.8	0.23	D	26.3	0.12	B	12.9	0.24	D	29.8	0.14	B	13.5	0.26	D	32.2	0.15	B	14.4	0.28
		T	C	23.7	0.02	B	11.5	0.02	C	24.1	0.02	B	11.6	0.03	D	26.6	0.03	B	11.8	0.03	D	28.3	0.03	B	12.3	0.03
Duchaine Boulevard at Samuel Barnet Boulevard	EB	LR	B	12.4	0.13	B	11.6	0.27	B	13.1	0.14	B	12.1	0.29	B	13.6	0.16	B	12.5	0.31	B	14.7	0.18	B	13.6	0.34
	WB	R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	NB	TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB	TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Phillips Road at Samuel Barnet Boulevard	EB	LR	B	11.2	0.21	D	34.0	0.82	B	11.2	0.22	D	34.5	0.83	B	11.5	0.24	F	52.3	0.94	B	11.6	0.24	F	53.3	0.94
	NB	LT	A	8.2	0.20	A	8.7	0.15	A	4.9	0.20	A	8.7	0.15	A	5.0	0.22	A	8.9	0.16	A	8.3	0.22	A	8.9	0.16
	SB	TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Duchaine Boulevard at Site Driveway	EB	L	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	WB	R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB	R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00

1 Level-of-Service

2 Average vehicle delay in seconds

3 Volume to capacity ratio

Table 7 reports the level-of-service results for the critical approaches at the unsignalized intersections within the study area during the weekday morning and weekday afternoon peak hours. The specific capacity analysis results of the study area intersections are discussed below.

Route 140 Northbound on/off-ramp at Braley Road

As shown in Table 7, the critical stop-controlled northbound approach at the Route 140 Northbound off-ramp operates at a LOS B for right-turning vehicles during the weekday morning peak hour and LOS C during the weekday afternoon peak hour, and LOS F for left-turning vehicles during both the peak hours under the 2020 Base conditions. Under the 2020 Existing condition, both the northbound right and left-turn movements are shown to continue to operate at the same LOS. Under all future 2027 conditions, both No Build and Build, the northbound approach is also expected to operate at the same LOS for both movements.

Route 140 Southbound on/off-ramp at Braley Road

The capacity analysis results show that under the 2020 Base conditions the stop-controlled southbound approach at the Route 140 southbound off-ramp operates at LOS F for left-turning vehicles during the weekday morning and at LOS B during the weekday afternoon peak hour. The southbound right-turn movement is shown to operate at LOS C and at LOS A during the weekday morning and weekday afternoon peak hours, respectively. Under the 2020 Existing conditions, both southbound movements are shown to continue to operate at the same LOS. Similarly, under both the 2027 No Build and 2027 Build future conditions, both of these movements continue to operate at the same LOS.

Braley Road/Theodore Rice Boulevard at Phillips Road

Under the 2020 Base conditions, the stop-controlled northbound approach is shown to operate at a LOS C during the weekday morning peak hour and at LOS E during the weekday afternoon peak hour. The stop-controlled southbound approach is also shown to operate at LOS C during the weekday morning peak hour, and at LOS E during the weekday afternoon peak hour. The stop-controlled eastbound approach is shown to operate at LOS B for both the left-through movement and for the right-turn movement during the weekday morning peak hour, and LOS F and LOS C for the left-through movement and right-turn movement, respectively, during the weekday afternoon peak hour. The stop-controlled westbound approach is shown to operate at LOS F during both the weekday morning and weekday afternoon peak hours. Under the 2020 Existing condition, there are no expected changes in LOS for any of the approaches at the unsignalized intersection.

Under the 2027 No Build conditions, the eastbound left turn and through movement is expected to drop from LOS B to LOS C during the weekday morning peak hour, and the northbound approach is expected to drop from LOS E to LOS F during the weekday afternoon peak hour. All other approaches are expected to continue to operate at the same LOS.

There are not expected to be any changes in LOS from the 2027 No Build to the 2027 Build conditions during either peak hour period analyzed.

Theodore Rice Boulevard at Duchaine Boulevard

The stop-controlled northbound approach at the intersection of Theodore Rice Boulevard at Duchaine Boulevard is shown to operate at a LOS C during the weekday morning peak hour and at LOS A during the weekday afternoon peak hour under the 2020 Base conditions. The southbound left turn approach is shown to operate at a LOS D during the weekday morning peak hour and LOS B during the weekday afternoon peak hour while the southbound through movement operates at a LOS C and LOS B during the weekday morning and weekday afternoon peak hours, respectively.

Under the 2020 Existing conditions, the northbound approach is shown to drop from a LOS A to a LOS B during the weekday afternoon peak hour. All other approaches are expected to maintain the same LOS.

Under the 2027 No Build conditions, the northbound approach and the southbound through movement are both expected to drop from LOS C to LOS D during the weekday morning peak hour while all other movements continue to operate with the same LOS.

There are not expected to be any changes in LOS from the 2027 No Build conditions during either peak hour analyzed under the 2027 Build conditions.

Duchaine Boulevard at Samuel Barnet Boulevard

Under the 2020 Base conditions the stop-controlled eastbound movement at the intersection of Duchaine Boulevard at Samuel Barnet Boulevard currently operates at LOS B during both the weekday morning and weekday afternoon peak hours. Based on the capacity analysis results, it is expected that the eastbound approach will continue to operate at LOS B under the 2020 Existing conditions and all future conditions (2027 No Build and 2027 Build).

Phillips Road at Samuel Barnet Boulevard

The critical eastbound approach on at the intersection of Phillips Road at Samuel Barnet Boulevard is shown to operate at a LOS B during the weekday morning peak hour and at LOS D during the weekday afternoon peak hour under the 2020 Base conditions. The capacity analysis indicates that under the 2020 Existing conditions, the eastbound approach is expected to continue to operate at the same LOS during both peak hours analyzed.

Under the 2027 No Build conditions, the stop controlled eastbound approach is expected to continue to operate at a LOS B during the weekday morning peak hour, and drop from a LOS D to a LOS F during the weekday afternoon peak hour.

There are not expected to be any changes in LOS from the 2027 No Build conditions during either peak hour analyzed under the 2027 Build conditions.

POTENTIAL MITIGATION

PPNE has met with the City of New Bedford to discuss potential mitigation, which has not been finalized. Potential measures were analyzed to evaluate mitigation to the study area intersections. Mitigation alternatives analyzed included the completion of a signal warrant analysis for the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard, and considering Transportation Demand Management (TDM) measures.

Traffic Signal Warrant Analysis

A traffic signal warrant analysis was performed for the study area intersection of Braley Road at Phillips Road/Theodore Rice Boulevard analysis was based on procedures outlined in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) as amended. The MUTCD establishes nine criteria, referred to as warrants, for the installation of traffic signals. The warrants are based upon traffic volumes, existing roadway conditions, crash history, pedestrian volumes, and proximity to schools. The manual states that satisfaction of these warrants does not in itself require the installation of a traffic signal. However, a traffic signal should not be installed unless one or more of the warrants is met.

The analyses performed are based on the criteria for Warrant 1 (Eight-Hour), Warrant 2 (Four-Hour) and Warrant 3 (Peak Hour) volume warrants. The following warrants were not applicable to this project: Warrant 4 (Pedestrian Volumes), Warrant 5 (School Crossing), Warrant 6 (Coordinated Signal System), Warrant 7 (Crash Experience), Warrant 8 (Roadway Network), and Warrant 9 (Intersection Near a Grade Crossing). The results of the traffic signal warrant analysis are provided in Appendix O and discussed below.

The Warrant 1 (Eight-Hour) and Warrant 2 (Four-Hour) vehicular volume signal warrants are intended to be applied where the volume of intersecting traffic is the principal reason to consider installing traffic signal control at an intersection. Warrant 1 is separated into Conditions A and B. According to the MUTCD, “the Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersection traffic is the principal reason to consider installing a traffic control signal.” The MUTCD also sets forth guidelines for Condition B, stating “the Interruption of Continuous Traffic, Condition B is intended for application at locations where Condition A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. In order for this warrant to be met, minimum vehicular volumes for the major street and minor street, found in Table 4C-1 of the MUTCD, must be exceeded. If any one condition is satisfied, Warrant 1 is met.

To satisfy Warrant 2, the plotted points representing the hourly volumes on the major street and minor street intersection approaches during any four hours of an average weekday must fall above the applicable curve in Figure 4C-2 of the MUTCD.

The Warrant 3 (Peak Hour) vehicular volume signal warrant is intended for use at a location where traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic experiences undue delay when entering or crossing the major street. Warrant 3 is satisfied when the plotted point representing the total hourly traffic volume of both approaches on the major street and the corresponding hourly volume of the higher-volume minor street approach for one hour of an average day falls above the applicable curve in Figure 4C-4 of the MUTCD.

Analyses for Warrants 1, 2, and 3 were performed using the adjusted 2020 Existing, 2027 No Build, and 2027 Build traffic volumes at the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard. The results of the signal warrant analysis are provided in Appendix O, and a summary of the results of the signal warrant analysis is shown in Table 8.

Table 8: Traffic Signal Warrant Summary

Braley Road at Phillips Road/Theodore Rice Boulevard	Warrant 1: Eight-Hour	Warrant 2: Four-Hour	Warrant 3: Peak Hour
2020 Existing	☑	☑	☑
2027 No Build	☑	☑	☑
2027 Build	☑	☑	☑

According to the warrant analysis results, the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard warrants the installation of a traffic signal under all three Warrants based on the 2020 Existing traffic volumes, independent of the proposed project.

Transportation Demand Management

A Transportation Demand management (TDM) plan is proposed to further mitigate the project's traffic impacts to the surrounding roadway network. These measures are anticipated to reduce single occupancy vehicle (SOV) trips among employees, and to encourage the use of alternative modes of transportation to the site, the client is proposing to apply the following TDM measures:

- Providing opportunities for employees to participate in transit subsidy or reimbursement programs.
- Informing employees of nearby transit stops and bicycle and pedestrian amenities.
- Coordinate with SRTA to consider revising existing transit service to better service the project site.
- Implementing a carpool system among employees.
- Direct deposit offered to employees.
- Providing preferential parking for carpools and vanpools.
- Providing incentives to encourage bicycle ridership to the site, such as bike racks and other storage facilities on site.
- Subject to request and subsequent approval by the City of New Bedford and New Bedford Business Park, providing striped bicycle lanes along Duchaine Boulevard and shared bicycle markings along Theodore Rice Boulevard to provide connectivity to the existing bicycle amenities along Braley Road.

CONCLUSION AND RECOMMENDATIONS

Phase 2 of the proposed project consists of expanding the existing facility at 100 Duchaine Boulevard to accommodate a receiving capacity of approximately 1,500 tons per day (tpd) of MSW and C&D materials and an additional 400 tpd of biosolid materials. The site is currently utilizing the existing buildings on the site to process plastic, aluminum, and recyclable glass as part of Phase 1 of the project. The site is proposed to be accessed via the existing site driveway on Duchaine Boulevard, which leads to an internal one-way loop roadway surrounding the proposed facility.

Phase 2 of the proposed project is expected to generate a total of 59 vehicle trips (17 entering and 42 exiting) during the weekday morning peak, and 59 vehicle trips (17 entering and 42 exiting) during the weekday afternoon peak hour. Over the course of an average weekday, Phase 2 of the proposed project is estimated to result in of approximately 478 vehicle trips (239 entering and 239 exiting) during the typical weekday.

Based on the capacity analysis results, the approaches under stop control at the Route 140 off-ramps onto Braley Road and at the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard operate over capacity and with high delays under the 2020 Base conditions. These movements carry a majority of the traffic accessing the industrial park on Duchaine Boulevard during the peak hours. The proposed project would result in minor increases in delay on these over-capacity movements within the study area.

Based on the MUTCD traffic signal warrant analysis, the installation of a traffic signal at the intersection of Braley Road at Phillips Road/Theodore Rice Boulevard is warranted under 2020 Existing traffic volumes independent of the project, as a result of existing development in the area.

Additionally, it is our opinion that the traffic impacts of the proposed development of this solid waste facility located at 100 Duchaine Boulevard do not constitute a danger to the public health, safety, or the environment with consideration to traffic congestion, pedestrian and vehicular safety, and roadway configuration.

Appendix for Updated Traffic Impact Study Solid Waste Handling Facility

100 Duchaine Boulevard
New Bedford, MA

Prepared by
McMahon Associates, Inc.
350 Myles Standish Boulevard, Suite 103
Taunton, MA 02780
508.823.2245

Prepared for
Green Seal Environmental, Inc.

July 2018
Revised December 2020

APPENDIX A

Manual Turning Movement Count Data

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

tel (781) 587-0086 cell (781) 439-4999

N/S: Route 140 Northbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063A

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Cars & Peds - Trucks & Buses - Bikes by Direction

	Route 140 NB On-Ramp From North				Braley Road From East				Route 140 NB Off-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	0	21	142	0	0	48	0	44	1	0	48	19	0	323
07:15 AM	0	0	0	0	16	145	0	0	56	0	62	2	0	34	16	0	331
07:30 AM	0	0	0	0	19	151	0	0	77	0	80	1	0	37	12	0	377
07:45 AM	0	0	0	0	16	150	0	0	78	0	97	0	0	37	18	0	396
Total	0	0	0	0	72	588	0	0	259	0	283	4	0	156	65	0	1427
08:00 AM	0	0	0	0	12	133	0	0	80	0	70	0	0	45	8	0	348
08:15 AM	0	0	0	0	15	142	0	0	95	0	80	1	0	45	16	0	394
08:30 AM	0	0	0	0	16	166	0	0	71	0	36	2	0	43	10	0	344
08:45 AM	0	0	0	1	14	137	0	0	68	0	51	1	0	33	19	1	325
Total	0	0	0	1	57	578	0	0	314	0	237	4	0	166	53	1	1411
Grand Total	0	0	0	1	129	1166	0	0	573	0	520	8	0	322	118	1	2838
Apprch %	0	0	0	100	10	90	0	0	52	0	47.2	0.7	0	73	26.8	0.2	
Total %	0	0	0	0	4.5	41.1	0	0	20.2	0	18.3	0.3	0	11.3	4.2	0	
Cars & Peds	0	0	0	1	128	1130	0	0	551	0	496	8	0	302	87	1	2704
% Cars & Peds	0	0	0	100	99.2	96.9	0	0	96.2	0	95.4	100	0	93.8	73.7	100	95.3
Trucks & Buses	0	0	0	0	1	36	0	0	22	0	24	0	0	19	31	0	133
% Trucks & Buses	0	0	0	0	0.8	3.1	0	0	3.8	0	4.6	0	0	5.9	26.3	0	4.7
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0

	Route 140 NB On-Ramp From North					Braley Road From East					Route 140 NB Off-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	19	151	0	0	170	77	0	80	1	158	0	37	12	0	49	377
07:45 AM	0	0	0	0	0	16	150	0	0	166	78	0	97	0	175	0	37	18	0	55	396
08:00 AM	0	0	0	0	0	12	133	0	0	145	80	0	70	0	150	0	45	8	0	53	348
08:15 AM	0	0	0	0	0	15	142	0	0	157	95	0	80	1	176	0	45	16	0	61	394
Total Volume	0	0	0	0	0	62	576	0	0	638	330	0	327	2	659	0	164	54	0	218	1515
% App. Total	0	0	0	0		9.7	90.3	0	0		50.1	0	49.6	0.3		0	75.2	24.8	0		
PHF	.000	.000	.000	.000	.000	.816	.954	.000	.000	.938	.868	.000	.843	.500	.936	.000	.911	.750	.000	.893	.956
Cars & Peds	0	0	0	0	0	62	562	0	0	624	316	0	313	2	631	0	152	40	0	192	1447
% Cars & Peds	0	0	0	0	0	100	97.6	0	0	97.8	95.8	0	95.7	100	95.8	0	92.7	74.1	0	88.1	95.5
Trucks & Buses	0	0	0	0	0	0	14	0	0	14	14	0	14	0	28	0	11	14	0	25	67
% Trucks & Buses	0	0	0	0	0	0	2.4	0	0	2.2	4.2	0	4.3	0	4.2	0	6.7	25.9	0	11.5	4.4
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.5	0.1

Transportation Data Corporation

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N/S: Route 140 Northbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063A

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Cars & Peds

	Route 140 NB On-Ramp From North				Braley Road From East				Route 140 NB Off-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	0	21	140	0	0	46	0	41	1	0	46	17	0	312
07:15 AM	0	0	0	0	16	144	0	0	55	0	60	2	0	34	11	0	322
07:30 AM	0	0	0	0	19	148	0	0	74	0	75	1	0	33	9	0	359
07:45 AM	0	0	0	0	16	147	0	0	77	0	94	0	0	34	10	0	378
Total	0	0	0	0	72	579	0	0	252	0	270	4	0	147	47	0	1371
08:00 AM	0	0	0	0	12	131	0	0	75	0	66	0	0	43	7	0	334
08:15 AM	0	0	0	0	15	136	0	0	90	0	78	1	0	42	14	0	376
08:30 AM	0	0	0	0	15	151	0	0	69	0	34	2	0	38	9	0	318
08:45 AM	0	0	0	1	14	133	0	0	65	0	48	1	0	32	10	1	305
Total	0	0	0	1	56	551	0	0	299	0	226	4	0	155	40	1	1333
Grand Total	0	0	0	1	128	1130	0	0	551	0	496	8	0	302	87	1	2704
Apprch %	0	0	0	100	10.2	89.8	0	0	52.2	0	47	0.8	0	77.4	22.3	0.3	
Total %	0	0	0	0	4.7	41.8	0	0	20.4	0	18.3	0.3	0	11.2	3.2	0	

	Route 140 NB On-Ramp From North					Braley Road From East					Route 140 NB Off-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	19	148	0	0	167	74	0	75	1	150	0	33	9	0	42	359
07:45 AM	0	0	0	0	0	16	147	0	0	163	77	0	94	0	171	0	34	10	0	44	378
08:00 AM	0	0	0	0	0	12	131	0	0	143	75	0	66	0	141	0	43	7	0	50	334
08:15 AM	0	0	0	0	0	15	136	0	0	151	90	0	78	1	169	0	42	14	0	56	376
Total Volume	0	0	0	0	0	62	562	0	0	624	316	0	313	2	631	0	152	40	0	192	1447
% App. Total	0	0	0	0		9.9	90.1	0	0		50.1	0	49.6	0.3		0	79.2	20.8	0		
PHF	.000	.000	.000	.000	.000	.816	.949	.000	.000	.934	.878	.000	.832	.500	.923	.000	.884	.714	.000	.857	.957

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N/S: Route 140 Northbound Ramps

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Page No : 1

Groups Printed- Trucks & Buses

	Route 140 NB On-Ramp From North				Braley Road From East				Route 140 NB Off-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	0	0	2	0	0	2	0	3	0	0	2	2	0	11
07:15 AM	0	0	0	0	0	1	0	0	1	0	2	0	0	0	5	0	9
07:30 AM	0	0	0	0	0	3	0	0	3	0	5	0	0	3	3	0	17
07:45 AM	0	0	0	0	0	3	0	0	1	0	3	0	0	3	8	0	18
Total	0	0	0	0	0	9	0	0	7	0	13	0	0	8	18	0	55
08:00 AM	0	0	0	0	0	2	0	0	5	0	4	0	0	2	1	0	14
08:15 AM	0	0	0	0	0	6	0	0	5	0	2	0	0	3	2	0	18
08:30 AM	0	0	0	0	1	15	0	0	2	0	2	0	0	5	1	0	26
08:45 AM	0	0	0	0	0	4	0	0	3	0	3	0	0	1	9	0	20
Total	0	0	0	0	1	27	0	0	15	0	11	0	0	11	13	0	78
Grand Total	0	0	0	0	1	36	0	0	22	0	24	0	0	19	31	0	133
Apprch %	0	0	0	0	2.7	97.3	0	0	47.8	0	52.2	0	0	38	62	0	
Total %	0	0	0	0	0.8	27.1	0	0	16.5	0	18	0	0	14.3	23.3	0	

	Route 140 NB On-Ramp From North					Braley Road From East					Route 140 NB Off-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	0	2	0	0	2	5	0	4	0	9	0	2	1	0	3	14
08:15 AM	0	0	0	0	0	0	6	0	0	6	5	0	2	0	7	0	3	2	0	5	18
08:30 AM	0	0	0	0	0	1	15	0	0	16	2	0	2	0	4	0	5	1	0	6	26
08:45 AM	0	0	0	0	0	0	4	0	0	4	3	0	3	0	6	0	1	9	0	10	20
Total Volume	0	0	0	0	0	1	27	0	0	28	15	0	11	0	26	0	11	13	0	24	78
% App. Total	0	0	0	0		3.6	96.4	0	0		57.7	0	42.3	0		0	45.8	54.2	0		
PHF	.000	.000	.000	.000	.000	.250	.450	.000	.000	.438	.750	.000	.688	.000	.722	.000	.550	.361	.000	.600	.750

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

tel (781) 587-0086 cell (781) 439-4999

N/S: Route 140 Northbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063A

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Bikes by Direction

	Route 140 NB On-Ramp From North				Braley Road From East				Route 140 NB Off-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	

	Route 140 NB On-Ramp From North					Braley Road From East					Route 140 NB Off-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250

Transportation Data Corporation

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N/S: Route 140 Northbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

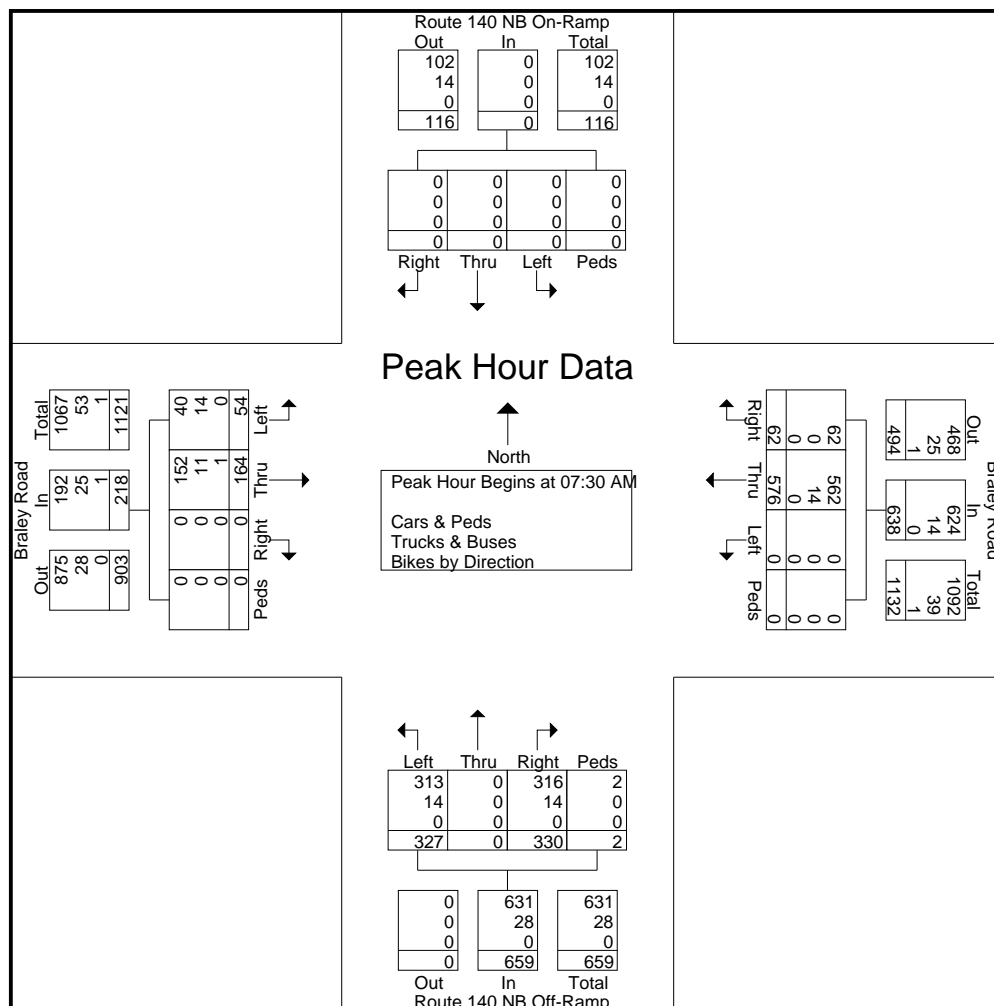
File Name : 05063A

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

	Route 140 NB On-Ramp From North					Braley Road From East					Route 140 NB Off-Ramp From South					Braley Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	19	151	0	0	170	77	0	80	1	158	0	37	12	0	49	377
07:45 AM	0	0	0	0	0	16	150	0	0	166	78	0	97	0	175	0	37	18	0	55	396
08:00 AM	0	0	0	0	0	12	133	0	0	145	80	0	70	0	150	0	45	8	0	53	348
08:15 AM	0	0	0	0	0	15	142	0	0	157	95	0	80	1	176	0	45	16	0	61	394
Total Volume	0	0	0	0	0	62	576	0	0	638	330	0	327	2	659	0	164	54	0	218	1515
% App. Total	0	0	0	0	0	9.7	90.3	0	0	0	50.1	0	49.6	0.3	0	0	75.2	24.8	0	0	0
PHF	.000	.000	.000	.000	.000	.816	.954	.000	.000	.938	.868	.000	.843	.500	.936	.000	.911	.750	.000	.893	.956
Cars & Peds	0	0	0	0	0	62	562	0	0	624	316	0	313	2	631	0	152	40	0	192	1447
% Cars & Peds	0	0	0	0	0	100	97.6	0	0	97.8	95.8	0	95.7	100	95.8	0	92.7	74.1	0	88.1	95.5
Trucks & Buses	0	0	0	0	0	0	14	0	0	14	14	0	14	0	28	0	11	14	0	25	67
% Trucks & Buses	0	0	0	0	0	0	2.4	0	0	2.2	4.2	0	4.3	0	4.2	0	6.7	25.9	0	11.5	4.4
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.5	0.1



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Page No : 1

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Transportation Data Corporation

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N/S: Route 140 Northbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063AA

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Cars & Peds

	Route 140 NB On-Ramp From North				Braley Road From East				Route 140 NB Off-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	0	0	0	0	15	158	0	0	84	0	44	0	0	56	21	0	378
03:15 PM	0	0	0	0	10	145	0	0	93	0	57	0	0	68	17	0	390
03:30 PM	0	0	0	0	8	130	0	1	65	0	54	1	0	57	32	1	349
03:45 PM	0	0	0	0	6	116	0	0	96	0	60	0	0	44	16	0	338
Total	0	0	0	0	39	549	0	1	338	0	215	1	0	225	86	1	1455
04:00 PM	0	0	0	0	8	105	0	0	88	0	46	0	0	52	29	0	328
04:15 PM	0	0	0	0	6	103	0	0	98	0	48	0	0	59	17	0	331
04:30 PM	0	0	0	0	12	106	0	0	100	0	43	0	0	63	14	0	338
04:45 PM	0	0	0	0	7	98	0	0	102	0	48	0	0	48	12	0	315
Total	0	0	0	0	33	412	0	0	388	0	185	0	0	222	72	0	1312
05:00 PM	0	0	0	0	9	111	0	0	89	0	37	1	0	71	58	0	376
05:15 PM	0	0	0	0	9	104	0	0	93	0	46	0	0	54	16	0	322
05:30 PM	0	0	0	0	9	90	0	0	95	0	32	0	0	52	17	0	295
05:45 PM	0	0	0	0	9	88	0	0	100	0	31	0	0	47	6	0	281
Total	0	0	0	0	36	393	0	0	377	0	146	1	0	224	97	0	1274
Grand Total	0	0	0	0	108	1354	0	1	1103	0	546	2	0	671	255	1	4041
Apprch %	0	0	0	0	7.4	92.5	0	0.1	66.8	0	33.1	0.1	0	72.4	27.5	0.1	
Total %	0	0	0	0	2.7	33.5	0	0	27.3	0	13.5	0	0	16.6	6.3	0	

	Route 140 NB On-Ramp From North					Braley Road From East					Route 140 NB Off-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	0	0	0	0	0	15	158	0	0	173	84	0	44	0	128	0	56	21	0	77	378
03:15 PM	0	0	0	0	0	10	145	0	0	155	93	0	57	0	150	0	68	17	0	85	390
03:30 PM	0	0	0	0	0	8	130	0	1	139	65	0	54	1	120	0	57	32	1	90	349
03:45 PM	0	0	0	0	0	6	116	0	0	122	96	0	60	0	156	0	44	16	0	60	338
Total Volume	0	0	0	0	0	39	549	0	1	589	338	0	215	1	554	0	225	86	1	312	1455
% App. Total	0	0	0	0		6.6	93.2	0	0.2		61	0	38.8	0.2		0	72.1	27.6	0.3		
PHF	.000	.000	.000	.000	.000	.650	.869	.000	.250	.851	.880	.000	.896	.250	.888	.000	.827	.672	.250	.867	.933

Transportation Data Corporation

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N/S: Route 140 Northbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063AA

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Trucks & Buses

	Route 140 NB On-Ramp From North				Braley Road From East				Route 140 NB Off-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	0	0	0	0	0	5	0	0	3	0	4	0	0	0	1	0	13
03:15 PM	0	0	0	0	2	6	0	0	3	0	5	0	0	2	2	0	20
03:30 PM	0	0	0	0	0	4	0	0	2	0	4	0	0	1	0	0	11
03:45 PM	0	0	0	0	0	2	0	0	2	0	6	0	0	1	1	0	12
Total	0	0	0	0	2	17	0	0	10	0	19	0	0	4	4	0	56
04:00 PM	0	0	0	0	0	4	0	0	0	0	3	0	0	1	0	0	8
04:15 PM	0	0	0	0	0	1	0	0	0	0	2	0	0	1	1	0	5
04:30 PM	0	0	0	0	0	3	0	0	0	0	2	0	0	0	1	0	6
04:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	4
Total	0	0	0	0	0	10	0	0	0	0	7	0	0	2	4	0	23
05:00 PM	0	0	0	0	0	1	0	0	1	0	4	0	0	0	0	0	6
05:15 PM	0	0	0	0	1	1	0	0	1	0	2	0	0	1	1	0	7
05:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	2
Total	0	0	0	0	1	3	0	0	3	0	8	0	0	1	1	0	17
Grand Total	0	0	0	0	3	30	0	0	13	0	34	0	0	7	9	0	96
Apprch %	0	0	0	0	9.1	90.9	0	0	27.7	0	72.3	0	0	43.8	56.2	0	
Total %	0	0	0	0	3.1	31.2	0	0	13.5	0	35.4	0	0	7.3	9.4	0	

	Route 140 NB On-Ramp From North					Braley Road From East					Route 140 NB Off-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	0	0	0	0	0	0	5	0	0	5	3	0	4	0	7	0	0	1	0	1	13
03:15 PM	0	0	0	0	0	2	6	0	0	8	3	0	5	0	8	0	2	2	0	4	20
03:30 PM	0	0	0	0	0	0	4	0	0	4	2	0	4	0	6	0	1	0	0	1	11
03:45 PM	0	0	0	0	0	0	2	0	0	2	2	0	6	0	8	0	1	1	0	2	12
Total Volume	0	0	0	0	0	2	17	0	0	19	10	0	19	0	29	0	4	4	0	8	56
% App. Total	0	0	0	0		10.5	89.5	0	0		34.5	0	65.5	0		0	50	50	0		
PHF	.000	.000	.000	.000	.000	.250	.708	.000	.000	.594	.833	.000	.792	.000	.906	.000	.500	.500	.000	.500	.700

Transportation Data Corporation

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N/S: Route 140 Northbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063AA

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Bikes by Direction

	Route 140 NB On-Ramp From North				Braley Road From East				Route 140 NB Off-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
Apprch %	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	33.3	0	0	0	0	0	0	0	66.7	0	0	

	Route 140 NB On-Ramp From North					Braley Road From East					Route 140 NB Off-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250

Transportation Data Corporation

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N/S: Route 140 Northbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

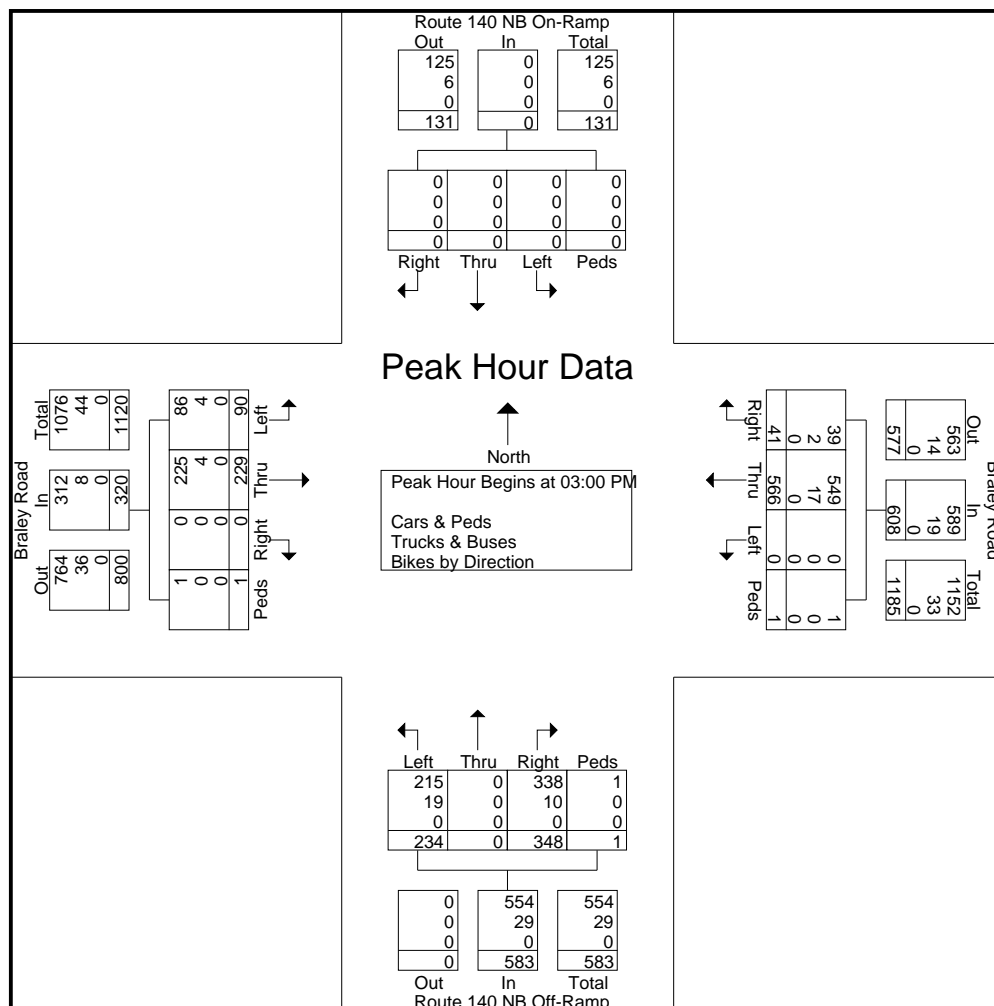
File Name : 05063AA

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

	Route 140 NB On-Ramp From North					Braley Road From East					Route 140 NB Off-Ramp From South					Braley Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	0	0	0	0	0	15	163	0	0	178	87	0	48	0	135	0	56	22	0	78	391
03:15 PM	0	0	0	0	0	12	151	0	0	163	96	0	62	0	158	0	70	19	0	89	410
03:30 PM	0	0	0	0	0	8	134	0	1	143	67	0	58	1	126	0	58	32	1	91	360
03:45 PM	0	0	0	0	0	6	118	0	0	124	98	0	66	0	164	0	45	17	0	62	350
Total Volume	0	0	0	0	0	41	566	0	1	608	348	0	234	1	583	0	229	90	1	320	1511
% App. Total	0	0	0	0	0	6.7	93.1	0	0.2		59.7	0	40.1	0.2		0	71.6	28.1	0.3		
PHF	.000	.000	.000	.000	.000	.683	.868	.000	.250	.854	.888	.000	.886	.250	.889	.000	.818	.703	.250	.879	.921
Cars & Peds	0	0	0	0	0	39	549	0	1	589	338	0	215	1	554	0	225	86	1	312	1455
% Cars & Peds	0	0	0	0	0	95.1	97.0	0	100	96.9	97.1	0	91.9	100	95.0	0	98.3	95.6	100	97.5	96.3
Trucks & Buses	0	0	0	0	0	2	17	0	0	19	10	0	19	0	29	0	4	4	0	8	56
% Trucks & Buses	0	0	0	0	0	4.9	3.0	0	0	3.1	2.9	0	8.1	0	5.0	0	1.7	4.4	0	2.5	3.7
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Transportation Data Corporation

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N/S: Route 140 Southbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063B

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Cars & Peds - Trucks & Buses - Bikes by Direction

	Route 140 SB Off-Ramp From North				Braley Road From East				Route 140 SB On-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	29	0	9	0	0	76	108	0	0	0	0	0	109	56	0	0	387
07:15 AM	26	0	7	0	0	93	115	0	0	0	0	1	45	45	0	0	332
07:30 AM	37	0	12	0	0	120	111	0	0	0	0	1	50	37	0	0	368
07:45 AM	28	0	14	0	0	136	112	0	0	0	0	0	40	41	0	0	371
Total	120	0	42	0	0	425	446	0	0	0	0	2	244	179	0	0	1458
08:00 AM	30	0	11	0	0	109	91	0	0	0	0	1	47	42	0	0	331
08:15 AM	29	0	5	0	0	119	100	0	0	0	0	0	49	56	0	0	358
08:30 AM	29	0	3	0	0	90	117	0	0	0	0	2	40	49	0	0	330
08:45 AM	16	0	7	0	0	88	100	0	0	0	0	2	31	44	0	0	288
Total	104	0	26	0	0	406	408	0	0	0	0	5	167	191	0	0	1307
Grand Total	224	0	68	0	0	831	854	0	0	0	0	7	411	370	0	0	2765
Apprch %	76.7	0	23.3	0	0	49.3	50.7	0	0	0	0	100	52.6	47.4	0	0	
Total %	8.1	0	2.5	0	0	30.1	30.9	0	0	0	0	0.3	14.9	13.4	0	0	
Cars & Peds	198	0	62	0	0	798	827	0	0	0	0	7	387	325	0	0	2604
% Cars & Peds	88.4	0	91.2	0	0	96	96.8	0	0	0	0	100	94.2	87.8	0	0	94.2
Trucks & Buses	26	0	6	0	0	33	27	0	0	0	0	0	24	44	0	0	160
% Trucks & Buses	11.6	0	8.8	0	0	4	3.2	0	0	0	0	0	5.8	11.9	0	0	5.8
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0	0	0

	Route 140 SB Off-Ramp From North					Braley Road From East					Route 140 SB On-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	29	0	9	0	38	0	76	108	0	184	0	0	0	0	0	109	56	0	0	165	387
07:15 AM	26	0	7	0	33	0	93	115	0	208	0	0	0	1	1	45	45	0	0	90	332
07:30 AM	37	0	12	0	49	0	120	111	0	231	0	0	0	1	1	50	37	0	0	87	368
07:45 AM	28	0	14	0	42	0	136	112	0	248	0	0	0	0	0	40	41	0	0	81	371
Total Volume	120	0	42	0	162	0	425	446	0	871	0	0	0	2	2	244	179	0	0	423	1458
% App. Total	74.1	0	25.9	0		0	48.8	51.2	0		0	0	0	100		57.7	42.3	0	0		
PHF	.811	.000	.750	.000	.827	.000	.781	.970	.000	.878	.000	.000	.000	.500	.500	.560	.799	.000	.000	.641	.942
Cars & Peds	109	0	39	0	148	0	408	442	0	850	0	0	0	2	2	232	154	0	0	386	1386
% Cars & Peds	90.8	0	92.9	0	91.4	0	96.0	99.1	0	97.6	0	0	0	100	100	95.1	86.0	0	0	91.3	95.1
Trucks & Buses	11	0	3	0	14	0	17	4	0	21	0	0	0	0	0	12	24	0	0	36	71
% Trucks & Buses	9.2	0	7.1	0	8.6	0	4.0	0.9	0	2.4	0	0	0	0	0	4.9	13.4	0	0	8.5	4.9
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.2	0.1

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

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N/S: Route 140 Southbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063B

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Cars & Peds

	Route 140 SB Off-Ramp From North				Braley Road From East				Route 140 SB On-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	27	0	8	0	0	72	107	0	0	0	0	0	109	52	0	0	375
07:15 AM	23	0	7	0	0	91	114	0	0	0	0	1	41	40	0	0	317
07:30 AM	32	0	10	0	0	113	110	0	0	0	0	1	47	32	0	0	345
07:45 AM	27	0	14	0	0	132	111	0	0	0	0	0	35	30	0	0	349
Total	109	0	39	0	0	408	442	0	0	0	0	2	232	154	0	0	1386
08:00 AM	29	0	9	0	0	105	89	0	0	0	0	1	43	41	0	0	317
08:15 AM	25	0	4	0	0	115	97	0	0	0	0	0	47	51	0	0	339
08:30 AM	23	0	3	0	0	86	102	0	0	0	0	2	38	43	0	0	297
08:45 AM	12	0	7	0	0	84	97	0	0	0	0	2	27	36	0	0	265
Total	89	0	23	0	0	390	385	0	0	0	0	5	155	171	0	0	1218
Grand Total	198	0	62	0	0	798	827	0	0	0	0	7	387	325	0	0	2604
Apprch %	76.2	0	23.8	0	0	49.1	50.9	0	0	0	0	100	54.4	45.6	0	0	
Total %	7.6	0	2.4	0	0	30.6	31.8	0	0	0	0	0.3	14.9	12.5	0	0	

	Route 140 SB Off-Ramp From North					Braley Road From East					Route 140 SB On-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	27	0	8	0	35	0	72	107	0	179	0	0	0	0	0	109	52	0	0	161	375
07:15 AM	23	0	7	0	30	0	91	114	0	205	0	0	0	1	1	41	40	0	0	81	317
07:30 AM	32	0	10	0	42	0	113	110	0	223	0	0	0	1	1	47	32	0	0	79	345
07:45 AM	27	0	14	0	41	0	132	111	0	243	0	0	0	0	0	35	30	0	0	65	349
Total Volume	109	0	39	0	148	0	408	442	0	850	0	0	0	2	2	232	154	0	0	386	1386
% App. Total	73.6	0	26.4	0		0	48	52	0		0	0	0	100		60.1	39.9	0	0		
PHF	.852	.000	.696	.000	.881	.000	.773	.969	.000	.874	.000	.000	.000	.500	.500	.532	.740	.000	.000	.599	.924

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N/S: Route 140 Southbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063B

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Trucks & Buses

	Route 140 SB Off-Ramp From North				Braley Road From East				Route 140 SB On-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	2	0	1	0	0	4	1	0	0	0	0	0	0	4	0	0	12
07:15 AM	3	0	0	0	0	2	1	0	0	0	0	0	4	5	0	0	15
07:30 AM	5	0	2	0	0	7	1	0	0	0	0	0	3	4	0	0	22
07:45 AM	1	0	0	0	0	4	1	0	0	0	0	0	5	11	0	0	22
Total	11	0	3	0	0	17	4	0	0	0	0	0	12	24	0	0	71
08:00 AM	1	0	2	0	0	4	2	0	0	0	0	0	4	1	0	0	14
08:15 AM	4	0	1	0	0	4	3	0	0	0	0	0	2	5	0	0	19
08:30 AM	6	0	0	0	0	4	15	0	0	0	0	0	2	6	0	0	33
08:45 AM	4	0	0	0	0	4	3	0	0	0	0	0	4	8	0	0	23
Total	15	0	3	0	0	16	23	0	0	0	0	0	12	20	0	0	89
Grand Total	26	0	6	0	0	33	27	0	0	0	0	0	24	44	0	0	160
Apprch %	81.2	0	18.8	0	0	55	45	0	0	0	0	0	35.3	64.7	0	0	
Total %	16.2	0	3.8	0	0	20.6	16.9	0	0	0	0	0	15	27.5	0	0	

	Route 140 SB Off-Ramp From North					Braley Road From East					Route 140 SB On-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	2	0	3	0	4	2	0	6	0	0	0	0	0	4	1	0	0	5	14
08:15 AM	4	0	1	0	5	0	4	3	0	7	0	0	0	0	0	2	5	0	0	7	19
08:30 AM	6	0	0	0	6	0	4	15	0	19	0	0	0	0	0	2	6	0	0	8	33
08:45 AM	4	0	0	0	4	0	4	3	0	7	0	0	0	0	0	4	8	0	0	12	23
Total Volume	15	0	3	0	18	0	16	23	0	39	0	0	0	0	0	12	20	0	0	32	89
% App. Total	83.3	0	16.7	0		0	41	59	0		0	0	0	0		37.5	62.5	0	0		
PHF	.625	.000	.375	.000	.750	.000	1.00	.383	.000	.513	.000	.000	.000	.000	.000	.750	.625	.000	.000	.667	.674

Transportation Data Corporation

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N/S: Route 140 Southbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063B

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Bikes by Direction

	Route 140 SB Off-Ramp From North				Braley Road From East				Route 140 SB On-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	

	Route 140 SB Off-Ramp From North					Braley Road From East					Route 140 SB On-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% App. Total	0	0	0	0		0	0	0	0		0	0	0	0		0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250

Transportation Data Corporation

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N/S: Route 140 Southbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

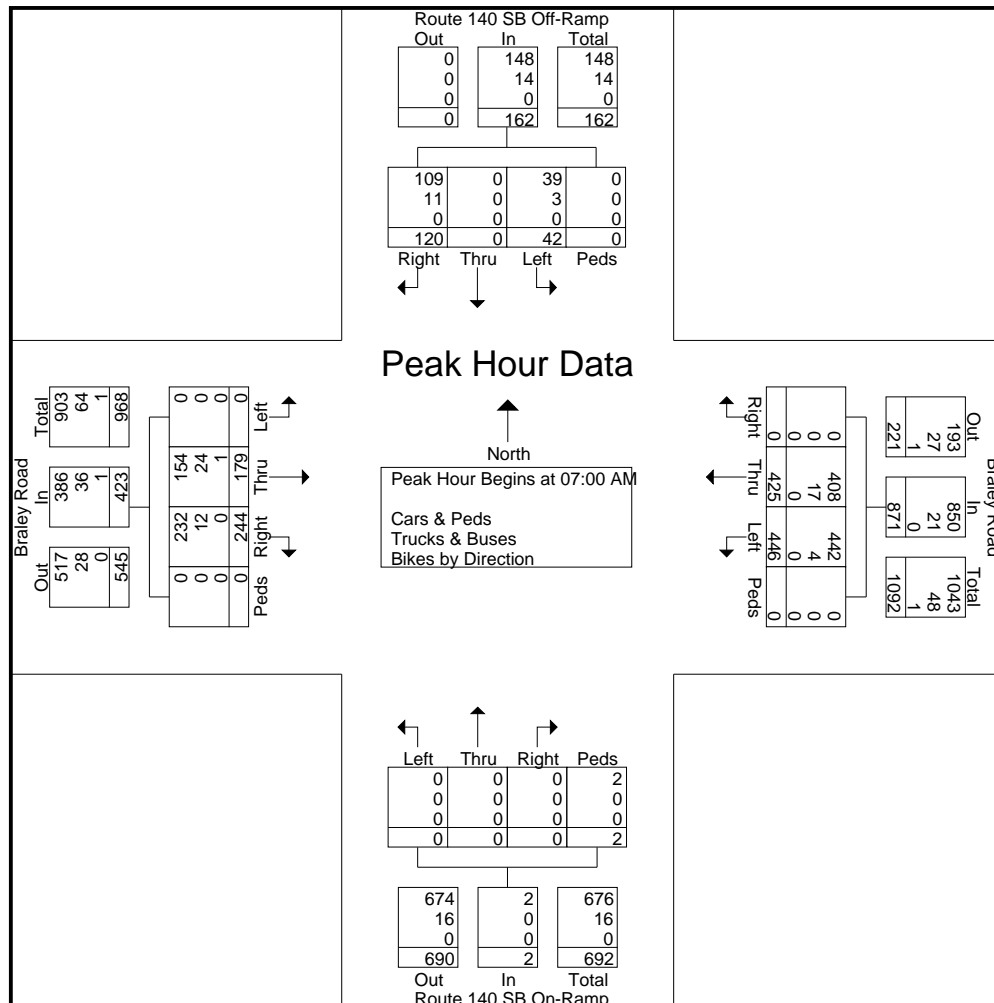
File Name : 05063B

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

	Route 140 SB Off-Ramp From North					Braley Road From East					Route 140 SB On-Ramp From South					Braley Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	29	0	9	0	38	0	76	108	0	184	0	0	0	0	0	109	56	0	0	165	387
07:15 AM	26	0	7	0	33	0	93	115	0	208	0	0	0	1	1	45	45	0	0	90	332
07:30 AM	37	0	12	0	49	0	120	111	0	231	0	0	0	1	1	50	37	0	0	87	368
07:45 AM	28	0	14	0	42	0	136	112	0	248	0	0	0	0	0	40	41	0	0	81	371
Total Volume	120	0	42	0	162	0	425	446	0	871	0	0	0	2	2	244	179	0	0	423	1458
% App. Total	74.1	0	25.9	0		0	48.8	51.2	0		0	0	0	100		57.7	42.3	0	0		
PHF	.811	.000	.750	.000	.827	.000	.781	.970	.000	.878	.000	.000	.000	.500	.500	.560	.799	.000	.000	.641	.942
Cars & Peds	109	0	39	0	148	0	408	442	0	850	0	0	0	2	2	232	154	0	0	386	1386
% Cars & Peds	90.8	0	92.9	0	91.4	0	96.0	99.1	0	97.6	0	0	0	100	100	95.1	86.0	0	0	91.3	95.1
Trucks & Buses	11	0	3	0	14	0	17	4	0	21	0	0	0	0	0	12	24	0	0	36	71
% Trucks & Buses	9.2	0	7.1	0	8.6	0	4.0	0.9	0	2.4	0	0	0	0	0	4.9	13.4	0	0	8.5	4.9
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	0	0	0.2	0.1



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Page No : 1

[illegible]

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N/S: Route 140 Southbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063BB

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Cars & Peds

	Route 140 SB Off-Ramp From North				Braley Road From East				Route 140 SB On-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	20	0	9	0	0	86	117	0	0	0	0	0	124	67	0	0	423
03:15 PM	17	0	11	0	0	95	106	0	0	0	0	0	70	75	0	0	374
03:30 PM	26	0	14	0	0	101	83	0	0	0	0	0	128	73	0	0	425
03:45 PM	24	0	12	0	0	94	79	0	0	0	0	0	71	48	0	1	329
Total	87	0	46	0	0	376	385	0	0	0	0	0	393	263	0	1	1551
04:00 PM	38	0	12	0	0	76	73	0	0	0	0	0	110	69	0	0	378
04:15 PM	21	0	19	0	0	83	69	0	0	0	0	0	62	56	0	0	310
04:30 PM	18	0	20	0	0	76	77	0	0	0	0	0	69	65	0	0	325
04:45 PM	19	0	11	0	0	75	70	0	0	0	0	0	72	50	0	0	297
Total	96	0	62	0	0	310	289	0	0	0	0	0	313	240	0	0	1310
05:00 PM	24	0	16	0	0	64	83	0	0	0	0	1	114	111	0	0	413
05:15 PM	28	1	18	0	0	73	79	0	0	0	0	0	54	49	0	0	302
05:30 PM	18	0	19	0	0	56	67	0	0	0	0	0	65	47	0	0	272
05:45 PM	16	0	15	0	0	65	56	0	0	0	0	0	34	38	0	0	224
Total	86	1	68	0	0	258	285	0	0	0	0	1	267	245	0	0	1211
Grand Total	269	1	176	0	0	944	959	0	0	0	0	1	973	748	0	1	4072
Apprch %	60.3	0.2	39.5	0	0	49.6	50.4	0	0	0	0	100	56.5	43.4	0	0.1	
Total %	6.6	0	4.3	0	0	23.2	23.6	0	0	0	0	0	23.9	18.4	0	0	

	Route 140 SB Off-Ramp From North					Braley Road From East					Route 140 SB On-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	20	0	9	0	29	0	86	117	0	203	0	0	0	0	0	124	67	0	0	191	423
03:15 PM	17	0	11	0	28	0	95	106	0	201	0	0	0	0	0	70	75	0	0	145	374
03:30 PM	26	0	14	0	40	0	101	83	0	184	0	0	0	0	0	128	73	0	0	201	425
03:45 PM	24	0	12	0	36	0	94	79	0	173	0	0	0	0	0	71	48	0	1	120	329
Total Volume	87	0	46	0	133	0	376	385	0	761	0	0	0	0	0	393	263	0	1	657	1551
% App. Total	65.4	0	34.6	0		0	49.4	50.6	0		0	0	0	0		59.8	40	0	0.2		
PHF	.837	.000	.821	.000	.831	.000	.931	.823	.000	.937	.000	.000	.000	.000	.000	.768	.877	.000	.250	.817	.912

Transportation Data Corporation

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N/S: Route 140 Southbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063BB

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Trucks & Buses

	Route 140 SB Off-Ramp From North				Braley Road From East				Route 140 SB On-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	2	0	0	0	0	6	3	0	0	0	0	0	4	1	0	0	16
03:15 PM	1	0	0	0	0	6	5	0	0	0	0	0	7	4	0	0	23
03:30 PM	1	0	0	0	0	4	4	0	0	0	0	0	4	1	0	0	14
03:45 PM	3	0	1	0	0	7	1	0	0	0	0	0	8	1	0	0	21
Total	7	0	1	0	0	23	13	0	0	0	0	0	23	7	0	0	74
04:00 PM	0	0	0	0	0	4	3	0	0	0	0	0	2	1	0	0	10
04:15 PM	2	0	1	0	0	2	1	0	0	0	0	0	2	1	0	0	9
04:30 PM	1	0	0	0	0	3	3	0	0	0	0	0	3	1	0	0	11
04:45 PM	2	0	0	0	0	2	0	0	0	0	0	0	3	2	0	0	9
Total	5	0	1	0	0	11	7	0	0	0	0	0	10	5	0	0	39
05:00 PM	1	0	0	0	0	3	1	0	0	0	0	0	1	1	0	0	7
05:15 PM	2	0	1	0	0	1	2	0	0	0	0	0	2	1	0	0	9
05:30 PM	1	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	4
05:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2
Total	4	0	1	0	0	6	4	0	0	0	0	0	5	2	0	0	22
Grand Total	16	0	3	0	0	40	24	0	0	0	0	0	38	14	0	0	135
Apprch %	84.2	0	15.8	0	0	62.5	37.5	0	0	0	0	0	73.1	26.9	0	0	
Total %	11.9	0	2.2	0	0	29.6	17.8	0	0	0	0	0	28.1	10.4	0	0	

	Route 140 SB Off-Ramp From North					Braley Road From East					Route 140 SB On-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	2	0	0	0	2	0	6	3	0	9	0	0	0	0	0	4	1	0	0	5	16
03:15 PM	1	0	0	0	1	0	6	5	0	11	0	0	0	0	0	7	4	0	0	11	23
03:30 PM	1	0	0	0	1	0	4	4	0	8	0	0	0	0	0	4	1	0	0	5	14
03:45 PM	3	0	1	0	4	0	7	1	0	8	0	0	0	0	0	8	1	0	0	9	21
Total Volume	7	0	1	0	8	0	23	13	0	36	0	0	0	0	0	23	7	0	0	30	74
% App. Total	87.5	0	12.5	0		0	63.9	36.1	0		0	0	0	0		76.7	23.3	0	0		
PHF	.583	.000	.250	.000	.500	.000	.821	.650	.000	.818	.000	.000	.000	.000	.000	.719	.438	.000	.000	.682	.804

Transportation Data Corporation

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N/S: Route 140 Southbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

File Name : 05063BB

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

Groups Printed- Bikes by Direction

	Route 140 SB Off-Ramp From North				Braley Road From East				Route 140 SB On-Ramp From South				Braley Road From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
Apprch %	0	0	0	0	0	100	0	0	0	0	0	0	0	100	0	0	
Total %	0	0	0	0	0	33.3	0	0	0	0	0	0	0	66.7	0	0	

	Route 140 SB Off-Ramp From North					Braley Road From East					Route 140 SB On-Ramp From South					Braley Road From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250

Transportation Data Corporation

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N/S: Route 140 Southbound Ramps

E/W: Braley Road

City, State: New Bedford, MA

Client: McM/S. Hawkins

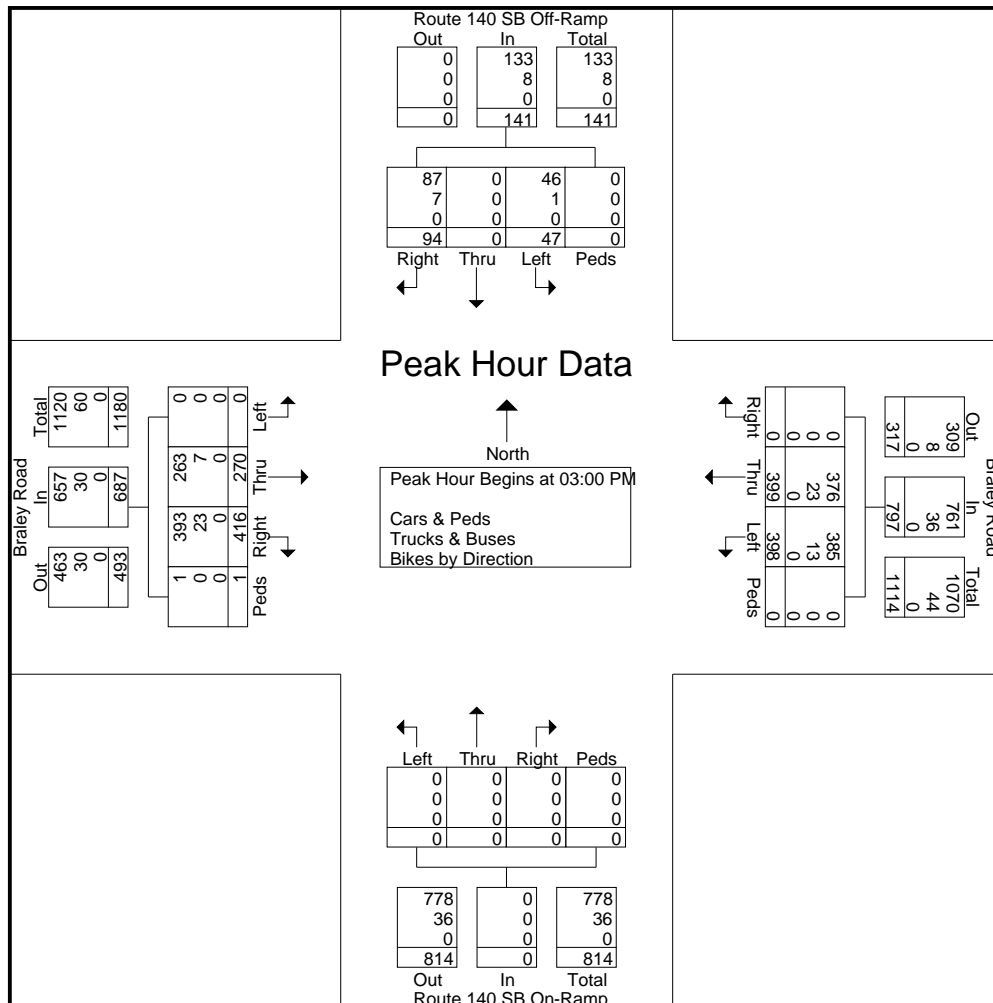
File Name : 05063BB

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

	Route 140 SB Off-Ramp From North					Braley Road From East					Route 140 SB On-Ramp From South					Braley Road From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	22	0	9	0	31	0	92	120	0	212	0	0	0	0	0	128	68	0	0	196	439
03:15 PM	18	0	11	0	29	0	101	111	0	212	0	0	0	0	0	77	79	0	0	156	397
03:30 PM	27	0	14	0	41	0	105	87	0	192	0	0	0	0	0	132	74	0	0	206	439
03:45 PM	27	0	13	0	40	0	101	80	0	181	0	0	0	0	0	79	49	0	1	129	350
Total Volume	94	0	47	0	141	0	399	398	0	797	0	0	0	0	0	416	270	0	1	687	1625
% App. Total	66.7	0	33.3	0		0	50.1	49.9	0		0	0	0	0	0	60.6	39.3	0	0.1		
PHF	.870	.000	.839	.000	.860	.000	.950	.829	.000	.940	.000	.000	.000	.000	.000	.788	.854	.000	.250	.834	.925
Cars & Peds	87	0	46	0	133	0	376	385	0	761	0	0	0	0	0	393	263	0	1	657	1551
% Cars & Peds	92.6	0	97.9	0	94.3	0	94.2	96.7	0	95.5	0	0	0	0	0	94.5	97.4	0	100	95.6	95.4
Trucks & Buses	7	0	1	0	8	0	23	13	0	36	0	0	0	0	0	23	7	0	0	30	74
% Trucks & Buses	7.4	0	2.1	0	5.7	0	5.8	3.3	0	4.5	0	0	0	0	0	5.5	2.6	0	0	4.4	4.6
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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N/S: Phillips Road
E/W: Braley Road/Theo Rice Blvd.
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063C
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds - Trucks & Buses - Bikes by Direction

	Phillips Road From North				Braley Road From East				Phillips Road From South				Theodore Rice Boulevard From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
07:00 AM	11	2	37	0	16	76	12	0	27	2	5	0	9	101	2	0	300
07:15 AM	2	10	42	0	20	84	15	0	29	6	2	1	3	16	0	0	230
07:30 AM	6	3	39	0	17	110	31	0	28	3	2	0	0	22	0	0	261
07:45 AM	7	4	33	0	26	124	14	0	24	7	6	0	6	23	1	0	275
Total	26	19	151	0	79	394	72	0	108	18	15	1	18	162	3	0	1066
08:00 AM	8	1	37	2	20	98	28	0	28	6	2	0	5	25	5	0	265
08:15 AM	6	10	33	0	28	78	43	0	50	6	2	0	2	25	2	0	285
08:30 AM	6	5	35	0	16	64	33	2	41	6	3	1	0	11	0	0	223
08:45 AM	5	12	21	0	23	62	23	0	19	4	6	0	1	34	2	0	212
Total	25	28	126	2	87	302	127	2	138	22	13	1	8	95	9	0	985
Grand Total	51	47	277	2	166	696	199	2	246	40	28	2	26	257	12	0	2051
Apprch %	13.5	12.5	73.5	0.5	15.6	65.5	18.7	0.2	77.8	12.7	8.9	0.6	8.8	87.1	4.1	0	
Total %	2.5	2.3	13.5	0.1	8.1	33.9	9.7	0.1	12	2	1.4	0.1	1.3	12.5	0.6	0	
Cars & Peds	44	46	270	2	161	649	192	2	234	37	27	2	25	208	9	0	1908
% Cars & Peds	86.3	97.9	97.5	100	97	93.2	96.5	100	95.1	92.5	96.4	100	96.2	80.9	75	0	93
Trucks & Buses	5	1	6	0	5	47	7	0	12	2	1	0	0	49	3	0	138
% Trucks & Buses	9.8	2.1	2.2	0	3	6.8	3.5	0	4.9	5	3.6	0	0	19.1	25	0	6.7
Bikes by Direction	2	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	5
% Bikes by Direction	3.9	0	0.4	0	0	0	0	0	0	2.5	0	0	3.8	0	0	0	0.2

	Phillips Road From North					Braley Road From East					Phillips Road From South					Theodore Rice Boulevard From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	3	39	0	48	17	110	31	0	158	28	3	2	0	33	0	22	0	0	22	261
07:45 AM	7	4	33	0	44	26	124	14	0	164	24	7	6	0	37	6	23	1	0	30	275
08:00 AM	8	1	37	2	48	20	98	28	0	146	28	6	2	0	36	5	25	5	0	35	265
08:15 AM	6	10	33	0	49	28	78	43	0	149	50	6	2	0	58	2	25	2	0	29	285
Total Volume	27	18	142	2	189	91	410	116	0	617	130	22	12	0	164	13	95	8	0	116	1086
% App. Total	14.3	9.5	75.1	1.1		14.7	66.5	18.8	0		79.3	13.4	7.3	0		11.2	81.9	6.9	0		
PHF	.844	.450	.910	.250	.964	.813	.827	.674	.000	.941	.650	.786	.500	.000	.707	.542	.950	.400	.000	.829	.953
Cars & Peds	24	17	139	2	182	90	386	111	0	587	128	21	11	0	160	12	67	6	0	85	1014
% Cars & Peds	88.9	94.4	97.9	100	96.3	98.9	94.1	95.7	0	95.1	98.5	95.5	91.7	0	97.6	92.3	70.5	75.0	0	73.3	93.4
Trucks & Buses	2	1	2	0	5	1	24	5	0	30	2	1	1	0	4	0	28	2	0	30	69
% Trucks & Buses	7.4	5.6	1.4	0	2.6	1.1	5.9	4.3	0	4.9	1.5	4.5	8.3	0	2.4	0	29.5	25.0	0	25.9	6.4
Bikes by Direction	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
% Bikes by Direction	3.7	0	0.7	0	1.1	0	0	0	0	0	0	0	0	0	0	7.7	0	0	0	0.9	0.3

Transportation Data Corporation

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N/S: Phillips Road
E/W: Braley Road/Theo Rice Blvd.
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063C
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds

	Phillips Road From North				Braley Road From East				Phillips Road From South				Theodore Rice Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	11	2	36	0	15	71	12	0	25	1	5	0	9	100	2	0	289
07:15 AM	1	10	40	0	19	81	14	0	28	6	2	1	3	11	0	0	216
07:30 AM	5	3	38	0	16	101	29	0	28	3	1	0	0	17	0	0	241
07:45 AM	7	4	32	0	26	121	12	0	24	7	6	0	6	12	0	0	257
Total	24	19	146	0	76	374	67	0	105	17	14	1	18	140	2	0	1003
08:00 AM	7	1	37	2	20	92	28	0	28	5	2	0	4	19	5	0	250
08:15 AM	5	9	32	0	28	72	42	0	48	6	2	0	2	19	1	0	266
08:30 AM	6	5	34	0	15	56	32	2	36	5	3	1	0	8	0	0	203
08:45 AM	2	12	21	0	22	55	23	0	17	4	6	0	1	22	1	0	186
Total	20	27	124	2	85	275	125	2	129	20	13	1	7	68	7	0	905
Grand Total	44	46	270	2	161	649	192	2	234	37	27	2	25	208	9	0	1908
Apprch %	12.2	12.7	74.6	0.6	16	64.6	19.1	0.2	78	12.3	9	0.7	10.3	86	3.7	0	
Total %	2.3	2.4	14.2	0.1	8.4	34	10.1	0.1	12.3	1.9	1.4	0.1	1.3	10.9	0.5	0	

	Phillips Road From North					Braley Road From East					Phillips Road From South					Theodore Rice Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	5	3	38	0	46	16	101	29	0	146	28	3	1	0	32	0	17	0	0	17	241
07:45 AM	7	4	32	0	43	26	121	12	0	159	24	7	6	0	37	6	12	0	0	18	257
08:00 AM	7	1	37	2	47	20	92	28	0	140	28	5	2	0	35	4	19	5	0	28	250
08:15 AM	5	9	32	0	46	28	72	42	0	142	48	6	2	0	56	2	19	1	0	22	266
Total Volume	24	17	139	2	182	90	386	111	0	587	128	21	11	0	160	12	67	6	0	85	1014
% App. Total	13.2	9.3	76.4	1.1		15.3	65.8	18.9	0		80	13.1	6.9	0		14.1	78.8	7.1	0		
PHF	.857	.472	.914	.250	.968	.804	.798	.661	.000	.923	.667	.750	.458	.000	.714	.500	.882	.300	.000	.759	.953

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N/S: Phillips Road
E/W: Braley Road/Theo Rice Blvd.
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063C
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Trucks & Buses

	Phillips Road From North				Braley Road From East				Phillips Road From South				Theodore Rice Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	1	0	1	5	0	0	2	1	0	0	0	1	0	0	11
07:15 AM	1	0	2	0	1	3	1	0	1	0	0	0	0	5	0	0	14
07:30 AM	1	0	0	0	1	9	2	0	0	0	1	0	0	5	0	0	19
07:45 AM	0	0	1	0	0	3	2	0	0	0	0	0	0	11	1	0	18
Total	2	0	4	0	3	20	5	0	3	1	1	0	0	22	1	0	62
08:00 AM	0	0	0	0	0	6	0	0	0	1	0	0	0	6	0	0	13
08:15 AM	1	1	1	0	0	6	1	0	2	0	0	0	0	6	1	0	19
08:30 AM	0	0	1	0	1	8	1	0	5	0	0	0	0	3	0	0	19
08:45 AM	2	0	0	0	1	7	0	0	2	0	0	0	0	12	1	0	25
Total	3	1	2	0	2	27	2	0	9	1	0	0	0	27	2	0	76
Grand Total	5	1	6	0	5	47	7	0	12	2	1	0	0	49	3	0	138
Apprch %	41.7	8.3	50	0	8.5	79.7	11.9	0	80	13.3	6.7	0	0	94.2	5.8	0	
Total %	3.6	0.7	4.3	0	3.6	34.1	5.1	0	8.7	1.4	0.7	0	0	35.5	2.2	0	

	Phillips Road From North					Braley Road From East					Phillips Road From South					Theodore Rice Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	0	0	0	0	0	0	6	0	0	6	0	1	0	0	1	0	6	0	0	6	13
08:15 AM	1	1	1	0	3	0	6	1	0	7	2	0	0	0	2	0	6	1	0	7	19
08:30 AM	0	0	1	0	1	1	8	1	0	10	5	0	0	0	5	0	3	0	0	3	19
08:45 AM	2	0	0	0	2	1	7	0	0	8	2	0	0	0	2	0	12	1	0	13	25
Total Volume	3	1	2	0	6	2	27	2	0	31	9	1	0	0	10	0	27	2	0	29	76
% App. Total	50	16.7	33.3	0		6.5	87.1	6.5	0		90	10	0	0		0	93.1	6.9	0		
PHF	.375	.250	.500	.000	.500	.500	.844	.500	.000	.775	.450	.250	.000	.000	.500	.000	.563	.500	.000	.558	.760

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City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063C
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Bikes by Direction

	Phillips Road From North				Braley Road From East				Phillips Road From South				Theodore Rice Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
08:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	2	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	4
Grand Total	2	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	5
Apprch %	66.7	0	33.3	0	0	0	0	0	0	100	0	0	100	0	0	0	
Total %	40	0	20	0	0	0	0	0	0	20	0	0	20	0	0	0	

	Phillips Road From North					Braley Road From East					Phillips Road From South					Theodore Rice Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
08:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	2	0	0	0	2	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	4
% App. Total	100	0	0	0		0	0	0	0		0	100	0	0		100	0	0	0		
PHF	.500	.000	.000	.000	.500	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.250	.000	.000	.000	.250	.500

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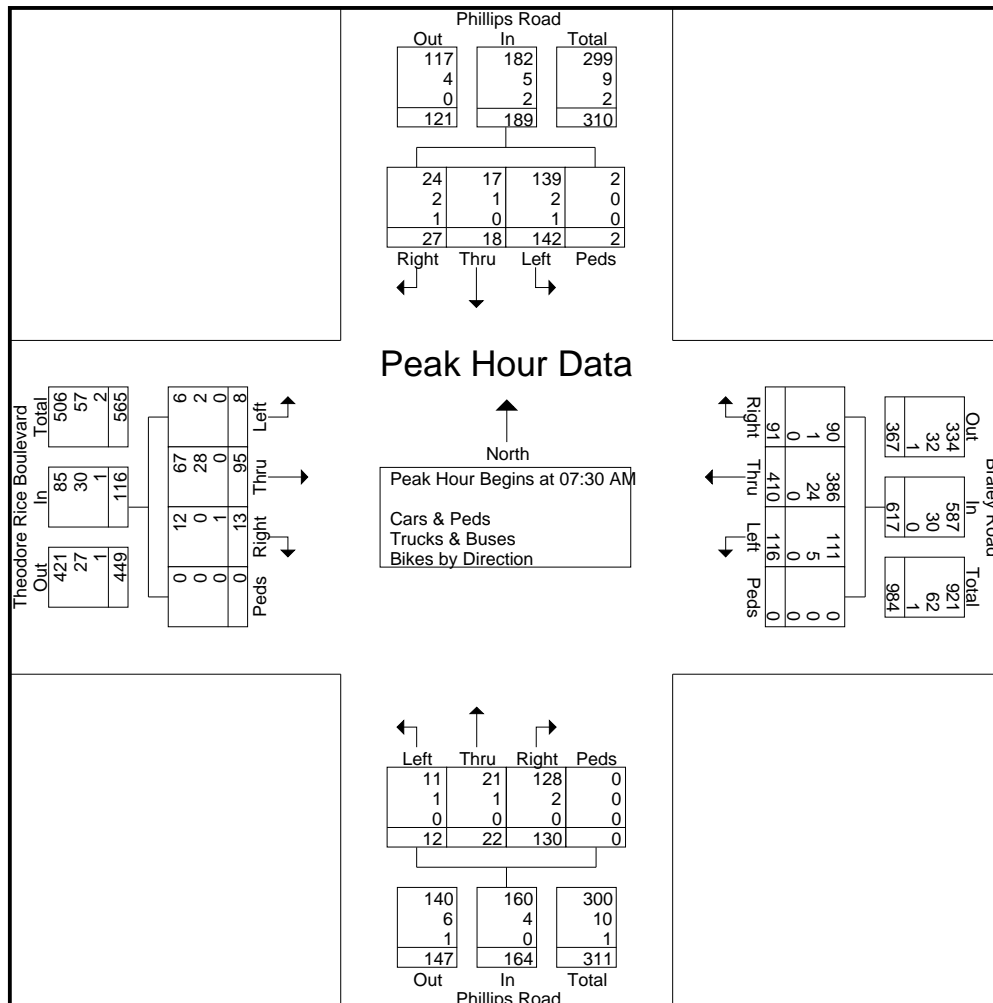
File Name : 05063C

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

	Phillips Road From North					Braley Road From East					Phillips Road From South					Theodore Rice Boulevard From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	6	3	39	0	48	17	110	31	0	158	28	3	2	0	33	0	22	0	0	22	261
07:45 AM	7	4	33	0	44	26	124	14	0	164	24	7	6	0	37	6	23	1	0	30	275
08:00 AM	8	1	37	2	48	20	98	28	0	146	28	6	2	0	36	5	25	5	0	35	265
08:15 AM	6	10	33	0	49	28	78	43	0	149	50	6	2	0	58	2	25	2	0	29	285
Total Volume	27	18	142	2	189	91	410	116	0	617	130	22	12	0	164	13	95	8	0	116	1086
% App. Total	14.3	9.5	75.1	1.1		14.7	66.5	18.8	0		79.3	13.4	7.3	0		11.2	81.9	6.9	0		
PHF	.844	.450	.910	.250	.964	.813	.827	.674	.000	.941	.650	.786	.500	.000	.707	.542	.950	.400	.000	.829	.953
Cars & Peds	24	17	139	2	182	90	386	111	0	587	128	21	11	0	160	12	67	6	0	85	1014
% Cars & Peds	88.9	94.4	97.9	100	96.3	98.9	94.1	95.7	0	95.1	98.5	95.5	91.7	0	97.6	92.3	70.5	75.0	0	73.3	93.4
Trucks & Buses	2	1	2	0	5	1	24	5	0	30	2	1	1	0	4	0	28	2	0	30	69
% Trucks & Buses	7.4	5.6	1.4	0	2.6	1.1	5.9	4.3	0	4.9	1.5	4.5	8.3	0	2.4	0	29.5	25.0	0	25.9	6.4
Bikes by Direction	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
% Bikes by Direction	3.7	0	0.7	0	1.1	0	0	0	0	0	0	0	0	0	0	7.7	0	0	0	0.9	0.3



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Site Code : Y1821511
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City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063CC
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds

	Phillips Road From North				Braley Road From East				Phillips Road From South				Theodore Rice Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	2	11	37	0	32	28	45	0	57	14	5	0	54	96	3	0	384
03:15 PM	4	11	38	0	41	33	36	0	34	10	8	0	8	72	7	0	302
03:30 PM	0	7	43	0	46	39	42	0	44	9	1	2	40	114	6	0	393
03:45 PM	0	12	38	0	38	34	45	0	25	9	4	0	5	53	2	0	265
Total	6	41	156	0	157	134	168	0	160	42	18	2	107	335	18	0	1344
04:00 PM	4	23	51	0	44	19	55	0	38	12	0	0	19	92	6	0	363
04:15 PM	0	13	30	0	44	20	39	0	34	10	6	0	6	51	9	0	262
04:30 PM	0	13	30	0	37	16	41	0	29	18	3	0	9	75	8	0	279
04:45 PM	0	7	32	0	33	15	44	0	24	10	0	0	6	63	2	0	236
Total	4	56	143	0	158	70	179	0	125	50	9	0	40	281	25	0	1140
05:00 PM	1	8	47	0	35	7	46	0	57	14	1	0	43	120	14	0	393
05:15 PM	1	12	29	0	42	10	52	0	29	13	2	0	2	46	1	0	239
05:30 PM	1	4	43	0	27	9	36	0	24	11	1	0	5	47	1	0	209
05:45 PM	1	11	35	0	34	14	33	0	20	9	1	0	1	15	1	0	175
Total	4	35	154	0	138	40	167	0	130	47	5	0	51	228	17	0	1016
Grand Total	14	132	453	0	453	244	514	0	415	139	32	2	198	844	60	0	3500
Apprch %	2.3	22	75.6	0	37.4	20.1	42.4	0	70.6	23.6	5.4	0.3	18	76.6	5.4	0	
Total %	0.4	3.8	12.9	0	12.9	7	14.7	0	11.9	4	0.9	0.1	5.7	24.1	1.7	0	

	Phillips Road From North					Braley Road From East					Phillips Road From South					Theodore Rice Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	2	11	37	0	50	32	28	45	0	105	57	14	5	0	76	54	96	3	0	153	384
03:15 PM	4	11	38	0	53	41	33	36	0	110	34	10	8	0	52	8	72	7	0	87	302
03:30 PM	0	7	43	0	50	46	39	42	0	127	44	9	1	2	56	40	114	6	0	160	393
03:45 PM	0	12	38	0	50	38	34	45	0	117	25	9	4	0	38	5	53	2	0	60	265
Total Volume	6	41	156	0	203	157	134	168	0	459	160	42	18	2	222	107	335	18	0	460	1344
% App. Total	3	20.2	76.8	0		34.2	29.2	36.6	0		72.1	18.9	8.1	0.9		23.3	72.8	3.9	0		
PHF	.375	.854	.907	.000	.958	.853	.859	.933	.000	.904	.702	.750	.563	.250	.730	.495	.735	.643	.000	.719	.855

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City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063CC
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Trucks & Buses

	Phillips Road From North				Braley Road From East				Phillips Road From South				Theodore Rice Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	1	0	1	0	1	5	2	0	0	0	0	0	0	4	3	0	17
03:15 PM	1	1	1	0	1	4	2	0	3	1	0	0	0	8	0	0	22
03:30 PM	1	0	0	0	0	5	0	0	3	1	0	0	2	2	0	0	14
03:45 PM	0	0	3	0	1	9	0	0	1	0	0	0	0	5	1	0	20
Total	3	1	5	0	3	23	4	0	7	2	0	0	2	19	4	0	73
04:00 PM	0	0	0	0	0	2	2	0	0	0	0	0	1	3	0	0	8
04:15 PM	0	0	0	0	0	3	1	0	0	0	0	0	0	2	1	0	7
04:30 PM	0	0	1	0	0	4	0	0	0	0	0	0	0	4	0	0	9
04:45 PM	0	0	0	0	1	1	2	0	0	0	0	0	0	4	0	0	8
Total	0	0	1	0	1	10	5	0	0	0	0	0	1	13	1	0	32
05:00 PM	1	0	0	0	1	2	1	0	0	0	0	0	1	1	0	0	7
05:15 PM	0	0	0	0	0	3	0	0	1	0	0	0	0	2	1	0	7
05:30 PM	1	0	0	0	0	4	1	0	0	0	0	0	0	2	0	0	8
05:45 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	3
Total	2	1	0	0	1	9	2	0	1	1	0	0	1	6	1	0	25
Grand Total	5	2	6	0	5	42	11	0	8	3	0	0	4	38	6	0	130
Apprch %	38.5	15.4	46.2	0	8.6	72.4	19	0	72.7	27.3	0	0	8.3	79.2	12.5	0	
Total %	3.8	1.5	4.6	0	3.8	32.3	8.5	0	6.2	2.3	0	0	3.1	29.2	4.6	0	

	Phillips Road From North					Braley Road From East					Phillips Road From South					Theodore Rice Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	1	0	1	0	2	1	5	2	0	8	0	0	0	0	0	0	4	3	0	7	17
03:15 PM	1	1	1	0	3	1	4	2	0	7	3	1	0	0	4	0	8	0	0	8	22
03:30 PM	1	0	0	0	1	0	5	0	0	5	3	1	0	0	4	2	2	0	0	4	14
03:45 PM	0	0	3	0	3	1	9	0	0	10	1	0	0	0	1	0	5	1	0	6	20
Total Volume	3	1	5	0	9	3	23	4	0	30	7	2	0	0	9	2	19	4	0	25	73
% App. Total	33.3	11.1	55.6	0		10	76.7	13.3	0		77.8	22.2	0	0		8	76	16	0		
PHF	.750	.250	.417	.000	.750	.750	.639	.500	.000	.750	.583	.500	.000	.000	.563	.250	.594	.333	.000	.781	.830

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File Name : 05063CC
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Bikes by Direction

	Phillips Road From North				Braley Road From East				Phillips Road From South				Theodore Rice Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	2
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	3
Apprch %	0	0	100	0	0	0	100	0	100	0	0	0	0	0	0	0	
Total %	0	0	33.3	0	0	0	33.3	0	33.3	0	0	0	0	0	0	0	

	Phillips Road From North					Braley Road From East					Phillips Road From South					Theodore Rice Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:45 PM																					
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
Total Volume	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
% App. Total	0	0	100	0		0	0	0	0		100	0	0	0		0	0	0	0		
PHF	.000	.000	.250	.000	.250	.000	.000	.000	.000	.000	.250	.000	.000	.000	.250	.000	.000	.000	.000	.000	.250

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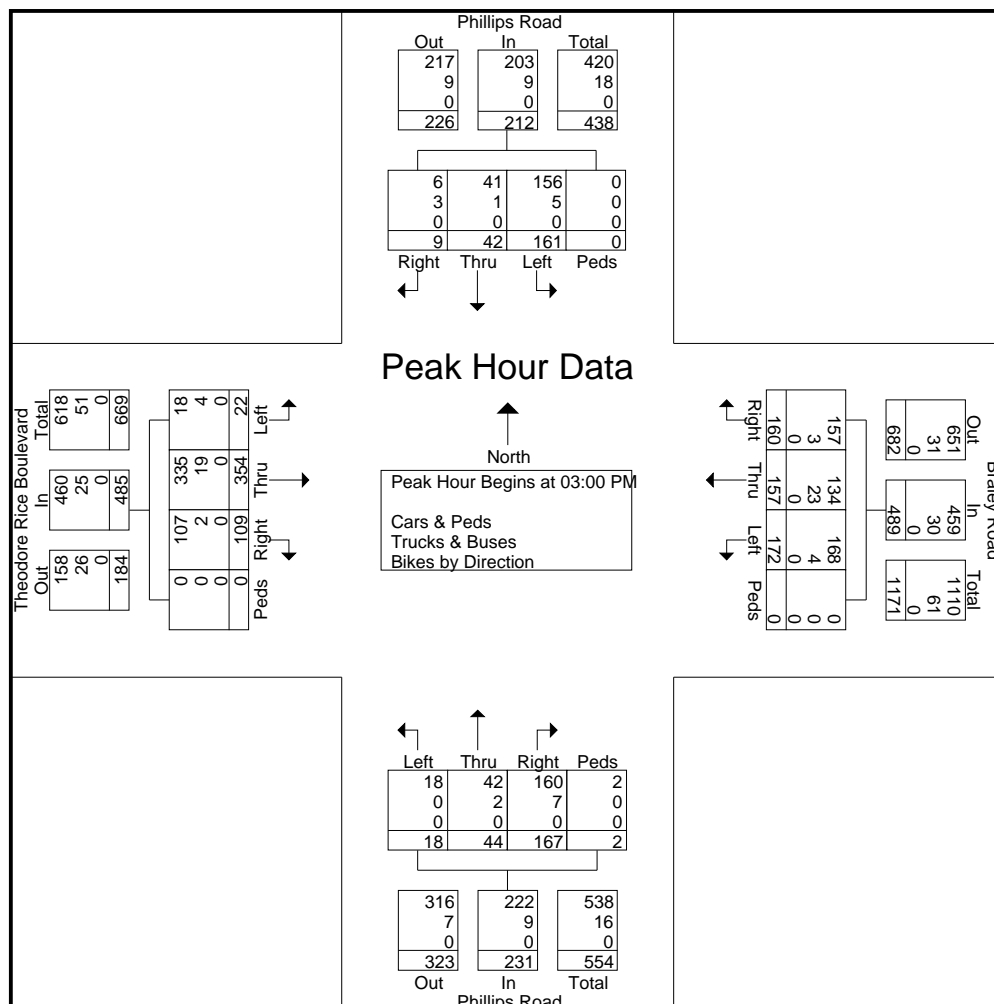
File Name : 05063CC

Site Code : Y1821511

Start Date : 6/13/2018

Page No : 1

	Phillips Road From North					Braley Road From East					Phillips Road From South					Theodore Rice Boulevard From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	3	11	38	0	52	33	33	47	0	113	57	14	5	0	76	54	100	6	0	160	401
03:15 PM	5	12	39	0	56	42	37	38	0	117	37	11	8	0	56	8	80	7	0	95	324
03:30 PM	1	7	43	0	51	46	44	42	0	132	47	10	1	2	60	42	116	6	0	164	407
03:45 PM	0	12	41	0	53	39	43	45	0	127	26	9	4	0	39	5	58	3	0	66	285
Total Volume	9	42	161	0	212	160	157	172	0	489	167	44	18	2	231	109	354	22	0	485	1417
% App. Total	4.2	19.8	75.9	0		32.7	32.1	35.2	0		72.3	19	7.8	0.9		22.5	73	4.5	0		
PHF	.450	.875	.936	.000	.946	.870	.892	.915	.000	.926	.732	.786	.563	.250	.760	.505	.763	.786	.000	.739	.870
Cars & Peds	6	41	156	0	203	157	134	168	0	459	160	42	18	2	222	107	335	18	0	460	1344
% Cars & Peds	66.7	97.6	96.9	0	95.8	98.1	85.4	97.7	0	93.9	95.8	95.5	100	100	96.1	98.2	94.6	81.8	0	94.8	94.8
Trucks & Buses	3	1	5	0	9	3	23	4	0	30	7	2	0	0	9	2	19	4	0	25	73
% Trucks & Buses	33.3	2.4	3.1	0	4.2	1.9	14.6	2.3	0	6.1	4.2	4.5	0	0	3.9	1.8	5.4	18.2	0	5.2	5.2
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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File Name : 05063D
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

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N/S: Duchaine Boulevard
 E: Theodore Rice Boulevard
 City, State: New Bedford, MA
 Client: McM/S. Hawkins

File Name : 05063D
 Site Code : Y1821511
 Start Date : 6/13/2018
 Page No : 1

Groups Printed- Cars & Peds

	Duchaine Boulevard From North			Theodore Rice Boulevard From East			Duchaine Boulevard From South			
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	Int. Total
07:00 AM	1	24	0	14	45	0	72	0	0	156
07:15 AM	1	2	0	11	48	0	11	1	0	74
07:30 AM	3	3	0	21	75	0	13	1	0	116
07:45 AM	1	3	0	39	81	0	12	2	0	138
Total	6	32	0	85	249	0	108	4	0	484
08:00 AM	2	4	0	16	74	0	23	0	0	119
08:15 AM	1	3	0	9	59	0	14	0	0	86
08:30 AM	2	1	0	6	23	0	9	2	0	43
08:45 AM	1	5	0	5	29	0	13	3	0	56
Total	6	13	0	36	185	0	59	5	0	304
Grand Total	12	45	0	121	434	0	167	9	0	788
Apprch %	21.1	78.9	0	21.8	78.2	0	94.9	5.1	0	
Total %	1.5	5.7	0	15.4	55.1	0	21.2	1.1	0	

	Duchaine Boulevard From North				Theodore Rice Boulevard From East				Duchaine Boulevard From South				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	1	24	0	25	14	45	0	59	72	0	0	72	156
07:15 AM	1	2	0	3	11	48	0	59	11	1	0	12	74
07:30 AM	3	3	0	6	21	75	0	96	13	1	0	14	116
07:45 AM	1	3	0	4	39	81	0	120	12	2	0	14	138
Total Volume	6	32	0	38	85	249	0	334	108	4	0	112	484
% App. Total	15.8	84.2	0		25.4	74.6	0		96.4	3.6	0		
PHF	.500	.333	.000	.380	.545	.769	.000	.696	.375	.500	.000	.389	.776

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 City, State: New Bedford, MA
 Client: McM/S. Hawkins

File Name : 05063D
 Site Code : Y1821511
 Start Date : 6/13/2018
 Page No : 1

Groups Printed- Trucks & Buses

	Duchaine Boulevard From North			Theodore Rice Boulevard From East			Duchaine Boulevard From South			
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	Int. Total
07:00 AM	0	0	0	1	3	0	1	0	0	5
07:15 AM	0	0	0	0	5	0	6	1	0	12
07:30 AM	0	0	0	2	10	0	7	0	0	19
07:45 AM	0	1	0	1	3	0	12	0	0	17
Total	0	1	0	4	21	0	26	1	0	53
08:00 AM	0	0	0	1	4	0	6	0	0	11
08:15 AM	1	1	0	1	6	0	4	1	0	14
08:30 AM	0	1	0	0	5	0	2	0	0	8
08:45 AM	2	2	0	4	9	0	11	2	0	30
Total	3	4	0	6	24	0	23	3	0	63
Grand Total	3	5	0	10	45	0	49	4	0	116
Apprch %	37.5	62.5	0	18.2	81.8	0	92.5	7.5	0	
Total %	2.6	4.3	0	8.6	38.8	0	42.2	3.4	0	

	Duchaine Boulevard From North				Theodore Rice Boulevard From East				Duchaine Boulevard From South				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	0	0	0	0	1	4	0	5	6	0	0	6	11
08:15 AM	1	1	0	2	1	6	0	7	4	1	0	5	14
08:30 AM	0	1	0	1	0	5	0	5	2	0	0	2	8
08:45 AM	2	2	0	4	4	9	0	13	11	2	0	13	30
Total Volume	3	4	0	7	6	24	0	30	23	3	0	26	63
% App. Total	42.9	57.1	0		20	80	0		88.5	11.5	0		
PHF	.375	.500	.000	.438	.375	.667	.000	.577	.523	.375	.000	.500	.525

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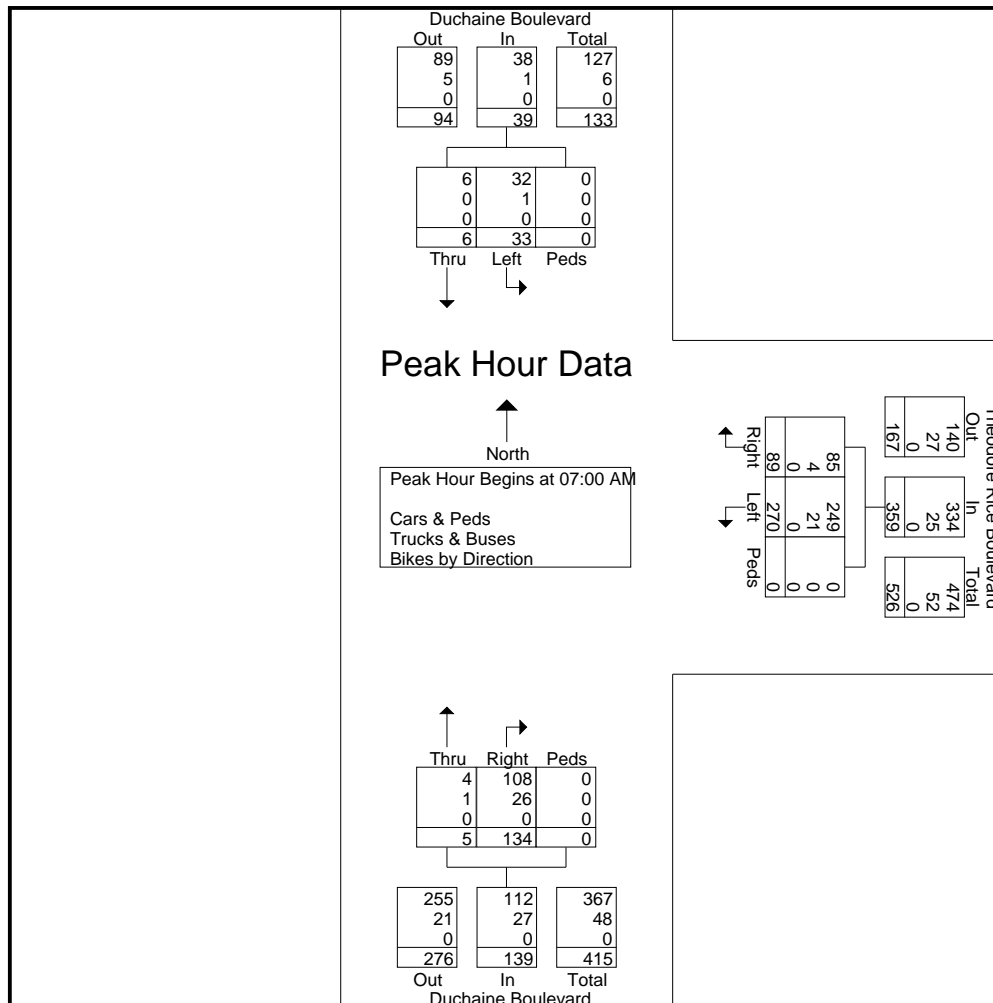
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N/S: Duchaine Boulevard
E: Theodore Rice Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063D
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

	Duchaine Boulevard From North				Theodore Rice Boulevard From East				Duchaine Boulevard From South				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	1	24	0	25	15	48	0	63	73	0	0	73	161
07:15 AM	1	2	0	3	11	53	0	64	17	2	0	19	86
07:30 AM	3	3	0	6	23	85	0	108	20	1	0	21	135
07:45 AM	1	4	0	5	40	84	0	124	24	2	0	26	155
Total Volume	6	33	0	39	89	270	0	359	134	5	0	139	537
% App. Total	15.4	84.6	0		24.8	75.2	0		96.4	3.6	0		
PHF	.500	.344	.000	.390	.556	.794	.000	.724	.459	.625	.000	.476	.834
Cars & Peds	6	32	0	38	85	249	0	334	108	4	0	112	484
% Cars & Peds	100	97.0	0	97.4	95.5	92.2	0	93.0	80.6	80.0	0	80.6	90.1
Trucks & Buses	0	1	0	1	4	21	0	25	26	1	0	27	53
% Trucks & Buses	0	3.0	0	2.6	4.5	7.8	0	7.0	19.4	20.0	0	19.4	9.9
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0



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File Name : 05063DD
Site Code : Y1821511
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Page No : 1

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N/S: Duchaine Boulevard
 E: Theodore Rice Boulevard
 City, State: New Bedford, MA
 Client: McM/S. Hawkins

File Name : 05063DD
 Site Code : Y1821511
 Start Date : 6/13/2018
 Page No : 1

Groups Printed- Cars & Peds

	Duchaine Boulevard From North			Theodore Rice Boulevard From East			Duchaine Boulevard From South			
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	Int. Total
03:00 PM	4	25	0	4	15	0	117	2	0	167
03:15 PM	4	9	0	12	19	0	35	1	0	80
03:30 PM	2	39	0	3	25	0	42	4	0	115
03:45 PM	6	6	0	5	20	0	28	1	0	66
Total	16	79	0	24	79	0	222	8	0	428
04:00 PM	2	15	0	1	8	0	74	2	0	102
04:15 PM	1	5	0	3	9	0	33	3	0	54
04:30 PM	7	9	0	1	11	0	44	2	0	74
04:45 PM	3	8	0	0	12	0	37	1	0	61
Total	13	37	0	5	40	0	188	8	0	291
05:00 PM	2	56	0	2	8	0	61	0	0	129
05:15 PM	2	10	0	2	9	0	28	0	0	51
05:30 PM	1	9	0	1	8	0	29	0	0	48
05:45 PM	1	2	0	2	15	0	13	2	0	35
Total	6	77	0	7	40	0	131	2	0	263
Grand Total	35	193	0	36	159	0	541	18	0	982
Apprch %	15.4	84.6	0	18.5	81.5	0	96.8	3.2	0	
Total %	3.6	19.7	0	3.7	16.2	0	55.1	1.8	0	

	Duchaine Boulevard From North				Theodore Rice Boulevard From East				Duchaine Boulevard From South				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:00 PM													
03:00 PM	4	25	0	29	4	15	0	19	117	2	0	119	167
03:15 PM	4	9	0	13	12	19	0	31	35	1	0	36	80
03:30 PM	2	39	0	41	3	25	0	28	42	4	0	46	115
03:45 PM	6	6	0	12	5	20	0	25	28	1	0	29	66
Total Volume	16	79	0	95	24	79	0	103	222	8	0	230	428
% App. Total	16.8	83.2	0		23.3	76.7	0		96.5	3.5	0		
PHF	.667	.506	.000	.579	.500	.790	.000	.831	.474	.500	.000	.483	.641

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 Client: McM/S. Hawkins

File Name : 05063DD
 Site Code : Y1821511
 Start Date : 6/13/2018
 Page No : 1

Groups Printed- Trucks & Buses

	Duchaine Boulevard From North			Theodore Rice Boulevard From East			Duchaine Boulevard From South			
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds	Int. Total
03:00 PM	0	2	0	1	6	0	6	0	0	15
03:15 PM	1	2	0	1	5	0	7	2	0	18
03:30 PM	1	1	0	2	4	0	1	1	0	10
03:45 PM	0	0	0	1	8	0	6	0	0	15
Total	2	5	0	5	23	0	20	3	0	58
04:00 PM	0	0	0	0	2	0	3	1	0	6
04:15 PM	1	2	0	1	2	0	1	1	0	8
04:30 PM	0	1	0	0	4	0	4	0	0	9
04:45 PM	0	0	0	0	1	0	5	1	0	7
Total	1	3	0	1	9	0	13	3	0	30
05:00 PM	0	2	0	1	2	0	1	0	0	6
05:15 PM	0	1	0	1	1	0	2	0	0	5
05:30 PM	0	0	0	2	3	0	1	0	0	6
05:45 PM	0	1	0	0	0	0	0	0	0	1
Total	0	4	0	4	6	0	4	0	0	18
Grand Total	3	12	0	10	38	0	37	6	0	106
Apprch %	20	80	0	20.8	79.2	0	86	14	0	
Total %	2.8	11.3	0	9.4	35.8	0	34.9	5.7	0	

	Duchaine Boulevard From North				Theodore Rice Boulevard From East				Duchaine Boulevard From South				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:00 PM													
03:00 PM	0	2	0	2	1	6	0	7	6	0	0	6	15
03:15 PM	1	2	0	3	1	5	0	6	7	2	0	9	18
03:30 PM	1	1	0	2	2	4	0	6	1	1	0	2	10
03:45 PM	0	0	0	0	1	8	0	9	6	0	0	6	15
Total Volume	2	5	0	7	5	23	0	28	20	3	0	23	58
% App. Total	28.6	71.4	0		17.9	82.1	0		87	13	0		
PHF	.500	.625	.000	.583	.625	.719	.000	.778	.714	.375	.000	.639	.806

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File Name : 05063DD
Site Code : Y1821511
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Page No : 1

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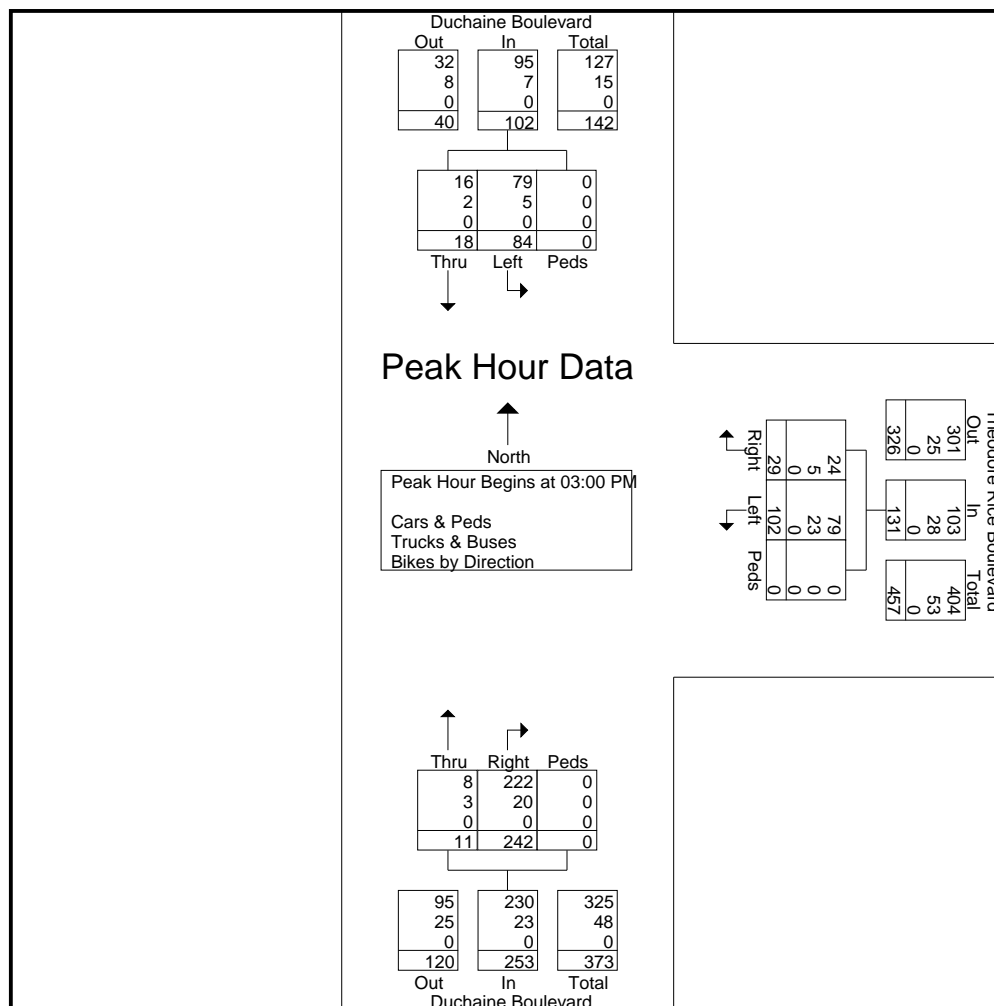
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N/S: Duchaine Boulevard
E: Theodore Rice Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063DD
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

	Duchaine Boulevard From North				Theodore Rice Boulevard From East				Duchaine Boulevard From South				
Start Time	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:00 PM													
03:00 PM	4	27	0	31	5	21	0	26	123	2	0	125	182
03:15 PM	5	11	0	16	13	24	0	37	42	3	0	45	98
03:30 PM	3	40	0	43	5	29	0	34	43	5	0	48	125
03:45 PM	6	6	0	12	6	28	0	34	34	1	0	35	81
Total Volume	18	84	0	102	29	102	0	131	242	11	0	253	486
% App. Total	17.6	82.4	0		22.1	77.9	0		95.7	4.3	0		
PHF	.750	.525	.000	.593	.558	.879	.000	.885	.492	.550	.000	.506	.668
Cars & Peds	16	79	0	95	24	79	0	103	222	8	0	230	428
% Cars & Peds	88.9	94.0	0	93.1	82.8	77.5	0	78.6	91.7	72.7	0	90.9	88.1
Trucks & Buses	2	5	0	7	5	23	0	28	20	3	0	23	58
% Trucks & Buses	11.1	6.0	0	6.9	17.2	22.5	0	21.4	8.3	27.3	0	9.1	11.9
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0



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E/W: Samuel Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063E
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds - Trucks & Buses - Bikes by Direction

	Duchaine Boulevard From North				Samuel Barnet Boulevard From East				Duchaine Boulevard From South				Samuel Barnet Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	60	38	0	0	39	0	0	0	61	7	0	0	53	0	30	0	288
07:15 AM	48	31	0	0	47	0	0	0	10	6	0	0	2	0	5	0	149
07:30 AM	100	14	1	0	52	0	0	0	18	7	0	0	8	0	12	0	212
07:45 AM	131	12	0	0	78	0	0	0	31	8	0	0	10	0	17	0	287
Total	339	95	1	0	216	0	0	0	120	28	0	0	73	0	64	0	936
08:00 AM	83	13	2	0	32	0	0	0	47	10	0	0	35	0	14	1	237
08:15 AM	77	13	0	0	42	0	0	0	12	5	0	0	7	0	9	0	165
08:30 AM	31	10	1	0	26	0	0	1	12	2	0	0	8	0	6	0	97
08:45 AM	44	6	0	0	23	0	0	0	17	5	0	0	10	0	16	0	121
Total	235	42	3	0	123	0	0	1	88	22	0	0	60	0	45	1	620
Grand Total	574	137	4	0	339	0	0	1	208	50	0	0	133	0	109	1	1556
Apprch %	80.3	19.2	0.6	0	99.7	0	0	0.3	80.6	19.4	0	0	54.7	0	44.9	0.4	
Total %	36.9	8.8	0.3	0	21.8	0	0	0.1	13.4	3.2	0	0	8.5	0	7	0.1	
Cars & Peds	527	127	4	0	326	0	0	1	180	31	0	0	122	0	80	1	1399
% Cars & Peds	91.8	92.7	100	0	96.2	0	0	100	86.5	62	0	0	91.7	0	73.4	100	89.9
Trucks & Buses	47	10	0	0	13	0	0	0	28	19	0	0	11	0	29	0	157
% Trucks & Buses	8.2	7.3	0	0	3.8	0	0	0	13.5	38	0	0	8.3	0	26.6	0	10.1
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	Duchaine Boulevard From North					Samuel Barnet Boulevard From East					Duchaine Boulevard From South					Samuel Barnet Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	60	38	0	0	98	39	0	0	0	39	61	7	0	0	68	53	0	30	0	83	288
07:15 AM	48	31	0	0	79	47	0	0	0	47	10	6	0	0	16	2	0	5	0	7	149
07:30 AM	100	14	1	0	115	52	0	0	0	52	18	7	0	0	25	8	0	12	0	20	212
07:45 AM	131	12	0	0	143	78	0	0	0	78	31	8	0	0	39	10	0	17	0	27	287
Total Volume	339	95	1	0	435	216	0	0	0	216	120	28	0	0	148	73	0	64	0	137	936
% App. Total	77.9	21.8	0.2	0		100	0	0	0		81.1	18.9	0	0		53.3	0	46.7	0		
PHF	.647	.625	.250	.000	.760	.692	.000	.000	.000	.692	.492	.875	.000	.000	.544	.344	.000	.533	.000	.413	.813
Cars & Peds	317	92	1	0	410	208	0	0	0	208	104	13	0	0	117	67	0	52	0	119	854
% Cars & Peds	93.5	96.8	100	0	94.3	96.3	0	0	0	96.3	86.7	46.4	0	0	79.1	91.8	0	81.3	0	86.9	91.2
Trucks & Buses	22	3	0	0	25	8	0	0	0	8	16	15	0	0	31	6	0	12	0	18	82
% Trucks & Buses	6.5	3.2	0	0	5.7	3.7	0	0	0	3.7	13.3	53.6	0	0	20.9	8.2	0	18.8	0	13.1	8.8
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

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City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063E
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds

	Duchaine Boulevard From North				Samuel Barnet Boulevard From East				Duchaine Boulevard From South				Samuel Barnet Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	55	38	0	0	39	0	0	0	59	6	0	0	52	0	30	0	279
07:15 AM	42	31	0	0	44	0	0	0	7	1	0	0	1	0	4	0	130
07:30 AM	93	11	1	0	49	0	0	0	13	4	0	0	5	0	9	0	185
07:45 AM	127	12	0	0	76	0	0	0	25	2	0	0	9	0	9	0	260
Total	317	92	1	0	208	0	0	0	104	13	0	0	67	0	52	0	854
08:00 AM	78	11	2	0	30	0	0	0	41	8	0	0	31	0	11	1	213
08:15 AM	72	11	0	0	42	0	0	0	9	5	0	0	7	0	5	0	151
08:30 AM	27	7	1	0	24	0	0	1	12	2	0	0	8	0	5	0	87
08:45 AM	33	6	0	0	22	0	0	0	14	3	0	0	9	0	7	0	94
Total	210	35	3	0	118	0	0	1	76	18	0	0	55	0	28	1	545
Grand Total	527	127	4	0	326	0	0	1	180	31	0	0	122	0	80	1	1399
Apprch %	80.1	19.3	0.6	0	99.7	0	0	0.3	85.3	14.7	0	0	60.1	0	39.4	0.5	
Total %	37.7	9.1	0.3	0	23.3	0	0	0.1	12.9	2.2	0	0	8.7	0	5.7	0.1	

	Duchaine Boulevard From North					Samuel Barnet Boulevard From East					Duchaine Boulevard From South					Samuel Barnet Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	55	38	0	0	93	39	0	0	0	39	59	6	0	0	65	52	0	30	0	82	279
07:15 AM	42	31	0	0	73	44	0	0	0	44	7	1	0	0	8	1	0	4	0	5	130
07:30 AM	93	11	1	0	105	49	0	0	0	49	13	4	0	0	17	5	0	9	0	14	185
07:45 AM	127	12	0	0	139	76	0	0	0	76	25	2	0	0	27	9	0	9	0	18	260
Total Volume	317	92	1	0	410	208	0	0	0	208	104	13	0	0	117	67	0	52	0	119	854
% App. Total	77.3	22.4	0.2	0		100	0	0	0		88.9	11.1	0	0		56.3	0	43.7	0		
PHF	.624	.605	.250	.000	.737	.684	.000	.000	.000	.684	.441	.542	.000	.000	.450	.322	.000	.433	.000	.363	.765

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N/S: Duchaine Boulevard
E/W: Samuel Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063E
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Trucks & Buses

	Duchaine Boulevard From North				Samuel Barnet Boulevard From East				Duchaine Boulevard From South				Samuel Barnet Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	5	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	9
07:15 AM	6	0	0	0	3	0	0	0	3	5	0	0	1	0	1	0	19
07:30 AM	7	3	0	0	3	0	0	0	5	3	0	0	3	0	3	0	27
07:45 AM	4	0	0	0	2	0	0	0	6	6	0	0	1	0	8	0	27
Total	22	3	0	0	8	0	0	0	16	15	0	0	6	0	12	0	82
08:00 AM	5	2	0	0	2	0	0	0	6	2	0	0	4	0	3	0	24
08:15 AM	5	2	0	0	0	0	0	0	3	0	0	0	0	0	4	0	14
08:30 AM	4	3	0	0	2	0	0	0	0	0	0	0	0	0	1	0	10
08:45 AM	11	0	0	0	1	0	0	0	3	2	0	0	1	0	9	0	27
Total	25	7	0	0	5	0	0	0	12	4	0	0	5	0	17	0	75
Grand Total	47	10	0	0	13	0	0	0	28	19	0	0	11	0	29	0	157
Apprch %	82.5	17.5	0	0	100	0	0	0	59.6	40.4	0	0	27.5	0	72.5	0	
Total %	29.9	6.4	0	0	8.3	0	0	0	17.8	12.1	0	0	7	0	18.5	0	

	Duchaine Boulevard From North					Samuel Barnet Boulevard From East					Duchaine Boulevard From South					Samuel Barnet Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	6	0	0	0	6	3	0	0	0	3	3	5	0	0	8	1	0	1	0	2	19
07:30 AM	7	3	0	0	10	3	0	0	0	3	5	3	0	0	8	3	0	3	0	6	27
07:45 AM	4	0	0	0	4	2	0	0	0	2	6	6	0	0	12	1	0	8	0	9	27
08:00 AM	5	2	0	0	7	2	0	0	0	2	6	2	0	0	8	4	0	3	0	7	24
Total Volume	22	5	0	0	27	10	0	0	0	10	20	16	0	0	36	9	0	15	0	24	97
% App. Total	81.5	18.5	0	0		100	0	0	0		55.6	44.4	0	0		37.5	0	62.5	0		
PHF	.786	.417	.000	.000	.675	.833	.000	.000	.000	.833	.833	.667	.000	.000	.750	.563	.000	.469	.000	.667	.898

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File Name : 05063E
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

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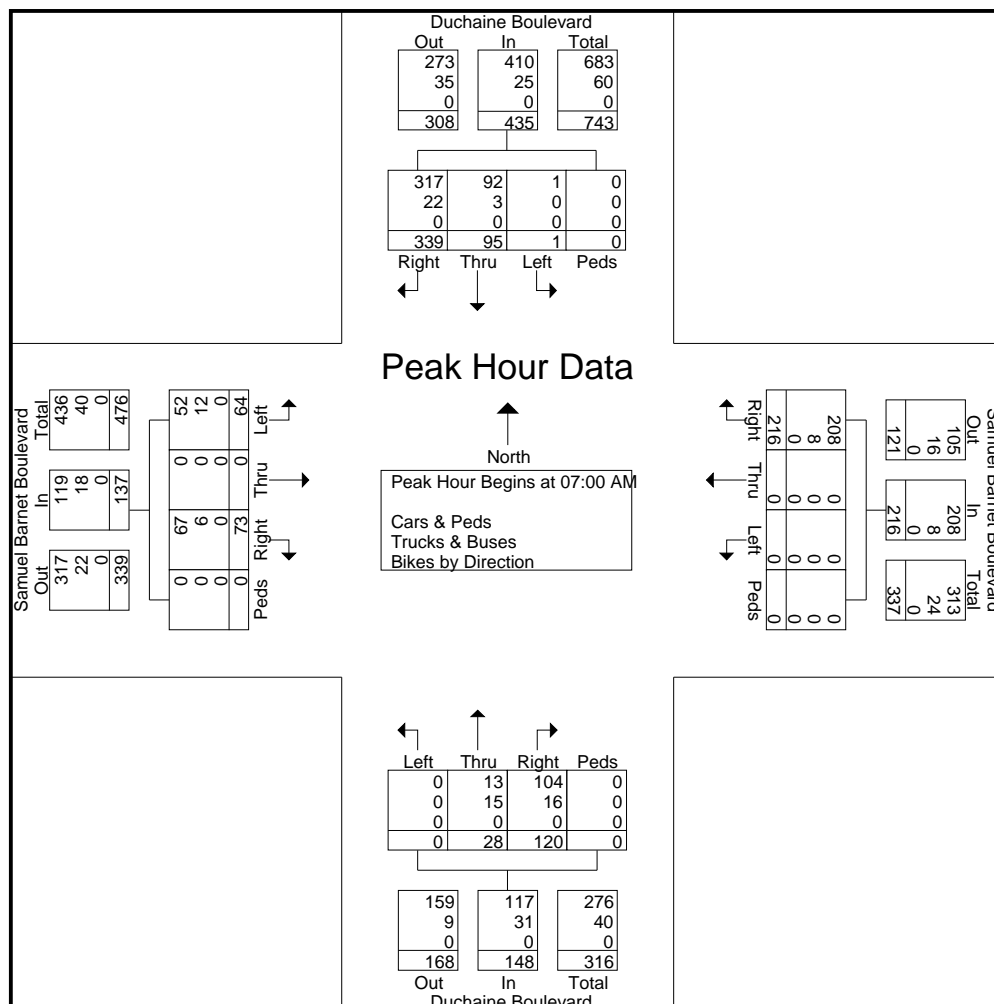
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N/S: Duchaine Boulevard
E/W: Samuel Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063E
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

	Duchaine Boulevard From North					Samuel Barnet Boulevard From East					Duchaine Boulevard From South					Samuel Barnet Boulevard From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	60	38	0	0	98	39	0	0	0	39	61	7	0	0	68	53	0	30	0	83	288
07:15 AM	48	31	0	0	79	47	0	0	0	47	10	6	0	0	16	2	0	5	0	7	149
07:30 AM	100	14	1	0	115	52	0	0	0	52	18	7	0	0	25	8	0	12	0	20	212
07:45 AM	131	12	0	0	143	78	0	0	0	78	31	8	0	0	39	10	0	17	0	27	287
Total Volume	339	95	1	0	435	216	0	0	0	216	120	28	0	0	148	73	0	64	0	137	936
% App. Total	77.9	21.8	0.2	0		100	0	0	0		81.1	18.9	0	0		53.3	0	46.7	0		
PHF	.647	.625	.250	.000	.760	.692	.000	.000	.000	.692	.492	.875	.000	.000	.544	.344	.000	.533	.000	.413	.813
Cars & Peds	317	92	1	0	410	208	0	0	0	208	104	13	0	0	117	67	0	52	0	119	854
% Cars & Peds	93.5	96.8	100	0	94.3	96.3	0	0	0	96.3	86.7	46.4	0	0	79.1	91.8	0	81.3	0	86.9	91.2
Trucks & Buses	22	3	0	0	25	8	0	0	0	8	16	15	0	0	31	6	0	12	0	18	82
% Trucks & Buses	6.5	3.2	0	0	5.7	3.7	0	0	0	3.7	13.3	53.6	0	0	20.9	8.2	0	18.8	0	13.1	8.8
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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File Name : 05063EE
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

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N/S: Duchaine Boulevard
E/W: Samuel Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063EE
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds

	Duchaine Boulevard From North				Samuel Barnet Boulevard From East				Duchaine Boulevard From South				Samuel Barnet Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	25	18	0	0	30	0	0	0	104	5	0	0	84	0	45	0	311
03:15 PM	38	10	0	0	29	0	0	0	40	4	0	0	16	0	20	0	157
03:30 PM	31	7	1	0	24	0	0	0	124	8	0	0	97	0	33	0	325
03:45 PM	31	6	1	0	22	0	0	0	37	3	0	0	25	0	17	0	142
Total	125	41	2	0	105	0	0	0	305	20	0	0	222	0	115	0	935
04:00 PM	12	10	0	0	14	0	0	0	129	5	0	0	100	0	58	0	328
04:15 PM	12	1	0	0	6	0	0	0	26	1	0	0	19	0	28	0	93
04:30 PM	11	7	1	0	7	0	0	0	50	2	0	1	44	0	35	0	158
04:45 PM	17	9	0	0	13	0	0	0	39	4	0	0	21	0	19	0	122
Total	52	27	1	0	40	0	0	0	244	12	0	1	184	0	140	0	701
05:00 PM	7	10	0	0	7	0	0	0	135	1	0	0	108	0	45	0	313
05:15 PM	11	7	0	0	11	0	0	0	36	0	0	0	26	0	21	0	112
05:30 PM	10	6	0	0	8	0	0	0	37	3	0	0	33	0	23	0	120
05:45 PM	16	3	0	0	12	0	0	0	33	1	0	0	32	0	11	0	108
Total	44	26	0	0	38	0	0	0	241	5	0	0	199	0	100	0	653
Grand Total	221	94	3	0	183	0	0	0	790	37	0	1	605	0	355	0	2289
Apprch %	69.5	29.6	0.9	0	100	0	0	0	95.4	4.5	0	0.1	63	0	37	0	
Total %	9.7	4.1	0.1	0	8	0	0	0	34.5	1.6	0	0	26.4	0	15.5	0	

	Duchaine Boulevard From North					Samuel Barnet Boulevard From East					Duchaine Boulevard From South					Samuel Barnet Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:15 PM																					
03:15 PM	38	10	0	0	48	29	0	0	0	29	40	4	0	0	44	16	0	20	0	36	157
03:30 PM	31	7	1	0	39	24	0	0	0	24	124	8	0	0	132	97	0	33	0	130	325
03:45 PM	31	6	1	0	38	22	0	0	0	22	37	3	0	0	40	25	0	17	0	42	142
04:00 PM	12	10	0	0	22	14	0	0	0	14	129	5	0	0	134	100	0	58	0	158	328
Total Volume	112	33	2	0	147	89	0	0	0	89	330	20	0	0	350	238	0	128	0	366	952
% App. Total	76.2	22.4	1.4	0		100	0	0	0		94.3	5.7	0	0		65	0	35	0		
PHF	.737	.825	.500	.000	.766	.767	.000	.000	.000	.767	.640	.625	.000	.000	.653	.595	.000	.552	.000	.579	.726

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E/W: Samuel Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063EE
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Trucks & Buses

	Duchaine Boulevard From North				Samuel Barnet Boulevard From East				Duchaine Boulevard From South				Samuel Barnet Boulevard From West				Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
03:00 PM	6	1	0	0	2	0	0	0	1	1	0	0	1	0	5	0	17
03:15 PM	3	12	0	0	8	0	0	0	1	0	0	0	0	0	10	0	34
03:30 PM	3	5	0	0	1	0	0	0	0	1	0	0	0	0	2	0	12
03:45 PM	5	4	0	0	3	0	0	0	3	1	0	0	1	0	3	0	20
Total	17	22	0	0	14	0	0	0	5	3	0	0	2	0	20	0	83
04:00 PM	2	5	0	0	4	0	0	0	1	0	0	0	1	0	4	0	17
04:15 PM	4	3	0	0	1	0	0	0	1	1	0	0	0	0	0	0	10
04:30 PM	3	4	0	0	3	0	0	0	1	2	0	0	2	0	1	0	16
04:45 PM	2	0	0	0	1	0	0	0	3	3	0	0	0	0	3	0	12
Total	11	12	0	0	9	0	0	0	6	6	0	0	3	0	8	0	55
05:00 PM	2	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	5
05:15 PM	3	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	7
05:30 PM	2	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	5
05:45 PM	1	1	0	0	1	0	0	0	1	1	0	0	0	0	0	0	5
Total	8	3	0	0	5	0	0	0	1	1	0	0	1	0	3	0	22
Grand Total	36	37	0	0	28	0	0	0	12	10	0	0	6	0	31	0	160
Apprch %	49.3	50.7	0	0	100	0	0	0	54.5	45.5	0	0	16.2	0	83.8	0	
Total %	22.5	23.1	0	0	17.5	0	0	0	7.5	6.2	0	0	3.8	0	19.4	0	

	Duchaine Boulevard From North					Samuel Barnet Boulevard From East					Duchaine Boulevard From South					Samuel Barnet Boulevard From West					Int. Total
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	6	1	0	0	7	2	0	0	0	2	1	1	0	0	2	1	0	5	0	6	17
03:15 PM	3	12	0	0	15	8	0	0	0	8	1	0	0	0	1	0	0	10	0	10	34
03:30 PM	3	5	0	0	8	1	0	0	0	1	0	1	0	0	1	0	0	2	0	2	12
03:45 PM	5	4	0	0	9	3	0	0	0	3	3	1	0	0	4	1	0	3	0	4	20
Total Volume	17	22	0	0	39	14	0	0	0	14	5	3	0	0	8	2	0	20	0	22	83
% App. Total	43.6	56.4	0	0		100	0	0	0		62.5	37.5	0	0		9.1	0	90.9	0		
PHF	.708	.458	.000	.000	.650	.438	.000	.000	.000	.438	.417	.750	.000	.000	.500	.500	.000	.500	.000	.550	.610

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File Name : 05063EE
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

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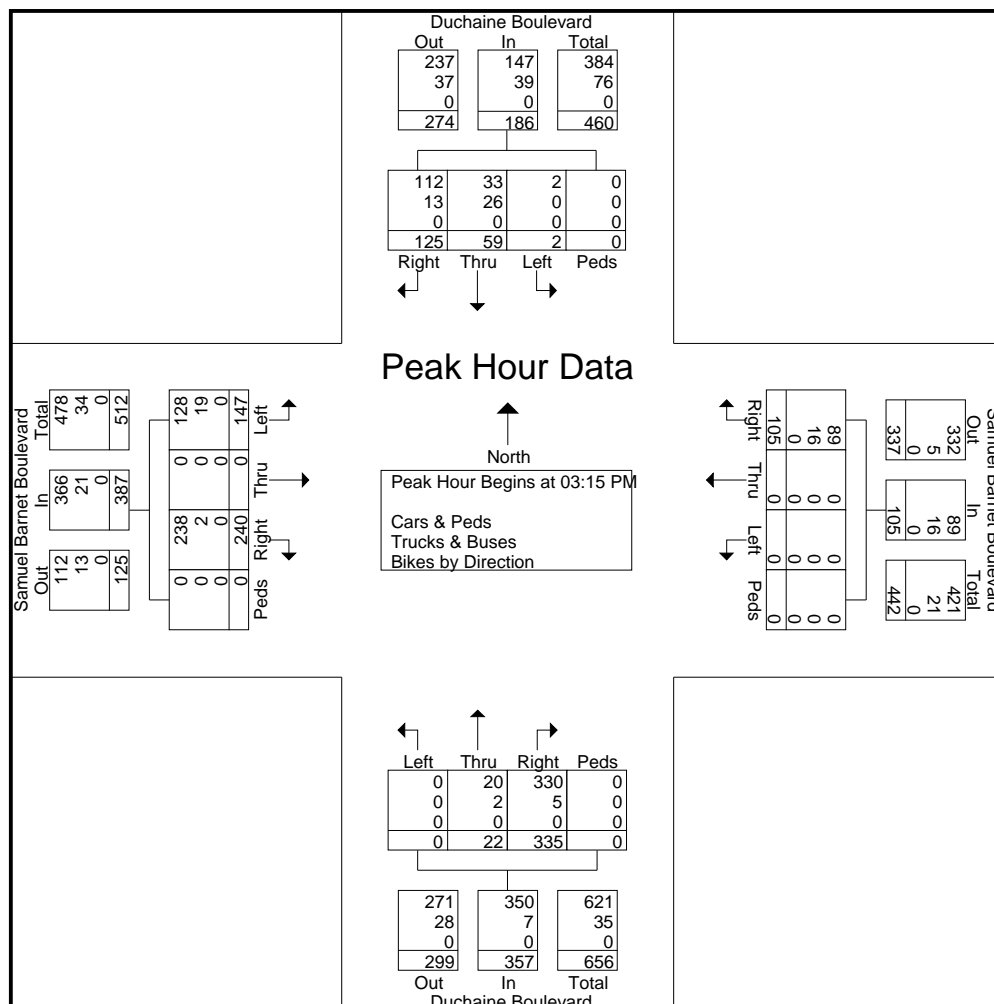
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N/S: Duchaine Boulevard
E/W: Samuel Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063EE
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

	Duchaine Boulevard From North					Samuel Barnet Boulevard From East					Duchaine Boulevard From South					Samuel Barnet Boulevard From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:15 PM																					
03:15 PM	41	22	0	0	63	37	0	0	0	37	41	4	0	0	45	16	0	30	0	46	191
03:30 PM	34	12	1	0	47	25	0	0	0	25	124	9	0	0	133	97	0	35	0	132	337
03:45 PM	36	10	1	0	47	25	0	0	0	25	40	4	0	0	44	26	0	20	0	46	162
04:00 PM	14	15	0	0	29	18	0	0	0	18	130	5	0	0	135	101	0	62	0	163	345
Total Volume	125	59	2	0	186	105	0	0	0	105	335	22	0	0	357	240	0	147	0	387	1035
% App. Total	67.2	31.7	1.1	0		100	0	0	0		93.8	6.2	0	0		62	0	38	0		
PHF	.762	.670	.500	.000	.738	.709	.000	.000	.000	.709	.644	.611	.000	.000	.661	.594	.000	.593	.000	.594	.750
Cars & Peds	112	33	2	0	147	89	0	0	0	89	330	20	0	0	350	238	0	128	0	366	952
% Cars & Peds	89.6	55.9	100	0	79.0	84.8	0	0	0	84.8	98.5	90.9	0	0	98.0	99.2	0	87.1	0	94.6	92.0
Trucks & Buses	13	26	0	0	39	16	0	0	0	16	5	2	0	0	7	2	0	19	0	21	83
% Trucks & Buses	10.4	44.1	0	0	21.0	15.2	0	0	0	15.2	1.5	9.1	0	0	2.0	0.8	0	12.9	0	5.4	8.0
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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File Name : 05063F
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

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W: Samuel Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063F
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds

	Phillips Road From North			Phillips Road From South			Samuel Barnet Boulevard From West			
Start Time	Right	Thru	Peds	Thru	Left	Peds	Right	Left	Peds	Int. Total
07:00 AM	0	15	0	22	40	0	56	3	0	136
07:15 AM	1	20	0	30	42	0	9	0	0	102
07:30 AM	2	23	0	25	48	0	13	1	0	112
07:45 AM	1	25	0	33	73	0	26	1	0	159
Total	4	83	0	110	203	0	104	5	0	509
08:00 AM	1	24	0	28	32	0	38	2	0	125
08:15 AM	2	33	0	41	37	0	9	0	0	122
08:30 AM	1	36	0	38	23	0	11	0	0	109
08:45 AM	0	37	0	23	24	0	15	0	0	99
Total	4	130	0	130	116	0	73	2	0	455
Grand Total	8	213	0	240	319	0	177	7	0	964
Apprch %	3.6	96.4	0	42.9	57.1	0	96.2	3.8	0	
Total %	0.8	22.1	0	24.9	33.1	0	18.4	0.7	0	

	Phillips Road From North				Phillips Road From South				Samuel Barnet Boulevard From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	2	23	0	25	25	48	0	73	13	1	0	14	112
07:45 AM	1	25	0	26	33	73	0	106	26	1	0	27	159
08:00 AM	1	24	0	25	28	32	0	60	38	2	0	40	125
08:15 AM	2	33	0	35	41	37	0	78	9	0	0	9	122
Total Volume	6	105	0	111	127	190	0	317	86	4	0	90	518
% App. Total	5.4	94.6	0		40.1	59.9	0		95.6	4.4	0		
PHF	.750	.795	.000	.793	.774	.651	.000	.748	.566	.500	.000	.563	.814

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N/S: Phillips Road
W: Samuel Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063F
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Trucks & Buses

	Phillips Road From North			Phillips Road From South			Samuel Barnet Boulevard From West			
Start Time	Right	Thru	Peds	Thru	Left	Peds	Right	Left	Peds	Int. Total
07:00 AM	0	0	0	2	0	0	2	0	0	4
07:15 AM	1	0	0	1	2	0	3	0	0	7
07:30 AM	1	1	0	0	2	0	4	1	0	9
07:45 AM	0	2	0	1	2	0	6	0	0	11
Total	2	3	0	4	6	0	15	1	0	31
08:00 AM	0	0	0	1	2	0	6	0	0	9
08:15 AM	1	0	0	2	0	0	3	0	0	6
08:30 AM	1	1	0	5	1	0	0	0	0	8
08:45 AM	0	0	0	1	1	0	2	1	0	5
Total	2	1	0	9	4	0	11	1	0	28
Grand Total	4	4	0	13	10	0	26	2	0	59
Apprch %	50	50	0	56.5	43.5	0	92.9	7.1	0	
Total %	6.8	6.8	0	22	16.9	0	44.1	3.4	0	

	Phillips Road From North				Phillips Road From South				Samuel Barnet Boulevard From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	1	0	0	1	1	2	0	3	3	0	0	3	7
07:30 AM	1	1	0	2	0	2	0	2	4	1	0	5	9
07:45 AM	0	2	0	2	1	2	0	3	6	0	0	6	11
08:00 AM	0	0	0	0	1	2	0	3	6	0	0	6	9
Total Volume	2	3	0	5	3	8	0	11	19	1	0	20	36
% App. Total	40	60	0		27.3	72.7	0		95	5	0		
PHF	.500	.375	.000	.625	.750	1.00	.000	.917	.792	.250	.000	.833	.818

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File Name : 05063F
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Bikes by Direction

	Groups Timed- Bikes by Direction									
	Phillips Road From North			Phillips Road From South			Samuel Barnett Boulevard From West			
Start Time	Right	Thru	Peds	Thru	Left	Peds	Right	Left	Peds	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	1	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	1
Grand Total	0	1	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0	0	0	0	0	0	
Total %	0	100	0	0	0	0	0	0	0	

[illegible]

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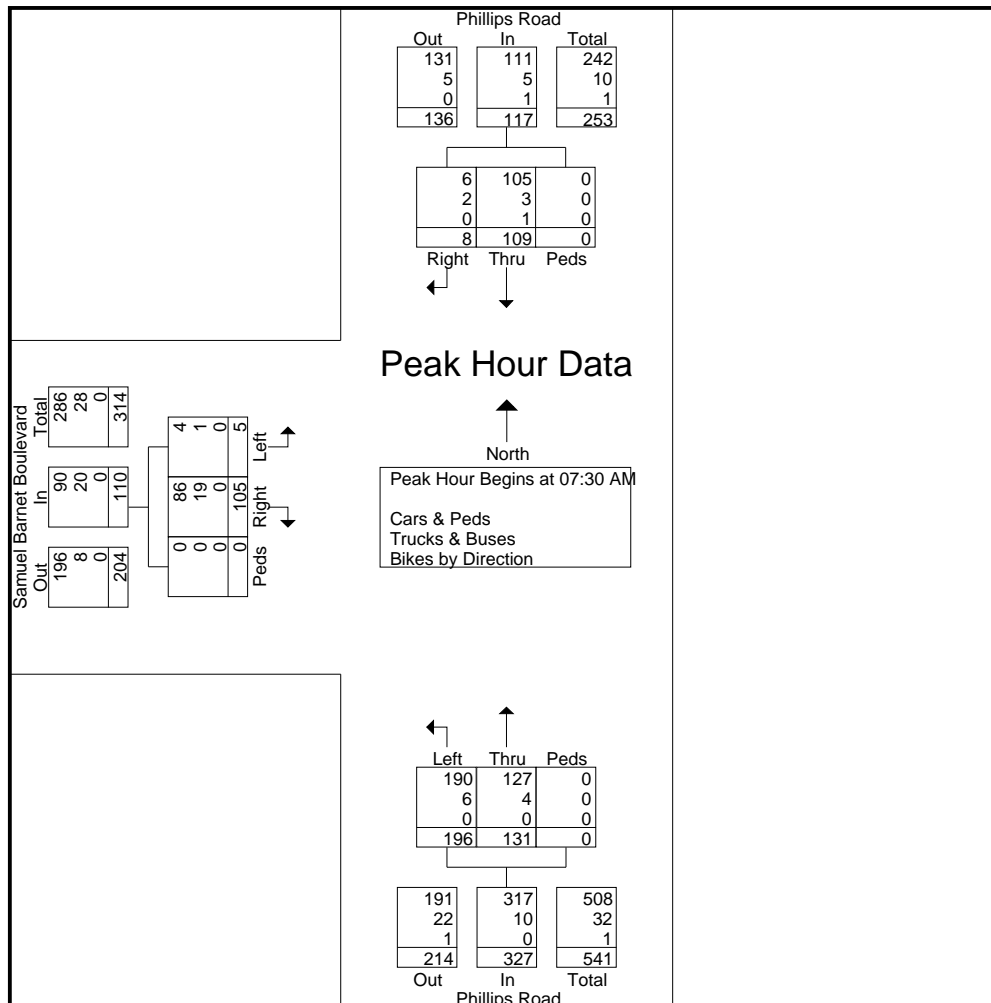
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File Name : 05063F
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

	Phillips Road From North				Phillips Road From South				Samuel Barnet Boulevard From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	3	24	0	27	25	50	0	75	17	2	0	19	121
07:45 AM	1	27	0	28	34	75	0	109	32	1	0	33	170
08:00 AM	1	24	0	25	29	34	0	63	44	2	0	46	134
08:15 AM	3	34	0	37	43	37	0	80	12	0	0	12	129
Total Volume	8	109	0	117	131	196	0	327	105	5	0	110	554
% App. Total	6.8	93.2	0		40.1	59.9	0		95.5	4.5	0		
PHF	.667	.801	.000	.791	.762	.653	.000	.750	.597	.625	.000	.598	.815
Cars & Peds	6	105	0	111	127	190	0	317	86	4	0	90	518
% Cars & Peds	75.0	96.3	0	94.9	96.9	96.9	0	96.9	81.9	80.0	0	81.8	93.5
Trucks & Buses	2	3	0	5	4	6	0	10	19	1	0	20	35
% Trucks & Buses	25.0	2.8	0	4.3	3.1	3.1	0	3.1	18.1	20.0	0	18.2	6.3
Bikes by Direction	0	1	0	1	0	0	0	0	0	0	0	0	1
% Bikes by Direction	0	0.9	0	0.9	0	0	0	0	0	0	0	0	0.2



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Client: McM/S. Hawkins

File Name : 05063FF
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds

	Phillips Road From North			Phillips Road From South			Samuel Barnet Boulevard From West			
Start Time	Right	Thru	Peds	Thru	Left	Peds	Right	Left	Peds	Int. Total
03:00 PM	0	96	0	41	29	0	86	15	0	267
03:15 PM	2	37	0	39	32	0	34	7	0	151
03:30 PM	1	60	0	35	21	0	114	6	0	237
03:45 PM	1	43	0	36	21	0	35	4	0	140
Total	4	236	0	151	103	0	269	32	0	795
04:00 PM	1	75	0	35	13	0	127	1	0	252
04:15 PM	0	56	0	50	6	0	30	0	0	142
04:30 PM	0	54	0	34	8	0	45	5	0	146
04:45 PM	0	49	0	26	13	0	34	1	0	123
Total	1	234	0	145	40	0	236	7	0	663
05:00 PM	1	67	0	40	6	0	112	22	0	248
05:15 PM	1	48	0	38	10	0	38	1	0	136
05:30 PM	0	39	0	19	8	0	40	0	0	106
05:45 PM	1	37	0	24	10	0	31	0	0	103
Total	3	191	0	121	34	0	221	23	0	593
Grand Total	8	661	0	417	177	0	726	62	0	2051
Apprch %	1.2	98.8	0	70.2	29.8	0	92.1	7.9	0	
Total %	0.4	32.2	0	20.3	8.6	0	35.4	3	0	

	Phillips Road From North				Phillips Road From South				Samuel Barnet Boulevard From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:00 PM													
03:00 PM	0	96	0	96	41	29	0	70	86	15	0	101	267
03:15 PM	2	37	0	39	39	32	0	71	34	7	0	41	151
03:30 PM	1	60	0	61	35	21	0	56	114	6	0	120	237
03:45 PM	1	43	0	44	36	21	0	57	35	4	0	39	140
Total Volume	4	236	0	240	151	103	0	254	269	32	0	301	795
% App. Total	1.7	98.3	0		59.4	40.6	0		89.4	10.6	0		
PHF	.500	.615	.000	.625	.921	.805	.000	.894	.590	.533	.000	.627	.744

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W: Samuel Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063FF
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Trucks & Buses

	Phillips Road From North			Phillips Road From South			Samuel Barnet Boulevard From West			
Start Time	Right	Thru	Peds	Thru	Left	Peds	Right	Left	Peds	Int. Total
03:00 PM	0	2	0	0	2	0	1	0	0	5
03:15 PM	1	1	0	3	7	0	0	1	0	13
03:30 PM	0	2	0	3	1	0	0	1	0	7
03:45 PM	0	0	0	1	3	0	3	0	0	7
Total	1	5	0	7	13	0	4	2	0	32
04:00 PM	1	2	0	0	3	0	1	0	0	7
04:15 PM	0	1	0	0	1	0	1	0	0	3
04:30 PM	0	1	0	0	3	0	1	0	0	5
04:45 PM	0	1	0	0	1	0	2	1	0	5
Total	1	5	0	0	8	0	5	1	0	20
05:00 PM	0	1	0	0	1	0	0	0	0	2
05:15 PM	1	0	0	0	1	0	0	0	0	2
05:30 PM	0	1	0	0	1	0	0	0	0	2
05:45 PM	0	1	0	1	1	0	1	0	0	4
Total	1	3	0	1	4	0	1	0	0	10
Grand Total	3	13	0	8	25	0	10	3	0	62
Apprch %	18.8	81.2	0	24.2	75.8	0	76.9	23.1	0	
Total %	4.8	21	0	12.9	40.3	0	16.1	4.8	0	

	Phillips Road From North				Phillips Road From South				Samuel Barnet Boulevard From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:15 PM													
03:15 PM	1	1	0	2	3	7	0	10	0	1	0	1	13
03:30 PM	0	2	0	2	3	1	0	4	0	1	0	1	7
03:45 PM	0	0	0	0	1	3	0	4	3	0	0	3	7
04:00 PM	1	2	0	3	0	3	0	3	1	0	0	1	7
Total Volume	2	5	0	7	7	14	0	21	4	2	0	6	34
% App. Total	28.6	71.4	0		33.3	66.7	0		66.7	33.3	0		
PHF	.500	.625	.000	.583	.583	.500	.000	.525	.333	.500	.000	.500	.654

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File Name : 05063FF
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

	Groups Limited			Bikes by Direction			Samuel Barnett Boulevard			
	Phillips Road From North			Phillips Road From South			From West			
Start Time	Right	Thru	Peds	Thru	Left	Peds	Right	Left	Peds	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	1	0	0	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	0	1	0	0	0	0	0	0	0	1
Apprch %	0	100	0	0	0	0	0	0	0	
Total %	0	100	0	0	0	0	0	0	0	

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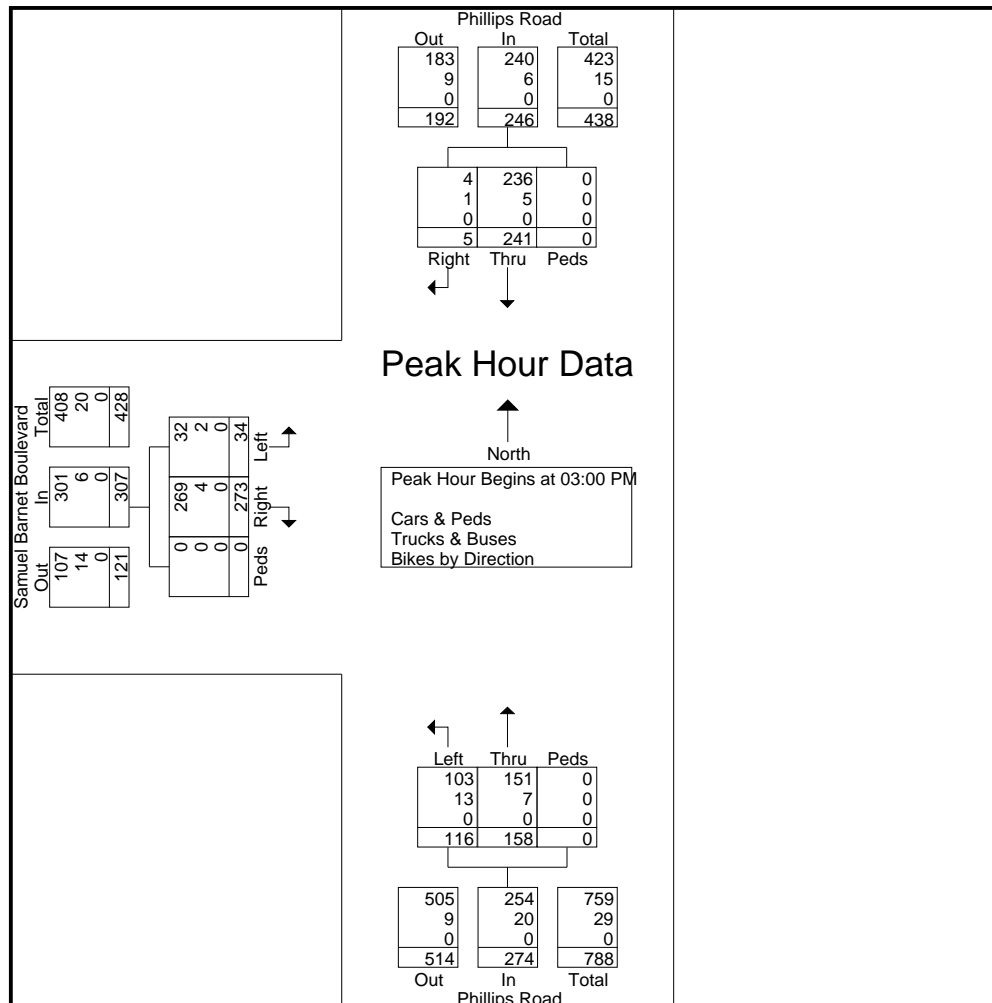
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N/S: Phillips Road
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City, State: New Bedford, MA
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File Name : 05063FF
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

	Phillips Road From North				Phillips Road From South				Samuel Barnet Boulevard From West				
Start Time	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Right	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:00 PM													
03:00 PM	0	98	0	98	41	31	0	72	87	15	0	102	272
03:15 PM	3	38	0	41	42	39	0	81	34	8	0	42	164
03:30 PM	1	62	0	63	38	22	0	60	114	7	0	121	244
03:45 PM	1	43	0	44	37	24	0	61	38	4	0	42	147
Total Volume	5	241	0	246	158	116	0	274	273	34	0	307	827
% App. Total	2	98	0		57.7	42.3	0		88.9	11.1	0		
PHF	.417	.615	.000	.628	.940	.744	.000	.846	.599	.567	.000	.634	.760
Cars & Peds	4	236	0	240	151	103	0	254	269	32	0	301	795
% Cars & Peds	80.0	97.9	0	97.6	95.6	88.8	0	92.7	98.5	94.1	0	98.0	96.1
Trucks & Buses	1	5	0	6	7	13	0	20	4	2	0	6	32
% Trucks & Buses	20.0	2.1	0	2.4	4.4	11.2	0	7.3	1.5	5.9	0	2.0	3.9
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0



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File Name : 05063G
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

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N: Duchaine Boulevard
E/W: #100 Site Drive (Exit/Enter Only)
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063G
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds

	Duchaine Boulevard From North			Exit #100 Eversource Driveway From East			Enter #100 Eversource Driveway From West			
Start Time	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	Int. Total
07:00 AM	19	0	0	10	0	0	0	0	0	29
07:15 AM	30	0	0	5	0	0	0	0	0	35
07:30 AM	9	0	0	8	0	0	0	0	0	17
07:45 AM	7	0	0	17	0	0	0	0	0	24
Total	65	0	0	40	0	0	0	0	0	105
08:00 AM	13	0	0	13	0	0	0	0	0	26
08:15 AM	11	0	0	7	0	0	0	0	0	18
08:30 AM	6	0	0	12	0	0	0	0	0	18
08:45 AM	8	0	0	10	0	0	0	0	0	18
Total	38	0	0	42	0	0	0	0	0	80
Grand Total	103	0	0	82	0	0	0	0	0	185
Apprch %	100	0	0	100	0	0	0	0	0	
Total %	55.7	0	0	44.3	0	0	0	0	0	

	Duchaine Boulevard From North				Exit #100 Eversource Driveway From East				Enter #100 Eversource Driveway From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:00 AM													
07:00 AM	19	0	0	19	10	0	0	10	0	0	0	0	29
07:15 AM	30	0	0	30	5	0	0	5	0	0	0	0	35
07:30 AM	9	0	0	9	8	0	0	8	0	0	0	0	17
07:45 AM	7	0	0	7	17	0	0	17	0	0	0	0	24
Total Volume	65	0	0	65	40	0	0	40	0	0	0	0	105
% App. Total	100	0	0		100	0	0		0	0	0		
PHF	.542	.000	.000	.542	.588	.000	.000	.588	.000	.000	.000	.000	.750

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City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063G
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Trucks & Buses

	Duchaine Boulevard From North			Exit #100 Eversource Driveway From East			Enter #100 Eversource Driveway From West			
Start Time	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	Int. Total
07:00 AM	0	0	0	2	0	0	0	0	0	2
07:15 AM	0	0	0	7	0	0	0	0	0	7
07:30 AM	2	0	0	5	0	0	0	0	0	7
07:45 AM	0	0	0	10	0	0	0	0	0	10
Total	2	0	0	24	0	0	0	0	0	26
08:00 AM	2	0	0	4	0	0	0	0	0	6
08:15 AM	1	0	0	2	0	0	0	0	0	3
08:30 AM	3	0	0	0	0	0	0	0	0	3
08:45 AM	1	0	0	4	0	0	0	0	0	5
Total	7	0	0	10	0	0	0	0	0	17
Grand Total	9	0	0	34	0	0	0	0	0	43
Apprch %	100	0	0	100	0	0	0	0	0	
Total %	20.9	0	0	79.1	0	0	0	0	0	

	Duchaine Boulevard From North				Exit #100 Eversource Driveway From East				Enter #100 Eversource Driveway From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	0	0	0	0	7	0	0	7	0	0	0	0	7
07:30 AM	2	0	0	2	5	0	0	5	0	0	0	0	7
07:45 AM	0	0	0	0	10	0	0	10	0	0	0	0	10
08:00 AM	2	0	0	2	4	0	0	4	0	0	0	0	6
Total Volume	4	0	0	4	26	0	0	26	0	0	0	0	30
% App. Total	100	0	0		100	0	0		0	0	0		
PHF	.500	.000	.000	.500	.650	.000	.000	.650	.000	.000	.000	.000	.750

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File Name : 05063G
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Bikes by Direction

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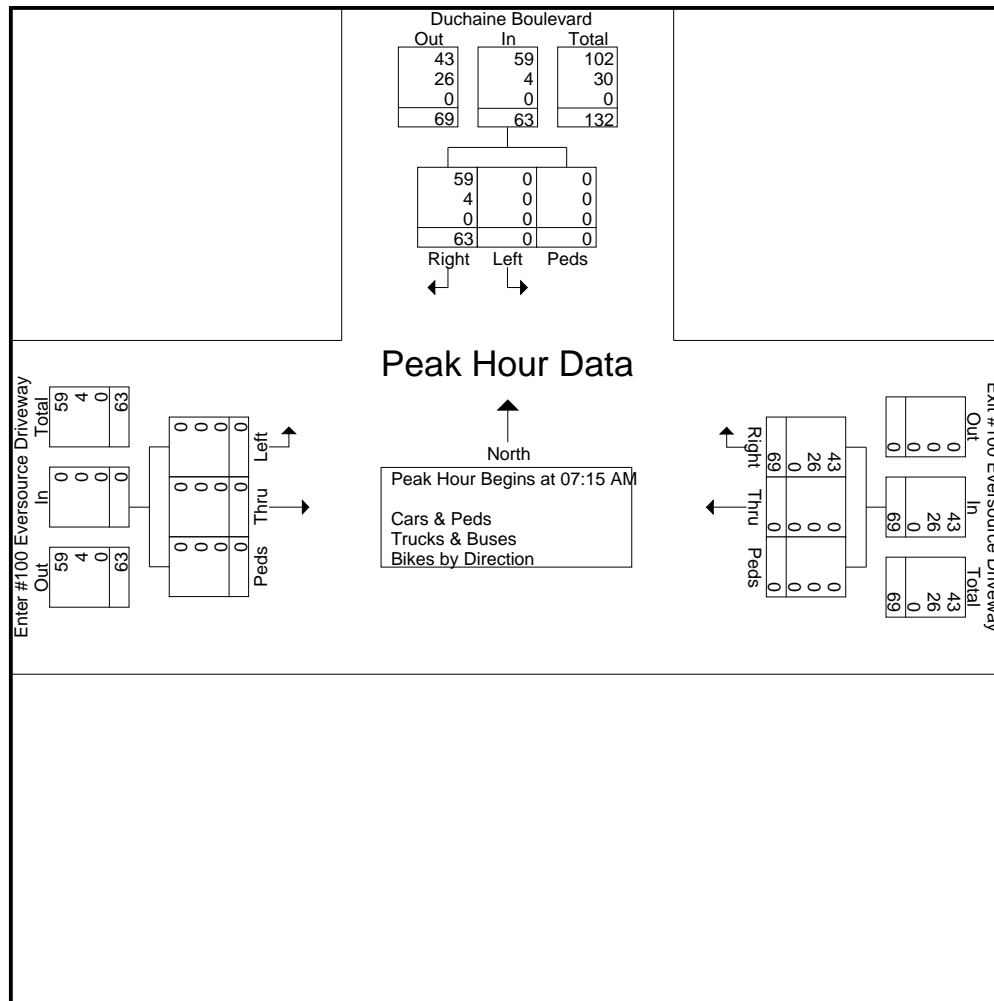
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File Name : 05063G
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Page No : 1

	Duchaine Boulevard From North				Exit #100 Eversource Driveway From East				Enter #100 Eversource Driveway From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	30	0	0	30	12	0	0	12	0	0	0	0	42
07:30 AM	11	0	0	11	13	0	0	13	0	0	0	0	24
07:45 AM	7	0	0	7	27	0	0	27	0	0	0	0	34
08:00 AM	15	0	0	15	17	0	0	17	0	0	0	0	32
Total Volume	63	0	0	63	69	0	0	69	0	0	0	0	132
% App. Total	100	0	0		100	0	0		0	0	0		
PHF	.525	.000	.000	.525	.639	.000	.000	.639	.000	.000	.000	.000	.786
Cars & Peds	59	0	0	59	43	0	0	43	0	0	0	0	102
% Cars & Peds	93.7	0	0	93.7	62.3	0	0	62.3	0	0	0	0	77.3
Trucks & Buses	4	0	0	4	26	0	0	26	0	0	0	0	30
% Trucks & Buses	6.3	0	0	6.3	37.7	0	0	37.7	0	0	0	0	22.7
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0



tel (781) 587-0086 cell (781) 439-4999

File Name : 05063GG
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

[illegible]

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

tel (781) 587-0086 cell (781) 439-4999

N: Duchaine Boulevard
E/W: #100 Site Drive (Exit/Enter Only)
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063GG
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Cars & Peds

	Duchaine Boulevard From North			Exit #100 Eversource Driveway From East			Enter #100 Eversource Driveway From West			
Start Time	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	Int. Total
03:00 PM	9	0	0	7	0	0	0	0	0	16
03:15 PM	15	0	0	19	0	0	0	0	0	34
03:30 PM	5	0	0	22	0	0	0	0	0	27
03:45 PM	6	0	0	14	0	0	0	0	0	20
Total	35	0	0	62	0	0	0	0	0	97
04:00 PM	6	0	1	23	0	0	0	0	0	30
04:15 PM	3	0	0	8	0	0	0	0	0	11
04:30 PM	5	0	0	7	0	0	0	0	0	12
04:45 PM	7	0	1	20	0	0	0	0	0	28
Total	21	0	2	58	0	0	0	0	0	81
05:00 PM	1	0	0	7	0	0	0	0	0	8
05:15 PM	3	0	0	2	0	0	0	0	0	5
05:30 PM	1	0	0	3	0	0	0	0	0	4
05:45 PM	2	0	0	2	0	0	0	0	0	4
Total	7	0	0	14	0	0	0	0	0	21
Grand Total	63	0	2	134	0	0	0	0	0	199
Apprch %	96.9	0	3.1	100	0	0	0	0	0	
Total %	31.7	0	1	67.3	0	0	0	0	0	

	Duchaine Boulevard From North				Exit #100 Eversource Driveway From East				Enter #100 Eversource Driveway From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:15 PM													
03:15 PM	15	0	0	15	19	0	0	19	0	0	0	0	34
03:30 PM	5	0	0	5	22	0	0	22	0	0	0	0	27
03:45 PM	6	0	0	6	14	0	0	14	0	0	0	0	20
04:00 PM	6	0	1	7	23	0	0	23	0	0	0	0	30
Total Volume	32	0	1	33	78	0	0	78	0	0	0	0	111
% App. Total	97	0	3		100	0	0		0	0	0		
PHF	.533	.000	.250	.550	.848	.000	.000	.848	.000	.000	.000	.000	.816

Transportation Data Corporation

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N: Duchaine Boulevard
E/W: #100 Site Drive (Exit/Enter Only)
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063GG
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

Groups Printed- Trucks & Buses

	Duchaine Boulevard From North			Exit #100 Eversource Driveway From East			Enter #100 Eversource Driveway From West			
Start Time	Right	Left	Peds	Right	Thru	Peds	Thru	Left	Peds	Int. Total
03:00 PM	1	0	0	0	0	0	0	0	0	1
03:15 PM	0	0	0	1	0	0	0	0	0	1
03:30 PM	1	0	0	0	0	0	0	0	0	1
03:45 PM	1	0	0	2	0	0	0	0	0	3
Total	3	0	0	3	0	0	0	0	0	6
04:00 PM	2	0	0	0	0	0	0	0	0	2
04:15 PM	1	0	0	1	0	0	0	0	0	2
04:30 PM	2	0	0	1	0	0	0	0	0	3
04:45 PM	0	0	0	2	0	0	0	0	0	2
Total	5	0	0	4	0	0	0	0	0	9
05:00 PM	1	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0
05:30 PM	1	0	0	0	0	0	0	0	0	1
05:45 PM	1	0	0	1	0	0	0	0	0	2
Total	3	0	0	1	0	0	0	0	0	4
Grand Total	11	0	0	8	0	0	0	0	0	19
Apprch %	100	0	0	100	0	0	0	0	0	
Total %	57.9	0	0	42.1	0	0	0	0	0	

	Duchaine Boulevard From North				Exit #100 Eversource Driveway From East				Enter #100 Eversource Driveway From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:45 PM													
03:45 PM	1	0	0	1	2	0	0	2	0	0	0	0	3
04:00 PM	2	0	0	2	0	0	0	0	0	0	0	0	2
04:15 PM	1	0	0	1	1	0	0	1	0	0	0	0	2
04:30 PM	2	0	0	2	1	0	0	1	0	0	0	0	3
Total Volume	6	0	0	6	4	0	0	4	0	0	0	0	10
% App. Total	100	0	0		100	0	0		0	0	0		
PHF	.750	.000	.000	.750	.500	.000	.000	.500	.000	.000	.000	.000	.833

Transportation Data Corporation

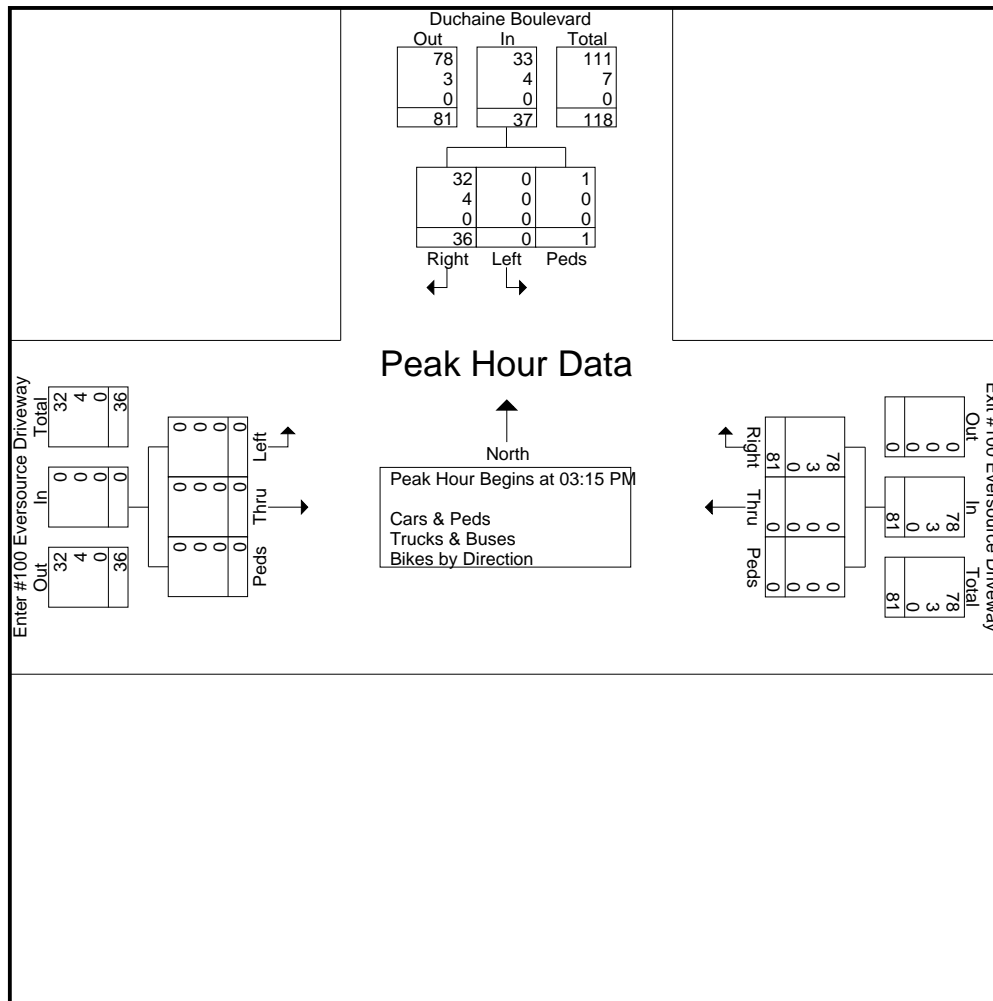
Mario Perone, mperone1@verizon.net

tel (781) 587-0086 cell (781) 439-4999

N: Duchaine Boulevard
E/W: #100 Site Drive (Exit/Enter Only)
City, State: New Bedford, MA
Client: McM/S. Hawkins

File Name : 05063GG
Site Code : Y1821511
Start Date : 6/13/2018
Page No : 1

	Duchaine Boulevard From North				Exit #100 Eversource Driveway From East				Enter #100 Eversource Driveway From West				
Start Time	Right	Left	Peds	App. Total	Right	Thru	Peds	App. Total	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 03:15 PM													
03:15 PM	15	0	0	15	20	0	0	20	0	0	0	0	35
03:30 PM	6	0	0	6	22	0	0	22	0	0	0	0	28
03:45 PM	7	0	0	7	16	0	0	16	0	0	0	0	23
04:00 PM	8	0	1	9	23	0	0	23	0	0	0	0	32
Total Volume	36	0	1	37	81	0	0	81	0	0	0	0	118
% App. Total	97.3	0	2.7		100	0	0		0	0	0		
PHF	.600	.000	.250	.617	.880	.000	.000	.880	.000	.000	.000	.000	.843
Cars & Peds	32	0	1	33	78	0	0	78	0	0	0	0	111
% Cars & Peds	88.9	0	100	89.2	96.3	0	0	96.3	0	0	0	0	94.1
Trucks & Buses	4	0	0	4	3	0	0	3	0	0	0	0	7
% Trucks & Buses	11.1	0	0	10.8	3.7	0	0	3.7	0	0	0	0	5.9
Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bikes by Direction	0	0	0	0	0	0	0	0	0	0	0	0	0



APPENDIX B

MassDOT TDMS Count Data

[Home](#) [TMC](#) [TCLS](#) [TTDS](#) [PMS](#) [PMDS](#) [RSMS](#) [NMDS](#) [WOTS](#) [RTTV](#)

[Back](#) [Login](#) [+ Locate](#) [+ Locate All](#)

[Auto-Locate OFF](#)

Volume Count Report

LOCATION INFO

Location ID	R26010
Type	SPOT
Funct'l Class	4
Located On	RAMP-RT 140 NB TO BRALEY RD
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO

Count Status	Accepted
Start Date	Wed 2/19/2020
End Date	Thu 2/20/2020
Start Time	12:15:00 PM
End Time	12:15:00 PM
Direction	
Notes	
Station	r26010
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude,Longitude	

INTERVAL:15-MIN

Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
0:00-1:00	18	9	6	4	37
1:00-2:00	4	7	3	2	16
2:00-3:00	7	6	14	4	31
3:00-4:00	1	1	5	7	14
4:00-5:00	7	19	46	53	125
5:00-6:00	30	39	47	68	184
6:00-7:00	45	81	105	123	354
7:00-8:00	84	113	113	137	447
8:00-9:00	117	117	82	95	411
9:00-10:00	78	77	74	105	334
10:00-11:00	79	89	105	83	356
11:00-12:00	85	104	101	108	398
12:00-13:00	116	111	105	133	465
13:00-14:00	111	119	109	113	452
14:00-15:00	104	146	150	155	555
15:00-16:00	125	139	143	127	534
16:00-17:00	129	138	132	149	548
17:00-18:00	130	145	121	106	502
18:00-19:00	79	93	86	73	331
19:00-20:00	86	74	64	58	282
20:00-21:00	81	73	48	46	248
21:00-22:00	45	34	40	32	151
22:00-23:00	31	31	65	67	194
23:00-24:00	13	23	23	21	80
Total					7,049
AM Peak					07:30-08:30 484
PM Peak					14:15-15:15 576

Count Navigation: << < > >>

Count Type: VOLUME ▼

Directions: **RAMP** ?

Volume Count Report

LOCATION INFO	
Location ID	R26010
Type	SPOT
Funct'l Class	4
Located On	RAMP-RT 140 NB TO BRALEY RD
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO	
Count Status	Accepted
Start Date	Thu 2/20/2020
End Date	Fri 2/21/2020
Start Time	12:15:00 PM
End Time	12:15:00 PM
Direction	
Notes	
Station	r26010
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude, Longitude	

INTERVAL:15-MIN					
Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
0:00-1:00	17	11	4	5	37
1:00-2:00	5	7	3	5	20
2:00-3:00	3	7	11	9	30
3:00-4:00	6	2	8	3	19
4:00-5:00	10	22	45	54	131
5:00-6:00	33	27	52	66	178
6:00-7:00	53	70	113	119	355
7:00-8:00	74	108	111	121	414
8:00-9:00	120	114	79	81	394
9:00-10:00	76	76	95	83	330
10:00-11:00	76	99	83	110	368
11:00-12:00	103	97	104	99	403
12:00-13:00	114	98	108	97	417
13:00-14:00	116	101	115	90	422
14:00-15:00	103	125	135	134	497
15:00-16:00	148	143	114	140	545
16:00-17:00	130	155	147	130	562
17:00-18:00	157	116	131	115	519
18:00-19:00	92	94	76	84	346
19:00-20:00	82	71	72	64	289
20:00-21:00	72	68	54	40	234
21:00-22:00	55	35	39	35	164
22:00-23:00	25	43	56	58	182
23:00-24:00	25	14	21	15	75
Total					6,931
AM Peak	07:30-08:30				466
PM Peak	16:15-17:15				589

[Home](#) [TMC](#) [TCLS](#) [TTDS](#) [PMS](#) [PMDS](#) [RSMS](#) [NMDS](#) [WOTS](#) [RTTV](#)

[Back](#) [Login](#) [+ Locate](#) [+ Locate All](#)

[Auto-Locate OFF](#)

Volume Count Report

LOCATION INFO

Location ID	R26005
Type	SPOT
Funct'l Class	4
Located On	RAMP-RT 140 NB TO KINGS HWY
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO

Count Status	Accepted
Start Date	Wed 2/5/2020
End Date	Thu 2/6/2020
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	
Station	R26005
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude, Longitude	

INTERVAL:15-MIN

Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
0:00-1:00	22	13	3	6	44
1:00-2:00	6	4	2	2	14
2:00-3:00	2	2	1	1	6
3:00-4:00	4	5	4	10	23
4:00-5:00	7	29	20	36	92
5:00-6:00	17	21	24	35	97
6:00-7:00	26	32	52	84	194
7:00-8:00	111	115	100	111	437
8:00-9:00	76	60	93	96	325
9:00-10:00	94	82	91	82	349
10:00-11:00	79	65	75	101	320
11:00-12:00	79	86	92	76	333
12:00-13:00	115	104	86	92	397
13:00-14:00	101	98	104	88	391
14:00-15:00	130	129	131	123	513
15:00-16:00	128	111	141	141	521
16:00-17:00	157	149	126	157	589
17:00-18:00	126	157	150	134	567
18:00-19:00	132	119	124	73	448
19:00-20:00	72	76	71	58	277
20:00-21:00	61	73	53	64	251
21:00-22:00	45	35	37	31	148
22:00-23:00	23	20	20	19	82
23:00-24:00	15	15	17	20	67
Total					6,485
AM Peak	07:00-08:00				437
PM Peak	16:45-17:45				590

Count Navigation: [|<<](#) [<](#) [>](#) [>>|](#)

Count Type: **VOLUME** ▼

Directions: **RAMP**

[Home](#) [TMC](#) [TCLS](#) [TTDS](#) [PMS](#) [PMDS](#) [RSMS](#) [NMDS](#) [WOTS](#) [RTTV](#)

[Back](#) [Login](#) [+ Locate](#) [+ Locate All](#)

[Auto-Locate OFF](#)

Volume Count Report

LOCATION INFO

Location ID	R26005
Type	SPOT
Funct'l Class	4
Located On	RAMP-RT 140 NB TO KINGS HWY
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO

Count Status	Accepted
Start Date	Thu 2/6/2020
End Date	Fri 2/7/2020
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	
Station	R26005
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude,Longitude	

INTERVAL:15-MIN

Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
0:00-1:00	11	10	8	2	31
1:00-2:00	3	8	2	5	18
2:00-3:00	4	6	4	3	17
3:00-4:00	4	3	7	6	20
4:00-5:00	9	21	30	30	90
5:00-6:00	13	15	18	30	76
6:00-7:00	27	40	44	76	187
7:00-8:00	134	116	110	111	471
8:00-9:00	81	80	87	78	326
9:00-10:00	68	77	76	72	293
10:00-11:00	71	73	69	90	303
11:00-12:00	76	117	97	89	379
12:00-13:00	102	86	76	90	354
13:00-14:00	91	105	76	102	374
14:00-15:00	128	148	121	119	516
15:00-16:00	116	123	135	141	515
16:00-17:00	141	167	161	142	611
17:00-18:00	145	171	134	130	580
18:00-19:00	112	120	99	94	425
19:00-20:00	90	85	61	63	299
20:00-21:00	69	64	57	61	251
21:00-22:00	36	40	34	36	146
22:00-23:00	28	30	21	21	100
23:00-24:00	16	17	22	11	66
Total					6,448
AM Peak	07:00-08:00				471
PM Peak	16:30-17:30				619

Count Navigation: << < > >>

Count Type: VOLUME ▼

Directions: **RAMP**



Home	TMC	TCLS	TTDS	PMS	PMDS	RSMS	NMDS	WOTS	RTTV
Back	Login	+ Locate	+ Locate All						

[Auto-Locate OFF](#)

Volume Count Report

LOCATION INFO	
Location ID	R26005
Type	SPOT
Funct'l Class	4
Located On	RAMP-RT 140 NB TO KINGS HWY
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO	
Count Status	Accepted
Start Date	Fri 2/7/2020
End Date	Sat 2/8/2020
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	
Station	R26005
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude, Longitude	

INTERVAL:15-MIN					
Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
 0:00-1:00	12	7	7	11	37
1:00-2:00	8	3	8	5	24
2:00-3:00	5	1	2	2	10
3:00-4:00	3	4	7	4	18
4:00-5:00	9	19	25	28	81
5:00-6:00	19	19	23	28	89
6:00-7:00	21	33	62	85	201
7:00-8:00	107	140	111	112	470
8:00-9:00	81	88	96	111	376
9:00-10:00	92	82	80	86	340
10:00-11:00	82	66	102	93	343
11:00-12:00	96	94	103	109	402
12:00-13:00	106	106	87	113	412
13:00-14:00	112	116	104	103	435
14:00-15:00	100	119	131	131	481
15:00-16:00	146	147	130	153	576
16:00-17:00	172	157	168	149	646
17:00-18:00	149	163	144	128	584
18:00-19:00	117	104	94	81	396
19:00-20:00	79	96	79	80	334
20:00-21:00	84	59	49	58	250
21:00-22:00	47	53	40	45	185
22:00-23:00	45	41	36	32	154
23:00-24:00 	26	18	35	22	101
Total					6,945
AM Peak	07:00-08:00				470
PM Peak	15:45-16:45				650

Count Navigation:	<<	<	>	>>	Count Type: VOLUME ▼
-------------------	--------------------------	----------------------	----------------------	--------------------------	--------------------------------------

Directions: **RAMP** 

[Home](#) [TMC](#) [TCLS](#) [TTDS](#) [PMS](#) [PMDS](#) [RSMS](#) [NMDS](#) [WOTS](#) [RTTV](#)

[Back](#) [Login](#) [+ Locate](#) [+ Locate All](#)

[Auto-Locate OFF](#)

Volume Count Report



LOCATION INFO

Location ID	R26005
Type	SPOT
Funct'l Class	4
Located On	RAMP-RT 140 NB TO KINGS HWY
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO

Count Status	Accepted
Start Date	Sat 2/8/2020
End Date	Sun 2/9/2020
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	
Station	R26005
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude, Longitude	

INTERVAL:15-MIN

Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
 0:00-1:00	17	16	18	8	59
1:00-2:00	16	14	7	11	48
2:00-3:00	5	9	4	3	21
3:00-4:00	4	8	7	4	23
4:00-5:00	6	9	11	10	36
5:00-6:00	4	4	10	14	32
6:00-7:00	11	13	20	30	74
7:00-8:00	38	38	53	79	208
8:00-9:00	65	71	69	101	306
9:00-10:00	84	82	84	113	363
10:00-11:00	87	112	99	150	448
11:00-12:00	109	118	124	128	479
12:00-13:00	118	148	129	156	551
13:00-14:00	119	131	127	128	505
14:00-15:00	123	132	142	140	537
15:00-16:00	108	138	113	138	497
16:00-17:00	108	100	104	116	428
17:00-18:00	111	98	108	119	436
18:00-19:00	104	100	112	72	388
19:00-20:00	72	70	71	68	281
20:00-21:00	60	69	67	55	251
21:00-22:00	59	51	52	35	197
22:00-23:00	43	47	22	24	136
23:00-24:00 	22	30	33	27	112
Total					6,416
AM Peak	11:45-12:45				523
PM Peak	12:15-13:15				552

Count Navigation: << < > >>

Count Type: VOLUME ▼

Directions: **RAMP** 

[Home](#)
[TMC](#)
[TCLS](#)
[TTDS](#)
[PMS](#)
[PMDS](#)
[RSMS](#)
[NMDS](#)
[WOTS](#)
[RTTV](#)

[Back](#)
[Login](#)
[+ Locate](#)
[+ Locate All](#)

[Auto-Locate OFF](#)

Volume Count Report



LOCATION INFO

Location ID	R26006
Type	SPOT
Funct'l Class	4
Located On	RAMP-KINGS HWY TO RT 140 NB
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO

Count Status	Accepted
Start Date	Wed 2/5/2020
End Date	Thu 2/6/2020
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	
Station	R26006
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude, Longitude	

INTERVAL:15-MIN

Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
 0:00-1:00	2	3	2	0	7
1:00-2:00	2	0	2	0	4
2:00-3:00	0	1	2	1	4
3:00-4:00	0	0	1	3	4
4:00-5:00	4	17	31	21	73
5:00-6:00	18	26	22	27	93
6:00-7:00	34	39	39	40	152
7:00-8:00	30	41	45	31	147
8:00-9:00	47	32	36	28	143
9:00-10:00	28	36	42	34	140
10:00-11:00	36	38	50	44	168
11:00-12:00	49	27	38	35	149
12:00-13:00	48	58	52	59	217
13:00-14:00	42	43	44	61	190
14:00-15:00	53	40	47	48	188
15:00-16:00	53	47	64	65	229
16:00-17:00	60	66	61	57	244
17:00-18:00	70	52	50	49	221
18:00-19:00	38	32	31	33	134
19:00-20:00	25	32	22	21	100
20:00-21:00	23	22	22	13	80
21:00-22:00	14	12	16	12	54
22:00-23:00	6	7	10	8	31
23:00-24:00 	5	2	6	6	19
Total					2,791
AM Peak	11:45-12:45 193				
PM Peak	15:30-16:30 255				

Count Navigation: |<<|<|>|>>|

Count Type: VOLUME ▼

Directions: **RAMP** 

Volume Count Report

LOCATION INFO	
Location ID	R26006
Type	SPOT
Funct'l Class	4
Located On	RAMP-KINGS HWY TO RT 140 NB
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO	
Count Status	Accepted
Start Date	Thu 2/6/2020
End Date	Fri 2/7/2020
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	
Station	R26006
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude,Longitude	

INTERVAL:15-MIN					
Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
0:00-1:00	2	3	3	3	11
1:00-2:00	0	3	0	1	4
2:00-3:00	3	4	0	1	8
3:00-4:00	2	1	3	5	11
4:00-5:00	5	14	34	23	76
5:00-6:00	22	27	15	24	88
6:00-7:00	29	46	30	37	142
7:00-8:00	37	45	37	33	152
8:00-9:00	40	43	31	27	141
9:00-10:00	31	26	34	31	122
10:00-11:00	27	38	35	33	133
11:00-12:00	33	49	44	38	164
12:00-13:00	44	47	45	39	175
13:00-14:00	53	54	35	38	180
14:00-15:00	41	51	39	49	180
15:00-16:00	49	40	53	57	199
16:00-17:00	53	63	53	62	231
17:00-18:00	52	54	43	46	195
18:00-19:00	41	36	35	45	157
19:00-20:00	28	29	27	18	102
20:00-21:00	21	25	24	23	93
21:00-22:00	8	10	8	8	34
22:00-23:00	5	6	12	1	24
23:00-24:00	12	3	7	5	27
Total					2,649
AM Peak	11:15-12:15				175
PM Peak	16:00-17:00				231

[Home](#) [TMC](#) [TCLS](#) [TTDS](#) [PMS](#) [PMDS](#) [RSMS](#) [NMDS](#) [WOTS](#) [RTTV](#)

[Back](#) [Login](#) [+ Locate](#) [+ Locate All](#)

[Auto-Locate OFF](#)

Volume Count Report

LOCATION INFO	
Location ID	R26006
Type	SPOT
Funct'l Class	4
Located On	RAMP-KINGS HWY TO RT 140 NB
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO	
Count Status	Accepted
Start Date	Fri 2/7/2020
End Date	Sat 2/8/2020
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	
Station	R26006
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude, Longitude	

INTERVAL:15-MIN					
Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
0:00-1:00	2	2	4	0	8
1:00-2:00	2	1	1	0	4
2:00-3:00	0	2	2	1	5
3:00-4:00	2	1	2	6	11
4:00-5:00	5	11	23	22	61
5:00-6:00	20	16	23	20	79
6:00-7:00	33	30	40	29	132
7:00-8:00	31	37	43	30	141
8:00-9:00	39	39	40	38	156
9:00-10:00	36	30	41	39	146
10:00-11:00	44	32	36	46	158
11:00-12:00	48	48	59	49	204
12:00-13:00	50	55	49	44	198
13:00-14:00	48	41	49	43	181
14:00-15:00	60	52	48	60	220
15:00-16:00	52	61	59	43	215
16:00-17:00	57	40	52	69	218
17:00-18:00	61	58	56	41	216
18:00-19:00	39	43	29	34	145
19:00-20:00	21	21	32	18	92
20:00-21:00	32	24	15	10	81
21:00-22:00	19	13	12	19	63
22:00-23:00	13	6	11	9	39
23:00-24:00	12	7	11	7	37
Total					2,810
AM Peak	11:30-12:30				213
PM Peak	16:45-17:45				244

Count Navigation: [<<](#) [<](#) [>](#) [>>](#) Count Type: **VOLUME** ▼

Directions: **RAMP**

Home TMC TCLS TTDS PMS PMDS RSMS NMDS WOTS RTTV

Back Login + Locate + Locate All

Auto-Locate OFF

Volume Count Report

LOCATION INFO

Location ID	R26006
Type	SPOT
Funct'l Class	4
Located On	RAMP-KINGS HWY TO RT 140 NB
Direction	RAMP
County	Bristol
Community	New Bedford
MPO ID	
HPMS ID	
Agency	MHD

COUNT DATA INFO

Count Status	Accepted
Start Date	Sat 2/8/2020
End Date	Sun 2/9/2020
Start Time	12:00:00 AM
End Time	12:00:00 AM
Direction	
Notes	
Station	R26006
Study	
Speed Limit	
Description	
Sensor Type	
Source	
Latitude, Longitude	

INTERVAL:15-MIN

Time	15-min Interval				Hourly Count
	1st	2nd	3rd	4th	
0:00-1:00	3	0	2	1	6
1:00-2:00	4	3	3	1	11
2:00-3:00	0	0	1	0	1
3:00-4:00	1	1	1	4	7
4:00-5:00	5	2	10	5	22
5:00-6:00	4	3	8	8	23
6:00-7:00	8	3	9	10	30
7:00-8:00	16	17	19	15	67
8:00-9:00	25	19	30	28	102
9:00-10:00	26	36	39	30	131
10:00-11:00	46	29	51	39	165
11:00-12:00	48	48	65	46	207
12:00-13:00	50	53	50	52	205
13:00-14:00	47	34	51	40	172
14:00-15:00	49	47	57	38	191
15:00-16:00	50	41	42	37	170
16:00-17:00	47	39	36	33	155
17:00-18:00	41	58	36	31	166
18:00-19:00	26	31	21	24	102
19:00-20:00	18	20	15	17	70
20:00-21:00	22	19	12	15	68
21:00-22:00	14	14	17	12	57
22:00-23:00	12	12	15	3	42
23:00-24:00	9	8	8	3	28
Total					2,198
AM Peak	11:30-12:30				214
PM Peak	12:00-13:00				205

Count Navigation: << < > >>

Count Type: VOLUME ▼

Directions: RAMP ?

APPENDIX C

Automatic Traffic Recorder Data

Mario Perone, mperone1@verizon.net

tel (781) 587-0086 cell (781) 439-4999

Duchaine Boulevard north of *te*
U-turn, north of Sam Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

05063A volume
Site Code: Y-18215.11

Start Time	13-Jun-18		NB		SB		Combined		14-Jun	NB		SB		Combined	
	Wed		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		Thu	A.M.	P.M.	A.M.	P.M.	A.M.
12:00			16	57	4	41	20	98		16	69	1	50	17	119
12:15			2	29	0	48	2	77		2	46	3	49	5	95
12:30			0	38	2	44	2	82		0	30	0	31	0	61
12:45			4	44	0	47	4	91		1	34	0	64	1	98
01:00			2	39	1	37	3	76		1	43	1	46	2	89
01:15			1	22	0	27	1	49		1	37	0	36	1	73
01:30			1	26	2	59	3	85		3	35	3	29	6	64
01:45			2	44	2	25	4	69		1	33	0	54	1	87
02:00			1	30	0	48	1	78		6	40	1	37	7	77
02:15			4	46	2	35	6	81		1	36	0	27	1	63
02:30			1	34	3	43	4	77		1	39	2	39	3	78
02:45			4	30	2	51	6	81		0	25	2	40	2	65
03:00			3	66	1	29	4	95		1	56	2	36	3	92
03:15			1	54	8	31	9	85		6	40	5	25	11	65
03:30			2	51	2	31	4	82		5	42	5	37	10	79
03:45			9	31	7	30	16	61		13	40	3	28	16	68
04:00			9	75	2	16	11	91		3	77	6	25	9	102
04:15			10	36	5	12	15	48		8	36	5	20	13	56
04:30			2	44	16	19	18	63		6	43	14	23	20	66
04:45			14	42	25	16	39	58		5	39	27	20	32	59
05:00			23	49	12	13	35	62		26	59	20	13	46	72
05:15			10	29	10	16	20	45		17	34	23	13	40	47
05:30			19	29	35	12	54	41		8	31	30	21	38	52
05:45			11	16	31	13	42	29		19	19	36	27	55	46
06:00			9	16	17	13	26	29		5	24	18	9	23	33
06:15			16	17	35	4	51	21		9	16	27	8	36	24
06:30			28	8	59	5	87	13		24	18	57	7	81	25
06:45			24	13	84	10	108	23		25	6	92	15	117	21
07:00			44	9	55	8	99	17		32	9	54	10	86	19
07:15			23	5	48	15	71	20		19	17	46	12	65	29
07:30			27	14	95	5	122	19		16	8	68	7	84	15
07:45			42	9	71	10	113	19		34	10	93	7	127	17
08:00			27	5	67	2	94	7		19	6	60	2	79	8
08:15			16	3	57	0	73	3		23	3	54	7	77	10
08:30			15	2	31	5	46	7		15	10	55	6	70	16
08:45			41	2	51	4	92	6		49	4	34	5	83	9
09:00			32	1	39	2	71	3		30	2	37	6	67	8
09:15			17	3	27	3	44	6		27	4	22	2	49	6
09:30			32	6	28	6	60	12		26	10	32	5	58	15
09:45			27	12	25	4	52	16		25	2	30	7	55	9
10:00			35	19	28	4	63	23		34	4	24	1	58	5
10:15			28	3	38	6	66	9		22	4	25	6	47	10
10:30			31	10	25	14	56	24		13	7	31	19	44	26
10:45			19	10	30	22	49	32		26	8	31	18	57	26
11:00			43	24	37	9	80	33		42	25	29	14	71	39
11:15			27	6	35	1	62	7		28	2	35	0	63	2
11:30			49	3	35	2	84	5		24	1	20	6	44	7
11:45			42	4	44	3	86	7		48	6	43	5	91	11
Total			845	1165	1233	900	2078	2065		765	1189	1206	974	1971	2163
Day Total			2010		2133		4143			1954		2180		4134	
% Total			20.4%	28.1%	29.8%	21.7%				18.5%	28.8%	29.2%	23.6%		
Peak	-	11:00	03:15	07:30	12:00	07:00	12:00		-	11:00	03:15	07:30	12:00	07:30	12:00
Vol.	-	161	211	290	180	405	348		-	142	199	275	194	367	373
P.H.F.		0.821	0.703	0.763	0.938	0.830	0.888			0.740	0.646	0.739	0.758	0.722	0.784
ADT	ADT	4,138	AADT 4,138												

Page 1

Mario Perone, mperone1@verizon.net
tel (781) 587-0086 cell (781) 439-4999

05063A volume
Site Code: Y-18215.11

[illegible]

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

tel (781) 587-0086 cell (781) 439-4999

Page 2

Duchaine Boulevard north of
U-turn, north of Sam Barnet Boulevard
City, State: New Bedford, MA
Client: McM/S. Hawkins

05063A volume
Site Code: Y-18215.11

Start Time	14-Jun-18 Thu	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		16	69			1	50				
12:15		2	46			3	49				
12:30		0	30			0	31				
12:45		1	34	19	179	0	64	4	194	23	373
01:00		1	43			1	46				
01:15		1	37			0	36				
01:30		3	35			3	29				
01:45		1	33	6	148	0	54	4	165	10	313
02:00		6	40			1	37				
02:15		1	36			0	27				
02:30		1	39			2	39				
02:45		0	25	8	140	2	40	5	143	13	283
03:00		1	56			2	36				
03:15		6	40			5	25				
03:30		5	42			5	37				
03:45		13	40	25	178	3	28	15	126	40	304
04:00		3	77			6	25				
04:15		8	36			5	20				
04:30		6	43			14	23				
04:45		5	39	22	195	27	20	52	88	74	283
05:00		26	59			20	13				
05:15		17	34			23	13				
05:30		8	31			30	21				
05:45		19	19	70	143	36	27	109	74	179	217
06:00		5	24			18	9				
06:15		9	16			27	8				
06:30		24	18			57	7				
06:45		25	6	63	64	92	15	194	39	257	103
07:00		32	9			54	10				
07:15		19	17			46	12				
07:30		16	8			68	7				
07:45		34	10	101	44	93	7	261	36	362	80
08:00		19	6			60	2				
08:15		23	3			54	7				
08:30		15	10			55	6				
08:45		49	4	106	23	34	5	203	20	309	43
09:00		30	2			37	6				
09:15		27	4			22	2				
09:30		26	10			32	5				
09:45		25	2	108	18	30	7	121	20	229	38
10:00		34	4			24	1				
10:15		22	4			25	6				
10:30		13	7			31	19				
10:45		26	8	95	23	31	18	111	44	206	67
11:00		42	25			29	14				
11:15		28	2			35	0				
11:30		24	1			20	6				
11:45		48	6	142	34	43	5	127	25	269	59
Total		765	1189			1206	974			1971	2163
Combined Total		1954				2180				4134	
Percentage	0.0%										
Total Percent		1610	2354			2439	1874			4049	4228
		40.6%	59.4%			56.5%	43.5%			48.9%	51.1%
ADT		ADT 4,138									
			AADT 4,138								

APPENDIX D

Crash Summary

Crash Summary

	Rte 140 NB Ramp at Braley Rd	Rte 140 SB Ramp at Braley Rd	Braley Rd/ Theodore Rice Blvd at Phillips Rd	Theodore Rive Blvd at Duchaine Blvd	Duchaine Blvd at Samuel Barnet Blvd	Phillips Rd at Samuel Barnet Blvd
Year						
2013	5	0	1	5	2	0
2014	0	0	4	3	0	1
2015	3	1	4	0	0	2
2016	5	1	2	0	2	0
2017	2	0	3	2	1	0
Total	<u>15</u>	<u>2</u>	<u>14</u>	<u>10</u>	<u>5</u>	<u>3</u>
Type						
Angle	7	0	2	4	0	1
Rear-end	5	0	3	1	0	1
Sideswipe	0	1	1	0	0	0
Head-on	0	0	2	0	0	1
Pedestrian	0	0	0	1	0	0
Bicycle	0	0	0	0	0	0
Single Vehicle	3	1	4	4	5	0
Unknown	<u>0</u>	<u>0</u>	<u>2</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	15	2	14	10	5	3
Severity						
Property Damage	8	2	9	7	3	1
Personal Injury	6	0	5	2	1	2
Fatality	0	0	0	1	0	0
Unknown	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>
Total	15	2	14	10	5	3
Weather						
Clear	12	1	9	6	4	3
Cloudy	1	0	2	0	0	0
Rain	0	1	1	2	0	0
Snow	1	0	1	1	1	0
Sleet	0	0	1	1	0	0
Fog	0	0	0	0	0	0
Unknown	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	15	2	14	10	5	3
Time						
7:00 AM to 9:00 AM	2	0	0	2	0	0
9:00 AM to 4:00 PM	6	1	0	2	1	1
4:00 PM to 6:00 PM	3	1	0	1	2	0
6:00 PM to 7:00 AM	<u>4</u>	<u>0</u>	<u>14</u>	<u>5</u>	<u>2</u>	<u>2</u>
Total	15	2	14	10	5	3
Crash Rate	0.49	0.06	0.48	1.01	0.24	0.18
Statewide Average	0.57	0.57	0.57	0.57	0.57	0.57
District 5 Average	0.57	0.57	0.57	0.57	0.57	0.57

Source: MassDOT

APPENDIX E

Traffic Projection Model

Existing Site ENTER VOL 5 EXIT VOL 13
EMPLOYEE IN 0 EMPLOYEE OUT 25

Phase 2 ENTER VOL 16 EXIT VOL 16
EMPLOYEE IN 0 EMPLOYEE OUT 25

TRAFFIC PROJECTION MODEL

Transfer Station Traffic Study
Weekday Morning Peak Hour
New Bedford, MA

Intersection	Dir.	Turn	2018 Existing Volumes Counted	2018 Existing Volumes Balanced	Adjustment to 2020 16%	2020 Existing (w/ glass & NE Farms)	Glass Facility PERCENT ENTER	Glass Facility Trips ENTER	Glass Facility PERCENT EXIT	Glass Facility Trips EXIT	New Project Employee PERCENT ENTER	New Project Employee Trips ENTER	New Project Employee PERCENT EXIT	New Project Employee Trips EXIT	Glass Facility Trips TOTAL	2020 Base (Removal of glass trips)	Background Growth 7 yrs (at 1% per year)	2027 No-Build Volumes	New Project Trucks PERCENT ENTER	New Project Truck Trips ENTER	New Project Trucks PERCENT EXIT	New Project Truck Trips EXIT	New Project Employee PERCENT ENTER	New Project Employee Trips ENTER	New Project Employee PERCENT EXIT	New Project Employee Trips EXIT	New Project Trips TOTAL	2027 Build Volumes
Route 140 Northbound Ramps at Braley Road	EB	L	54	54	9	63		0	50%	7		0	50%	12	19	44	5	68		0	50%	8		0	50%	12	20	88
	T		164	166	27	193		0		0		0		0	0	193	14	207		0		0		0		0	0	207
	WB	T	576	580	93	673		0		0		0		0	0	673	49	722		0		0		0		0	0	722
	R		62	62	10	72		0		0		0		0	0	72	5	77		0		0		0		0	0	77
	NB	L	327	327	52	379	50%	3		0	40%	0		0	3	376	27	406	50%	8		0	40%	0		0	8	414
	R		330	330	53	383		0		0		0		0	0	383	28	411		0		0		0		0	0	411
Route 140 Southbound Ramps at Braley Road	EB	T	176	178	29	207		0	50%	7		0	50%	12	19	188	15	222		0	50%	8		0	50%	12	20	242
	R		186	189	30	219		0	50%	6		0	40%	10	16	203	16	235		0	50%	8		0	40%	10	18	253
	WB	L	414	414	66	480		0		0		0		0	0	480	35	515		0		0		0		0	0	515
	T		484	493	79	572	50%	3		0	40%	0		0	3	569	41	613	50%	8		0	40%	0		0	8	621
	SB	L	42	42	7	49		0		0		0		0	0	49	4	53		0		0		0		0	0	53
	R		124	124	21	145	50%	2		0	50%	0		0	2	143	11	156	50%	8		0	50%	0		0	8	164
Braley Road/ Theodore Rice Boulevard at Phillips Road	EB	L	8	8	1	9		0		0		0		0	0	9	1	10		0		0		0		0	0	10
	T		95	95	15	110		0	100%	13		0	90%	22	35	75	8	118		0	100%	16		0	90%	22	38	156
	R		13	13	2	15		0		0		0		0	0	15	1	16		0		0		0		0	0	16
	WB	L	116	116	19	135		0		0		0		0	0	135	10	145		0		0		0		0	0	145
	T		410	410	66	476	100%	5		0	90%	0		0	5	471	34	510	100%	16		0	90%	0		0	16	526
	R		91	91	15	106		0		0		0		0	0	106	8	114		0		0		0		0	0	114
	NB	L	12	12	2	14		0		0		0		0	0	14	1	15		0		0		0		0	0	15
	T		22	22	4	26		0		0		0		0	0	26	2	28		0		0		0		0	0	28
	R		130	130	21	151		0		0		0		0	0	151	11	162		0		0		0		0	0	162
	SB	L	142	142	23	165		0		0		0		0	0	165	12	177		0		0		0		0	0	177
	T		18	18	3	21		0		0		0		0	0	21	2	23		0		0		0		0	0	23
	R		27	27	4	31		0		0		0		0	0	31	2	33		0		0		0		0	0	33
Theodore Rice Boulevard at Duchaine Boulevard	WB	L	312	312	50	362	100%	5		0	90%	0		0	5	357	26	388	100%	16		0	90%	0		0	16	404
	R		90	90	14	104		0		0		0		0	0	104	8	112		0		0		0		0	0	112
	NB	T	4	4	1	5		0		0		0		0	0	5	0	5		0		0		0		0	0	5
	R		91	91	15	106		0	100%	13		0	90%	22	35	71	8	114		0	100%	16		0	90%	22	38	152
	SB	L	15	15	2	17		0		0		0		0	0	17	1	18		0		0		0		0	0	18
	T		8	8	1	9		0		0		0		0	0	9	1	10		0		0		0		0	0	10
Duchaine Boulevard at Samuel Barnet Boulevard	EB	L	52	52	8	60		0		0		0		0	0	60	4	64		0		0		0		0	0	64
	R		60	60	10	70		0		0		0		0	0	70	5	75		0		0		0		0	0	75
	WB	R	204	204	33	237		0		0	10%	0		0	0	237	17	254		0		0	10%	0		0	0	254
	NB	T	30	30	5	35		0	100%	13		0	90%	22	35	0	3	38		0	100%	16		0	90%	22	38	76
	R		108	110	18	128		0		0		0	10%	3	3	125	9	137		0		0		0	10%	3	3	140
	SB	T	52	52	8	60	100%	5		0	100%	0		0	5	55	4	64	100%	16		0	100%	0		0	16	80
	R		391	391	63	454		0		0		0		0	0	454	33	487		0		0		0		0	0	487
Phillips Road at Samuel Barnet Boulevard	EB	L	5	5	1	6		0		0		0		0	0	6	0	6		0		0		0		0	0	6
	R		105	105	17	122		0		0		0	10%	3	3	119	9	131		0		0		0	10%	3	3	134
	NB	L	196	196	32	228		0		0	10%	0		0	0	228	16	244		0		0	10%	0		0	0	244
	T		131	131	21	152		0		0		0		0	0	152	11	163		0		0		0		0	0	163
	SB	T	109	109	17	126		0		0		0		0	0	126	9	135		0		0		0		0	0	135
	R		8	8	1	9		0		0		0		0	0	9	1	10		0		0		0		0	0	10
Duchaine Boulevard at Site Driveway	EB	L	0	0	0	0		0		0		0		0	0	0	0	0		0		0		0		0	0	0
	WB	R	66	66	11	77		0	100%	13		0	100%	25	38	39	0	77		0	100%	16		0	100%	25	41	118
	SB	R	45	45	7	52	100%	5		0	100%	0		0	5	47	0	52	100%	16		0	100%	0		0	16	68

Peak Hour: 7:30 AM - 8:30 AM

Existing Glass/PP Facility ENTER VOL 1 EXIT VOL 1
EMPLOYEE IN 0 EMPLOYEE OUT 25

Phase 2 ENTER VOL 16 EXIT VOL 16
EMPLOYEE IN 0 EMPLOYEE OUT 25

TRAFFIC PROJECTION MODEL

Transfer Station Traffic Study
Weekday Afternoon Peak Hour
New Bedford, MA

Intersection	Dir.	Turn	2018 Existing Volumes Counted	2018 Existing Volumes Balanced	Adjustment to 2020 21%	2020 Existing (w/ glass & NE Farms)	Glass Facility PERCENT ENTER	Glass Facility Trips ENTER	Glass Facility PERCENT EXIT	Glass Facility Trips EXIT	New Project Employee PERCENT ENTER	New Project Employee Trips ENTER	New Project Employee PERCENT EXIT	New Project Employee Trips EXIT	Glass Facility Trips TOTAL	2020 Base (Removal of glass trips)	Background Growth 7 yrs (at 1% per year)	2027 No-Build Volumes	New Project Trucks PERCENT ENTER	New Project Truck Trips ENTER	New Project Trucks PERCENT EXIT	New Project Truck Trips EXIT	New Project Employee PERCENT ENTER	New Project Employee Trips ENTER	New Project Employee PERCENT EXIT	New Project Employee Trips EXIT	New Project Trips TOTAL	2027 Build Volumes
Route 140 Northbound Ramps at Braley Road	EB	L	90	90	19	109		0	50%	1		0	50%	12	13	96	8	117		0	50%	8		0	50%	12	20	137
	T		229	229	48	277		0		0		0		0	0	277	20	297		0		0		0		0	0	297
	WB	T	566	566	119	685		0		0		0		0	0	685	49	734		0		0		0		0	0	734
	R		41	41	9	50		0		0		0		0	0	50	4	54		0		0		0		0	0	54
	NB	L	234	234	49	283	50%	1		0	40%	0		0	1	282	21	304	50%	8		0	40%	0		0	8	312
	R		348	348	73	421		0		0		0		0	0	421	30	451		0		0		0		0	0	451
Route 140 Southbound Ramps at Braley Road	EB	T	270	272	57	329		0	50%	1		0	50%	12	13	316	24	353		0	50%	8		0	50%	12	20	373
	R		416	416	87	503		0	50%	0		0	40%	10	10	493	36	539		0	50%	8		0	40%	10	18	557
	WB	L	398	399	84	483		0		0		0		0	0	483	35	518		0		0		0		0	0	518
	T		399	401	84	485	50%	1		0	40%	0		0	1	484	35	520	50%	8		0	40%	0		0	8	528
	SB	L	47	47	10	57		0		0		0		0	0	57	4	61		0		0		0		0	0	61
	R		94	94	20	114	50%	0		0	50%	0		0	0	114	8	122	50%	8		0	50%	0		0	8	130
Braley Road/ Theodore Rice Boulevard at Phillips Road	EB	L	22	22	5	27		0		0		0		0	0	27	2	29		0		0		0		0	0	29
	T		354	357	75	432		0	100%	1		0	90%	22	23	409	31	463		0	100%	16		0	90%	22	38	501
	R		109	109	23	132		0		0		0		0	0	132	10	142		0		0		0		0	0	142
	WB	L	172	174	37	211		0		0		0		0	0	211	15	226		0		0		0		0	0	226
	T		157	159	33	192	100%	1		0	90%	0		0	1	191	14	206	100%	16		0	90%	0		0	16	222
	R		160	162	34	196		0		0		0		0	0	196	14	210		0		0		0		0	0	210
	NB	L	18	18	4	22		0		0		0		0	0	22	2	24		0		0		0		0	0	24
	T		44	44	9	53		0		0		0		0	0	53	4	57		0		0		0		0	0	57
	R		167	169	35	204		0		0		0		0	0	204	15	219		0		0		0		0	0	219
	SB	L	161	162	34	196		0		0		0		0	0	196	14	210		0		0		0		0	0	210
	T		42	42	9	51		0		0		0		0	0	51	4	55		0		0		0		0	0	55
	R		9	9	2	11		0		0		0		0	0	11	1	12		0		0		0		0	0	12
Theodore Rice Boulevard at Duchaine Boulevard	WB	L	102	102	21	123	100%	1		0	90%	0		0	1	122	9	132	100%	16		0	90%	0		0	16	148
	R		29	29	6	35		0		0		0		0	0	35	3	38		0		0		0		0	0	38
	NB	T	11	11	2	13		0		0		0		0	0	13	1	14		0		0		0		0	0	14
	R		242	242	51	293		0	100%	1		0	90%	22	23	270	21	314		0	100%	16		0	90%	22	38	352
	SB	L	84	84	18	102		0		0		0		0	0	102	7	109		0		0		0		0	0	109
	T		18	18	4	22		0		0		0		0	0	22	2	24		0		0		0		0	0	24
Duchaine Boulevard at Samuel Barnet Boulevard	EB	L	135	135	28	163		0		0		0		0	0	163	12	175		0		0		0		0	0	175
	R		224	224	47	271		0		0		0		0	0	271	20	291		0		0		0		0	0	291
	WB	R	119	121	25	146		0		0	10%	0		0	0	146	11	157		0		0	10%	0		0	0	157
	NB	T	23	23	5	28		0	100%	1		0	90%	22	23	5	2	30		0	100%	16		0	90%	22	38	68
	R		310	310	65	375		0		0		0	10%	3	3	372	27	402		0		0		0	10%	3	3	405
	SB	T	63	63	13	76	100%	1		0	100%	0		0	1	75	5	81	100%	16		0	100%	0		0	16	97
	R		142	142	30	172		0		0		0		0	0	172	12	184		0		0		0		0	0	184
Phillips Road at Samuel Barnet Boulevard	EB	L	34	34	7	41		0		0		0		0	0	41	3	44		0		0		0		0	0	44
	R		273	276	58	334		0		0		0	10%	3	3	331	24	358		0		0		0	10%	3	3	361
	NB	L	116	116	24	140		0		0	10%	0		0	0	140	10	150		0		0	10%	0		0	0	150
	T		158	158	33	191		0		0		0		0	0	191	14	205		0		0		0		0	0	205
	SB	T	241	241	51	292		0		0		0		0	0	292	21	313		0		0		0		0	0	313
	R		5	5	1	6		0		0		0		0	0	6	1	7		0		0		0		0	0	7
Duchaine Boulevard at Site Driveway	EB	L	0	0	0	0		0		0		0		0	0	0	0	0		0		0		0		0	0	0
	WB	R	65	65	14	79		0	100%	1		0	100%	25	26	53	0	79		0	100%	16		0	100%	25	41	120
	SB	R	38	38	8	46	100%	1		0	100%	0		0	1	45	0	46		100%	16		0	100%	0	16	62	62

Peak Hour: 3:00 PM - 4:00 PM

APPENDIX F

Hourly Distribution Data

Hourly Trip Distribution

Time	Taunton	Covanta	Assumed for TIS
5-6 AM	0%	8%	4%
6-7 AM	5%	7%	6%
7-8 AM	10%	6%	8%
8-9 AM	10%	7%	8%
9-10 AM	11%	8%	9%
10-11 AM	11%	10%	10%
11-12 AM	11%	9%	10%
12-1 PM	12%	10%	11%
1-2 PM	12%	8%	10%
2-3 PM	10%	10%	10%
3-4 PM	6%	8%	7%
4-5 PM	1%	5%	3%
5-6 PM	1%	2%	2%
6-7 PM	0%	1%	1%
7-8 PM	0%	1%	1%
8-9 PM	0%	1%	0%
	100%	100%	100%

APPENDIX G

Trip Generation Calculations

Truck Type	Tons per day	Truck Weight (tons)	No. of Trucks per day (inbound)
<u>MSW (1,360 Tons/Day)</u>			
Packer	295	9	33
Transfer	1065	28	38
<u>C & D (140 Tons/Day)</u>			
Transfer	140	28	5
<u>Biosolids (400 Tons/Day)</u>			
Large	220	28	8
Rolloffs	120	12	10
Small	60	12	5
<u>Outbound Trailers (1,550 Tons/Day)</u>			
Transfer	1,550	28	56

Time	Hourly distribution of trucks (%)	No of trucks- Inbound MSW and C&D	Total No of Truck Trips (MSW and C&D)	Number of Biosolid Trips Inbound	Total Number of Biosolids Trips	Outbound Materials Inbound	Total Number of Outbound Material Trips
5-6 AM	4%	3	6	1	2	2	4
6-7 AM	6%	5	10	2	4	3	6
7-8 AM	8%	6	12	2	4	4	8
8-9 AM	8%	6	12	2	4	5	10
9-10 AM	9%	7	14	2	4	6	12
10-11 AM	10%	8	16	2	4	6	12
11-12 AM	10%	7	14	2	4	5	10
12-1 PM	11%	8	16	2	4	6	12
1-2 PM	10%	8	16	2	4	6	12
2-3 PM	10%	8	16	2	4	6	12
3-4 PM	7%	5	10	2	4	4	8
4-5 PM	3%	2	4	1	2	2	4
5-6 PM	2%	1	2	1	2	1	2
6-7 PM	1%	1	2	0	0	0	0
7-8 PM	1%	1	2	0	0	0	0
8-9 PM	0%	0	0	0	0	0	0
	100%	76	152	23	46	56	112

APPENDIX H

Highway Capacity Manual Methodologies

CAPACITY/LEVEL-OF-SERVICE ANALYSES METHODOLOGY

The detailed capacity/level-of-service analysis contained in this traffic impact study was performed in accordance with the standard techniques contained in the *Highway Capacity Manual*.⁽¹⁾ By definition, capacity represents “the maximum rate of flow that can reasonably be expected to pass a point on a uniform section of a lane or roadway under prevailing roadway, traffic, and control conditions.” The level of functioning of an intersection or a uniform section of a lane or roadway can be expressed in terms of levels of service. Level of service (LOS) is defined as “a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers”. Such measures include “speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety.”

At unsignalized intersections, a methodology for evaluating the relative functioning of intersections controlled by stop or yield signs has been developed, and is based on several assumptions, including:

- Major street flows are not affected by the minor (stop-sign controlled) street movements.
- Left turns from the major street to the minor street are influenced only by opposing major street through flow.
- Minor street left turns are impeded by all major street traffic plus opposing minor street traffic.
- Minor street through traffic is impeded by all major street traffic.
- Minor street right turns are impeded only by the major street traffic coming from the left.

The concept of stop-controlled or yield-controlled intersection analysis is based on the estimate of average total delay on minor streets. The methodology of analysis relies on three elements: the size and distribution of gaps in the major traffic stream, the usefulness of these gaps to the minor stream drivers, and the relative priority of the various traffic streams at the intersection. The results of the analysis provide an estimate of average total delay for the various critical movements at the unsignalized intersections. Correlation between average total delay and the respective levels of service are provided for unsignalized intersections as follows:

(1) *Transportation Research Board, Highway Capacity Manual, 6th Edition, published by the Transportation Research Board, Washington, DC, 2016.*

<i>Unsignalized Intersections</i>	
Level of Service	Control Delay Per Vehicle (seconds)
A	0 – 10
B	>10 – 15
C	>15 – 25
D	>25 – 35
E	>35 – 50
F	> 50

At signalized intersections, an additional element must be considered: time allocation. Level of service is based on the average control delay per vehicle for various movements within the intersection. Volume/capacity relationships also affect the operations of signalized intersections. Thus, both volume/capacity and delay must be considered to evaluate the overall operation of a signalized intersection. Correlation between average delay per vehicle and the respective levels of service are provided for signalized intersections as follows:

<i>Signalized Intersections</i>	
Level of Service	Control Delay Per Vehicle (seconds)
A	≤ 10
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	> 80

APPENDIX I

2020 Base Capacity/Level-of-Service Analysis

Intersection

Int Delay, s/veh 89.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↰		↰		↰			
Traffic Vol, veh/h	44	193	0	0	673	72	376	0	383	0	0	0
Future Vol, veh/h	44	193	0	0	673	72	376	0	383	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	0	-	75	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	-169	65	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	94	94	94	94	94	94	92	92	92
Heavy Vehicles, %	26	7	0	0	2	0	4	0	4	2	2	2
Mvmt Flow	49	217	0	0	716	77	400	0	407	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	793	0	- - - 0 1070 - 217
Stage 1	-	-	- - - 315 - -
Stage 2	-	-	- - - 755 - -
Critical Hdwy	4.36	-	- - - 6.44 - 6.24
Critical Hdwy Stg 1	-	-	- - - 5.44 - -
Critical Hdwy Stg 2	-	-	- - - 5.44 - -
Follow-up Hdwy	2.434	-	- - - 3.536 - 3.336
Pot Cap-1 Maneuver	731	-	0 0 - ~ 243 0 818
Stage 1	-	-	0 0 - 735 0 -
Stage 2	-	-	0 0 - 461 0 -
Platoon blocked, %	-	-	- -
Mov Cap-1 Maneuver	731	-	- - - ~ 225 0 818
Mov Cap-2 Maneuver	-	-	- - - ~ 225 0 -
Stage 1	-	-	- - - 679 0 -
Stage 2	-	-	- - - 461 0 -

Approach	EB	WB	NB
HCM Control Delay, s	89.9	0	207.2
HCM LOS	F		F

Minor Lane/Major Mvm	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	225	818	731	-	-	-
HCM Lane V/C Ratio	1.778	0.498	0.068	-	-	-
HCM Control Delay (s)	404.4	13.7	10.3	0	-	-
HCM Lane LOS	F	B	B	A	-	-
HCM 95th %tile Q(veh)	27.4	2.8	0.2	-	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

New Bedford Solid Waste Handling Facility
2: Route 140 SB Off Ramp/Route 140 SB On Ramp & Braley Road

2020 Base
Weekday AM

Intersection

Int Delay, s/veh 56.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱					↱		↱
Traffic Vol, veh/h	0	188	203	480	569	0	0	0	0	49	0	143
Future Vol, veh/h	0	188	203	480	569	0	0	0	0	49	0	143
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	0	-	75
Veh in Median Storage, #	0	-	-	0	-	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	91	91	91	92	92	92	85	85	85
Heavy Vehicles, %	0	12	8	2	4	0	2	2	2	12	0	9
Mvmt Flow	0	219	236	527	625	0	0	0	0	58	0	168

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	-	0	0 455 0 0 2016 - 625
Stage 1	-	-	- - - 1679 - -
Stage 2	-	-	- - - 337 - -
Critical Hdwy	-	-	- 4.12 - - 6.52 - 6.29
Critical Hdwy Stg 1	-	-	- - - 5.52 - -
Critical Hdwy Stg 2	-	-	- - - 5.52 - -
Follow-up Hdwy	-	-	- 2.218 - - 3.608 - 3.381
Pot Cap-1 Maneuver	0	-	- 1106 - 0 60 0 472
Stage 1	0	-	- - - 157 0 -
Stage 2	0	-	- - - 701 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- 1106 - - ~ 16 0 472
Mov Cap-2 Maneuver	-	-	- - - ~ 16 0 -
Stage 1	-	-	- - - 157 0 -
Stage 2	-	-	- - - 189 0 -

Approach	EB	WB	SB
HCM Control Delay, s	0	5.1	\$ 435.4
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	1106	-	16	472
HCM Lane V/C Ratio	-	-	0.477	-	3.603	0.356
HCM Control Delay (s)	-	-	11.2	\$	1657	16.8
HCM Lane LOS	-	-	B	A	F	C
HCM 95th %tile Q(veh)	-	-	2.6	-	7.9	1.6






Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Intersection Delay, s/veh 84.4

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	75	15	135	471	106	14	26	151	165	21	31
Future Vol, veh/h	9	75	15	135	471	106	14	26	151	165	21	31
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.80	0.80	0.80	0.96	0.96	0.96
Heavy Vehicles, %	25	30	0	4	6	1	8	5	2	1	6	7
Mvmt Flow	11	90	18	144	501	113	18	33	189	172	22	32
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	12.5	138.1	15	15.8
HCM LOS	B	F	B	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	7%	11%	0%	19%	76%
Vol Thru, %	14%	89%	0%	66%	10%
Vol Right, %	79%	0%	100%	15%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	84	15	712	217
LT Vol	14	9	0	135	165
Through Vol	26	75	0	471	21
RT Vol	151	0	15	106	31
Lane Flow Rate	239	101	18	757	226
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.423	0.212	0.035	1.231	0.426
Departure Headway (Hd)	6.981	8.011	7.322	5.851	7.395
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	518	451	492	621	491
Service Time	4.981	5.711	5.022	3.898	5.395
HCM Lane V/C Ratio	0.461	0.224	0.037	1.219	0.46
HCM Control Delay	15	12.9	10.3	138.1	15.8
HCM Lane LOS	B	B	B	F	C
HCM 95th-tile Q	2.1	0.8	0.1	27.8	2.1

New Bedford Solid Waste Handling Facility
4: Duchaine Boulevard & Theodore Rice Boulevard








2020 Base
Weekday AM

Intersection													
Int Delay, s/veh	9												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕	↕		↕			↕		
Traffic Vol, veh/h	0	0	0	357	0	104	0	5	71	17	9	0	
Future Vol, veh/h	0	0	0	357	0	104	0	5	71	17	9	0	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None	
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-	
Veh in Median Storage, #	0	-	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	81	92	81	92	82	82	96	96	92	
Heavy Vehicles, %	2	2	2	7	2	6	2	25	32	13	13	2	
Mvmt Flow	0	0	0	441	0	128	0	6	87	18	9	0	

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	0	0	0	1	0	0	-	883	-	886	883	-	
Stage 1	-	-	-	-	-	-	-	1	-	882	882	-	
Stage 2	-	-	-	-	-	-	-	882	-	4	1	-	
Critical Hdwy	4.12	-	-	4.17	-	-	-	6.75	-	7.23	6.63	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.75	-	6.23	5.63	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.75	-	6.23	5.63	-	
Follow-up Hdwy	2.218	-	-	2.263	-	-	-	4.225	-	3.617	4.117	-	
Pot Cap-1 Maneuver	-	-	-	1589	-	0	0	261	0	254	273	0	
Stage 1	-	-	-	-	-	0	0	851	0	326	350	0	
Stage 2	-	-	-	-	-	0	0	334	0	990	874	0	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	1589	-	-	-	188	-	195	197	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	188	-	195	197	-	
Stage 1	-	-	-	-	-	-	-	851	-	326	253	-	
Stage 2	-	-	-	-	-	-	-	241	-	983	874	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.1		25.4
HCM LOS			-	D

Minor Lane/Major Mvm	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	188	-	-	-	-	1589	-	195	197
HCM Lane V/C Ratio	0.016	-	-	-	-	0.277	-	0.115	0.024
HCM Control Delay (s)	24.5	-	0	-	-	8.1	0	25.8	23.7
HCM Lane LOS	C	-	A	-	-	A	A	D	C
HCM 95th %tile Q(veh)	0	-	-	-	-	1.1	-	0.4	0.1

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	0	70	0	0	237	0	0	125	0	55	454
Future Vol, veh/h	60	0	70	0	0	237	0	0	125	0	55	454
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	Free	-	-	Free	-	-	None
Storage Length	0	-	50	-	-	0	-	-	0	-	-	-
Veh in Median Storage, #	0	-	-	-169	79	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	35	0	13	0	0	3	0	37	19	0	13	5
Mvmt Flow	75	0	88	0	0	296	0	0	156	0	69	568

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	353	-	-	-	0
Stage 1	353	-	-	-	-
Stage 2	0	-	-	-	-
Critical Hdwy	7.125	-	-	-	-
Critical Hdwy Stg 1	6.325	-	-	-	-
Critical Hdwy Stg 2	5.925	-	-	-	-
Follow-up Hdwy	3.8325	-	-	-	-
Pot Cap-1 Maneuver	560	0	0	0	0
Stage 1	606	0	0	0	0
Stage 2	-	0	0	0	0
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	560	0	-	-	-
Mov Cap-2 Maneuver	560	0	-	-	-
Stage 1	606	0	-	-	-
Stage 2	-	0	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NB	EBLn	EBLn2	SBT	SBR
Capacity (veh/h)	-	560	-	-	-
HCM Lane V/C Ratio	-	0.134	-	-	-
HCM Control Delay (s)	-	12.4	0	-	-
HCM Lane LOS	-	B	A	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-	-

Intersection

Int Delay, s/veh 5.1

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 6 119 228 152 126 9

Future Vol, veh/h 6 119 228 152 126 9

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage 0# - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 80 80 80 80 80 80

Heavy Vehicles, % 20 18 3 3 3 25

Mvmt Flow 8 149 285 190 158 11

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 924 164 169 0 - 0

Stage 1 164 - - - - -

Stage 2 760 - - - - -

Critical Hdwy 6.6 6.38 4.13 - - -

Critical Hdwy Stg 1 5.6 - - - - -

Critical Hdwy Stg 2 5.6 - - - - -

Follow-up Hdwy 3.68 3.46 2.227 - - -

Pot Cap-1 Maneuver 278 841 1402 - - -

Stage 1 823 - - - - -

Stage 2 431 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 215 841 1402 - - -

Mov Cap-2 Maneuver 215 - - - - -

Stage 1 636 - - - - -

Stage 2 431 - - - - -

Approach EB NB SB

HCM Control Delay, s 11.2 4.9 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBTLn1 SBT SBR

Capacity (veh/h) 1402 - 738 - -

HCM Lane V/C Ratio 0.203 -0.212 - -

HCM Control Delay (s) 8.2 0 11.2 - -

HCM Lane LOS A A B - -

HCM 95th %tile Q(veh) 0.8 - 0.8 - -

Intersection

Int Delay, s/veh 115.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↰		↰		↰			
Traffic Vol, veh/h	96	277	0	0	685	50	282	0	421	0	0	0
Future Vol, veh/h	96	277	0	0	685	50	282	0	421	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	0	-	75	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-169	65	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	85	85	85	89	89	89	92	92	92
Heavy Vehicles, %	4	2	0	0	3	5	8	0	3	0	0	0
Mvmt Flow	109	315	0	0	806	59	317	0	473	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	865	0	- - - 0 1369 - 315
Stage 1	-	-	- - - 533 - -
Stage 2	-	-	- - - 836 - -
Critical Hdwy	4.14	-	- - - 6.48 - 6.23
Critical Hdwy Stg 1	-	-	- - - 5.48 - -
Critical Hdwy Stg 2	-	-	- - - 5.48 - -
Follow-up Hdwy	2.236	-	- - - 3.572 - 3.327
Pot Cap-1 Maneuver	770	-	0 0 - ~ 157 0 723
Stage 1	-	-	0 0 - 577 0 -
Stage 2	-	-	0 0 - 415 0 -
Platoon blocked, %	-	-	- -
Mov Cap-1 Maneuver	770	-	- - - ~ 130 0 723
Mov Cap-2 Maneuver	-	-	- - - ~ 130 0 -
Stage 1	-	-	- - - 478 0 -
Stage 2	-	-	- - - 415 0 -

Approach	EB	WB	NB
HCM Control Delay, s	2.7	0	\$ 301.5
HCM LOS			F

Minor Lane/Major Mvm	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	130	723	770	-	-	-
HCM Lane V/C Ratio	2.437	0.654	0.142	-	-	-
HCM Control Delay (s)	\$ 723.5	18.9	10.4	0	-	-
HCM Lane LOS	F	C	B	A	-	-
HCM 95th %tile Q(veh)	27.7	4.9	0.5	-	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

New Bedford Solid Waste Handling Facility
2: Route 140 SB Off Ramp/Route 140 SB On Ramp & Braley Road

2020 Base
Weekday PM

Intersection

Int Delay, s/veh 5.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱					↱		↱
Traffic Vol, veh/h	0	316	493	483	484	0	0	0	0	57	0	114
Future Vol, veh/h	0	316	493	483	484	0	0	0	0	57	0	114
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	0	-	75
Veh in Median Storage, #	0	-	-	-	0	-	-169	74	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	94	94	94	92	92	92	86	86	86
Heavy Vehicles, %	0	3	6	3	6	0	2	2	2	2	0	7
Mvmt Flow	0	381	594	514	515	0	0	0	0	66	0	133

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	- 0	0 975	0 0 2221 - 515
Stage 1	- -	- -	- - 1543 - -
Stage 2	- -	- -	- - 678 - -
Critical Hdwy	- -	- 4.13	- - 6.42 - 6.27
Critical Hdwy Stg 1	- -	- -	- - 5.42 - -
Critical Hdwy Stg 2	- -	- -	- - 5.42 - -
Follow-up Hdwy	- -	- 2.227	- - 3.518 - 3.363
Pot Cap-1 Maneuver	0 -	- 703	- 0 ~ 48 0 550
Stage 1	0 -	- -	- 0 194 0 -
Stage 2	0 -	- -	- 0 504 0 -
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- -	- 703	- - 0 0 550
Mov Cap-2 Maneuver	- -	- -	- - 0 0 -
Stage 1	- -	- -	- - 194 0 -
Stage 2	- -	- -	- - 0 0 -

Approach	EB	WB	SB
HCM Control Delay, s	0	11.3	
HCM LOS			-

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	703	-	-	550
HCM Lane V/C Ratio	-	-	0.731	-	-	0.241
HCM Control Delay (s)	-	-	22.7	0	-	13.6
HCM Lane LOS	-	-	C	A	-	B
HCM 95th %tile Q(veh)	-	-	6.4	-	-	0.9

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Intersection Delay, s/veh 154.5												
Intersection LOS F												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰			↰			↰	
Traffic Vol, veh/h	27	409	132	211	191	196	22	53	204	196	51	11
Future Vol, veh/h	27	409	132	211	191	196	22	53	204	196	51	11
Peak Hour Factor	0.80	0.80	0.80	0.93	0.93	0.93	0.80	0.80	0.80	0.95	0.95	0.95
Heavy Vehicles, %	18	5	2	2	15	2	0	5	4	3	2	33
Mvmt Flow	34	511	165	227	205	211	28	66	255	206	54	12
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	161.3	257	43.9	36
HCM LOS	F	F	E	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	8%	6%	0%	35%	76%
Vol Thru, %	19%	94%	0%	32%	20%
Vol Right, %	73%	0%	100%	33%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	436	132	598	258
LT Vol	22	27	0	211	196
Through Vol	53	409	0	191	51
RT Vol	204	0	132	196	11
Lane Flow Rate	349	545	165	643	272
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.803	1.357	0.367	1.49	0.693
Departure Headway (Hd)	10.148	9.993	8.996	8.958	11.197
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	359	371	403	412	326
Service Time	8.148	7.693	6.696	6.958	9.197
HCM Lane V/C Ratio	0.972	1.469	0.409	1.561	0.834
HCM Control Delay	43.9	205.1	16.8	257	36
HCM Lane LOS	E	F	C	F	E
HCM 95th-tile Q	6.9	23.8	1.7	31.7	4.9

New Bedford Solid Waste Handling Facility
4: Duchaine Boulevard & Theodore Rice Boulevard









2020 Base
Weekday PM

Intersection													
Int Delay, s/veh	9.8												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕	↕		↕			↕		
Traffic Vol, veh/h	0	0	0	118	0	35	0	13	270	102	22	0	
Future Vol, veh/h	0	0	0	118	0	35	0	13	270	102	22	0	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None	
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-	
Veh in Median Storage, #	0	-	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	89	92	89	92	80	80	80	80	92	
Heavy Vehicles, %	2	2	2	23	2	17	2	27	8	6	11	2	
Mvmt Flow	0	0	0	133	0	39	0	16	338	128	28	0	

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	0	0	0	1	0	0	-	267	-	275	267	-	
Stage 1	-	-	-	-	-	-	-	1	-	266	266	-	
Stage 2	-	-	-	-	-	-	-	266	-	9	1	-	
Critical Hdwy	4.12	-	-	4.33	-	-	-	6.77	-	7.16	6.61	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.77	-	6.16	5.61	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.77	-	6.16	5.61	-	
Follow-up Hdwy	2.218	-	-	2.407	-	-	-	4.243	-	3.554	4.099	-	
Pot Cap-1 Maneuver	-	-	-	1494	-	0	0	599	0	669	624	0	
Stage 1	-	-	-	-	-	0	0	848	0	731	673	0	
Stage 2	-	-	-	-	-	0	0	645	0	1002	877	0	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	1494	-	-	-	546	-	609	568	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	546	-	609	568	-	
Stage 1	-	-	-	-	-	-	-	848	-	731	613	-	
Stage 2	-	-	-	-	-	-	-	588	-	983	877	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.6		12.7
HCM LOS			-	B

Minor Lane/Major Mvm	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	546	-	-	-	-	1494	-	605	568
HCM Lane V/C Ratio	0.015	-	-	-	-	0.089	-	0.233	0.024
HCM Control Delay (s)	11.7	-	0	-	-	7.6	0	12.8	11.5
HCM Lane LOS	B	-	A	-	-	A	A	B	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0.3	-	0.9	0.1

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	163	0	271	0	0	146	0	5	372	0	75	172
Future Vol, veh/h	163	0	271	0	0	146	0	5	372	0	75	172
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	Free	-	-	Free	-	-	None
Storage Length	0	-	50	-	-	0	-	-	0	-	-	-
Veh in Median Storage, #	0	-	-	-	-	16979	-	-	0	-	-	0
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	82	82	82
Heavy Vehicles, %	15	0	1	0	0	12	0	13	2	0	35	12
Mvmt Flow	204	0	339	0	0	183	0	6	465	0	91	210

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	202	-	-	-	0
Stage 1	196	-	-	-	-
Stage 2	6	-	-	-	-
Critical Hdwy	6.825	-	-	-	-
Critical Hdwy Stg 1	6.025	-	-	-	-
Critical Hdwy Stg 2	5.625	-	-	-	-
Follow-up Hdwy	3.6425	-	-	-	-
Pot Cap-1 Maneuver	745	0	0	0	0
Stage 1	785	0	0	0	0
Stage 2	982	0	0	0	0
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	745	0	-	-	-
Mov Cap-2 Maneuver	745	0	-	-	-
Stage 1	785	0	-	-	-
Stage 2	982	0	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	4.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NB	EBLn	EBLn2	SBT	SBR
Capacity (veh/h)	-	745	-	-	-
HCM Lane V/C Ratio	-	0.273	-	-	-
HCM Control Delay (s)	-	11.6	0	-	-
HCM Lane LOS	-	B	A	-	-
HCM 95th %tile Q(veh)	-	1.1	-	-	-

Intersection

Int Delay, s/veh 14.1

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 41 331 140 191 292 6

Future Vol, veh/h 41 331 140 191 292 6

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage 0# - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 80 80 85 85 80 80

Heavy Vehicles, % 6 2 11 4 2 20

Mvmt Flow 51 414 165 225 365 8

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 924 369 373 0 - 0

Stage 1 369 - - - - -

Stage 2 555 - - - - -

Critical Hdwy 6.46 6.22 4.21 - - -

Critical Hdwy Stg 1 5.46 - - - - -

Critical Hdwy Stg 2 5.46 - - - - -

Follow-up Hdwy 3.554 3.318 2.299 - - -

Pot Cap-1 Maneuve 294 677 1138 - - -

Stage 1 691 - - - - -

Stage 2 567 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuve 245 677 1138 - - -

Mov Cap-2 Maneuve 245 - - - - -

Stage 1 576 - - - - -

Stage 2 567 - - - - -

Approach EB NB SB

HCM Control Delay, s 34 3.7 0

HCM LOS D

Minor Lane/Major Mvmt NBL NBTEBLn1 SBT SBR

Capacity (veh/h) 1138 - 567 - -

HCM Lane V/C Ratio 0.145 - 0.82 - -

HCM Control Delay (s) 8.7 0 34 - -

HCM Lane LOS A A D - -

HCM 95th %tile Q(veh) 0.5 - 8.3 - -

APPENDIX J

2020 Existing Capacity/Level-of-Service Analysis

New Bedford Solid Waste Handling Facility
1: Route 140 NB Off Ramp/Route 140 NB On Ramp & Braley Road

2020 Existing
Weekday AM

Intersection												
Int Delay, s/veh	109.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱		↰		↱			
Traffic Vol, veh/h	63	193	0	0	673	72	379	0	383	0	0	0
Future Vol, veh/h	63	193	0	0	673	72	379	0	383	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	0	-	75	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	94	94	94	94	94	94	92	92	92
Heavy Vehicles, %	26	7	0	0	2	0	4	0	4	2	2	2
Mvmt Flow	71	217	0	0	716	77	403	0	407	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	793	0	- - - 0 1114 - 217
Stage 1	-	-	- - - - 359 - -
Stage 2	-	-	- - - - 755 - -
Critical Hdwy	4.36	-	- - - - 6.44 - 6.24
Critical Hdwy Stg 1	-	-	- - - - 5.44 - -
Critical Hdwy Stg 2	-	-	- - - - 5.44 - -
Follow-up Hdwy	2.434	-	- - - - 3.536 - 3.336
Pot Cap-1 Maneuver	731	- 0 0	- - - ~ 228 0 818
Stage 1	-	- 0 0	- - - 702 0 -
Stage 2	-	- 0 0	- - - 461 0 -
Platoon blocked, %	-	-	- -
Mov Cap-1 Maneuver	731	- - - -	- ~ 203 0 818
Mov Cap-2 Maneuver	-	- - - -	- ~ 203 0 -
Stage 1	-	- - - -	- 625 0 -
Stage 2	-	- - - -	- 461 0 -

Approach	EB	WB	NB
HCM Control Delay, s	2.6	0	255.4
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	203	818	731	-	-	-
HCM Lane V/C Ratio	1.986	0.498	0.097	-	-	-
HCM Control Delay (s)	\$ 499.7	13.7	10.5	0	-	-
HCM Lane LOS	F	B	B	A	-	-
HCM 95th %tile Q(veh)	30.1	2.8	0.3	-	-	-

Notes			
-: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

New Bedford Solid Waste Handling Facility
2: Route 140 SB Off Ramp/Route 140 SB On Ramp & Braley Road






2020 Existing
Weekday AM

Intersection												
Int Delay, s/veh	64.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↰					↰		↰
Traffic Vol, veh/h	0	207	219	480	572	0	0	0	0	49	0	145
Future Vol, veh/h	0	207	219	480	572	0	0	0	0	49	0	145
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	0	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	91	91	91	92	92	92	85	85	85
Heavy Vehicles, %	0	12	8	2	4	0	2	2	2	12	0	9
Mvmt Flow	0	241	255	527	629	0	0	0	0	58	0	171
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	-	0	0	496	0	0				2052	-	629
Stage 1	-	-	-	-	-	-				1683	-	-
Stage 2	-	-	-	-	-	-				369	-	-
Critical Hdwy	-	-	-	4.12	-	-				6.52	-	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-				5.52	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.52	-	-
Follow-up Hdwy	-	-	-	2.218	-	-				3.608	-	3.381
Pot Cap-1 Maneuver	0	-	-	1068	-	0				~ 57	0	470
Stage 1	0	-	-	-	-	0				156	0	-
Stage 2	0	-	-	-	-	0				678	0	-
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	-	1068	-	-				~ 14	0	470
Mov Cap-2 Maneuver	-	-	-	-	-	-				~ 14	0	-
Stage 1	-	-	-	-	-	-				156	0	-
Stage 2	-	-	-	-	-	-				164	0	-
Approach	EB			WB			SB					
HCM Control Delay, s	0			5.3			\$ 504.7					
HCM LOS							F					
Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2						
Capacity (veh/h)	-	-	1068	-	14	470						
HCM Lane V/C Ratio	-	-	0.494	-	4.118	0.363						
HCM Control Delay (s)	-	-	11.6	\$ 1947.8	17							
HCM Lane LOS	-	-	B	A	F	C						
HCM 95th %tile Q(veh)	-	-	2.8	-	8.1	1.6						
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

New Bedford Solid Waste Handling Facility
3: Phillips Road & Theodore Rice Boulevard/Braleley Road

2020 Existing
Weekday AM

Intersection	
Intersection Delay, s/veh	91.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	110	15	135	476	106	14	26	151	165	21	31
Future Vol, veh/h	9	110	15	135	476	106	14	26	151	165	21	31
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.80	0.80	0.80	0.96	0.96	0.96
Heavy Vehicles, %	25	30	0	4	6	1	8	5	2	1	6	7
Mvmt Flow	11	133	18	144	506	113	18	33	189	172	22	32
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	13.9	154.4	15.7	16.4
HCM LOS	B	F	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	7%	8%	0%	19%	76%
Vol Thru, %	14%	92%	0%	66%	10%
Vol Right, %	79%	0%	100%	15%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	191	119	15	717	217
LT Vol	14	9	0	135	165
Through Vol	26	110	0	476	21
RT Vol	151	0	15	106	31
Lane Flow Rate	239	143	18	763	226
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.434	0.302	0.035	1.27	0.436
Departure Headway (Hd)	7.238	8.098	7.425	5.994	7.655
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	501	447	485	603	475
Service Time	5.238	5.798	5.125	4.059	5.655
HCM Lane V/C Ratio	0.477	0.32	0.037	1.265	0.476
HCM Control Delay	15.7	14.3	10.4	154.4	16.4
HCM Lane LOS	C	B	B	F	C
HCM 95th-tile Q	2.2	1.3	0.1	29.6	2.2








New Bedford Solid Waste Handling Facility
4: Duchaine Boulevard & Theodore Rice Boulevard

2020 Existing
Weekday AM

Intersection												
Int Delay, s/veh	9.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	0	0	0	362	0	104	0	5	106	17	9	0
Future Vol, veh/h	0	0	0	362	0	104	0	5	106	17	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	81	92	81	92	82	82	96	96	92
Heavy Vehicles, %	2	2	2	7	2	6	2	25	32	13	13	2
Mvmt Flow	0	0	0	447	0	128	0	6	129	18	9	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	1	0	0	-	895	-	898	895	-
Stage 1	-	-	-	-	-	-	-	1	-	894	894	-
Stage 2	-	-	-	-	-	-	-	894	-	4	1	-
Critical Hdwy	4.12	-	-	4.17	-	-	-	6.75	-	7.23	6.63	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.75	-	6.23	5.63	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.75	-	6.23	5.63	-
Follow-up Hdwy	2.218	-	-	2.263	-	-	-	4.225	-	3.617	4.117	-
Pot Cap-1 Maneuver	-	-	-	1589	-	0	0	257	0	249	269	0
Stage 1	-	-	-	-	-	0	0	851	0	321	345	0
Stage 2	-	-	-	-	-	0	0	330	0	990	874	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1589	-	-	-	185	-	190	193	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	185	-	190	193	-
Stage 1	-	-	-	-	-	-	-	851	-	321	248	-
Stage 2	-	-	-	-	-	-	-	237	-	983	874	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			8.2						25.9		
HCM LOS							-			D		
Minor Lane/Major Mvmt	NBLn1 NBLn2		EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2			
Capacity (veh/h)	185		-	-	-	-	1589	-	191	193		
HCM Lane V/C Ratio	0.016		-	-	-	-	0.281	-	0.117	0.024		
HCM Control Delay (s)	24.8		-	0	-	-	8.2	0	26.3	24.1		
HCM Lane LOS	C		-	A	-	-	A	A	D	C		
HCM 95th %tile Q(veh)	0.1		-	-	-	-	1.2	-	0.4	0.1		

New Bedford Solid Waste Handling Facility
5: Duchaine Boulevard & Samuel Barnet Boulevard

2020 Existing
Weekday AM

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	60	0	70	0	0	237	0	35	128	0	60	454
Future Vol, veh/h	60	0	70	0	0	237	0	35	128	0	60	454
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	Free	-	-	Free	-	-	None
Storage Length	0	-	50	-	-	0	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	35	0	13	0	0	3	0	37	19	0	13	5
Mvmt Flow	75	0	88	0	0	296	0	44	160	0	75	568

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	403	-	-	-	0	-	-	-	0
Stage 1	359	-	-	-	-	-	-	-	-
Stage 2	44	-	-	-	-	-	-	-	-
Critical Hdwy	7.125	-	-	-	-	-	-	-	-
Critical Hdwy Stg 1	6.325	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.925	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.8325	-	-	-	-	-	-	-	-
Pot Cap-1 Maneuver	520	0	0	0	-	0	0	-	-
Stage 1	602	0	0	0	-	0	0	-	-
Stage 2	894	0	0	0	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	520	0	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	520	0	-	-	-	-	-	-	-
Stage 1	602	0	-	-	-	-	-	-	-
Stage 2	894	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	-	520	-	-	-
HCM Lane V/C Ratio	-	0.144	-	-	-
HCM Control Delay (s)	-	13.1	0	-	-
HCM Lane LOS	-	B	A	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-	-

New Bedford Solid Waste Handling Facility
6: Phillips Road & Samuel Barnett Boulevard

2020 Existing
Weekday AM

Intersection

Int Delay, s/veh 5.1

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 6 122 228 152 126 9

Future Vol, veh/h 6 122 228 152 126 9

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage, # 0 - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 80 80 80 80 80 80

Heavy Vehicles, % 20 18 3 3 3 25

Mvmt Flow 8 153 285 190 158 11

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 924 164 169 0 - 0

Stage 1 164 - - - - -

Stage 2 760 - - - - -

Critical Hdwy 6.6 6.38 4.13 - - -

Critical Hdwy Stg 1 5.6 - - - - -

Critical Hdwy Stg 2 5.6 - - - - -

Follow-up Hdwy 3.68 3.462 2.227 - - -

Pot Cap-1 Maneuver 278 841 1402 - - -

Stage 1 823 - - - - -

Stage 2 431 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver 215 841 1402 - - -

Mov Cap-2 Maneuver 215 - - - - -

Stage 1 636 - - - - -

Stage 2 431 - - - - -

Approach EB NB SB

HCM Control Delay, s 11.2 4.9 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h) 1402 - 740 - -

HCM Lane V/C Ratio 0.203 - 0.216 - -

HCM Control Delay (s) 8.2 0 11.2 - -

HCM Lane LOS A A B - -

HCM 95th %tile Q(veh) 0.8 - 0.8 - -

New Bedford Solid Waste Handling Facility
1: Route 140 NB Off Ramp/Route 140 NB On Ramp & Braley Road

2020 Existing
Weekday PM

Intersection												
Int Delay, s/veh	128.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱		↰		↱			
Traffic Vol, veh/h	109	277	0	0	685	50	283	0	421	0	0	0
Future Vol, veh/h	109	277	0	0	685	50	283	0	421	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	0	-	75	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	85	85	85	89	89	89	92	92	92
Heavy Vehicles, %	4	2	0	0	3	5	8	0	3	0	0	0
Mvmt Flow	124	315	0	0	806	59	318	0	473	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	865	0	-	-	0	1399
Stage 1	-	-	-	-	-	563
Stage 2	-	-	-	-	-	836
Critical Hdwy	4.14	-	-	-	-	6.48
Critical Hdwy Stg 1	-	-	-	-	-	5.48
Critical Hdwy Stg 2	-	-	-	-	-	5.48
Follow-up Hdwy	2.236	-	-	-	-	3.572
Pot Cap-1 Maneuver	770	-	0	0	-	~ 150
Stage 1	-	-	0	0	-	558
Stage 2	-	-	0	0	-	415
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	770	-	-	-	-	~ 121
Mov Cap-2 Maneuver	-	-	-	-	-	~ 121
Stage 1	-	-	-	-	-	449
Stage 2	-	-	-	-	-	415

Approach	EB	WB	NB
HCM Control Delay, s	3	0	\$ 337.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	121	723	770	-	-	-
HCM Lane V/C Ratio	2.628	0.654	0.161	-	-	-
HCM Control Delay (s)	\$ 812.5	18.9	10.6	0	-	-
HCM Lane LOS	F	C	B	A	-	-
HCM 95th %tile Q(veh)	28.8	4.9	0.6	-	-	-

Notes			
-: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

New Bedford Solid Waste Handling Facility
2: Route 140 SB Off Ramp/Route 140 SB On Ramp & Braley Road






2020 Existing
Weekday PM

Intersection												
Int Delay, s/veh	5.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱					↱		↱
Traffic Vol, veh/h	0	329	503	483	485	0	0	0	0	57	0	114
Future Vol, veh/h	0	329	503	483	485	0	0	0	0	57	0	114
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	0	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	94	94	94	92	92	92	86	86	86
Heavy Vehicles, %	0	3	6	3	6	0	2	2	2	2	0	7
Mvmt Flow	0	396	606	514	516	0	0	0	0	66	0	133
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	-	0	0	1002	0	0				2243	-	516
Stage 1	-	-	-	-	-	-				1544	-	-
Stage 2	-	-	-	-	-	-				699	-	-
Critical Hdwy	-	-	-	4.13	-	-				6.42	-	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	-	-
Follow-up Hdwy	-	-	-	2.227	-	-				3.518	-	3.363
Pot Cap-1 Maneuver	0	-	-	687	-	0				~ 46	0	549
Stage 1	0	-	-	-	-	0				194	0	-
Stage 2	0	-	-	-	-	0				493	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	687	-	-				0	0	549
Mov Cap-2 Maneuver	-	-	-	-	-	-				0	0	-
Stage 1	-	-	-	-	-	-				194	0	-
Stage 2	-	-	-	-	-	-				0	0	-
Approach	EB			WB			SB					
HCM Control Delay, s	0			12								
HCM LOS							-					
Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2						
Capacity (veh/h)	-	-	687	-	-	549						
HCM Lane V/C Ratio	-	-	0.748	-	-	0.241						
HCM Control Delay (s)	-	-	24.1	0	-	13.6						
HCM Lane LOS	-	-	C	A	-	B						
HCM 95th %tile Q(veh)	-	-	6.8	-	-	0.9						
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

New Bedford Solid Waste Handling Facility
3: Phillips Road & Theodore Rice Boulevard/Braleley Road

2020 Existing
Weekday PM

Intersection	
Intersection Delay, s/veh	171
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	432	132	211	192	196	22	53	204	196	51	31
Future Vol, veh/h	27	432	132	211	192	196	22	53	204	196	51	31
Peak Hour Factor	0.80	0.80	0.80	0.93	0.93	0.93	0.80	0.80	0.80	0.95	0.95	0.95
Heavy Vehicles, %	18	5	2	2	15	2	0	5	4	3	2	33
Mvmt Flow	34	540	165	227	206	211	28	66	255	206	54	33
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	193.4	270.5	48	42.1
HCM LOS	F	F	E	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	8%	6%	0%	35%	71%
Vol Thru, %	19%	94%	0%	32%	18%
Vol Right, %	73%	0%	100%	33%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	279	459	132	599	278
LT Vol	22	27	0	211	196
Through Vol	53	432	0	192	51
RT Vol	204	0	132	196	31
Lane Flow Rate	349	574	165	644	293
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.824	1.449	0.373	1.519	0.751
Departure Headway (Hd)	10.564	10.257	9.261	9.306	11.431
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	345	361	391	399	319
Service Time	8.564	7.957	6.961	7.306	9.431
HCM Lane V/C Ratio	1.012	1.59	0.422	1.614	0.918
HCM Control Delay	48	244	17.4	270.5	42.1
HCM Lane LOS	E	F	C	F	E
HCM 95th-tile Q	7.2	26.8	1.7	32	5.7

New Bedford Solid Waste Handling Facility
4: Duchaine Boulevard & Theodore Rice Boulevard

2020 Existing
Weekday PM

Intersection												
Int Delay, s/veh	9.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	0	0	0	123	0	35	0	13	293	102	22	0
Future Vol, veh/h	0	0	0	123	0	35	0	13	293	102	22	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	92	89	92	80	80	80	80	92
Heavy Vehicles, %	2	2	2	23	2	17	2	27	8	6	11	2
Mvmt Flow	0	0	0	138	0	39	0	16	366	128	28	0








Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	1	0	0	-	277	-	285	277	-
Stage 1	-	-	-	-	-	-	-	1	-	276	276	-
Stage 2	-	-	-	-	-	-	-	276	-	9	1	-
Critical Hdwy	4.12	-	-	4.33	-	-	-	6.77	-	7.16	6.61	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.77	-	6.16	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.77	-	6.16	5.61	-
Follow-up Hdwy	2.218	-	-	2.407	-	-	-	4.243	-	3.554	4.099	-
Pot Cap-1 Maneuver	-	-	-	1494	-	0	0	591	0	659	616	0
Stage 1	-	-	-	-	-	0	0	848	0	722	666	0
Stage 2	-	-	-	-	-	0	0	639	0	1002	877	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1494	-	-	-	537	-	598	559	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	537	-	598	559	-
Stage 1	-	-	-	-	-	-	-	848	-	722	605	-
Stage 2	-	-	-	-	-	-	-	580	-	983	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.7		12.8
HCM LOS			-	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	537	-	-	-	-	1494	-	594	559
HCM Lane V/C Ratio	0.015	-	-	-	-	0.093	-	0.238	0.025
HCM Control Delay (s)	11.8	-	0	-	-	7.7	0	12.9	11.6
HCM Lane LOS	B	-	A	-	-	A	A	B	B
HCM 95th %tile Q(veh)	0	-	-	-	-	0.3	-	0.9	0.1

New Bedford Solid Waste Handling Facility
5: Duchaine Boulevard & Samuel Barnet Boulevard

2020 Existing
Weekday PM

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	163	0	271	0	0	146	0	28	375	0	76	172
Future Vol, veh/h	163	0	271	0	0	146	0	28	375	0	76	172
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	Free	-	-	Free	-	-	None
Storage Length	0	-	50	-	-	0	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	82	82	82
Heavy Vehicles, %	15	0	1	0	0	12	0	13	2	0	35	12
Mvmt Flow	204	0	339	0	0	183	0	35	469	0	93	210

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	233	-	-	-	0	-	-	-	0
Stage 1	198	-	-	-	-	-	-	-	-
Stage 2	35	-	-	-	-	-	-	-	-
Critical Hdwy	6.825	-	-	-	-	-	-	-	-
Critical Hdwy Stg 1	6.025	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.625	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.6425	-	-	-	-	-	-	-	-
Pot Cap-1 Maneuver	713	0	0	0	-	0	0	-	-
Stage 1	783	0	0	0	-	0	0	-	-
Stage 2	952	0	0	0	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	713	0	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	713	0	-	-	-	-	-	-	-
Stage 1	783	0	-	-	-	-	-	-	-
Stage 2	952	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		




Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	-	713	-	-	-
HCM Lane V/C Ratio	-	0.286	-	-	-
HCM Control Delay (s)	-	12.1	0	-	-
HCM Lane LOS	-	B	A	-	-
HCM 95th %tile Q(veh)	-	1.2	-	-	-

New Bedford Solid Waste Handling Facility
6: Phillips Road & Samuel Barnet Boulevard

2020 Existing
Weekday PM

Intersection

Int Delay, s/veh 14.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	334	140	191	292	6
Future Vol, veh/h	41	334	140	191	292	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	85	85	80	80
Heavy Vehicles, %	6	2	11	4	2	20
Mvmt Flow	51	418	165	225	365	8

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	924	369	373
Stage 1	369	-	-
Stage 2	555	-	-
Critical Hdwy	6.46	6.22	4.21
Critical Hdwy Stg 1	5.46	-	-
Critical Hdwy Stg 2	5.46	-	-
Follow-up Hdwy	3.554	3.318	2.299
Pot Cap-1 Maneuver	294	677	1138
Stage 1	691	-	-
Stage 2	567	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	245	677	1138
Mov Cap-2 Maneuver	245	-	-
Stage 1	576	-	-
Stage 2	567	-	-

Approach	EB	NB	SB
HCM Control Delay, s	34.5	3.7	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1138	-	568	-	-
HCM Lane V/C Ratio	0.145	-	0.825	-	-
HCM Control Delay (s)	8.7	0	34.5	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.5	-	8.4	-	-

APPENDIX K

2027 No Build Capacity/Level-of-Service Analysis

New Bedford Solid Waste Handling Facility
1: Route 140 NB Off Ramp/Route 140 NB On Ramp & Braley Road

2027 No Build
Weekday AM

Intersection												
Int Delay, s/veh	152.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱		↰		↱			
Traffic Vol, veh/h	68	207	0	0	722	77	406	0	411	0	0	0
Future Vol, veh/h	68	207	0	0	722	77	406	0	411	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	0	-	75	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	94	94	94	94	94	94	92	92	92
Heavy Vehicles, %	26	7	0	0	2	0	4	0	4	2	2	2
Mvmt Flow	76	233	0	0	768	82	432	0	437	0	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	850	0	-	-	0	1194
Stage 1	-	-	-	-	-	385
Stage 2	-	-	-	-	-	809
Critical Hdwy	4.36	-	-	-	-	6.44
Critical Hdwy Stg 1	-	-	-	-	-	5.44
Critical Hdwy Stg 2	-	-	-	-	-	5.44
Follow-up Hdwy	2.434	-	-	-	-	3.536
Pot Cap-1 Maneuver	695	-	0	0	-	~ 204
Stage 1	-	-	0	0	-	683
Stage 2	-	-	0	0	-	435
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	695	-	-	-	-	~ 178
Mov Cap-2 Maneuver	-	-	-	-	-	~ 178
Stage 1	-	-	-	-	-	597
Stage 2	-	-	-	-	-	435

Approach	EB	WB	NB
HCM Control Delay, s	2.7	0	\$ 355.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	178	801	695	-	-	-
HCM Lane V/C Ratio	2.426	0.546	0.11	-	-	-
HCM Control Delay (s)	\$ 699.9	14.8	10.8	0	-	-
HCM Lane LOS	F	B	B	A	-	-
HCM 95th %tile Q(veh)	36.2	3.4	0.4	-	-	-

Notes			
-: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

New Bedford Solid Waste Handling Facility
2: Route 140 SB Off Ramp/Route 140 SB On Ramp & Braley Road






2027 No Build
Weekday AM

Intersection												
Int Delay, s/veh	172.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱					↱		↱
Traffic Vol, veh/h	0	222	235	515	613	0	0	0	0	53	0	156
Future Vol, veh/h	0	222	235	515	613	0	0	0	0	53	0	156
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	0	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	91	91	91	92	92	92	85	85	85
Heavy Vehicles, %	0	12	8	2	4	0	2	2	2	12	0	9
Mvmt Flow	0	258	273	566	674	0	0	0	0	62	0	184
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	-	0	0	531	0	0				2201	-	674
Stage 1	-	-	-	-	-	-				1806	-	-
Stage 2	-	-	-	-	-	-				395	-	-
Critical Hdwy	-	-	-	4.12	-	-				6.52	-	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-				5.52	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.52	-	-
Follow-up Hdwy	-	-	-	2.218	-	-				3.608	-	3.381
Pot Cap-1 Maneuver	0	-	-	1036	-	0				~ 46	0	443
Stage 1	0	-	-	-	-	0				135	0	-
Stage 2	0	-	-	-	-	0				659	0	-
Platoon blocked, %	-	-	-	-	-	-						
Mov Cap-1 Maneuver	-	-	-	1036	-	-				~ 6	0	443
Mov Cap-2 Maneuver	-	-	-	-	-	-				~ 6	0	-
Stage 1	-	-	-	-	-	-				135	0	-
Stage 2	-	-	-	-	-	-				84	0	-
Approach	EB			WB			SB					
HCM Control Delay, s	0			5.7			\$ 1387.2					
HCM LOS							F					
Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2						
Capacity (veh/h)	-	-	1036	-	6	443						
HCM Lane V/C Ratio	-	-	0.546	-	10.392	0.414						
HCM Control Delay (s)	-	-	12.6	\$ 5414.8	18.8							
HCM Lane LOS	-	-	B	A	F	C						
HCM 95th %tile Q(veh)	-	-	3.4	-	9.5	2						
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

New Bedford Solid Waste Handling Facility
3: Phillips Road & Theodore Rice Boulevard/Braleley Road

2027 No Build
Weekday AM

Intersection	
Intersection Delay, s/veh	123.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	118	16	145	510	114	15	28	162	177	23	33
Future Vol, veh/h	10	118	16	145	510	114	15	28	162	177	23	33
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.80	0.80	0.80	0.96	0.96	0.96
Heavy Vehicles, %	25	30	0	4	6	1	8	5	2	1	6	7
Mvmt Flow	12	142	19	154	543	121	19	35	203	184	24	34
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	14.9	211.5	17.4	18.2
HCM LOS	B	F	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	7%	8%	0%	19%	76%
Vol Thru, %	14%	92%	0%	66%	10%
Vol Right, %	79%	0%	100%	15%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	205	128	16	769	233
LT Vol	15	10	0	145	177
Through Vol	28	118	0	510	23
RT Vol	162	0	16	114	33
Lane Flow Rate	256	154	19	818	243
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.474	0.333	0.038	1.406	0.476
Departure Headway (Hd)	7.659	8.49	7.813	6.188	8.077
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	474	426	461	589	449
Service Time	5.659	6.19	5.513	4.261	6.077
HCM Lane V/C Ratio	0.54	0.362	0.041	1.389	0.541
HCM Control Delay	17.4	15.4	10.8	211.5	18.2
HCM Lane LOS	C	C	B	F	C
HCM 95th-tile Q	2.5	1.4	0.1	37.3	2.5

New Bedford Solid Waste Handling Facility
4: Duchaine Boulevard & Theodore Rice Boulevard

2027 No Build
Weekday AM

Intersection												
Int Delay, s/veh	9.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	0	0	0	388	0	112	0	5	114	18	10	0
Future Vol, veh/h	0	0	0	388	0	112	0	5	114	18	10	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	81	92	81	92	82	82	96	96	92
Heavy Vehicles, %	2	2	2	7	2	6	2	25	32	13	13	2
Mvmt Flow	0	0	0	479	0	138	0	6	139	19	10	0








Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	1	0	0	-	959	-	962	959	-
Stage 1	-	-	-	-	-	-	-	1	-	958	958	-
Stage 2	-	-	-	-	-	-	-	958	-	4	1	-
Critical Hdwy	4.12	-	-	4.17	-	-	-	6.75	-	7.23	6.63	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.75	-	6.23	5.63	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.75	-	6.23	5.63	-
Follow-up Hdwy	2.218	-	-	2.263	-	-	-	4.225	-	3.617	4.117	-
Pot Cap-1 Maneuver	-	-	-	1589	-	0	0	235	0	225	246	0
Stage 1	-	-	-	-	-	0	0	851	0	295	322	0
Stage 2	-	-	-	-	-	0	0	307	0	990	874	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1589	-	-	-	164	-	168	172	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	164	-	168	172	-
Stage 1	-	-	-	-	-	-	-	851	-	295	225	-
Stage 2	-	-	-	-	-	-	-	215	-	983	874	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.2		29.2
HCM LOS			-	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	164	-	-	-	-	1589	-	169	172
HCM Lane V/C Ratio	0.019	-	-	-	-	0.301	-	0.142	0.03
HCM Control Delay (s)	27.4	-	0	-	-	8.2	0	29.8	26.6
HCM Lane LOS	D	-	A	-	-	A	A	D	D
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.3	-	0.5	0.1




New Bedford Solid Waste Handling Facility
5: Duchaine Boulevard & Samuel Barnet Boulevard

2027 No Build
Weekday AM

Intersection													
Int Delay, s/veh	1.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Vol, veh/h	64	0	75	0	0	254	0	38	137	0	64	487	
Future Vol, veh/h	64	0	75	0	0	254	0	38	137	0	64	487	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free	
RT Channelized	-	-	Free	-	-	Free	-	-	Free	-	-	None	
Storage Length	0	-	50	-	-	0	-	-	0	-	-	-	
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80	
Heavy Vehicles, %	35	0	13	0	0	3	0	37	19	0	13	5	
Mvmt Flow	80	0	94	0	0	318	0	48	171	0	80	609	
Major/Minor	Minor2			Major1				Major2					
Conflicting Flow All	433	-	-					-	0	-	-	-	0
Stage 1	385	-	-					-	-	-	-	-	-
Stage 2	48	-	-					-	-	-	-	-	-
Critical Hdwy	7.125	-	-					-	-	-	-	-	-
Critical Hdwy Stg 1	6.325	-	-					-	-	-	-	-	-
Critical Hdwy Stg 2	5.925	-	-					-	-	-	-	-	-
Follow-up Hdwy	3.8325	-	-					-	-	-	-	-	-
Pot Cap-1 Maneuver	498	0	0					0	-	0	0	-	-
Stage 1	582	0	0					0	-	0	0	-	-
Stage 2	890	0	0					0	-	0	0	-	-
Platoon blocked, %									-			-	-
Mov Cap-1 Maneuver	498	0	-					-	-	-	-	-	-
Mov Cap-2 Maneuver	498	0	-					-	-	-	-	-	-
Stage 1	582	0	-					-	-	-	-	-	-
Stage 2	890	0	-					-	-	-	-	-	-
Approach	EB			NB				SB					
HCM Control Delay, s	13.6			0				0					
HCM LOS	B												
Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT	SBR								
Capacity (veh/h)	-	498	-	-	-								
HCM Lane V/C Ratio	-	0.161	-	-	-								
HCM Control Delay (s)	-	13.6	0	-	-								
HCM Lane LOS	-	B	A	-	-								
HCM 95th %tile Q(veh)	-	0.6	-	-	-								

New Bedford Solid Waste Handling Facility
6: Phillips Road & Samuel Barnett Boulevard

2027 No Build
Weekday AM

Intersection						
Int Delay, s/veh	5.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	131	244	163	135	10
Future Vol, veh/h	6	131	244	163	135	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	20	18	3	3	3	25
Mvmt Flow	8	164	305	204	169	13
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	990	176	182	0	-	0
Stage 1	176	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Critical Hdwy	6.6	6.38	4.13	-	-	-
Critical Hdwy Stg 1	5.6	-	-	-	-	-
Critical Hdwy Stg 2	5.6	-	-	-	-	-
Follow-up Hdwy	3.68	3.462	2.227	-	-	-
Pot Cap-1 Maneuver	253	827	1387	-	-	-
Stage 1	813	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	827	1387	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	611	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.5	5		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1387	-	721	-	-	
HCM Lane V/C Ratio	0.22	-	0.238	-	-	
HCM Control Delay (s)	8.3	0	11.5	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.8	-	0.9	-	-	

New Bedford Solid Waste Handling Facility
1: Route 140 NB Off Ramp/Route 140 NB On Ramp & Braley Road

2027 No Build
Weekday PM

Intersection												
Int Delay, s/veh	182.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱		↰		↱			
Traffic Vol, veh/h	117	297	0	0	734	54	304	0	451	0	0	0
Future Vol, veh/h	117	297	0	0	734	54	304	0	451	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	0	-	75	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	16965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	85	85	85	89	89	89	92	92	92
Heavy Vehicles, %	4	2	0	0	3	5	8	0	3	0	0	0
Mvmt Flow	133	338	0	0	864	64	342	0	507	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	928	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.236	-	-
Pot Cap-1 Maneuver	729	-	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	729	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	3.1	0	\$ 480.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	101	702	729	-	-	-
HCM Lane V/C Ratio	3.382	0.722	0.182	-	-	-
HCM Control Delay (s)	\$ 1160.9	22.3	11	0	-	-
HCM Lane LOS	F	C	B	A	-	-
HCM 95th %tile Q(veh)	33.9	6.2	0.7	-	-	-

Notes			
-: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

New Bedford Solid Waste Handling Facility
2: Route 140 SB Off Ramp/Route 140 SB On Ramp & Braley Road






2027 No Build
Weekday PM

Intersection												
Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱					↱		↱
Traffic Vol, veh/h	0	353	539	518	520	0	0	0	0	61	0	122
Future Vol, veh/h	0	353	539	518	520	0	0	0	0	61	0	122
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	0	-	75
Veh in Median Storage, #	-	0	-	-	0	-	-	16974	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	94	94	94	92	92	92	86	86	86
Heavy Vehicles, %	0	3	6	3	6	0	2	2	2	2	0	7
Mvmt Flow	0	425	649	551	553	0	0	0	0	71	0	142
Major/Minor	Major1			Major2			Minor2					
Conflicting Flow All	-	0	0	1074	0	0				2405	-	553
Stage 1	-	-	-	-	-	-				1655	-	-
Stage 2	-	-	-	-	-	-				750	-	-
Critical Hdwy	-	-	-	4.13	-	-				6.42	-	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-				5.42	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-				5.42	-	-
Follow-up Hdwy	-	-	-	2.227	-	-				3.518	-	3.363
Pot Cap-1 Maneuver	0	-	-	645	-	0				~ 36	0	523
Stage 1	0	-	-	-	-	0				171	0	-
Stage 2	0	-	-	-	-	0				467	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	645	-	-				0	0	523
Mov Cap-2 Maneuver	-	-	-	-	-	-				0	0	-
Stage 1	-	-	-	-	-	-				171	0	-
Stage 2	-	-	-	-	-	-				0	0	-
Approach	EB			WB			SB					
HCM Control Delay, s	0			17.2								
HCM LOS							-					
Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2						
Capacity (veh/h)	-	-	645	-	-	523						
HCM Lane V/C Ratio	-	-	0.854	-	-	0.271						
HCM Control Delay (s)	-	-	34.6	0	-	14.4						
HCM Lane LOS	-	-	D	A	-	B						
HCM 95th %tile Q(veh)	-	-	9.7	-	-	1.1						
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

New Bedford Solid Waste Handling Facility
3: Phillips Road & Theodore Rice Boulevard/Braleley Road

2027 No Build
Weekday PM

Intersection	
Intersection Delay, s/veh	212.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	463	142	226	206	210	24	57	219	210	55	12
Future Vol, veh/h	29	463	142	226	206	210	24	57	219	210	55	12
Peak Hour Factor	0.80	0.80	0.80	0.93	0.93	0.93	0.80	0.80	0.80	0.95	0.95	0.95
Heavy Vehicles, %	18	5	2	2	15	2	0	5	4	3	2	33
Mvmt Flow	36	579	178	243	222	226	30	71	274	221	58	13
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	238.9	335.3	60.4	46.3
HCM LOS	F	F	F	E

Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	8%	6%	0%	35%	76%
Vol Thru, %	19%	94%	0%	32%	20%
Vol Right, %	73%	0%	100%	33%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	492	142	642	277
LT Vol	24	29	0	226	210
Through Vol	57	463	0	206	55
RT Vol	219	0	142	210	12
Lane Flow Rate	375	615	178	690	292
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.889	1.583	0.41	1.667	0.766
Departure Headway (Hd)	11.123	10.753	9.754	9.682	12.287
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	330	344	371	380	297
Service Time	9.123	8.453	7.454	7.682	10.287
HCM Lane V/C Ratio	1.136	1.788	0.48	1.816	0.983
HCM Control Delay	60.4	302.3	19.1	335.3	46.3
HCM Lane LOS	F	F	C	F	E
HCM 95th-tile Q	8.4	30.8	1.9	37.2	5.8

New Bedford Solid Waste Handling Facility
4: Duchaine Boulevard & Theodore Rice Boulevard

2027 No Build
Weekday PM

Intersection												
Int Delay, s/veh	10.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	0	0	0	132	0	38	0	14	314	109	24	0
Future Vol, veh/h	0	0	0	132	0	38	0	14	314	109	24	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	89	92	89	92	80	80	80	80	92
Heavy Vehicles, %	2	2	2	23	2	17	2	27	8	6	11	2
Mvmt Flow	0	0	0	148	0	43	0	18	393	136	30	0








Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	0	0	0	1	0	0	-	297	-	306	297	-
Stage 1	-	-	-	-	-	-	-	1	-	296	296	-
Stage 2	-	-	-	-	-	-	-	296	-	10	1	-
Critical Hdwy	4.12	-	-	4.33	-	-	-	6.77	-	7.16	6.61	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.77	-	6.16	5.61	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.77	-	6.16	5.61	-
Follow-up Hdwy	2.218	-	-	2.407	-	-	-	4.243	-	3.554	4.099	-
Pot Cap-1 Maneuver	-	-	-	1494	-	0	0	575	0	639	600	0
Stage 1	-	-	-	-	-	0	0	848	0	704	652	0
Stage 2	-	-	-	-	-	0	0	625	0	1001	877	0
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	1494	-	-	-	518	-	576	541	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	518	-	576	541	-
Stage 1	-	-	-	-	-	-	-	848	-	704	587	-
Stage 2	-	-	-	-	-	-	-	563	-	980	877	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.7		13.3
HCM LOS			-	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	518	-	-	-	-	1494	-	572	541
HCM Lane V/C Ratio	0.017	-	-	-	-	0.099	-	0.264	0.028
HCM Control Delay (s)	12.1	-	0	-	-	7.7	0	13.5	11.8
HCM Lane LOS	B	-	A	-	-	A	A	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.3	-	1.1	0.1

New Bedford Solid Waste Handling Facility
5: Duchaine Boulevard & Samuel Barnet Boulevard




2027 No Build
Weekday PM

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	175	0	291	0	0	157	0	30	402	0	81	184
Future Vol, veh/h	175	0	291	0	0	157	0	30	402	0	81	184
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	Free	-	-	Free	-	-	None
Storage Length	0	-	50	-	-	0	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	82	82	82
Heavy Vehicles, %	15	0	1	0	0	12	0	13	2	0	35	12
Mvmt Flow	219	0	364	0	0	196	0	38	503	0	99	224

Major/Minor	Minor2			Major1			Major2		
Conflicting Flow All	249	-	-	-	0	-	-	-	0
Stage 1	211	-	-	-	-	-	-	-	-
Stage 2	38	-	-	-	-	-	-	-	-
Critical Hdwy	6.825	-	-	-	-	-	-	-	-
Critical Hdwy Stg 1	6.025	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.625	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.6425	-	-	-	-	-	-	-	-
Pot Cap-1 Maneuver	697	0	0	0	-	0	0	-	-
Stage 1	771	0	0	0	-	0	0	-	-
Stage 2	949	0	0	0	-	0	0	-	-
Platoon blocked, %					-			-	-
Mov Cap-1 Maneuver	697	0	-	-	-	-	-	-	-
Mov Cap-2 Maneuver	697	0	-	-	-	-	-	-	-
Stage 1	771	0	-	-	-	-	-	-	-
Stage 2	949	0	-	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	-	697	-	-	-
HCM Lane V/C Ratio	-	0.314	-	-	-
HCM Control Delay (s)	-	12.5	0	-	-
HCM Lane LOS	-	B	A	-	-
HCM 95th %tile Q(veh)	-	1.3	-	-	-

Intersection						
Int Delay, s/veh	21.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	358	150	205	313	7
Future Vol, veh/h	44	358	150	205	313	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	85	85	80	80
Heavy Vehicles, %	6	2	11	4	2	20
Mvmt Flow	55	448	176	241	391	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	989	396	400	0	-	0
Stage 1	396	-	-	-	-	-
Stage 2	593	-	-	-	-	-
Critical Hdwy	6.46	6.22	4.21	-	-	-
Critical Hdwy Stg 1	5.46	-	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-	-
Follow-up Hdwy	3.554	3.318	2.299	-	-	-
Pot Cap-1 Maneuver	269	653	1111	-	-	-
Stage 1	671	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	220	653	1111	-	-	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	548	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	52.3	3.7		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1111	-	537	-	-	
HCM Lane V/C Ratio	0.159	-	0.936	-	-	
HCM Control Delay (s)	8.9	0	52.3	-	-	
HCM Lane LOS	A	A	F	-	-	
HCM 95th %tile Q(veh)	0.6	-	11.7	-	-	

APPENDIX L

2027 Build Capacity/Level-of-Service Analysis

Intersection

Int Delay, s/veh 183.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱			↱		↱		↱			
Traffic Vol, veh/h	88	207	0	0	722	77	414	0	411	0	0	0
Future Vol, veh/h	88	207	0	0	722	77	414	0	411	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	0	-	75	-	-	-
Veh in Median Storage, #	0	-	-	-	0	-	-	0	-	-16	965	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	94	94	94	94	94	94	92	92	92
Heavy Vehicles, %	26	7	0	0	2	0	4	0	4	2	2	2
Mvmt Flow	99	233	0	0	768	82	440	0	437	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	850	0	- - - 0 1240 - 233
Stage 1	-	-	- - - - 431 - -
Stage 2	-	-	- - - - 809 - -
Critical Hdwy	4.36	-	- - - - 6.44 - 6.24
Critical Hdwy Stg 1	-	-	- - - - 5.44 - -
Critical Hdwy Stg 2	-	-	- - - - 5.44 - -
Follow-up Hdwy	2.434	-	- - - - 3.536 - 3.336
Pot Cap-1 Maneuver	695	-	0 0 - - ~ 192 0 801
Stage 1	-	-	0 0 - - 651 0 -
Stage 2	-	-	0 0 - - ~ 435 0 -
Platoon blocked, %	-	-	- -
Mov Cap-1 Maneuver	695	-	- - - - ~ 161 0 801
Mov Cap-2 Maneuver	-	-	- - - - ~ 161 0 -
Stage 1	-	-	- - - - 544 0 -
Stage 2	-	-	- - - - ~ 435 0 -

Approach	EB	WB	NB
HCM Control Delay, \$	3	0	\$ 430
HCM LOS			F





Minor Lane/Major Mvm	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	161	801	695	-	-	-
HCM Lane V/C Ratio	2.736	0.546	0.142	-	-	-
HCM Control Delay (s)	\$ 842.1	14.8	11	0	-	-
HCM Lane LOS	F	B	B	A	-	-
HCM 95th %tile Q(veh)	39.1	3.4	0.5	-	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 255

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	242	253	515	621	0	0	0	0	53	0	164
Future Vol, veh/h	0	242	253	515	621	0	0	0	0	53	0	164
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	0	-	75
Veh in Median Storage, #	0	-	-	-	0	-	-169	74	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	91	91	91	92	92	92	85	85	85
Heavy Vehicles, %	0	12	8	2	4	0	2	2	2	12	0	9
Mvmt Flow	0	281	294	566	682	0	0	0	0	62	0	193

Major/Minor	Major1			Major2			Minor2		
Conflicting Flow All	-	0	0	575	0	0	2242	-	682
Stage 1	-	-	-	-	-	-	1814	-	-
Stage 2	-	-	-	-	-	-	428	-	-
Critical Hdwy	-	-	-	4.12	-	-	6.52	-	6.29
Critical Hdwy Stg 1	-	-	-	-	-	-	5.52	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.52	-	-
Follow-up Hdwy	-	-	-	2.218	-	-	3.608	-	3.381
Pot Cap-1 Maneuver	0	-	-	998	-	0	~ 43	0	438
Stage 1	0	-	-	-	-	0	134	0	-
Stage 2	0	-	-	-	-	0	637	0	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	998	-	-	~ 4	0	438
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 4	0	-
Stage 1	-	-	-	-	-	-	134	0	-
Stage 2	-	-	-	-	-	-	~ 55	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	6	\$ 2047.1
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	998	-	4	438
HCM Lane V/C Ratio	-	-	0.567	-	15.588	0.441
HCM Control Delay (s)	-	-	13.2	-	\$ 8321	19.5
HCM Lane LOS	-	-	B	-	A	F
HCM 95th %tile Q(veh)	-	-	3.7	-	9.7	2.2

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Intersection Delay, s/veh 138.8

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰↱			↰↱			↰↱	
Traffic Vol, veh/h	10	156	16	145	526	114	15	28	162	177	23	33
Future Vol, veh/h	10	156	16	145	526	114	15	28	162	177	23	33
Peak Hour Factor	0.83	0.83	0.83	0.94	0.94	0.94	0.80	0.80	0.80	0.96	0.96	0.96
Heavy Vehicles, %	25	30	0	4	6	1	8	5	2	1	6	7
Mvmt Flow	12	188	19	154	560	121	19	35	203	184	24	34
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	17.2	242.5	18.4	19.2
HCM LOS	C	F	C	C








Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	7%	6%	0%	18%	76%
Vol Thru, %	14%	94%	0%	67%	10%
Vol Right, %	79%	0%	100%	15%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	205	166	16	785	233
LT Vol	15	10	0	145	177
Through Vol	28	156	0	526	23
RT Vol	162	0	16	114	33
Lane Flow Rate	256	200	19	835	243
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.488	0.434	0.038	1.477	0.489
Departure Headway (Hd)	8.016	8.648	7.98	6.367	8.438
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	454	420	451	568	430
Service Time	6.016	6.348	5.68	4.46	6.438
HCM Lane V/C Ratio	0.564	0.476	0.042	1.47	0.565
HCM Control Delay	18.4	17.8	11	242.5	19.2
HCM Lane LOS	C	C	B	F	C
HCM 95th-tile Q	2.6	2.1	0.1	40.8	2.6

Intersection													
Int Delay, s/veh	9.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕	↕		↕			↕		
Traffic Vol, veh/h	0	0	0	404	0	112	0	5	152	18	10	0	
Future Vol, veh/h	0	0	0	404	0	112	0	5	152	18	10	0	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None	
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-	
Veh in Median Storage, #	0	-	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	81	92	81	92	82	82	96	96	92	
Heavy Vehicles, %	2	2	2	7	2	6	2	25	32	13	13	2	
Mvmt Flow	0	0	0	499	0	138	0	6	185	19	10	0	

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	0	0	0	1	0	0	-	999	-	1002	999	-	
Stage 1	-	-	-	-	-	-	-	1	-	998	998	-	
Stage 2	-	-	-	-	-	-	-	998	-	4	1	-	
Critical Hdwy	4.12	-	-	4.17	-	-	-	6.75	-	7.23	6.63	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.75	-	6.23	5.63	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.75	-	6.23	5.63	-	
Follow-up Hdwy	2.218	-	-	2.263	-	-	-	4.225	-	3.617	4.117	-	
Pot Cap-1 Maneuver	-	-	-	1589	-	0	0	222	0	211	233	0	
Stage 1	-	-	-	-	-	0	0	851	0	280	308	0	
Stage 2	-	-	-	-	-	0	0	294	0	990	874	0	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	1589	-	-	-	152	-	155	160	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	152	-	155	160	-	
Stage 1	-	-	-	-	-	-	-	851	-	280	211	-	
Stage 2	-	-	-	-	-	-	-	202	-	983	874	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.3		31.5
HCM LOS			-	D

Minor Lane/Major Mvm	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	152	-	-	-	-	1589	-	156	160
HCM Lane V/C Ratio	0.02	-	-	-	-	0.314	-	0.154	0.033
HCM Control Delay (s)	29.2	-	0	-	-	8.3	0	32.2	28.3
HCM Lane LOS	D	-	A	-	-	A	A	D	D
HCM 95th %tile Q(veh)	0.1	-	-	-	-	1.4	-	0.5	0.1

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	64	0	75	0	0	254	0	76	140	0	80	487
Future Vol, veh/h	64	0	75	0	0	254	0	76	140	0	80	487
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	Free	-	-	Free	-	-	None
Storage Length	0	-	50	-	-	0	-	-	0	-	-	-
Veh in Median Storage, #	0	-	-	-169	79	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	35	0	13	0	0	3	0	37	19	0	13	5
Mvmt Flow	80	0	94	0	0	318	0	95	175	0	100	609

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	500	-	-	-	0
Stage 1	405	-	-	-	-
Stage 2	95	-	-	-	-
Critical Hdwy	7.125	-	-	-	-
Critical Hdwy Stg 1	6.325	-	-	-	-
Critical Hdwy Stg 2	5.925	-	-	-	-
Follow-up Hdwy	3.8325	-	-	-	-
Pot Cap-1 Maneuver	450	0	0	0	0
Stage 1	568	0	0	0	0
Stage 2	845	0	0	0	0
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	450	0	-	-	-
Mov Cap-2 Maneuver	450	0	-	-	-
Stage 1	568	0	-	-	-
Stage 2	845	0	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NB	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	-	450	-	-	-
HCM Lane V/C Ratio	-	0.178	-	-	-
HCM Control Delay (s)	-	14.7	0	-	-
HCM Lane LOS	-	B	A	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-	-

Intersection

Int Delay, s/veh 5.3

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 6 134 244 163 135 10

Future Vol, veh/h 6 134 244 163 135 10

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage0# - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 80 80 80 80 80 80

Heavy Vehicles, % 20 18 3 3 3 25

Mvmt Flow 8 168 305 204 169 13

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 990 176 182 0 - 0

Stage 1 176 - - - - -

Stage 2 814 - - - - -

Critical Hdwy 6.6 6.38 4.13 - - -

Critical Hdwy Stg 1 5.6 - - - - -

Critical Hdwy Stg 2 5.6 - - - - -

Follow-up Hdwy 3.68 3.46 2.227 - - -

Pot Cap-1 Maneuver253 827 1387 - - -

Stage 1 813 - - - - -

Stage 2 406 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuver190 827 1387 - - -

Mov Cap-2 Maneuver190 - - - - -

Stage 1 611 - - - - -

Stage 2 406 - - - - -

Approach EB NB SB

HCM Control Delay, s 14.6 5 0

HCM LOS B

Minor Lane/Major Mvmt NBL NBTEBLn1 SBT SBR

Capacity (veh/h) 1387 - 723 - -

HCM Lane V/C Ratio 0.22 -0.242 - -

HCM Control Delay (s) 8.3 0 11.6 - -

HCM Lane LOS A A B - -

HCM 95th %tile Q(veh) 0.8 - 0.9 - -

Intersection

Int Delay, s/veh 221.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗		↖		↗			
Traffic Vol, veh/h	137	297	0	0	734	54	312	0	451	0	0	0
Future Vol, veh/h	137	297	0	0	734	54	312	0	451	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	Stop	-	-	None
Storage Length	-	-	-	-	-	-	0	-	75	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	-169	65	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	85	85	85	89	89	89	92	92	92
Heavy Vehicles, %	4	2	0	0	3	5	8	0	3	0	0	0
Mvmt Flow	156	338	0	0	864	64	351	0	507	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	928	0	- - - 0 1546 - 338
Stage 1	-	-	- - - 650 - -
Stage 2	-	-	- - - 896 - -
Critical Hdwy	4.14	-	- - - 6.48 - 6.23
Critical Hdwy Stg 1	-	-	- - - 5.48 - -
Critical Hdwy Stg 2	-	-	- - - 5.48 - -
Follow-up Hdwy	2.236	-	- - - 3.572 - 3.327
Pot Cap-1 Maneuver	729	-	0 0 - ~ 122 0 702
Stage 1	-	-	0 0 - 508 0 -
Stage 2	-	-	0 0 - 389 0 -
Platoon blocked, %	-	-	- -
Mov Cap-1 Maneuver	729	-	- - - ~ 90 0 702
Mov Cap-2 Maneuver	-	-	- - - ~ 90 0 -
Stage 1	-	-	- - - 374 0 -
Stage 2	-	-	- - - 389 0 -

Approach	EB	WB	NB
HCM Control Delay, \$	6	0	\$ 585.5
HCM LOS			F





Minor Lane/Major Mvm	NBLn1	NBLn2	EBL	EBT	WBT	WBR
Capacity (veh/h)	90	702	729	-	-	-
HCM Lane V/C Ratio	3.895	0.722	0.214	-	-	-
HCM Control Delay (\$)	1399.6	22.3	11.3	0	-	-
HCM Lane LOS	F	C	B	A	-	-
HCM 95th %tile Q(veh)	36.2	6.2	0.8	-	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection

Int Delay, s/veh 9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	373	557	518	528	0	0	0	0	61	0	130
Future Vol, veh/h	0	373	557	518	528	0	0	0	0	61	0	130
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	-	-	-	-	0	-	75
Veh in Median Storage, #	0	-	-	-	0	-	-169	74	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	94	94	94	92	92	92	86	86	86
Heavy Vehicles, %	0	3	6	3	6	0	2	2	2	2	0	7
Mvmt Flow	0	449	671	551	562	0	0	0	0	71	0	151

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	- 0	0 1120	0 0 2449 - 562
Stage 1	- -	- -	- - 1664 - -
Stage 2	- -	- -	- - 785 - -
Critical Hdwy	- -	- 4.13	- - 6.42 - 6.27
Critical Hdwy Stg 1	- -	- -	- - 5.42 - -
Critical Hdwy Stg 2	- -	- -	- - 5.42 - -
Follow-up Hdwy	- -	- 2.227	- - 3.518 - 3.363
Pot Cap-1 Maneuver	0 -	- 620	- 0 ~ 34 0 517
Stage 1	0 -	- -	- 0 169 0 -
Stage 2	0 -	- -	- 0 449 0 -
Platoon blocked, %	- -	- -	- -
Mov Cap-1 Maneuver	- -	- 620	- - 0 0 517
Mov Cap-2 Maneuver	- -	- -	- - 0 0 -
Stage 1	- -	- -	- - 169 0 -
Stage 2	- -	- -	- - 0 0 -






Approach	EB	WB	SB
HCM Control Delay, s	0	19.9	
HCM LOS			-

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	620	-	-	517
HCM Lane V/C Ratio	-	-	0.889	-	-	0.292
HCM Control Delay (s)	-	-	40.1	0	-	14.8
HCM Lane LOS	-	-	E	A	-	B
HCM 95th %tile Q(veh)	-	-	10.7	-	-	1.2

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Intersection Delay, s/veh 237.9												
Intersection LOS F												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	501	142	226	222	210	24	57	219	210	55	12
Future Vol, veh/h	29	501	142	226	222	210	24	57	219	210	55	12
Peak Hour Factor	0.80	0.80	0.80	0.93	0.93	0.93	0.80	0.80	0.80	0.95	0.95	0.95
Heavy Vehicles, %	18	5	2	2	15	2	0	5	4	3	2	33
Mvmt Flow	36	626	178	243	239	226	30	71	274	221	58	13
Number of Lanes	0	1	1	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	2
HCM Control Delay	284.5	354.5	61.6	47.3
HCM LOS	F	F	F	E








Lane	NBLn1	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	8%	5%	0%	34%	76%
Vol Thru, %	19%	95%	0%	34%	20%
Vol Right, %	73%	0%	100%	32%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	300	530	142	658	277
LT Vol	24	29	0	226	210
Through Vol	57	501	0	222	55
RT Vol	219	0	142	210	12
Lane Flow Rate	375	662	178	708	292
Geometry Grp	2	7	7	5	2
Degree of Util (X)	0.89	1.706	0.41	1.71	0.766
Departure Headway (Hd)	11.399	10.835	9.837	9.849	12.596
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	323	345	369	375	292
Service Time	9.399	8.535	7.537	7.849	10.596
HCM Lane V/C Ratio	1.161	1.919	0.482	1.888	1
HCM Control Delay	61.6	355.6	19.2	354.5	47.3
HCM Lane LOS	F	F	C	F	E
HCM 95th-tile Q	8.3	35.3	1.9	38.5	5.8

Intersection													
Int Delay, s/veh	10.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↕			↕	↕		↕			↕		
Traffic Vol, veh/h	0	0	0	148	0	38	0	14	352	109	24	0	
Future Vol, veh/h	0	0	0	148	0	38	0	14	352	109	24	0	
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0	
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	
RT Channelized	-	-	None	-	-	Free	-	-	Free	-	-	None	
Storage Length	-	-	-	-	-	0	-	-	-	-	-	-	
Veh in Median Storage, #	0	-	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	89	92	89	92	80	80	80	80	92	
Heavy Vehicles, %	2	2	2	23	2	17	2	27	8	6	11	2	
Mvmt Flow	0	0	0	166	0	43	0	18	440	136	30	0	

Major/Minor	Major1			Major2			Minor1			Minor2			
Conflicting Flow All	0	0	0	1	0	0	-	333	-	342	333	-	
Stage 1	-	-	-	-	-	-	-	1	-	332	332	-	
Stage 2	-	-	-	-	-	-	-	332	-	10	1	-	
Critical Hdwy	4.12	-	-	4.33	-	-	-	6.77	-	7.16	6.61	-	
Critical Hdwy Stg 1	-	-	-	-	-	-	-	5.77	-	6.16	5.61	-	
Critical Hdwy Stg 2	-	-	-	-	-	-	-	5.77	-	6.16	5.61	-	
Follow-up Hdwy	2.218	-	-	2.407	-	-	-	4.243	-	3.554	4.099	-	
Pot Cap-1 Maneuver	-	-	-	1494	-	0	0	548	0	605	573	0	
Stage 1	-	-	-	-	-	0	0	848	0	673	629	0	
Stage 2	-	-	-	-	-	0	0	602	0	1001	877	0	
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	1494	-	-	-	487	-	538	509	-	
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	487	-	538	509	-	
Stage 1	-	-	-	-	-	-	-	848	-	673	559	-	
Stage 2	-	-	-	-	-	-	-	535	-	980	877	-	

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.7		14.2
HCM LOS			-	B

Minor Lane/Major Mvm	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	487	-	-	-	-	1494	-	535	509
HCM Lane V/C Ratio	0.018	-	-	-	-	0.111	-	0.283	0.029
HCM Control Delay (s)	12.5	-	0	-	-	7.7	0	14.4	12.3
HCM Lane LOS	B	-	A	-	-	A	A	B	B
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.4	-	1.2	0.1

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	175	0	291	0	0	157	0	68	405	0	97	184
Future Vol, veh/h	175	0	291	0	0	157	0	68	405	0	97	184
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	Free	-	-	Free	-	-	Free	-	-	None
Storage Length	0	-	50	-	-	0	-	-	0	-	-	-
Veh in Median Storage, #	0	-	-	-169	79	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	82	82	82
Heavy Vehicles, %	15	0	1	0	0	12	0	13	2	0	35	12
Mvmt Flow	219	0	364	0	0	196	0	85	506	0	118	224

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	315	-	-	-	0
Stage 1	230	-	-	-	-
Stage 2	85	-	-	-	-
Critical Hdwy	6.825	-	-	-	-
Critical Hdwy Stg 1	6.025	-	-	-	-
Critical Hdwy Stg 2	5.625	-	-	-	-
Follow-up Hdwy	3.6425	-	-	-	-
Pot Cap-1 Maneuver	635	0	0	0	0
Stage 1	754	0	0	0	0
Stage 2	903	0	0	0	0
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	635	0	-	-	-
Mov Cap-2 Maneuver	635	0	-	-	-
Stage 1	754	0	-	-	-
Stage 2	903	0	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NB	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	-	635	-	-	-
HCM Lane V/C Ratio	-	0.344	-	-	-
HCM Control Delay (s)	-	13.6	0	-	-
HCM Lane LOS	-	B	A	-	-
HCM 95th %tile Q(veh)	-	1.5	-	-	-

Intersection

Int Delay, s/veh 21.5

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations 

Traffic Vol, veh/h 44 361 150 205 313 7

Future Vol, veh/h 44 361 150 205 313 7

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length 0 - - - - -

Veh in Median Storage 0# - - 0 0 -

Grade, % 0 - - 0 0 -

Peak Hour Factor 80 80 85 85 80 80

Heavy Vehicles, % 6 2 11 4 2 20

Mvmt Flow 55 451 176 241 391 9

Major/Minor Minor2 Major1 Major2

Conflicting Flow All 989 396 400 0 - 0

Stage 1 396 - - - - -

Stage 2 593 - - - - -

Critical Hdwy 6.46 6.22 4.21 - - -

Critical Hdwy Stg 1 5.46 - - - - -

Critical Hdwy Stg 2 5.46 - - - - -

Follow-up Hdwy 3.554 3.318 2.299 - - -

Pot Cap-1 Maneuve 269 653 1111 - - -

Stage 1 671 - - - - -

Stage 2 544 - - - - -

Platoon blocked, % - - -

Mov Cap-1 Maneuve 220 653 1111 - - -

Mov Cap-2 Maneuve 220 - - - - -

Stage 1 548 - - - - -

Stage 2 544 - - - - -

Approach EB NB SB

HCM Control Delay, s 58.3 3.7 0

HCM LOS F

Minor Lane/Major Mvmt NBL NBTEBLn1 SBT SBR

Capacity (veh/h) 1111 - 538 - -

HCM Lane V/C Ratio 0.159 -0.941 - -

HCM Control Delay (s) 8.9 0 53.3 - -

HCM Lane LOS A A F - -

HCM 95th %tile Q(veh) 0.6 - 11.9 - -

APPENDIX M

Capacity/Level-of-Service Analysis Summary

Capacity Analysis Summary
New Bedford Solid Waste Handling Facility
New Bedford, MA

Weekday Morning Peak Hour													
		2020 Base			2020 Existing			2027 No Build			2027 Build		
Intersection	Movement	LOS ¹	Delay ²	V/C ³	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Route 140 Northbound Ramps at Braley Road	EB LT	B	10.3	0.07	B	10.5	0.10	B	10.8	0.11	B	11.0	0.14
	WB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	NB L	F	404.4	1.78	F	499.7	1.99	F	>500	2.43	F	>500	2.74
	R	B	13.7	0.50	B	13.7	0.50	B	14.8	0.55	B	14.8	0.55
Route 140 Southbound Ramps at Braley Road	EB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	WB LT	B	11.2	0.48	B	11.6	0.49	B	12.6	0.55	B	13.2	0.57
	SB L	F	>500	3.60	F	>500	4.12	F	>500	10.39	F	>500	15.59
	R	C	16.8	0.36	C	17.0	0.36	C	18.8	0.41	C	19.5	0.44
Braley Road/ Theodore Rice Boulevard at Phillips Road	EB LT	B	12.9	0.22	B	14.3	0.32	C	15.4	0.36	C	17.8	0.48
	R	B	10.3	0.04	B	10.4	0.04	B	10.8	0.04	B	11.0	0.04
	WB LTR	F	138.1	1.22	F	154.4	1.27	F	211.5	1.39	F	242.5	1.47
	NB LTR	B	15.0	0.46	C	15.7	0.48	C	17.4	0.54	C	18.4	0.56
	SB LTR	C	15.8	0.46	C	16.4	0.48	C	18.2	0.54	C	19.2	0.57
Theodore Rice Boulevard at Duchaine Boulevard	WB LR	A	8.1	0.28	A	8.2	0.28	A	8.2	0.30	A	8.3	0.31
	NB TR	C	24.5	0.02	C	24.8	0.02	D	27.4	0.02	D	29.2	0.02
	SB L	D	25.8	0.12	D	26.3	0.12	D	29.8	0.14	D	32.2	0.15
	T	C	23.7	0.02	C	24.1	0.02	D	26.6	0.03	D	28.3	0.03
Duchaine Boulevard at Samuel Barnet Boulevard	EB LR	B	12.4	0.13	B	13.1	0.14	B	13.6	0.16	B	14.7	0.18
	WB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	NB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Phillips Road at Samuel Barnet Boulevard	EB LR	B	11.2	0.21	B	11.2	0.22	B	11.5	0.238	B	11.6	0.24
	NB LT	A	8.2	0.20	A	4.9	0.20	A	5.0	0.22	A	8.3	0.22
	SB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Duchaine Boulevard at Site Driveway	EB L	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	WB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00

1 Level-of-Service
2 Average vehicle delay in seconds
3 Volume to capacity ratio
n/a Not Applicable

Queue Summary
New Bedford Solid Waste Handling Facility
New Bedford, MA

Weekday Morning Peak Hour										
Intersection	Movement		2020 Base		2020 Existing		2027 No Build		2027 Build	
			50th Queue ¹	95th Queue ²	50th Queue	95th Queue	50th Queue	95th Queue	50th Queue	95th Queue
Route 140 Northbound Ramps at Braley Road	EB	LT	n/a	5	n/a	8	n/a	10	n/a	13
	WB	TR	n/a	0	n/a	0	n/a	0	n/a	0
	NB	L	n/a	685	n/a	753	n/a	905	n/a	978
		R	n/a	70	n/a	70	n/a	85	n/a	85
Route 140 Southbound Ramps at Braley Road	EB	TR	n/a	0	n/a	0	n/a	0	n/a	0
	WB	LT	n/a	65	n/a	70	n/a	85	n/a	93
	SB	L	n/a	198	n/a	203	n/a	238	n/a	243
		R	n/a	40	n/a	40	n/a	50	n/a	55
Braley Road/ Theodore Rice Boulevard at Phillips Road	EB	LT	n/a	20	n/a	33	n/a	35	n/a	53
		R	n/a	3	n/a	3	n/a	3	n/a	3
	WB	LTR	n/a	695	n/a	740	n/a	933	n/a	1020
	NB	LTR	n/a	53	n/a	55	n/a	63	n/a	65
	SB	LTR	n/a	53	n/a	55	n/a	63	n/a	65
Theodore Rice Boulevard at Duchaine Boulevard	WB	LR	n/a	28	n/a	30	n/a	33	n/a	35
	NB	TR	n/a	0	n/a	3	n/a	3	n/a	3
	SB	L	n/a	10	n/a	10	n/a	13	n/a	13
		T	n/a	3	n/a	3	n/a	3	n/a	3
Duchaine Boulevard at Samuel Barnet Boulevard	EB	LR	n/a	13	n/a	13	n/a	15	n/a	15
	WB	R	n/a	0	n/a	0	n/a	0	n/a	0
	NB	TR	n/a	0	n/a	0	n/a	0	n/a	0
	SB	TR	n/a	0	n/a	0	n/a	0	n/a	0
Phillips Road at Samuel Barnet Boulevard	EB	LR	n/a	20	n/a	20	n/a	23	n/a	23
	NB	LT	n/a	20	n/a	20	n/a	20	n/a	20
	SB	TR	n/a	0	n/a	0	n/a	0	n/a	0
Duchaine Boulevard at Site Driveway	EB	L	n/a	0	n/a	0	n/a	0	n/a	0
	WB	R	n/a	0	n/a	0	n/a	0	n/a	0
	SB	R	n/a	0	n/a	0	n/a	0	n/a	0

1 50th Percentile Queue Length (ft)
2 95th Percentile Queue Length (ft)
n/a Not Applicable

Capacity Analysis Summary
New Bedford Solid Waste Handling Facility
New Bedford, MA

Weekday Afternoon Peak Hour													
		2020 Base			2020 Existing			2027 No Build			2027 Build		
Intersection	Movement	LOS ¹	Delay ²	V/C ³	LOS	Delay	V/C	LOS	Delay	V/C	LOS	Delay	V/C
Route 140 Northbound Ramps at Braley Road	EB LT	B	10.4	0.14	B	10.6	0.16	B	11.0	0.18	B	11.3	0.21
	WB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	NB L	F	>500	2.44	F	>500	2.63	F	>500	3.38	F	>500	3.90
	R	C	18.9	0.65	C	18.9	0.65	C	22.3	0.72	C	22.3	0.72
Route 140 Southbound Ramps at Braley Road	EB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	WB LT	C	22.7	0.73	C	24.1	0.75	D	34.6	0.85	E	40.1	0.89
	SB L	B	13.6	0.24	B	13.6	0.24	B	14.4	0.27	B	14.8	0.29
	R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Braley Road/ Theodore Rice Boulevard at Phillips Road	EB LT	F	205.1	1.47	F	244.0	1.59	F	302.3	1.79	F	355.6	1.92
	R	C	16.8	0.41	C	17.4	0.42	C	19.1	0.48	C	19.2	0.48
	WB LTR	F	257.0	1.56	F	270.5	1.61	F	335.3	1.82	F	354.5	1.89
	NB LTR	E	43.9	0.97	E	48.0	1.01	F	60.4	1.14	F	61.6	1.16
	SB LTR	E	36.0	0.83	E	42.1	0.92	E	46.3	0.98	E	47.3	1.00
Theodore Rice Boulevard at Duchaine Boulevard	WB LR	A	7.6	0.09	A	7.7	0.09	A	7.7	0.10	A	7.7	0.11
	NB TR	B	11.7	0.02	B	11.8	0.02	B	12.1	0.02	B	12.5	0.02
	SB L	B	12.8	0.23	B	12.9	0.24	B	13.5	0.26	B	14.4	0.28
	T	B	11.5	0.02	B	11.6	0.03	B	11.8	0.03	B	12.3	0.03
Duchaine Boulevard at Samuel Barnet Boulevard	EB LR	B	11.6	0.27	B	12.1	0.29	B	12.5	0.31	B	13.6	0.34
	WB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	NB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Phillips Road at Samuel Barnet Boulevard	EB LR	D	34.0	0.82	D	34.5	0.83	F	52.3	0.94	F	53.3	0.94
	NB LT	A	8.7	0.15	A	8.7	0.15	A	8.9	0.16	A	8.9	0.16
	SB TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Duchaine Boulevard at Site Driveway	EB L	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	WB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
	SB R	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00

1 Level-of-Service
2 Average vehicle delay in seconds
3 Volume to capacity ratio
n/a Not Applicable

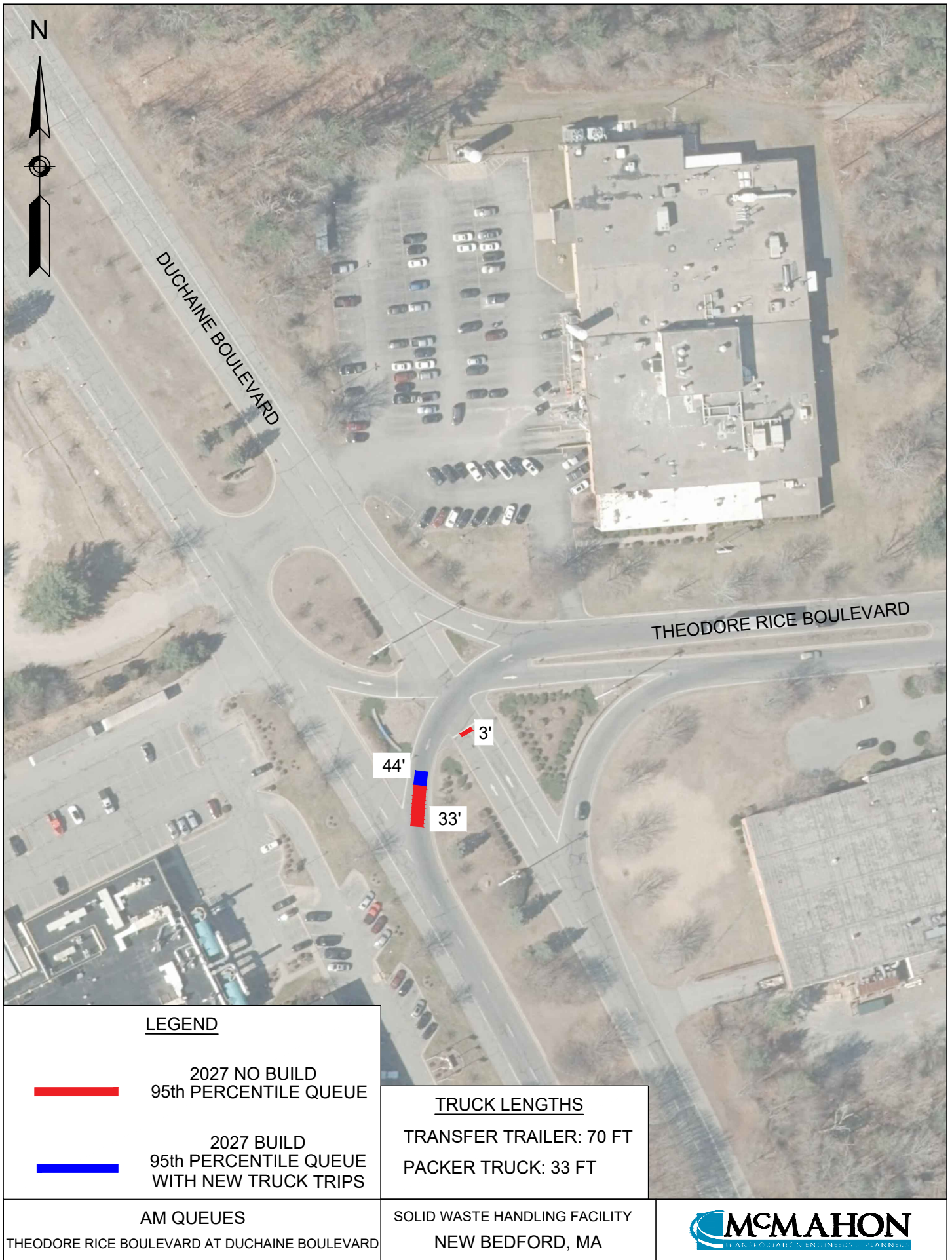
Queue Summary
New Bedford Solid Waste Handling Facility
New Bedford, MA

Weekday Afternoon Peak Hour										
Intersection	Movement		2020 Base		2020 Existing		2027 No Build		2027 Build	
			50th Queue ¹	95th Queue ²	50th Queue	95th Queue	50th Queue	95th Queue	50th Queue	95th Queue
Route 140 Northbound Ramps at Braley Road	EB	LT	n/a	13	n/a	15	n/a	18	n/a	20
	WB	TR	n/a	0	n/a	0	n/a	0	n/a	0
	NB	L	n/a	693	n/a	720	n/a	848	n/a	905
		R	n/a	123	n/a	123	n/a	155	n/a	155
Route 140 Southbound Ramps at Braley Road	EB	TR	n/a	0	n/a	0	n/a	0	n/a	0
	WB	LT	n/a	160	n/a	170	n/a	243	n/a	268
	SB	L	n/a	23	n/a	23	n/a	28	n/a	30
		R	n/a	0	n/a	0	n/a	0	n/a	0
Braley Road/ Theodore Rice Boulevard at Phillips Road	EB	LT	n/a	595	n/a	670	n/a	770	n/a	883
		R	n/a	43	n/a	43	n/a	48	n/a	48
	WB	LTR	n/a	793	n/a	800	n/a	930	n/a	963
	NB	LTR	n/a	173	n/a	180	n/a	210	n/a	208
	SB	LTR	n/a	123	n/a	143	n/a	145	n/a	145
Theodore Rice Boulevard at Duchaine Boulevard	WB	LR	n/a	8	n/a	8	n/a	8	n/a	10
	NB	TR	n/a	0	n/a	0	n/a	3	n/a	3
	SB	L	n/a	23	n/a	23	n/a	28	n/a	30
		T	n/a	3	n/a	3	n/a	3	n/a	3
Duchaine Boulevard at Samuel Barnet Boulevard	EB	LR	n/a	28	n/a	30	n/a	33	n/a	38
	WB	R	n/a	0	n/a	0	n/a	0	n/a	0
	NB	TR	n/a	0	n/a	0	n/a	0	n/a	0
	SB	TR	n/a	0	n/a	0	n/a	0	n/a	0
Phillips Road at Samuel Barnet Boulevard	EB	LR	n/a	208	n/a	210	n/a	293	n/a	298
	NB	LT	n/a	13	n/a	13	n/a	15	n/a	15
	SB	TR	n/a	0	n/a	0	n/a	0	n/a	0
Duchaine Boulevard at Site Driveway	EB	L	n/a	0	n/a	0	n/a	0	n/a	0
	WB	R	n/a	0	n/a	0	n/a	0	n/a	0
	SB	R	n/a	0	n/a	0	n/a	0	n/a	0


1 50th Percentile Queue Length (ft)
2 95th Percentile Queue Length (ft)
n/a Not Applicable


APPENDIX N

Queue Graphics



LEGEND

 2027 NO BUILD
95th PERCENTILE QUEUE

 2027 BUILD
95th PERCENTILE QUEUE
WITH NEW TRUCK TRIPS

TRUCK LENGTHS

TRANSFER TRAILER: 70 FT
PACKER TRUCK: 33 FT

AM QUEUES

THEODORE RICE BOULEVARD AT DUCHAINE BOULEVARD

SOLID WASTE HANDLING FACILITY
NEW BEDFORD, MA





LEGEND

2027 NO BUILD
95th PERCENTILE QUEUE

2027 BUILD
95th PERCENTILE QUEUE
WITH NEW TRUCK TRIPS

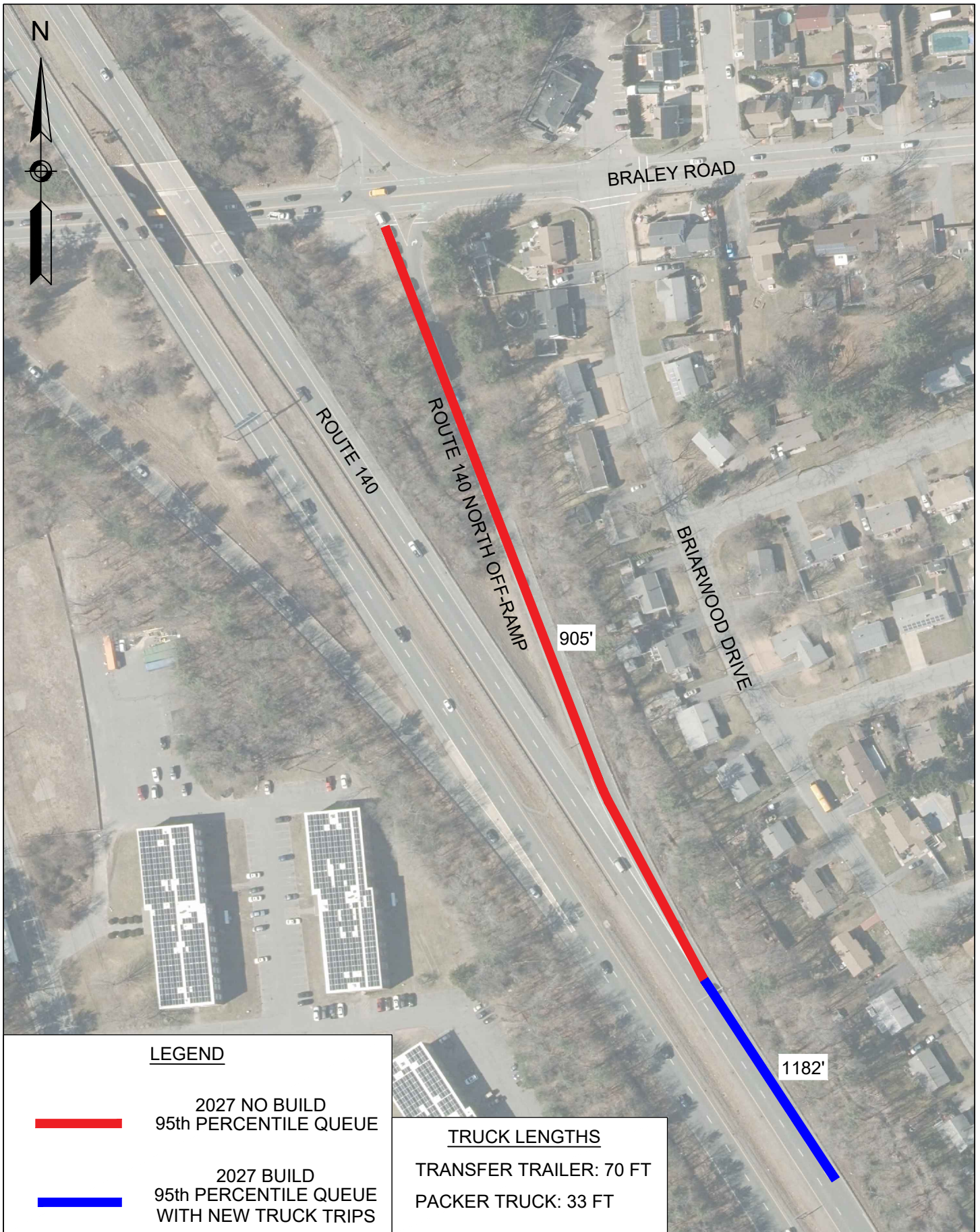
TRUCK LENGTHS

TRANSFER TRAILER: 70 FT

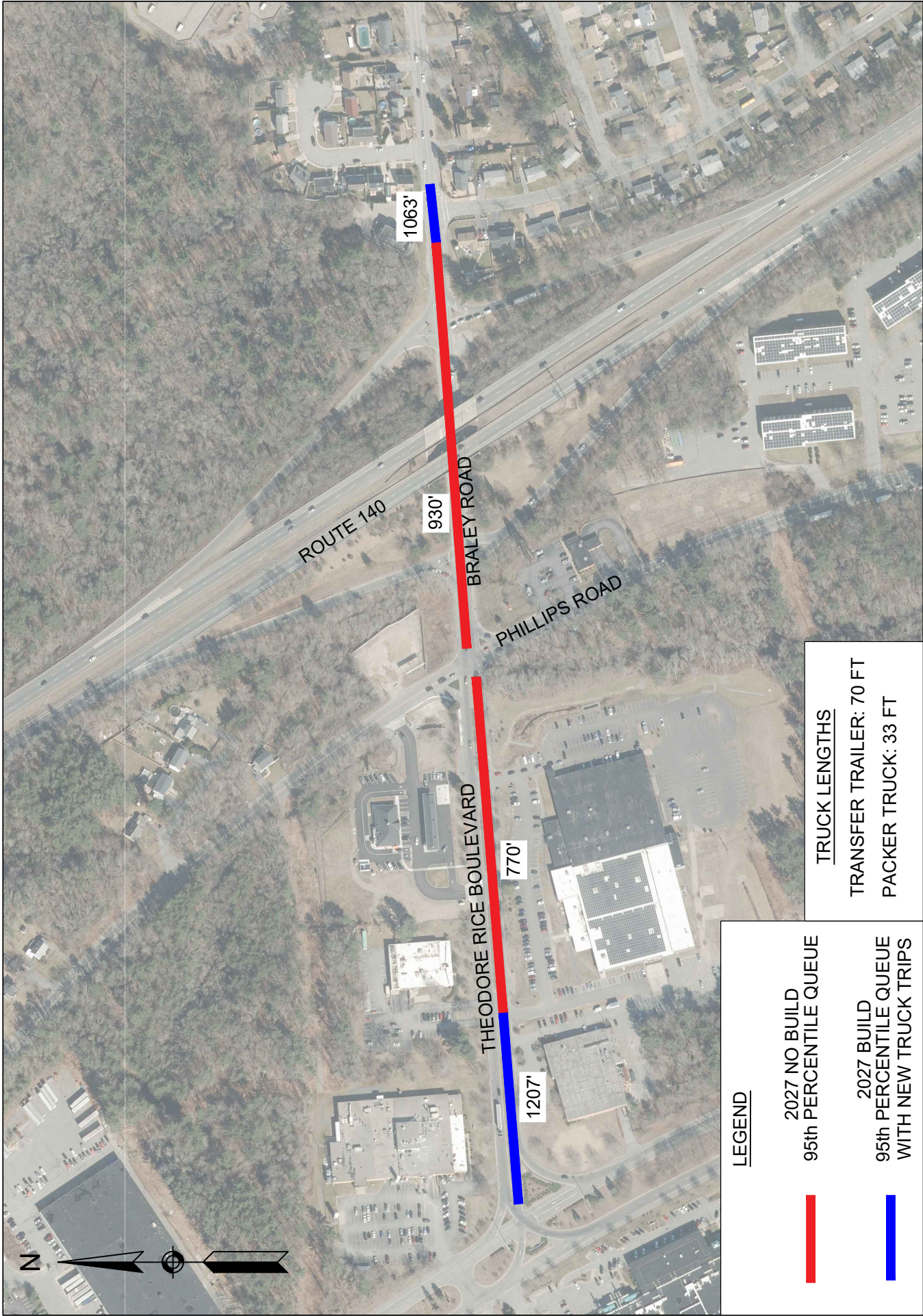
PACKER TRUCK: 33 FT

AM QUEUES PHILLIPS ROAD AT BRALEY ROAD	SOLID WASTE HANDLING FACILITY NEW BEDFORD, MA	
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LEGEND

- 2027 NO BUILD
95th PERCENTILE QUEUE
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WITH NEW TRUCK TRIPS

TRUCK LENGTHS

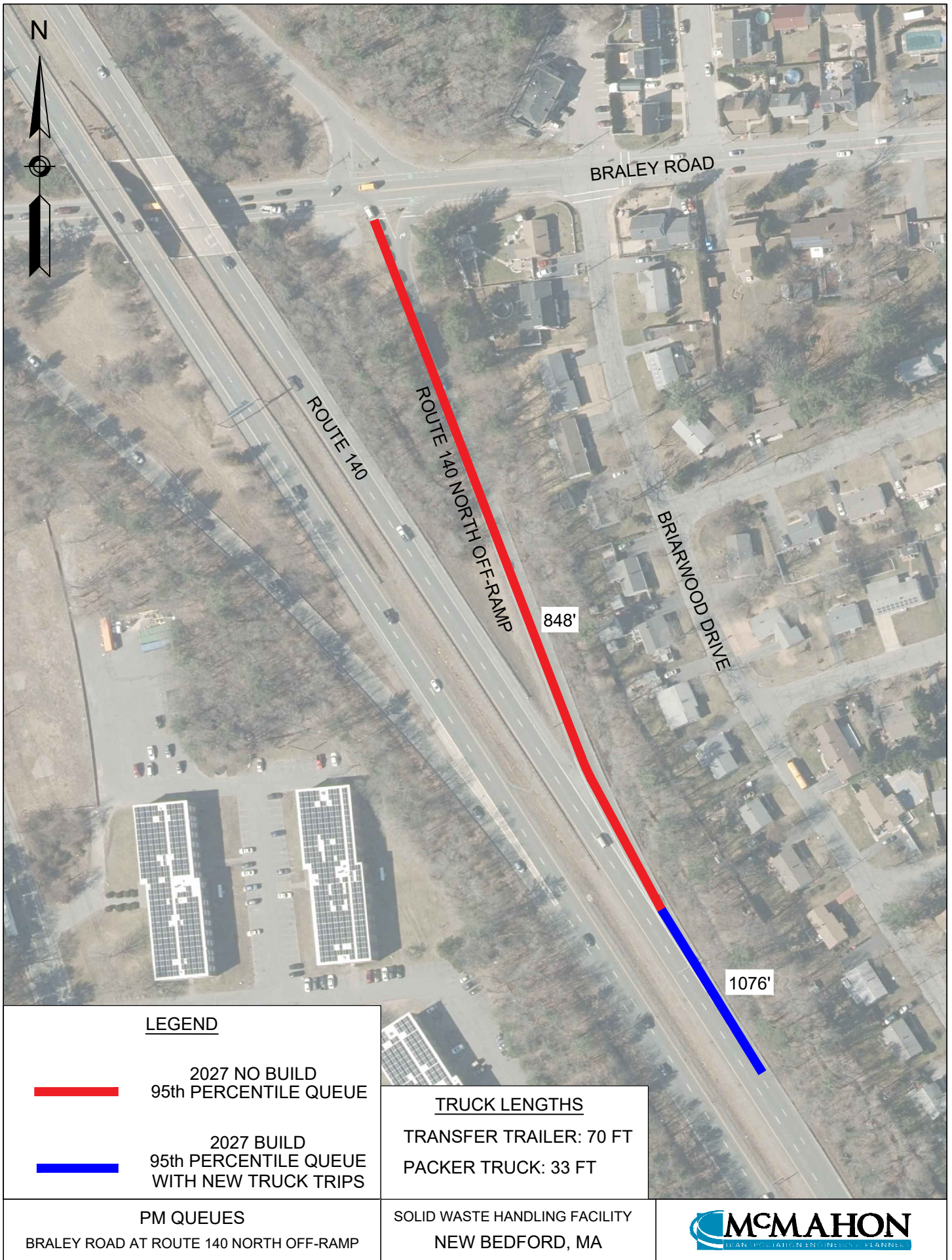
- TRANSFER TRAILER: 70 FT
- PACKER TRUCK: 33 FT

PM QUEUES
PHILLIPS ROAD AT BRALEY ROAD

SOLID WASTE HANDLING FACILITY
NEW BEDFORD, MA







APPENDIX O

Traffic Signal Warrant Analysis

HCS7 Warrants Report

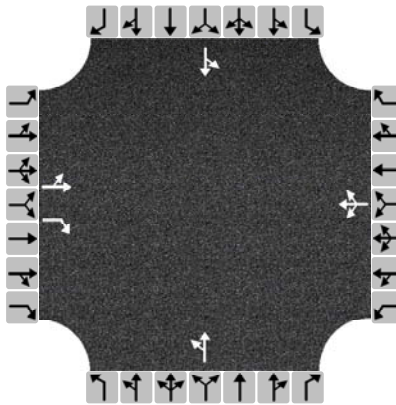
Project Information

Analyst	EKB	Date	6/22/2020
Agency	McMahon Associates	Analysis Year	2020 Existing
Jurisdiction	New Bedford, MA	Time Period Analyzed	Four-Hour
Project Description	New Bedford Solid Waste Handling Facility		

General

Major Street Direction	East-West	Population < 10,000	No
Starting Time Interval	7	Coordinated Signal System	No
Median Type	Divided	Crashes (crashes/year)	4
Major Street Speed (mi/h)	30	Adequate Trials of Crash Exp. Alt.	No
Nearest Signal (ft)	2700		

Geometry and Traffic



Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Number of Lanes, N	0	1	1	0	1	0	0	1	0	0	1	0
Lane Usage		LT	R		LTR			LT			LT	
Vehicle Volumes Averages (veh/h)	7	113	22	72	96	62	5	18	0	73	34	0
Pedestrian Averages (peds/h)	0			0			0			0		
Gap Averages (gaps/h)	0			0			0			0		
Delay (s/veh)	0.0			0.0			0.0			0.0		
Delay (veh-hrs)	0.0			0.0			0.0			0.0		

School Crossing and Roadway Network

Number of Students in Highest Hour	0	Two or More Major Routes	No
Number of Adequate Gaps in Period	0	Weekend Counts	No
Number of Minutes in Period	0	5-year Growth Factor (%)	0

Railroad Crossing

Grade Crossing Approach	None	Rail Traffic (trains/day)	0
Highest Volume Hour with Trains	Unknown	High Occupancy Buses (%)	0
Distance to Stop Line (ft)		Tractor-Trailer Trucks (%)	0

HCS7 Warrants Report

Volume Summary

Hour	Major Volume	Minor Volume	Total Volume	Peds/h	Gaps/h	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)	4A (100%)	4B (100%)
07 - 08	845	397	1280	0	0	Yes	Yes	No	Yes	Yes	No	Yes	No	No
08 - 09	727	178	946	0	0	Yes	Yes	No	Yes	No	No	No	No	No
09 - 10	0	0	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	1179	246	1500	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
16 - 17	949	243	1264	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
17 - 18	801	230	1095	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
18 - 19	0	0	0	0	0	No	No	No	No	No	No	No	No	No
Total	4501	1294	6085	0	0	5	5	2	5	4	0	2	0	0

Warrants

Warrant 1: Eight-Hour Vehicular Volume

A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	
B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	
80% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	

Warrant 2: Four-Hour Vehicular Volume

Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach)	✓
--	---

Warrant 3: Peak Hour

A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or--	✓
B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	✓

Warrant 4: Pedestrian Volume

A. Four Hour Volumes --or--	
B. One-Hour Volumes	

Warrant 5: School Crossing

Gaps Same Period --and--	
Student Volumes	
Nearest Traffic Control Signal (optional)	✓

Warrant 6: Coordinated Signal System

Degree of Platooning (Predominant direction or both directions)	
---	--

Warrant 7: Crash Experience

A. Adequate trials of alternatives, observance and enforcement failed --and--	
B. Reported crashes susceptible to correction by signal (12-month period) --and--	
C. 80% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied	

Warrant 8: Roadway Network

A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or--	
B. Weekend Volume (Five hours total)	

Warrant 9: Grade Crossing

A. Grade Crossing within 140 ft --and--	
B. Peak-Hour Vehicular Volumes	

HCS7 Warrants Report

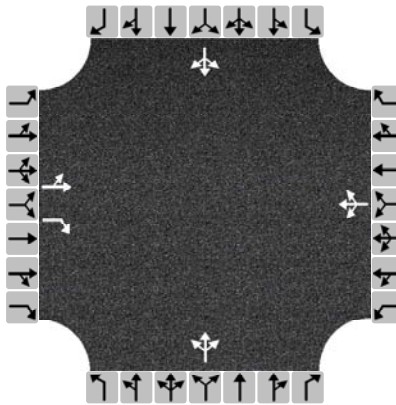
Project Information

Analyst	EKB	Date	6/18/2020
Agency		Analysis Year	2020 Existing
Jurisdiction	City of New Bedford	Time Period Analyzed	
Project Description	New Bedford Solid Waste Handling Facility		

General

Major Street Direction	East-West	Population < 10,000	No
Starting Time Interval	7	Coordinated Signal System	No
Median Type	Undivided	Crashes (crashes/year)	0
Major Street Speed (mi/h)	0	Adequate Trials of Crash Exp. Alt.	No
Nearest Signal (ft)	0		

Geometry and Traffic



Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Number of Lanes, N	0	1	1	0	1	0	0	1	0	0	1	0
Lane Usage		LT	R		LTR			LTR			LTR	
Vehicle Volumes Averages (veh/h)	17	250	43	135	193	118	13	36	142	137	32	14
Pedestrian Averages (peds/h)	0			0			0			0		
Gap Averages (gaps/h)	0			0			0			0		
Delay (s/veh)	0.0			0.0			0.0			0.0		
Delay (veh-hrs)	0.0			0.0			0.0			0.0		

School Crossing and Roadway Network

Number of Students in Highest Hour	0	Two or More Major Routes	No
Number of Adequate Gaps in Period	0	Weekend Counts	No
Number of Minutes in Period	0	5-year Growth Factor (%)	0

Railroad Crossing

Grade Crossing Approach	None	Rail Traffic (trains/day)	4
Highest Volume Hour with Trains	Unknown	High Occupancy Buses (%)	0
Distance to Stop Line (ft)		Tractor-Trailer Trucks (%)	10

HCS7 Warrants Report

Volume Summary

Hour	Major Volume	Minor Volume	Total Volume	Peds/h	Gaps/h	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)	4A (100%)	4B (100%)
07 - 08	501	196	815	0	0	No	Yes	No	No	No	No	No	No	No
08 - 09	844	227	1235	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
09 - 10	760	217	1186	0	0	Yes	Yes	No	Yes	No	No	No	No	No
10 - 11	521	133	787	0	0	No	Yes	No	No	No	No	No	No	No
11 - 12	541	141	820	0	0	No	Yes	No	No	No	No	No	No	No
12 - 13	715	150	1003	0	0	Yes	Yes	No	No	No	No	No	No	No
13 - 14	793	202	1157	0	0	Yes	Yes	No	Yes	No	No	No	No	No
14 - 15	700	173	1044	0	0	Yes	Yes	No	No	No	No	No	No	No
15 - 16	790	221	1188	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
16 - 17	1179	278	1713	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
17 - 18	949	247	1421	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
18 - 19	814	237	1274	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
Total	9107	2422	13643	0	0	9	12	2	7	5	0	1	0	0

Warrants

Warrant 1: Eight-Hour Vehicular Volume	✓
A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	✓
B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	
80% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	
Warrant 2: Four-Hour Vehicular Volume	✓
Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach)	✓
Warrant 3: Peak Hour	✓
A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or--	
B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	✓
Warrant 4: Pedestrian Volume	
A. Four Hour Volumes --or--	
B. One-Hour Volumes	
Warrant 5: School Crossing	
Gaps Same Period --and--	
Student Volumes	
Nearest Traffic Control Signal (optional)	
Warrant 6: Coordinated Signal System	
Degree of Platooning (Predominant direction or both directions)	
Warrant 7: Crash Experience	
A. Adequate trials of alternatives, observance and enforcement failed --and--	
B. Reported crashes susceptible to correction by signal (12-month period) --and--	
C. 80% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied	✓
Warrant 8: Roadway Network	
A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or--	
B. Weekend Volume (Five hours total)	
Warrant 9: Grade Crossing	
A. Grade Crossing within 140 ft --and--	
B. Peak-Hour Vehicular Volumes	

HCS7 Warrants Report

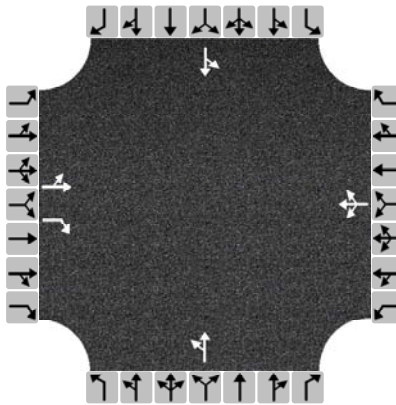
Project Information

Analyst	EKB	Date	6/22/2020
Agency	McMahon Associates	Analysis Year	2027 No Build
Jurisdiction	New Bedford, MA	Time Period Analyzed	Four-Hour
Project Description	New Bedford Solid Waste Handling Facility		

General

Major Street Direction	East-West	Population < 10,000	No
Starting Time Interval	7	Coordinated Signal System	No
Median Type	Divided	Crashes (crashes/year)	4
Major Street Speed (mi/h)	30	Adequate Trials of Crash Exp. Alt.	No
Nearest Signal (ft)	2700		

Geometry and Traffic



Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Number of Lanes, N	0	1	1	0	1	0	0	1	0	0	1	0
Lane Usage		LT	R		LTR			LT			LT	
Vehicle Volumes Averages (veh/h)	8	122	24	77	103	66	6	19	0	78	37	0
Pedestrian Averages (peds/h)	0			0			0			0		
Gap Averages (gaps/h)	0			0			0			0		
Delay (s/veh)	0.0			0.0			0.0			0.0		
Delay (veh-hrs)	0.0			0.0			0.0			0.0		

School Crossing and Roadway Network

Number of Students in Highest Hour	0	Two or More Major Routes	No
Number of Adequate Gaps in Period	0	Weekend Counts	No
Number of Minutes in Period	0	5-year Growth Factor (%)	0

Railroad Crossing

Grade Crossing Approach	None	Rail Traffic (trains/day)	0
Highest Volume Hour with Trains	Unknown	High Occupancy Buses (%)	0
Distance to Stop Line (ft)		Tractor-Trailer Trucks (%)	0

HCS7 Warrants Report

Volume Summary

Hour	Major Volume	Minor Volume	Total Volume	Peds/h	Gaps/h	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)	4A (100%)	4B (100%)
07 - 08	907	426	1374	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
08 - 09	780	191	1015	0	0	Yes	Yes	No	Yes	No	No	No	No	No
09 - 10	0	0	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	1265	264	1610	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
16 - 17	1018	261	1356	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
17 - 18	859	246	1173	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
18 - 19	0	0	0	0	0	No	No	No	No	No	No	No	No	No
Total	4829	1388	6528	0	0	5	5	3	5	4	0	2	0	0

Warrants

Warrant 1: Eight-Hour Vehicular Volume

A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	
B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	
80% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	

Warrant 2: Four-Hour Vehicular Volume

Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach)	✓
--	---

Warrant 3: Peak Hour

A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or--	✓
B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	✓

Warrant 4: Pedestrian Volume

A. Four Hour Volumes --or--	
B. One-Hour Volumes	

Warrant 5: School Crossing

Gaps Same Period --and--	
Student Volumes	
Nearest Traffic Control Signal (optional)	✓

Warrant 6: Coordinated Signal System

Degree of Platooning (Predominant direction or both directions)	
---	--

Warrant 7: Crash Experience

A. Adequate trials of alternatives, observance and enforcement failed --and--	
B. Reported crashes susceptible to correction by signal (12-month period) --and--	
C. 80% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied	

Warrant 8: Roadway Network

A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or--	
B. Weekend Volume (Five hours total)	

Warrant 9: Grade Crossing

A. Grade Crossing within 140 ft --and--	
B. Peak-Hour Vehicular Volumes	

HCS7 Warrants Report

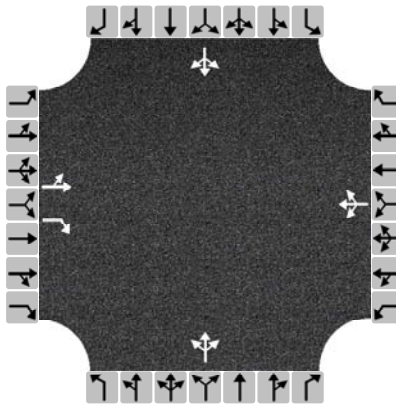
Project Information

Analyst	EKB	Date	6/18/2020
Agency		Analysis Year	2027 No Build
Jurisdiction	City of New Bedford	Time Period Analyzed	
Project Description	New Bedford Solid Waste Handling Facility		

General

Major Street Direction	East-West	Population < 10,000	No
Starting Time Interval	7	Coordinated Signal System	No
Median Type	Undivided	Crashes (crashes/year)	0
Major Street Speed (mi/h)	0	Adequate Trials of Crash Exp. Alt.	No
Nearest Signal (ft)	0		

Geometry and Traffic



Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Number of Lanes, N	0	1	1	0	1	0	0	1	0	0	1	0
Lane Usage		LT	R		LTR			LTR			LTR	
Vehicle Volumes Averages (veh/h)	18	268	46	145	207	126	14	39	153	147	35	15
Pedestrian Averages (peds/h)	0			0			0			0		
Gap Averages (gaps/h)	0			0			0			0		
Delay (s/veh)	0.0			0.0			0.0			0.0		
Delay (veh-hrs)	0.0			0.0			0.0			0.0		

School Crossing and Roadway Network

Number of Students in Highest Hour	0	Two or More Major Routes	No
Number of Adequate Gaps in Period	0	Weekend Counts	No
Number of Minutes in Period	0	5-year Growth Factor (%)	0

Railroad Crossing

Grade Crossing Approach	None	Rail Traffic (trains/day)	4
Highest Volume Hour with Trains	Unknown	High Occupancy Buses (%)	0
Distance to Stop Line (ft)		Tractor-Trailer Trucks (%)	10

HCS7 Warrants Report

Volume Summary

Hour	Major Volume	Minor Volume	Total Volume	Peds/h	Gaps/h	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)	4A (100%)	4B (100%)
07 - 08	538	210	874	0	0	No	Yes	No	No	No	No	No	No	No
08 - 09	905	243	1324	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
09 - 10	815	233	1272	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
10 - 11	559	143	844	0	0	No	Yes	No	No	No	No	No	No	No
11 - 12	580	151	879	0	0	No	Yes	No	No	No	No	No	No	No
12 - 13	767	161	1076	0	0	Yes	Yes	No	Yes	No	No	No	No	No
13 - 14	852	217	1243	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
14 - 15	750	185	1118	0	0	Yes	Yes	No	Yes	No	No	No	No	No
15 - 16	846	237	1272	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
16 - 17	1265	298	1838	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
17 - 18	1017	265	1523	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
18 - 19	873	255	1367	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
Total	9767	2598	14630	0	0	9	12	3	9	7	0	1	0	0

Warrants

Warrant 1: Eight-Hour Vehicular Volume

A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	✓
B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	✓
80% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	✓

Warrant 2: Four-Hour Vehicular Volume

Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach)	✓
--	---

Warrant 3: Peak Hour

A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or--	✓
B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	✓

Warrant 4: Pedestrian Volume

A. Four Hour Volumes --or--	
B. One-Hour Volumes	

Warrant 5: School Crossing

Gaps Same Period --and--	
Student Volumes	
Nearest Traffic Control Signal (optional)	

Warrant 6: Coordinated Signal System

Degree of Platooning (Predominant direction or both directions)	
---	--

Warrant 7: Crash Experience

A. Adequate trials of alternatives, observance and enforcement failed --and--	
B. Reported crashes susceptible to correction by signal (12-month period) --and--	
C. 80% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied	✓

Warrant 8: Roadway Network

A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or--	
B. Weekend Volume (Five hours total)	

Warrant 9: Grade Crossing

A. Grade Crossing within 140 ft --and--	
B. Peak-Hour Vehicular Volumes	

HCS7 Warrants Report

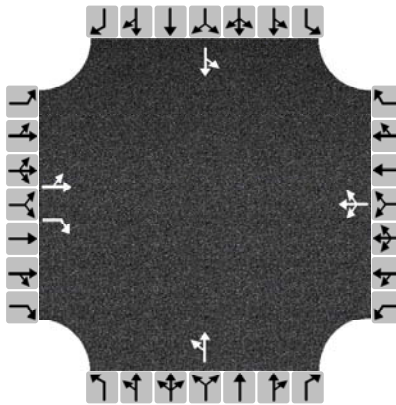
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Major Street Direction	East-West	Population < 10,000	No
Starting Time Interval	7	Coordinated Signal System	No
Median Type	Divided	Crashes (crashes/year)	4
Major Street Speed (mi/h)	30	Adequate Trials of Crash Exp. Alt.	No
Nearest Signal (ft)	2700		

Geometry and Traffic



Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Number of Lanes, N	0	1	1	0	1	0	0	1	0	0	1	0
Lane Usage		LT	R		LTR			LT			LT	
Vehicle Volumes Averages (veh/h)	8	138	24	77	109	66	6	19	0	78	37	0
Pedestrian Averages (peds/h)	0			0			0			0		
Gap Averages (gaps/h)	0			0			0			0		
Delay (s/veh)	0.0			0.0			0.0			0.0		
Delay (veh-hrs)	0.0			0.0			0.0			0.0		

School Crossing and Roadway Network

Number of Students in Highest Hour	0	Two or More Major Routes	No
Number of Adequate Gaps in Period	0	Weekend Counts	No
Number of Minutes in Period	0	5-year Growth Factor (%)	0

Railroad Crossing

Grade Crossing Approach	None	Rail Traffic (trains/day)	0
Highest Volume Hour with Trains	Unknown	High Occupancy Buses (%)	0
Distance to Stop Line (ft)		Tractor-Trailer Trucks (%)	0

HCS7 Warrants Report

Volume Summary

Hour	Major Volume	Minor Volume	Total Volume	Peds/h	Gaps/h	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)	4A (100%)	4B (100%)
07 - 08	961	426	1428	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
08 - 09	834	191	1069	0	0	Yes	Yes	No	Yes	No	No	No	No	No
09 - 10	0	0	0	0	0	No	No	No	No	No	No	No	No	No
10 - 11	0	0	0	0	0	No	No	No	No	No	No	No	No	No
11 - 12	0	0	0	0	0	No	No	No	No	No	No	No	No	No
12 - 13	0	0	0	0	0	No	No	No	No	No	No	No	No	No
13 - 14	0	0	0	0	0	No	No	No	No	No	No	No	No	No
14 - 15	0	0	0	0	0	No	No	No	No	No	No	No	No	No
15 - 16	1321	264	1666	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
16 - 17	1074	261	1412	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
17 - 18	915	246	1229	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
18 - 19	0	0	0	0	0	No	No	No	No	No	No	No	No	No
Total	5105	1388	6804	0	0	5	5	4	5	4	0	2	0	0

Warrants

Warrant 1: Eight-Hour Vehicular Volume

A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	
B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	
80% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	

Warrant 2: Four-Hour Vehicular Volume

Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach)	✓
--	---

Warrant 3: Peak Hour

A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or--	✓
B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	✓

Warrant 4: Pedestrian Volume

A. Four Hour Volumes --or--	
B. One-Hour Volumes	

Warrant 5: School Crossing

Gaps Same Period --and--	
Student Volumes	
Nearest Traffic Control Signal (optional)	✓

Warrant 6: Coordinated Signal System

Degree of Platooning (Predominant direction or both directions)	
---	--

Warrant 7: Crash Experience

A. Adequate trials of alternatives, observance and enforcement failed --and--	
B. Reported crashes susceptible to correction by signal (12-month period) --and--	
C. 80% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied	

Warrant 8: Roadway Network

A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or--	
B. Weekend Volume (Five hours total)	

Warrant 9: Grade Crossing

A. Grade Crossing within 140 ft --and--	
B. Peak-Hour Vehicular Volumes	

HCS7 Warrants Report

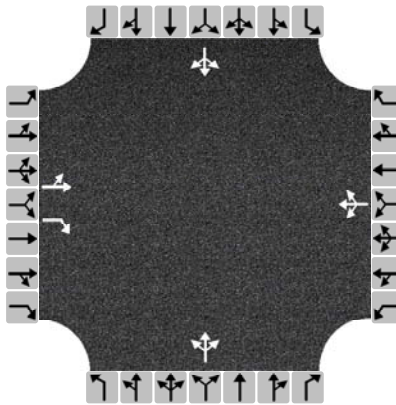
Project Information

Analyst	EKB	Date	6/18/2020
Agency		Analysis Year	2027 Build
Jurisdiction	City of New Bedford	Time Period Analyzed	
Project Description	New Bedford Solid Waste Handling Facility		

General

Major Street Direction	East-West	Population < 10,000	No
Starting Time Interval	7	Coordinated Signal System	No
Median Type	Undivided	Crashes (crashes/year)	0
Major Street Speed (mi/h)	0	Adequate Trials of Crash Exp. Alt.	No
Nearest Signal (ft)	0		

Geometry and Traffic



Approach	Eastbound			Westbound			Northbound			Southbound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Number of Lanes, N	0	1	1	0	1	0	0	1	0	0	1	0
Lane Usage		LT	R		LTR			LTR			LTR	
Vehicle Volumes Averages (veh/h)	18	284	46	145	222	126	14	39	153	147	35	15
Pedestrian Averages (peds/h)	0			0			0			0		
Gap Averages (gaps/h)	0			0			0			0		
Delay (s/veh)	0.0			0.0			0.0			0.0		
Delay (veh-hrs)	0.0			0.0			0.0			0.0		

School Crossing and Roadway Network

Number of Students in Highest Hour	0	Two or More Major Routes	No
Number of Adequate Gaps in Period	0	Weekend Counts	No
Number of Minutes in Period	0	5-year Growth Factor (%)	0

Railroad Crossing

Grade Crossing Approach	None	Rail Traffic (trains/day)	4
Highest Volume Hour with Trains	Unknown	High Occupancy Buses (%)	0
Distance to Stop Line (ft)		Tractor-Trailer Trucks (%)	10

HCS7 Warrants Report

Volume Summary

Hour	Major Volume	Minor Volume	Total Volume	Peds/h	Gaps/h	1A (100%)	1A (80%)	1B (100%)	1B (80%)	2 (100%)	3A (100%)	3B (100%)	4A (100%)	4B (100%)
07 - 08	580	210	916	0	0	No	Yes	No	No	No	No	No	No	No
08 - 09	931	243	1350	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
09 - 10	843	233	1300	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
10 - 11	591	143	876	0	0	No	Yes	No	No	No	No	No	No	No
11 - 12	612	151	911	0	0	Yes	Yes	No	No	No	No	No	No	No
12 - 13	797	161	1106	0	0	Yes	Yes	No	Yes	No	No	No	No	No
13 - 14	888	217	1279	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
14 - 15	805	185	1173	0	0	Yes	Yes	No	Yes	No	No	No	No	No
15 - 16	902	237	1328	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
16 - 17	1277	298	1850	0	0	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No
17 - 18	1027	265	1533	0	0	Yes	Yes	Yes	Yes	Yes	No	No	No	No
18 - 19	877	255	1371	0	0	Yes	Yes	No	Yes	Yes	No	No	No	No
Total	10130	2598	14993	0	0	10	12	4	9	7	0	1	0	0

Warrants

Warrant 1: Eight-Hour Vehicular Volume	✓
A. Minimum Vehicular Volumes (Both major approaches --and-- higher minor approach) --or--	✓
B. Interruption of Continuous Traffic (Both major approaches --and-- higher minor approach) --or--	
80% Vehicular --and-- Interruption Volumes (Both major approaches --and-- higher minor approach)	✓
Warrant 2: Four-Hour Vehicular Volume	✓
Four-Hour Vehicular Volume (Both major approaches --and-- higher minor approach)	✓
Warrant 3: Peak Hour	✓
A. Peak-Hour Conditions (Minor delay -- and-- minor volume --and-- total volume) --or--	
B. Peak-Hour Vehicular Volumes (Both major approaches --and-- higher minor approach)	✓
Warrant 4: Pedestrian Volume	
A. Four Hour Volumes --or--	
B. One-Hour Volumes	
Warrant 5: School Crossing	
Gaps Same Period --and--	
Student Volumes	
Nearest Traffic Control Signal (optional)	
Warrant 6: Coordinated Signal System	
Degree of Platooning (Predominant direction or both directions)	
Warrant 7: Crash Experience	
A. Adequate trials of alternatives, observance and enforcement failed --and--	
B. Reported crashes susceptible to correction by signal (12-month period) --and--	
C. 80% Volumes for Warrants 1A, 1B, --or-- 4 are satisfied	✓
Warrant 8: Roadway Network	
A. Weekday Volume (Peak hour total --and-- projected warrants 1, 2, or 3) --or--	
B. Weekend Volume (Five hours total)	
Warrant 9: Grade Crossing	
A. Grade Crossing within 140 ft --and--	
B. Peak-Hour Vehicular Volumes	

APPENDIX 14
WSP ENERGY ANALYSIS



MEMORANDUM

TO: Massachusetts Dept. of Energy Resources
FROM: WSP
SUBJECT: Parallel Products / New Bedford, MA – Energy Compliance Path
DATE: June 3, 2020

The following identifies our proposed code compliant pathway & its requirements:

The engineering team has proposed to follow the following code compliant path for buildings permitted before August 7, 2020:

- ASHRAE 90.1-2013 with Massachusetts Amendments per Chapter 13 of 780 CMR

The project will comply with the mandatory and prescriptive requirements of ASHRAE 90.1-2013. In addition, all conditioned buildings will comply with two of the six C406.1 measures as follows:

- Reduced lighting power density in accordance with Section C406.3
 - All buildings will achieve minimum 10% lighting power density reduction.
- On-site supply of renewable energy in accordance with Section C406.4
 - Approximately 1.9-MW of photovoltaic array will be installed on adjacent canopies within the site.

Project Summary:

The project consists of the construction of 7 different structures on the site:

1. Glass Building (for processing glass recyclables), which has 3 separate components:
 - a. Glass Processing Section – a conditioned space per ASHRAE due to the heating load calculations (19 Btu/hr./s.f.). Mechanical systems to maintain space at approximately 50 degrees F.
 - b. Bunker Building Section – a conditioned space per ASHRAE due to the anticipated heating load. Mechanical systems to maintain space at approximately 50 degrees F.
 - c. Rear Photovoltaic Canopy #2 – an open-sided roof extension above rail tracks.
2. Side Bunker Building – an unconditioned space.
3. Rear Photovoltaic Canopy #1 – an open-sided, trellis type structure for PV panels.
4. Front Photovoltaic Canopy #1 – an open-sided roofed shed above loading dock approaches for PV panel installation.

5. Front Photovoltaic Canopy #2 – an open-sided, trellis type structure for PV panel installation.
6. Municipal Solid Waste Addition – an unconditioned space.
7. Bio-Solids Building – a conditioned space per ASHRAE due to the anticipated heating load. Processing floor to be maintained at 50 degrees F and approximately 1,500 sf of office/restroom suite to be maintained at approximately 70 degrees F with both heat & A/C.

Following are the requirements of this selected Code Compliant Path for Climate Zone 5A for the various elements of the project required to be energy code compliant:

Section 5 – Building Envelope:

The following (3) conditioned buildings will meet the mandatory and prescriptive requirements of the energy code:

- 1a: Glass Processing Section
- 1b: Bunker Building Section
- 7: Bio-solids Building

5.2 – Compliance Paths

5.2.1 – Compliance to be per Section 5.1, Section 5.4, Section 5.7, Section 5.8 and Section 5.5 – Prescriptive Building Envelope Option (as allowed since “fenestration area does not exceed the maximum allowed by Section 5.5.4.2.” – which is met per the proposed design.

5.4 – Mandatory Provisions

5.4.1 – Insulation / As prescribed & applicable, the buildings shall comply with the insulation requirements of Sections 5.8.1.1 through 5.8.1.10.

5.4.3.1 – Continuous Air Barrier / All conditioned spaces will be required to comply with the Continuous Air Barrier requirement within Section 5.4.3.1.

5.5 – Prescriptive Building Envelope Option

5.5.2 – As applicable, buildings will comply with the requirements for conditioned space in Table 5.5-5.

Table 5.5-5 – Building Envelope Requirements for Climate Zone 5 (A, B, & C):

Roofs

Metal Building R-19 + R-11 Ls (U-0.037)

Walls, Above Grade

Metal Building R-0 + R-19 c.i. (U-0.050)

Slab on Grade / Unheated

R-15 for 24 in. (F-0.52)

Opaque Doors

Swinging U-0.500

Nonswinging U-0.500



Vertical Fenestration

Metal Framing, Fixed	U-0.42
Metal Framing, Operable	U-0.50
Metal Framing, Ent. Door	U-0.77

Notes: “c.i.”=Continuous Insulation / Ls = Linear System / NR = No (Insulation) Required.

Sections 6 through 9 – HVAC, Service Water Heating, Electrical Power and Lighting

The (3) conditioned buildings will meet the mandatory and prescriptive requirements of these sections, as applicable.

Mechanical:

The conditioned buildings will be heated by gas-fired heating and ventilating units to maintain 50 degrees F within the space. These heaters will have a minimum efficiency of 82%.

Within the Bio-solids building there will be 1,500 sf of office/restroom suite to be maintained at approximately 70 degrees F with gas-fired heating and air-cooled DX cooling.

Lighting:

Lighting power density will be reduced by at least 10% from ASHRAE 90.1-2013 to comply with Section C406.1 of the MA Energy Code.

-END-

APPENDIX 15
HEAT PUMP ANALYSIS



ENERGY ANALYSIS

TO: Massachusetts Dept. of Energy Resources
FROM: WSP
SUBJECT: Parallel Products / New Bedford, MA – MEPA Energy Analysis DRAFT
DATE: July 29, 2020

Project Overview

The purpose of this analysis is to evaluate gas and electric heating systems at Parallel Product's new recycling facility in New Bedford, MA. The project will consist of multiple structures, including (3) conditioned buildings as follows:

1. Glass Processing Building (27,200 SF) – a conditioned space per ASHRAE due to the heating load calculations (15 Btu/hr./s.f.). Mechanical systems to maintain space at approximately 50 degrees F.
 - Estimated Envelope Heating Load: 454,000 Btu/hr for space heating,
 - Estimated Ventilation Load: 1,463,000 Btu/hr for process ventilation heating due to baghouse fans
 - End-of-process fans will be located at two baghouse exhausts. These fans will draw a total of approximately 27,100 cfm on a 24/7 operational basis. The impact of the makeup air heating necessary to operate the baghouses is now included in the heating load of the building.
 - Total required heat = 1,917,000 Btu/hr
2. Bunker Building Section (23,320 SF) – a conditioned space per ASHRAE due to the anticipated heating load. Mechanical systems to maintain space at approximately 50 degrees F.
 - Estimated Heating Load – 375,000 Btu/hr for space heating
3. Bio-Solids Building (30,000 SF) – a conditioned space per ASHRAE due to the anticipated heating load. Processing floor to be maintained at 50 degrees F and approximately 1,500 sf of office/restroom suite to be maintained at approximately 70 degrees F with both heat & A/C.
 - Estimated Envelope Heating Load: 425,000 Btu/hr for space heating,
 - Estimated Ventilation Load: 3,923,000 Btu/hr process ventilation heating
 - Includes 68,000 cfm of process ventilation operating 24/7/365
 - Total required heat = 4,348,000 Btu/hr

Note: The heating loads presented in this report are for MEPA purposes only and are based on conceptual design. Final load calculations shall be produced by the Engineer of Record.

HVAC System Options

The code-compliant baseline heating system is assumed to be an 80% efficient gas-fired packaged heating unit. This unit will heat the space to 50°F in the winter, and will also provide minimum code-required ventilation year-round. No cooling will be provided to the space, except for a small 1,500 SF office area within the Bio-solids building. The proposed design options are as follows

- Proposed Design = Gas-fired Furnace Heating and Ventilating Unit with 82% Efficiency
- Proposed Alternate Design = Electric Packaged Heat Pump Unit with 3.4 COP at 47°F OA

Heating Energy Analysis

For each option, WSP estimated the annual energy consumption, greenhouse gas (GHG) emissions, and energy cost using spreadsheet calculations based on weather bin data. The results of this analysis are shown in the tables below:

Table 1: Annual Heating Energy Consumption

Glass Processing Building	Annual Energy Consumption				GHG Emissions		Annual Energy Cost	
	Electricity (kWh)	Natural Gas (therm)	Total Energy (MMBtu)	Energy Savings (%)	GHG Emissions (tons/year)	GHG Savings (%)	Energy Cost (\$)	Energy Cost Savings (\$)
Baseline - Gas Heating 80% Efficient:	47,936	29,836	3,147	-	192	-	\$46,349	-
Proposed Design - Gas Heating 82% Efficient:	47,936	29,108	3,074	2.3%	187	2.2%	\$45,475	\$873
Proposed Alternative - Heat Pump Heating:	327,090	0	1,116	64.5%	116	39.4%	\$71,960	-\$25,611

Glass Bunker Building	Annual Energy Consumption				GHG Emissions		Annual Energy Cost	
	Electricity (kWh)	Natural Gas (therm)	Total Energy (MMBtu)	Energy Savings (%)	GHG Emissions (tons/year)	GHG Savings (%)	Energy Cost (\$)	Energy Cost Savings (\$)
Baseline - Gas Heating 80% Efficient:	9,346	5,817	614	-	37	-	\$9,037	-
Proposed Design - Gas Heating 82% Efficient:	9,346	5,675	599	2.3%	37	2.2%	\$8,867	\$170
Proposed Alternative - Heat Pump Heating:	63,775	0	218	64.5%	23	39.4%	\$14,031	-\$4,994

Bio-solids Building	Annual Energy Consumption				GHG Emissions		Annual Energy Cost	
	Electricity (kWh)	Natural Gas (therm)	Total Energy (MMBtu)	Energy Savings (%)	GHG Emissions (tons/year)	GHG Savings (%)	Energy Cost (\$)	Energy Cost Savings (\$)
Baseline	112,254	67,664	7,149	-	436	-	\$105,893	-
Proposed Design - Gas Heating 82% Efficient:	112,254	66,014	6,984	2.31%	426	2.2%	\$103,912	\$1,980
Proposed Alternative - Heat Pump Heating:	745,347	0	2,543	64.4%	265	39.3%	\$163,976	-\$58,084

As shown in the table above, the heat pump system would reduce site energy and GHG emissions; however, it would increase annual energy costs. The heat pump system would cost an additional \$91,713 per year to operate compared to the proposed gas furnace heating system.

Utility rates used in the analysis are \$0.22/kWh and \$1.2/therm.

Construction Costs

The following construction costs were developed using RS Means:

Table 2: RS Means Cost Estimates for Air Handling Equipment (Material + Labor)

	RS Means Cost (\$/MBH of installed heating capacity)
Gas Rooftop Unit 80% Efficiency (\$/MBH Cost)	\$70
Gas Rooftop Unit 82% Efficiency (\$/MBH Cost)	\$72
Rooftop Heat Pump (\$/MBH Cost)	\$134

Using the costs developed above, the heating system costs were calculated for each building based on floor area:

Table 3: Estimated Air Handling Equipment Cost by Building

	Glass Processing	Glass Bunker	Bio-Solids	TOTAL
Baseline - Gas Heating 82% Efficient:	\$134,220	\$26,170	\$304,397	\$464,787
Proposed Design - Gas Heating 82% Efficient:	\$137,576	\$26,824	\$312,007	\$476,406
Proposed Alternative - Heat Pump Heating:	\$256,936	\$50,097	\$582,702	\$889,735
Overall Construction Cost Increase for Heat Pump Heating = \$413,328				

Alternative Energy Credits and Utility Incentives

Alternative energy certificates (AECs) are financial incentives available to businesses that use air-source heat pump systems, which take advantage of the naturally occurring temperature differences in the air to provide heating/cooling.

Air-source heat pumps with efficiencies that exceed code are also eligible for incentives through the Mass Save Utility Program. For purposes of this analysis the following assumptions were made:

- Project would pursue Mass Save Custom Incentive Approach
- Estimated Incentive is \$0.35/kWh saved
- The heat pump system would save 20% energy compared to code

Table 4 below outlines the potential AECs and incentives available for air-source heat pumps.

Table 4: AEC and Incentive Summary

Incentives	Glass Processing	Glass Bunker	Bio-Solids
Alternative Energy Credits for Heat Pump System	\$2,862	\$559	\$6,489
Mass Save Incentives for Heat Pump System	\$22,896	\$4,464	\$52,174

Conclusion

Table 5 and 6 below summarize the first cost, incentives, and net operating cost for each building. The proposed gas heating system has a simple payback of 3.8 years, while the heat pump system does not payback.

The heat pump system would reduce GHG emissions by 40%; however, it would cost an additional \$78,779 per year to operate when compared to the proposed gas heating system.

Additionally, the heat pump systems provide both heating and cooling; however, only heating is required at the building. Therefore, the owner would pay a premium for a heat pump system with cooling capabilities that are not needed. Overall it would increase construction cost by approximately \$345,413.

The project team reach out to several vendors that indicated air source heat pump units are currently available in sizes up to ~240,000 Btu/hr. For example, one (1) proposed gas heating make-up air unit for the Bio-solids is currently 47,500 CFM, and approximately 4,000,000 Btu/hr. This would need to be replaced with (17) air-source heat pumps, which is not a realistic design or approach to heating a high-bay warehouse or manufacturing facility.

For the reasons outlined above, a heat pump system was not selected for this project.

Table 5: Annual First Cost and Operating Cost (By Building)

Glass Processing Building	Incentives and Construction Costs				Net First Cost	Net Annual Operating Cost Savings	Simple Payback (years)
	Construction Cost (\$)	Incremental First Cost (\$)	Alt. Energy Credits (\$)	Mass Save Incentive*			
Baseline - Gas Heating 80% Efficient:	\$134,220	\$0	\$0	\$0	-	-	-
Proposed Design - Gas Heating 82% Efficient:	\$137,576	\$3,356	\$0	\$0	\$3,356	\$873	3.8
Proposed Alternative - Heat Pump Heating:	\$256,936	\$122,715	\$2,862	\$22,896	\$99,819	-\$22,749	Does Not Payback

Glass Bunker Building	Incentives and Construction Costs				Net First Cost	Net Annual Operating Cost Savings	Simple Payback (years)
	Construction Cost (\$)	Incremental First Cost (\$)	Alt. Energy Credits (\$)	Mass Save Incentive*			
Baseline - Gas Heating 80% Efficient:	\$26,170	\$0	\$0	\$0	-	-	-
Proposed Design - Gas Heating 82% Efficient:	\$26,824	\$654	\$0	\$0	\$654	\$170	3.8
Proposed Alternative - Heat Pump Heating:	\$50,097	\$23,927	\$559	\$4,464	\$19,463	-\$4,435	Does Not Payback

Bio-solids Building	Incentives and Construction Costs				Net First Cost	Net Annual Operating Cost Savings	Simple Payback (years)
	Construction Cost (\$)	Incremental First Cost (\$)	Alt. Energy Credits (\$)	Mass Save Incentive*			
Baseline	\$304,397	\$0	\$0	\$0	-	-	-
Proposed Design - Gas Heating 82% Efficient:	\$312,007	\$7,610	\$0	\$0	\$7,610	\$1,980	3.8
Proposed Alternative - Heat Pump Heating:	\$582,702	\$278,306	\$6,489	\$52,174	\$226,131	-\$51,595	Does Not Payback

Table 6: Added First Cost and Operating Cost for Heat Pump System (Total – all 3 buildings)

	Net First Cost	Net Annual Operating Cost Savings
Heat Pump Heating System for entire site	\$345,413	-\$78,779

--END--

APPENDIX 16
SITE PLAN REVIEW APPROVAL

**PLANNING BOARD**

City Hall, Room 303
 133 William Street,
 New Bedford, MA 02740
 (508) 979-1488
www.newbedford-ma.gov

CITY OF NEW BEDFORD

JONATHAN F. MITCHELL, MAYOR

NOTICE OF DECISION

Case Number:	20-26			
Request Type:	Site Plan			
Address:	100 Duchaine Blvd.			
Zoning:	Industrial C, Mixed Use Business, and Residential A			
Recorded Owner:	SMRE 100, LLC & SMRE SUBLOT 20, LLC			
Owner Address:	255 State Street 7 th Floor Boston, MA 02109 & 401 Industry Road, Suite 100 Louisville, KY 40208			
Applicant:	SMRE 100, LLC			
Applicant Address:	255 State Street, 7 th Floor Boston, MA 02109			
Application Submittal Date	Public Hearing Date(s)		Decision Date	
September 8, 2020	September 30, October 28, November 18, and December 9, 2020		December 9, 2020	
Assessor's Plot Number	Lot Number(s)	Book Number	Page Number	Certificate Number
134	5 & 462	134	60	24201, 23339, 24417, 25024
133	67	12378	314	

Application: SMRE 100, LLC (255 State Street, 7th Floor, Boston, MA 02109) for a **Site Plan Review** for the expansion of an existing glass and plastics recycling and processing facility; including a 23,050± building addition, a 22,819± building addition, solar canopies, a railroad line spur, and associated site improvements. Located at **100 Duchaine Boulevard** (Map: 134 Lots: 5 & 462; & Map: 133 Lot: 67) on a 70 ± acre site in an Industrial C, Mixed Use Business, and Residential A zoned districts.

Action: **GRANTED, WITH CONDITIONS, as described in section four (4).**

A copy of this decision was filed with the City Clerk of the City of New Bedford on December 23, 2020. Any person aggrieved by this decision for **Site Plan** Approval has twenty (20) days to appeal the decision in accordance with the procedures set forth in Section 8 of Chapter 40A of the General Laws of Massachusetts and Section 5490B of the City of New Bedford Site Plan Review Ordinance.

12/23/2020

Date

Kathryn Duff, Chair
City of New Bedford Planning Board

1) APPLICATION SUMMARY

SMRE 100, LLC (255 State Street, 7th Floor, Boston, MA 02109) for a **Site Plan Review** for the expansion of an existing glass and plastics recycling and processing facility; including a 23,050± building addition, a 22,819± building addition, solar canopies, a railroad line spur, and associated site improvements. Located at **100 Duchaine Boulevard** (Map: 134 Lots: 5 & 462; & Map: 133 Lot: 67) on a 70 ± acre site in an Industrial C, Mixed Use Business, and Residential A zoned districts.

2) MATERIALS REVIEWED BY THE PLANNING BOARD

Plans Considered to be Part of the Application

The engineered plan submission is shown as “Phase I & Phase II Site Plan 100 Duchaine Boulevard Assessors Map 133 Lot 67 & Map 134 Lots 5 & 462 New Bedford, Massachusetts” dated July 3, 2020, last revision dated November 3, 2020; date stamped received by City Clerk’s Office on November 24, 2020. Plans were prepared by Farland Corp., in New Bedford, MA and stamped by Christian Albert Farland, PE. The plan set consists of the following sheets:

- Sheet 1 Cover Sheet
- Sheet 2 Existing Conditions Overall Site
- Sheet 3 Existing Conditions
- Sheet 4 Existing Conditions Cont.
- Sheet 5 Erosion Control & Demolition
- Sheet 6 Erosion Control & Demo. Cont.
- Sheet 7 Layout Overall Site
- Sheet 8 Layout
- Sheet 9 Layout Cont.
- Sheet 10 Traffic Circulation
- Sheet 11 Utilities
- Sheet 12 Utilities Cont.
- Sheet 13 Grading & Drainage
- Sheet 14 Grading & Drainage Cont.
- Sheet 15 Lighting & Landscaping
- Sheet 16 Lighting & Landscaping Cont.
- Sheet 17 Landscaping & Planting Schedule
- Sheet 18 Color Presentation
- Sheet 19 Notes & Legend
- Sheet 20 Details
- Sheet 21 Details Cont.
- Sheet 22 Details
- Sheet 23 Details
- Sheet 24 Details

The architectural plan submission is shown as “Parallel Products 100 Duchaine Blvd., New Bedford, MA 02745 – Planning Board Submission” dated September 16, 2019, last revision dated November 3, 2020; date stamped received by City Clerk’s Office on November 24, 2020. prepared by William Starck Architects, Inc., in Providence, RI, unstamped. The plan set consists of the following sheets:

- Drawing A1.1 Glass Building Extension Floor Plan

- Drawing A1.2 Side Bunker Building Floor Plan
- Drawing A1.3 Front Photovoltaic Canopy #1 Floor Plan
- Drawing A3.1 Proposed Side Bunker Building Elevation
- Drawing A3.2 Proposed Glass Building Extension Elevations
- Drawing A3.3 Proposed Front Photovoltaic Canopy #2 Elevations
- Drawing A3.4 Proposed Front Photovoltaic Canopy #1 Elevations
- Drawing A3.5 Proposed Rear Photovoltaic Canopy #1 Elevations
- Drawing C1A Proposed Architectural Site Plan

The solar panel details and architectural plan submission is shown as “Solar Canopy for Parallel Products at 100 Duchaine Blvd., New Bedford, MA 02745” last revision dated 8/29/19, prepared by RBI Solar in Cincinnati, OH, unstamped. The plan set consists of the following sheets:

- Sheet SC001 Cover Sheet
- Sheet SC002 General Notes & Module Specifications
- Sheet SC003 Site Plan
- Sheet SC101 Foundation & Column Plan
- Sheet SC102 Foundation & Column Plan
- Sheet SC103 Component Plan
- Sheet SC104 Component Plan
- Sheet SC301 Canopy Section
- Sheet SC302 Canopy Section
- Sheet SC401 Foundation & Base Plate Details
- Sheet SC501 Component Details

Other Documents and Supporting Materials

- ✉ Site Plan Review Application date stamped received by the City Clerk’s Office on September 8, 2020.
- ✉ Certified Abutters List
- ✉ Department of City Planning Staff Report dated September 24, 2020
- ✉ Department of City Planning Staff Memo dated October 27, 2020
- ✉ Department of Public Infrastructure Memo dated September 29, 2020
- ✉ Department of Public Infrastructure Memo dated October 28, 2020
- ✉ Department of Public Infrastructure Memo dated November 18, 2020
- ✉ New Bedford Fire Prevention Bureau Comments dated December 7, 2020
- ✉ Department of Public Infrastructure Memo dated December 9, 2020
- ✉ Conservation Commission Comments September 23, 2020
- ✉ Conservation Commission Comments November 12, 2020
- ✉ Applicant Response Letter dated October 9, 2020
- ✉ Applicant Response Letter dated November 3, 2020
- ✉ Applicant Response to DPI Phase 1 Traffic Comments dated November 3, 2020
- ✉ Letter from MassCoastal Rail dated September 30, 2020
- ✉ Letter from City Councilor At-Large Linda Morad, dated October 26, 2020
- ✉ Email from Tracy Wallace, New Bedford resident, dated December 9, 2020

3) DISCUSSION

Due to the COVID- 19 outbreak, the following meeting were held fully remotely in accordance with the Governor of Massachusetts' March 12, 2020 Order Suspending Certain Provisions of the Open Meeting Law G. L. c. 30A, Section 20.

September 30, 2020

Board members Kathryn Duff, Peter Cruz, Alexander Kalife, Arthur Glassman, and Kamile Khazan attended the September 30, 2020 virtual meeting held online and over a conference call. Senior Planner Jennifer Carloni was also present during the discussion.

A motion was made by Mr. Glassman and seconded Mr. Cruz to open the public hearing. Motion passed unopposed.

Att. Michael Kehoe, New Bedford, appeared on behalf of the owner/applicant. He stated they are requesting the expansion of the glass recycling component of the currently operational facility. He described the scope and detail of the expansion, including solar canopies and parking, railroad spur line installation, and site improvements. He described the history of the project, including a 2017 planning board site plan approval; namely Case #32-17. He referenced the board's 2018 approval of a new pylon ground sign along with the structure addition. Attorney Kehoe provided further project details, including orders of conditions, MEPA review and the filing showing the project as Phase 1. He clarified that the applicant is seeking approval of glass recycling expansion at this time.

Chairperson Duff noted the addition of plastic as it was in the application and suggested the need to modify the request.

Timothy Cusson, Vice-President of Parallel Products, provided a history of the company and its operations. He noted no operational complaints at the original facility, and since moving to Duchaine Boulevard in 2019 and operating since February 2020 he has no knowledge of any complaints. He described the glass processing work that is presently being done at the facility, and he described the proposed expansion operations. He discussed storage, abutter concerns, and proposed changes in operation. He discussed outside operations, the scope of the proposed volumes, and traffic.

Mr. Cusson then discussed rail service details. There was further board discussion on the railway correspondence, which Chairperson Duff read into the record.

Attorney Kehoe introduced Christian Farland of Farland Corp. Mr. Farland, on behalf of the applicant, provided a history of their work on the Phase 1 project. He discussed the rail aspect of the project and the absence of the need for significant work on the same. He provided a presentation for the board to view, including site buildings. He discussed the operation and directions of travel within the project and stormwater. He then described project changes and additions. He noted steps taken to minimize various impacts, including wetlands and stormwater improvements. He acknowledged the staff report and DPI comments and said the applicant would address the comments.

Chairperson Duff provided positive comments on the project plan. She commented that several application items need clarification, including whether the applicant seeks a waiver versus permission.

Chairperson Duff requested further details about the plans, including the rail crossing and traffic circulation.

Mr. Cusson then explained site access and maintenance, product travel, loading, et cetera, on the site. Chairperson Duff asked about the use/direction of the conveyor, as well as employee traffic circulation and parking. In response to Chairperson Duff, Mr. Cusson stated there will be 75 employees over 3 shifts. He also discussed sidewalks, employee entrance, additional available parking and bike racks, and paved space versus green space.

Mr. Farland spoke further on green space/impervious space. In response to Chairperson Duff, Mr. Farland stated they would explore installation of planting islands in the northeast section. There was further discussion, noting the area in question is part of the applicant's Phase II. Chairperson Duff suggested delineation of the two phases, noting only Phase I is before the board.

Phil Viveiros of McMahon Associates, discussed traffic impacts from operation, noting their previous July 2019 memo which did not include glass trips and discussed the updated figures. Chairperson Duff requested clarification and suggested the applicant speak with DPI regarding an updated traffic study.

Board Member Khazan requested clarification regarding the DPI traffic study request and discussed buffering, truck traffic and other concerns with Mr. Cusson.

Board Member Glassman discussed the impact of approving Phase I as it relates to any advantage created for Phase II and encouraged the board to consider these as two separate operations. Chairperson Duff welcomed comment from the City Solicitor's Office. Elizabeth Lydon, Associate City Solicitor suggested conditioning the project to address these concerns.

Board Member Cruz discussed a railroad and wetland crossing retaining wall with Mr. Farland as well as the stormwater system, noting the railroad area and associated traffic, storm receptors, wetlands, and other site improvements. Chairperson Duff requested plans of the layout improvements related to the railroad.

Board Member Glassman discussed train operating hours with Mr. Cusson.

A motion was made (AG) and seconded (PC) to open the hearing to comments from the public.

ROLL CALLVOTE:

Board Member Glassman– Yes

Board Member Kalife – Yes

Board Member Cruz – Yes

Board Member Khazan - Yes

Chairperson Duff – Yes

Motion passes 5-0

In response to Chairperson Duff's invitation to speak or be recorded in favor of the project, Eric Bratemier, Intercorporation, an abutter, raised concerns about noise at conveyor operations, railroad spurs and associated work on the site, as well as traffic.

Elizabeth Swible, of Jennifer Lane, expressed concerns about piggy backing phases and the lack of information on Phase II. She inquired about the volume and employment opportunities. She stated she could hear the facility running late at night and questioned the need versus the benefit. Chairperson Duff provided comment on the same, noting the board's purview. Ms. Swible reiterated her concern that Phase II has impacts that are not being discussed.

Charles Kennedy, of Birchwood Drive, reiterated the comments of the prior speaker, noting he was up at 5:30 a.m. hearing noise from the operation as well. He inquired as to hours of operation. Chairperson Duff stated she believes it to be 3 shifts per day, 7 days a week.

Ken Costa of Greenbrier Drive reiterated previous comments about noise from the glass, and suggested studies on the same. He noted Phase II is already present on the rail drawings.

Vincent Carolan of Stephanie Place discussed safety of school children related to truck traffic.

Tracy Wallace of Stephanie Place expressed her traffic concerns and reiterated previous comments related to noise, which she described as significant. She noted her concern about safety when running on Phillips Road. She stated that in a 40-minute period she was passed by 14 Mack trucks and 4 tractor-trailers. She also noted the bike lanes and speed of motorists on that road. She spoke of trash, parked cars and Eversource traffic. She suggested a moratorium on traffic. She also expressed concern on the Phase I and Phase II distinctions and requested to include "waste" in the current documents for review by the public.

Councilor Linda Morad echoed the previous comments given the concerns expressed. She asked the board to clarify with the Solicitor's Office whether the City's noise ordinance applies, given the hours of operation. Councilor Morad requested the board limit rail cars loading hours of operation, as the loading occurs outside. She requested current truck volume numbers and information on dumpster locations and associated schedules and odors. Councilor Morad commented that an updated traffic study should be required for Phase I and requested installation of traffic signals at the corners of Braley and Phillips Roads, as well as the 140 exit ramps, as the board has previously required.

Charles Kennedy reiterated that in the mornings there is a large amount of truck traffic and noise as they hit surface patches in the road. He noted concerns with the dust from the loading/unloading. He agreed with changes to the traffic study and complained about the Phillips Road traffic.

Wendy Boucher, of East Freetown, thanked Councilor Morad for her comments and expressed concerns over noise, light pollution from a 24 hour operating site, vermin and traffic.

Chairperson Duff agreed with the traffic study points raised.

Jim Niiand, Stephanie Place, stated he supports all the public comments expressed both for and against the proposal. He stated that traffic is an issue. He expressed concerns about lighting and trucks on Phillips Road, which would affect quality of life.

At the conclusion of the comment period, Chairperson Duff highlighted the concerns expressed, including noise. She confirmed the hours of operation with Mr. Cusson. Chairperson Duff again raised the conveyor operations and suggested closing the area on 2 or 3 sides. Chairperson Duff also noted the neighboring business's traffic concerns.

In addressing public comments, Mr. Cusson stated that all material is loaded inside of the building. He stated he would look into noise concerns and suggested he could restrict conveyor loading times. He addressed the early morning noise complaints, noting that Parallel Products is not the only operator in the area. He then discussed rail line access and construction of the same.

Eric Bratemier commented on the narrowness of the road and negative interference on Barnett Boulevard.

Mr. Cusson responded that he could include an area for construction vehicles and would look into traffic interruption due to the rail. Mr. Cusson stated that he would provide additional information addressing traffic concerns at the next meeting. Mr. Cusson stated that Phase II may never happen and discussed outstanding approvals needed. He commented on the economic feasibility and noted the limited build out of the rail. He acknowledged Phase II would not provide any extensive volume of jobs. He acknowledged the uptick in truck traffic in the Industrial Park due to the addition of many companies. He said they would self-police any trucks on Phillips Road, and noted their agreement to a truck exclusionary zone. He also discussed DPI comments and traffic signals. Chairperson Duff noted the concerns expressed about traffic and noise, and suggested a noise study. Mr. Cusson stated that there are currently no outside operations.

Board Member Glassman discussed ton limits on Phillips Road with fines.

After discussion with the applicant on meeting availability, a motion was made (AG) and seconded (KK) to continue the matter to October 28, 2020.

ROLL CALLVOTE:

Board Member Glassman– Yes

Board Member Kalife – Yes

Board Member Cruz – Yes

Board Member Khazan - Yes

Chairperson Duff – Yes

Motion passes 5-0

October 28, 2020

Board members Kathryn Duff, Peter Cruz, Alexander Kalife, Arthur Glassman, and Kamile Khazan attended the September 30, 2020 virtual meeting held online and over a conference call. Senior Planner Jennifer Carloni was also present during the discussion.

A motion was made by Mr. Glassman and seconded Mr. Cruz to open the public hearing. Motion passed unopposed.

Chair Duff read into the record a communication from the Department of Public Infrastructure dated October 27, 2020.

Attorney Kehoe presented on behalf of the applicant and requested that many of the concerns outlined in the DPI memorandum could be made into conditions of approval and requested the board vote as such. He explained the traffic report numbers included the existing operation and highlighted that the rail line would further reduce the number of vehicular trips to the site.

Mr. Farland, project engineer, detailed the revisions made to the plans since the last hearing. He noted the applicant made all the revisions previously requested by DPI. He further requested the new DPI comments received on the latest plan revisions be made conditions of approval. He noted the projected number of vehicles in question would be about six and should not require any further traffic studies. He indicated the information provided by the project team is adequate for review and approval. Mr. Farland then read and reviewed each item outlined in his response letter dated October 9, 2020 for the board.

Chair Duff inquired if the applicant had quantified the existing noise on the site. Mr. Farland replied that he did not feel there was a need to do so and it is not a requirement of site plan review. He said noise is not an issue on the site and it complies with the City noise requirements. He reiterated that the use is not changing, just expanding. He noted the concerns about noise expressed by the neighborhood were related to the adjacent business and not this site. He noted Parallel Products does not use backup alarms on their vehicles so those complaints would have to be related to an adjacent business. Lastly, he noted the property is located in the industrial park and the property is not in violation of any noise issues. He also noted there is no exterior machinery proposed.

Mr. Farland noted the traffic engineer is working with DPI to address their concerns and questions related to traffic. He also noted the team submitted a letter from MassCoastal dated September 30, 2020, which outlined the potential service levels for the rail operator to the site.

Mr. Farland continued to read and review his response letter outlining the changes made to the plan since the last hearing.

Chair Duff clarified that the Board received a letter clarifying that information contained in a previous traffic report was for a larger proposal at the site. Mr. Farland noted that the traffic to be generated by this phase is minimal and does not warrant a full traffic study.

Chair Duff asked for clarification about the rail lines. Mr. Farland noted some revisions still need to be made to this section of the plan for clarity. He explained that at this time the applicant proposes to have the rail cars and rail line enter the building in the rear. The plan has been revised to have one rail line entering the building and one rail line on the exterior under the canopies. Rail cars would be loaded inside the building to further reduce any noise impacts then be moved to the exterior rail line until they were picked up by the rail operator.

Mr. Cusson, of Parallel Products, further explained that the architectural plans have an overhead door on the west side of the building. It is in that location where the rail line would be entering the building for loading the processed materials.

At the request of Chair Duff, Mr. Cusson further detailed how the rail cars would be moved between the two rail lines utilizing an electric rail car.

Chair Duff requested that a rail car be added to the plan revision for a sense of proportional scale and better understanding by all.

Chair Duff outlined the concerns expressed by abutters were related to noise, traffic, and impacts to neighboring businesses in the park when the rail service stops traffic in the park.

At the request of Chair Duff, Mr. Farland pointed out the wetland area that would be flooded. Mr. Farland noted the plans had been peer reviewed and approved by Conservation Commission. He indicated he could follow up with the Conservation Agent and coordinate with DPI.

Mr. Cusson provided clarification about the hours of operation. He noted they are an existing business already approved for 24-hour operation. He explained the rail line service would be based on when MassCoastal serves the area but again referred to the letter provided for more specifics. He noted there would likely be two service visits per week, whereas the real problem for the park businesses will be the commuter rail once that becomes operational.

Regarding the truck traffic on Phillips Road, Mr. Cusson offered that they would train their employees not to utilize Phillips Road, and provide signage and instructions to outside vendors to not use that route as well. They would also be supportive of any petition made to the Traffic Commission to limit heavy trucks on that portion of roadway.

Chair Duff asked for questions from the board. Ms. Khazan asked for clarification about the revisions made and DPI comments. Chair Duff noted the comments from DPI were for the most recent revision submitted. The comments were received moments before the meeting so some revisions the applicant verbally described tonight have not yet been made on the drawings. Mr. Farland noted most concerns are minor and typical. Senior Planner, Jennifer Carloni interjected that it is very unusual for DPI to request a continuance for further revisions. If it could be conditioned, DPI would not request a continuance.

At the request of Chair Duff, Mr. Cusson provided an overview of the site operation and procedure for processing the recyclable materials. He explained they received material from redemption centers, sort, process and bale it by types and ship it back out to vendors who reuse the material to create new products.

There was further discussion between Chair Duff and Mr. Cusson about the revisions to be made and the requirements and regulations that apply to the project.

Chair Duff then offered the opportunity for anyone in attendance to speak or be recorded in favor or opposition. No one was recorded in favor.

Chair Duff read a letter in opposition from City Councilor At-Large Linda Morad, dated October 26, 2020.

Then the following individuals spoke and were recorded in opposition: Vincent Carol (75 Stephanie Place New Bedford), City Councilor Ward 1, Brad Markey (133 William Street New Bedford, Ma), Tracy Wallace (75 Stephanie Place New Bedford, MA), Jim Niland (47 Stephanie Place New Bedford, MA), and Elizabeth Swible (Jennifer Lane New Bedford, MA).

Those in opposition expressed concerns about traffic impacts to the nearby Pulaski Elementary School, Phillips Road neighborhoods, noise, odors, independent drivers coming to the site using Phillips Road, environmental impacts to air and ground water and the material being processed on site. They also expressed concern for approving elements in this phase that are designed for future phases.

In response to a request from Chair Duff, Mr. Cusson explained how they communicate with the independent haulers coming to their facility. Mr. Cusson offered to provide signage around the site and instructions to all vendors. He further reiterated his support for the City to have the traffic commission put a heavy truck restriction on Phillips Road, which is outside of their control.

Mr. Phil Viveiros addressed questions about the traffic study. He noted the current proposal would not generate significant additional traffic volumes. The full site build-out which the full traffic study was originally based on would have much higher traffic volumes and any mitigation measures would be reviewed as part of the MEPA review and subsequent site plan review processes with the city. It was further clarified that the 2018 traffic study projected the site would see 108 trips per day once Parallel Products relocated to the site. The current traffic counts are 90 vehicle trips per day. With this proposed expansion they anticipate a total of 6 additional trips per day bringing them under their 2018 study projections.

There was further discussion on concerns of abutters and revisions the applicant could make to the plan.

Mr. Glassman made a motion, seconded by Mr. Cruz to continue the case hearing to November 18, 2020. With all in favor the motion passed.

November 18, 2020

Board members Kathryn Duff, Peter Cruz, Alexander Kalife, Arthur Glassman, and Kamile Khazan attended the November 18, 2020 virtual meeting held online and over a conference call. Senior Planner Jennifer Carloni was also present during the discussion.

A motion was made by Mr. Glassman and seconded Mr. Cruz to open the public hearing. Motion passed unopposed.

Chair Duff read a memo from the Department of Public Infrastructure dated November 18, 2020 noting DPI required more time to review the revised plans and documents submitted since the October meeting. It was also noted that Senior Planner, Jennifer Carloni had received word from Fire Prevention Office that they too required additional time to review the plan for the rail to enter the building.

There was brief conversation about the need for further time and the applicant expressed frustration with the process and requested comments be provided in a timely fashion prior to the next hearing.

Mr. Glassman made a motion, seconded by Mr. Cruz to continue the hearing to December 9, 2020. With all in favor the motion passed.

December 9, 2020

Board members Kathryn Duff, Peter Cruz, Arthur Glassman, Alexander Kalife, and Kamile Khazan attend the December 9, 2020 virtual meeting held online and over a conference call. Preservation Planner Anne Louro, Staff Planner Michael McCarthy, and Associate Solicitor Elizabeth Lydon were also present during this discussion

Chair Duff began the discussion by reading into the record a letter with comments from the New Bedford Fire Prevention Bureau dated December 7, 2020, which contained questions about the submitted plan such as the materials to be handled in the rail cars, at what times rail cars will be in the building, what type of a rail cars will be in the building, and plans for relocating a fire hydrant.

Chair Duff read into the record a memo from the Department of Public Infrastructure dated December 9, 2020 (attached), which detailed comments from DPI along with a request that the applicant's engineer contact DPI for a review meeting to discuss all of DPI's outstanding and new comments.

Chair Duff read an email dated December 9, 2020 from a neighboring resident, Ms. Tracy Wallace, into the record. The letter detailed concerns with the Parallel Products site and the abutting homes owned by Parallel Products, including unkept properties, trash along the roadside, odors, noise, and traffic concerns related to Theodore Rice Blvd. Ms. Wallace attached photos to her email.

Attorney Michael Kehoe presented on behalf of the applicant and began by stating that the applicant team felt that the current plans had been revised to adequately address previous concerns voiced by the public and City departments. With regards to the comments from the Fire Prevention Bureau, Attorney Kehoe felt that the current revision of the plans provided enough information to answer any questions. Attorney Kehoe noted that at the time of a building permit application, the application team would submit detailed construction plans, which will include plans for a fire safety system. Attorney Kehoe stated that most of DPI's comments up until the most recent memo dealt with traffic concerns, an issue that he considered to be resolved. He added that DPI called the traffic study analysis thorough. Attorney Kehoe said that adding in conditions that are already tied to the issuance of building permit conflated the issue and asked the Board to focus on the site plan review requirements.

Attorney Kehoe stated that Parallel Products should not be held responsible for the noise generated from that area of the business park and that the noise was what one could expect from that type of site in an industrial park. Regarding trash, Attorney Kehoe said that Parallel Products itself is not the source of trash dumped on the property, and that if they are made aware of any trash, they remove it.

Mr. Farland insisted that the current plans meet all the City's and state's standards and that he disagrees with Ms. Wallace's email.

Mr. Farland reiterated that the current plans met the City's standards and that they have addressed comments from the Planning Department staff report and from DPI's October memo. Mr. Farland remarked that the Planning Board typically includes DPI comments as conditions of approval, rather than withholding approval until issues are addressed. He said that he believed that outstanding issues related

to utilities should be resolved during the building permit process. He concluded by saying that the Board had everything in front of them that they needed to approve the plan at this time.

Chair Duff asked if Mr. Farland had any objections to the latest comments from DPI and he stated that he did not. Chair Duff then asked for a response to comment #10 from DPI's December 9, 2020 memo, which reads: "Coordinate site plan changes with Conservation Commission for filed Notice of Intent. Several utility relocations appear to have direct impacts on wetland resources." Mr. Farland responded that the Conservation Commission has approved the project and that any changes that cause work to be done outside of the limitations set by the Commission would require the applicant to refile for approval from the Commission.

Mr. Farland then responded to the comments from the Fire Prevention Bureau and argued that the typical process is for the fire protection plan to be reviewed as part of the building permit plan and not during site plan review. Chair Duff responded that these concerns were brought up at this time due to the unique nature of the project, which was recently revised to bring rail cars inside of the building.

Chair Duff noted that she had visited the location multiple times to understand the concerns raised by the public throughout the hearing. She said that the site was clean and that she never observed any issues with trash along the road during her visits. Regarding traffic, Chair Duff commented that Phillips Road is a very busy road and that concerns regarding that are correct, but that this must be addressed by the City and is not something that is solely the responsibility of Parallel Products.

Regarding noise, Chair Duff stated that the applicant was not required to adhere to the local noise ordinance because they are not surrounded by residential properties. Chair Duff and Attorney Kehoe discussed the possibility of setting a 60-decible limit on noise at the property boundary. Mr. Farland questioned how a baseline reading would be measured and suggested adding landscape features along the boundary line to dampen noise. Chair Duff agreed with this suggestion and Mr. Farland agreed to add evergreen plantings in this area.

Chair Duff confirmed that Parallel Products would add signage to direct inbound truck traffic to Theodore Rice Boulevard and outbound truck traffic to Duchaine Boulevard and that all proposed signage would be reviewed by Planning Department staff. Mr. Farland agreed to this condition. Chair Duff also confirmed that the applicant would replace all inoperable fixtures with down-shielded fixtures prior to the certificate of occupancy. Mr. Farland agreed to this condition.

Chair Duff then asked if Planning staff or Board members had any questions from the team and Ms. Louro stated that Captain Coons from the Fire Department would be on the call to speak on his concerns, but that he was not at the moment at the meeting. Mr. Cruz said that Chair Duff addressed all the points he wished to discuss and had no further questions for the applicant.

Chair Duff invited members of the public to speak on record in support or opposition of this case. City Councilors Linda Morad and Brad Markey spoke about concerns that they had already raised in previous meetings and heard from the public regarding noise and traffic. Both councilors asked that the Board

condition its approval in a way that gives the City a means to remedy these issues if they are not addressed by the applicant.

Mr. Vincent Carolan, a nearby resident, commented that the additional traffic projected in the traffic report posed a danger due to the current traffic levels, presence of a school, and pedestrian traffic in the area. Chair Duff acknowledged Mr. Carolan's concerns and asked the applicant team to speak to this. Mr. Farland said that the increase in traffic would only be 10 vehicles a day and that the report did not factor in the reduction of traffic due to the addition of the rail line.

Chair Duff turned the discussion to the reduction of operating hours and the condition that the applicant improve conditions between their property and the abutting residential properties to reduce noise. Mr. Timothy Cusson, of Parallel Products, suggested start and end times for the weekend. Chair Duff suggested limiting Sunday to 10AM to 2PM and ending operations at 6:30PM on Saturday, which Mr. Cusson agreed to.

Chair Duff and Mr. Cusson worked to clarify where landscape modifications would be done to reduce noise for the residential abutters. Mr. Cusson agreed to put plantings along the two residential properties owned by Parallel Products and along the northern and western boundaries of the abutting residential property.

Chair Duff asked how residents would be able to identify trucks from Parallel Products and Mr. Cusson responded that trucks marked "Tomra" are the only trucks that leave and return to their facility every day. Chair Duff and Mr. Cusson discussed how drivers would be disciplined if they took Phillips Road. Mr. Cusson agreed to develop a training program and share it with the Board but would not commit to any disciplinary actions without first consulting with Human Resources.

Ms. Wendy Graca, a resident of Freetown, spoke to address the hours of operation and how it would disturb the sleep of residents, and suggested that fines should be involved if a driver takes Phillips Road. Chair Duff responded that the Board is not an enforcement agent and could not impose fines.

Ms. Elizabeth Swible, a neighboring resident, stated that opposition to this project extended beyond immediate abutters, because Parallel Products was undertaking this expansion to increase more business to this location. Given this, Ms. Swible questioned whether the traffic estimates were accurate. Chair Duff stated that the traffic report had been peer reviewed, revised, and accepted by the City.

Mr. Cusson responded to a question from Chair Duff regarding operations and noise levels, saying that trucks are not active on site after 11:30PM and most trucks are on the road from 6:30PM until 6PM. Ms. Swible asked if the doors to the facility would be open 24 hours a day, which she said caused noise. Mr. Cusson responded that generally, the doors are closed, and he invited to public to call and come visit when they hear noise.

Captain Daniel Coons of the New Bedford Fire Department expanded on the concerns outlined in the December 7 memo, stating that once a railroad system is in place, it is difficult to alter and that this is why the Fire Prevention Bureau requested additional details about the type of rail cars and fire safety system at this time. Mr. Cusson responded that crushed glass would be loaded into closed-top hopper cars moved

by an electric engine and that as part of the building permit process the Fire Prevention Bureau would receive fully engineered fire protection plans. Attorney Kehoe added that the applicant intended for the building expansion to be fully code compliant regarding fire safety and all other codes.

Associate Solicitor Lydon stated that section 5451 of the City's code of ordinances for site plan review required "a utility plan which shall include all facilities for refuse and sewage disposal or storage of waste. The location of all hydrants, fire alarms, and firefighting facilities on or adjacent to the site." Mr. Cusson and Attorney Kehoe insisted that the plans included these items and Mr. Farland requested that a plan sheet be brought up so that he could identify them.

Associate Solicitor Lydon reminded the Board that it was within their purview to continue a hearing and ask for more details at the recommendation of City departments if they wished to do.

Chair Duff asked Captain Coons to clarify if Fire Prevention was requesting additional plans. Captain Coons responded that Fire Prevention was asking for "engineered, stamped plans" that show the type of fire safety system. Chair Duff stated that stamped plans would have to be submitted for the applicant to receive a building permit. Associate Solicitor Lydon noted that a building permit will be issued after the rail line is constructed.

4) DECISION

Mr. Glassman made a motion, seconded by Mr. Cruz to approve Case #20-26: 100 Duchaine Boulevard – Request by applicant for a Site Plan Review for the expansion of an existing glass and plastics recycling and processing facility; including a 23,050± building addition, a 22,819± building addition, solar canopies, a railroad line spur, and associated site improvements. Located at 100 Duchaine Boulevard (Map: 134 Lots: 5 & 462; & Map: 133 Lot: 67) on a 70± acre site in an Industrial C, Mixed Use Business, and Residential A zoned districts. Owners/Applicant: SMRE 100, LLC (255 State Street, 7th Floor, Boston, MA 02109) & SMRE SUBLOT 20, LLC (401 Industry Road – Suite 100 Louisville, KY 40208).

The approval is subject to the following:

Special Conditions:

1. This approval is for the expansion of the glass recycling operation only. Any further expansion and additional uses resulting in increased impacts on the site, including an increase in traffic beyond 126 total daily trips, will require additional site plan review.
2. The project is required to address all DPI comments dated December 9, 2020 prior to the issuance of a building permit.
3. The project is required to receive approval from New Bedford Fire Prevention prior to the issuance of a building permit and a certificate of occupancy.
4. The project is approved subject to conditions established by the New Bedford Conservation Commission and all applicable federal, state, and local permitting authorities.

5. In lieu of a 60-decibel noise requirement, the applicant will install plantings along the boundary of the eastern property line running parallel to Phillips Road, following the property line westerly along the access road and behind the two abutting residential properties owned by the applicant. A landscaping plan shall be submitted to the Planning Department staff for review and approval prior to issuance of a Building Permit. Landscaping shall be provided according to the approved plans prior to issuance of a Certificate of Occupancy.
6. The Applicant must provide on-site signage directing Inbound truck traffic to Theodore Rice Boulevard and Outbound truck traffic to Duchaine Boulevard. Proposed signage, including the existing 25 mile per hour speed limit signage, and signage prohibiting idling and queuing to be added along the internal roadway on the east side of the site, shall be noted on the plans and submitted to Planning Department staff prior to issuance of a building permit.
7. All inoperable light fixtures shall be replaced with operable down shielded fixtures prior to the issuance of a building permit.
8. The hours of operations on Sundays shall be 10 AM to 2 PM and Saturdays closing at 6 PM.
9. The applicant commits to training drivers to stay off Phillips Road with repercussions to be determined at a later date. The training and personnel policy will be submitted to the Planning Department for review.

General Conditions:

10. The project shall be completed in accordance with approved plans, notes, reports, and specifications.
11. The Memorandum from the Department of Public Infrastructure received and placed on file on December 9, 2020 and directives contained within are hereby incorporated by reference. The project shall be consistent with the directives contained within and attached to this decision.
12. The applicant shall submit final plan revisions to the Planning Department in the following formats: one (1) -11" x 17" Plan Set and one (1) CD or USB with Plan Set in PDF format and shall ensure that these same plans are properly submitted to the Department of Inspectional Services prior to the issuance of a certificate of occupancy.
13. The applicant shall ensure a copy of the Notice of Decision bearing the certification of the New Bedford City Clerk, signifying no appeal has been made against the project's approval, be recorded at the Registry of Deeds and a copy of the recorded decision shall be provided for the Planning Department Case file folder prior to the issuance of a certificate of occupancy.
14. The applicant shall present any proposed modification of the approved plans for consideration to the City Planner for determination as to whether it requires further review by the Planning Board.

15. The rights authorized by the granted approval must be exercised by issuance of a Building Permit by the Department of Inspectional Services and acted upon within one year from the date the decision was rendered, or they will lapse.

16. The developer and site contractor must schedule a pre-construction meeting with the Department of Public Infrastructure prior to the start of construction.

As a result of such consideration, the Board moves approval on the subject application with the conditions so noted. The motion being properly made and seconded, the Chair called for a roll call vote which was taken and approved, four (4) to zero (1).

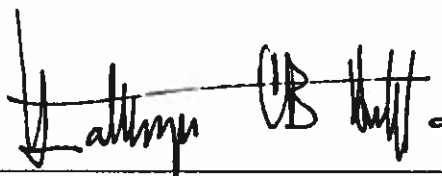
Chairperson Kathryn Duff – Yes
Board Member Kalife – Yes
Board Member Cruz – Yes

Board Member Glassman – No
Board Member Khazan – Yes

Filed with the City Clerk on:

12/23/2020

Date

A handwritten signature in black ink, appearing to read 'Kathryn Duff', is written over a horizontal line.

Kathryn Duff

City of New Bedford Planning Board



CITY OF NEW BEDFORD

Jonathan F. Mitchell, Mayor

Department of Public Infrastructure

Jamie Ponte
Commissioner

Water
Wastewater
Highways
Engineering
Cemeteries
Park Maintenance
Forestry
Energy

Memorandum

TO: City of New Bedford Planning Board *JP* *MHS*

FROM: Jamie Ponte, Commissioner

DATE: December 9, 2020

SUBJECT: Parallel Products, Phase I – Site Plan
100 Duchaine Boulevard
Plot 133, Lot 67 and Plot 134, Lots 5 and 462

The City of New Bedford (City) Department of Public Infrastructure (DPI) has reviewed the revised plan dated 11/3/2020 along with all supporting documents submitted for the development of the above referenced site. The following summarizes DPI's comments to the proposed site plan and traffic impact analysis:

Traffic Impact Analysis

DPI has reviewed the technical memorandum titled Parallel Products Expansion – 100 Duchaine Boulevard Phase 1 Traffic Impacts, dated November 3, 2020 by McMahon and Associates (traffic analysis) and offers the following comments:

1. The transportation engineer has provided a thorough analysis acknowledging DPI comments from previous memo regarding the concern of assuming increased volumes to the Industrial Park would be by large trucks only. The revised traffic data clearly outlines the range in possible increase to daily trips in and out of the Industrial Park.

Site Plan Review

DPI has reviewed the proposed site plan for the above referenced location, prepared by Farland Corp, with revision date November 3, 2020 and offer the following comments:

1. Engineer must contact DPI to hold a review meeting of the plans. DPI team has multiple comments and questions regarding the various utility relocations for the proposed structures, canopies and railroad tracks.
2. Refer to previous DPI Memorandum, dated October 28, 2020, for comments that must still be addressed and/or adhered to:
 - a. Comment 2: Developer must conduct test pits regarding utility exploration for clarification on conflicts with water and sewer mains in the project area. Test pits to verify depth, diameter and location of existing mains to address conflicts. Submit proposed plan of test pit locations to DPI.
 - b. Comment 6: Refer to Sheet 14 of 25. Sedimentation and erosion controls shown to the east of proposed Side Bunker Building conflict with water main work shown on Sheets 11 of 25 and 13 of 25.
 - i. Revised plan still has conflicts that will require edits.
 - c. Comment 9: DPI has conducted a review of the submitted plans, Developer/engineer to request mark-ups from DPI to incorporate detailed edits into site design.
 - d. Comment 10: Coordinate site plan changes with Conservation Commission for field Notice of Intent. Several utility relocations appear to have direct impacts on wetland resource areas.
 - e. Comment 11: Permits for utilities must be obtained from the DPI, Engineering Division.
 - f. Comment 12: Existing water and sewer services to be capped at the main in accordance with the City Construction Standards.
 - g. Comment 13: Developer to contact DPI's IPP/FOG Engineer for sampling manhole maintenance and inspection permits/requirements.
 - h. Comment 14: Area of impact is greater than one acre. Owner must file a NPDES permit and supply a copy to DPI's Engineering Division. Coordinate sedimentation and erosion control site inspections with DPI Engineering Division.
 - i. Comment 15: Proposed fire hydrants, located on private property must be maintained in accordance with New Bedford Fire Department standards.
 - j. Comment 16: The DPI requires a final plan set to be submitted that reflects all revisions made prior to the start of construction.

100 Duchaine Boulevard
December 9, 2020
Page 3

- k. Comment 17: Developer and site contractor must schedule and attend a pre-construction meeting with the DPI's Assistant City Engineer prior to the start of construction.
- l. Comment 18: Upon completion of work, Engineer and Developer must submit As-built Drawings prior to Certificate of Occupancy being issued.

Cc:

Department of Inspectional Services
Department of Resiliency and Environmental Stewardship
Parallel Products of New England
Farland Corp.