UNITED MATERIAL MANAGEMENT OF LEOMINSTER

Massachusetts Environmental Policy Act
Environmental Notification Form

Site Location:

200 Tanzio Road
Leominster, Massachusetts 01453

August 2024

Applicant/Owner:
United Material Management of Leominster LLC
c/o Win Waste Innovations
90 Arboretum Drive, Suite 300
Portsmouth, NH 03801

Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Massachusetts Environmental Policy Act (MEPA) Office

Environmental Notification Form

For Office Use Only
EEA#: ____________________
MEPA Analyst: ______________

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: United Material Management of Leominster, LLC		
Street Address: 200 Tanzio Road, Leominster, MA 01453		
Municipality: Leominster	Watershed: Nashua River Basin	
Universal Transverse Mercator Coordinates: **274625.96 E and 4709625.77 N (meters)**	Latitude: 42.506178 N Longitude: -71.743084 W	
Estimated commencement date: 12/30/23	Estimated completion date: 12/31/24	
Project Type: Expansion	Status of project design: 100 %complete	
Proponent: United Material Management of Leominster, LLC		
Street Address: 90 Arboretum Drive, Suite 300		
Municipality: Portsmouth	State: NH	Zip Code: 03801
Name of Contact Person: Laura Bugay PE		
Firm/Agency:Green Seal Environmental, LLC	Street Address:114 State Rd Bldg B	
Municipality: Sagamore Beach	State: MA	Zip Code: 02562
Phone: 508-888-6034	Fax: 508-888-1506	E-mail: l.bugay@gseenv.com

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
☐Yes ☒No

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting:

a Single EIR? (see 301 CMR 11.06(8)) ☐Yes ☐No
a Rollover EIR? (see 301 CMR 11.06(13)) ☐Yes ☐No
a Special Review Procedure? (see 301CMR 11.09) ☐Yes ☐No
a Waiver of mandatory EIR? (see 301 CMR 11.11) ☐Yes ☐No
a Phase I Waiver? (see 301 CMR 11.11) ☐Yes ☐No
(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?
(9) Solid or Hazardous Waste (11.03(9)(b)(1))
Which State Agency Permits will the project require?
MassDEP Site Suitability (BWP SW 38); MassDEP Permit Modification (BWP SW 07)
Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres: None

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	13.46		
New acres of land altered		0.0	
Acres of impervious area	3.69	0.0	3.69
Square feet of new bordering vegetated wetlands alteration		0.0	
Square feet of new other wetland alteration		0.0	
Acres of new non-water dependent use of tidelands or waterways		0.0	
STRUCTURES			
Gross square footage	33,860	0	33,860
Number of housing units	0	0	0
Maximum height (feet)	45	0	45
TRANSPORTATION			
Vehicle trips per day	286	142	428
Parking spaces	20	0	20
WASTEWATER			
Water Use (Gallons per day)	3600	0	3600
Water withdrawal (GPD)	0	0	0
Wastewater generation/treatment (GPD)	600	0	600
Length of water mains (miles)	0	0	0
Length of sewer mains (miles)	0	0	0

Has this project been filed with MEPA before?
☒ Yes (EEA # 15896) ☐No

Has any project on this site been filed with MEPA before?
☒ Yes (EEA # 15896) ☐No

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

Describe the existing conditions and land uses on the project site:___________________________

United Material Management of Leominster, LLC (hereinafter referred to as UMML) is proposing to increase capacity by 500 tons/day at the existing transfer station (the "Facility") located at 200 Tanzio Road in Leominster, MA. The Facility consists of an approximate 32,400-square-foot solid waste transfer/waste handling building with 1,260 sf of attached office space, as well as a rail yard; scale house and scales; parking areas; site grading and paving; stormwater collection, treatment, and infiltration structures; and associated appurtenances.

The Facility is located on 13.46 acres of land, of which 11.33 acres is site assigned. The existing facility was constructed in 2019 and located within an industrially zoned/designated area. To the west of the site is an existing CSX railroad line, with commercial and residential properties beyond. To the north are industrial-zoned vacant lots and an electrical easement with transmission towers. To the east of the Site is Tanzio Road with commercial and residential properties beyond. Tanzio Road is served with above ground electrical, sewer, gas, and water and directly connects to Route 117 which leads to I-190 and Route 2.

Describe the proposed project and its programmatic and physical elements: _________________

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.

UMML has vehicular access via Tanzio Road and is served by municipal sewer and water Service; and private electrical, telephone, and gas service in/along Tanzio Road. UMML intends to increase the existing waste handling operation, currently permitted for 1,000 tons per day, by 500 tons per day (tpd) to 1,500 tpd. The maximum annualized capacity will increase from 300,000 tons to 450,000 tons. The Facility operates 6 days per week, Monday through Friday from 6 AM to 7 PM and Saturday from 7 AM to 3 PM under the current permits. Inbound materials are delivered to the Facility by covered trucks and containers where all vehicles are weighed, inspected, and then off-loaded onto an enclosed interior tipping floor. In addition to the larger commercial deliveries, the Facility services the local community by accepting deliveries from smaller haulers as well.

The appended Traffic Impact Study (TIS) prepared by Bowman demonstrates that the proposed tonnage increase will not have an appreciable impact on the operations of the study area intersections or roadways. Overall delays and levels-of-service show a negligible increase. The traffic analysis concluded that mitigation measures are not necessary on the surrounding roadway network to accommodate the proposed increase.

Additionally, the TIS concluded that the increase would not have any appreciable impact on the operations of the signalized study area intersections or roadways and that no mitigation measures are necessary to accommodate the proposed increase.

Based upon review and interpretation of the Traffic Impact Study, it is Bowman's and GSE's opinion that the increased tonnage at the Facility will not constitute a danger to the public health, safety, or the environment based on traffic congestion, pedestrian and vehicle safety, road configurations, or alternate routes in conformance with the requirements of 310 CMR 16.40(4)(b). See the appended Traffic Impact Study for further detail (Exhibit 2 – Attachment 3).

To meet regional demand, UMML plans to increase capacity from 1,000 to 1,500 tons per day of MSW and C&D. The Facility employs approximately 12+/- personnel per shift and will operate as currently

permitted. No additional employees are anticipated to be necessary for this tonnage increase.

The incoming materials delivered to the site are inspected and any observed recyclable commodities or waste ban materials will be separated and ultimately shipped to various outlets in covered containers. UMML is required to comply with existing Waste Ban requirements set forth in 310 CMR 19.017 as part of their operational requirements. The Facility maintains and reports all of their inbound and outbound statistics to the MassDEP on a quarterly and annual basis, as required.

The Facility is fully aligned with existing regulations and policy as well as with the initiatives of the Massachusetts Solid Waste Master Plan. In addition, as discussed in the appended Traffic Impact Study, the Facility will have a negligible impact to the surrounding roadway infrastructure and can be accessed through major roadways (Route 2, Interstate I-190, Route 117, and Route 12) without traveling through highly-congested areas.

The Facility does not require significant support from municipal infrastructure besides electricity and limited water and sewer needs. In addition, this Facility supports local infrastructure with respect to handling and disposal of MSW and recycling and handling of C&D.

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:

NOTE: *The purpose of the alternatives analysis is to consider what effect changing the parameters and/or siting of a project, or components thereof, will have on the environment, keeping in mind that the objective of the MEPA review process is to avoid or minimize damage to the environment to the greatest extent feasible. Examples of alternative projects include alternative site locations, alternative site uses, and alternative site configurations.*

As the regional need for waste handling increases due to recent closing of in-state landfills, alternative transfer station locations were considered during the original siting of this facility and evaluated. Alternative on-site configurations were also considered but the chosen alternative provides optimal use of the site and existing adjacent rail service while minimizing environmental impacts. Alternatives for on-site reconfiguration do not reduce impacts or enhance on-site logistics.

Alternative off-site locations for waste transfer operations had been previously evaluated but would require waivers to regulatory setback criteria and would not have access to rail which minimizes overall impacts. Additionally, Green Seal Environmental, LLC (GSE) had assessed other off-site waste disposal alternatives for the possibility of providing more capacity. The overriding factors that make this Site the best alternative are rail access and site layout. As this Site is an expansion of an existing facility, there are less impacts than constructing a new 500 tpd facility elsewhere.

Please see Alternatives Analysis for further details.

Summarize the mitigation measures proposed to offset the impacts of the preferred alternative:

1. **Use of an existing facility located within an Industrial zoned area.**
2. **Building is equipped with translucent panels to reduce the need for artificial light and energy usage.**
3. **Lighting (interior and exterior) includes lower power-consuming products including, when feasible, LED.**
4. **Use of native species and low water tolerant plants to reduce the need for watering and fertilization.**
5. **Outbound materials will primarily be shipped off-site using rail cars and as necessary, large capacity containers/trailers to reduce truck trips (e.g., 100 cy walking floor trailers) and resulting emissions.**
6. **Encourage the use of public transportation by employees when available.**

7. **Full compliance with the Massachusetts Stormwater Policy.**
8. **Compliance with the Solid Waste Management Regulations (310 CMR 16.00 and 19.00) including Waste Bans.**
9. **Reduction in Greenhouse Gas Emissions based on the use of rail for outbound materials.**
10. **Based on existing facility controls, UMML will meet existing and future National Ambient Air Quality Standards (NAAQS) air quality standards for particulate emissions (PM 10 and PM 2.5).**
11. **The results of the odor modeling analyses show that the UMML Facility will not cause an adverse impact to health, safety, or the environment with respect to odors at nearby residential receptors. The Facility also has the ability to add additional engineering controls to control odor if deemed appropriate.**
12. **The most current sound assessment shows that the impacts from all sounds due to the Project demonstrates compliance with the MassDEP Noise Policy and the Leominster Noise Ordinance, and therefore will not cause a condition of noise pollution. Therefore, no mitigation was deemed necessary.**

If the project is proposed to be constructed in phases, please describe each phase:

No additional construction is required for the increased capacity proposed.
____

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:
Is the project within or adjacent to an Area of Critical Environmental Concern?
☐Yes (Specify___________________________________)
☒No
if yes, does the ACEC have an approved Resource Management Plan? ___ Yes ___ No;
If yes, describe how the project complies with this plan.
____
Will there be stormwater runoff or discharge to the designated ACEC? ___ Yes ___ No;
If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC.
____

RARE SPECIES:
Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/priority_habitat_home.htm)
☐Yes (Specify____________________________________) ☒No

HISTORICAL /ARCHAEOLOGICAL RESOURCES:
Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?
☐Yes (Specify____________________________________) ☒No
If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? ☐Yes (Specify____________________________________) ☐No

WATER RESOURCES:
Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site? ___Yes _**X**__No;
if yes, identify the ORW and its location. ____

(NOTE: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

Are there any impaired water bodies on or within a half-mile radius of the project site? __**X**__Yes ___No; if yes, identify the water body and pollutant(s) causing the impairment:

Fall Brook is located to the north of the subject property and is designated a Category 5 303(d) waterway per the draft Massachusetts Year 2022 Integrated List of Waters with an impairment for E.

coli and temperature. The North Nashua River, located slightly over 0.5-miles away, is also a Category 5 303(d) waterway, with the impairments of E. coli and odor listed.

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? __**X**__Yes ___No

The project is within a medium stress basin: the North Nashua River basin. Note that technically the North Nashua River is within a low stress basin, but due to downgradient classification as medium stress, it has been categorized as a medium stress basin.

STORMWATER MANAGEMENT:

Generally describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

The site is currently developed with stormwater management controls.

The Facility was previously designed to meet the Massachusetts Stormwater Standards using several stormwater Best Management Practices (BMPs). Stormwater collected from roof runoff and the paved surface is collected in deep sump catch basins with hoods and routed via piped systems to treatment units (oil/grit water separators) which will remove grit/sediments and separate oil prior to discharge.

MASSACHUSETTS CONTINGENCY PLAN:

Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification):_____**NO**_____________

Is there an Activity and Use Limitation (AUL) on any portion of the project site? Yes ___ No _X__; if yes, describe which portion of the site and how the project will be consistent with the AUL: ______________________.

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN? Yes ___ No _X__ ; if yes, please describe:___________________________________

SOLID AND HAZARDOUS WASTE:

If the project will generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood: **No construction proposed.**

(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Will your project disturb asbestos containing materials? Yes ___ No _X__ ;
if yes, please consult state asbestos requirements at http://mass.gov/MassDEP/air/asbhom01.htm

Describe anti-idling and other measures to limit emissions from construction equipment: _________________

Massachusetts General Laws, Part I, Title XIV, Chapter 90, Section 16A was promulgated to reduce air pollution related to idling vehicles. In general, and barring any of the exceptions inherent to the law, "vehicles are not to be idled longer than 5 minutes". UMML permanently posted "NO IDLING" signs in the loading, off-loading, queuing, and parking areas on the site. These rules are enforced by facility management. All diesel equipment and trucks will use low-sulfur fuel and current particulate matter and nitrogen oxide controls applicable for the given model of vehicle or equipment.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? Yes ___ No X____ ;

if yes, specify name of river and designation:

If yes, does the project have the potential to impact any of the “outstandingly remarkable” resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River?
Yes ___ No ___ ; if yes, specify name of river and designation: _____________;
if yes, will the project will result in any impacts to any of the designated “outstandingly remarkable” resources of the Wild and Scenic River or the stated purposes of a Scenic River.
Yes ___ No ___ ;
if yes,describe the potential impacts to one or more of the “outstandingly remarkable” resources or stated purposes and mitigation measures proposed.

ATTACHMENTS:

1. List of all attachments to this document. **(See Exhibit 1)**
2. U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries. **(See Exhibit 2 – Figure 1)**
3.. Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities**. (See Exhibit 2 – Figures 3, 4, 5, and 6)**
4 Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts. **(See Exhibit 2 – Figures 2, 3, and 5)**
5. Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase). **(See Exhibit 2 – Figures 5, 6, and 7)**
6. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2). **(See Exhibit 4)**
7. List of municipal and federal permits and reviews required by the project, as applicable.
8. Printout of output report from RMAT Climate Resilience Design Standards Tool, available here. **(See Exhibit 9)**
9. Printout from the EEA EJ Maps Viewer showing the project location relative to Environmental Justice (EJ) Populations located in whole or in part within a 1-mile and 5-mile radius of the project site. **(See Exhibit 2- Figure 8)**

All of the required attachments outlined above can be found as Exhibits within this Environmental Notification Form submittal. A majority of the requisite information is also required when submitting the application for Site Suitability for a Major Modification of an Existing Site Assignment (BWP SW 38 – “Site Suitability Application”) to the MassDEP Solid Waste Department. Therefore, GSE has prepared and attached the draft Site Suitability Application as Exhibit 2 to this ENF, which provides a significant amount of relevant information with respect to the subject Site and the proposed modification(s).

PLEASE REFER TO EXHIBIT 1 THAT PROVIDES A TABLE OF CONTENTS OUTLINING WHERE THIS INFORMATION CAN BE FOUND WITHIN THIS ENF SUBMITTAL.

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1)
___ Yes _**X**__ No; if yes, specify each threshold:

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	Existing	Change	Total
Footprint of buildings	________	________	________
Internal roadways	________	________	________
Parking and other paved areas	________	________	________
Other altered areas	________	________	________
Undeveloped areas	________	________	________
Total: Project Site Acreage	________	________	________

B. Has any part of the project site been in active agricultural use in the last five years?
___ Yes __X_ No; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?

C. Is any part of the project site currently or proposed to be in active forestry use?
___ Yes _X__ No; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:

D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ___ Yes __X_ No; if yes, describe:

E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction? ___ Yes__ No_X_; if yes, does the project involve the release or modification of such restriction? ___ Yes ___ No; if yes, describe:

F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes __X_ No; if yes, describe:

G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? Yes ___ No _X__; if yes, describe:

III. Consistency

A. Identify the current municipal comprehensive land use plan
Title:___Leominster Master Plan________________ Date____1959____________

Please note that the Leominster Master Plan is outdated (1959) and is not a plan that is presently relied upon by the City. As such, GSE gathered information that is relevant to the project and assessed how the project is consistent with the goals and initiatives of the City. Secondly, the Leominster Economic Development Office also provided other plans for review such as the "Leominster Community Development Plan" dated 2004, submitted to the City of Leominster by the Montachusett Regional Planning Commission, and the "Fitchburg-Leominster Consortium Five-Year Consolidated Plan 2022-2026 and Program Year 48 Annual Action Plan".

B. Describe the project's consistency with that plan with regard to:

1) **Economic Development: According to the Leominster Economic Development Office, industrial development in Leominster is a priority, as was evident by the Montachusett Regional Comprehensive Economic Development Strategy (CEDS) that was referenced in the grant application that helped construct Tanzio Road. This region boasts a highly skilled workforce, with historic emphasis in the manufacturing industries. At the time of the grant application, the then-proposed Industrial Park sat on land that is part of the Borden Chemical Economic Opportunity Area (EOA). The development of this area helps the City to better attract industrial businesses including manufacturing, research & development, and biotechnology firms. The array of industries that this project attracts is of great economic development benefit to the region as a whole, creating much needed jobs, as well as promoting local investment and increasing the tax base. The existing facility was approved as being consistent with the City's economic goals, and increased throughput will also be consistent.**

2) **Adequacy of Infrastructure: The MORE grant funding was sought to complete an economic development project including the construction of roadway and utilities on land owned by the City of Leominster located in an industrial zone (Tanzio Road), which at the time was designated by the City of Leominster as an Economic Target Area. This funding was applied towards the installation of 2,600 linear feet of roadway with all utilities to assist in the development of road frontage. The installation of the necessary infrastructure, including roadway and utilities had removed the major roadblocks preventing the productive use of this prime industrial land, allowing the existing facility to be constructed. The facility location has excellent access to transportation infrastructure, including highways and rail access, allowing for the increased tonnage with minimal affects, as documented in the Traffic Study.**

3) **Open Space Impacts: Tanzio Road is zoned Industrial and the installation of the infrastructure was completed to promote industrial development within the Tanzio Road section of the City of Leominster. This particular location should not impact open space as it has adequate separation to any designated open space; and has been slated for this type of facility. No new or additional construction on the Facility is proposed, so no increased direct effect on open space will occur.**

4) **Compatibility with Adjacent Land Uses: The subject property is compatible with the abutting properties. The subject property (200 Tanzio Road) is abutted to north of the site by Multi-Use 1 Zoning. The remaining abutting properties are zoned Industrial. The Facility will remain appropriately sited with the increase of tonnage proposed. The same location and roadway network currently providing access will continue to be used, with no changes to traffic patterns that may effect adjacent land uses.**

C. Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)
RPA: **Montachusett Regional Planning Commission**

Title: **Montachusett Regional Strategic Framework Plan** Date: **April 2011**

Title: **<u>Montachusett Region Comprehensive Economic Development Strategy</u>** Date: **<u>July 2019 – July 2024</u>**

D. Describe the project's consistency with that plan with regard to:

1) economic development

Increasing solid waste handling at an existing transfer station can lead to the creation of sustainable jobs related to the waste management sector, for example in trucking, recycling, and rail operations. These new jobs contribute to the local economy and provide employment opportunities for residents. Additionally, if the waste handling includes recycling and resource recovery initiatives, it can lead to the development of new businesses and industries that rely on recycled materials, further supporting the local economy.

Increased waste handling can attract investment in transportation and other waste management infrastructure and facilities, which can be considered as an essential business asset. A well-developed waste management network can be showcased as a regional strength, promoting responsible waste management and recycling practices. Moreover, the increased waste handling can attract attention from businesses seeking to invest in eco-friendly solutions to waste processing, contributing to the emergence of a green economy cluster in the region.

2) adequacy of infrastructure

The Facility exists in an area that has adequate infrastructure (utilities, roadways, highway access, etc.) to support the project. Increased solid waste handling at an existing transfer station can be viewed as an improvement to the region's waste management infrastructure. By increasing the capacity and efficiency of an existing transfer station, the region can ensure that its waste management infrastructure is adequate to meet the needs of the growing population and changing waste patterns without developing an undeveloped site.

Additionally, this Facility is designed to meet the needs of the regional solid waste infrastructure. With the closure of large landfills in central and western Massachusetts, outlets are needed to handle waste generation in this region. By utilizing the rail, the region will be better served with outlets that are not generally accessible/ viable via through traditional trucking.

3) open space impacts

No physical expansion of the existing Facility is required to allow the increased throughput proposed. By utilizing the existing facility, no new facility must be constructed. Therefore, no demand for additional land space is required to increase waste handling capacity, lessening demand for development in the region. This existing Facility does not impact open space as it has adequate separation to any designated open space; and is located in an industrially-zoned area slated for this type of facility.

It's essential to recognize that the direct connection between solid waste handling and open space preservation may not be immediately apparent. However, responsible waste management practices align with broader environmental and sustainability goals, including the protection and conservation of open spaces, and reduction of illegal dumping. By providing

efficient waste handling, the Project contributes to open space protection as part of the region's comprehensive development strategy.

Given that the existing facility is separated from designated open space, is outside of mapped habitats, and is located in an existing industrial park, the Project is consistent with the aforementioned objectives.

RARE SPECIES SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **rare species or habitat** (see 301 CMR 11.03(2))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

B. Does the project require any state permits related to **rare species or habitat**? ___ Yes __X No

C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes _X No.

D. If you answered "No" to all questions A, B and C, proceed to the **Wetlands, Waterways, and Tidelands Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes _X No. If yes,

1. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)? ___Yes ___No; if yes, have you received a determination as to whether the project will result in the "take" of a rare species? ___ Yes ___ No; if yes, attach the letter of determination to this submission.

2. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts

3. Which rare species are known to occur within the Priority or Estimated Habitat?

4. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act? ___ Yes ___ No

4. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? ___ Yes ___ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? ___ Yes ___ No

B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes _X__ No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wetlands, waterways, and tidelands** (see 301 CMR 11.03(3))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits (or a local Order of Conditions) related to **wetlands, waterways, or tidelands**? __ Yes _X_ No; if yes, specify which permit:

Original construction approved under RDA for minor work in riverfront area. No new construction proposed and therefore no additional filings will be necessary.

C. If you answered "No" to both questions A and B, proceed to the **Water Supply Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

A. Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? __ Yes ___ No; if yes, has a Notice of Intent been filed? ___ Yes __ No; if yes, list the date and MassDEP file number: ______; if yes, has a local Order of Conditions been issued? ___ Yes ___ No; Was the Order of Conditions appealed? ___ Yes ___ No. Will the project require a Variance from the Wetlands regulations? ___ Yes ___ No.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

Coastal Wetlands	Area (square feet) or Length (linear feet)	Temporary or Permanent Impact?
Land Under the Ocean	________	________
Designated Port Areas	________	________
Coastal Beaches	________	________
Coastal Dunes	________	________
Barrier Beaches	________	________
Coastal Banks	________	________
Rocky Intertidal Shores	________	________
Salt Marshes	________	________
Land Under Salt Ponds	________	________
Land Containing Shellfish	________	________
Fish Runs	________	________
Land Subject to Coastal Storm Flowage	________	________
Inland Wetlands		
Bank (lf)	________	________
Bordering Vegetated Wetlands	________	________
Isolated Vegetated Wetlands	________	________
Land under Water	________	________
Isolated Land Subject to Flooding	________	________
Bordering Land Subject to Flooding	________	________
Riverfront Area	________	________

D. Is any part of the project:

1. proposed as a **limited project**? ___ Yes __ No; if yes, what is the area (in sf)?____
2. the construction or alteration of a **dam**? ___ Yes ___ No; if yes, describe:
3. fill or structure in a **velocity zone** or **regulatory floodway**? ___ Yes ___ No
4. dredging or disposal of dredged material? ___ Yes ___ No; if yes, describe the volume of dredged material and the proposed disposal site:
5. a discharge to an **Outstanding Resource Water (ORW)** or an **Area of Critical Environmental Concern (ACEC)**? ___ Yes ___ No
6. subject to a wetlands restriction order? ___ Yes ___ No; if yes, identify the area (in sf):
7. located in buffer zones? _ __Yes ___No; if yes, how much (in sf)

E. Will the project:
1. be subject to a local wetlands ordinance or bylaw? ___ Yes ___ No
2. alter any federally-protected wetlands not regulated under state law? ___ Yes __ No; if yes, what is the area (sf)?

III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? ___ Yes ___ No; if yes, is there a current Chapter 91 License or Permit affecting the project site? ___ Yes ___ No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands:

B. Does the project require a new or modified license or permit under M.G.L.c.91? ___ Yes ___No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use? Current ___ Change ___ Total ___
If yes, how many square feet of solid fill or pile-supported structures (in sf)?

C. For non-water-dependent use projects, indicate the following:
Area of filled tidelands on the site:___________0__________
Area of filled tidelands covered by buildings:____0________
For portions of site on filled tidelands, list ground floor uses and area of each use:
____
Does the project include new non-water-dependent uses located over flowed tidelands?
Yes ___ No ___
Height of building on filled tidelands________________

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

D. Is the project located on landlocked tidelands? ___ Yes ___ No; if yes, describe the project's impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ___Yes ___ No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

F. Is the project non-water-dependent **and** located on landlocked tidelands **or** waterways or tidelands subject to the Waterways Act **and** subject to a mandatory EIR? ___ Yes ___ No; ___
(NOTE: If yes, then the project will be subject to Public Benefit Review and

Determination.)

G. Does the project include dredging? ___ Yes ___ No; if yes, answer the following questions:
What type of dredging? Improvement ___ Maintenance ___ Both ____
What is the proposed dredge volume, in cubic yards (cys) _________
What is the proposed dredge footprint ____length (ft) ___width (ft)____depth (ft);
Will dredging impact the following resource areas?
Intertidal Yes__ No__; if yes, ___ sq ft
Outstanding Resource Waters Yes__ No__; if yes, ___ sq ft
Other resource area (i.e. shellfish beds, eel grass beds) Yes__ No__; if yes __ sq ft
If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either avoidance or minimize is not possible, mitigation?
If no to any of the above, what information or documentation was used to support this determination?
Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.
Sediment Characterization
Existing gradation analysis results? __Yes ___No: if yes, provide results.
Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6? ___Yes ____No; if yes, provide results.
Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

Beach Nourishment ___
Unconfined Ocean Disposal ___
Confined Disposal:
Confined Aquatic Disposal (CAD) ___
Confined Disposal Facility (CDF) ___
Landfill Reuse in accordance with COMM-97-001 ___
Shoreline Placement ___
Upland Material Reuse____
In-State landfill disposal____
Out-of-state landfill disposal ____
(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:
A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? ___ Yes ___ No; if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? ___ Yes ___ No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **water supply** (see 301 CMR 11.03(4))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **water supply**? ___ Yes _X_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Wastewater Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

	Existing	Change	Total
Municipal or regional water supply	________	________	________
Withdrawal from groundwater	________	________	________
Withdrawal from surface water	________	________	________
Interbasin transfer	________	________	________

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ___ Yes ___ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ___ Yes ___ No; if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results. _______________

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? ______Will the project require an increase in that withdrawal? ___Yes ___No; if yes, then how much of an increase (gpd)? _____________________

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ___ Yes ___No. If yes, describe existing and proposed water supply facilities at the project site:

	Permitted Flow	Existing Avg Daily Flow	Project Flow	Total
Capacity of water supply well(s) (gpd)	_______	________	________	________
Capacity of water treatment plant (gpd)	_______	________	________	________

F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve:

1. new water service by the Massachusetts Water Resources Authority or other agency of the Commonwealth to a municipality or water district? ___ Yes ___ No
2. a Watershed Protection Act variance? ___ Yes ___ No; if yes, how many acres of alteration?
3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking

water supply for purpose of forest harvesting activities? ___ Yes ___ No

III. Consistency

Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wastewater** (see 301 CMR 11.03(5))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **wastewater**? ___ Yes _X_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

	Existing	Change	Total
Discharge of sanitary wastewater	________	________	________
Discharge of industrial wastewater	________	________	________
TOTAL	________	________	________

	Existing	Change	Total
Discharge to groundwater	________	________	________
Discharge to outstanding resource water	________	________	________
Discharge to surface water	________	________	________
Discharge to municipal or regional wastewater facility	________	________	________
TOTAL	________	________	________

B. Is the existing collection system at or near its capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

C. Is the existing wastewater disposal facility at or near its permitted capacity? ___ Yes___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? ___ Yes ___ No; if yes, describe as follows:

	Permitted	Existing Avg Daily Flow	Project Flow	Total
Wastewater treatment plant capacity (in gallons per day)	_______	________	________	________

E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or new?

(NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)

F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district? ___ Yes ___ No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials? ___ Yes ___ No; if yes, what is the capacity (tons per day):

	Existing	Change	Total
Storage	________	________	________
Treatment	________	________	________
Processing	________	________	________
Combustion	________	________	________
Disposal	________	________	________

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency

A. Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:

B. If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ___ Yes ___ No; if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan:

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to **traffic generation** (see 301 CMR 11.03(6))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

C. Does the project require any state permits related to **state-controlled roadways**? __Yes _X_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	Existing	Change	Total
Number of parking spaces	_______	________	_______
Number of vehicle trips per day	________	________	________
ITE Land Use Code(s):	________	________	________

B. What is the estimated average daily traffic on roadways serving the site?

Roadway	Existing	Change	Total
1. ____________________	________	________	________
2. _____________________	________	________	________
3. _____________________	________	________	________

C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

C. Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? ____ Yes ____ No; if yes, describe if and how will the project will participate in the TMA:

D. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ____ Yes ____ No; if yes, generally describe:

E. If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **roadways or other transportation facilities**? ___ Yes _X_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Energy Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site:

B. Will the project involve any

1. Alteration of bank or terrain (in linear feet)? ____________
2. Cutting of living public shade trees (number)? ____________
3. Elimination of stone wall (in linear feet)? ____________

III. Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **energy** (see 301 CMR 11.03(7))?
___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **energy**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	Existing	Change	Total
Capacity of electric generating facility (megawatts)	________	________	________
Length of fuel line (in miles)	________	________	________
Length of transmission lines (in miles)	________	________	________
Capacity of transmission lines (in kilovolts)	________	________	________

B. If the project involves construction or expansion of an electric generating facility, what are:

1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? ___Yes ___No; if yes, please describe:

D. Describe the project's other impacts on energy facilities and services:

III. Consistency

Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? ___ Yes _X_ No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **air quality**? ___ Yes _X_ No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? ___ Yes ___ No; if yes, describe existing and proposed emissions (in tons per day) of:

	Existing	Change	Total
Particulate matter	________	________	________
Carbon monoxide	________	________	________
Sulfur dioxide	________	________	________
Volatile organic compounds	________	________	________
Oxides of nitrogen	________	________	________
Lead	________	________	________
Any hazardous air pollutant	________	________	________
Carbon dioxide	________	________	________

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? _X_ Yes ___No; if yes, specify, in quantitative terms:

UMML intends to handle/transfer up to 1,500 tons per day (tpd) of Construction and Demolition debris (C&D) and Municipal Solid Waste (MSW) with a maximum annualized capacity of 450,000 tons. This is an increase of 500 tpd over current permitted capacity of 1,000 tpd. 301 CMR 11.03 (9) requires an ENF and other MEPA review for an expansion in capacity. The Facility currently operates 6 days per week, Monday through Friday from 6 AM to 7 PM and Saturday from 7 AM to 3 PM under the current permit and limitations. Inbound materials are delivered to the Facility by covered trucks and containers where all loaded vehicles are weighed, inspected, and then off loaded onto an enclosed interior tipping floor. In addition to the larger commercial deliveries, the Facility services the local community by accepting deliveries from smaller haulers.

C. Does the project require any state permits related to **solid and hazardous waste**? _X_ Yes __ No; if yes, specify which permit:

This project will require the following permits in accordance with the following Commonwealth of Massachusetts regulations:

- **301 CMR 11.00 – MEPA Regulations – Environmental Notification Form required under 301 CMR 11.03(9) – Solid and Hazardous Waste – Expansion of Capacity at an Existing Transfer Station**
- **310 CMR 16.00 – Site Assignment Regulations for Solid Waste Facilities – Modification of Existing Facility**
- **310 CMR 19.00 – Solid Waste Facility Regulations – Modification of Operating Permit**

C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? _X__Yes ___ No; if yes, what is the volume (in tons per day) of the capacity:

	Existing	Change	Total
Storage	1000	500	1500
Treatment, processing	0	0	0
Combustion			
Disposal			

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ___ Yes _X_ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	Existing	Change	Total
Storage			

Recycling	________	________	________
Treatment	________	________	________
Disposal	________	________	________

D. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

As the Facility is existing and fully operational, no construction and demolition (C&D) wastes will be generated from construction of this project.

D. If the project involves demolition, do any buildings to be demolished contain asbestos?
___ Yes ___ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

Please refer to Exhibit 2 - Draft Site Suitability Application, which provides additional information about the Site, the existing Facility, proposed capacity increase, and potential impacts to the surrounding environment and receptors.

III. Consistency

Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

This tonnage increase at this rail-served Facility is being proposed to increase access to solid waste outlets due to the disposal capacity shortage in the Commonwealth. UMML will continue to maintain the following hierarchy (in order of commitment):

1. **Recycling (extraction for marketplace) – UMML has a sister solid waste recycling facility in Millbury, MA.**
2. **Diversionary usages (materials that need further recycling/processing will be sent to compliant facilities such as their sister facility in Millbury, MA).**
3. **Landfill/Incineration disposal**

The Facility intends to maintain full compliance with the intent of the Solid Waste Master Plan and the Waste Bans under 310 CMR 19.017.

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? ___ Yes _X_ No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? ____Yes ____ No; if yes, attach correspondence

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes _X_ No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? ___ Yes ___ No; if yes, please describe:

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes _X_ No; if yes, does the project involve the destruction of all or any part of such archaeological site? ___ Yes ___ No; if yes, please describe:

D. If you answered "No" to all parts of both questions A, B and C, proceed to the **Attachments and Certifications** Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

CLIMATE CHANGE ADAPTATION AND RESILIENCY SECTION

This section of the Environmental Notification Form (ENF) solicits information and disclosures related to climate change adaptation and resiliency, in accordance with the MEPA Interim Protocol on Climate Change Adaptation and Resiliency (the "MEPA Interim Protocol"), effective October 1, 2021. The Interim Protocol builds on the analysis and recommendations of the 2018 Massachusetts Integrated State Hazard Mitigation and Climate Adaptation Plan (SHMCAP), and incorporates the efforts of the Resilient Massachusetts Action Team (RMAT), the inter-agency steering committee responsible for implementation, monitoring, and maintenance of the SHMCAP, including the "Climate Resilience Design Standards and Guidelines" project. The RMAT team recently released the RMAT Climate Resilience Design Standards Tool, which is available here.

The MEPA Interim Protocol is intended to gather project-level data in a standardized manner that will both inform the MEPA review process and assist the RMAT team in evaluating the accuracy and effectiveness of the RMAT Climate Resilience Design Standards Tool. Once this testing process is completed, the MEPA Office anticipates developing a formal Climate Change Adaptation and Resiliency Policy through a public stakeholder process. Questions about the RMAT Climate Resilience Design Standards Tool can be directed to rmat@mass.gov.

All Proponents must complete the following section, referencing as appropriate the results of the output report generated by the RMAT Climate Resilience Design Standards Tool and attached to the ENF. In completing this section, Proponents are encouraged, but not required at this time, to utilize the recommended design standards and associated Tier 1/2/3 methodologies outlined in the RMAT Climate Resilience Design Standards Tool to analyze the project design. However, Proponents are requested to respond to a respond to a user feedback survey on the RMAT website or to provide feedback to rmat@mass.gov, which will be used by the RMAT team to further refine the tool. Proponents are also encouraged to consult general guidance and best practices as described in the RMAT Climate Resilience Design Guidelines.

Climate Change Adaptation and Resiliency Strategies

I. Has the project taken measures to adapt to climate change for all of the climate parameters analyzed in the RMAT Climate Resilience Design Standards Tool (sea level rise/storm surge, extreme precipitation (urban or riverine flooding), extreme heat)? ___Yes __**X**__ No

Note: Climate adaptation and resiliency strategies include actions that seek to reduce vulnerability to anticipated climate risks and improve resiliency for future climate conditions. Examples of climate adaptation and resiliency strategies include flood barriers, increased stormwater infiltration, living shorelines, elevated infrastructure, increased tree canopy, etc. Projects should address any planning priorities identified by the affected municipality through the Municipal Vulnerability Preparedness (MVP) program or other planning efforts, and should consider a flexible adaptive pathways approach, an adaptation best practice that encourages design strategies that adapt over time to respond to changing climate conditions. General guidance and best practices for designing for climate risk are described in the RMAT Climate Resilience Design Guidelines.

A. If no, explain why.

There is no construction proposed for the project proposed under this ENF. When constructed in 2019-2020, the project was built in accordance with the code requirements in effect at the time of construction, and additional measures (translucent wall panels, etc.) were incorporated to reduce energy consumption and greenhouse gases. The project location itself was chosen in part to reduce greenhouse gas emissions by being sited next to a rail line, so that materials can be more efficiently transported. Stormwater collection and treatment systems were previously designed for the 25-year storm event and incorporated infiltration to the maximum extent practicable; the on-site buildings were constructed well above nearby floodplain elevations.

B. If yes, describe the measures the project will take, including identifying the planning horizon and climate data used in designing project components. If applicable, specify the return period and design storm used (e.g., 100-year, 24-hour storm).

C. Is the project contributing to regional adaptation strategies? __X__ Yes __ No; If yes, describe.

The project uses rail transportation, which is a component of a regional strategy to reduce greenhouse gases and other transportation-related environmental impacts.

II. Has the Proponent considered alternative locations for the project in light of climate change risks? ___ Yes __X__ No

A. If no, explain why.

As noted above, the original site selection was motivated in part by this location's rail component, which reduces climate change risks. Additionally, its location well above flood plain elevations and distant proximity to coastline provide reduced climate change risks.

B. If yes, describe alternatives considered.

III. Is the project located in Land Subject to Coastal Storm Flowage (LSCSF) or Bordering Land Subject to Flooding (BLSF) as defined in the Wetlands Protection Act? ____Yes __X__No

If yes, describe how/whether proposed changes to the site's topography (including the addition of fill) will result in changes to floodwater flow paths and/or velocities that could impact adjacent properties or the functioning of the floodplain. General guidance on providing this analysis can be found in the CZM/MassDEP Coastal Wetlands Manual, available here.

ENVIRONMENTAL JUSTICE SECTION

I. Identifying Characteristics of EJ Populations

A. If an Environmental Justice (EJ) population has been identified as located in whole or in part within 5 miles of the project site, describe the characteristics of each EJ populations as identified in the EJ Maps Viewer (i.e., the census block group identification number and EJ characteristics of "Minority," "Minority and Income," etc.). Provide a breakdown of those EJ populations within 1 mile of the project site, and those within 5 miles of the site.

Census Block	Census Tract	Within 1 mile?	Within 5 miles?	Population
1	7092.04	Yes	Yes	Minority
2	7092.03	Yes	Yes	Minority and Income
3	7092.03	Yes	Yes	Minority, Income, and Language Isolation
3	7092.01	Yes	Yes	Minority and Income
1	7094	Yes	Yes	Minority and Income
3	7094	Yes	Yes	Minority and Income
1	7094	Yes	Yes	Minority
3	7092.04	Yes	Yes	Minority
4	7131	No	Yes	Minority

B. Identify all languages identified in the "Languages Spoken in Massachusetts" tab of the EJ Maps Viewer as spoken by 5 percent or more of the EJ population who also identify as not speaking English "very well." The languages should be identified for each census tract located in whole or in part within 1 mile and 5 miles of the project site, regardless of whether such census tract contains any designated EJ populations.

Census Block	Census Tract	Within 1 mile?	Within 5 miles?	Non-English Language, > 5%
1	7092.04	Yes	Yes	Spanish or Spanish Creole
2	7092.03	Yes	Yes	Spanish or Spanish Creole
3	7092.03	Yes	Yes	Spanish or Spanish Creole
3	7092.01	Yes	Yes	Spanish or Spanish Creole
1	7094	Yes	Yes	Spanish or Spanish Creole
3	7094	Yes	Yes	Spanish or Spanish Creole
1	7094	Yes	Yes	Spanish or Spanish Creole
3	7092.04	Yes	Yes	Spanish or Spanish Creole
4	7131	No	Yes	Spanish or Spanish Creole

C. If the list of languages identified under Section I.B. has been modified with approval of the EEA EJ Director, provide a list of approved languages that the project will use to provide public involvement opportunities during the course of MEPA review. If the list has been expanded by the Proponent (without input from the EEA EJ Director), provide a list of the additional languages that will be used to provide public involvement opportunities during the course of MEPA review as required by Part II of the MEPA Public Involvement Protocol for Environmental Justice Populations ("MEPA EJ Public Involvement Protocol"). If the project is exempt from Part II of the protocol, please specify.

The list has not been modified.

II. Potential Effects on EJ Populations

A. If an EJ population has been identified using the EJ Maps Viewer within 1 mile of the project site, describe the likely effects of the project (both adverse and beneficial) on the identified EJ population(s).

Potential adverse effects include increased truck traffic and associated emissions. These are mitigated by use of existing rail for outbound material hauling. Beneficial effects include increased local capacity for solid waste disposal, which would avoid increased costs of transporting material to more distant facilities, thus increasing miles traveled and associated GHG emissions.

B. If an EJ population has been identified using the EJ Maps Viewer within 5 miles of the project site, will the project: (i) meet or exceed MEPA review thresholds under 301 CMR 11.03(8)(a)-(b) __ Yes **_X_** No; or (ii) generate 150 or more new average daily trips (adt) of diesel vehicle traffic, excluding public transit trips, over a duration of 1 year or more. ___ Yes **_X_** No

C. If you answered "Yes" to either question in Section II.B., describe the likely effects of the project (both adverse and beneficial) on the identified EJ population(s).

Not applicable.

III. Public Involvement Activities

A. Provide a description of activities conducted prior to filing to promote public involvement by EJ populations, in accordance with Part II of the MEPA EJ Public Involvement Protocol. In particular:

1. If advance notification was provided under Part II.A., attach a copy of the Environmental Justice Screening Form and provide list of CBOs/tribes contacted (with dates). Copies of email correspondence can be attached in lieu of a separate list.

2. State how CBOs and tribes were informed of ways to request a community meeting, and if any meeting was requested. If public meetings were held, describe any issues of concern that were raised at such meetings, and any steps taken (including modifications to the project design) to address such concerns.

3. If the project is exempt from Part II of the protocol, please specify.

Advance notification was provided to the distribution list consisting of the EJ Reference List provided by the MEPA office as well as the Spanish American Center that was previously engaged during the initial permitting and construction of the Facility in 2018-2019. The State Representative, Mayor, Leominster Board of Health, Leominster Cultural Center and the Department of Public Works were all additionally notified.

A pre-application public meeting was held at the Leominster Public Library on July 22, 2024. The public meeting was advertised in the Sentinel in English and the Vocero Hispano newspaper and online in Spanish. The meeting notice was provided to the City of Leominster and the Spanish American Center in both Spanish and English. Fact sheets, public notice, and the advance notification screening forms were posted to the project website.

B. Provide below (or attach) a distribution list (if different from the list in Section III.A. above) of CBOs and tribes, or other individuals or entities the Proponent intends to maintain for the notice of the MEPA Site Visit and circulation of other materials and notices during the course of MEPA review.

The Project-Specific Distribution List, as amended following the July 22, 2024 pre-application public meeting is included in Exhibit 8. Organizations and individuals who contact the Proponent and express an interest in the project will be added to this distribution list.

C. Describe (or submit as a separate document) the Proponent's plan to maintain the same level of community engagement throughout the MEPA review process, as conducted prior to filing.

As noted in this section, organizations and individuals who contact the Proponent and express an interest in the project will be added to the project-specific distribution list. A project fact sheet with contact info will be posted at the Leominster Public Library and at the Spanish American Center in both Spanish and English, for interested parties to request information and be added to the distribution and notification list. A project website (www.ummleominster.com) was created for announcements and includes links to the fact sheets and reports, as well as contact information to request information or to be added to the distribution list . A public involvement plan has been prepared to summarize planned continued efforts throughout the permitting process, which is attached as Exhibit 8.

CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

   (Name)The Sentinel and Vocero Hispano (Date) August 29, 2024 (Sentinel) August 30, 2024 (Vocero)

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Signatures:

8/28/2024	8/28/2024
Date Signature of Responsible Officer or Proponent	Date Signature of person preparing ENF (if different from above)
Johannes Kohn	Laura Bugay P.E.
Name (print or type)	Name (print or type)
United Material Management of Leominster	Green Seal Environmental, LLC
Firm/Agency	Firm/Agency
90 Arboretum Drive, Suite 300	114 State Road
Street	Street
Portsmouth, NH 03801	Sagamore Beach, MA 02562
Municipality/State/Zip	Municipality/State/Zip
	508-888-6034
Phone	Phone

EXHIBIT 1

LIST OF EXHIBITS

EXHIBIT 1
MASSACHUSETTS ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL NOTIFICATION FORM
LIST OF REQUIRED ATTACHMENTS/EXHIBITS

<table>
<tr><th>EXHIBIT TAB WITHIN ENF</th><th>TOPIC</th><th>DESCRIPTION</th></tr>
<tr><td>1</td><td>List of Exhibits</td><td>Description of what materials are presented as part of this ENF submittal. Satisfies Exhibit/Attachment 1 requirements.</td></tr>
<tr><td>2</td><td>Draft Site Suitability Application
Narrative
Attachments
1 - Receipt of Technical Fee
2 - MEPA Correspondence
3 - Traffic Study
4 – NHESP Communication
5 – Odor Study
6 - Sound Assessment
7- Air Quality Study
8 - Certificate of Service

Figures (Plans)
1- USGS Topographic Locus Map
2- Water Resources Plan
3- Land Use Plan
4- Property Identification and Zoning Map
5- Existing & Proposed Conditions Plan (Exterior)
6- Existing & Proposed Conditions Plan (Interior)
7- Traffic Pattern Plan
8- EJ Populations Radius Plan</td><td>• Describes proposed project in significant detail

○ Not Attached – will be attached post MEPA process
○ Certificate will be attached post MEPA process
○ Presented to outline the limited traffic impacts
○ Requests and response from NHESP
○ Presents modeling findings with respect to nuisance odor conditions
○ Presented to assess the potential for nuisance sound impacts
○ Assesses emissions associated with proposed operations
○ Not Attached – will be attached post developed during MassDEP permitting process

○ Satisfies ENF Exhibit/Attachment 2 requirements
○ Satisfies ENF Exhibit/Attachment 3 & 4 requirements
○ Satisfies ENF Exhibit/Attachment 3 & 4 requirements
○ Satisfies ENF Exhibit/Attachment 2 requirements
○ Satisfies ENF Exhibit/Attachment 4 requirements
○ Satisfies ENF Exhibit/Attachment 5 requirements
○ Satisfies ENF Exhibit/Attachment 5 requirements
○ Satisfies ENF Exhibit/Attachment 9 requirements</td></tr>
<tr><td>3</td><td>Alternatives Analysis</td><td>Provides an analysis of alternatives for the proposed capacity increase.</td></tr>
<tr><td>4</td><td>Distribution List</td><td>List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2). Satisfies Exhibit/Attachment 6 requirements.</td></tr>
<tr><td>5</td><td>List of Permits</td><td>Provides a list of municipal, state and federal permits and review required by the project, as applicable. Satisfies Exhibit/Attachment 7 requirements.</td></tr>
<tr><td>6</td><td>Public Notice</td><td>Provides the proper public notice:
1. Environmental Monitor
2. Local Newspaper(s)</td></tr>
<tr><td>7</td><td>Previous MEPA Certificate</td><td>Previous MEPA decision – EEA #15896</td></tr>
<tr><td>8</td><td>Public Involvement</td><td>Public Involvement Plan including Project-Specific EJ Distribution List (updated), factsheets prepared for EJ community public involvement prior to filing of ENF, and EJ Screening Forms</td></tr>
<tr><td>9</td><td>RMAT Tool Report</td><td>Note that the RMAT Climate Resilience Design Standard Tool Report required an inputted construction start date to complete assessment beyond Step 4- Project Assets, although no construction is proposed for this Project. Satisfies Exhibit/Attachment 8 requirements.</td></tr>
</table>

EXHIBIT 2

DRAFT SITE SUITABILITY APPLICATION

UNITED MATERIAL MANAGEMENT OF LEOMINSTER

Site Suitability – Major Modification Application
BWP SW 38

Solid Waste Transfer Station
200 Tanzio Road
Leominster, Massachusetts 01453

August 2023

DRAFT

Prepared For:

United Material Management of Leominster
90 Arboretum Drive, Suite 300
Portsmouth, New Hampshire 03801

Green Seal Environmental, LLC

114 State Road, Building B, Sagamore Beach, MA 02562 | Tel: (508) 888-6034 | Fax: (508) 888-1506 | www.gseenv.com

THE BWP-SW38 APPLICATION FORM WILL BE SUBMITTED DURING THE MASSDEP PERMITTING PROCESS

Site Suitability Introduction

Introduction

Green Seal Environmental, LLC (GSE) has prepared the following document for the Massachusetts Department of Environmental Protection (MassDEP) on behalf of United Material Management of Leominster, LLC (the "Applicant" or "UMML").

This application provides the necessary information for MassDEP to find the Facility suitable to handle municipal solid waste (MSW) and construction and demolition debris (C&D), at a total of 1,500 tons per day (tpd) and 450,000 tons annually, an increase of 500 tons per day over 1,000 tpd currently permitted, pursuant to the siting criteria of 310 CMR 16.00 applicable to this Site.

Information contained herein includes a Site Suitability Application (BWP SW 38), supporting narratives, attachments, figures and site plans for the Facility and surrounding area as required under 310 CMR 16.00.

How to Use this Document

This document coincides with the format of the MassDEP's Site Suitability application and contains the following information:

- Site Suitability for a major Modification of an Existing Site Assignment application form (BWP SW 38) provided by MassDEP;
- A narrative that provides required information relative to each individual suitability criteria;
- Attachments that supplement certain sections of the application corresponding with that particular section (e.g., traffic analysis, MEPA, and NHESP); and
- Figures/site plans for comparison to the Site Suitability Criteria such as Water Resources and Land Uses, Zoning, Existing Conditions, and Proposed Conditions.

Non-Applicability

In the sections of the Site Suitability Application that do not pertain to the project, the statement ***"not applicable"*** will appear. However, some of these sections will contain a narrative and/or justification statement. Where a statement is determined to be necessary, the reader will be directed to the appropriate section within this document and any supporting attachments, site plans or figures.

Site Suitability Table of Contents

Continued on next page

Site Suitability Table of Contents, *Continued*

Table of Contents *(continued)*

Section I. General Information

Introduction

The following sections are addenda to the General Information section contained within the Site Suitability application and address the following topics:

- Site Location
- Project Description
- About the Applicant
- Fees
- Collection of Household Hazardous Waste
- Declaration of Waivers
- Massachusetts Environmental Policy Act (MEPA)
- Wetland Resources
- Maps Narrative

Section I Table of Contents

The following Section I table of contents references page numbers of this document, not the application forms.

Site Location and Project Description (A)

Site Location

UMML currently operates a 1,000 tpd MSW and C&D handling and transfer station (the "Facility"). The Facility consists of an 32,400-square-foot solid waste transfer/waste handling building (including 1,260 sf of attached office space for a total footprint of 33,660 sf). The site also includes a rail yard, scale house and scales, parking areas, site grading and paving, and associated appurtenances. Additionally, a series of catch basins, drainage manholes, and subsurface infiltration systems manage stormwater in compliance with the current Massachusetts Stormwater Standards.

The Facility is located on 13.46 acres of land and is comprised of two parcels (9.621 acres and 3.841 acres in size). The site assigned area within these parcels is comprised of 11.33 acres. Please refer to Figures 5 that depicts the parcel and site assigned area.

The Facility is designed to accept MSW and C&D delivered by truck for subsequent sorting or transfer into rail cars and secondarily as conditions dictate, larger trucks for transport to various locations throughout the country for disposal and/or further recycling. The Facility is equipped with recycling equipment to sort Category 1 and 3 C&D debris to capture and separate the recyclable fraction so that it may be further recycled. Post-processed Category 2 C&D which is the residuals generated from the separation recycling process at the Facility or other MassDEP-approved Processing facilities is loaded onto rail cars for disposal. Solid waste handling activities occur within the enclosed building, which is adequately sized so that all unloading, handling, and loading onto rail cars and/or trucks occurs within the building interior. Please refer to Figure 6 for further detail.

UMML intends to increase their permitted daily tonnage from 1,000 tpd (300,000 tons annually) to 1,500 tpd of C&D and MSW with a maximum annualized capacity of 450,000 tons (the Project). As presently approved, the Facility operates six days per week, and accepts waste from 6 AM to 7 PM Monday through Friday, and from 7 AM to 3 PM on Saturdays.

Based upon a maximum daily capacity of 1,500 tpd and a six (6) day operating week, the maximum annual capacity is requested to be 450,000 tons per calendar year.

Continued on next page

Site Location and Project Description (A), *Continued*

Type of Facility

UMML is a state-of-the-art MSW and C&D handling and transfer Facility with an integrated rail line. The waste handling is performed entirely within the existing 32,400-square-foot metal-framed handling building. The confines of the building include tipping and inspection areas, temporary waste storage areas, an elevated picking/sorting line, and outbound rail and truck loading area.

Site Area

The Facility is located on a 13.46-acre parcel of land of which 11.33 acres is currently site assigned. The Facility is bound to the east by Tanzio Road and the west by a rail line. A portion of the parcel to the north contains an electrical easement with transmission towers. Vacant industrial-zoned land is further north. Additional vacant land with a wooded wetland area surrounding a brook is located at the southern portion of the Site.

Residential dwellings exist greater than 500-feet away from the waste handling area to the southwest across the elevated rail line, and other residential dwellings are located over 800 feet to the east.

Capacity

The Applicant proposes increasing the permitted tonnage at this MSW and C&D handling and transfer Facility, and will have the following projected capacity:

a. The Facility will have a maximum daily capacity of 1,500 tpd, an increase of 500 tpd from the current permitted 1,000 tpd.
b. The Facility will continue to operate six (6) days per week, from Monday through Saturday. Based upon a maximum daily capacity of 1,500 tpd and a six (6) day operating week, the proponent requests an annual capacity of 450,000 tons per calendar year.
c. The Facility is expected to have a lifetime of approximately 30 years.
d. Based upon the projections given above, the estimated lifetime capacity for the Facility is 13.5 million tons.

Continued on next page

Site Location and Project Description (A), *Continued*

Type of Waste

The Facility will continue to handle, sort (as applicable), and transfer MSW and C&D materials as they do presently. As defined by MassDEP, MSW is any residential or commercial solid waste.

Construction and demolition (C&D) waste is waste building materials and rubble resulting from the construction, remodeling, repair or demolition of buildings, pavements, roads, or other structures. Construction and demolition waste includes but is not limited to, concrete, bricks, asphalt pavement, masonry, plaster, gypsum wallboard, metal, lumber, and wood.

No hazardous wastes will be accepted.

Disposal in Leominster

There are no active combustion facilities or landfills in Leominster as listed on the MassDEP Solid Waste Facilities Master List. The MassDEP Solid Waste Facilities Master List includes four inactive or closed landfills in Leominster. They are:

- Leominster Landfill - located 0.95 miles from the subject site
- Mechanic Street Landfill - located 0.8 miles from the subject site
- Margot Xarras/Lock Drive - located 1.37 miles from the subject site
- 89 Commercial Road, LLC - located 1.78 miles from the subject site

Waste Flow

The following describes how waste will flow on-site.

1. Vehicular ingress and egress is from/to Tanzio Road to the east of the subject property.
2. The ingress traffic pattern follows along a paved driveway that runs centrally through the parcel from east to west to the inbound and outbound scales. This area provides for adequate vehicular queuing, two scales, and a bypass lane to ensure there is no queuing on Tanzio Road. The scale house is located at the outbound scale, with views of the inbound scale and equipped with remote communication to the inbound scale. Scale house personnel are able to monitor inbound and outbound traffic patterns. The Facility can utilize both scales for inbound and/or outbound operations if ever deemed necessary. To date, this has not been necessary.

Continued on next page

Site Location and Project Description (A), *Continued*

Waste Flow *(continued)*

3. From the inbound scale, delivering waste vehicles proceed westerly around the handling building to the paved tarmac area on the northeast side of the building. From this point, vehicles are directed by personnel to back into one of the three inbound off-loading doorways. A fourth doorway in the northwest corner is reserved for railcars and/or outbound live floor tractor trailers. A loadout bay and fifth door in the southwest corner was previously included for live floor tractor trailers only, but has since been closed to accommodate recycled product bins below the elevated sorting line. Please see Figures 5 and 6 which depict the exterior site layout and interior layout of the waste handling building, respectively, and Figure 7 which includes a Traffic Movement and Turning Radius Plan. It should be noted that there is adequate access and turning radii to provide access around the entire building. This paved access around the building can also be utilized for vehicle staging/queuing if it is ever necessary.
4. Once in the building, the inbound waste vehicles tip their loads and exit out of same inbound doorway in which they entered.
5. Exiting vehicles proceed from the waste handling building west around the building in a counterclockwise direction to the outbound scale and then proceed off-site.

Additionally by having two scales on-site, logistics with respect to traffic patterns, staging, tare in, and tare out is well served, and creates efficient flow and functionality without having traffic patterns cross.

Building Size, Elevations and Doorways

The waste handling building has general envelope dimensions of 150 feet (east to west) by 230 feet (north to south). The building's footprint allows for at least two coupled railcars to be staged within waste handling building at one time. Figure 6 depicts the following:

1. Building dimensions.
2. Dimensions of the Temporary Waste Storage, Tipping and Waste Inspection Area, Outbound Loading Area, and Railcar Staging areas. These areas will be discussed in further detail within the Size of Facility section of this narrative.
3. The location and size of the existing doorways.

Continued on next page

Site Location and Project Description (A), *Continued*

Building Size, Elevations and Doorways *(continued)*

4. Locations of the interior trench drain system.
5. Pushwall locations and heights.
6. Sorting line location and orientation.

The building is approximately 45 feet tall at the peak that runs in a north to south direction.

Tipping Overview

The Facility's operational protocols require personnel to inspect and oversee waste tipping activities. The following table outlines UMML's procedure, as outlined in the Facility's approved O&M Plan.

Step	Action
1	An incoming driver is prompted to back his/her vehicle up and onto the concrete tipping area.
2	Facility personnel will direct the driver to tip the waste in one of several designated areas.
3	The load is inspected by trained Facility personnel for unacceptable materials (e.g., visible waste ban materials).
4	Pending an acceptable inspection, the vehicle exits the waste handling area within the building and proceeds to the outbound scale.

Waste Consolidation

The following table outlines UMML's procedure for waste consolidation within the building.

Step	Action
1	Pending an acceptable inspection and safe vehicle exit, the tipped waste materials may be pushed to a waste staging area located within the southwestern portion of the building.
2	The waste materials may also be pushed and/or consolidated in the waste tipping and inspection area and pushed for subsequent loadout in the outbound loading area located along the western interior of the building.
3	The materials will be managed by a front-end loader and/or excavator.
4	With respect to the handling of Category 1 (Recyclable C&D), this material will either processed on site with the use of the existing sorting line or be consolidated for off-site shipment to another MassDEP-approved C&D processor following the requirement of 310 CMR 19.017.

Given the Facility's size and layout, proper vehicle movement throughout the building can be achieved.

Continued on next page

Site Location and Project Description (A), *Continued*

Railcar or Live Floor Loading Operations

The following table outlines UMML's procedure for railcar or truck loading within the building.

Step	Action
1	A front-end loader and/or excavator transports waste materials from the temporary waste storage area and/or directly from the waste tipping and inspection area.
2	The materials will be directly loaded into a live floor truck and/or rail car located in the outbound loadout and railcar staging area respectively.
3	The rail cars and/or trucks are covered with an appropriate cover for subsequent staging and transport to the final disposal destination.

Impervious Surfaces

Presently, the Site has approximately 160,760 sf of impervious surfaces which includes the handling building and attached offices, scale house, scales, and access driveway. No increase to impervious surfaces is proposed.

Stormwater

The stormwater management and treatment system comply with the Massachusetts Stormwater Standards as well as requirements set forth by the City of Leominster.

The Facility's stormwater management system consists of deep sump catch basins equipped with hoods that flow to oil-grit separators to treat the stormwater for Total Suspended Solids (TSS) and oils to meet state 44% pre-treatment standards. Stormwater is then directed to one of three infiltration systems on site.

Wetland and Riverfront Resource Areas

Riverfront Area and wetlands exist to the south of the site and at the very north of the site. As part of initial Facility construction in 2019, a small area of paving and limited re-grading occurred as approved by the City of Leominster Conservation Commission within the 200-foot Riverfront Area. No work occurred within the 100-foot wetland buffer zone or 100-foot inner riparian area, except for native plantings in accordance with the approved restoration plan. No additional impacts to Resource Areas will occur as part of the tonnage expansion, as no physical changes to the Facility property are proposed.

Continued on next page

Site Location and Project Description (A), *Continued*

Facility BMPs

The Facility was developed using state-of-the-art Best Management Practices (BMPs) to minimize potential impacts to the Site and surrounding environment. The following BMPs are implemented at the Facility:

- All tipping, handling, and loading is performed within a fully-enclosed processing and handling building.
- The building floor is impervious concrete that will prevent any potential contamination of groundwater. Any liquids released from the waste will be collected in a floor drain system. The liquid collected in this system is routed through an oil/water separator and discharged to the sanitary sewer system pursuant to their existing discharge permit.
- Use of a fine atomized misting system within the Waste Handling Building effectively controls fugitive dust and odor in the building.
- Regular daily cleanup and sweeping occurs on the external paved surfaces.
- Enhanced stormwater controls that meet or exceed MassDEP Stormwater Standards.

Applicant Identification (B)

Applicant

The Applicant is United Material Management of Leominster, LLC, which has a current corporate address of 90 Arboretum Drive, Suite 300, Portsmouth, New Hampshire. The Site (13.46 combined acres with 11.33 acres site assigned) is presently owned by the following entity:

Property Owner	Size	Description
United Material Management of Leominster, LLC	3.84 Acres	Book 9351 – Page 242 Parcel ID 310-1D
	9.62 Acres	Book 9351 – Page 248 Parcel ID 320-2

These two properties were previously combined into the current 13.46-acre parcel which is listed in the City of Leominster Assessors records as Parcel 320-2. Please see Figure 5 that depict the property lines and the Site Assignment limits and relationships to various setbacks relevant to 310 CMR 16.40.

Fees, Household Hazardous Waste, Waivers (C-E)

Fees

As part of the site suitability process, the Leominster Board of Health will assess UMML a Technical Fee. The Board of Health may use the fee for eligible costs of reviewing technical data, obtaining technical assistance, and conducting a public hearing. The maximum allowable technical fee that the Board of Health can assess is computed per 310 CMR 16.00 and is based on the type of Facility and the tons of waste accepted per day.

From 310 CMR 16.99 Appendix A, Table 2, the Maximum Technical Fee for Handling Facilities is based on the maximum daily volume of waste, measured in tons per day (tpd), that is proposed to be accepted at the Facility. UMML is proposing to accept up to 1,500 tpd of municipal solid waste at the Facility, which is an increase of 500 tpd over the 1,000 tpd facility that is currently site assigned. The Maximum Technical Fee for the proposed Facility capacity increase is as follows:

- Maximum Fee = $3,000 + (500 tpd Increase x $20.00/tpd) = $13,000.00

The total of the Maximum Technical Fee ($13,000) is required be adjusted for inflation by a factor determined by the ratio of the Boston Consumer Price Index ("BCPI") for September of the year preceding the current year, divided by the BCPI for September 1988. Per information provided by the U.S. Department of Labor, Bureau of Labor Statistics, the BCPI for September 2023 was 327.14 and for September 1988 was 126.2.

Applying the adjustment factor results in the following Maximum Technical Fee for the proposed tonnage increase at the Facility = $13,000 x (327.14/126.2) = $33,669.

Please see Attachment 1 for a copy of the check. (Note check will be issued with a copy provided in Attachment 1 during the MassDEP Site Suitability Application process.)

Household Hazardous Waste

The Applicant is not applying, pursuant to the Massachusetts Hazardous Waste Regulations (310 CMR 30.000, section 30.190), for approval to operate a Facility for the collection of Household Hazardous Waste.

Continued on next page

Fees, Household Hazardous Waste, Waivers (C-E), Continued

Household Hazardous Waste, Continued	The Facility does not accept Household Hazardous Waste however, some qualifying items may be found mixed in accepted C&D loads. If Household Hazardous Waste is found during inspections, the oil and/or hazardous material will be placed in a secured and approved container for subsequent removal and proper disposal.
Waivers	UMML is not requesting any waivers per 310 CMR 16.18.

Priority Resources and Land Uses (F-H)

MEPA

According to 310 CMR 16.08(5)(d), the Applicant must provide evidence that the proposed project does or does not require review under the Massachusetts Environmental Policy Act (MEPA).

An Environmental Notification Form (ENF) was prepared and submitted to the MEPA office under file number EEA #15896, for the initial permitting of the Facility in 2018/2019. A copy of this prior Certificate is presented in Attachment 2. An ENF is required to be filed per 301 CMR 11.03 (9) for an Expansion in Capacity of greater than 150 tpd for an expansion of an existing facility with a valid Site Assignment. An EIR (DEIR/FEIR) for the proposed tonnage increase will also be required pursuant to the recent changes in the MEPA regulations regarding Environmental Justice.

Wetland Resources

The wetland boundaries and 100-foot wetland buffer zones are shown on the attached Water Resources Plan (Figure 2) as well as the Existing and Proposed Conditions Plan (Figure 5). Wetlands surrounding Fall Brook extend over a small portion of the site across the northern site property boundary. A bordering vegetated wetland system approximately 3.85-acres in area, is located in the southern portion of the site. The 100-foot buffer area around the wetland within the site is mostly vegetated. No development is planned within the wetland resources area.

The existing building and surrounding pavement are located outside the 100-foot wetland buffer zone. No impacts to the wetlands or associated buffer zones will occur as no physical modifications to the Facility are proposed.

Riverfront Area

Fall Brook and an unnamed Brook run through the northern and southern portions of the site, respectively. Riverfront Areas are associated with the two brooks described above and are depicted on Figure 2 as well as on Figure 5. Developed portions of the site are generally located outside of the Riverfront Areas with the following exceptions: A limited amount of paved access road including a portion of the outbound scale on the south side of the Site is located within the 200-foot Riverfront Area of the unnamed Brook, but is outside of the 100-Inner riparian zone. As part of the initial Facility development and construction, restoration of the undeveloped riverfront area occurred with native plantings.

Continued on next page

Priority Resources and Land Uses (F-H), *Continued*

Riverfront Area *(continued)*	No additional impacts to the Riverfront Area will occur as no physical modifications to the Facility are proposed.
100-Year Floodplain	The 100-year flood boundaries as determined by the Federal Emergency Management Agency (FEMA) are shown on the attached Water Resources Plan (Figure 2). All of the developed portions of the site are above the 100-year floodplain elevation and have no impact on the floodplain as depicted on Figure 5.
Proposed Impacts on Resource Areas	No impacts to Resource Areas will occur as part of the tonnage expansion, as no physical changes to the Facility property are proposed.

Continued on next page

Priority Resources and Land Uses (F-H) *Continued*

Maps

The following section addresses plans and figures that GSE has prepared for the proposed project. Please refer to the Figures section.

Groundwater Contour Map

A groundwater contour map of the subject Site has not been developed and GSE opines that it is not warranted due to the large separation between groundwater and the existing floor elevation of the waste handling area due to the required filling at the Site previously to achieve appropriate rail spur grades. Test pits conducted prior to stormwater system design and permitting confirmed groundwater to be at a minimum of 11-feet below the elevation of the lowest handling building floor elevation, with groundwater flow generally to the southeast towards the unnamed brook to the south of the Site. Therefore, adequate separation to groundwater is achieved.

Figure 5 "Existing and Proposed Conditions - Interior" identifies the existing slab elevations which satisfies the requirements of 310 CMR 16.40(3) (d) (7).

Locus Map

The following table provides pertinent information relative to the "Locus Map." Please refer to the Locus Plan (Figure 1) and the Existing Conditions Plan (Figure 5) for site-referencing locus information.

Quad Name and Date	Shirley (Massachusetts) - 2015
Latitude and Longitude	Lat. 42.506178 N, Long. -71.743084 W
UTM Coordinates	274625.96 E, 4709625.77 N (meters)
Elevation above MSL	Approximately 370 feet above Mean Sea Level

Continued on next page

Priority Resources and Land Uses (F-H) *Continued*

Priority Resources

The following table provides a brief narrative of the priority resource features found within ½-mile radius of the Site. Please refer to the Water Resources Plan (Figure 2), the Land Use Plan (Figure 3), Property Identification and Zoning Map (Figure 4), and the Existing and Proposed Conditions Plan - Exterior (Figure 5) of this application for more information on these features.

Regional Details (1/2-mile radius)	Description
Wetlands	The Water Resources Plan (Figure 2) depicts wetlands as obtained from MassGIS within a ½-mile radius of the site. The Existing Conditions Plan (Figure 5) shows the wetland areas to the south and north of the Site and associated 100-foot wetlands buffer zone. Wetland buffer zones extend over a small portion of the site across the northern boundary from wetlands surrounding Fall Brook and over a more significant portion of the southern end of the site from the wetlands categorized as wooded swamp with mixed trees. No development is located within the regulatory 100-foot buffer zone. The Site is developed with some pavement and/or rail track within the 200-foot Riverfront Areas. The existing Facility is located outside of the 100-year flood plains of both the unnamed Brook to the south of the site and Fall Brook to the north of the site. The stormwater management system is in conformance with MassDEP's Stormwater Management Policy for water quality, recharge, and control of sedimentation.

Continued on next page

Priority Resources and Land Uses (F-H) *Continued*

Priority Resources, (*continued)*

Regional Details (1/2-mile radius)	Description Please refer to the Water Resources Plan included as Figure 2.
Proposed Drinking Water Source Areas	The Site is not located within or adjacent to a proposed drinking water source area. The nearest mapped high-yield aquifer is located approximately 1-mile northwest of the site. No Water Management Permits or Applications for permits were listed for Leominster on MassDEPs website. Please note that all waste handling operations will take place indoors.
Zone A & B Areas	The Site is not located within or adjacent to a Zone A or B of a public drinking water supply area. The nearest Zone A and B of a public drinking water supply is at the Fall Brook Reservoir 1.9 miles southwest of the Site and the Morse Reservoir 2.2 miles northwest of the Site. This is well beyond the ½ mile radius from the Site and is not depicted on the Water Resources Plan.
Zone I	The Site is not located within or in close proximity to a Zone I of a public water supply. The nearest Public Water Supply Wells are located approximately 2 miles east of the Site.
IWPA or Zone II	The Site is not located within an IWPA or Zone II. The nearest Zone II is approximately 1.7 miles south of the existing facility. The nearest IWPA is approximately 1.8 miles northeast of the existing facility.

Continued on next page

Priority Resources and Land Uses (F-H) *Continued*

Land Uses

The following table provides a brief narrative of land uses within ½-mile of the Site. Please note that this information was obtained using digitized images and vectorized data from the Massachusetts Geographic Information Systems (MassGIS) and other publicly available information from the MassGIS website. Please refer to Figure 3, Land Use Plan.

Regional Details (1/2-mile radius)	Description Please refer to the Land Use Plan included as Figure 3.
Natural Heritage Endangered Species Program	According to MassGIS, there is Priority Habitat of Rare Species and an Estimated Habitat of Rare Wildlife located approximately 0.5 miles west of the subject Site. These areas are separated from the Site by the existing rail line, commercial/residential properties, and Route 12. The areas of Rare Species Habitat and Habitat of Rare Wildlife are depicted on Figure 3.
Wildlife Management Areas	GSE reviewed the Division of Fisheries and Wildlife website and MassWildlife Lands Viewer for information regarding Wildlife Management Areas. No Wildlife Management Areas are located within a ½ mile of the Site boundary.
ACECs	According to MassGIS, there is an Area of Critical Environmental Concern (ACEC) located approximately 0.4 miles east of the subject Site within the Johny Appleseed State Park. The area is separated from the Site by commercial/residential properties and Route 117. The ACEC is depicted on Figure 3.
Agricultural Lands (Adjacent & On-Site)	Areas of prime farmland, farmland of unique importance, and farmland of statewide importance as identified by soils classification on the MassGIS system are mapped at the site and are indicated on Figure 3. Farmland of state wide importance was identified overlapping three areas within the Site. Based on a soil investigation performed by APEX prior to the original siting of the Facility, the findings of the Detailed Soil Survey determined that all areas within the area to be Site Assigned previously designated as having soils classified by NRCS as Farmland of Statewide Importance were not present but instead consisted of other soil mapping units, 600 – Pits, gravel and 602 – Urban Land, that are not such farmland designations due to previous excavation and extraction of sand and gravel at the Site. Additionally, there is at least a 100-foot buffer between the Facility and those lands as evidenced by the results of a detailed soil survey and the actual use of land. The mapping on Figure 3 represents the limits based upon the soil survey and shows the areas confirmed not having soils classified as farmland.

Continued on next page

Priority Resources and Land Uses (F-H), *Continued*

Land Uses,
(continued)

Regional Details (1/2-mile radius)	Description Please refer to the Land Use Plan included as Figure 3.
State Forests	GSE reviewed the Department of Conservation and Recreation website for information regarding State forests. No State forests were identified within a ½ mile of the Site boundary.
Conservation and Park Lands	Saint Leo Cemetery is located north of the existing Facility across Route 117 (Lancaster Street) and is also separated from the Site by commercially developed properties. The Fuller Street Conservation Area is located northwest of the Site and is separated from the Site by the CSX Railroad and Litchfield Street. The Leominster Lassie League Field Complex is located approximately 0.48 miles west of the Site and is separated from the Site by the CSX railroad, Litchfield Street, Route 12, commercially developed properties, and residential dwellings. Eagles Field and the Old Deerfield Woods Estates Conservation Areas are separated from the Site by Route 12 (Central Street), commercially developed properties, and residential dwellings. The Johnny Appleseed State Park is located approximately 0.36 miles east of the Site and is separated from the Site by commercially developed properties, residential dwellings, and Route 117.
MDC Reservations	The MDC is now the Department of Conservation and Recreation (DCR). No DCR parks were identified within ½ mile of the existing Facility.
EOEA Restricted Land	GSE did not identify any lands with conservation, preservation, agricultural, or watershed protection restrictions approved by the secretary of EOEA within a ½ mile of the Site.
Privately Owned Public Access Conservation Land	GSE did not identify any privately owned public access conservation lands in close proximity to the subject Site. Based on the existing location, the subject Site will not have adverse impacts on the physical environment of local conservation lands.
Residential Dwellings (500 Foot Radius)	No residential dwellings exist within 500 feet of the existing waste handling area of the project. The residential dwelling nearest the Facility is 522 feet southwesterly from the waste handling area (subject building). Please note, there is also significant topography in-between the Facility and the residential dwelling that provides a natural buffer.

Continued on next page

Priority Resources and Land Uses (F-H), *Continued*

Land Uses,
(*continued)*

<table>
<tr><th>Regional Details (1/2-mile radius)</th><th>Description

Please refer to the Land Use Plan included as Figure 3.</th></tr>
<tr><td>Commercial Buildings (500 Foot Radius)</td><td>Six commercial buildings are located within 500 feet of the property line of the existing Site. The buildings are located on Lancaster Street, Litchfield Street, Calza Street, and Tanzio Road as shown on the Property Identification & Zoning Map, Figure 4. The commercial buildings within 500 feet of the Site are:
<table>
<tr><th>Facility/Business</th><th>Address</th></tr>
<tr><td>Monson Companies at Leominster Commerce Center</td><td>463-477 Lancaster St, Leominster, MA</td></tr>
<tr><td>Massachusetts Electric Co.</td><td>189 Litchfield St, Leominster, MA</td></tr>
<tr><td>CubeSmart Self Storage</td><td>193 Litchfield St, Leominster, MA</td></tr>
<tr><td>Fraticelli Oil</td><td>239 Litchfield St, Leominster, MA</td></tr>
<tr><td>Antique Auto Upkeep</td><td>22 Calza St, Leominster, MA</td></tr>
<tr><td>(formerly) Tanzio Construction</td><td>65 Tanzio Road, Leominster, MA</td></tr>
</table></td></tr>
<tr><td>Health Care Facilities</td><td>GSE identified two health care facilities, Gateway Chiropractic & Occupational Health Center and TAK Medical Group within ½ mile of the site but both at greater than 500-feet away.</td></tr>
<tr><td>Prisons</td><td>GSE did not identify any prisons within ½ mile of the Site.</td></tr>
<tr><td>Schools</td><td>GSE did not identify any schools within ½ mile of the Site.</td></tr>
<tr><td>Daycare Facilities</td><td>GSE did not identify any daycares within ½ mile of the Site.</td></tr>
<tr><td>Senior & Youth Centers</td><td>GSE did not identify any senior or youth centers within ½ mile of the Site.</td></tr>
</table>

Continued on next page

Priority Resources and Land Uses (F-H), *Continued*

On-Site Land Use

The following table provides an overview of the Facility's on-site land use. This information can be found on the Existing and Proposed Condition Site Plan(s) – Exterior and Interior presented as Figures 5 and 6, respectively.

Criteria	Description
Solid Waste Facilities	GSE did not identify any solid waste facilities within ½ mile of the Site.
On-Site Waste Handling Areas	The waste handling areas at the Site are confined to the limits of the existing building.
Areas of Waste Deposition	Waste will not be landfilled and/or incinerated on the Site. Inbound materials are tipped, handled, and loaded within the confines of the building. The waste materials are then transported off-site via rail or large trucks.
Existing Buildings	Presently, there is one 33,660 sf building of which 32,400 is dedicated to waste handling and 1,260 sf is offices and employee facilities. Multiple trailers are on site serving as the scale house and additional employee facilities. a
Access Roads	There is one access road to the subject facility, Tanzio Road that provides ingress and egress from Route 117 (Lancaster Street) to the Site. Please refer to Figures 5 and 7 and the Traffic Report presented as Attachment 3 for further detail.
Traffic Flow	Traffic accesses the Site from Route 117 (Lancaster Street). From Route 117, traffic turns onto Tanzio Road, which leads to the Site. The traffic flow pattern is shown on Traffic Report (Attachment 3) and Traffic Movement and Turning Radius Plan (Figure 7). The Site has adequate room for safe and effective traffic flow and truck queueing on-site.
Zoning of Abutting Properties	The abutting properties, as defined in 310 CMR 16.02, to north of the site are zoned Multi-Use 1. The remaining abutting properties are zoned Industrial. Zoning designations are shown on the Property Identification and Zoning Map (Figure 4).
Site Zoning	The zoning of the Site is Industrial and transfer stations are an allowed use. As such, no local variances were or are required for the Facility.

Section II. Facility Specific Criteria (A-C)

Introduction

The following section addresses Facility-specific criteria [310 CMR 16.40(3)(d)] for Waste Handling and Processing Facilities. Please refer to the prior statements in this narrative in the Priority Resources and Land Uses description, Attachments, Figures, and Site Plans for additional information.

Table of Contents – Section II

The following is a TOC for Section II of the Site Suitability application. The page numbers cited refer to page numbers of the general document, not the application form.

Landfills

The existing Facility is a solid waste handling Facility that will not landfill/dispose waste on-site. Therefore, this section does not apply.

Combustion Facilities

The existing Facility is a solid waste handling Facility that will not burn or incinerate waste on-site. Therefore, this section does not apply.

Continued on next page

Section II. Facility Specific Criteria (A-C) *Continued*

Zone I of a Public Water Supply	The existing waste handling area is not located within a Zone I of a public water supply. MassDEP establishes Zone I areas as the area encompassed by a protective radius of 400 feet around a public water system well with a yield of 100,000 gallons per day or greater. The Site is not located within or in close proximity to Zone I of a public water supply. The nearest Public Water Supply Wells are located approximately 2 miles east of the Site. The proposed Project complies with the requirements of 310 CMR 16.40(3) (d) (1).
IWPA and Zone II Areas	The existing waste handling area is not within an Interim Wellhead Protection Areas or the Zone II of a public water supply well. The nearest Zone II is approximately 1.7 miles south of the existing facility. The nearest IWPA is approximately 1.8 miles northeast of the existing facility. The proposed Project complies with the requirements of 310 CMR 16.40(3) (d) (2).
Zone A	The existing waste handling area is not within the Zone A of a public water supply. As shown on the Water Resources Plan (Figure 2), no Public Surface Water Supplies are located within ½ mile of the Site. The proposed Project complies with the requirements of 310 CMR 16.40(3) (d) (3).
Private Water Supplies	Private well locations in the vicinity of the site were obtained from the Commonwealth of Massachusetts Energy & Environmental Affairs Data Portal. No private wells were identified within 500 feet of the existing waste handling area. As shown on Figure 2, the nearest private well is 970 feet from the existing waste handling area and 560 feet from the property line. GSE contacted the City of Leominster Health Department, and confirmed that the properties in the vicinity of the Facility are served by a public water supply system (no records of private wells are available at the City of Leominster Health Department, however they provided the master list kept by the City's Department of Public Works). The proposed Project complies with the requirements of 310 CMR 16.40(3) (d) (4).

Continued on next page

Section II. Facility Specific Criteria (A-C), *Continued*

Occupied Facilities

There are no existing occupied residential dwellings, prisons, health care facilities, elementary schools, middle schools or high schools, children's preschools, licensed day care centers, senior centers, or youth centers within 500 feet of the existing waste handling areas at the Facility. The locations of these sensitive receptors are presented within Figure 3.

The residential dwelling nearest the Facility located at 37 Calza Street is located 508 feet southwesterly from the existing waste handling area (handling building).

The proposed Project complies with the requirements of 310 CMR 16.40(3) (d)(5).

Riverfront Area

The waste handling area is not within a Riverfront Area as defined at 310 CMR 10.00. A "River" is defined at 310 CMR 10.58(2)1.a. as a perennial stream where "the issuing authority shall presume that a river or stream shown as perennial on the current U.S. Geologic Survey ("USGS") or more recent map provided by the MassDEP is perennial unless rebutted by evidence from a competent source asserting to the contrary or a finding by the issuing authority." The Riverfront Area is defined at 310 CMR 10.58(2)(a)3.a. as "the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away." The waste handling area is not located within 200 feet of a river. A limited amount of existing railroad track located on the north side of the Site that connects the Facility to the CSX rail line is within the Riverfront Area of Fall Brook. A portion of the existing site access road and outbound scale are located within the Riverfront Area to the unnamed Brook on the east side of the Site. An Order of Conditions was granted by the Leominster Conservation Commission prior to construction t approving work in the outer riparian zone which included a Riverfront Area restoration plan. Please refer to Figure 5 that depicts the existing conditions including the resource areas on site.

The proposed Project complies with the requirements of 310 CMR 16.40(3) (d)(6).

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Section II. Facility Specific Criteria (A-C), *Continued*

Depth to Groundwater

The Facility maintains at least a two-foot separation between the maximum high groundwater elevation and the waste handling area. A groundwater contour map of the subject Site has not been developed and GSE opines that it is not warranted due to the large separation between groundwater and the existing floor elevation of the waste handling area due to the previous required filling at the site to achieve appropriate rail spur grades. Test pits conducted as part of the original design and permitting of the Facility revealed groundwater to be between elevation (el.) 360 at the north end of the handling building and el. 359 at the south end of the handling building. With the tipping floor elevation at el. 375, and the rail at el. 371; there is a minimum of 11 feet between the lowest floor elevation and the maximum groundwater elevation, which exceeds the minimum 2-foot separation including in consideration of the leachate collection trench drains. Groundwater elevation near the site entrance to the southeast was observed to be around el. 352 which is consistent with the elevation of the closest wetland system located to the south of the existing waste handling building that is between el. 350 and el. 354, more than 20-feet lower than existing topography at the existing waste handling building. Based upon observations, the inferred groundwater flow is to the south-southeast across the site.

Figure 6 “Existing and Proposed Conditions - Interior” identifies the existing slab elevations which satisfies the requirements of 310 CMR 16.40(3) (d) (7).

Continued on next page

Section III. General Criteria (A-L)

Introduction

The following section addresses Section III of the Site Suitability Application - General Site Suitability Criteria for a Solid Waste Management Facility. Please refer to the prior statements in this narrative in the Priority Resources and Land Uses description, Attachments, Figures, and Site Plans for additional information.

Table of Contents – Section III

The following is a TOC for Section III of the Site Suitability application. The page numbers cited refer to page numbers of the general document, not the application form.

Agricultural Land (A)

Agricultural Land(s)

Areas of prime farmland, farmland of unique importance, and farmland of statewide importance as identified by soils classification on the MassGIS system are indicated on Figure 3. Farmland of state wide importance was previously identified within three areas of the Site.

A soil investigation was previously performed by APEX to further evaluate the areas identified as farmland of state wide importance. APEX completed a Detailed Soil Survey of the area(s) to be Site Assigned at the 200 Tanzio Road property. Based on the Detailed Soil Survey work performed, APEX developed the following conclusions:

- *"Soil mapping units that correspond to Agricultural Land of Prime, Unique, or of State or Local Importance do not occur within the Site Assignment limits as depicted in Figure 5.*
- *Areas of soil previously mapped by the NRCS as consisting of Hinckley loamy sand, 3 to 8 percent slopes (Map Unit 245B) and Windsor loamy sand 3 to 8 percent slopes (Map Unit 255B), both rated as a Farmland of Statewide Importance, were not encountered within the area requested by UMML for Site Assignment by MassDEP and Leominster BOH. The natural soils within this area were destroyed by human activities related to the extraction of sand and gravel as a resource for offsite uses.*
- *The findings of the Detailed Soil Survey determined that all areas previously designated as having soils classified by NRCS as Farmland of Statewide Importance were not present but instead consisted of other soil mapping units, 600 – Pits, gravel and 602 – Urban Land, that are not such farmland designations."*

Based on APEX's conclusions, none of the area that is site-assigned is in farmland or is within 100-feet of mapped farmland, and as such, the site meets 310 CMR 16.40(4) (a).

Continued on next page

Traffic Impacts (B)

Traffic Impacts

The traffic associated with the Facility expansion has been evaluated to demonstrate that the traffic impacts from Facility operations would not constitute a danger to the public health, safety, or the environment, taking into consideration the following factors:

1. traffic congestion;
2. pedestrian and vehicle safety;
3. road configurations;
4. alternate routes; and
5. vehicle emissions (Discussed in Air quality Section).

Traffic Study Overview

Bowman (FKA McMahon & Associates) completed a review of the existing traffic operations and potential traffic impacts associated with the proposed tonnage increase at the existing solid waste facility located at 200 Tanzio Road in Leominster, MA. The purpose of this Traffic Impact Study (TIS) was to evaluate existing and projected traffic operations and safety conditions in the vicinity of the site and identify any potential 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. In summary, this study has determined that the proposed project, when developed and operational, will allow for safe and efficient access to and from the Facility with minimal impacts.

The assessment documented in the TIS (the study) is based on a review of existing traffic volumes, crash data, and the anticipated traffic-generating characteristics of the tonnage expansion. The study examines existing and projected traffic operations (both without and with the Project) at key intersections in the vicinity of the Facility. Those intersections include Tanzio Road at the Facility driveway, Tanzio Road at Lancaster Street (Rt. 117), and New Lancaster Road at Willard Street. The study area was selected based on a review of the surrounding roadway network and estimated trip generating characteristics of the proposed Project. This study provides an analysis of traffic operations during the weekday morning and weekday afternoon peak hours, when the combination of adjacent roadway volumes and Project trips would be expected to be the greatest.

Continued on next page

Traffic Impacts (B), Continued

Traffic Study Overview, Continued

Truck Trips

The Facility proposes to receive a maximum of 1,500 tpd of solid waste (MSW and C&D) as part of the proposed Facility expansion. To estimate the trip generation for the proposed Project, the proponent provided data on operations at the existing facility, including total tons per day of inbound and outbound material and total number of trucks transporting each type of material between March 27 and March 31, 2023, consistent with the week traffic counts were collected. Based on ticket data provided by the Facility, inbound material is currently transported to the site at an average rate of 9.4 tons per load.

The Facility is served by rail and it is expected that the majority of outbound materials will be transported from the site via rail. However, to present a conservative analysis, the trip generation and level-of-service analysis presented in this study include an additional scenario assuming all outbound materials would be transported from the site by truck. In addition, when outbound materials are transported by truck, it is standard industry practice to use backhauls, where a truck delivering inbound materials reloads and removes material from the site rather than departing empty. To present a conservative analysis, the estimated trip generation does not include the use of backhauls (i.e., all trucks transporting inbound materials were assumed to leave the site empty, and all trucks transporting outbound material were assumed to arrive at the site empty). Outbound materials transported from the site by truck were assumed to be transported in transfer trailers, which transport an average of 28 tons per load.

Based on the currently permitted 1,000 tpd, existing operations at the Facility generates a calculated maximum of 214 one-way truck trips per day (107 entering, 107 exiting) transporting inbound materials to the site. As noted above, outbound materials are currently transported from the site by rail and do not generate additional trips on the roadway network (besides recyclables). If the rail was not in operation and assuming no backhauls, the existing Facility would generate a maximum of 72 one-way truck trips per day (36 entering, 36 exiting) transporting outbound material off-site.

Continued on next page

Traffic Impacts (B), Continued

Traffic Study Overview, Continued

Based on the assumption that inbound material arrives at the site with an average load of 9.4 tons per truck, the Facility would generate a maximum of 320 one-way truck trips (160 entering, 160 exiting) transporting inbound material with the proposed expansion to 1,500 tpd. In addition, assuming no rail service or backhauls and the assumption that outbound material would be transported from the site with an average load of 28 tons per truck, the site would generate 108 additional one-way truck trips (54 entering, 54 exiting) transporting outbound material off-site. In total, the expanded Facility would generate a **maximum** of 428 daily one-way truck trips, which could be enforced by a condition to the Site Assignment. The two tables below (from TIS) summarize the maximum daily truck trip generation and net change from existing conditions for the Facility under existing and proposed conditions assuming rail service and no rail service.

Estimated Traffic with Rail Service

Description	Existing Operations (1,000 tpd)			Expanded Operations (1,500 tpd)			Net Change		
	In	Out	Total	In	Out	Total	In	Out	Total
Inbound Material	107	107	214	160	160	320	53	53	106
Outbound Material	0	0	0	0	0	0	0	0	0
Outbound Recyclables(1)	5	5	10	7	7	14	2	2	4
TOTAL	**112**	**112**	**224**	**167**	**167**	**334**	**55**	**55**	**110**

(1) – Recyclable materials would not be transported out of the facility by rail.

Estimated Traffic without Rail Service

Description	Existing Operations (1,000 tpd)			Expanded Operations (1,500 tpd)			Net Change		
	In	Out	Total	In	Out	Total	In	Out	Total
Inbound Material	107	107	214	160	160	320	53	53	106
Outbound Material	31	31	62	47	47	94	16	16	32
Outbound Recyclables(1)	5	5	10	7	7	14	2	2	4
TOTAL	**143**	**143**	**286**	**214**	**214**	**428**	**71**	**71**	**142**

(1) – Recyclable materials would not be transported out of the facility by rail.

Continued on next page

Traffic Impacts (B), Continued

Traffic Study Overview *(continued)*

Capacity Analysis
The capacity analysis indicates that the proposed Project will not have an appreciable impact on the operations of the study area intersections or roadways. Under the 2030 Build condition which represents future traffic with the Project (using conservative, worst-case conditions of no rail service and no backhauling), no changes to LOS are anticipated compared to No-Build Conditions.

The report concluded that the Project would not have any appreciable impact on the operations of the signalized or unsignalized study area intersections or roadways and that no mitigation measures are necessary to accommodate the proposed Project.

Based on the analysis presented in this study, Bowman concludes that the projected traffic increases associated with both the background traffic growth and the project-related traffic generated by the proposed expansion of the Facility do not result in a significant impact to the operations of the surrounding roadway network, and the proposed tonnage expansion does not constitute a danger to the public health, safety, or the environment with consideration to traffic congestion, pedestrian and vehicular safety, and roadway configuration in conformance with 310 CMR 16.40(4)(b).

Sight Distance
Sight distances were also reviewed as part of the TIS for the intersections of Tanzio and the Facility driveways as well as at Tanzio Road and Lancaster Street (Rt. 117). The sight distances at these intersections were reviewed in accordance with the American Association of State Highway and Transportation Officials (AASHTO) policies, and were determined to either meet or exceed requirements.

Please refer to Attachment 3 for a copy of the Traffic Impact Study.

Wildlife and Wildlife Habitat (C)

Introduction

This section addresses the Natural Heritage and Endangered Species Program (NHESP) administered by the Massachusetts Division of Fisheries & Wildlife (MassWildlife).

Habitat and Endangered Species

According to MassGIS, there is Priority Habitat of Rare Species and an Estimated Habitat of Rare Wildlife located approximately 0.5 miles west of the subject Site. These areas are separated from the Site by commercial/residential properties and Route 12. The areas of Rare Species Habitat and Habitat of Rare Wildlife are noted on Figure 3. The proposed increase in tonnage at the Facility will not have an adverse impact on Endangered, Threatened, or Special Concern species listed by the NHESP.

Additionally, MassWildlife was previously contacted with respect to the subject Site prior to construction. MassWildlife provided a letter dated July 16, 2018 stating that "…at this time the site is not mapped as Priority or Estimated Habitat. The NHESP database does not contain any state-listed species records in the immediate vicinity of this site." A recent request to MassWildlife to confirm any changes to habitat mapping has occurred resulted in another response received via email August 8, 2023 confirming no habitat is located on site and is not subject to further review. A copy of this NHESP correspondence is included in Attachment 4.

The proposed Project complies with the requirements of 310 CMR 16.40(4) (c) (1).

Ecologically Significant Communities

The siting of the expanded Facility will not have an adverse impact on an Ecologically Significant Natural Community. There are no areas identified by the Natural Heritage and Endangered Species Program as ecoregions within ½ mile of the Site.

The proposed Project complies with the requirements of 310 CMR 16.40(4) (c) (2).

Continued on next page

Wildlife and Wildlife Habitat (C), Continued

Wildlife Management Area	The siting of the expanded Facility will not have an adverse impact on the wildlife habitat of any state Wildlife Management Area. GSE reviewed MassGIS and the Division of Fisheries and Wildlife website and the MassWildlife online Lands viewer for information regarding Wildlife Management Areas. No Wildlife Management Areas are located with ½ mile of the Site. The proposed Project complies with the requirements of 310 CMR 16.40(4) (c) (3).

Areas of Critical Environmental Concern (D)

Introduction	This section addresses Areas of Critical Environmental Concern (ACEC) administered by the Executive Office of Environmental Affairs.
ACEC On-Site	Based on GSE's review of the MassGIS ACEC data layer, the Site is not within an ACEC. The proposed Project complies with the requirements of 310 CMR 16.40(4)(d) (1).
ACEC Adjacent	Based on GSE's review of the MassGIS ACEC data layer, no ACECs are located adjacent to the existing Site. The proposed Project complies with the requirements of 310 CMR 16.40(4)(d) (2).

Protection of Open Space (E)

Introduction

This section addresses land areas that are considered parks and recreation lands under local, regional, and state regulatory agency jurisdiction.

State Forests

GSE reviewed the Department of Conservation and Recreation website for information regarding State forests. According to the Department of Conservation and Recreation website there are no State owned or operated forests within ½ mile of the Site.

Therefore, the siting of the Facility will not have an adverse impact on the physical environment of, or on the use and enjoyment of State forests in conformance with the requirements of 310 CMR 16.40(4)(e)(1).

State or Municipal Conservation and Park Lands

GSE reviewed MassGIS and the Executive Office of Energy and Environmental Affairs websites for information regarding State parklands. The Johnny Appleseed State Park is located approximately 0.36 miles east of the site and is separated from the site by Route 117, commercially developed properties, and residential dwellings.

Saint Leo Cemetery is identified as a historical/cultural open space and located north of the existing Facility across Route 117 (Lancaster Street) and is also separated from the Site by commercially developed properties. The Fuller Street Conservation Area is located northwest of the Site and is separated from the Site by the CSX Railroad and Litchfield Street. The Leominster Lassie League Field Complex is located approximately 0.48 miles west of the Site and is separated from the Site by commercially developed properties and residential dwellings. Eagles Field and the Old Deerfield Woods Estates Conservation Areas are separated from the site by Route 12 (Central Street), commercially developed properties, and residential dwellings.

Based on separation, 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 in accordance with Article 97 of the Massachusetts Constitution in conformance with the requirements of 310 CMR 16.40(4) (e) (2).

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Protection of Open Space (E), *Continued*

MDC Reservations	The MDC is now part of the Massachusetts Department of Conservation and Recreation (DCR). GSE reviewed the DCR website for information regarding reservations in the area of the existing Facility and none were located within ½ mile of the Facility. Therefore, the siting of the Facility will not have an adverse impact on the physical environment of, or on the use and enjoyment of DCR (MDC) reservations in conformance with the requirements of 310 CMR 16.40(4)(e)(3).
EOEA Restricted Lands	GSE reviewed MassGIS and the Executive Office of Energy and Environmental Affairs website for any lands with conservation, preservation, agricultural, or watershed protection restrictions approved by the secretary of EOEA within ½ mile of the Site. GSE did not identify any lands with conservation, preservation, agricultural, or watershed protection restrictions approved by the Secretary of EOEA within ½ mile of the Site. Therefore, the siting of the Facility will not have an adverse impact on the physical environment of, or on the use and enjoyment of, on EOEA restricted lands in conformance with the requirements of 310 CMR 16.40(4)(e)(4).
Privately Owned Public Conservation Land	GSE reviewed MassGIS and the Executive Office of Energy and Environmental Affairs website for any privately owned public access conservation lands in close proximity to the subject Site. GSE did not identify any privately owned public access conservation lands in close proximity to the subject Site. Therefore, the siting of the Facility will not have an adverse impact on the physical environment of, or on the use and enjoyment of, local conservation lands in conformance with the requirements of 310 CMR 16.40(4)(e)(5).

Air Quality Impacts (F)

Introduction

The following section addresses the potential air quality impacts regarding anticipated emissions from potential truck and mobile, diesel-powered equipment emissions and rail yard activity at the Site.

According to 310 CMR 16.40(4)(f), Potential Air Quality Impacts, no site shall be determined to be suitable or be assigned as a Solid Waste Management Facility where the anticipated emissions from the Facility would not meet required State and Federal air quality standards or criteria or would otherwise constitute a danger to the public health, safety, or the environment, taking into consideration:

1. The concentration and dispersion of emissions
2. The number and proximity of sensitive receptors; and
3. The attainment status of the area.

Regulation

GSE reviewed Massachusetts Air Pollution Control Regulations (310 CMR 7.00) and the criteria set forth in the MEPA regulations. After a review of the regulations, it was determined that the Facility is exempt from Section 7.02 of the Air Pollution Control Regulations (U Plan Approval, Limited Plan Application and U Comprehensive Plan Approvals).

Regulation Intent

As stated within section 7.01(1) of the Air Pollution Control Regulations: *"No person owning, leasing, or controlling the operation of any air contamination source shall willfully, negligently, or through failure to provide necessary equipment or to take necessary precautions, permit any emission from said air contamination source or sources of such quantities of air contaminants which will cause, by themselves or in conjunction with other air contaminants, a condition of air pollution."*

Continued on next page

Air Quality Impacts (F), *Continued*

On-Site Fuel Use

According to MassDEP's Air Pollution Group in Boston, Massachusetts, the Air Pollution Group regulates only stationary sources of pollution. Mobile sources (self-propelled equipment) are regulated under the Federal Clean Air Act.

Non-mobile equipment on-site is regulated under 310 CMR 7.00, section 7.02. Please note that **no stationary fuel burning equipment will be utilized** for handling activities and no equipment has a BTU input capacity over 3,000,000 BTU per hour nor does the total amount of stationary source equipment have a BTU input capacity which exceeds 10,000,000 BTUs per hour. Stationary equipment on site will be powered by electric motors. Therefore, 310 CMR 7.02 does not apply.

Emissions from Mobile Equipment

Two front-end loaders and two excavators operate inside the building. In addition, the Facility has a skid steer, lift, rail car mover, and a sweeper for facilitating on-site logistics and operations and maintenance. This equipment is rated either EPA Tier III or Tier IV compliant.

Dust and Diesel Particulate Emissions

Tech Environmental analyzed air quality to determine whether the proposed Project would meet the local ambient air quality emission limits and/or trigger any state or federal air permitting requirements. This analysis is presented in the Air Quality Study included as Attachment 7.

As with all non-combustion solid waste facilities, the only criteria pollutant of concern is particulate emissions. The Facility operations were assessed for particulate emissions, specifically both PM_{10} and $PM_{2.5}$ to determine compliance with regulatory respirable limits.

Continued on next page

Air Quality Impacts (F), *Continued*

Dust and Diesel Particulate Emissions, Continued

All potential sources of particulate emissions were examined from truck emissions and movements, to waste sorting and handing, including the on-site construction demolition and debris (C&D) processing line, as well as non-road equipment used solely on-site to move and handle waste. The analysis used conservative assumptions including that the maximum throughput of 1,500 tpd occurred every day over five years for the dispersion modeling to calculate the worst-case 24-hour and annual particulate emissions. In addition, the C&D processing line was assumed to operate at a maximum daily rate of 50 tons per hour. While the line itself could physically operate at a higher rate, it is simply ineffective to run it above 40 tons per hour regularly and 50 tons per hour peak. At higher throughput, the Applicant has noted that the material sorting rate drops as material passes through too quickly, defeating the purpose of the sorting process. Even at maximum reasonable throughput and maximum theoretical daily throughputs, Table 1 below demonstrates that the particulate emissions for the Project are well below both federal and state air permitting thresholds.

Table 1- SUMMARY OF FACILITY-WIDE AIR EMISSIONS (tons per year)

Emissions Source	PM_{10}	$PM_{2.5}$
Truck Loading/Unloading Fugitives	0.064	0.008
C&D Processing Fugitives	0.50	0.075
Non-Road Equipment Exhaust	0.032	0.031
Idling Truck Exhaust	0.071	0.065
Total	**0.66**	**0.18**

As expected with so little emission potential, the air emissions will remain below the current National Ambient Air Quality Standards (NAAQS)(as adopted by Massachusetts) as shown in Table 2 below. Additional modelling information is available in the Air Quality Study in the appendices.

Continued on next page

Air Quality Impacts (F), Continued

Dust and Diesel Particulate Emissions, Continued

Table 2- COMPLIANCE WITH AIR QUALITY STANDARDS FOR THE UMML FACILITY

Pollutant	Averaging Period	Maximum Predicted Impact-UMML (ug/m^3)	Year	Background Concentration (ug/m^3)	Total Impact (ug/m^3)	NAAQS (ug/m^3)
$PM_{2.5}$	24-Hour	1.9	2020-2022	16.7	18.6	35
	Annual	0.4		8.2	8.6	12
PM_{10}	24-Hour	11.0	2020-2022	45.0	56.0	150

Based upon the air emission estimating and air dispersion modelling, the Facility will not cause a condition of air pollution from particulate emissions and would not exceed either federal or state air permitting thresholds.

On February 7, 2024, EPA promulgated a lower $PM_{2.5}$ annual NAAQS of 9 µg/m^3. It is expected that the new standard will be incorporated by Massachusetts at some point in the future. These regulations cannot be formally changed until the state holds the proper public meetings and submits an updated State Implementation Plan (SIP) to EPA for approval. However, it should be noted that the Facility can also comply with the lower EPA standard of 9 µg/m^3 as well.

Emission Reductions through Rail Use

The Massachusetts 2030 Solid Waste Master Plan reports:

- Landfill capacity for municipal solid waste and construction and demolition debris (C&D) is projected to decline to virtually zero by the end of the next decade.
- Massachusetts has extensive waste transfer capacity; however, most waste transfer facilities do not increase overall waste management capacity because they are not able to deliver waste beyond Massachusetts and our neighboring states, where disposal capacity is also limited. Some facilities are investing in capacity to transfer waste out of the region by rail, though those facilities face logistical challenges arranging rail shipments and ensuring an adequate supply of the right type of railcars.

Continued on next page

Air Quality Impacts (F), Continued

Emission reductions through rail use, Continued

- By incorporating rail and large trucks, there will be overall reduction in CO_2 emissions annually. It is documented by CSX that moving freight (waste) by rail is approximately 4 times more fuel efficient than moving freight on the highway. Trains can move a ton of freight over 470 miles on a single gallon of fuel whereas a truck can move a ton of freight approximately 134 miles per gallon of fuel.

- Consolidating waste and incorporating rail efficiencies can result in significant reductions to CO_2 emissions, which follows the goals and initiatives of the Massachusetts Environmental Policy Act (MEPA), M.G.L. c. 30, ss. 61-621 and within 301 CMR 11.00.

General Emissions Mitigation Measures

Airborne particulate emissions associated with the acceptance of C&D and/or MSW can occur. However, Massachusetts existing C&D infrastructure has had a long history on how to successfully reduce and control the potential for particulate emissions. Nuisance dust mitigation measures, at a minimum, will include the following:

Control	Function
Pavement	Minimize potential for dust emissions associated with access ways and parking areas.
Sweeping	Minimize potential for dust emissions associated with access ways and parking areas by wet sweeping or vacuum sweeping on a regular basis.
Building	Minimize potential for dust emissions by handling the material in a controlled environment.
Atomized Misting system	Controls dust within building.

Operational Facilities

All of the above-referenced controls are included and detailed in the Facility's "Operations and Maintenance Plan" as required per 310 CMR 19.200.

Emission studies at existing processing and handling facilities within the Commonwealth (e.g., PM_{10} and $PM_{2.5}$) have shown that the above-referenced environmental controls adequately control nuisance emissions and that additional controls are not needed.

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Air Quality Impacts (F), *Continued*

Odor Emissions

UMML does not anticipate that nuisance odor conditions will occur off-site. UMML incorporates policies, controls, and procedures to ensure that nuisance odor conditions do not exist and has operated since 2020 with no odor complaints. Facility Best Management Practices related to Odor Control includes:

- Following a "first-in, first-out" policy for MSW or any odorous waste
- Using an atomized misting system
- Introducing odor counteractants into misting system as necessary
- Using overhead doors to contain odorous materials or deliveries
- Removing MSW from the floor and minimizing overnight stockpiles

In order to assess potential odor for the tonnage expansion Project, Tech Environmental assessed potential odor at the Facility which is presented in the Odor Study included in Attachment 5.

Odor potential at this Facility is predominately from Municipal Solid Waste (MSW) and not Construction and Demolition (C&D) Debris. And although the Facility is presently primarily focused on handling C&D, it is currently permitted to accept the maximum permitted capacity of either waste stream or a combination of the two for flexibility. Operating permits cap storage of MSW overnight to 600 tons.The Facility intends to have the same flexibility in the future.

The worst-case odor potential will occur when the daily inbound waste stream is predominately MSW. The maximum odor potential is directly proportional to both the temperature and age of the waste. The odor potential in the winter is typically much lower than the summer since the biological activity is slowed with decreased temperature. Therefore, to demonstrate that the maximum odor potential would not result in nuisance conditions, the Odor Study evaluated an all-MSW acceptance scenario. Data collected from a New York City transfer station in August where substantial amounts of MSW were stored in the transfer station overnight, and over long- weekends were used to be conservative.

So long as the Facility follows their current protocols of first-in-first-out MSW waste handling procedure and appropriately manages the stockpiles throughout the day and each day, the Facility can continue to store up to 600 tons of MSW on the floor at the end of each day and not create a potential nuisance condition.

Continued on next page

Air Quality Impacts (F), Continued

Odor Emissions, Continued

Currently, the Facility prefers to leave less than 100 tons of MSW on the floor for good housekeeping reasons and for ease of operation within the handling building. Given that the Facility is a transfer station, the goal is to quickly and efficiently move materials through the Facility such that there is space to handle the consistent flow of materials and maintain functionality of the Facility.

Tech assessed two different scenarios of MSW storage (150 tons and 600 tons) based upon assumptions surrounding current operations and permit limitations and concluded that neither scenario would create off-site nuisance conditions.

There is a potential that MSW odor vapor can be released directly or attach to the particulates generated from C&D handling, so the Facility is committed to the Best Management Practice (BMP) of using an atomized misting system within the waste storage and processing areas. In the two scenarios examined, a 50% reduction in odor and particulate matter was assumed for water misting. This typical misting reduction is considered conservative.

If the Facility were to switch to an all-MSW scenario or plan to store close to 600 tons per day on the floor in the future on a regular basis, the study performed suggested that some additional odor control measures could be considered. If the Facility continues to focus on C&D transfer, there is little reason to consider anything additional to the current BMPs.

Tech concluded that the results of the odor modelling analyses show that the UMML Facility will not cause an adverse impact to health, safety, or the environment with respect to odors at nearby residential receptors. Although the study does not warrant it, it was Tech's recommendation that the Facility proactively install odor control in the future, if the Facility changes its current operating focus from C&D processing to handling MSW and plans to regularly store the current limit of 600 tons of MSW on the floor overnight.

Please refer to Attachment 5 for the Odor Study.

Attainment Status

According to the EPA's AirData Air Quality Monitor mapping [https://epa.maps.arcgis.com/apps/webappviewer/index.html], the site is within an attainment status area.

Nuisance Conditions (G)

Introduction

The following section addresses nuisance conditions identified at 310 CMR 16.40(4) (g).

Noise

Noise on site is currently minimized by conducting all tipping, handling, and loading of waste materials within an enclosed building. Additionally, the building layout was previously designed to face the tipping doors and "activity areas" to the north away from the nearest residential receptors, thereby using the building itself to provide a noise barrier.

Tech prepared a sound study to determine if the increase in tonnage at the Facility will cause a nuisance sound condition. The potential increase in sound was assessed including the increased traffic expected from the added tonnage. Ambient sound levels were recorded over 7 days as per ANSI standards and MassDEP's typical requirements at the site to establish existing sound levels in the vicinity of the Facility. The hours of operation were considered, and two ambient scenarios were developed to coincide with two operating conditions. The first scenario was the typical daytime condition. In the typical daytime condition, all sound sources were conservatively assumed to be operating simultaneously with reasonable usage factors. A second ambient condition titled "End of Day" was considered for the hours of 5 PM to 7 PM weekdays and 1 PM to 3 PM Saturdays (after active tipping hours) where less equipment would be operated as the Facility winds down and cleans up for the next day. Both of these scenarios are described in more detail within Tech's Sound Study.

A three-dimensional noise model was used predict the sound of the Facility operating, conservatively with the overhead tipping and loadout doors open during the daytime, and with only one tipping door closed during the "End of Day" scenario. The model predicted sound increases at the closest receptors on Malburn Street, Meadow Pond Drive, Abbey Road, Litchfield Street, Calza Street, and Ruth Street.

Results of the model indicated that predicted sound levels at the identified receptors would not increase more than 10 dBA above the ambient sound level or create a "pure tone" condition, as required by the MassDEP Noise Policy.

Continued on next page

Nuisance Conditions (G), *Continued*

Noise, Continued

The Sound Study demonstrated that the Facility with the proposed increase in throughput, pursuant to 310 CMR 16.40(4)(g), will not cause a nuisance sound condition which would constitute a danger to the public health, safety, or the environment. This assessment shows that the impacts from all sounds due to the Project demonstrates compliance with the MassDEP Noise Policy and the Leominster Noise Ordinance, and therefore will not cause a condition of noise pollution.

No additional recommendations such as acoustical controls, earthen berms, or other sound attenuation measures are recommended at this time. The proposed Project complies with the requirements of 310 CMR 16.40(4) (g) (1). See Attachment 6 for a copy of the Sound Study.

Litter

All waste handling activities will occur within the confines of the existing building. This building will provide for significant protection from the elements, thus significantly reducing the potential for windblown litter nuisance conditions.

All commercial vehicles that will transport materials either to or from the Facility will be required to be covered in order to prevent incidental littering. The Facility has protocols in place to ban drivers that violate this requirement.

The Facility also implements a daily inspection and sweeping program as a part of the Operations & Maintenance Program to control windblown litter on site and along Tanzio Road, if observed.

For these reasons, the establishment or operation of the Facility not result in a nuisance condition that would constitute a danger to the public health, safety, or the environment taking into account litter pursuant to 310 CMR 16.40(4)(g)(2).

Continued on next page

Nuisance Conditions (G), Continued

Vectors

Vermin will be discouraged by confining the waste handling operations to the inside of the existing building. Additionally, MSW is handled in such a way as to avoid the attraction of rodents and insects by rapidly moving the material from the tipping floor to the rail cars or trucks. For these reasons, coupled with the mitigation measures presented in the next section, the establishment or operation of the Facility will not result in nuisance conditions that would constitute a danger to public health, safety, or the environment taking into consideration vermin such as rodents and insects pursuant to 310 CMR 16.40(4)(g)(3).

Vector Mitigation

UMML will implement mitigation measures to ensure that vectors do not pose a nuisance condition. The following measures are incorporated into UMML's Operation and Maintenance Plan and further describe and illustrate the processes and procedures for the control of nuisance conditions. Proposed measures include, but are not limited to the following:

- Contracting with a vector control management firm.
- Installing rodent traps within and around the interior and exterior of the building.
- Minimizing door openings within the existing building.
- Conducting all waste handling activities indoors.
- Maintaining equipment on-site that will remove the materials from the tipping floor for subsequent handling.
- Covering the containers and trailers prior to leaving the waste handling building.
- Sweeping the paved areas and the interior of the building (as needed) at regular intervals.
- Instituting a daily inspection program for vectors following the Facility's Operations and Maintenance Plan.

Continued on next page

Nuisance Conditions (G), Continued

Odors

UMML incorporates policies and procedures to ensure that nuisance odor conditions do not exist. No odor complaints have been received by the Facility since the commencement of operations. UMML does not anticipate that nuisance odor conditions will occur on and/or off-site based upon these policies and procedures, and historical operations. As discussed in the Air Quality section, Tech concluded that the results of the odor modelling analyses show that the UMML Facility will not cause an adverse impact to health, safety, or the environment with respect to odors at nearby residential receptors.

An Odor Study is included as Attachment 5.

Odor Mitigation

Proposed policies and procedure with respect to nuisance odor conditions include the following measures:

- Confining all waste handling to within the building only
- Having the ability to entirely enclose/secure the Facility
- Instituting a first in/first out procedure
- Covering the trailers and containers
- Using a fine water mist and odor agents to reduce odor-adhering particulate matter from escaping the building
- Add additional control if necessary

For these reasons, the establishment or operation of the Facility will not result in nuisance conditions that would constitute a danger to public health, safety, or the environmental taking into consideration odors pursuant to 310 CMR 16.40(4)(g)(4).

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Nuisance Conditions (G), Continued

Bird Hazards to Air Traffic

The closest airport identified is the Fitchburg Municipal Airport located approximately 2.95 miles (north) from the Site. Based on the distance to the nearest airport and the design considerations noted below, birds will not be a hazard to air traffic.

- The Facility will not be a landfill, and thus is not subject to the regulations discussed in the FAA Advisory Circular #150/5200-34(2000) regarding the construction or establishment of municipal solid waste landfills near airports.
- The Site is outside of the 3,000-foot buffer established by M.G.L. Chapter 90, Section 35B for building height restrictions within proximity of airports.
- Vectors such as gulls will not be attracted to the Site given the completely enclosed operation.
- No waste handling, loading, or unloading, will be allowed outside of the building.
- A vector control service will be contracted.

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Nuisance Conditions (G), *Continued*

Bird Hazards to Air Traffic - Mitigation

Even though bird hazards are not a significant concern at the subject Facility, UMML will still implement mitigation measures to ensure that bird hazards do not pose a threat. The following measures are incorporated into UMML's Operation and Maintenance Plan and further describe and illustrate the process and procedures for the control of nuisance conditions. These measures include, but are not limited to the following:

- Minimizing door openings within the existing building;
- Closing the doors when the Facility is not operating;
- Conducting all waste handling activities indoors;
- Maintaining equipment on-site that will remove the materials from the tipping floor for subsequent handling and off-site shipment;
- Covering the containers and trailers prior to leaving the handling building;
- Sweeping the paved areas and the interior of the building (as needed) at regular intervals; and,
- Instituting a daily inspection program for vectors following the Operations and Maintenance Plan.

Based on the location of the airports from the Site and the existing controls at the Site, the establishment or operation of the Facility would not result in nuisance conditions that would constitute a danger to the public health, safety, or the environment taking into consideration bird hazards to air traffic in compliance with the requirements of 310 CMR 16.40(4) (g) (5).

Other Nuisance Conditions

Other nuisance conditions are not likely to exist during the operation of the Facility. No nuisance conditions have occurred since the commencement of operations at the Facility.

The proposed Project complies with the requirements of 310 CMR 16.40(4) (g) (6).

Size of the Facility (H)

Introduction

The following section discusses the characteristics and logistics of the exisitng Facility and details how the Facility is designed to adequately handle up to 1,500 TPD of MSW and C&D material and meet the Size of Facility criterion at 310 CMR 16.40(4)(h). This section includes information regarding the following:

- Size of the Facility
- Access Roads (Material Ingress & Egress)
- Vehicle Queuing Areas
- Tipping, Waste Consolidation, and Loading Operations
- Comparison with Existing Facilities
- Waste Tipping Capacity Factors
- Setbacks of Waste Handling Areas from property boundaries

Size of Facility

The size of the Site is sufficient to properly operate and maintain the Facility. The existing Facility consists of an approximately 32,400-square foot handling building as well as a rail yard, two scales, scale house, employee facilities and office space, associated driveway and parking areas, underground utilities, site grading, paving, and stormwater controls. The Facility is located on 13.46 acres of land of which 11.33 acres is Site Assigned. Please refer to Figure 5 that depicts the parcel and site assigned within this parcel.

The existing Facility is designed to accept C&D and MSW delivered by truck for handling and transfer primarily onto rail cars and secondarily, as conditions dictate, larger trucks for transport to various off-site locations. The Facility is equipped with a sorting line to process C&D for recycling and to meet Massachusetts-required Minimum Performance Standards. The handling building (solid waste handling area) has been sized so that all unloading, handling, and loading onto rail cars and/or trucks will occur within the building interior.

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Size of the Facility (H), *Continued*

Access Roads – Material Ingress and Egress

The following describes the waste flow on-site.

1. Vehicular ingress and egress is from/to Tanzio Road to the east of the subject property.
2. The ingress traffic pattern follows along the paved driveway that runs counterclockwise around the Site from the east to the inbound scale, north to the tarmac area and tipping doors, and then west to the outbound scale. The paved areas provide for adequate queuing, two scales, and by-pass lanes to ensure there is no queuing on Tanzio Road. The scale house is located at the outbound scale but is equipped with communication equipment to and with sightlines to the inbound scale. Scale house personnel are able to monitor inbound and outbound traffic patterns. The Facility can utilize both scales for inbound and/or outbound operations, if ever necessary.
3. From the inbound scale, delivering waste vehicles proceed north-westerly around the handling building to the paved tarmac area on the northeast side of the handling building. The vehicle backs into one of the four inbound off-loading doorways, as directed by staff. A fifth doorway in the northwest corner is reserved for railcars or outbound live floor tractor trailers. A sixth door in the southwest corner was originally constructed for outbound live floor tractor trailers only, but has been since closed off to accommodate sorting bins for the C&D sorting station. Please see Figures 5 and 6, which depict the exterior Facility layout and interior building layout, respectively, and Figure 7 which includes a Traffic Movement and Turning Radius Plan. It should be noted that there are adequate access/turning radii to provide access around the entire building.
4. Once in the handling building, the inbound waste vehicles will tip their loads and exit out of the tipping door in which they entered located along the northeastern side of the waste handling building.
5. Exiting vehicles would proceed from the handling building to the west in a counterclockwise direction to the outbound scale and scale house.

Additionally, by having two scales, the Facility can easily handle the additional vehicles associated with the tonnage increase. The outbound scale can always be used for inbound trucks using the bypass lane if necessary to maintain the efficient flow of vehicles throughout the Site.

Continued on next page

Size of the Facility (H), *Continued*

Vehicle Queueing

The Site provides a significant amount of space for vehicle queuing (whether inbound or outbound) as there are staging areas located post-inbound scale all the way around the entire transfer building. As previously noted, both scales can weigh inbound vehicles simultaneously so that there is no queueing on Tanzio Road. All inbound scale traffic will take precedent over outbound scale traffic.

Building Size, Elevations, and Doorways

The existing waste handling building has general envelope dimensions of 150 feet (east to west) by 230 feet (north to south). The building's footprint allows for two coupled railcars to be in the handling building at one time. See Figures 5 and 6 which depicts the following:

1. Existing building dimensions.
2. Dimensions of the four (4) discrete areas (Temporary Waste Storage, Tipping and Waste Inspection Area, Outbound Loading Area, and Railcar Staging area). These areas will be discussed in further detail within the Size of Facility Section of this narrative.
3. The location and approximate size of the existing doorways.
4. Locations of the interior trench drain system.
5. Pushwall locations and wall heights.
6. The location and orientation of the C&D sorting line.

The existing building height is approximately 45 feet at the peak and runs in a north-south direction.

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Size of the Facility (H), *Continued*

Staging & Handling Areas

As described above, the building has four discrete areas for staging and handling waste. Please refer to Figure 6 for the Interior Layout Plan. The following table describes these areas.

Location	Usable Area (sf)	Description
Tipping and Waste Inspection Area	4,500	This 4,500-square foot area has ample room to allow for inbound vehicles to tip waste materials. Additionally, there is room for waste inspections and loader articulation to push waste to the outbound loading area or temporary waste storage areas. Also, if deemed necessary, a roll-off container can be situated within this area to provide for temporary storage of separated waste ban items.
Temporary Waste Storage	(6,600 + 4,700) 11,300 total	There are two temporary waste storage areas within the building. Based on general calculations and pushwall heights, the central area can store approximately 4,400 cubic yards and the second area near the feed hopper to the sorting station can store approximately 3,600 cubic yards.
Outbound Loading Area	4,500	The outbound loading area will stage a loader and/or an excavator that will load outbound railcars or live floor trailers. After the waste is tipped and inspected, it can be pushed to this area for immediate loadout or pushed to the temporary waste storage area.
Railcar Staging Area	3,731	The railcar staging area can either service railcars or live floor trailers. Given the length of the building (230 feet), it has the ability to house two flatbed or three gondola railcars or two live floor tractor trailers within this area with the doors closed.
Sorting Station	3,600	The elevated sorting station is used for processing Category 1 & 3 C&D and separating recyclables. Collection bins are located below the sorting station for collection of recyclables.

Note: The usable areas are slightly different than the entire building envelope as pushwalls and other features were removed from the calculations.

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Size of the Facility (H), *Continued*

Tipping Overview

The Facility's operations protocols require personnel to inspect and oversee waste tipping activities. The following table outlines UMML's procedures.

Step	Action
1	An incoming driver is prompted to back their vehicle up and onto the concrete tipping area.
2	Facility personnel will direct the driver to tip the waste in one of several designated areas.
3	The load is inspected by trained Facility personnel for unacceptable materials (e.g., visible waste ban materials).
4	Pending an acceptable inspection, the vehicle exits the waste handling area within the building and heads towards the outbound scale.

Waste Consolidation

The following table outlines UMML's procedure for waste consolidation within the waste handling building.

Step	Action
1	Pending an acceptable inspection and safe vehicle exit, the tipped waste materials may be pushed to the waste staging area located within the southern and northeastern portions of the building.
2	The waste materials may also be pushed and/or consolidated in the waste tipping and inspection area and pushed for subsequent loadout in the outbound loading area located along the western interior of the building.
3	The materials will be managed by a front-end loader and/or excavator.

Given the space, proper vehicle movement throughout the building can be achieved.

Continued on next page

Size of the Facility (H), *Continued*

Railcar or Live Floor Loading Operations

The following table outlines UMML's procedure for railcar or truck loading within the building.

Step	Action
1	A front-end loader and/or excavator will transport waste materials from the temporary waste storage area and/or directly from the waste tipping and inspection area.
2	The materials will be directly loaded into a live floor trailer and/or rail car located in the outbound loadout and railcar staging area.
3	The rail cars and/or trailers will be covered with an appropriate cover for subsequent staging and transport to the final disposal destination.
Note: Any Category 1 C&D will be staged separately and either processed on site or shipped to a MassDEP-approved processor that is compliant with the waste ban regulations (310 CMR 19.017)	

Comparison with Existing Facilities

The existing 32,400-square foot waste handling building has easily handled the existing permitted 1,000 tpd of waste. This building provides greater operational area than the existing 1,600 tpd, 23,600-square foot Braintree transfer station; and similar area to the 1,200 TPD, 33,300-square foot Casella Holyoke processing and transfer station with respect to building size. Additionally, it appears this Facility will exceed the aforementioned facilities with respect to queueing areas and overall size of the site, etc.

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Size of the Facility (H), *Continued*

Waste Tipping Capacity Factors The table presented below has been prepared to outline the doorway capacities as it relates to tonnage based on various delivery scenarios.

UMML Three Door Peak Factor Calculations			
	All 8-Ton Packer/Roll-off Vehicles	**50% Packers/Roll-off & 50% Live Floor Trailers by Weight**	**100% Live Floor Trailers by Weight**
Average Tons Per Vehicle	8	12	28
Inbound Trucks Per Day Based on Weight Assumptions	188	121	54
Tons Received Per Day at Facility	1500	1500	1500
Operational Hours Per Day for Tipping Waste	13	13	13
Hourly Tonnage if Averaged Over 13 Operational Hours	116	116	116
Number of Doorways Used	3	3	3
Time to Tip per Vehicle (Minutes Averaged)	10.0	11.1	15
Trucks Per Hour Per Doorway	6	5	4
Tons Per Hour Per Doorway	48	60	112
Tons Per Hour - 3 Doorways	144	180	336
Peak Capacity Factor 3 Doorways Utilized	1.25	1.56	2.91

Notes:

1. *Packers/Roll-off weights averaged and assume to carry 8-tons per vehicle.*
2. *Live floor trailers assumed to carry 28 tons per vehicle.*
3. *Tipping time for packers/roll-off is 10 minutes (generally tipping is less than 5 minutes).*
4. *Tipping time for live floor trailers is 15 minutes.*
5. *Columns 2 and 3 assume that tonnage average is by weight. For example, if deliveries are 50% packers/roll-offs and 50% live floor trailers, then each vehicle type delivers 500 TPD.*
6. *Column 3 has assumed 100% live floor trailers.*
7. *Figures have been rounded up when necessary.*

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Size of the Facility (H), Continued

Waste Handling Setbacks

The table below presents various setbacks from the waste handling area which is the handling building.

Setback	Distance
Handling Building to closest property line	120 feet to closest western property line
Handling Building to closest occupied residential dwelling	508 feet to property located to the west-southwest
Handling Building to closest Riverfront Area	20 feet

Note: Please refer to Figure 5 that depicts various setbacks to features such as Riverfront Area. Additionally, refer to the Priority Resource and Land Use sections of this narrative and Figures 2 and 3 that depict setbacks from other various features that are located off-site. Based on the regulations set forth in 310 CMR 16.40, all of the required minimum setbacks are met.

Conclusion

Based on the size of the Site, the design of the existing handling building, associated paved surfaces, the available space for queuing of trucks, and the analysis of the interior operations, the size of the Site is sufficient to properly operate and maintain the proposed expanded Facility.

The proposed Project complies with the requirements of 310 CMR 16.40(4)(h).

Areas Previously Used for Solid Waste Disposal (I)

Introduction

The following section discusses areas previously used for solid waste disposal and demonstrates compliance with 310 CMR 16.40(4) (i).

Abutting Properties

Based on GSE's research, no former solid waste landfill disposal activities were identified on abutting properties.

Site

No portion of the Site has been previously used for solid waste disposal as listed on the MassDEP Solid Waste Facilities Master List.

Conclusion

1. No prior solid waste Facility operated on any area adjacent to the Facility.
2. GSE is unaware of any solid waste activities or contamination that would adversely impact or threaten to adversely impact the Site.

The proposed Project complies with the requirements of 310 CMR 16.40(4) (i).

Existing Disposal Facilities (J)

Introduction

The following section discusses existing disposal facilities in the vicinity of the Site and demonstrates that the Facility is entitled to a preference pursuant to 310 CMR 16.40(4) (j).

Active Disposal Facilities

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. The Facility meets these requirements and is entitled to a preference.

First, there are no active combustion facilities or landfills in Leominster as listed on the MassDEP Solid Waste Facilities Master List. The MassDEP Solid Waste Facilities Master List includes four inactive or closed landfills in Leominster. They are:

- Leominster Landfill (inactive) - located 0.95 miles from the subject site
- Mechanic Street Landfill (closed) - located 0.8 miles from the subject site
- Margot Xarras/Lock Drive (inactive) - located 1.37 miles from the subject site
- 89 Commercial Road, LLC (closed) - located 1.78 miles from the subject site

Second, the Facility will not be for the exclusive use of the City, thus the Facility should be given preferential consideration.

It is presently unknown how much MSW or C&D is generated within the City of Leominster, however given the population (approximately 46,000 residents) and the proposed increase to the Facility's capacity, the Facility can contribute to the City's and its region's ability to provide to both the private and public sectors an economically competitive and efficient means to manage their C&D and MSW. This rail-served Facility will allow the region to access disposal outlets that are generally not viable (economical) through traditional trucking.

Other Sources of Contamination or Pollution (K)

Introduction

The Facility includes environmental controls for stormwater, contact water, dust, odors, vectors, bird hazards, and noise. The Facility will not pose a threat to public health, safety, or the environment taking into consideration the impacts of existing sources of pollution or contamination pursuant to 310 CMR 16.40(4)(k).

Consideration of Other Sources of Contamination or Pollution

The Facility creates an overall reduction in CO_2 emissions annually. Currently, the Facility ships both MSW and Category 2 C&D residuals by rail, which depending on the quantity of MSW shipped by rail, accounts for 50% to 95% of the current outbound waste stream. It is documented by CSX that moving freight (waste) by rail is approximately 4 times more fuel efficient than moving freight on the highway. Trains can move a ton of freight over 470 miles on a single gallon of fuel whereas a truck can move a ton of freight only approximately 134 miles per gallon of fuel.

Consolidating waste and incorporating rail efficiencies can result in significant reductions to CO_2 emissions, which follows the goals and initiatives of the Massachusetts Environmental Policy Act (MEPA), M.G.L. c. 30, ss. 61-621 and within 301 CMR 11.00.

The proposed Project complies with the requirements of 310 CMR 16.40(4)(k).

Regional Participation (L)

Regional Participation & Need

MassDEP and the Board of Health shall give preferential consideration to sites located in municipalities not already participating in a regional disposal Facility pursuant to 310 CMR 16.40(4) (l).

When this Facility was originally permitted, the City was considered a preferred municipality under M.G.L. c. 111, § 150A½ (15) and (16) as Leominster did not have an existing solid waste disposal Facility and was not part of a regional waste disposal district. Since the existing Facility is not "new" and is considered an expansion of an existing facility, it is GSE's opinion that preferential consideration is not necessary pursuant to 310 CMR 16.40(4) (l).

The proposed increase in the Facility's maximum daily capacity and annual capacity will support regional need within the surrounding area(s). By having a Facility in close proximity to major roadway networks coupled with access to rail, the Facility is designed around regional participation.

The proposed Project complies with the requirements of 310 CMR 16.40(4) (l).

Continued on next page

Section IV. Integrated Solid Waste Management

Introduction	Section IV is applicable to Landfills and Combustion facilities only.

Section V. Waivers

Waiver	The Facility is not requesting any waivers under 310 CMR 16.40.

ATTACHMENT 1

RECEIPT OF TECHNICAL FEE

TO BE INSERTED AS PART OF THE MASSDEP SITE SUITABILITY PERMITTING PROCESS

ATTACHMENT 2

MEPA CERTIFICATE AND CORRESPONDENCE

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

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SECRETARY

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http://www.mass.gov/eea

September 7, 2018

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: United Materials Management of Leominster
PROJECT MUNICIPALITY	: Leominster
PROJECT WATERSHED	: Nashua River
EEA NUMBER	: 15896
PROJECT PROPONENT	: United Material Management of Leominster, LLC
DATE NOTICED IN MONITOR	: August 8, 2018

Pursuant to the Massachusetts Environmental Policy Act (MEPA) (M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the project consists of the construction of a waste transfer station that will collect and handle Municipal Solid Waste (MSW) and Construction and Demolition (C&D) debris. The facility will have a capacity of 1,000 tons per day (tpd) and up to 300,000 tons per year (tpy). It will be operated 24 hours per day, seven days per week and will accept material from both large commercial haulers and smaller haulers.

All unloading, handling and loading activities will take place within an enclosed 32,500-square foot (sf) metal building. Four doors on the east side of the building will provide access to the tipping floor. The tipped waste will be visually inspected and any recyclables or waste ban items will be separated and shipped in covered trucks to the appropriate facilities for processing. The C&D and MSW will be pushed into separate storage areas in the north and south ends of the building, respectively. The material will be loaded into railcars or trailers in the loading area occupying the western portion of the building for removal from the site by rail or truck.

Loaded trucks will enter the site from Tanzio Road, stop at a scale south of the building, then drive in a clockwise direction around the west side (back) of the building to the tipping area doors on the east side of the building. After unloading waste, trucks will travel in a counter-clockwise direction around the back of the building, stop at the outbound scale south of the building and exit the site onto Tanzio Road. A rail spur will be constructed from the railroad west of the site to the interior loading area through a door on the north side of the building. Additional tracks will be constructed west of the building to provide storage and maneuvering of rail cars.

Project Site

The 13.46-acre project site is located on the west side of Tanzio Road in an industrial area in southeastern Leominster. The majority of the site has been disturbed and has been cleared of large trees. It is covered in brush and shrub vegetation with an unpaved road through the site. The site is bordered to the west by a CSX rail line, to the north by Fall Brook, an electrical transmission line and vacant properties, to the east by Tanzio Road and an active sand and gravel facility, and to the south by an undeveloped area with wetlands and woods. Tanzio Road is located off Route 117 (New Lancaster Road), which provides vehicular access to Interstate-291 (I-291) approximately 1.5 miles south of the site.

An unnamed perennial stream passes through the southernmost portion of the site. Bordering Vegetated Wetlands (BVW), Bordering Land Subject to Flooding (BLSF) and Riverfront Area associated with the stream are located on the project site. The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) number 25027C0288E effective date July 4, 2011 shows the project site as "Zone Area Not Included." According to MassDEP, the FIRM number 2503140007 (dated September 16, 1982) indicates that a portion of the site is within the 100-year floodplain. A small area in the northernmost part of the project site, in which no activities are proposed, is within the Outer Riparian Zone of the Riverfront Area associated with Fall Brook.

Permitting and Jurisdiction

The project is undergoing MEPA review pursuant to 301 CMR 11.03(9)(b)(1) and 301 CMR 11.03(3)(b)(f), respectively, because it will require State Agency Actions and the project will: provide New Capacity or Expansion in Capacity for combustion or disposal of any quantity of solid waste, or storage, treatment or processing of 50 or more tpd of solid waste, unless the Project is exempt from site assignment requirements; and will alter ½ or more acres of any other wetlands (0.94 acres of Riverfront Area). The project will require a Site Suitability Report for a New Site Assignment, an Authorization to Construct and an Authorization to Operate from the Massachusetts Department of Environmental Protection (MassDEP). The project is subject to the Executive Office of Energy and Environmental Affairs' (EEA) Environmental Justice (EJ) Policy.

The project requires a Solid Waste Site Assignment from the Leominster Board of Health. It requires an Order of Conditions (OOC) from the Leominster Conservation Commission (and, if the

Order is appealed, a Superseding Order of Conditions (SOC) from MassDEP) and a National Pollutant Discharge Elimination System (NPDES) Stormwater Permit for Construction Activities from the U.S. Environmental Protection Agency (EPA).

Because the project is not seeking Financial Assistance from the Commonwealth for the project, MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required, or potentially required, State Agency Actions and that may cause Damage to the Environment as defined in the MEPA regulations. The subject matter of the Site Assignment regulations is sufficiently broad to confer the equivalent of broad scope jurisdiction over the potential environmental impacts of the project. Therefore, MEPA jurisdiction is broad in scope and extends to all aspects of a project that are likely, directly or indirectly, to cause Damage to the Environment, as defined in the MEPA regulations.

Environmental Impacts

According to the ENF, potential environmental impacts will include alteration of 6.67 acres of land, 3.69 acres of new impervious area, 274 new average daily vehicle trips (adt), alteration of 40,984 sf (0.94 acres) of Riverfront Area, consumption of 3,600 gallons per day (gpd) of potable water and generation of 600 gpd of wastewater. The project will generate noise and air emissions in connection with its construction and operation.

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, requiring vehicles transporting material from the site to be covered, use of rail to transport 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, a stormwater management system and implementation of best management practices to minimize dust, noise, and litter impacts.

Review of the ENF

The ENF included a detailed project description, described existing and proposed conditions plans, provided an alternatives analysis and identified measures to avoid, minimize and mitigate project impacts. It included a copy of the draft Site Suitability Application that has been submitted to MassDEP and a Traffic Impact Study.

The project exceeds a solid waste threshold and is located within one mile of an Environmental Justice (EJ) community. Consistent with the enhanced outreach requirements of the EJ Policy, the Proponent published a Spanish-language version of the MEPA Public Notice in the Vocero Hispano newspaper, a local paper that is circulated in Leominster.

Alternatives Analysis

The ENF reviewed a No Build alternative and two alternative project locations, including an alternative site off Tanzio Road (Alternative A) and expansion of an existing transfer station located off Route 117 in Leominster (Alternative B). The No Build alternative would avoid the project's impacts, including land alteration, new impervious area and noise and air quality impacts. According to the ENF, in the absence of a new transfer station and with the expected closures of local and regional landfills, MSW and C&D would have to be transported even greater distances for disposal. The No Build alternative would increase waste disposal costs and increase emissions of air contaminants and Greenhouse Gases (GHG).

Alternative A includes the construction of a transfer station at the 7.61-acre sand and gravel facility on Tanzio Road east of the project site. This alternative site has some of the benefits of the Preferred Alternative, including zoning for industrial use, is a previously disturbed site of adequate size and has good truck access to regional highways. This alternative is infeasible because it would require filling the sand and gravel pit to establish construction grades, the irregular shape of the site would not provide the required 500-ft setbacks to residences and it lacks rail access. It would generate more truck traffic than the Preferred Alternative.

Alternative B includes the expansion of a nearby MSW transfer station with an existing capacity of 650 tpd. The facility has good truck access to regional highways and has been site assigned. To increase its capacity by 1,000 tpd, the 20,000-sf building would have to be expanded to at least 37,000 sf. The Proponent has indicated that Alternative B is infeasible because in order to meet residential setback requirements, the building would have to be expanded in an L-shaped configuration that would not be well-suited to handling MSW and C&D. In addition, the facility does not have rail access and would generate more truck trips and associated air emissions than the Preferred Alternative.

The Preferred Alternative will meet the regional need for new waste handling capacity. It involves the use of a previously-disturbed site that is zoned for industrial use and will meet residential setback requirements. The facility will be connected via rail spur to the railroad abutting the site to the west and will transport waste primarily by rail. The Preferred Alternative will avoid impacts to BVW and Inner Riparian Zone, minimize impacts to the Outer Riparian Zone and construct a stormwater management system that will treat and attenuate peak flows to maintain existing runoff patterns.

Solid Waste

The ENF included a draft of the Site Suitability Application (BWP SW 01) submitted to MassDEP. According to MassDEP, the Proponent will be required to meet the site suitability criteria for solid waste handling facilities in the Site Assignment regulations at 310 CMR 16.40. 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 ENF, the project design and location conform with the criteria.

The facility will not accept hazardous waste or other waste streams. The Proponent must manage, process, handle, and dispose of all solid waste and recyclable materials in accordance with Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.00) and Solid Waste Facility Regulations (310 CMR 19.00), including the waste ban regulations (310 CMR 19.017). As noted by MassDEP, transfer stations such as the proposed facility help conserve landfill space by managing waste, including the reuse and recycling of C&D material banned from disposal in landfills.

Site operations should be managed in accordance with applicable MassDEP Solid Waste and Air Pollution Control regulations pursuant to M.G.L. c.40, §54. Nuisance odors, dust and noise will be managed by the following means:

- Conducting all handling within the fully-enclosed building;
- Using an atomized misting system with odor agents;
- Sweeping paved areas at regular intervals;
- Wetting paved surfaces to control dust;
- Orienting the tipping doors so that they open away from the closest residential receptor; and,
- Using a small track mobile to movė rail cars around the site.

At the MEPA site visit on August 16, 2018, the Proponent committed to conducting a noise study, including noise associated with the facility's planned rail operations, as part of its application to the Leominster Board of Health. MassDEP and/or the Board of Health may require the use of additional odor control measures using Best Available Control Technology (BACT) or otherwise condition, restrict or limit activities at the site.

Transportation

The ENF included a Traffic Impact Study (TIS) that reviewed existing and future traffic conditions. It analyzed traffic operations at three intersections under Existing 2018, No Build 2025 and Build 2025 conditions. According to the TIA, the project will generate 274 adt, including 226 trucks and 48 cars, including 15 vehicle trips in the morning peak hour and 12 trips in the evening peak hour. The TIS concluded that project-generated trips will not have any significant effects on traffic operations at these intersections.

The TIS evaluated traffic conditions under the assumption that trucks would be used to transport waste from the site in order to provide a conservative analysis of the project's traffic impacts. According to the ENF, most waste will be transported from the site by rail. A rail line will extend through the loading area at the back of the proposed building so that waste can be loaded directly onto rail cars. At the MEPA site visit, the Proponent stated that loaded rail cars would be expected to be removed from the site approximately two times per week. To minimize noise and air quality impacts associated with locomotives, rail cars will be moved into transport position by a small trackmobile rather than by locomotive.

Wetlands and Stormwater

The project will impact 40,984 sf of Riverfront Area, all of which is located in the Outer Riparian Zone. The impacts include an area of 12,000 sf that will be permanently covered by pavement, the truck scales and small sections of track. A stormwater detention basin and a small corner of a subsurface infiltration system will also be located in the Outer Riparian Zone. According to the ENF, a small area of BLSF is confined to either side of the stream and will not be affected by project activities. MassDEP recommends that the Proponent consult with previously-published FIRMs and consult FEMA flood studies to verify the 100-year flood elevation.

According to the ENF, the stormwater management system has been designed to comply with MassDEP's Stormwater Management Standards (SMS), including requirements to remove 80 percent of the Total Suspended Solids (TSS) and to maintain pre-construction peak flow volumes and rates. Runoff will be directed to deep sump catch basins, routed through water quality treatment units and discharged into Best Management Practices (BMPs) such as a subsurface infiltration system and a detention basin. During the construction erosion control measures (ECMs) and BMPs will be implemented and maintained to minimize and mitigate potential stormwater runoff impacts. I refer the Proponent to comments from MassDEP which indicate pretreatment of roof runoff may be required, note that the project must comply with the Underground Injection Control Regulations (310 CMR 27.00), and that additional soil and groundwater investigations may be required to inform the design of the stormwater management system.

Construction Period

The Proponent will prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the NPDES Construction General Permit requirements to manage erosion and sedimentation during the construction process. The Proponent is advised that the project must comply with both Solid Waste and Air Pollution Control regulations pursuant to M.G.L. Chapter 40, Section 54. Construction and operation activities must also conform to current Massachusetts Air Pollution Control regulations governing nuisance conditions at 310 CMR 7.09 and 7.10. The Proponent should implement measures to alleviate dust, noise, and odor nuisance conditions that may occur during the construction period.

Conclusion

Based on a review of the ENF and comments received, and in consultation with State Agencies, I have determined that the ENF has sufficiently defined the nature and general elements of the project for the purposes of MEPA review and demonstrated that the project's environmental impacts can be avoided, minimized and/or mitigated to the extent practicable. No further MEPA review is required. The project may proceed to state permitting.

September 7, 2018
Date

Matthew Beaton
Matthew A. Beaton

Comments received:

08/24/2018	Anthony J. Bilotta
08/24/2018	Allison Clifford
08/27/2018	Peter Dandini
08/27/2018	Gregg Lisciotti
08/28/2018	Massachusetts Department of Environmental Protection (MassDEP) - Central Regional Office (CERO)

MAB/AJS/ajs

ATTACHMENT 3

TRAFFIC STUDY

Bowman

TRAFFIC IMPACT STUDY

Solid Waste Transfer Station – Tonnage Expansion

200 Tanzio Road

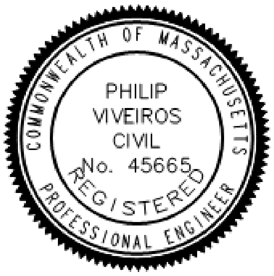
Leominster, Massachusetts

Prepared by

Bowman Consulting Group, Ltd.

350 Myles Standish Boulevard, Suite 103

Taunton, MA 02780



Prepared for

Green Seal Environmental, LLC

Phil Viveiros, P.E., PTOE, RSP2I

MA PE License Number 45665

April, 2024

Bowman Project Number: 313429-01-001

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

Introduction

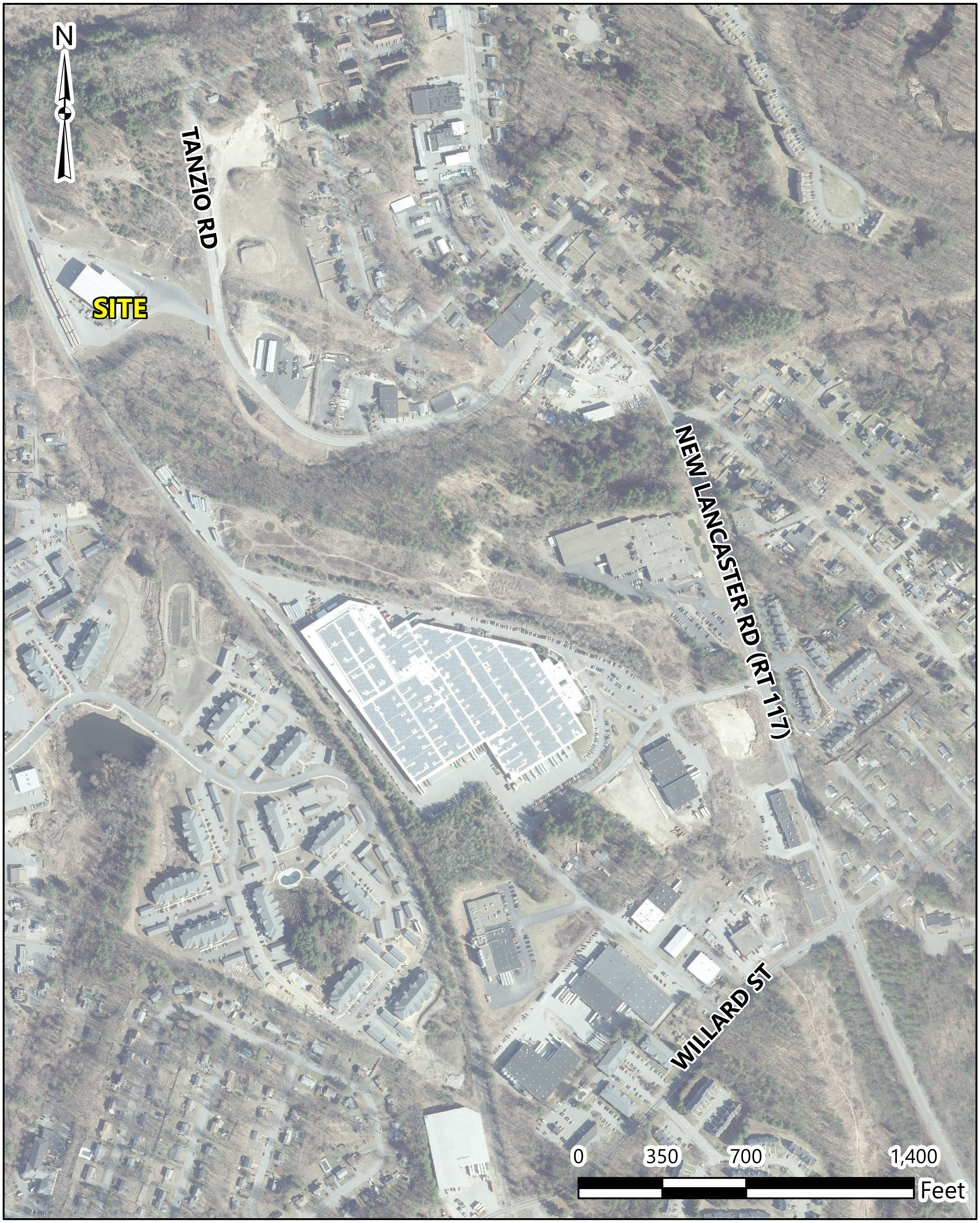
Bowman has completed a review of the existing traffic operations and potential traffic impacts associated with the proposed tonnage expansion at the existing solid waste facility located at 200 Tanzio Road in Leominster, MA. The purpose of this traffic impact study is to evaluate existing and projected traffic operations 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. In summary, this study has determined that the proposed project, when developed and operational, will allow for safe and efficient access to and from the facility.

The assessment documented in this traffic impact study is based on a review of existing traffic volumes, crash data, and the anticipated traffic generating characteristics of the tonnage expansion. The study examines existing and projected traffic operations (both without and with the project) at key intersections in the vicinity of the project site. The study area was selected based on a review of the surrounding roadway network and estimated trip generating characteristics of the proposed project. This study provides an analysis of traffic operations during the weekday morning and weekday afternoon peak hours, when the combination of adjacent roadway volumes and project trips would be expected to be the greatest.

Based on the analysis presented in this study, Bowman 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, and the proposed tonnage expansion does not constitute a danger to the public health, safety, or the environment with consideration to traffic congestion, pedestrian and vehicular safety, and roadway configuration in conformance with 310 CMR 16.40(4)(b).

Project Description

The project site, depicted in Figure 1, is bounded by Tanzio Road to the east, railroad tracks and commercial properties to the west, and undeveloped wooded land to the north and south. The site currently consists of the existing solid waste facility. Under the proposed expansion, the facility is proposed to handle up to 1,500 tons per day (tpd) of construction and demolition debris (C&D) and municipal solid waste (MSW), an increase of 500 tpd from the currently permitted 1,000 tpd of C&D and MSW.



Bowman

Figure 1
Site Location
Solid Waste Facility
Leominster, MA

Study Methodology

This traffic impact study evaluates existing and projected traffic operations within the study area for the weekday morning and weekday afternoon peak hour traffic conditions, when the combination of the adjacent roadway volumes and potential traffic increases would be expected to be the greatest.

The study was conducted in three steps. The first step consisted of an inventory of existing traffic conditions within the project study area. As part of this inventory, traffic counts were collected at key intersections during the weekday morning and weekday afternoon peak periods. A field visit was conducted to document intersection and roadway geometries, posted speed limits, and available sight distance at the existing site driveway. Crash data for the study area intersections 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 the data collected in the first step and establishes the basis for evaluating the potential transportation impacts associated with future conditions. In this step, the 2023 Existing traffic volumes were projected to 2030 No Build (without the proposed facility expansion) and 2030 Build (with the proposed facility expansion) conditions, consistent with MassDOT traffic study guidelines.

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

Based on a review of the anticipated traffic generating characteristics of the project and a review of the adjacent roadways serving the project site, the following study area intersections were selected for analysis:

- New Lancaster Road (Route 117) at Willard Street
- Lancaster Street (Route 117) at Tanzio Road
- Tanzio Road at Existing Site Driveway (200 Tanzio Road)

The traffic impact study documents existing and future traffic conditions for the study area intersections noted above.

Existing Conditions

An assessment of the potential traffic impacts associated with the project requires a comprehensive understanding of the existing traffic conditions within the study area. The existing conditions assessment included in this study consists of an inventory of roadway and intersection geometries, an inventory of traffic control devices, the collection of traffic volume data in the study area, and a review of recent crash data. The existing conditions in the vicinity of the project site are summarized below.

Roadway Network

The study area roadway network characteristics are summarized in **Table 1** and described in further detail below.

Table 1: Existing Roadway Characteristics

Roadway Name (Jurisdiction)	Average Daily Traffic Volumes (vehicles per day)(1)	Roadway Classification (1)		Number of Travel Lanes per Direction(1)	Posted Speed Limit (mph)
		Roadway Classification	Roadway Jurisdiction		
New Lancaster Road/Lancaster Street (Route 117)	10,100	Uban Principal Arterial	City of Leominster	2	35
Willard Street	5,700	Urban Collector	City of Leominster	1	35
Tanzio Road	n/a	Local	City of Leominster	1	30(2)

(1) Based on data presented in MassDOT's Road Inventory viewer.
(2) No posted speed limit on Tanzio Road. 30 mph is considered to be the advisory speed.

New Lanaster Road/Lancaster Street (Route 117)

Lancaster Street/New Lancaster Road (Route 117) generally runs in a north-south direction in the City of Leominster, although Route 117 is signed as an east-west route. New Lancaster Road provides access to I-190 to the south at Interchange 17 and connects with Route 12 to the north. South of its intersection with Willard Street, New Lancaster Road is primarily a two-way roadway providing two lanes in each direction with turn lanes at major intersections, abutted by retail and commercial land uses. North of its intersection with Willard Street, New Lancaster Road/Lancaster Street is primarily a two-way roadway providing one lane in each direction, abutted by commercial and residential properties. New Lancaster Road/Lancaster Street typically provides 10- to 12-foot-wide travel lanes in both directions. Montachusett Regional Transit Authority (MART) Bus Route #9 provides service along New Lancaster Road south of the Willard Street intersection.

Willard Street

Willard Street generally runs in an east-west direction and provides access to Route 12 to the west and Route 117 to the east. Willard Street is primarily a two-lane, two-way roadway abutted by residential and commercial land uses. Willard Street typically provides travel lanes ranging from 11 to 16 feet in width in both directions. MART Bus Route #9 provides service along Willard Street.

Tanzio Road

Tanzio Road connects to Lancaster Street (Route 117) to the southeast. Tanzio Road is primarily abutted by industrial parcels and vacant land. Tanzio Road provides one 12-foot-wide lane and in each direction with 5-foot-wide paved shoulders. There is no posted speed along Tanzio Road; however, a 30 mph advisory speed sign is posted along Tanzio Road approximately 700 feet west of its intersection with Lancaster Street.

Signalized Intersections

The following signalized intersections in the vicinity of the site are within the study area:

Fairfield Commons Access Driveway/Home Depot Driveway at US Route 6

The signalized intersection of Fairfield Commons Access Driveway/Home Depot Driveway at US Route 6 is a four-way intersection with Fairfield Commons Access Driveway/Home Depot Driveway forming the north and south legs and US Route 6 forming the east and west legs. The north leg provides access to Fairfield Commons, while the south leg provides access to the Home Depot. The northbound and southbound approaches of Fairfield Commons Access Driveway/Home Depot Driveway consist of a shared through/left turn lane and an exclusive right turn lane. The eastbound and westbound approaches of US Route 6 each consist of an exclusive left turn lane, one through lane, and one shared through/right turn lane. Crosswalks are provided across all four legs of the intersection.

Unsignalized Intersections

The following unsignalized intersections in the vicinity of the site are within the study area:

New Lancaster Road (Route 117) at Willard Street

The intersection of New Lancaster Road (Route 117) and Willard Street is a signalized four-legged intersection. The northbound New Lancaster Road approach consists of an exclusive left turn lane and a shared through lane and right turn lane. The southbound New Lancaster Road approach consists of an exclusive left turn lane, a through lane, and a shared through and right turn lane. The eastbound approach from Willard Street consists of an exclusive right turn lane and shared left turn and through lane. The westbound approach of Willard Street consists of a shared left turn, through and right turn lane. The signal operates with four phases for vehicular traffic: a lead protected phase for northbound and southbound left turns with an eastbound right turn overlap, a phase for northbound and southbound though traffic with left turns prohibited, a protected phase for eastbound traffic, and a protected phase for westbound traffic. A 5-foot-wide bituminous concrete sidewalk is provided along the west side of New Lancaster Road south of the Willard Street intersection, and a wheelchair ramp with a detectable warning panel is provided at the southwest corner of the intersection. No bicycle facilities are provided at the intersection.

Pedestrian/Bicycle Facilities

A 5-foot-wide bituminous concrete sidewalk is provided along the west side of New Lancaster Road south of the Willard Street intersection. No other pedestrian or bicycle facilities are provided along New Lancaster Road/Lancaster Street or Willard Street, within the study area. There are no pedestrian or bicycle facilities along Tanzio Road, which provides access to industrial land uses and does not provide connections to other local roadways. It is not anticipated that pedestrians would utilize Tanzio Road.

Existing Traffic Volumes

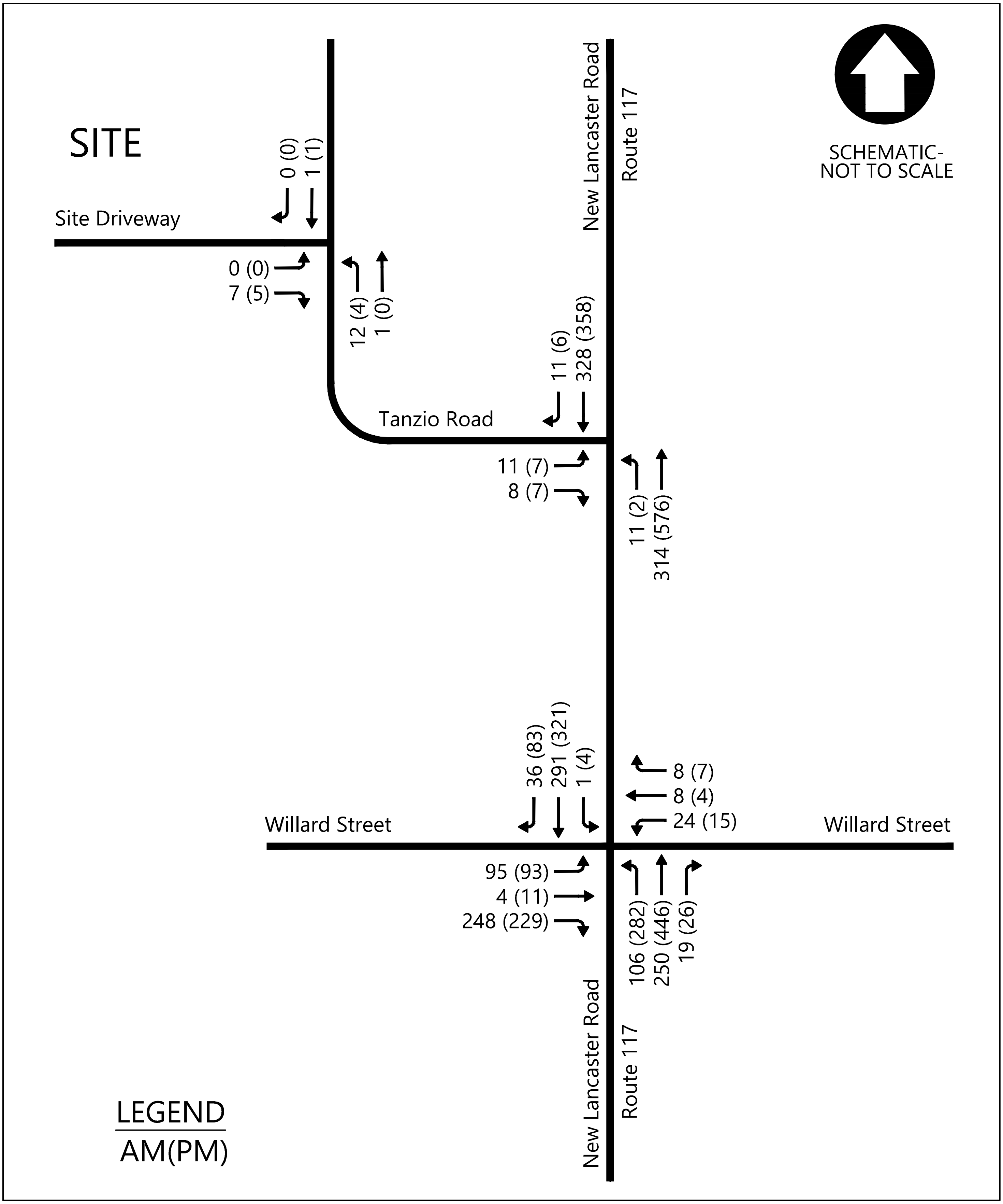
To assess peak hour traffic conditions, turning movement counts (TMCs) were conducted at the study area intersections during the weekday morning and weekday afternoon peak periods.

TMCs were conducted on Wednesday, March 29, 2023 from 7:00 AM to 9:00 AM and from 3:00 PM to 6:00 PM. The results of the turning movement counts are tabulated by 15-minute periods and are provided in **Appendix A** of this report. The four highest consecutive 15-minute intervals during each of these count periods constitute the peak hours that are the basis of the traffic analysis provided in this report. Based on a review of the peak period traffic data, the weekday morning peak hour occurs between 7:00 AM and 8:00 AM and the weekday afternoon peak hour occurs between 4:15 PM and 5:15 PM.

Seasonal Variation

To account for seasonal variation in traffic volumes, MassDOT Weekday Seasonal Adjustment Factors were reviewed. Based on the data, traffic volumes collected during the month of March on urban arterial roadways are higher than traffic volumes for an average month. For a conservative analysis, no seasonal adjustment was made to the turning movement counts. The seasonal adjustment data is provided in **Appendix B** of this report.

The resulting 2023 Existing weekday morning and weekday afternoon peak hour traffic volumes are presented in the traffic projection model provided in **Appendix C** and are presented in **Figure 2**.



Bowman

Figure 2
2023 Existing
Peak Hour Traffic Volumes
Solid Waste Facility - Tonnage Increase
Leominster, Massachusetts

Crash Summary

Crash data in the vicinity of the project site was obtained from MassDOT Interactive Mapping Portal for Analysis and Crash Tracking (IMPACT) database for the most recent five-year period available, 2016 through 2020, in order to evaluate the existing safety conditions at the study area intersections. A summary of the crash data is provided in **Appendix D**. An overall summary of the crash data is provided in **Table 2**, below for each of the study intersections.

Table 2: Intersection Crash Summary

Location	Crash Frequency Per Year					Total	Average Crash Rate (1)
	2016	2017	2018	2019	2020		
New Lancaster Road (Route 117) at Willard Street	1	2	4	3	6	16	0.63
Lancaster Street (Route 117) at Tanzio Road	1	1	0	0	0	2	0.18
Tanzio Road at Existing Site Driveway	0	0	0	0	0	1	0.00
TOTAL	**2**	**3**	**4**	**3**	**6**	**19**	

(1) Average crash rate per million entering vehicles based on MassDOT Crash Rate Worksheet calculations

The crash rates at the study intersections were calculated to determine whether the crash frequencies at the study area intersections were unusually high given the travel demand. The intersection crash rate is expressed in crashes per million entering vehicles (C/MEV). The crash rate for each intersection was then compared to the average rate for signalized and unsignalized intersections Statewide and within MassDOT District 3. For signalized intersections, the Statewide and MassDOT District 3 average crash rates are 0.78 and 0.89 C/MEV, respectively. For unsignalized intersections, the Statewide and MassDOT District 3 average crash rates are 0.57 and 0.61 C/MEV, respectively.

Between 2016 and 2020, a total of 16 crashes were reported at the signalized intersection of New Lancaster Road (Route 117) at Willard Street, resulting in a crash rate of approximately 0.63 crashes per million entering vehicles, which are below both the Statewide and MassDOT District 3 averages. Of these 16 crashes, 7 were rear-end crashes, 4 were angle crashes, 3 were sideswipe crashes, and 2 were single-vehicle crashes. Two of the reported crashes resulted in personal injury, while the remaining 14 resulted in property damage only. No fatal crashes were reported at the intersection during the five-year study period.

Between 2016 and 2020, two crashes were reported at the unsignalized intersection of Lancaster Street (Route 117) at Tanzio Road, resulting in a crash rate of approximately 0.18 crashes per million entering vehicles, which are below both the Statewide and MassDOT District 3 averages. Of these two crashes, one was an angle crash and the other was a single-vehicle crash. One of the reported crashes resulted in personal injury, while the other crash resulted in property damage only. No fatal crashes were reported at the intersection during the five-year study period.

No crashes were reported at the intersection of Tanzio Road at the Site Driveway for the 2016 to 2020 period. The The MassDOT IMPACT database provides crash data for years after 2020, however, it is noted that the crash data available after 2020 are listed as “open” and are subject to change. Based on a review of the crash data available at the existing Site Driveway for 2021, 2022, and 2023, and based on information provided by facility personnel, there have been no documented crashes at the site driveway since the facility has been in operation.

Future Conditions

To determine future traffic demands on the study area roadways and intersections, the 2023 Existing traffic volumes were projected to the future-year 2030 condition, by which time the proposed project would be anticipated to be built and occupied. Traffic volumes on the study area roadways in 2030 are considered to include all existing traffic, as well as new traffic resulting from general growth in the study area and from other planned development projects, independent of the proposed project. The potential background traffic growth, unrelated to the proposed project, was considered in the development of the 2030 No Build (without project) peak hour traffic volumes. The estimated traffic increases associated with the proposed project were then added to the 2030 No Build volumes to reflect the 2030 Build (with project at maximum capacity) traffic conditions. A detailed description of the development of the 2030 No Build and 2030 Build traffic volume networks is presented below.

Planned Roadway Improvements

Based on City of Leominster and MassDOT project information, no planned roadway improvement projects in the vicinity of the project site that would be anticipated to impact future traffic volumes or patterns were identified.

Background Traffic Growth

Traffic growth is generally a function of changes in motor vehicle use and expected land development within the area. To establish the rate at which traffic on the study area roadways can be expected to grow during the seven-year forecast period (2023 to 2030), both planned area developments and historic traffic growth were reviewed.

Historic Traffic Growth

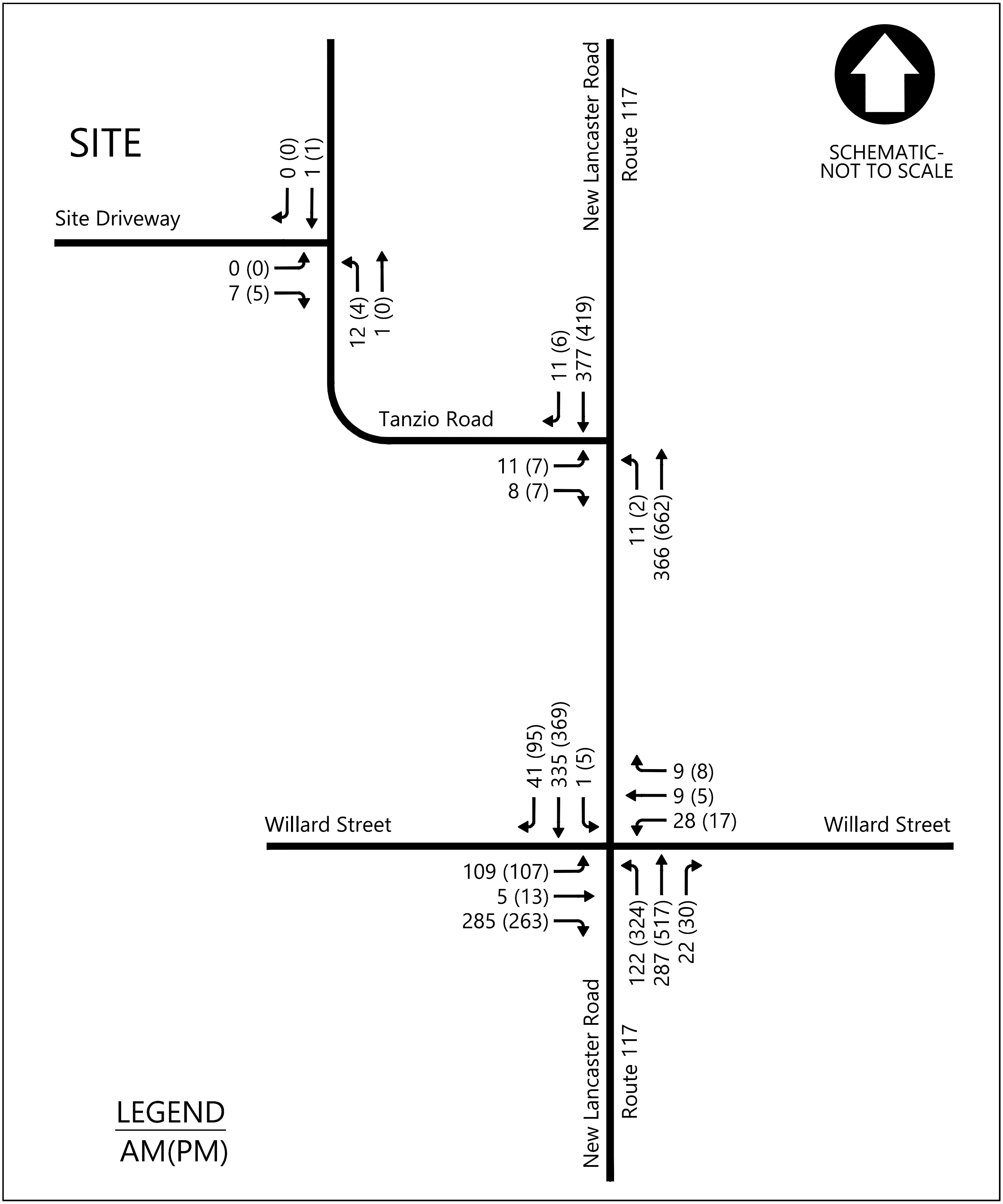
Background traffic growth accounts for changes in traffic volumes associated with general changes in population and other developments that are not known at this time. To be consistent with regional growth rates as provided by the Montachusett Regional Planning Commission (MRPC), a compound background growth rate of 2.0 percent per year was used for this project to grow the 2023 traffic volumes to future year 2030.

Site-Specific Growth

In addition to the background traffic growth rate, the traffic volumes associated with other proposed developments in the area were considered. Based on discussions with the City of Leominster, no additional projects are planned and/or are under construction at this time.

2030 No Build Traffic Volumes

The 2023 Existing peak hour traffic volumes were grown by 2.0 percent per year, compounded annually, over the seven year study horizon to establish the 2030 baseline volumes. The resulting 2030 No Build peak hour traffic volumes for the weekday morning and weekday afternoon peak hours are illustrated in **Figure 3**. The 2030 No Build traffic volumes are documented in the traffic projection model presented in **Appendix C** of this report.



Bowman

Figure 3
2030 No Build
Peak Hour Traffic Volumes
Solid Waste Facility - Tonnage Increase
Leominster, Massachusetts

Trip Generation

Daily Trip Generation

The site proposes to receive a maximum of 1,500 tpd of solid waste (MSW and C&D) as part of the proposed facility expansion. To estimate the trip generation for the proposed site, the proponent provided data on operations at the existing facility, including total tons per day of inbound and outbound material and total number of trucks transporting each type of material between March 27 and March 31, 2023, consistent with the week traffic counts were collected. Based on ticket data provided by the facility, inbound material is currently transported to the site at an average rate of 9.4 tons per load, while outbound material is transported from the site by rail. Truck ticket data for the week of March 27-31, 2023 is provided in **Appendix E** of this report.

The facility is served by rail, and it is expected that the majority of outbound materials will be transported from the site via rail. However, to present a conservative analysis, the trip generation and level-of-service analysis presented in this study include an additional scenario assuming all outbound materials would be transported from the site by truck. In addition, when outbound materials are transported by truck, it is standard industry practice to use backhauls, where a truck delivering inbound materials reloads and removes material from the site rather than departing empty. To present a conservative analysis, the estimated trip generation does not include the use of backhauls; i.e., all trucks transporting inbound materials were assumed to leave the site empty, and all trucks transporting outbound material were assumed to arrive at the site empty. Outbound materials transported from the site by truck were assumed to be transported in transfer trailers, which transport an average of 28 tons per load.

Based on the currently permitted 1,000 tpd, existing operations at the site would generate a maximum of 214 one-way truck trips per day (107 entering, 107 exiting) transporting inbound materials to the site. As noted above, outbound materials are currently transported from the site by rail and do not generate additional trips on the roadway network (besides recyclables). Were the rail not to be in operation and assuming no backhauls, the existing facility would generate a maximum of 72 one-way truck trips per day (36 entering, 36 exiting) transporting outbound material off-site.

Based on the assumption that inbound material arrives at the site with an average load of 9.4 tons per truck, the facility would generate a maximum of 320 one-way truck trips (160 entering, 160 exiting) transporting inbound material with the proposed expansion to 1,500 tpd. In addition, assuming no rail service or backhauls and the assumption that outbound material would be transported from the site with an average load of 28 tons per truck, the site would generate 108 additional one-way truck trips (54 entering, 54 exiting) transporting outbound material off-site. In total, the expanded facility would generate a **maximum** of 428 daily one-way truck trips, which would be enforced by a condition to the Site Assignment. **Table 3** below summarizes the maximum daily truck trip generation and net change from existing conditions for the facility under existing and proposed conditions assuming rail service, while **Table 4** summarizes daily trip generation assuming no rail service.

Table 3: Maximum Daily Trip Generation with Rail Service

Description	Existing Operations (1,000 tpd)			Expanded Operations (1,500 tpd)			Net Change		
	In	Out	Total	In	Out	Total	In	Out	Total
Inbound Material	107	107	214	160	160	320	53	53	106
Outbound Material	0	0	0	0	0	0	0	0	0
Outbound Recyclables(1)	5	5	10	7	7	14	2	2	4
TOTAL	**112**	**112**	**224**	**167**	**167**	**334**	**55**	**55**	**110**

(1) – Recyclable materials would not be transported out of the facility by rail.

Table 4: Maximum Daily Trip Generation without Rail Service

Description	Existing Operations (1,000 tpd)			Expanded Operations (1,500 tpd)			Net Change		
	In	Out	Total	In	Out	Total	In	Out	Total
Inbound Material	107	107	214	160	160	320	53	53	106
Outbound Material	31	31	62	47	47	94	16	16	32
Outbound Recyclables(1)	5	5	10	7	7	14	2	2	4
TOTAL	**143**	**143**	**286**	**214**	**214**	**428**	**71**	**71**	**142**

(1) – Recyclable materials would not be transported out of the facility by rail.

As shown in Table 3, the proposed facility expansion is projected to result in a net increase of up to 110 one-way truck trips per day on the study area roadway network. Should rail not to be in operation, the proposed facility expansion would generate a maximum of 142 additional one-way truck trips compared with existing conditions.

Hourly Distribution

The hourly distribution of new truck trips at the site was determined using the existing arrival patterns based on delivery ticket data and wait time data obtained from the facility between March 27, 2023 and March 31, 2023, consistent with the week traffic counts were collected. Additional ticket data for May 5, 2023, August 30, 2023, and October 27, 2023 were also reviewed to consider potential hourly distribution changes throughout the year. The facility data is included in **Appendix E**. The resulting hourly distribution is shown **Table 5**.

Table 5: Hourly Distribution of Truck Trips

Time	Existing Hourly Distribution
6:00 to 7:00 AM	7%
7:00 to 8:00 AM	11%
8:00 to 9:00 AM	12%
9:00 to 10:00 AM	14%
10:00 to 11:00 AM	12%
11:00 AM to 12:00 PM	12%
12:00 to 1:00 PM	13%
1:00 to 2:00 PM	9%
2:00 to 3:00 PM	7%
3:00 to 4:00 PM	0%-3%(1)
4:00 to 5:00 PM	0%-3%(1)
5:00 to 6:00 PM	0%-3%(1)

(1) – An estimated 3% of daily trips would be anticipated to access the site during the 3:00 PM through 6:00 PM window, with an estimated maximum distribution of 3% in any one-hour period during this time frame.

Tables 6 and 7 below summarize the hourly distribution of truck round trips with and without rail service, respectively.

Table 6: Projected Hourly Truck Volumes with Rail Service

Time	Hourly Distribution of Truck Trips (%)	Existing Operations (1,000 tpd)	Proposed Expansion (1,500 tpd)	Net Change
6:00 to 7:00 AM	7%	8	12	4
7:00 to 8:00 AM	11%	13	19	6
8:00 to 9:00 AM	12%	13	20	7
9:00 to 10:00 AM	14%	16	23	7
10:00 to 11:00 AM	12%	13	20	7
11:00 AM to 12:00 PM	12%	13	20	7
12:00 to 1:00 PM	13%	14	21	7
1:00 to 2:00 PM	9%	11	16	5
2:00 to 3:00 PM	7%	8	21	4
3:00 to 4:00 PM	0%-3%(1)	3	4	1
4:00 to 5:00 PM	0%-3%(1)	0	0	0
5:00 to 6:00 PM	0%-3%(1)	0	0	0
TOTAL	**100%**	**112**	**167**	**55**

(1)– The 3% of daily trips associated with the expansion that would be anticipated to access the site during the 3:00 PM through 6:00 PM window were considered to occur during a one hour period in order to present a conservative peak hour capacity analysis.

Table 7: Projected Hourly Truck Volumes without Rail Service

Time	Hourly Distribution of Truck Trips (%)	Existing Operations (1,000 tpd)	Proposed Expansion (1,500 tpd)	Net Change
6:00 to 7:00 AM	7%	10	15	5
7:00 to 8:00 AM	11%	16	24	8
8:00 to 9:00 AM	12%	17	26	9
9:00 to 10:00 AM	14%	20	30	10
10:00 to 11:00 AM	12%	17	26	9
11:00 AM to 12:00 PM	12%	17	26	9
12:00 to 1:00 PM	13%	18	27	9
1:00 to 2:00 PM	9%	13	20	7
2:00 to 3:00 PM	7%	10	14	4
3:00 to 4:00 PM	0%-3%(1)	4	7	3
4:00 to 5:00 PM	0%-3%(1)	0	0	0
5:00 to 6:00 PM	0%-3%(1)	0	0	0
TOTAL	**100%**	**143**	**214**	**71**

(1)– The 3% of daily trips associated with the expansion that would be anticipated to access the site during the 3:00 PM through 6:00 PM window were considered to occur during a one hour period in order to present a conservative peak hour capacity analysis.

As previously noted, the weekday morning and afternoon peak hours along the street network occur from 7:00 to 8:00 AM and 4:15 to 5:15 PM. As shown the above tables, the 3% of daily trips that would be anticipated to access the facility during the 3:00 PM through 6:00 PM period were considered to occur during a one hour period, which was applied to estimate the weekday afternoon peak hour trips for the purpose of this study. As an additional conservative measure, it was assumed that all trucks transporting inbound material would depart from the site empty, and all trucks transporting outbound material would arrive at the site empty, with no reduction for the use of backhauls. The resulting peak hour trip generation estimates for the proposed project with and without rail service are summarized in **Table 8** below.

Table 8: Peak Hour Truck Trip Generation

Description	Weekday Morning Peak Hour Trips			Weekday Afternoon Peak Hour Trips		
	In	Out	Total	In	Out	Total
With Rail						
Existing Operations (1,000 tpd)	7	7	14	3	3	6
Proposed Operations (1,500 tpd)	11	11	22	4	4	8
New Truck Trips	**4**	**4**	**8**	**1**	**1**	**2**
Without Rail						
Existing Operations (1,000 tpd)	16	16	32	4	4	8
Proposed Operations (1,500 tpd)	24	24	48	7	7	14
New Truck Trips	**8**	**8**	**16**	**3**	**3**	**6**

As shown in Table 8, the proposed facility expansion is estimated to generate 8 new truck trips (4 entering and 4 exiting) during the weekday morning peak hour and 2 new truck trips (1 entering and 1 exiting) during the weekday afternoon peak hour, assuming outbound material is transported by rail. Assuming all outbound material were to be removed by truck to present a conservative analysis, the proposed facility expansion is estimated to generate 16 new truck trips (8 entering and 8 existing) during the weekday morning peak hour and 6 new truck trips (3 entering and 3 exiting) during the weekday afternoon peak hour.

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 and from I-190. It is expected that traffic entering the site will utilize I-190 to the south as opposed to originating from minor local roads to access the site unless that is where the waste originates. The resulting arrival and departure patterns are presented in **Figure 4.**

The new project-related trips were then assigned to the surrounding roadway network based on the project trip distribution patterns presented in **Figure 4**. The new project-related trips assume the non-rail transport trip generation scenario, representing a more conservative analysis than if the rail transport trip generation scenario were to be used. The resulting distributed new weekday morning peak hour project trips are shown in **Figure 5** and weekday afternoon peak hour project trips are shown in **Figure 6**.

2030 Build Traffic Volumes

To establish the 2030 Build peak hour traffic volumes, the distributed new project trips shown in **Figure 5** and **Figure 6** were then added to the 2030 No Build peak hour traffic volumes to reflect the 2030 Build peak hour traffic volumes. The resulting 2030 Build weekday morning and weekday afternoon peak hour traffic volumes are presented in **Figure 7**. The 2030 Build traffic volumes are documented in the traffic projection model presented in **Appendix C** of this report.

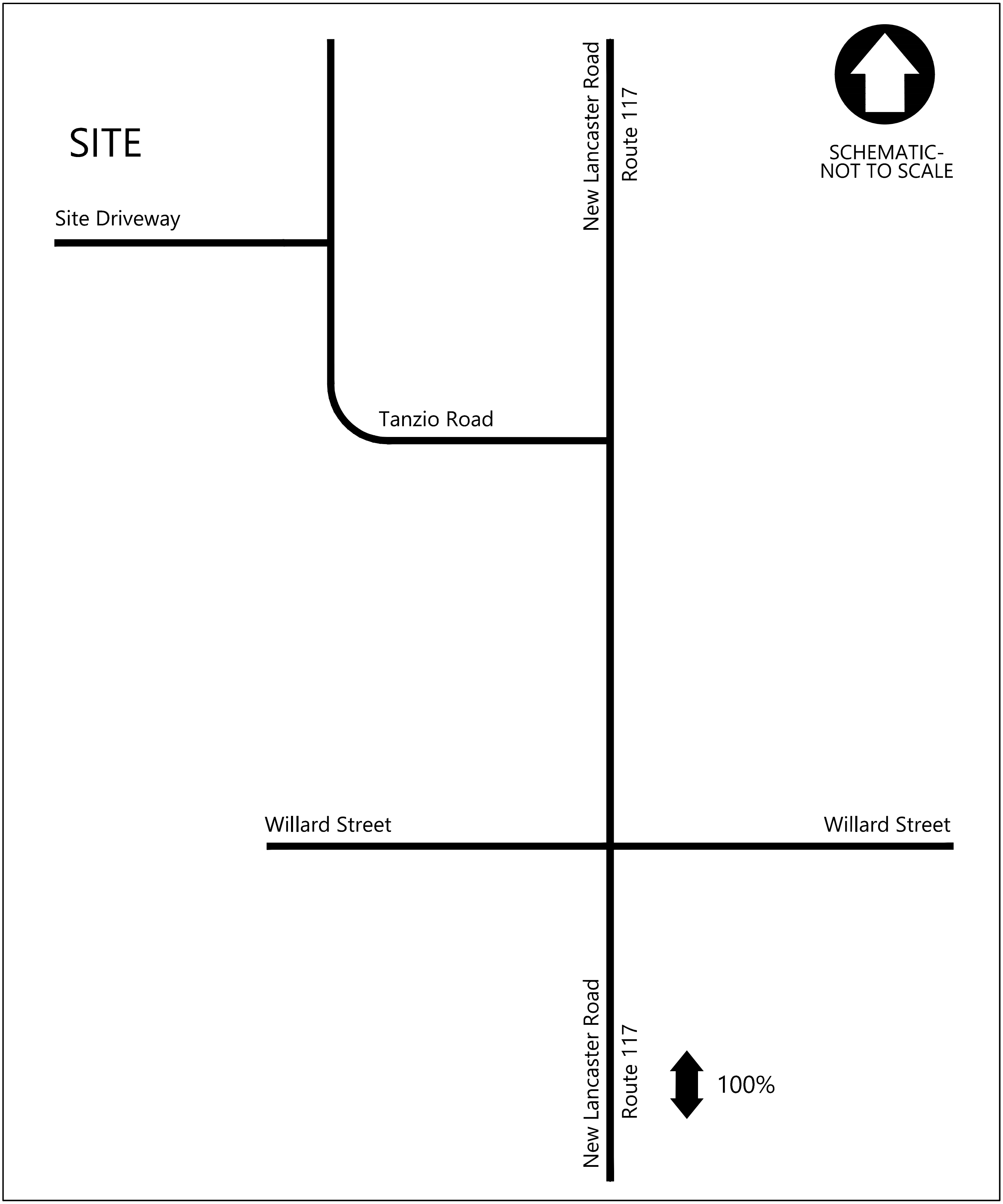


Figure 4
Directions of Arrival and Departure
Solid Waste Facility - Tonnage Increase
Leominster, Massachusetts

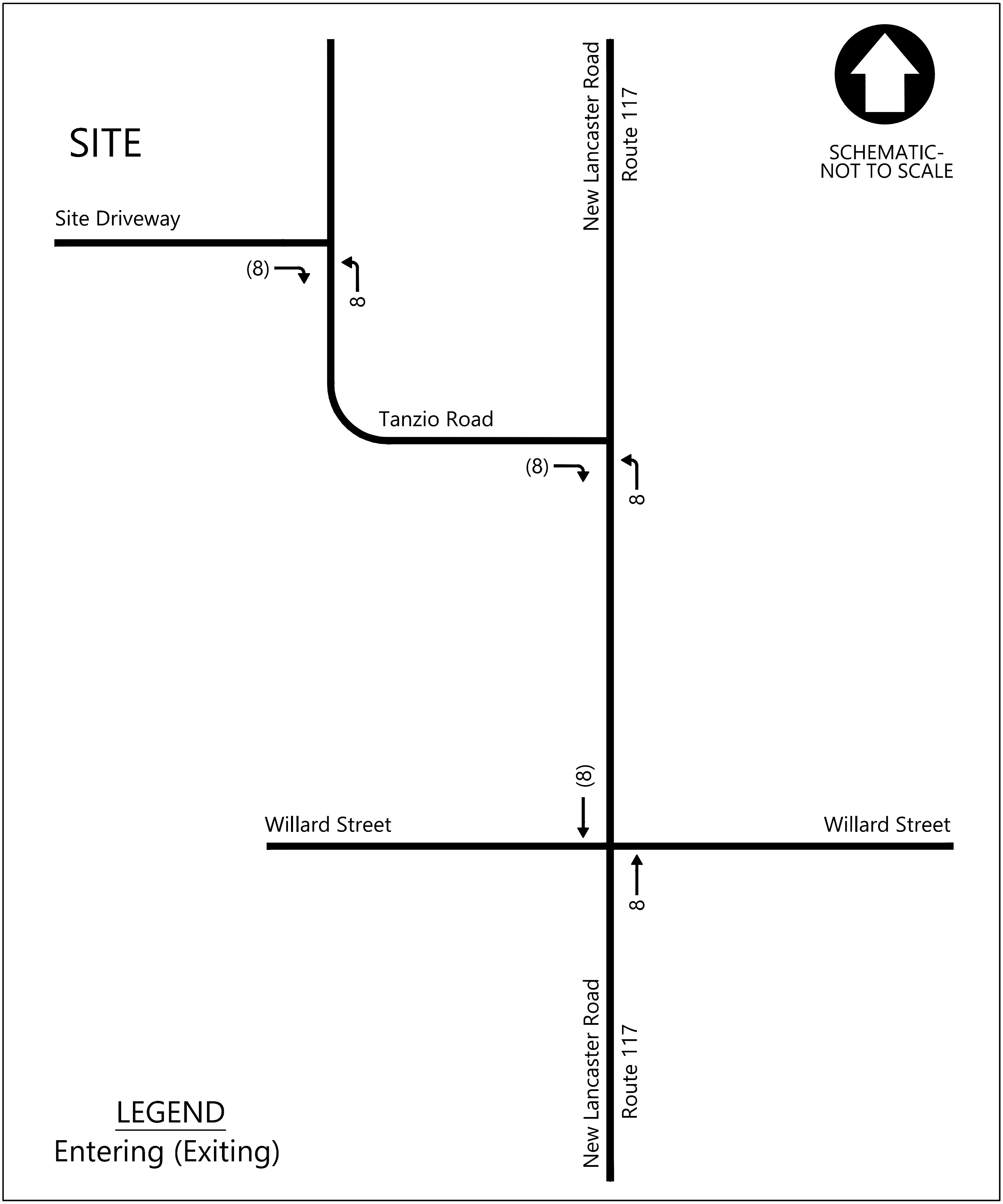


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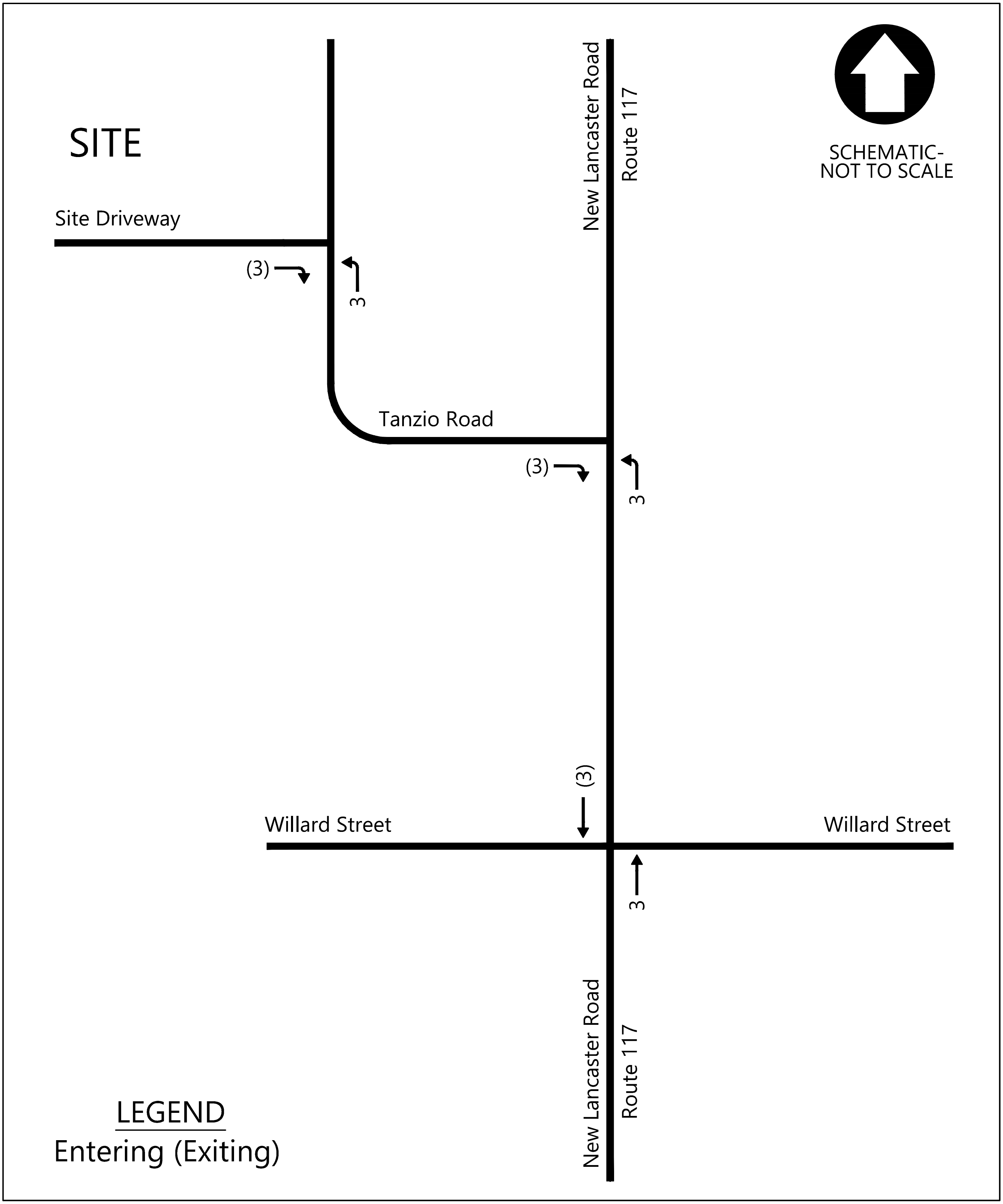
Figure 5
New Project Trips
Weekday Morning Peak Hour
Solid Waste Facility - Tonnage Increase
Leominster, Massachusetts



Bowman

Figure 6
New Project Trips
Weekday Afternoon Peak Hour
Solid Waste Facility - Tonnage Increase
Leominster, Massachusetts

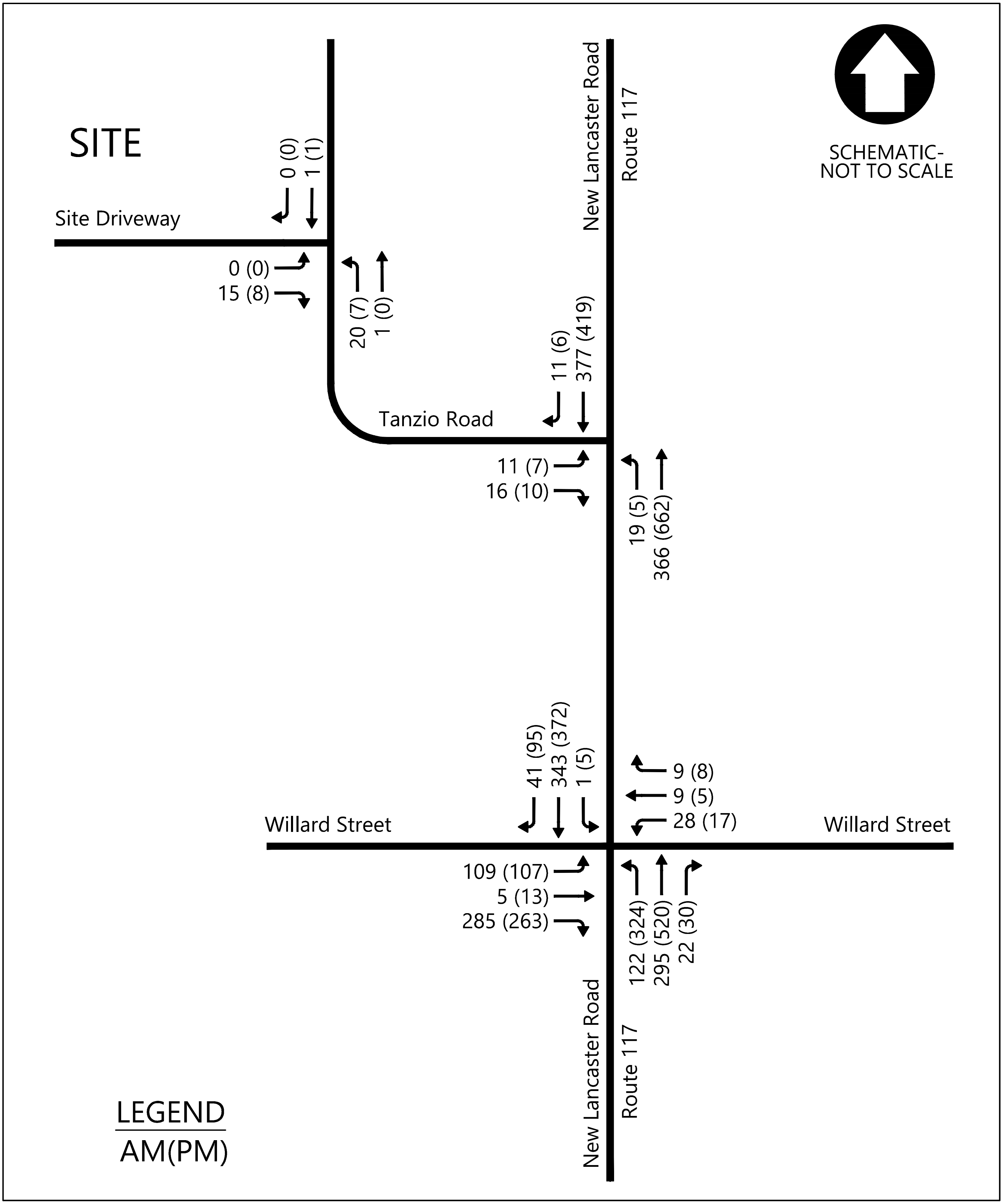


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Figure 7
2030 Build
Peak Hour Traffic Volumes
Solid Waste Facility - Tonnage Increase
Leominster, Massachusetts

Traffic Operations Analysis

In previous sections of this report, the quantity of traffic at the study area intersections has been discussed. This section describes the overall quality of the traffic flow at the study area intersections during the weekday morning and weekday afternoon peak hours. To complete this assessment, intersection capacity analysis was conducted using the Synchro capacity analysis software at the study area intersections under the 2023 Existing, 2030 No Build, and 2030 Build scenarios for the peak hour traffic conditions. The analysis is based on capacity analysis methodologies and procedures contained in the *Highway Capacity Manual, 6th Edition* (HCM), which are summarized in **Appendix F**. A discussion of the evaluation criteria and a summary of the results of the capacity analysis are presented below.

Level-of-Service Criteria

Average total vehicle delay is reported as level-of-service (LOS) on a scale of A to F. LOS A represents delays of 10 seconds or less, while LOS F represents delays in excess of 50 seconds for unsignalized intersections and greater than 80 seconds for signalized intersections. A more detailed description of the LOS criteria is provided in Appendix E.

Capacity Analysis Results

Intersection capacity analysis was conducted using Synchro capacity analysis software for the study area intersections to evaluate the 2023 Existing, 2030 No Build, and 2030 Build traffic conditions during the weekday midday, weekday afternoon and Saturday midday peak hours. The peak hour traffic volumes utilized as part of this analysis are provided in the traffic projection model, attached in **Appendix C** of this report.

The Synchro capacity analysis results for the 2023 Existing, 2030 No Build and 2030 Build traffic conditions are presented in **Appendix G**, **Appendix H**, and **Appendix I**, respectively. The capacity analysis results for the signalized and unsignalized study area intersections are presented in **Table 9** and **Table 10** below for the weekday midday, weekday afternoon and Saturday midday peak hours, respectively. The results of the specific capacity analysis at the study area intersections are discussed below, with a more detailed summary of the capacity analysis for the study area intersections provided in **Appendix J.**

Table 9: Overall Signalized Intersection Levels-of-Service

				2023 Existing					2030 No Build					2030 Build				
Intersection	Peak Period	Movement		LOS[1]	Delay[2]	V/C[3]	50th Queue[4]	95th Queue[5]	LOS	Delay	V/C	50th Queue	95th Queue	LOS	Delay	V/C	50th Queue	95th Queue
New Lancaster Road (Route 117) at Willard Street	AM	EB	LT	C	30.3	0.40	34	86	C	32.0	0.47	43	101	C	32.3	0.47	43	102
			R	A	3.3	0.31	0	40	A	3.3	0.36	0	43	A	3.3	0.36	0	43
		WB	LTR	C	24.3	0.19	13	41	C	24.9	0.19	14	47	C	25.1	0.19	14	47
		NB	L	C	29.4	0.45	43	89	C	30.0	0.46	46	101	C	30.2	0.47	47	102
			TR	B	15.1	0.40	77	171	B	15.1	0.41	82	199	B	15.2	0.42	84	204
		SB	L	C	29.0	0.00	0	5	C	29.0	0.00	0	5	C	29.0	0.00	0	5
			TR	C	22.6	0.48	60	108	C	23.5	0.53	71	123	C	23.6	0.54	72	125
		Overall		*B*	*18.0*	*0.46*			*B*	*18.3*	*0.50*			*B*	*18.4*	*0.50*		
	PM	EB	LT	D	40.4	0.52	38.0	133	D	43.7	0.57	44.0	159	D	43.7	0.57	44.0	159
			R	A	2.8	0.29	0.0	33	A	2.8	0.30	0.0	41	A	2.8	0.30	0.0	41
		WB	LTR	C	26.7	0.13	7.0	34	C	27.6	0.13	7.0	39	C	27.6	0.13	7.0	39
		NB	L	C	30.6	0.69	88.0	226	C	32.8	0.74	106.0	262	C	32.8	0.74	106.0	262
			TR	B	12.4	0.50	70.0	306	B	13.1	0.55	84.0	362	B	13.2	0.56	85.0	366
		SB	L	C	34.0	0.03	2.0	13	D	35.2	0.03	2.0	13	D	35.2	0.03	2.0	13
			TR	C	24.9	0.58	66.0	148	C	26.2	0.62	77.0	168	C	26.3	0.63	78.0	170
		Overall		*B*	*19.9*	*0.53*			*C*	*21.1*	*0.59*			*C*	*21.1*	*0.59*		

1 Level-of-Service
2 Average vehicle delay in seconds
3 Volume to capacity ratio
4 50th Percentile Queue Length in feet
5 95th Percentile Queue Length in feet

Table 10: Unsignalized Intersection Levels-of-Service

				2023 Existing				2030 No Build				2030 Build			
Intersection	Peak Period	Movement		LOS[1]	Delay[2]	V/C[3]	95th Queue[4]	LOS	Delay	V/C	95th Queue	LOS	Delay	V/C	95th Queue
Lancaster Street (Route 117) at Tanzio Road	AM	EB	LR	B	13.3	0.05	5	B	14.7	0.05	5	B	14.2	0.07	5
		NB	LT	A	0.3	0.01	0	A	0.3	0.01	0	A	0.4	0.02	3
		SB	TR	A	0.0	0.00	0	A	0.0	0.00	0	A	0.0	0.00	0
	PM	EB	LR	B	14.8	0.05	3	C	17.1	0.05	5.0	C	16.3	0.06	5
		NB	LT	A	0.0	0.00	0	A	0.0	0.00	0.0	A	0.1	0.01	0
		SB	TR	A	0.0	0.00	0	A	0.0	0.00	0.0	A	0.0	0.00	0
Tanzio Road at Site Driveway	AM	EB	LR	A	8.9	0.01	0	A	8.8	0.01	0.0	A	8.9	0.02	3
		NB	LT	A	7.7	0.01	0	A	7.7	0.01	0.0	A	7.7	0.02	0
		SB	TR	A	0.0	0.00	0	A	0.0	0.00	0.0	A	0.0	0.00	0
	PM	EB	LR	A	8.3	0.01	0	A	8.3	0.01	0.0	A	8.3	0.01	0
		NB	LT	A	7.2	0.00	0	A	7.2	0.00	0.0	A	7.2	0.01	0
		SB	TR	A	0.0	0.00	0	A	0.0	0.00	0.0	A	0.0	0.00	0

1 Level-of-Service
2 Average vehicle delay in seconds
3 Volume to capacity ratio
4 95th Percentile Queue Length in feet

As shown in Table 7, the capacity analysis indicates that the signalized intersection of New Lancaster Road (Route 117) at Willard Street currently operates at an overall LOS B during the weekday morning and weekday afternoon peak hour. The intersection is expected to operate at LOS B during the weekday morning peak hour and at LOS C during the weekday afternoon peak hour under 2030 No Build conditions. All movements operate at LOS D or better under existing conditions during each peak period and are projected to continue to operate at LOS D or better under 2030 No-Build conditions.

Under 2030 Build conditions, **no changes** to LOS are anticipated compared with No-Build conditions.

As shown in Table 8, the capacity analysis indicates that the critical stop-controlled eastbound approach from Tanzio Road at the unsignalized intersection with Lancaster Street (Route 117) currently operates at LOS B during the weekday morning and weekday afternoon peak hour, and is projected to operate at LOS B during the weekday morning peak hour and LOS C during the weekday afternoon peak hour under 2030 No Build conditions. Under 2030 Build conditions with the addition of project generated traffic, no change in LOS is anticipated compared with 2030 No-Build conditions. The northbound and southbound approaches operate at LOS A with minimal delay under Existing conditions and are projected to continue to do so under 2030 No-Build and Build conditions.

As shown in Table 8, all movement at the unsignalized intersection of Tanzio Road at the site driveway operate at LOS A during the weekday morning and weekday afternoon peak hours and are anticipated to continue to operate at LOS A under 2030 No-Build conditions. Under 2030 Build conditions, **no changes** to LOS are anticipated compared with No-Build conditions.

Sight Distance

A field review of the available sight distance was conducted at the existing Site Driveway location on Tanzio Road and at the intersection of Tanzio Road at Lancaster Street (Route 117). The American Association of State Highway and Transportation Officials (AASHTO) publication, *A Policy on Geometric Design, 2018 Edition*, defines minimum sight distances at intersections. In the vicinity of the site, New Lancaster Road Street (Route 117) has a posted speed limit of 35 mph, increasing to 45 mph approaching Willard Street. Tanzio Road has a posted speed limit of 30 mph in the vicinity of the proposed site driveway.

The minimum sight distance is based on the required stopping sight distance (SSD) for vehicles traveling along the main road. According to AASHTO, "If the available sight distance for an entering or crossing vehicle is at least equal to the appropriate stopping sight distance for the major road, then drivers have sufficient time to anticipate and avoid collisions."

Table 11 summarizes the measured sight distances compared with sight distance standards based on the posted speed limits on Tanzio Road and Lancaster Street (Route 117). As shown in Table 11, the measured sight distance for Tanzio Road at Lancaster Street (Route 117) meets the minimum SSD requirements for a design speed of 40 mph. The sight distance measured at the proposed site driveway exceeds the SSD requirements for a design speed of 35 mph in both directions.

Table 11: Stopping Sight Distance Requirements

Location	Approaching	Speed Limit (mph)	SSD[1] Required (ft)	SSD Measured (ft)	Meets Required SSD?
Lancaster Street (Route 117) at Tanzio Road	Southbound	40	305	347	Yes
	Northbound	40	305	>700	Yes
Tanzio Road at Existing Site Driveway	Southbound	35	250	306	Yes
	Northbound	35	250	>700	Yes

Conclusion

The proposed project consists of expanding the existing solid waste facility at 200 Tanzio Road in Leominster, Massachusetts to increase its approved maximum capacity from 1,000 tons per day (tpd) to 1,500 tpd of MSW and C&D. The site will continue to be accessed via the existing site driveway on Tanzio Road.

The proposed facility expansion is projected to generate 106 new daily truck trips (53 entering, 53 exiting) transporting inbound material, with the majority of outbound material being transported by rail or backhaul. However, the traffic analysis presented in this study incorporated several assumptions to present a conservative analysis, including no reduction in trips for outbound material being transported by rail or backhaul. Based on these assumptions, the proposed facility expansion is projected to generate a total of 142 new daily truck trips (71 entering, 71 exiting), including 10 new truck trips (5 entering and 5 exiting) during the weekday morning peak hour and 6 new truck trips (3 entering and 3 exiting) during the weekday afternoon peak hour. When added to 286 daily one-way truck trips generated by existing facility operations, the expanded facility is estimated to generate a maximum of up to 428 one-way daily truck trips. The MassDEP, the maximum daily truck trip generation of the facility **will not exceed** 428 one-way trips, which the Facility is amenable to having as a condition of the Site Assignment for the expanded facility.

Based on the capacity analysis results, the study area intersections of New Lancaster Road (Route 117) at Willard Street, Lancaster Street (Route 117) at Tanzio Road, and Tanzio Road at the site driveway operate at acceptable levels of service under 2023 Existing and 2030 No-Build conditions. The capacity analysis indicates that the proposed facility expansion is not projected to have an appreciable impact on the operations of the study area intersections or roadways. Overall delays and levels-of-service are expected to experience a negligible increase as a result of this project and do not change the LOS between the Build and No-Build scenarios. Bowman concludes that mitigation measures are not necessary on the surrounding roadway network to accommodate the proposed development.

There are no existing pedestrian or bicycle facilities along Tanzio Road; however, Tanzio Road provides access to industrial land uses and does not provide connections to other local roadways. Therefore, it is not anticipated that Tanzio Road would be utilized as a pedestrian route.

Based on the findings and results presented in this traffic study, the proposed project is projected to have a minimal impact on overall traffic conditions in the study area, and it is our opinion that the traffic impacts of the proposed development of this solid waste facility located at 200 Tanzio Road 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 in conformance with 310 CMR 16.40(4)(b).

Bowman

Appendix for Traffic Impact Study
Solid Waste Transfer Station – Tonnage Expansion

200 Tanzio Road

Leominster, Massachusetts

Prepared by

Bowman Consulting Group, Ltd.

350 Myles Standish Boulevard
Taunton, MA 02780
508.823.2245

Prepared for

Green Seal Environmental, LLC

April 2024

Bowman Project Number: 313429-01-001

Bowman

APPENDIX A

TURNING MOVEMENT COUNTS

New England
TRAFFIC COUNTS

New England Traffic Counts
(413) 579-8366
emayboroda@netrafficcounts.com
www.netrafficcounts.com

CLIENT	Bowman	STREET 1	Route 117
CITY/TOWN	Leominster	STREET 2	Willard Rd
WEATHER	Sunny	DATE	3/29/2023
INTERSECTION #	1		

Passenger Cars & Heavy Vehicles Combined

	Route 117 - Northbound				Route 117 - Southbound				Willard Rd - Westbound				Willard Rd - Eastbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	24	61	3	0	0	65	7	0	3	2	3	0	17	0	73
7:15 AM	0	30	54	6	0	0	84	7	0	9	1	1	0	20	0	67
7:30 AM	0	22	56	5	0	1	71	11	0	2	2	4	0	34	2	52
7:45 AM	0	30	79	5	0	0	71	11	0	10	3	0	0	24	2	56
8:00 AM	0	39	58	7	0	0	62	9	0	5	2	1	0	16	2	60
8:15 AM	0	28	65	7	0	2	77	8	0	4	1	1	0	19	2	56
8:30 AM	0	36	66	8	0	1	62	14	0	8	5	3	0	14	5	35
8:45 AM	0	28	71	7	0	0	75	9	0	7	2	0	0	15	3	44
3:00 PM	0	49	118	10	0	1	72	17	0	5	0	1	0	15	1	77
3:15 PM	0	64	95	11	0	0	87	24	0	9	3	1	0	19	2	52
3:30 PM	0	61	95	7	0	0	68	16	0	10	1	0	0	17	1	61
3:45 PM	0	61	114	6	0	0	91	15	0	5	3	0	0	20	1	46
4:00 PM	0	53	101	10	0	0	103	23	0	8	3	1	0	21	2	52
4:15 PM	0	83	120	6	0	2	80	22	0	0	1	2	1	17	2	57
4:30 PM	0	61	105	4	0	1	81	14	0	6	2	3	0	27	3	67
4:45 PM	0	73	108	7	0	1	67	23	0	7	1	1	0	19	3	42
5:00 PM	0	65	113	9	0	0	93	24	0	2	0	1	0	29	3	63
5:15 PM	0	76	102	16	0	1	78	23	0	5	2	1	0	21	1	44
5:30 PM	0	78	108	9	0	1	53	9	0	6	0	0	0	18	6	37
5:45 PM	0	45	78	12	0	0	64	23	0	3	2	0	0	5	2	37

AM PEAK HOURS	Route 117 - Northbound				Route 117 - Southbound				Willard Rd - Westbound				Willard Rd - Eastbound			
7:15 AM	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	121	247	23	0	1	288	38	0	26	8	6	0	94	6	235
PHF	0.86				0.90				0.77				0.95			
HV%	0.0%	1.7%	5.3%	4.3%	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	0.0%	0.0%	1.7%

PM PEAK HOURS	Route 117 - Northbound				Route 117 - Southbound				Willard Rd - Westbound				Willard Rd - Eastbound			
4:15 PM	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	282	446	26	0	4	321	83	0	15	4	7	1	92	11	229
PHF	0.90				0.87				0.59				0.86			
HV%	0.0%	3.5%	0.9%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%

New England
TRAFFIC COUNTS

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emayboroda@netrafficcounts.com
www.netrafficcounts.com

CLIENT	Bowman	**STREET 1**	Route 117
CITY/TOWN	Leominster	**STREET 2**	Willard Rd
WEATHER	Sunny	**DATE**	3/29/2023
INTERSECTION #	1		

Heavy Vehicles

	Route 117 - Northbound				Route 117 - Southbound				Willard Rd - Westbound				Willard Rd - Eastbound			
Start Time	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**
7:00 AM	0	0	6	1	0	0	2	0	0	0	0	1	0	0	0	0
7:15 AM	0	1	4	0	0	0	4	0	0	0	0	0	0	0	0	2
7:30 AM	0	0	5	1	0	0	4	0	0	0	0	1	0	1	0	1
7:45 AM	0	1	3	0	0	0	5	0	0	0	1	0	0	1	0	0
8:00 AM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	1
8:15 AM	0	0	7	0	0	0	6	2	0	0	0	1	0	0	0	1
8:30 AM	0	1	4	0	0	0	5	1	0	0	0	0	0	0	2	0
8:45 AM	0	0	5	0	0	0	3	0	0	0	0	0	0	0	1	1
3:00 PM	0	1	2	0	0	0	1	0	0	0	0	0	0	0	0	0
3:15 PM	0	3	0	0	0	0	2	0	0	0	0	0	0	0	0	1
3:30 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:45 PM	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	1
4:00 PM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	4	1	0	0	0	3	0	0	0	0	0	0	0	0	0
4:30 PM	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	4	0	0	0	0	3	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	3	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	1

	Route 117 - Northbound				Route 117 - Southbound				Willard Rd - Westbound				Willard Rd - Eastbound			
AM PEAK HOURS	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**
7:15 AM	0	2	13	1	0	0	16	0	0	0	1	1	0	2	0	4

	Route 117 - Northbound				Route 117 - Southbound				Willard Rd - Westbound				Willard Rd - Eastbound			
PM PEAK HOURS	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**	**Right**
4:15 PM	0	10	4	0	0	0	6	0	0	0	0	0	0	0	0	1

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CLIENT	Bowman	STREET 1	Route 117
CITY/TOWN	Leominster	STREET 2	Willard Rd
WEATHER	Sunny	DATE	3/29/2023
INTERSECTION #	1		

Pedestrians and Bicycles

	Route 117 - Northbound				Route 117 - Southbound				Willard Rd - Westbound				Willard Rd - Eastbound			
Start Time	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

AM PEAK HOURS	Route 117 - Northbound				Route 117 - Southbound				Willard Rd - Westbound				Willard Rd - Eastbound			
7:15 AM	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PM PEAK HOURS	Route 117 - Northbound				Route 117 - Southbound				Willard Rd - Westbound				Willard Rd - Eastbound			
4:15 PM	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

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CLIENT	Bowman	STREET 1	New Lancaster Road (Route 117)
CITY/TOWN	Leominster	STREET 2	Tanzio Road
WEATHER	Sunny	DATE	3/29/2023
INTERSECTION #	2		

Passenger Cars & Heavy Vehicles Combined

	Route 117 - Northbound			Route 117 - Southbound			Tanzio Road - Eastbound		
Start Time	U-Turn	Left	Thru	U-Turn	Thru	Right	U-Turn	Left	Right
7:00 AM	0	4	76	0	81	4	0	1	3
7:15 AM	0	1	71	0	87	0	0	3	3
7:30 AM	0	1	84	0	76	4	0	1	0
7:45 AM	0	5	83	0	84	3	2	4	2
8:00 AM	0	3	64	0	77	1	0	2	4
8:15 AM	0	9	65	0	85	1	0	1	2
8:30 AM	0	0	65	0	87	1	0	3	3
8:45 AM	0	6	85	0	98	1	0	1	2
3:00 PM	0	1	158	0	89	2	0	4	1
3:15 PM	0	2	131	0	92	0	0	1	3
3:30 PM	0	0	109	0	93	4	0	5	3
3:45 PM	0	1	126	0	86	0	1	0	1
4:00 PM	0	1	135	0	118	2	0	4	2
4:15 PM	0	1	155	0	87	1	0	2	2
4:30 PM	0	0	143	0	94	2	0	2	1
4:45 PM	0	1	130	0	83	3	0	1	0
5:00 PM	0	0	148	0	94	0	0	2	4
5:15 PM	0	0	150	0	81	0	2	0	0
5:30 PM	0	1	128	0	69	1	0	2	1
5:45 PM	0	2	102	0	84	0	0	0	3

AM PEAK HOURS	Route 117 - Northbound			Route 117 - Southbound			Tanzio Road - Eastbound		
7:00 AM	U-Turn	Left	Thru	U-Turn	Thru	Right	U-Turn	Left	Right
	0	11	314	0	328	11	2	9	8
PHF	0.92			0.97			0.59		
HV%	0.0%	27.3%	3.8%	0.0%	1.2%	0.0%	0.0%	0.0%	37.5%

PM PEAK HOURS	Route 117 - Northbound			Route 117 - Southbound			Tanzio Road - Eastbound		
4:00 PM	U-Turn	Left	Thru	U-Turn	Thru	Right	U-Turn	Left	Right
	0	3	563	0	382	8	0	9	5
PHF	0.91			0.81			0.58		
HV%	0.0%	0.0%	1.1%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%

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CLIENT	Bowman	**STREET 1**	New Lancaster Road (Route 117)
CITY/TOWN	Leominster	**STREET 2**	Tanzio Road
WEATHER	Sunny	**DATE**	3/29/2023
INTERSECTION #	2		

Heavy Vehicles

	Route 117 - Northbound			Route 117 - Southbound			Tanzio Road - Eastbound		
Start Time	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Left**	**Right**
7:00 AM	0	2	4	0	0	1	0	0	0
7:15 AM	0	0	3	0	0	0	0	1	1
7:30 AM	0	0	4	0	2	1	0	0	0
7:45 AM	0	1	1	0	2	1	0	0	2
8:00 AM	0	1	0	0	1	0	0	1	2
8:15 AM	0	3	1	0	1	0	0	1	2
8:30 AM	0	0	3	0	2	0	0	0	2
8:45 AM	0	3	3	0	1	0	0	0	2
3:00 PM	0	0	2	0	1	0	0	0	0
3:15 PM	0	0	1	0	0	0	0	1	1
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	1	0	0	0	0	0	0
4:00 PM	0	0	1	0	2	0	0	0	0
4:15 PM	0	0	3	0	1	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	2	0	2	0	0	0	0
5:00 PM	0	0	1	0	3	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	1	0	0	0	0	1	0
5:45 PM	0	0	1	0	1	0	0	0	0

AM PEAK HOURS	Route 117 - Northbound			Route 117 - Southbound			Tanzio Road - Eastbound		
7:00 AM	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Left**	**Right**
	0	3	12	0	4	3	0	1	3

PM PEAK HOURS	Route 117 - Northbound			Route 117 - Southbound			Tanzio Road - Eastbound		
4:00 PM	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Left**	**Right**
	0	0	6	0	5	0	0	0	0

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CLIENT	Bowman	**STREET 1**	New Lancaster Road (Route 117)
CITY/TOWN	Leominster	**STREET 2**	Tanzio Road
WEATHER	Sunny	**DATE**	3/29/2023
INTERSECTION #	2		

Pedestrians and Bicycles

	Route 117 - Northbound			Route 117 - Southbound			Tanzio Road - Eastbound		
Start Time	**Peds**	**Left**	**Thru**	**Peds**	**Thru**	**Right**	**Peds**	**Left**	**Right**
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	1	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	1	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	1	0	0
5:00 PM	0	0	0	0	1	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	0	0	0	0	0

AM PEAK HOURS	Route 117 - Northbound			Route 117 - Southbound			Tanzio Road - Eastbound		
7:00 AM	**Peds**	**Left**	**Thru**	**Peds**	**Thru**	**Right**	**Peds**	**Left**	**Right**
	0	0	0	0	0	0	0	0	0

PM PEAK HOURS	Route 117 - Northbound			Route 117 - Southbound			Tanzio Road - Eastbound		
4:00 PM	**Peds**	**Left**	**Thru**	**Peds**	**Thru**	**Right**	**Peds**	**Left**	**Right**
	0	0	1	0	0	0	1	0	0

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CLIENT	Bowman		**STREET 1**	Tanzio Road
CITY/TOWN	Leominster		**STREET 2**	Site Drive
WEATHER	Sunny		**DATE**	3/29/2023
INTERSECTION #	3			

Passenger Cars & Heavy Vehicles Combined

	Tanzio Road - Northbound			Tanzio Road - Southbound			Site Drive - Eastbound		
Start Time	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**
7:00 AM	0	4	0	0	0	0	0	0	2
7:15 AM	0	1	0	0	1	0	0	0	2
7:30 AM	0	3	0	0	0	0	0	0	0
7:45 AM	0	4	0	0	0	0	0	0	3
8:00 AM	0	3	0	0	0	0	0	0	3
8:15 AM	0	7	0	0	0	0	0	0	3
8:30 AM	0	4	0	0	0	0	0	0	4
8:45 AM	0	5	0	0	0	0	0	0	3
3:00 PM	0	1	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	2
3:30 PM	0	0	0	0	0	0	0	0	1
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	2	0	0	1	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	1
4:45 PM	0	2	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	4
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0

AM PEAK HOURS	Tanzio Road - Northbound			Tanzio Road - Southbound			Site Drive - Eastbound		
8:00 AM	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**
	0	19	0	0	0	0	0	0	13
PHF	0.68			0.00			0.81		
HV%	0.0%	42.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	69.2%

PM PEAK HOURS	Tanzio Road - Northbound			Tanzio Road - Southbound			Site Drive - Eastbound		
4:15 PM	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**
	0	4	0	0	1	0	0	0	5
PHF	0.50			0.25			0.31		
HV%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

New England
TRAFFIC COUNTS

New England Traffic Counts
(413) 579-8366
emayboroda@netrafficcounts.com
www.netrafficcounts.com

CLIENT	Bowman		STREET 1	Tanzio Road
CITY/TOWN	Leominster		STREET 2	Site Drive
WEATHER	Sunny		DATE	3/29/2023
INTERSECTION #	3			

Heavy Vehicles

	Tanzio Road - Northbound			Tanzio Road - Southbound			Site Drive - Eastbound		
Start Time	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**
7:00 AM	0	3	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	2
7:30 AM	0	1	0	0	0	0	0	0	0
7:45 AM	0	2	0	0	0	0	0	0	2
8:00 AM	0	2	0	0	0	0	0	0	3
8:15 AM	0	3	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	2
8:45 AM	0	3	0	0	0	0	0	0	2
3:00 PM	0	1	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	2
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0

AM PEAK HOURS	Tanzio Road - Northbound			Tanzio Road - Southbound			Site Drive - Eastbound		
8:00 AM	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**
	0	8	0	0	0	0	0	0	9

PM PEAK HOURS	Tanzio Road - Northbound			Tanzio Road - Southbound			Site Drive - Eastbound		
4:15 PM	**U-Turn**	**Left**	**Thru**	**U-Turn**	**Thru**	**Right**	**U-Turn**	**Left**	**Thru**
	0	0	0	0	0	0	0	0	0

New England
TRAFFIC COUNTS

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(413) 579-8366
emayboroda@netrafficcounts.com
www.netrafficcounts.com

CLIENT	Bowman	**STREET 1**	Tanzio Road
CITY/TOWN	Leominster	**STREET 2**	Site Drive
WEATHER	Sunny	**DATE**	3/29/2023
INTERSECTION #	3		

Pedestrians and Bicycles

	Tanzio Road - Northbound			Tanzio Road - Southbound			Site Drive - Eastbound		
Start Time	**Peds**	**Left**	**Thru**	**Peds**	**Thru**	**Right**	**Peds**	**Left**	**Thru**
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
3:00 PM	0	0	0	0	0	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	1	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	1	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	2	0	0
5:45 PM	0	0	0	0	0	0	0	0	0

AM PEAK HOURS	Tanzio Road - Northbound			Tanzio Road - Southbound			Site Drive - Eastbound		
8:00 AM	**Peds**	**Left**	**Thru**	**Peds**	**Thru**	**Right**	**Peds**	**Left**	**Thru**
	0	0	0	0	0	0	0	0	0

PM PEAK HOURS	Tanzio Road - Northbound			Tanzio Road - Southbound			Site Drive - Eastbound		
4:15 PM	**Peds**	**Left**	**Thru**	**Peds**	**Thru**	**Right**	**Peds**	**Left**	**Thru**
	0	0	0	0	0	0	2	0	0

Bowman

APPENDIX B

SEASONAL ADJUSTMENT DATA

Massachusetts Highway Department
Statewide Traffic Data Collection
2019 Weekday Seasonal Factors

Factor Group	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Axle Factor
R1	1.22	1.14	1.12	1.06	1.00	0.96	0.87	0.85	0.96	0.99	1.04	1.12	0.85
R2	0.95	0.96	0.98	0.97	0.97	0.93	0.97	0.94	0.96	0.90	0.92	0.93	0.96
R3	1.15	1.06	1.07	1.00	0.89	0.88	0.89	0.89	0.95	0.92	1.02	1.01	0.97
R4-R7	1.09	1.09	1.11	1.02	0.96	0.92	0.89	0.89	0.99	0.98	1.09	1.13	0.98
U1-Boston	1.03	1.01	0.98	0.94	0.94	0.92	0.95	0.93	0.94	0.94	0.97	1.04	0.96
U1-Essex	1.09	1.06	1.03	0.99	0.94	0.90	0.88	0.86	0.93	0.94	0.99	1.06	0.93
U1-Southeast	1.06	1.05	1.01	0.97	0.95	0.93	0.93	0.90	0.94	0.94	0.98	1.04	0.98
U1-West	1.19	1.14	1.09	0.95	0.92	0.89	0.89	0.86	0.91	0.95	0.97	1.07	0.84
U1-Worcester	1.02	1.04	0.97	0.94	0.93	0.91	0.95	0.91	0.93	0.92	0.95	1.10	0.88
U2	1.01	1.00	0.94	0.93	0.91	0.89	0.93	0.90	0.90	0.91	0.94	1.02	0.99
U3	1.06	1.03	0.98	0.94	0.93	0.91	0.95	0.91	0.92	0.93	0.97	1.00	0.98
U4-U7	1.01	1.00	0.95	0.92	0.88	0.86	0.92	0.91	0.92	0.94	0.99	1.04	0.99
Rec - East	1.04	1.16	1.12	0.98	0.92	0.88	0.77	0.81	0.94	1.02	1.08	1.12	0.99
Rec - West	1.30	1.23	1.32	1.18	0.95	0.82	0.70	0.69	0.97	0.96	1.16	1.15	0.98

Round off:
0-999 = 10
>1000 = 100

U = Urban
R = Rural

1 - Interstate
2 - Freeway and Expressway
3 - Other Principal Arterial
4 - Minor Arterial
5 - Major Collector
6 - Minor Collector
7 - Local Road and Street

Recreational - East Group - Cape Cod (all towns) including the town of Plymouth south of Route 3A (stations 7014,7079,7080,7090,7091,7092,7093,7094,7095,7096,7097,7108 and 7178), Martha's Vineyard and Nantucket.

Recreational - West Group - Continuous Stations 2 and 189 including stations 1066,1067,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1113,1114,1116,2196,2197 and 2198.

Bowman

APPENDIX C

TRAFFIC PROJECTION MODEL

TRAFFIC PROJECTION MODEL

Leominster Solid Waste Facility - Tonnage Increase
Weekday Morning Peak Hour
Leominster, MA

Intersection	Dir.	Turn	2023 Counted Volumes	2023 Existing Volumes	Background Growth 7 yrs (at 2.0 % per year)	Volume Balancing	2030 No Build Volumes	New Project PERCENT ENTER	New Project Trips ENTER	New Project PERCENT EXIT	New Project Trips EXIT	New Project Trips TOTAL	2030 Build Volumes
New Lancaster Road (Route 117)	EB	L	95	95	14		109					0	109
at Willard Street		T	4	4	1		5					0	5
		R	248	248	37		285					0	285
	WB	L	24	24	4		28					0	28
		T	8	8	1		9					0	9
		R	8	8	1		9					0	9
	NB	L	106	106	16		122					0	122
		T	250	250	37		287	100%	8			8	295
		R	19	19	3		22					0	22
	SB	L	1	1	0		1					0	1
		T	291	291	43	1	335			100%	8	8	343
		R	36	36	5		41					0	41
New Lancaster Road (Route 117)	EB	L	11	11			11					0	11
at Tanzio Road		R	8	8			8				8	8	16
	NB	L	11	11			11	100%	8			8	19
		T	314	314	47	5	366					0	366
	SB	T	328	328	49		377					0	377
		R	11	11			11					0	11
Tanzio Road at	EB	L	0	0			0					0	0
Proposed Site Driveway		R	7	7			7			100%	8	8	15
	NB	L	12	12			12	100%	8			8	20
		T	0	0			0					0	0
	SB	T	1	1			1					0	1
		R	0	0			0					0	0

Peak Hour: 7:00 AM - 8:00 AM

TRAFFIC PROJECTION MODEL

Leominster Solid Waste Facility - Tonnage Increase

Weekday Afternoon Peak Hour

Leominster, MA

Intersection	Dir.	Turn	2023 Counted Volumes	2023 Existing Volumes	Background Growth 7 yrs (at 2.0 % per year)	Volume Balancing	2030 No Build Volumes	New Project PERCENT ENTER	New Project Trips ENTER	New Project PERCENT EXIT	New Project Trips EXIT	New Project Trips TOTAL	2030 Build Volumes
New Lancaster Road (Route 117)	EB	L	93	93	14		107					0	107
at Willard Street		T	11	11	2		13					0	13
		R	229	229	34		263					0	263
	WB	L	15	15	2		17					0	17
		T	4	4	1		5					0	5
		R	7	7	1		8					0	8
	NB	L	282	282	42		324					0	324
		T	446	446	66	5	517	100%	3			3	520
		R	26	26	4		30					0	30
	SB	L	4	4	1		5					0	5
		T	321	321	48		369			100%	3	3	372
		R	83	83	12		95					0	95
New Lancaster Road (Route 117)	EB	L	7	7			7					0	7
at Tanzio Road		R	7	7			7				3	3	10
	NB	L	2	2			2	100%	3			3	5
		T	576	576	86		662					0	662
	SB	T	358	358	53	8	419					0	419
		R	6	6			6					0	6
Tanzio Road at	EB	L	0	0			0					0	0
Proposed Site Driveway		R	5	5			5			100%	3	3	8
	NB	L	4	4			4	100%	3			3	7
		T	0	0			0					0	0
	SB	T	1	1			1					0	1
		R	0	0			0					0	0

Peak Hour: 4:15 PM - 5:15 PM

Bowman

APPENDIX D

CRASH SUMMARY

CRASH SUMMARY

Facility Tonnage Expansion
Leominster, MA

	New Lancaster Road (Route 117) at Willard Street	Lancaster Street (Route 117) at Tanzio Road	Site Driveway at Tanzio Road
Year			
2016	1	1	0
2017	2	1	0
2018	4	0	0
2019	3	0	0
2020	6	0	0
Type			
Angle	4	1	0
Rear-end	7	0	0
Sideswipe	3	0	0
Head-on	0	0	0
Pedestrian	0	0	0
Bicycle	0	0	0
Single Vehicle	2	1	0
Other	0	0	0
Unknown	0	0	0
Severity			
Property Damage	14	1	0
Personal Injury	2	1	0
Fatality	0	0	0
Unknown	0	0	0
Weather			
Clear	11	1	0
Cloudy	3	0	0
Rain	0	0	0
Snow	1	1	0
Sleet	1	0	0
Fog	0	0	0
Other	0	0	0
Unknown	0	0	0
Time			
7:00 AM to 9:00 AM	3	0	0
9:00 AM to 4:00 PM	6	1	0
4:00 PM to 6:00 PM	5	0	0
6:00 PM to 7:00 AM	2	1	0
Total	**16**	**2**	**0**
Crash Rate	0.63	0.18	0.00
State Average	0.78	0.57	0.57
District 3 Average	0.89	0.61	0.61

Source: MassDOT IMPACT Portal

Bowman

APPENDIX E

TRIP GENERATION CALCULTIONS

Summary Material Activity Report

All Ticket Types | March 27, 2023 to March 27, 2023

* - Confirmed Qty Applied to Billing

History and Waiting | Facility: WIN Waste Innovations at Leominster

All Materials

									Item	Ticket			
AC UNIT(S) / APPLIANCE	0.00	0.00 TN	0.00	0.00 YD		1.00	0.00 EA	1.00 EA	$50.00	$0.00	$0.00		1
C&D	194.25	0.00 TN	0.00	0.00 YD		0.00	0.00 EA	194.25 TN	$0.00	$0.00	$0.00		47
MATTRESS(ES)	0.00	0.00 TN	0.00	0.00 YD		3.00	0.00 EA	3.00 EA	$0.00	$0.00	$0.00		2
MSW	8.17	0.00 TN	0.00	0.00 YD		0.00	0.00 EA	8.17 TN	$0.00	$0.00	$0.00		1
RESIDUALS	527.10	764.95 TN	0.00	0.00 YD		0.00	0.00 EA	1,292.05 TN	$0.00	$0.00	$0.00		27
TIRE(S) CAR	0.00	0.00 TN	0.00	0.00 YD		2.00	0.00 EA	2.00 EA	$0.00	$0.00	$0.00		2
TV/MONITOR(S)	0.00	0.00 TN	0.00	0.00 YD		2.00	0.00 EA	2.00 EA	$0.00	$0.00	$0.00		1
WOOD CLEAN	0.00	15.03 TN	0.00	0.00 YD		0.00	0.00 EA	15.03 TN	$0.00	$0.00	$0.00		2
	729.52	779.98 TN	0.00	0.00 YD	8.00	0.00 EA	8.00 EA 1,509.50 TN	$0.00	$0.00		$0.00	83	77

Summary Material Activity Report

All Ticket Types

March 28, 2023 to March 28, 2023

* - Confirmed Qty Applied to Billing

History and Waiting

Facility: WIN Waste Innovations at Leominster

All Materials

Item Ticket

AC UNIT(S) / APPLIANCE	0.00	0.00 TN	0.00	0.00 YD	2.00	0.00 EA	2.00 EA	$0.00	$0.00	$0.00	1	
C&D	254.52	0.00 TN	0.00	0.00 YD	0.00	0.00 EA	254.52 TN	$0.00	$0.00	$0.00	58	
LIGHT IRON	0.00	12.85 TN	0.00	0.00 YD	0.00	0.00 EA	12.85 TN	$0.00	$0.00	$0.00	1	
MATTRESS(ES)	0.00	0.00 TN	0.00	0.00 YD	9.00	0.00 EA	9.00 EA	$0.00	$0.00	$0.00	4	
RESIDUALS	513.66	576.75 TN	0.00	0.00 YD	0.00	0.00 EA	1,090.41 TN	$0.00	$0.00	$0.00	25	
WOOD CLEAN	0.00	7.60 TN	0.00	0.00 YD	0.00	0.00 EA	7.60 TN	$0.00	$0.00	$0.00	1	
WHITE GOODS	0.00	0.00 TN	0.00	0.00 YD	4.00	0.00 EA	4.00 EA	$0.00	$0.00	$0.00	1	
	768.18	597.20 TN	0.00	0.00 YD	15.00	0.00 EA	15.00 EA 1,365.38 TN	$0.00	$0.00	$0.00	91	85

Summary Material Activity Report

All Ticket Types — March 29, 2023 to March 29, 2023

* - Confirmed Qty Applied to Billing

History and Waiting — Facility: WIN Waste Innovations at Leominster

All Materials

Material	Weight Inbound	Weight Outbound	Volume Inbound	Volume Outbound	Count Inbound	Count Outbound	Billing Qty	Material Total	Tax Total	Total	Item Count	Ticket Count	trucks/vehicles
AC UNIT(S) / APPLIANCE	0.00	0.00 TN	0.00	0.00 YD	2.00	0.00 EA	2.00 EA	$0.00	$0.00	$0.00			1
C&D	216.21	0.00 TN	0.00	0.00 YD	0.00	0.00 EA	216.21 TN	$0.00	$0.00	$0.00			48
MSW	6.94	0.00 TN	0.00	0.00 YD	0.00	0.00 EA	6.94 TN	$0.00	$0.00	$0.00			1
RESIDUALS	463.63	933.35 TN	0.00	0.00 YD	0.00	0.00 EA	1,396.98 TN	$0.00	$0.00	$0.00			27
TIRE(S) CAR	0.00	0.00 TN	0.00	0.00 YD	2.00	0.00 EA	2.00 EA	$0.00	$0.00	$0.00			1
WOOD CLEAN	0.00	23.60 TN	0.00	0.00 YD	0.00	0.00 EA	23.60 TN	$0.00	$0.00	$0.00			3
WHITE GOODS	0.00	0.00 TN	0.00	0.00 YD	2.00	0.00 EA	2.00 EA	$0.00	$0.00	$0.00			1
	686.78	956.95 TN	0.00	0.00 YD	6.00	0.00 EA	6.00 EA 1,643.73 TN	$0.00	$0.00	$0.00	82		79

Summary Material Activity Report

All Ticket Types

March 30, 2023 to March 30, 2023

* - Confirmed Qty Applied to Billing

History and Waiting

Facility: WIN Waste Innovations at Leominster

All Materials

Material	Weight Inbound	Weight Outbound		Volume Inbound	Volume Outbound		Count Inbound	Count Outbound		Billing Qty		Material Total	Tax Total	Total	Item Count	Ticket Count / trucks/vehicles
ALUMINUM LOOSE	0.00	1.79	TN	0.00	0.00	YD	0.00	0.00	EA	1.79	TN	$0.00	$0.00	$0.00		1
AC UNIT(S) / APPLIANCE	0.00	0.00	TN	0.00	0.00	YD	1.00	0.00	EA	1.00	EA	$0.00	$0.00	$0.00		1
C&D	199.76	0.00	TN	0.00	0.00	YD	0.00	0.00	EA	199.76	TN	$0.00	$0.00	$0.00		38
LIGHT IRON	0.00	7.71	TN	0.00	0.00	YD	0.00	0.00	EA	7.71	TN	$0.00	$0.00	$0.00		1
MSW	7.58	0.00	TN	0.00	0.00	YD	0.00	0.00	EA	7.58	TN	$0.00	$0.00	$0.00		1
OCC	0.00	2.77	TN	0.00	0.00	YD	0.00	0.00	EA	2.77	TN	$0.00	$0.00	$0.00		1
RESIDUALS	509.39	565.00	TN	0.00	0.00	YD	0.00	0.00	EA	1,074.39	TN	$0.00	$0.00	$0.00		25
TV/MONITOR(S)	0.00	0.00	TN	0.00	0.00	YD	2.00	0.00	EA	2.00	EA	$0.00	$0.00	$0.00		1
WOOD CLEAN	0.00	8.20	TN	0.00	0.00	YD	0.00	0.00	EA	8.20	TN	$0.00	$0.00	$0.00		1
	716.73	585.47	TN	0.00	0.00	YD	3.00	0.00	EA	3.00	EA	$0.00	$0.00	$0.00	70	68
										1,302.20	TN					

thodgkins 04/28/2023 12:27 PM

WIN Waste Innovations Millbury TS

Summary Material Activity Report

All Ticket Types

March 31, 2023 to March 31, 2023

* - Confirmed Qty Applied to Billing

History and Waiting

Facility: WIN Waste Innovations at Leominster

All Materials

Material	Weight Inbound	Weight Outbound	Volume Inbound	Volume Outbound	Count Inbound	Count Outbound	Billing Qty	Material Total	Tax Total	Total		trucks/vehicles
AC UNIT(S) / APPLIANCE	0.00	0.00 TN	0.00	0.00 YD	1.00	0.00 EA	1.00 EA	$0.00	$0.00	$0.00		1
C&D	126.90	0.00 TN	0.00	0.00 YD	0.00	0.00 EA	126.90 TN	$0.00	$0.00	$0.00		43
MATTRESS(ES)	0.00	0.00 TN	0.00	0.00 YD	5.00	0.00 EA	5.00 EA	$0.00	$0.00	$0.00		2
MSW	7.19	0.00 TN	0.00	0.00 YD	0.00	0.00 EA	7.19 TN	$0.00	$0.00	$0.00		1
RESIDUALS	422.55	1,112.95 TN	0.00	0.00 YD	0.00	0.00 EA	1,535.50 TN	$0.00	$0.00	$0.00		27
TIRE(S) CAR	0.00	0.00 TN	0.00	0.00 YD	12.00	0.00 EA	12.00 EA	$0.00	$0.00	$0.00		2
WOOD CLEAN	0.00	27.91 TN	0.00	0.00 YD	0.00	0.00 EA	27.91 TN	$0.00	$0.00	$0.00		4
WHITE GOODS	0.00	0.00 TN	0.00	0.00 YD	1.00	0.00 EA	1.00 EA	$0.00	$0.00	$0.00		1
	556.64	1,140.86 TN	0.00	0.00 YD	19.00	0.00 EA	19.00 EA 1,697.50 TN	$0.00	$0.00	$0.00	81	75

Summary Material Activity Report

All Ticket Types

April 01, 2023 to April 01, 2023

* - Confirmed Qty Applied to Billing

History and Waiting

Facility: WIN Waste Innovations at Leominster

All Materials

Material	Weight Inbound	Weight Outbound	Volume Inbound	Volume Outbound	Count Inbound	Count Outbound	Billing Qty	Material Total	Tax Total	Total	Item Count	Ticket Count
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	$0.00	$0.00	$0.00		
							$0.00	$0.00		$0.00		

Date	Monday March 27	Tuesday March 28	Wednesday March 29	Thursday March 30	Friday March 31	**Average**
Inbound (Tons)	729.52	768.18	686.78	716.73	556.64	**692**
Inbound (Trucks)	75	83	76	64	71	**74**
Inbound T/Truck	**9.7**	**9.3**	**9.0**	**11.2**	**7.8**	**9.4**

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36543**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 6:29 am	3/27/23 6:45 am	27525		

REFERENCE	ORIGIN
ROC	MA

001266 - WIN - LONDONDERRY COLLECTIONS
209 NASHUA RD
LONDONDERRY, NH 03053

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 39620 lb Scale In
TARE 37340 lb Scale Out
NET 2280 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.14	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

Intercompany Info
Work Order: 918974
Route #: 0

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36544**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 6:31 am	3/27/23 7:09 am	31050		

REFERENCE	ORIGIN
TT - SERVICE PLUS 19	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 98700 lb Manual In
TARE 43300 lb Manual Out
NET 55400 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
27.70	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36542**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 6:32 am	3/27/23 6:40 am	29171		

REFERENCE	ORIGIN
TT - KGD 16	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 99000 lb Manual In
TARE 42800 lb Manual Out
NET 56200 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
28.10	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36541**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 6:38 am	3/27/23 6:38 am	44042		

REFERENCE	ORIGIN
TT - RECORE 53	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 99960 lb Manual In
TARE 39140 lb Manual Out
NET 60820 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
30.41	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36548**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 6:40 am	3/27/23 7:42 am	43267		

REFERENCE	ORIGIN
TT - DYNAMIC YELLOW	MA

001399 - North Andover Waste Systems
PO Box 227
East Greenwich, RI 02818

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 95660 lb Scale In
TARE 42840 lb Scale Out
NET 52820 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
26.41	TN	RESIDUALS				
2.00	EA	MATTRESS(ES)	2			
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36547**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 7:16 am	3/27/23 7:33 am	43254		

REFERENCE	ORIGIN
ST - GM	MA

001273 - ROUTE 12 DUMPSTERS
106 CARTER ROAD
LEOMINSTER, MA 01453

CONTRACT: LEO1

CASH
INBOUND

GROSS 17420 lb Scale In
TARE 11820 lb Scale Out
NET 5600 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
2.80	TN	C&D			$0.00	
1.00	EA	MATTRESS(ES)	1		$0.00	
1.00		Environmental Fee			$0.00	
1.00		FUEL CHARGE			$0.00	

Total:
Amount Paid:
Payment Type: Visa
4

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

Change: $0.00

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36551**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 7:31 am	3/27/23 8:15 am	27673		

REFERENCE	ORIGIN
TT - RICHARD	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 92620 lb Manual In
TARE 40620 lb Manual Out
NET 52000 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
26.00	TN	RESIDUALS				
1.00	EA	TIRE(S) CAR	1			
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36549**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 7:38 am	3/27/23 7:57 am	43617		

REFERENCE	ORIGIN
ROO 9	MA

001005 - D & D WASTE REMOVAL
72 JACKSON AVENUE
FITCHBURG, MA 01420

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 37940 lb Scale In
TARE 35020 lb Scale Out
NET 2920 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.46	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36550**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 7:42 am	3/27/23 7:59 am	43260		

REFERENCE	ORIGIN
ROO 51	MA

001007 - DANDINI DISPOSAL
PO BOX 187
LEOMINSTER, MA 01453

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 24600 lb Scale In
TARE 18260 lb Scale Out
NET 6340 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.17	TN	C&D				
1.00	EA	AC UNIT(S) / APPLIANCE	1			
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36553**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 7:47 am	3/27/23 8:40 am	43635		

REFERENCE	ORIGIN
TT - WSTREAM 328	MA

001399 - North Andover Waste Systems
PO Box 227
East Greenwich, RI 02818

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 102080 lb Scale In
TARE 43040 lb Scale Out
NET 59040 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
29.52	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36552**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 8:33 am	3/27/23 8:33 am	26912		

REFERENCE	ORIGIN
TT - JC	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 102300 lb Manual In
TARE 41780 lb Manual Out
NET 60520 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
30.26	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:___________________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36554**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 8:36 am	3/27/23 8:56 am	43732		

REFERENCE	ORIGIN
TT - BOURNE	MA

001329 - BOURNE LANDFILL
24 Perry Ave
BOURNE, MA 02532

CONTRACT: LEO

INVOICE
INBOUND

GROSS 78640 lb Scale In
TARE 36260 lb Scale Out
NET 42380 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.19	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:___________________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36556**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 8:46 am	3/27/23 9:07 am	44042		

REFERENCE	ORIGIN
TT - RECORE 53	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 97500 lb Manual In
TARE 38960 lb Manual Out
NET 58540 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
29.27	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36555**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 8:46 am	3/27/23 9:07 am	43207		

REFERENCE	ORIGIN
ROO 46	MA

001007 - DANDINI DISPOSAL
PO BOX 187
LEOMINSTER, MA 01453

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 25200 lb Scale In
TARE 20840 lb Scale Out
NET 4360 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
2.18	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36558**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 8:51 am	3/27/23 9:09 am	43782		

REFERENCE	ORIGIN
ROO 23	NH

001202 - MD RECYCLING
PO BOX 155
MILFORD, NH 03055-0155

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 20040 lb Scale In
TARE 17840 lb Scale Out
NET 2200 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.10	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36557**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 8:55 am	3/27/23 9:08 am	43276		

REFERENCE	ORIGIN
ROO 18	NH

001006 - D C SLOCOMB CO
32 GREENVILLE ROAD
WILTON, NH 03086

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 33660 lb Scale In
TARE 29620 lb Scale Out
NET 4040 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
2.02	TN	C&D				
2.00	EA	TV/MONITOR(S)	2			
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36559**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 9:03 am	3/27/23 9:16 am	43617		

REFERENCE	ORIGIN
ROO 9	MA

001005 - D & D WASTE REMOVAL
72 JACKSON AVENUE
FITCHBURG, MA 01420

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 48960 lb Scale In
TARE 34840 lb Scale Out
NET 14120 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
7.06	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36560**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 9:12 am	3/27/23 9:27 am	43927		

REFERENCE	ORIGIN
ROO 19	MA

001130 - GUIDO'S SERVICES INC
269 CRAWFORD STREET
LEOMINSTER, MA 01453

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 39160 lb Scale In
TARE 32700 lb Scale Out
NET 6460 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.23	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36562**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 9:33 am	3/27/23 9:59 am	CASH LEO		

REFERENCE	ORIGIN
ST - KAS	MA

001059 - CASH CUSTOMERS LEOMINSTER (COD)
200 TANZIO ROAD
LEOMINSTER, MA 01453

CONTRACT: Gate Rate Leominster

CASH
INBOUND

GROSS 17560 lb Scale In
TARE 12920 lb Scale Out
NET 4640 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
2.32	TN	C&D			$0.00	
1.00		Environmental Fee			$0.00	
1.00		FUEL CHARGE			$0.00	

Total:
Amount Paid:
Payment Type: Visa
4

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

Change: $0.00

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36565**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 9:40 am	3/27/23 10:20 am	27400		

REFERENCE	ORIGIN
TT - WSTREAM 325	MA

001399 - North Andover Waste Systems
PO Box 227
East Greenwich, RI 02818

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 102300 lb Scale In
TARE 40120 lb Scale Out
NET 62180 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
31.09	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36561**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 9:43 am	3/27/23 9:56 am	43229		

REFERENCE	ORIGIN
ROO 18	NH

001202 - MD RECYCLING
PO BOX 155
MILFORD, NH 03055-0155

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 37860 lb Scale In
TARE 30680 lb Scale Out
NET 7180 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.59	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36563**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 10:04 am	3/27/23 10:13 am	20438		

REFERENCE	ORIGIN
ROO 17	MA

001077 - D CRESCIO TRUCKING
PO BOX 512
BILLERICA, MA 01821

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 50220 lb Scale In
TARE 37540 lb Scale Out
NET 12680 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
6.34	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36564**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 10:15 am	3/27/23 10:15 am	31050		

REFERENCE	ORIGIN
TT - SERVICE PLUS 19	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 101680 lb Manual In
TARE 44020 lb Manual Out
NET 57660 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
28.83	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36566**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 10:36 am	3/27/23 10:51 am	43216		

REFERENCE	ORIGIN
	MA

001183 - A J ARSENAULT
62 LAKEVIEW STREET
LEOMINSTER, MA 01453-4513

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 15500 lb Manual In
TARE 14000 lb Scale Out
NET 1500 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
0.75	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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REPRINT

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36575**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 10:38 am	3/27/23 11:33 am	43267		

REFERENCE	ORIGIN
TT - DYNAMIC YELLOW	MA

001399 - North Andover Waste Systems
PO Box 227
East Greenwich, RI 02818

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 76500 lb Scale In
TARE 42180 lb Scale Out
NET 34320 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
17.16	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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REPRINT

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36567**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 10:38 am	3/27/23 10:53 am	43299		

REFERENCE	ORIGIN
TT - JC/VICTOR	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 101560 lb Manual In
TARE 42120 lb Manual Out
NET 59440 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
29.72	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR		
01	**36568**	jhamilton		

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 10:44 am	3/27/23 10:55 am	43889		

REFERENCE	ORIGIN
	MA

001010 - MITRANO REMOVAL SVS LLC
104 LANCASTER ROAD #2
SHIRLEY, MA 01464

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 42560 lb Scale In
TARE 35660 lb Scale Out
NET 6900 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.45	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR		
01	**36569**	jhamilton		

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 10:46 am	3/27/23 11:04 am	43605		

REFERENCE	ORIGIN
	MA

001008 - GW SHAW
124 OLD WILTON ROAD
GREENVILLE, NH 03048-3108

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 37000 lb Scale In
TARE 33840 lb Scale Out
NET 3160 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.58	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36570**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:03 am	3/27/23 11:13 am	43606		

REFERENCE	ORIGIN
ROO	MA

001266 - WIN - LONDONDERRY COLLECTIONS
209 NASHUA RD
LONDONDERRY, NH 03053

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 48620 lb Scale In
TARE 39840 lb Scale Out
NET 8780 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
4.39	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

Intercompany Info
Work Order: 919967
Route #: 0

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36580**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:06 am	3/27/23 12:04 pm	26651		

REFERENCE	ORIGIN
TT - CWT 2195	MA

001113 - G MELLO TRAILERS
95 TENNEY STREET
GEORGETOWN, MA 01833

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 87960 lb Scale In
TARE 44000 lb Scale Out
NET 43960 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
21.98	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36572**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:07 am	3/27/23 11:18 am	43220		

REFERENCE	ORIGIN
ROO 304	MA

001009 - MARK-ONE LLC
109 INDUSTRIAL AVENUE EAST
LOWELL, MA 01852-5111

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 23060 lb Scale In
TARE 18220 lb Scale Out
NET 4840 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
2.42	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36571**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:08 am	3/27/23 11:17 am	43710		

REFERENCE	ORIGIN
ROO 3	MA

001005 - D & D WASTE REMOVAL
72 JACKSON AVENUE
FITCHBURG, MA 01420

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 22160 lb Scale In
TARE 19580 lb Scale Out
NET 2580 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.29	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36573**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:15 am	3/27/23 11:28 am	43221		

REFERENCE	ORIGIN
ROO 46	MA

001008 - GW SHAW
124 OLD WILTON ROAD
GREENVILLE, NH 03048-3108

INVOICE
INBOUND

CONTRACT: LEO1

GROSS 41060 lb Scale In
TARE 34100 lb Scale Out
NET 6960 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.48	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_______________________

CUSTOMER COPY

REPRINT

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36576**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:22 am	3/27/23 11:34 am	CASH LEO		

REFERENCE	ORIGIN
BLACK PICK UP W/ TRAILER	MA

001059 - CASH CUSTOMERS LEOMINSTER (COD)
200 TANZIO ROAD
LEOMINSTER, MA 01453

CASH
INBOUND

CONTRACT: Gate Rate Leominster

GROSS 14600 lb Scale In
TARE 10740 lb Scale Out
NET 3860 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.93	TN	C&D			$0.00	
1.00		Environmental Fee			$0.00	
1.00		FUEL CHARGE			$0.00	

Total:
Amount Paid:
Payment Type: Mastercard
5

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_______________________

Change: $0.00

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36574**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:29 am	3/27/23 11:29 am	43810		S 90288

REFERENCE	ORIGIN
ROO 7	MA

001267 - SERVICE PLUS
PO BOX 1032
WORCESTER, MA 01613

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 19260 lb Manual In
TARE 16120 lb Scale Out
NET 3140 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.57	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36577**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:32 am	3/27/23 11:47 am	43620		

REFERENCE	ORIGIN
ROO 306	MA

001009 - MARK-ONE LLC
109 INDUSTRIAL AVENUE EAST
LOWELL, MA 01852-5111

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 43160 lb Scale In
TARE 34080 lb Scale Out
NET 9080 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
4.54	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36578**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:35 am	3/27/23 11:52 am	43294		

REFERENCE	ORIGIN
ROO BUSY BEE	MA

001273 - ROUTE 12 DUMPSTERS
106 CARTER ROAD
LEOMINSTER, MA 01453

CONTRACT: LEO1

CASH
INBOUND

GROSS 24920 lb Scale In
TARE 13740 lb Scale Out
NET 11180 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
5.59	TN	C&D			$0.00	
1.00		Environmental Fee			$0.00	
1.00		FUEL CHARGE			$0.00	

Total:
Amount Paid:
Payment Type: merican Express
3

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

Change: $0.00

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36579**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:37 am	3/27/23 11:57 am	43757		

REFERENCE	ORIGIN
ROO 8	MA

001005 - D & D WASTE REMOVAL
72 JACKSON AVENUE
FITCHBURG, MA 01420

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 24240 lb Scale In
TARE 18360 lb Scale Out
NET 5880 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
2.94	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36581**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:41 am	3/27/23 12:07 pm	43216		

REFERENCE	ORIGIN
ROO	MA

001183 - A J ARSENAULT
62 LAKEVIEW STREET
LEOMINSTER, MA 01453-4513

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 16560 lb Scale In
TARE 14260 lb Scale Out
NET 2300 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.15	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36582**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:47 am	3/27/23 12:09 pm	43229		

REFERENCE	ORIGIN
ROO 18	NH

001202 - MD RECYCLING
PO BOX 155
MILFORD, NH 03055-0155

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 50760 lb Scale In
TARE 30680 lb Scale Out
NET 20080 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
10.04	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36583**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:53 am	3/27/23 12:10 pm	43243		

REFERENCE	ORIGIN
ST W/ TRAILER	MA

001365 - BENHAM CONSTRUCTION
59 BUTTERMILK ROAD
LEOMINSTER, MA 01453

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 11520 lb Scale In
TARE 10440 lb Scale Out
NET 1080 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
0.54	TN	C&D			$0.00	
1.00		Environmental Fee			$0.00	
1.00		FUEL CHARGE			$0.00	

$0.00

$0.00

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36589**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 11:55 am	3/27/23 12:48 pm	26921		

REFERENCE	ORIGIN
TT - WSTREAM 330 (WDS)	MA

001152 - STAR WASTE SYSTEMS, LLC - DIRECT
PO BOX 227
EAST GREENWICH, RI 02818

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 46640 lb Scale In
TARE 39720 lb Scale Out
NET 6920 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.46	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

001007 - DANDINI DISPOSAL
PO BOX 187
LEOMINSTER, MA 01453

CONTRACT: LEO1

INVOICE
INBOUND

SITE	TICKET #	OPERATOR
01	**36584**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:07 pm	3/27/23 12:14 pm	43206		

REFERENCE	ORIGIN
ROO 41	MA

GROSS 22020 lb Scale In
TARE 17520 lb Scale Out
NET 4500 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
2.25	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

SITE	TICKET #	OPERATOR
01	**36585**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:09 pm	3/27/23 12:29 pm	27673		

REFERENCE	ORIGIN
TT - RICHARD	MA

GROSS 91940 lb Manual In
TARE 40500 lb Manual Out
NET 51440 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
25.72	TN	RESIDUALS				
1.00	EA	TIRE(S) CAR	1			
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

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SITE	TICKET #	OPERATOR
01	**36591**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:16 pm	3/27/23 12:51 pm	29171		

REFERENCE	ORIGIN
TT - KGD 16	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 99720 lb Manual In
TARE 43080 lb Manual Out
NET 56640 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
28.32	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36586**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:17 pm	3/27/23 12:30 pm	43710		

REFERENCE	ORIGIN
ROO 3	MA

001005 - D & D WASTE REMOVAL
72 JACKSON AVENUE
FITCHBURG, MA 01420

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 23420 lb Scale In
TARE 20100 lb Scale Out
NET 3320 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.66	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36587**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:24 pm	3/27/23 12:44 pm	43224		

REFERENCE	ORIGIN
ROO 302	MA

001009 - MARK-ONE LLC
109 INDUSTRIAL AVENUE EAST
LOWELL, MA 01852-5111

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 40160 lb Scale In
TARE 35260 lb Scale Out
NET 4900 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
2.45	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36588**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:25 pm	3/27/23 12:45 pm	43215		

REFERENCE	ORIGIN
ROO 52	MA

001008 - GW SHAW
124 OLD WILTON ROAD
GREENVILLE, NH 03048-3108

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 24040 lb Scale In
TARE 20020 lb Scale Out
NET 4020 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
2.01	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36590**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:31 pm	3/27/23 12:50 pm	20438		

REFERENCE	ORIGIN
ROO 17	MA

001077 - D CRESCIO TRUCKING
PO BOX 512
BILLERICA, MA 01821

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 43980 lb Scale In
TARE 36980 lb Scale Out
NET 7000 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.50	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36593**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:38 pm	3/27/23 1:12 pm	44042		

REFERENCE	ORIGIN
TT - RECORE 53	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 94520 lb Manual In
TARE 38840 lb Manual Out
NET 55680 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
27.84	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_______________________________

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REPRINT

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36592**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:47 pm	3/27/23 12:59 pm	43254		

REFERENCE	ORIGIN
ST - GM	MA

001273 - ROUTE 12 DUMPSTERS
106 CARTER ROAD
LEOMINSTER, MA 01453

CONTRACT: LEO1

CASH
INBOUND

GROSS 19400 lb Scale In
TARE 12020 lb Scale Out
NET 7380 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.69	TN	C&D			$0.00	
1.00		Environmental Fee			$0.00	
1.00		FUEL CHARGE			$0.00	

Total:
Amount Paid:
Payment Type: Visa 4

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:__________________________________

Change: $0.00

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36599**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:51 pm	3/27/23 1:44 pm	29171		

REFERENCE	ORIGIN
TT - KGD 16	Outbound

001358 - WIN - UMM OF MILLBURY (OUTBOUND)
200 FRIBERG PARKWAY, SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 60660 lb Scale In
TARE 42780 lb Scale Out
NET 17880 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
8.94	TN	WOOD CLEAN				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:__________________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36594**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 12:57 pm	3/27/23 1:14 pm	27525		

REFERENCE	ORIGIN
ROO	MA

001266 - WIN - LONDONDERRY COLLECTIONS
209 NASHUA RD
LONDONDERRY, NH 03053

INVOICE
INBOUND

CONTRACT: LEO1

GROSS 46300 lb Scale In
TARE 37780 lb Scale Out
NET 8520 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
4.26	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

Intercompany Info
Work Order: 919877
Route #: 0

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36595**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 1:07 pm	3/27/23 1:14 pm	43277		

REFERENCE	ORIGIN
PAC	MA

001266 - WIN - LONDONDERRY COLLECTIONS
209 NASHUA RD
LONDONDERRY, NH 03053

INVOICE
INBOUND

CONTRACT: LEO1

GROSS 56860 lb Scale In
TARE 40520 lb Scale Out
NET 16340 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
8.17	TN	MSW				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36605**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 1:12 pm	3/27/23 2:29 pm	44042		

REFERENCE	ORIGIN
TT - RECORE 53	Outbound

001358 - WIN - UMM OF MILLBURY (OUTBOUND)
200 FRIBERG PARKWAY, SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 50860 lb Scale In
TARE 38680 lb Scale Out
NET 12180 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
6.09	TN	WOOD CLEAN				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36596**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 1:16 pm	3/27/23 1:26 pm	CASH LEO		

REFERENCE	ORIGIN
BLACK PICK UP W/ TRAILER	MA

001059 - CASH CUSTOMERS LEOMINSTER (COD)
200 TANZIO ROAD
LEOMINSTER, MA 01453

CONTRACT: Gate Rate Leominster

CASH
INBOUND

GROSS 14620 lb Scale In
TARE 10820 lb Scale Out
NET 3800 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.90	TN	C&D			$0.00	
1.00		Environmental Fee			$0.00	
1.00		FUEL CHARGE			$0.00	

Total:
Amount Paid:
Payment Type: Mastercard 5

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

Change: $0.00

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36597**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 1:24 pm	3/27/23 1:35 pm	43620		

REFERENCE	ORIGIN
ROO 306	MA

001009 - MARK-ONE LLC
109 INDUSTRIAL AVENUE EAST
LOWELL, MA 01852-5111

INVOICE
INBOUND

CONTRACT: LEO1

GROSS 57000 lb Scale In
TARE 34160 lb Scale Out
NET 22840 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
11.42	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36598**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 1:27 pm	3/27/23 1:41 pm	CASH LEO		

REFERENCE	ORIGIN
ST - GREENLEAF	MA

001059 - CASH CUSTOMERS LEOMINSTER (COD)
200 TANZIO ROAD
LEOMINSTER, MA 01453

CASH
INBOUND

CONTRACT: Gate Rate Leominster

GROSS 12300 lb Scale In
TARE 9400 lb Scale Out
NET 2900 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
1.45	TN	C&D			$0.00	
1.00		Environmental Fee			$0.00	
1.00		FUEL CHARGE			$0.00	

Total:
Amount Paid:
Payment Type: Mastercard
5

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________ **Change:** $0.00

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36600**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 1:30 pm	3/27/23 2:07 pm	20664		

REFERENCE	ORIGIN
TT - JIM	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 94600 lb Manual In
TARE 40020 lb Manual Out
NET 54580 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
27.29	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36601**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 1:32 pm	3/27/23 2:12 pm	43635		

REFERENCE	ORIGIN
TT - WSTREAM 328 (NEEDHAM)	MA

001152 - STAR WASTE SYSTEMS, LLC - DIRECT
PO BOX 227
EAST GREENWICH, RI 02818

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 53960 lb Scale In
TARE 42920 lb Scale Out
NET 11040 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
5.52	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36604**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 1:52 pm	3/27/23 2:26 pm	31050		

REFERENCE	ORIGIN
TT - SERVICE PLUS 19	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 100920 lb Manual In
TARE 43820 lb Manual Out
NET 57100 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
28.55	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

CUSTOMER COPY

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36603**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 1:55 pm	3/27/23 2:26 pm	43229		

REFERENCE	ORIGIN
ROO 18	NH

001202 - MD RECYCLING
PO BOX 155
MILFORD, NH 03055-0155

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 37660 lb Scale In
TARE 30940 lb Scale Out
NET 6720 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.36	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36602**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 2:05 pm	3/27/23 2:23 pm	43606		

REFERENCE	ORIGIN
ROO	MA

001266 - WIN - LONDONDERRY COLLECTIONS
209 NASHUA RD
LONDONDERRY, NH 03053

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 45780 lb Scale In
TARE 37540 lb Scale Out
NET 8240 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
4.12	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

Intercompany Info
Work Order: 919915
Route #: 0

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36606**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 2:11 pm	3/27/23 2:32 pm	43767		

REFERENCE	ORIGIN
ROO 53	MA

001008 - GW SHAW
124 OLD WILTON ROAD
GREENVILLE, NH 03048-3108

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 29540 lb Scale In
TARE 21540 lb Scale Out
NET 8000 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
4.00	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36607**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 2:21 pm	3/27/23 2:33 pm	43927		

REFERENCE	ORIGIN
ROO 19	MA

001130 - GUIDO'S SERVICES INC
269 CRAWFORD STREET
LEOMINSTER, MA 01453

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 40320 lb Scale In
TARE 33140 lb Scale Out
NET 7180 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
3.59	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36608**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 2:23 pm	3/27/23 3:06 pm	27400		

REFERENCE	ORIGIN
TT - WSTREAM 325	MA

001399 - North Andover Waste Systems
PO Box 227
East Greenwich, RI 02818

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 89540 lb Scale In
TARE 40040 lb Scale Out
NET 49500 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
24.75	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

CUSTOMER COPY

REPRINT

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36618**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 2:59 pm	3/27/23 3:20 pm	27222		

REFERENCE	ORIGIN
TT - KGD 29	MA

001306 - WIN - MILLBURY TS
200 FRIBERG PARKWAY SUITE 4001
WESTBOROUGH, MA 01581

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 102440 lb Manual In
TARE 42120 lb Manual Out
NET 60320 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
30.16	TN	RESIDUALS				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36609**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:00 pm	3/27/23 3:10 pm	43294		

REFERENCE	ORIGIN
ROO BUSY BEE	MA

001273 - ROUTE 12 DUMPSTERS
106 CARTER ROAD
LEOMINSTER, MA 01453

CONTRACT: LEO1

CASH
INBOUND

GROSS 23280 lb Scale In
TARE 13260 lb Scale Out
NET 10020 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
5.01	TN	C&D			$0.00	
1.00		Environmental Fee			$0.00	
1.00		FUEL CHARGE			$0.00	

Total:
Amount Paid:
Payment Type: nerican Express
3

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

Change: $0.00

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36619**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:12 pm	3/27/23 3:26 pm	26941		

REFERENCE	ORIGIN
ROO	MA

001266 - WIN - LONDONDERRY COLLECTIONS
209 NASHUA RD
LONDONDERRY, NH 03053

CONTRACT: LEO1

INVOICE
INBOUND

GROSS 45160 lb Scale In
TARE 34440 lb Scale Out
NET 10720 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
5.36	TN	C&D				
1.00		Environmental Fee				
1.00		FUEL CHARGE				

Intercompany Info
Work Order: 918644
Route #: 0

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36610**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:13 pm	3/27/23 3:13 pm	RAILSUNNYFARMS		

REFERENCE	ORIGIN
LEWX2131	Outbound

001355 - WIN - SUNNY FARMS LANDFILL (OUTBOUND)
12500 W COUNTY RD 18
FOSTORIA, OH 44830

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 248000 lb Manual In
TARE 73600 lb Manual Out
NET 174400 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
87.20	TN	RESIDUALS				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36611**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:15 pm	3/27/23 3:15 pm	RAILSUNNYFARMS		

REFERENCE	ORIGIN
CDEX206260	Outbound

001355 - WIN - SUNNY FARMS LANDFILL (OUTBOUND)
12500 W COUNTY RD 18
FOSTORIA, OH 44830

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 277000 lb Manual In
TARE 85600 lb Manual Out
NET 191400 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
95.70	TN	RESIDUALS				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36612**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:15 pm	3/27/23 3:15 pm	RAILSUNNYFARMS		

REFERENCE	ORIGIN
WINX162	Outbound

001355 - WIN - SUNNY FARMS LANDFILL (OUTBOUND)
12500 W COUNTY RD 18
FOSTORIA, OH 44830

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 263000 lb Manual In
TARE 73300 lb Manual Out
NET 189700 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
94.85	TN	RESIDUALS				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:____________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36613**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:16 pm	3/27/23 3:16 pm	RAILSUNNYFARMS		

REFERENCE	ORIGIN
WINX431	Outbound

001355 - WIN - SUNNY FARMS LANDFILL (OUTBOUND)
12500 W COUNTY RD 18
FOSTORIA, OH 44830

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 269000 lb Manual In
TARE 73100 lb Manual Out
NET 195900 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
97.95	TN	RESIDUALS				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_______________________________

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WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

REPRINT

SITE	TICKET #	OPERATOR
01	**36614**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:16 pm	3/27/23 3:16 pm	RAILSUNNYFARMS		

REFERENCE	ORIGIN
WCTX572	Outbound

001355 - WIN - SUNNY FARMS LANDFILL (OUTBOUND)
12500 W COUNTY RD 18
FOSTORIA, OH 44830

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 270000 lb Manual In
TARE 72700 lb Manual Out
NET 197300 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
98.65	TN	RESIDUALS				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:_______________________________

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REPRINT

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR		
01	**36615**	jhamilton		

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:16 pm	3/27/23 3:16 pm	RAILSUNNYFARMS		

REFERENCE	ORIGIN
CDEX16384	Outbound

001355 - WIN - SUNNY FARMS LANDFILL (OUTBOUND)
12500 W COUNTY RD 18
FOSTORIA, OH 44830

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 271000 lb Manual In
TARE 71800 lb Manual Out
NET 199200 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
99.60	TN	RESIDUALS				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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REPRINT

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR		
01	**36616**	jhamilton		

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:17 pm	3/27/23 3:17 pm	RAILSUNNYFARMS		

REFERENCE	ORIGIN
CDEX16146	Outbound

001355 - WIN - SUNNY FARMS LANDFILL (OUTBOUND)
12500 W COUNTY RD 18
FOSTORIA, OH 44830

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 258000 lb Manual In
TARE 72500 lb Manual Out
NET 185500 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
92.75	TN	RESIDUALS				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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REPRINT

WIN Waste Innovations at Leominster
200 Tanzio Rd
Leominster, MA 01453
PH: 508-752-6900

SITE	TICKET #	OPERATOR
01	**36617**	jhamilton

IN	OUT	TRUCK	CONT.	LICENSE
3/27/23 3:17 pm	3/27/23 3:17 pm	RAILSUNNYFARMS		

REFERENCE	ORIGIN
CDEX16197	Outbound

001355 - WIN - SUNNY FARMS LANDFILL (OUTBOUND)
12500 W COUNTY RD 18
FOSTORIA, OH 44830

CONTRACT: LEO1

INVOICE
OUTBOUND

GROSS 269000 lb Manual In
TARE 72500 lb Manual Out
NET 196500 lb

COMMENTS:
BOL:

QTY	UNIT	DESCRIPTION	TRACKING QTY	RATE	TAX	TOTAL
98.25	TN	RESIDUALS				

I hereby certify that this load does not contain any unauthorized hazardous waste.

SIGNATURE:______________________________

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Hourly Truck Distribution

Time	3/27/2023	3/28/2023	3/29/2023	3/30/2023	3/31/2023	5/5/2023	8/30/2023	10/27/2023	Average	To Use
6:00 AM	7%	2%	10%	2%	11%	5%	8%	8%	**6.63%**	**7%**
7:00 AM	7%	10%	14%	10%	6%	12%	13%	14%	**10.75%**	**11%**
8:00 AM	9%	11%	23%	10%	13%	13%	8%	11%	**12.25%**	**12%**
9:00 AM	7%	20%	15%	7%	13%	14%	20%	20%	**14.50%**	**14%**
10:00 AM	10%	15%	8%	18%	17%	7%	11%	15%	**12.63%**	**12%**
11:00 AM	21%	11%	10%	20%	10%	7%	6%	11%	**12.00%**	**12%**
12:00 PM	16%	13%	6%	13%	8%	20%	14%	15%	**13.13%**	**13%**
1:00 PM	13%	8%	8%	13%	10%	12%	8%	6%	**9.75%**	**9%**
2:00 PM	7%	10%	4%	5%	8%	10%	11%	0%	**6.88%**	**7%**
3:00 PM	3%	0%	2%	2%	4%	0%	1%	0%	**1.50%**	**0%-3%**
4:00 PM	0%	0%	0%	0%	0%	0%	0%	0%	**0.00%**	**0%-3%**
5:00 PM	0%	0%	0%	0%	0%	0%	0%	0%	**0.00%**	**0%-3%**
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Bowman

APPENDIX F

HIGHWAY CAPACITY 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:

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(1) *Transportation Research Board, Highway Capacity Manual, 6th Edition, published by the Transportation Research Board, Washington, DC, 2016.*

Unsignalized Intersections

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:

Signalized Intersections

Level of Service	Control Delay Per Vehicle (seconds)
A	≤ 10
B	>10 – 20
C	>20 – 35
D	>35 – 55
E	>55 – 80
F	> 80

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APPENDIX G

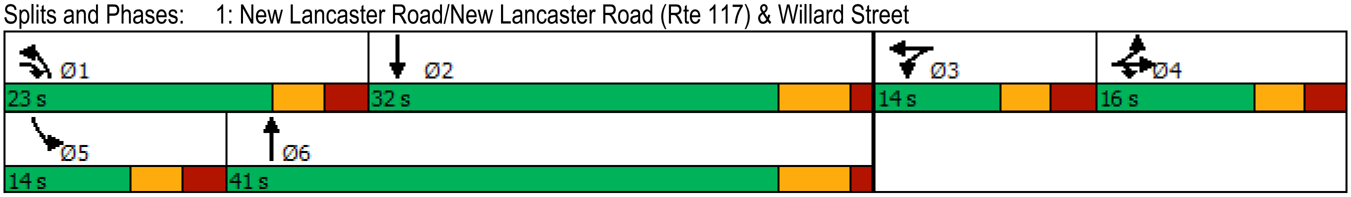
2023 EXISTING CAPACITY/ LEVEL-OF-SERVICE ANALYSIS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	4	248	24	8	8	106	250	19	1	291	36
Future Volume (vph)	95	4	248	24	8	8	106	250	19	1	291	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		140	0		0	0		0	52		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			138		
Satd. Flow (prot)	0	1778	1599	0	1668	0	1770	1752	0	1805	3397	0
Flt Permitted		0.954			0.971		0.950			0.950		
Satd. Flow (perm)	0	1778	1599	0	1668	0	1770	1752	0	1805	3397	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			258		10			5			16	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		327			271			240			2918	
Travel Time (s)		7.4			6.2			3.6			44.2	
Peak Hour Factor	0.96	0.96	0.96	0.80	0.80	0.80	0.82	0.82	0.82	0.90	0.90	0.90
Heavy Vehicles (%)	2%	0%	1%	0%	13%	25%	2%	7%	11%	0%	5%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	258	0	50	0	129	328	0	1	363	0
Turn Type	Split	NA	pt+ov	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4	4 1	3	3		1	6		5	2	
Permitted Phases												
Detector Phase	4	4	4 1	3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		8.0	8.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		14.0	14.0		12.0	16.0		12.0	16.0	
Total Split (s)	16.0	16.0		14.0	14.0		23.0	41.0		14.0	32.0	
Total Split (%)	18.8%	18.8%		16.5%	16.5%		27.1%	48.2%		16.5%	37.6%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	4.5		3.2	4.5	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.8	1.5		2.8	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
Act Effct Green (s)		7.9	23.2		8.5		8.9	25.4		6.4	12.1	
Actuated g/C Ratio		0.14	0.42		0.15		0.16	0.46		0.12	0.22	
v/c Ratio		0.40	0.31		0.19		0.45	0.40		0.00	0.48	
Control Delay		30.3	3.3		24.3		29.4	15.1		29.0	22.6	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		30.3	3.3		24.3		29.4	15.1		29.0	22.6	
LOS		C	A		C		C	B		C	C	
Approach Delay		11.0			24.3			19.1			22.6	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		34	0		13		43	77		0	60	
Queue Length 95th (ft)		86	40		41		89	171		5	108	
Internal Link Dist (ft)		247			191			160			2838	
Turn Bay Length (ft)			140							52		
Base Capacity (vph)		341	976		265		578	1180		277	1706	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.30	0.26		0.19		0.22	0.28		0.00	0.21	

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 55.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 46.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: New Lancaster Road/New Lancaster Road (Rte 117) & Willard Street



Intersection						
Int Delay, s/veh	0.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	8	11	314	328	11
Future Vol, veh/h	11	8	11	314	328	11
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	92	92	97	97
Heavy Vehicles, %	11	38	27	4	1	27
Mvmt Flow	14	10	12	341	338	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	709	344	349	0	-	0
Stage 1	344	-	-	-	-	-
Stage 2	365	-	-	-	-	-
Critical Hdwy	6.51	6.58	4.37	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.642	2.443	-	-	-
Pot Cap-1 Maneuver	387	624	1083	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	382	624	1083	-	-	-
Mov Cap-2 Maneuver	382	-	-	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1083	-	457	-	-
HCM Lane V/C Ratio	0.011	-	0.052	-	-
HCM Control Delay (s)	8.4	0	13.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	12	0	1	0
Future Vol, veh/h	0	7	12	0	1	0
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, %	0	57	50	0	0	0
Mvmt Flow	0	9	15	0	1	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	31	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	30	-	-	-	-	-
Critical Hdwy	6.4	6.77	4.6	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.813	2.65	-	-	-
Pot Cap-1 Maneuver	988	943	1357	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	977	943	1357	-	-	-
Mov Cap-2 Maneuver	977	-	-	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	7.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1357	-	943	-	-
HCM Lane V/C Ratio	0.011	-	0.009	-	-
HCM Control Delay (s)	7.7	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

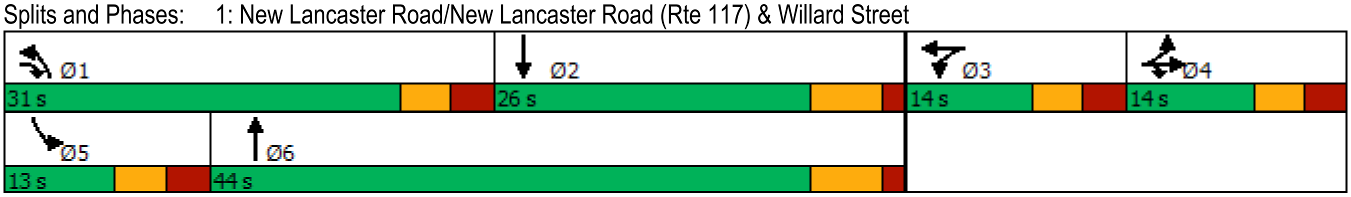
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	11	229	15	4	7	282	446	26	4	321	83
Future Volume (vph)	93	11	229	15	4	7	282	446	26	4	321	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		140	0		0	0		0	52		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			138		
Satd. Flow (prot)	0	1818	1599	0	1778	0	1736	1867	0	1805	3443	0
Flt Permitted		0.957			0.972		0.950			0.950		
Satd. Flow (perm)	0	1818	1599	0	1778	0	1736	1867	0	1805	3443	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			266		9			4			35	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		327			271			240			2918	
Travel Time (s)		7.4			6.2			3.6			44.2	
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.90	0.90	0.90	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	4%	1%	0%	0%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	121	266	0	33	0	313	525	0	5	464	0
Turn Type	Split	NA	pt+ov	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4	4 1	3	3		1	6		5	2	
Permitted Phases												
Detector Phase	4	4	4 1	3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		8.0	8.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		14.0	14.0		12.0	16.0		12.0	16.0	
Total Split (s)	14.0	14.0		14.0	14.0		31.0	44.0		13.0	26.0	
Total Split (%)	16.5%	16.5%		16.5%	16.5%		36.5%	51.8%		15.3%	30.6%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	4.5		3.2	4.5	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.8	1.5		2.8	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
Act Effct Green (s)		7.8	30.2		8.6		16.0	34.3		6.4	13.6	
Actuated g/C Ratio		0.13	0.50		0.14		0.26	0.56		0.10	0.22	
v/c Ratio		0.52	0.29		0.13		0.69	0.50		0.03	0.58	
Control Delay		40.4	2.8		26.7		30.6	12.4		34.0	24.9	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		40.4	2.8		26.7		30.6	12.4		34.0	24.9	
LOS		D	A		C		C	B		C	C	
Approach Delay		14.6			26.7			19.2			25.0	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		38	0		7		88	70		2	66	
Queue Length 95th (ft)		#133	33		34		226	306		13	148	
Internal Link Dist (ft)		247			191			160			2838	
Turn Bay Length (ft)			140							52		
Base Capacity (vph)		255	1108		258		763	1268		222	1233	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.47	0.24		0.13		0.41	0.41		0.02	0.38	

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 61	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: New Lancaster Road/New Lancaster Road (Rte 117) & Willard Street



Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	7	2	576	358	6
Future Vol, veh/h	7	7	2	576	358	6
Conflicting Peds, #/hr	0	0	1	0	0	1
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	93	93	95	95
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	9	9	2	619	377	6

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1004	381	384	0	-	0
Stage 1	381	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	270	671	1186	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	269	670	1185	-	-	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	692	-	-	-	-	-
Stage 2	538	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1185	-	384	-	-
HCM Lane V/C Ratio	0.002	-	0.046	-	-
HCM Control Delay (s)	8	0	14.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	7					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	4	0	1	0
Future Vol, veh/h	0	5	4	0	1	0
Conflicting Peds, #/hr	0	0	2	0	0	2
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, %	0	0	0	0	0	0
Mvmt Flow	0	6	5	0	1	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	13	3	3	0	-	0
Stage 1	3	-	-	-	-	-
Stage 2	10	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	1011	1087	1632	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	1018	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1004	1085	1629	-	-	-
Mov Cap-2 Maneuver	1004	-	-	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	1016	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.3	7.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1629	-	1085	-	-
HCM Lane V/C Ratio	0.003	-	0.006	-	-
HCM Control Delay (s)	7.2	0	8.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

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APPENDIX H

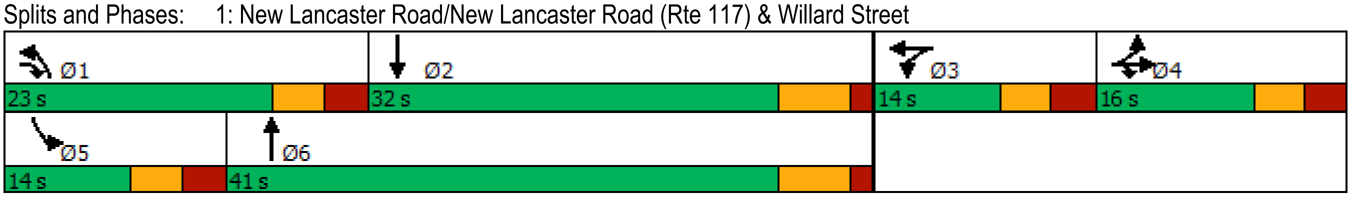
2030 NO BUILD CAPACITY/ LEVEL-OF-SERVICE ANALYSIS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	5	285	28	9	9	122	287	22	1	335	41
Future Volume (vph)	109	5	285	28	9	9	122	287	22	1	335	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		140	0		0	0		0	52		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			138		
Satd. Flow (prot)	0	1778	1599	0	1668	0	1770	1751	0	1805	3397	0
Flt Permitted		0.954			0.971		0.950			0.950		
Satd. Flow (perm)	0	1778	1599	0	1668	0	1770	1751	0	1805	3397	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			310		10			6			16	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		327			271			240			2918	
Travel Time (s)		7.4			6.2			3.6			44.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	1%	0%	13%	25%	2%	7%	11%	0%	5%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	123	310	0	50	0	133	336	0	1	409	0
Turn Type	Split	NA	pt+ov	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4	4 1	3	3		1	6		5	2	
Permitted Phases												
Detector Phase	4	4	4 1	3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		8.0	8.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		14.0	14.0		12.0	16.0		12.0	16.0	
Total Split (s)	16.0	16.0		14.0	14.0		23.0	41.0		14.0	32.0	
Total Split (%)	18.8%	18.8%		16.5%	16.5%		27.1%	48.2%		16.5%	37.6%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	4.5		3.2	4.5	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.8	1.5		2.8	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
Act Effct Green (s)		8.3	23.8		8.5		9.1	26.1		6.4	12.5	
Actuated g/C Ratio		0.15	0.42		0.15		0.16	0.47		0.11	0.22	
v/c Ratio		0.47	0.36		0.19		0.46	0.41		0.00	0.53	
Control Delay		32.0	3.3		24.9		30.0	15.1		29.0	23.5	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		32.0	3.3		24.9		30.0	15.1		29.0	23.5	
LOS		C	A		C		C	B		C	C	
Approach Delay		11.4			24.9			19.4			23.5	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		43	0		14		46	82		0	71	
Queue Length 95th (ft)		101	43		47		101	199		5	123	
Internal Link Dist (ft)		247			191			160			2838	
Turn Bay Length (ft)			140							52		
Base Capacity (vph)		336	1013		260		569	1161		273	1678	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.37	0.31		0.19		0.23	0.29		0.00	0.24	

Intersection Summary			
Area Type:	Other		
Cycle Length: 85			
Actuated Cycle Length: 56.1			
Natural Cycle: 60			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 18.3		Intersection LOS: B	
Intersection Capacity Utilization 49.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: New Lancaster Road/New Lancaster Road (Rte 117) & Willard Street



Intersection						
Int Delay, s/veh	0.5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	8	11	366	377	11
Future Vol, veh/h	11	8	11	366	377	11
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	92	92	92	92	92	92
Heavy Vehicles, %	11	38	27	4	1	27
Mvmt Flow	12	9	12	398	410	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	838	416	422	0	-	0
Stage 1	416	-	-	-	-	-
Stage 2	422	-	-	-	-	-
Critical Hdwy	6.51	6.58	4.37	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.642	2.443	-	-	-
Pot Cap-1 Maneuver	325	566	1015	-	-	-
Stage 1	647	-	-	-	-	-
Stage 2	643	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	320	566	1015	-	-	-
Mov Cap-2 Maneuver	320	-	-	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	643	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.7	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1015	-	392	-	-
HCM Lane V/C Ratio	0.012	-	0.053	-	-
HCM Control Delay (s)	8.6	0	14.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	7.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	7	12	0	1	0
Future Vol, veh/h	0	7	12	0	1	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	57	50	0	0	0
Mvmt Flow	0	8	13	0	1	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	27	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	26	-	-	-	-	-
Critical Hdwy	6.4	6.77	4.6	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.813	2.65	-	-	-
Pot Cap-1 Maneuver	993	943	1357	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	983	943	1357	-	-	-
Mov Cap-2 Maneuver	983	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	1002	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	7.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1357	-	943	-	-
HCM Lane V/C Ratio	0.01	-	0.008	-	-
HCM Control Delay (s)	7.7	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

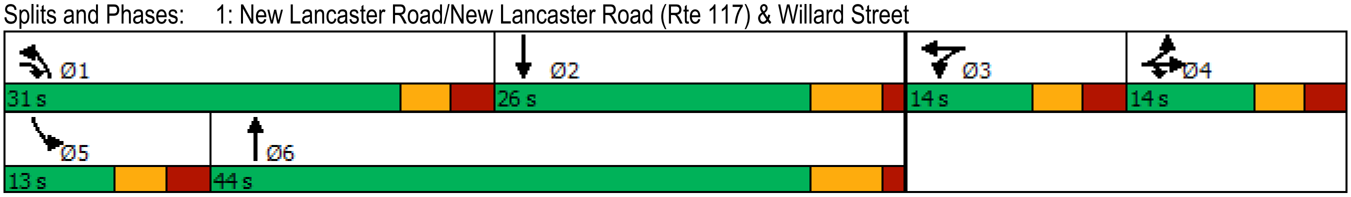
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	13	263	17	5	8	324	517	30	5	369	95
Future Volume (vph)	107	13	263	17	5	8	324	517	30	5	369	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		140	0		0	0		0	52		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			138		
Satd. Flow (prot)	0	1818	1599	0	1778	0	1736	1867	0	1805	3443	0
Flt Permitted		0.957			0.973		0.950			0.950		
Satd. Flow (perm)	0	1818	1599	0	1778	0	1736	1867	0	1805	3443	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			286		9			4			35	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		327			271			240			2918	
Travel Time (s)		7.4			6.2			3.6			44.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	4%	1%	0%	0%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	286	0	32	0	352	595	0	5	504	0
Turn Type	Split	NA	pt+ov	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4	4 1	3	3		1	6		5	2	
Permitted Phases												
Detector Phase	4	4	4 1	3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		8.0	8.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		14.0	14.0		12.0	16.0		12.0	16.0	
Total Split (s)	14.0	14.0		14.0	14.0		31.0	44.0		13.0	26.0	
Total Split (%)	16.5%	16.5%		16.5%	16.5%		36.5%	51.8%		15.3%	30.6%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	4.5		3.2	4.5	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.8	1.5		2.8	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
Act Effct Green (s)		8.0	31.9		8.6		17.5	36.5		6.4	14.4	
Actuated g/C Ratio		0.13	0.50		0.14		0.28	0.57		0.10	0.23	
v/c Ratio		0.57	0.30		0.13		0.74	0.55		0.03	0.62	
Control Delay		43.7	2.8		27.6		32.8	13.1		35.2	26.2	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		43.7	2.8		27.6		32.8	13.1		35.2	26.2	
LOS		D	A		C		C	B		D	C	
Approach Delay		15.6			27.6			20.5			26.3	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)		44	0		7		106	84		2	77	
Queue Length 95th (ft)		#159	41		39		262	362		13	168	
Internal Link Dist (ft)		247			191			160			2838	
Turn Bay Length (ft)			140							52		
Base Capacity (vph)		245	1114		247		732	1252		213	1185	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.53	0.26		0.13		0.48	0.48		0.02	0.43	

Intersection Summary

Area Type: Other
Cycle Length: 85
Actuated Cycle Length: 63.5
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 21.1 Intersection LOS: C
Intersection Capacity Utilization 58.9% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: New Lancaster Road/New Lancaster Road (Rte 117) & Willard Street



Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	7	2	662	419	6
Future Vol, veh/h	7	7	2	662	419	6
Conflicting Peds, #/hr	0	0	1	0	0	1
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	8	8	2	720	455	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1184	460	463	0	-	0
Stage 1	460	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	211	605	1109	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	484	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	210	604	1108	-	-	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	484	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1108	-	312	-	-
HCM Lane V/C Ratio	0.002	-	0.049	-	-
HCM Control Delay (s)	8.3	0	17.1	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	5	4	0	1	0
Future Vol, veh/h	0	5	4	0	1	0
Conflicting Peds, #/hr	0	0	2	0	0	2
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	5	4	0	1	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	11	3	3	0	-	0
Stage 1	3	-	-	-	-	-
Stage 2	8	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	1014	1087	1632	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	1020	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1008	1085	1629	-	-	-
Mov Cap-2 Maneuver	1008	-	-	-	-	-
Stage 1	1021	-	-	-	-	-
Stage 2	1018	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.3	7.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1629	-	1085	-	-
HCM Lane V/C Ratio	0.003	-	0.005	-	-
HCM Control Delay (s)	7.2	0	8.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Bowman

APPENDIX I

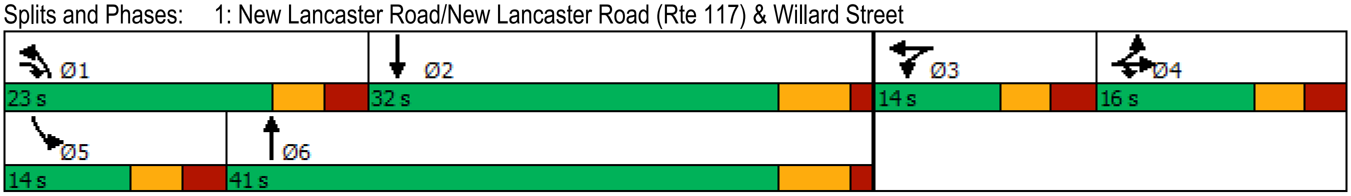
2030 BUILD CAPACITY/ LEVEL-OF-SERVICE ANALYSIS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	109	5	285	28	9	9	122	295	22	1	343	41
Future Volume (vph)	109	5	285	28	9	9	122	295	22	1	343	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		140	0		0	0		0	52		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			138		
Satd. Flow (prot)	0	1778	1599	0	1668	0	1770	1753	0	1805	3401	0
Flt Permitted		0.954			0.971		0.950			0.950		
Satd. Flow (perm)	0	1778	1599	0	1668	0	1770	1753	0	1805	3401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			310		10			5			16	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		327			271			240			2918	
Travel Time (s)		7.4			6.2			3.6			44.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	1%	0%	13%	25%	2%	7%	11%	0%	5%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	123	310	0	50	0	133	345	0	1	418	0
Turn Type	Split	NA	pt+ov	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4	4 1	3	3		1	6		5	2	
Permitted Phases												
Detector Phase	4	4	4 1	3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		8.0	8.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		14.0	14.0		12.0	16.0		12.0	16.0	
Total Split (s)	16.0	16.0		14.0	14.0		23.0	41.0		14.0	32.0	
Total Split (%)	18.8%	18.8%		16.5%	16.5%		27.1%	48.2%		16.5%	37.6%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	4.5		3.2	4.5	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.8	1.5		2.8	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
Act Effct Green (s)		8.3	23.8		8.5		9.1	26.3		6.4	12.6	
Actuated g/C Ratio		0.15	0.42		0.15		0.16	0.47		0.11	0.22	
v/c Ratio		0.47	0.36		0.19		0.47	0.42		0.00	0.54	
Control Delay		32.2	3.3		25.1		30.2	15.2		29.0	23.6	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		32.2	3.3		25.1		30.2	15.2		29.0	23.6	
LOS		C	A		C		C	B		C	C	
Approach Delay		11.5			25.1			19.4			23.6	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		43	0		14		47	84		0	73	
Queue Length 95th (ft)		102	43		47		102	204		5	125	
Internal Link Dist (ft)		247			191			160			2838	
Turn Bay Length (ft)			140							52		
Base Capacity (vph)		335	1011		260		567	1159		272	1676	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.37	0.31		0.19		0.23	0.30		0.00	0.25	

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 56.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 18.4	Intersection LOS: B
Intersection Capacity Utilization 50.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: New Lancaster Road/New Lancaster Road (Rte 117) & Willard Street



Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	11	16	19	366	377	11
Future Vol, veh/h	11	16	19	366	377	11
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	92	92	92	92	92	92
Heavy Vehicles, %	11	38	27	4	1	27
Mvmt Flow	12	17	21	398	410	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	856	416	422	0	-	0
Stage 1	416	-	-	-	-	-
Stage 2	440	-	-	-	-	-
Critical Hdwy	6.51	6.58	4.37	-	-	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.642	2.443	-	-	-
Pot Cap-1 Maneuver	317	566	1015	-	-	-
Stage 1	647	-	-	-	-	-
Stage 2	630	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	308	566	1015	-	-	-
Mov Cap-2 Maneuver	308	-	-	-	-	-
Stage 1	630	-	-	-	-	-
Stage 2	630	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.2	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1015	-	422	-	-
HCM Lane V/C Ratio	0.02	-	0.07	-	-
HCM Control Delay (s)	8.6	0	14.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Intersection						
Int Delay, s/veh	8					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	15	20	0	1	0
Future Vol, veh/h	0	15	20	0	1	0
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	92	92	92	92	92	92
Heavy Vehicles, %	0	57	50	0	0	0
Mvmt Flow	0	16	22	0	1	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	45	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	44	-	-	-	-	-
Critical Hdwy	6.4	6.77	4.6	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.813	2.65	-	-	-
Pot Cap-1 Maneuver	970	943	1357	-	-	-
Stage 1	1028	-	-	-	-	-
Stage 2	984	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	954	943	1357	-	-	-
Mov Cap-2 Maneuver	954	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	984	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	7.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1357	-	943	-	-
HCM Lane V/C Ratio	0.016	-	0.017	-	-
HCM Control Delay (s)	7.7	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

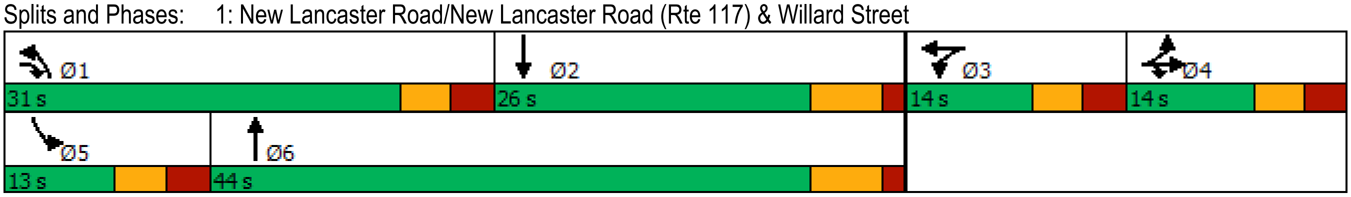
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	13	263	17	5	8	324	520	30	5	372	95
Future Volume (vph)	107	13	263	17	5	8	324	520	30	5	372	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		140	0		0	0		0	52		200
Storage Lanes	0		1	0		0	1		0	1		1
Taper Length (ft)	25			25			25			138		
Satd. Flow (prot)	0	1818	1599	0	1778	0	1736	1867	0	1805	3447	0
Flt Permitted		0.957			0.973		0.950			0.950		
Satd. Flow (perm)	0	1818	1599	0	1778	0	1736	1867	0	1805	3447	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			286		9			4			35	
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		327			271			240			2918	
Travel Time (s)		7.4			6.2			3.6			44.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	4%	1%	0%	0%	2%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	130	286	0	32	0	352	598	0	5	507	0
Turn Type	Split	NA	pt+ov	Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4	4 1	3	3		1	6		5	2	
Permitted Phases												
Detector Phase	4	4	4 1	3	3		1	6		5	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		8.0	8.0		6.0	10.0		6.0	10.0	
Minimum Split (s)	12.0	12.0		14.0	14.0		12.0	16.0		12.0	16.0	
Total Split (s)	14.0	14.0		14.0	14.0		31.0	44.0		13.0	26.0	
Total Split (%)	16.5%	16.5%		16.5%	16.5%		36.5%	51.8%		15.3%	30.6%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	4.5		3.2	4.5	
All-Red Time (s)	2.8	2.8		2.8	2.8		2.8	1.5		2.8	1.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag		Lead	Lead		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
Act Effct Green (s)		8.0	31.9		8.6		17.5	36.5		6.4	14.4	
Actuated g/C Ratio		0.13	0.50		0.14		0.28	0.57		0.10	0.23	
v/c Ratio		0.57	0.30		0.13		0.74	0.56		0.03	0.63	
Control Delay		43.7	2.8		27.6		32.8	13.2		35.2	26.3	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		43.7	2.8		27.6		32.8	13.2		35.2	26.3	
LOS		D	A		C		C	B		D	C	
Approach Delay		15.6			27.6			20.4			26.4	
Approach LOS		B			C			C			C	
Queue Length 50th (ft)		44	0		7		106	85		2	78	
Queue Length 95th (ft)		#159	41		39		262	366		13	170	
Internal Link Dist (ft)		247			191			160			2838	
Turn Bay Length (ft)			140							52		
Base Capacity (vph)		245	1113		247		732	1252		212	1186	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.53	0.26		0.13		0.48	0.48		0.02	0.43	

Intersection Summary	
Area Type: Other	
Cycle Length: 85	
Actuated Cycle Length: 63.5	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 59.0%	ICU Level of Service B
Analysis Period (min) 15	

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: New Lancaster Road/New Lancaster Road (Rte 117) & Willard Street



Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	7	10	5	662	419	6
Future Vol, veh/h	7	10	5	662	419	6
Conflicting Peds, #/hr	0	0	1	0	0	1
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	8	11	5	720	455	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1190	460	463	0	-	0
Stage 1	460	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	209	605	1109	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	481	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	207	604	1108	-	-	-
Mov Cap-2 Maneuver	207	-	-	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	481	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.3	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1108	-	337	-	-
HCM Lane V/C Ratio	0.005	-	0.055	-	-
HCM Control Delay (s)	8.3	0	16.3	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection						
Int Delay, s/veh	7.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	8	7	0	1	0
Future Vol, veh/h	0	8	7	0	1	0
Conflicting Peds, #/hr	0	0	2	0	0	2
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	9	8	0	1	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	19	3	3	0	-	0
Stage 1	3	-	-	-	-	-
Stage 2	16	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	1004	1087	1632	-	-	-
Stage 1	1025	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	995	1085	1629	-	-	-
Mov Cap-2 Maneuver	995	-	-	-	-	-
Stage 1	1018	-	-	-	-	-
Stage 2	1010	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.3	7.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1629	-	1085	-	-
HCM Lane V/C Ratio	0.005	-	0.008	-	-
HCM Control Delay (s)	7.2	0	8.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Bowman

APPENDIX J

CAPACITY/LEVEL-OF-SERVICE

ANALYSIS SUMMARY

Capacity Analysis Summary

Weekday Morning Peak Hour

Leominster Solid Waste Facility - Tonnage Increase

Leominster, MA

			2023 Existing			2030 No Build			2030 Build		
Intersection	**Movement**		**LOS[1]**	**Delay[2]**	**V/C[3]**	**LOS**	**Delay**	**V/C**	**LOS**	**Delay**	**V/C**
New Lancaster Road (Route 117) at	EB	LT	C	30.3	0.40	C	32.0	0.47	C	32.3	0.47
Willard Street		R	A	3.3	0.31	A	3.3	0.36	A	3.3	0.36
	WB	LTR	C	24.3	0.19	C	24.9	0.19	C	25.1	0.19
	NB	L	C	29.4	0.45	C	30.0	0.46	C	30.2	0.47
		TR	B	15.1	0.40	B	15.1	0.41	B	15.2	0.42
	SB	L	C	29.0	0.00	C	29.0	0.00	C	29.0	0.00
		TR	C	22.6	0.48	C	23.5	0.53	C	23.6	0.54
	Overall		*B*	*18.0*	*0.46*	*B*	*18.3*	*0.50*	*B*	*18.4*	*0.50*
Lancaster Street (Route 117) at	EB	LR	B	13.3	0.05	B	14.7	0.05	B	14.2	0.07
Tanzio Road	NB	LTR	A	0.3	0.01	A	0.3	0.01	A	0.4	0.02
	SB	TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Tanzio Road at	EB	LR	A	8.9	0.01	A	8.8	0.01	A	8.9	0.02
Proposed Site Driveway	NB	LT	A	7.7	0.01	A	7.7	0.01	A	7.7	0.02
	SB	TR	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

Weekday Morning Peak Hour

Leominster Solid Waste Facility - Tonnage Increase

Leominster, MA

			Weekday Morning Peak Hour					
			2023 Existing		2030 No Build		2030 Build	
Intersection	**Movement**		**50th Queue[1]**	**95th Queue[2]**	**50th Queue**	**95th Queue**	**50th Queue**	**95th Queue**
New Lancaster Road (Route 117) at	EB	LT	34	86	43	101	43	102
Willard Street		R	0	40	0	43	0	43
	WB	LTR	13	41	14	47	14	47
	NB	L	43	89	46	101	47	102
		TR	77	171	82	199	84	204
	SB	L	0	5	0	5	0	5
		TR	60	108	71	123	72	125
Lancaster Street (Route 117) at	EB	LR	n/a	5	n/a	5	n/a	5
Tanzio Road	NB	LT	n/a	0	n/a	0	n/a	3
	SB	TR	n/a	0	n/a	0	n/a	0
Tanzio Road at	EB	LR	n/a	0	n/a	0	n/a	3
Proposed Site Driveway	NB	LT	n/a	0	n/a	0	n/a	0
	SB	TR	n/a	0	n/a	0	n/a	0

1 50th Percentile Queue Length

2 95th Percentile Queue Length

n/a Not Applicable

Capacity Analysis Summary

Weekday Afternoon Peak Hour

Leominster Solid Waste Facility - Tonnage Increase

Leominster, MA

			Weekday Morning Peak Hour								
			2023 Existing			2030 No Build			2030 Build		
Intersection	**Movement**		**LOS[1]**	**Delay[2]**	**V/C[3]**	**LOS**	**Delay**	**V/C**	**LOS**	**Delay**	**V/C**
New Lancaster Road (Route 117) at	EB	LT	D	40.4	0.52	D	43.7	0.57	D	43.7	0.57
Willard Street		R	A	2.8	0.29	A	2.8	0.30	A	2.8	0.30
	WB	LTR	C	26.7	0.13	C	27.6	0.13	C	27.6	0.13
	NB	L	C	30.6	0.69	C	32.8	0.74	C	32.8	0.74
		TR	B	12.4	0.50	B	13.1	0.55	B	13.2	0.56
	SB	L	C	34.0	0.03	D	35.2	0.03	D	35.2	0.03
		TR	C	24.9	0.58	C	26.2	0.62	C	26.3	0.63
	Overall		*B*	*19.9*	*0.53*	*C*	*21.1*	*0.59*	*C*	*21.1*	*0.59*
Lancaster Street (Route 117) at	EB	LR	B	14.8	0.05	C	17.1	0.05	C	16.3	0.06
Tanzio Road	NB	LTR	A	0.0	0.00	A	0.0	0.00	A	0.1	0.01
	SB	TR	A	0.0	0.00	A	0.0	0.00	A	0.0	0.00
Tanzio Road at	EB	LR	A	8.3	0.01	A	8.3	0.01	A	8.3	0.01
Proposed Site Driveway	NB	LT	A	7.2	0.00	A	7.2	0.00	A	7.2	0.01
	SB	TR	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

Queue Summary

Weekday Afternoon Peak Hour

Leominster Solid Waste Facility - Tonnage Increase

Leominster, MA

			Weekday Morning Peak Hour					
			2023 Existing		2030 No Build		2030 Build	
Intersection	**Movement**		**50th Queue[1]**	**95th Queue[2]**	**50th Queue**	**95th Queue**	**50th Queue**	**95th Queue**
New Lancaster Road (Route 117) at	EB	LT	38	133	44	159	44	159
Willard Street		R	0	33	0	41	0	41
	WB	LTR	7	34	7	39	7	39
	NB	L	88	226	106	262	106	262
		TR	70	306	84	362	85	366
	SB	L	2	13	2	13	2	13
		TR	66	148	77	168	78	170
Lancaster Street (Route 117) at	EB	LR	n/a	3	n/a	5	n/a	5
Tanzio Road	NB	LT	n/a	0	n/a	0	n/a	0
	SB	TR	n/a	0	n/a	0	n/a	0
Tanzio Road at	EB	LR	n/a	0	n/a	0	n/a	0
Proposed Site Driveway	NB	LT	n/a	0	n/a	0	n/a	0
	SB	TR	n/a	0	n/a	0	n/a	0

1 50th Percentile Queue Length

2 95th Percentile Queue Length

n/a Not Applicable

ATTACHMENT 4

NHESP COMMUNICATION

Green Seal Environmental, LLC
114 State Road, Bldg. B, Sagamore Beach, MA 02562
T: 508.888.6034 **F:** 508.888.1506
www.gseenv.com

MassDOT Certified

August 2, 2023

Dr. Mark Tisa, Director
Division of Fisheries and Wildlife
Natural Heritage & Endangered Species Program
Regulatory Review
1 Rabbit Hill Road
Westborough, MA 01581

RE: Natural Heritage & Endangered Species Determination
200 Tanzio Road, Leominster

Dr. Tisa,

Green Seal Environmental, LLC (GSE) requests a determination from your agency regarding endangered, threatened, special concern species, or areas of natural heritage relative to the above property.

The property in question (locus map attached) is an existing transfer station located at 200 Tanzio Road in Leominster, Massachusetts. GSE is in the process of preparing and filing an Environmental Notification Form application for the proposed increase in throughput at the solid waste transfer station at this location.

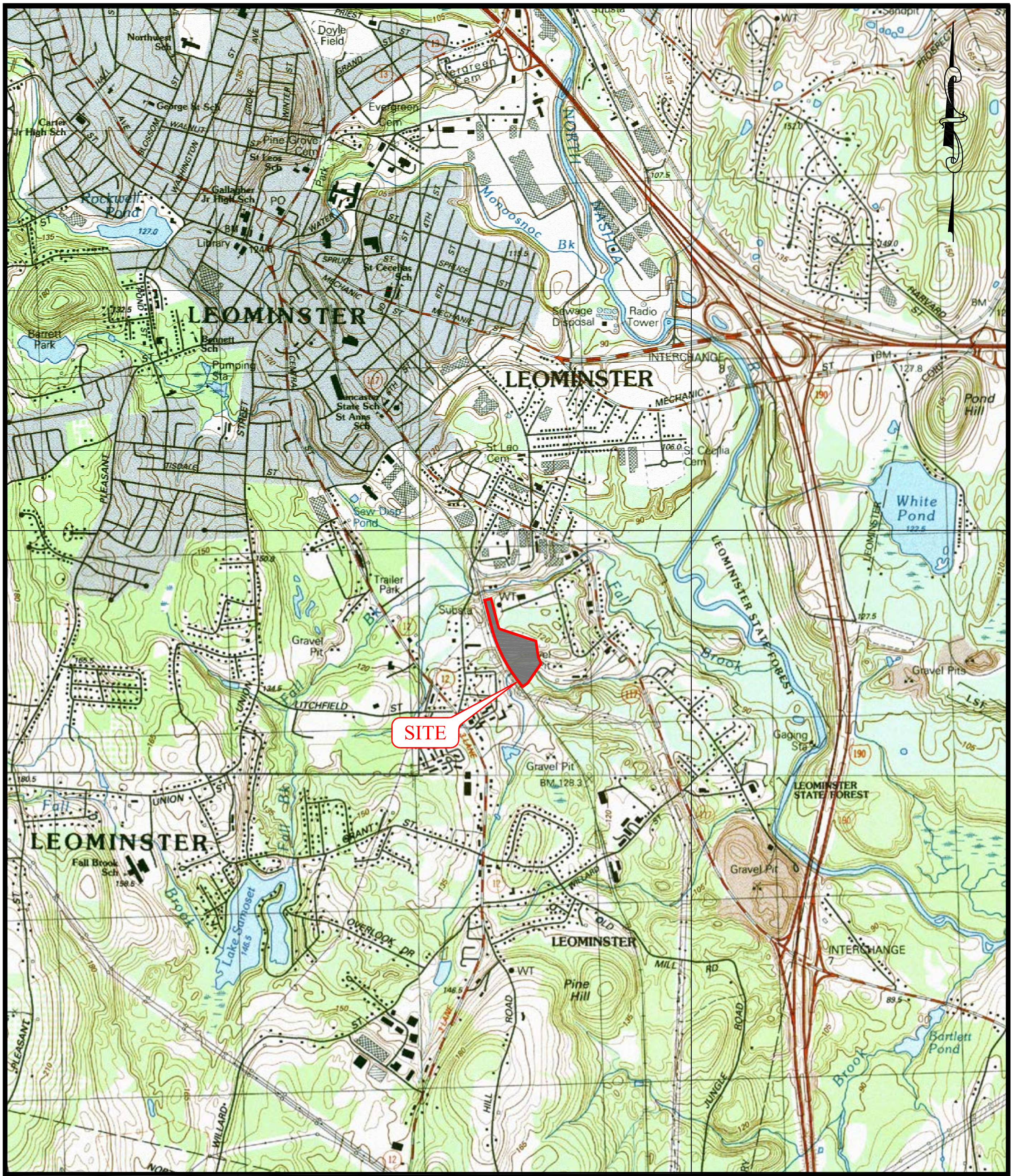
Current Massmapper datalayers do not identify any rare plant or animals, exemplary natural communities, or wildlife management areas on or adjacent to the cited property that would be adversely affected by the above noted activities.

If you could provide us with a letter with respect to endangered, threatened, special concern species, or areas of natural heritage, it would be greatly appreciated. If you have any questions or comments, please call me at 781-206-7521.

Sincerely,
Green Seal Environmental, LLC

Jack O'Leary PG CPESC
Vice President/Operations

Attachment - Locus Map



NOTE: USGS TOPOGRAPHIC MAP WAS PROVIDED BY THE OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (MassGIS), COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS CURRENT TO MARCH 2017.	DRAWING TITLE: SITE LOCUS MAP	PREPARED FOR: UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC 200 FRIBERG PARKWAY #3008 WESTBOROUGH, MA 01581	Green Seal Environmental, Inc. 114 State Road, Building B Sagamore Beach, MA 02562 Tel: (508) 888-6034 Fax: (508) 888-1506 www.gseenv.com
REVISIONS	CAD TECH: MPD / CHECKED BY: GCW	LOCUS: 200 TANZIO ROAD LEOMINSTER MA 01453	SCALE: 1" = 2,500' / SHEET: FIGURE 1
NO./ DATE / COMMENT	ENGINEER: LAB / DATE: 8/20/2018		

From: Cheeseman, Melany (FWE)
To: Jack O'Leary
Subject: RE: MEPA confirmation request
Date: Tuesday, August 08, 2023 3:39:01 PM

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Good afternoon,

Thank you for submitting the locus map for the site at 200 Tanzio Road in Leominster. Based on a review of the information that was provided (FIGURE 1- SITE LOCUS MAP, dated 8/20/2018) and the information that is currently contained in our database, the Division has determined that this project, as currently proposed, does not occur within Estimated Habitat of Rare Wildlife or Priority Habitat as indicated in the Massachusetts Natural Heritage Atlas (15th Edition). Therefore, the project is not required to be reviewed for compliance with the rare wildlife species section of the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.37, 10.59 & 10.58(4)(b)) or the MA Endangered Species Act Regulations (321 CMR 10.18). Any additional work beyond that shown on the submitted plan may require a filing with the Division. Please let me know if you have any additional questions or need any additional information. Thank you,

Melany Cheeseman
Endangered Species Review Assistant
Natural Heritage & Endangered Species Program
Massachusetts Division of Fisheries & Wildlife
1 Rabbit Hill Road, Westborough, MA 01581
melany.cheeseman@mass.gov | www.mass.gov/nhesp

From: Jack O'Leary <j.oleary@gseenv.com>
Sent: Thursday, August 3, 2023 1:35 PM
To: Natural Heritage (FWE) <nheritage@mass.gov>
Subject: MEPA confirmation request

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Fellow conservationists! Please see the attached letter.

A copy will also be mailed.

Thank you.

Jack O'Leary PG CPESC
Senior Project Manager

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www.gseenv.com
Engineering | Environmental | Survey | Energy

ATTACHMENT 5

ODOR STUDY

MEMORANDUM

To: Laura A. Bugay, Green Seal Environmental
From: Michael Lannan & Marc Wallace, Tech Environmental
Date: July 10, 2024
Subject: Odor Study of United Materials Management, Leominster, Massachusetts Ref. 4885

United Materials Management Leominster ("UMML") currently operates a 1,000 tons per day ("tpd") municipal solid waste ("MSW") and construction and demolition ("C&D") waste handling and transfer station (the "Facility") at 200 Tanzio Road in Leominster, Massachusetts. The Facility consists of a 32,400 square foot ("sf") solid waste transfer/waste handling building (including 1,260 sf of attached office space for a total footprint of 33,660 sf). The site also includes a rail yard, scale house and scales, parking areas, paved access roads, and associated appurtenances.

The Facility is located on 13.46 acres of land and is comprised of two (2) parcels (9.621 acres and 3.841 acres in size) of which 11.33 acres are site assigned per 310 CMR 16.00 as a solid waste handling facility. The Facility is designed to accept MSW and C&D delivered by truck for subsequent transfer into rail cars and secondarily, as conditions dictate, larger trucks for transport to various locations throughout the country for disposal and/or recycling. Solid waste handling activities occur within the enclosed building, which is adequately sized so that all unloading, handling, and loading onto rail cars and/or trucks occurs within the building interior. The handling building is equipped with overhead doors.

UMML intends to increase their permitted daily tonnage from 1,000 tpd (300,000 tons annually) to 1,500 tpd of C&D and MSW with a maximum annualized capacity of 450,000 tons. As presently approved, the Facility operates six (6) days per week and accepts waste from 6:00 a.m. to 7:00 p.m. Monday through Friday, and from 7:00 a.m. to 3:00 p.m. on Saturdays. The Facility is not intending to change their hours of operation at this time.

Tech performed odor modeling analyses for typical Facility operations without additional odor control and for allowable operations but with additional odor control. Under both operating Facility operating scenarios, the results of the odor modeling analyses shows that the UMML Facility will not cause an adverse impact to health, safety or the environment with respect to odors at nearby residential receptors and commercial abutters.

Odor Analysis

A refined odor dispersion modeling analysis was performed to determine the potential odor impacts from the Facility. The predicted air quality impacts were used to assess the potential for odorous impacts from the solid waste handling operations at the Site property boundary and at other locations (e.g. residential and commercial receptors) further from the Facility.

Odor Descriptors and Nuisance Threshold

Odor is a human response to olfactory stimulus. An unfavorable response that changes one's behavior is described as a nuisance. To determine the quantity of odor emissions that is acceptable below the odor nuisance threshold, the tolerance for odor needs to be established. Determining a facility's neighborhood tolerance for odor is one of the first steps in developing the odor control strategy necessary to prevent odor nuisance conditions. In general odor is always present, and therefore, there must be an acceptable threshold for odor. The tolerance for odor is heavily influenced by four odor exposure factors: frequency, intensity, duration, and offensiveness, or "FIDO" for short.

Frequency: *The odor frequency refers to how often the odor meets or exceeds a certain strength threshold. There are two thresholds for odor: the detection threshold and the recognition threshold. An individual can detect an odor at a lower threshold than they can recognize an odor. Frequent exposure can lower the recognition threshold as individuals "learn" or teach themselves to recognize an odor.*

Intensity: *The strength of odor is often referred to as the intensity. Odor strength is used to determine how an odorous exhaust will disperse after release. When an odorous plume exits a stack or passively vents from an enclosed source, it will be diluted by ambient air. The amount of air required to dilute a source to a point where less than 50% of the people will be able to detect it is often referred to as the dilution-to-threshold or D/T. For example, a 1,000 D/T means that 1,000 units of ambient air is necessary to dilute one unit of odorous air to an acceptable level.*

Duration: *The length of time of odor exposure can heavily influence the odor nuisance potential in many situations. Duration is especially important when sensitive receptors are nearby that have the potential for prolonged exposure. Duration is less important in industrial areas where exposure is limited to the time workers at other facilities are in parking lots traveling to and from work.*

Offensiveness: *The hedonic tone is the relative pleasant of an odor. It is a scale of -10 to +10 with zero being neutral pleasantness. A positive number refers to a more pleasant odor while a negative number refers to a more offensive odor. If the odor has a positive hedonic tone then it is considered less offensive, and therefore, more exposure could be considered. A less offensive odor could have a longer duration, a stronger odor, and/or more frequent exposure and still not be considered a nuisanc*e.

These four FIDO variables were considered for this Facility and the following threshold was proposed as the nuisance threshold for this project: No impacts above 5 D/T for 15 minutes or more in residential areas. Municipal solid waste ("MSW") odor is dominated by fatty acids that have very low hedonic tones so the goal for this project is to demonstrate minimal-strength odor at all times.

Facility Odor Emissions

The potential sources of odor from the Facility will be from three sources: the tipping, storing and transferring of waste into railcars inside the solid waste handling building. Ideally, from a waste-handling standpoint, the Facility would be able to operate with all the doors open.

Tech used odor sampling data for four New York City municipal waste transfer stations to calculate an average odor level without odor control.[1] In the NYC study, sampling was performed at the active ventilation/building exhaust system during steady process operations occurring inside the building. A maximum odor concentration of 42.9 D/T*m3/sec per ton of waste stored on the floor for a prototypical transfer station was calculated. An average odor concentration of 19.3 D/T*m3/sec per ton of waste stored on the floor for a prototypical transfer station was calculated.

Based upon current operations and the other facilities that the current permit holder is utilizing, it is anticipated that the Facility, after the increase in tonnage, will still handle more C&D than MSW, at least in the near future. Since this facility is installing a new C&D picking line as part of this expansion in daily throughput, it is reasonable to assume that C&D will continue to be this facility's priority. Given the propensity for C&D processing and handling, there will be little desire to store any appreciable amount of MSW on the floor at any one time including overnight. There is simply limited storage space in the existing structure.

The most important Best Management Practice, for odor minimization regardless of the ratio of C&D to MSW, now and in the future, includes rotating the MSW received via the standard "first-in, first out" approach that exists today. First-in, first-out ensures that there is no aged MSW on the floor at any one time, or that the maximum odor loading rates observed in the NYC study could be achieved. Therefore any

Currently the facility has an overnight limit of 600 tons of MSW on the tipping floor. The facility typically has 100 tons or less given the space restriction and the predisposition for C&D material throughput. Tech ratioed the less than 100 tons typically on the floor to 150 tons as the typical maximum amount on the floor overnight after the 50% increase from expansion to be conservative. With 150 tons of MSW on the floor overnight, at maximum odor loadings that are not typical, but could hypothetically occur over a long weekend, Tech determined the potential maximum hour concentration to be 2 D/T over a five-year modeling period at the nearest residences. In addition to the maximum concentration, Tech also explored the number of hours a year that the facility could experience a 5 D/T or greater odor concentration to be 13 15-minute event which corresponds to 0.15 % of time. Based upon this modeling no odor control is necessary to prevent nuisance concerns.

Tech also explored the odor potential from the current MSW limit of 600 tons of storage on the floor overnight. Tech determined the potential maximum hour concentration to be 8 D/T over a five-year modeling period at the nearest residences. In addition to the maximum concentration Tech also explored the number of hours a year that the facility could experience a 5 D/T or greater odor concentration to be 480 15-minute event which corresponds to 5.5 % of time. Based upon this modeling, the facility could consider odor control, but only if the facility really could or would approach 600 tons on the floor on a regular basis. The facility is willing to commit to adding odor control, when but more likely only if, there was a desire for this amount of MSW overnight storage regularly.

Tech also explored the odor potential from the current MSW limit of 600 tons of storage on the floor overnight with odor control. Odor control could consist of a counteractant added to the water misting

[1] Henningson, Durham & Richardson Architecture & Engineering, P.C., Commercial Waste Management Study, Volume 1 prepared for the New York City Department of Sanitation, March 2004.

system, exhaust filters on the exhaust fans, or a recirculating system within the building. Tech selected the worst-case assumption of a one through system treating 2/3rds of the odor via the exhaust system with 1/3rd of the odor still escaping from the open doors. For the non-fugitive emissions, it was assumed that 90% odor control reduction can be achieved with a once through exhaust odor control system.

Again, the modeling assumes that all doors are open. Tech determined the potential maximum hour concentration in this partial odor control scenario with one-third escaping through the open doors, to be 5 D/T over a five-year modeling period at the nearest residences. In addition to the maximum concentration Tech also explored the number of hours a year that the facility could experience a 5 D/T or greater odor concentration to be 127 15-minute event which corresponds to 1.4 % of time.

The Facility ventilation rate is 137,288 cubic feet per minute (cfm) based on the three western-most exhaust vents and the fourth northern exhaust vent have maximum air flow rates of 34,322 cfm; and since "odor mass" is conserved, the Facility building odor concentration is 6,642 D/T and 11,684 D/T for the typical operations and allowable operations with additional controls, respectively. Odor loading is put in quotes here because the modeling does not really have "odor mass" or "mass loading" since D/T is a unitless value. The modeling does work the same as if it is a mass loading and odor is conserved, with respect to varying airflow rates applied to the same odorous source.

The odor concentration from handling waste inside a building depends on the how long the waste remains at the Facility and how much the waste is agitated by picking up and moving the waste materials before it is loaded into rail cars or live floor trailers for shipment off-site. The Building has been sized so that all unloading, sorting, and loading onto rail cars will occur within the Building interior. Up to two rail cars can be loaded within the Building at one time.

The Facility includes a water-based misting system, with the ability to introduce odor control agents inside the Building to reduce odorous compounds that adhere to particulate matter. It was conservatively assumed that the misting system will achieve a 50% reduction in odors simply by water impaction and deposition alone.

Odor Dispersion Modeling

EPA's recommended model for near-source impact assessments is the AERMOD dispersion model (40 CFR 51 Appendix W). The AERMOD model is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The most recent available version of AERMOD is Version No. 23132. The graphical user interface, BEEST, created by Beeline Software, was used to facilitate model setup and post-processing. AERMOD was used in "refined" mode, with full receptor grids and five years of meteorological data.

The modeling was performed using five years of hourly surface meteorological data from Worcester, MA Airport and using twice-daily mixing heights from Albany, New York for 2017-2021 obtained from MassDEP[2]. Model regulatory default options were selected, and rural dispersion parameters were used. Thirty-three percent of all odor emissions originating inside of the Building were conservatively assumed

[2] https://www.mass.gov/info-details/meteorological-data

to escape through up to four open Building overhead doors. Please note that this assumption is not intended to reflect actual overhead door operations but is used in the modeling assumptions to be extremely conservative for this assessment. The emissions escaping through the Building doors were modeled as a single volume source with an initial vertical dimension of 23.6 feet (7.2 meters), assuming 50% control from the Building's odor misting system.

The remaining 67 percent of the Building's emissions were modeled as four horizontal point sources exhausted from the sides of the Building. The three western-most exhaust vents and the fourth northern exhaust vent were modeled with stack heights of 37 feet (11.3 meters) and flow rates of 34,322 cfm (12.7 m^3/s). The exit velocities of each exhaust were set to 0.0328 feet per second (0.001 meters per second) to represent horizontal discharge. The stack exhausts were assumed to have an ambient temperature of 68ºF.

A receptor grid was set up in the model to conservatively represent where the general public may have frequent and prolonged access to the ambient air. This grid included receptors spaced at 164-foot (50-meter) intervals along the fence line, a Cartesian receptor grid with 328-foot (100-meter) spacing extending from the fence line out to 1,640 feet (500 meters), and 656-foot (200-meter) spacing extending from the 500-meter grid out to 3,280 feet (1,000 meters). A total of 378 receptors were included in AERMOD. The elevation and hill height for each receptor were calculated with the EPA AERMAP program, using digital terrain data with 98-foot (30-meter) spacing from the US Geological Survey (USGS) digital map.

The default AERMOD model input units are grams/sec and the default output concentration units predicted by the AERMOD model are ug/m^3. Input source units of (D/T) *(m^3/sec) were modeled, and a conversion factor was included with the AERMOD model to convert the output concentration units to odor units (D/T). Separate AERMOD modeling runs were set up to model 15-minute averaging periods. The model predicted maximum 15-minute odor concentrations (D/T values) by setting the model to predict one-hour concentrations and scaling these concentrations within the model by a factor of 1.32 per the one-fifth power law.

Conclusions and Mitigation Summary

Under the current operating scenario, the facility typically receives more C&D than MSW, and the facility has very little odor potential. With the new C&D processing line being added as part of this throughput expansion, it is most likely that on a typical day, the proposed increase in waste would be more C&D than MSW, and therefore the odor potential should not rise.

Given that the permit does request a limit for accepting up to 1,500 tpd of either C&D or MSW, there is a potential for a day or more of higher percentages of MSW or even an all MSW day. In the MSW only scenario, it is possible that there would be a desire for more than the 100 tons or less on the floor at the end of any given day. With a commitment by the facility to not exceed the current limit of 600 tons per day, which is six or more times the current daily amount, the study showed that facility could operate without any nuisance potential so long as the normal Best Management Practices for odor minimization such as first-in-first-out and frequent housekeeping are followed.

The results of the odor modeling analyses show that the UMML Facility will not cause an adverse impact to health, safety or the environment with respect to odors at nearby residential receptors. Although the study does not require it, it is Tech's recommendation that the facility proactively install odor control in the future, if the facility changes its typical operating focus from C&D processing to MSW and planned to regularly keep anywhere near the current limit of 600 tons of MSW on the floor overnight.

ATTACHMENT 6

SOUND STUDY

FOCUSED KNOWLEDGE. REAL SOLUTIONS.

MEMORANDUM

To: Laura A. Bugay, Green Seal Environmental
From: Michael Lannan & Matthew Riegert, Tech Environmental
Date: July 2, 2024
Subject: Sound Study of United Materials Management, Leominster, Massachusetts Ref. 4885

United Materials Management Leominster ("UMML") currently operates a 1,000 tons per day ("tpd") municipal solid waste ("MSW") and construction and demolition ("C&D") waste handling and transfer station (the "Facility") at 200 Tanzio Road in Leominster, Massachusetts. The Facility consists of a 32,400 square foot ("sf") solid waste transfer/waste handling building (including 1,260 sf of attached office space for a total footprint of 33,660 sf). The site also includes a rail yard, scale house and scales, parking areas, paved access roads, and associated appurtenances.

The Facility is located on 13.46 acres of land and is comprised of two (2) parcels (9.621 acres and 3.841 acres in size) of which 11.33 acres are site assigned per 310 CMR 16.00 as a solid waste handling facility. The Facility is designed to accept MSW and C&D delivered by truck for subsequent transfer into rail cars and secondarily as conditions dictate, larger trucks for transport to various locations throughout the country for disposal and/or recycling. Solid waste handling activities occur within the enclosed building, which is adequately sized so that all unloading, handling, and loading onto rail cars and/or trucks occurs within the building interior. The handling building is equipped with overhead doors.

UMML intends to increase their permitted daily tonnage from 1,000 tpd (300,000 tons annually) to 1,500 tpd of C&D and MSW with a maximum annualized capacity of 450,000 tons. As presently approved, the Facility operates six (6) days per week and accepts waste from 6:00 a.m. to 7:00 p.m. Monday through Friday, and from 7:00 a.m. to 3:00 p.m. on Saturdays. The Facility is not intending to change these waste acceptance hours of operation at this time.

The objective of this study was to determine whether the operation of the proposed Facility will comply with the Massachusetts Department of Environmental Protection ("MassDEP") Noise Policy and the Leominster Noise Ordinance. The study included baseline sound level monitoring at three (3) locations representative of the nearest residential areas, and long-term monitoring was also conducted at a location on the Facility site. The results of the acoustic modeling analysis of the Facility demonstrates that the proposed Facility operations will generate sound level impacts that will fully comply with the MassDEP Noise Policy and the Leominster Noise Ordinance and will not create a nuisance at nearby receptors including residential dwellings.

MassDEP Noise Policy

MassDEP regulates noise through 310 CMR 7.10, "Air Pollution Control". In these regulations "air contaminant" is defined to include sound and a condition of "air pollution" includes the presence of an air contaminant in such concentration and duration as to "cause a nuisance" or "unreasonably interfere with the comfortable enjoyment of life and property".

Regulation 7.10 prohibits "unnecessary emissions" of noise. The MassDEP Noise Policy (Policy Statement 90-001, February 1, 1990) interprets a violation of this noise regulation to have occurred if the source causes either:

1) An increase in the broadband sound pressure level of more than 10 dBA above the ambient (L_{90}) sound level, or
2) A "pure tone" condition.

The ambient background level is defined as the lowest L_{90} level measured during Facility operating hours.

Leominster Noise Ordinance

The Leominster Code of Ordinances, and specifically Chapter 14 (Offenses – Miscellaneous), Section 14-8 (Noise – Generally), defines a violation similarly to the MassDEP Noise Policy as an increase of *"ten dB(A) or more above background noise level"*, but further regulates that, *"except that if the noise source produces a tonal sound, an increase at five dB(A) or more above background noise level is sufficient to cause noise pollution."* A tonal sound is defined as, *"any sound that is judged by a listener to have the characteristics of a pure tone, whine, hum or buzz"* which is not applicable to the Facility, thus the latter criteria is not applicable. Thus, a demonstration of compliance with the MassDEP Noise Policy infers compliance with the Leominster Noise Ordinance.

Ambient Sound Levels

A long-term sound analyzer was placed on the Facility site to measure hourly sound levels over a seven-day period, which included a weekend, to provide a complete picture of 24-hour sound conditions, and to identify the L_{90} background levels during Facility operating hours. The long-term measurements were taken with a Larson Davis 831 real-time sound level analyzer. The analyzer is equipped with a 1/2" precision condenser microphone and has an operating range of 5 dB to 140 dB, and an overall frequency range of 3.5 to 20,000 Hz. This analyzer meets or exceeds all requirements set forth in the American National Standards Institute (ANSI) Standards for Type 1 for quality and accuracy. Prior to and immediately following all measurement sessions, the sound analyzer was calibrated (no level adjustment calibrations were required) with an ANSI Type 1 calibrator which has an accuracy traceable to the National Institute of Standards and Technology (NIST). All instrumentation was also laboratory calibrated per ANSI recommendations. For all measurement sessions, the microphone was fitted with an environmental windscreen to negate the effect of air movement and tripod-mounted at a height of five feet. Measurements were completed in open areas away from vertical reflecting surfaces. All data were downloaded to a computer following the measurement session for the purposes of storage and further analysis. A summary of the long-term baseline measurements is provided in Table 1. At the long-term monitoring location(s) background (L_{90}) levels ranged from 37 to 58 dBA.

TABLE 1. SUMMARY OF LONG-TERM BASELINE SOUND LEVELS (L_{90}, dBA) ON SITE – 200 TANZIO ROAD, LEOMINSTER

Wednesday, August 9, 2023 to Wednesday, August 16, 2023

Hour Starting	Measured L_{90} Broadband Hourly Sound Levels (dBA)							
	Wed. 8/9/24	Thur. 8/10/24	Fri. 8/11/24	Sat. 8/12/24	Sun. 8/13/24	Mon. 8/14/23	Tues. 8/15/23	Wed. 8/16/23
Midnight	--	42	45	40	46	45	45	42
1 a.m.	--	42	43	40	46	44	43	44
2 a.m.	--	42	42	38	45	42	42	44
3 a.m.	--	45	42	39	44	40	43	43
4 a.m.	--	42	42	40	40	40	44	42
5 a.m.	--	44	42	42	39	41	56	45
6 a.m.	--	46	47	43	37	44	54	51
7 a.m.	--	53	52	46	38	46	56	51
8 a.m.	53	46	50	45	40	51	56	52
9 a.m.	55	46	52	45	41	48	58	50
10 a.m.	52	49	51	44	42	49	54	52
11 a.m.	52	46	53	43	41	51	55	48
Noon	51	44	53	42	42	49	51	--
1 p.m.	53	44	51	42	42	49	51	--
2 p.m.	51	47	50	42	43	47	51	--
3 p.m.	48	46	45	43	42	46	47	--
4 p.m.	44	46	44	43	42	43	44	--
5 p.m.	43	44	44	43	42	42	43	--
6 p.m.	42	45	42	43	41	41	44	--
7 p.m.	42	46	41	42	40	42	43	--
8 p.m.	45	48	44	44	43	45	46	--
9 p.m.	47	57	44	49	48	48	46	--
10 p.m.	46	52	43	48	45	46	46	--
11 p.m.	45	47	43	48	43	45	46	--

- *Monitoring began at 8 a.m. on August 9, 2023*

The lowest measured ambient sound level was 37 dBA on Sunday August 13, 2024 at 6:00 a.m., however the Facility does not/will not operate on Sundays. Ambient sound levels during Facility operating hours were measured higher at 39 dBA. The Facility operates six (6) days per week (Monday through Saturday) from 6:00 a.m. to 7:00 p.m. Monday through Friday and from 7:00 a.m. to 3:00 p.m. on Saturdays and typically operates with less truck traffic and operating equipment during the final two (2) hours each operating day (no tipping activities). Thus, this analysis utilizes the measured ambient sound level of 41 dBA on Saturday August 12, 2024 at 12:00 p.m. to establish a normal daytime operating limit under the MassDEP Noise Policy to be 51 dBA (the ambient sound level plus 10 dBA), and the measured ambient sound level of 39 dBA on Monday, August 14, 2024 at 6:00 p.m. to establish an "end-of-day" operating limit under the MassDEP Noise Policy to be 49 dBA. Table 2 summarizes the measured ambient sound level and the prescribed MassDEP Noise Policy and Leominster Noise Ordinance limits.

TABLE 2. SUMMARY OF AMBIENT SOUND LEVELS AND NOISE LIMITS

Modeling Assumptions	Normal Daytime Conditions	End-of Day Conditions
Time Periods	M-F: 6:00 a.m. to 5:00 p.m. Sat: 7:00 a.m. to 1:00 p.m.	M-F: 5:00 p.m. to 7:00 p.m. Sat: 1:00 p.m. to 3:00 p.m.
Ambient Sound Levels (L_{90})	41 to 55 dBA	39 to 44 dBA
MassDEP Noise Policy & Leominster Ordinance Prescribed Limits	51 dBA	49 dBA

Facility Sound Sources

The existing Building has four (4) roll-up doors on the north wall. A fifth door furthest to the east was a former truck loadout bay that was eliminated for the installation of the picking line above it. The four (4) roll-up doors include three (3) for incoming haul trucks (tipping) and one (1) for rail cars (outbound loadout). The existing building has an average interior height of 45 feet, the truck roll-up door openings on the northeast wall are 22 feet wide by 28 (1) and 40 (2) feet high, and the rail car roll-up door opening is 19.5 feet wide by 23 feet high.. The building is constructed of steel walls, steel roof and steel roll-up doors.

The waste-handling and processing activities will continue to consist of the unloading of MSW and C&D waste inside the building, inspecting the MSW and C&D waste, processing C&D materials through the existing recycling equipment, moving the materials to truck and railcar loading areas, and loading into respective mode of transport. The Facility will only operate the C&D recycling system between the existing waste acceptance hours of 6:00 a.m. to 7:00 p.m. Monday through Friday and 7:00 a.m. to 3:00 p.m. on Saturday.

Sound sources included as part of the acoustic modeling analysis are:

- A front-end loader and two (2) excavators operating inside the building to move materials, operating continuously.
- An idling haul truck inside the building, although idling is temporary in nature and regulated to no more than five (5) minutes per anti-idling regulations.
- A C&D recycling system inside the building, the noise from which is dominated by the electrically-powered screener.
- Four (4) elevated building ventilation fans (three on the west wall and one on the north wall).
- A front-end loader or skid steer outside the building operating continuously to be conservative as part of this analysis. Note that this would be infrequent as waste handling occurs indoors.
- A railcar mover outside the building to move rail cars in the rail yard.

- An idling haul truck outside the building, although idling is temporary in nature and regulated to no more than five (5) minutes per anti-idling regulations.
- A street sweeper outside of the building, although not expected to operate continuously.
- A compactor outside of the building, although not expected to operate continuously.
- Haul trucks traveling to and from the Facility.

Most of the above sound sources occur inside the building. The railcar mover will operate primarily outside the building, and intermittently to move rail cars into and out of the building, and not prior to 6:00 a.m. A front-end loader or skid steer will also be operated outside the building if necessary, but again not prior to 6:00 a.m. Ventilation fans and motors will be located inside the building, and air will be exhausted through vents on the walls of the building. The fan sound will be insignificant compared to that from mechanical equipment inside the building. Similarly, the sound of waste tipping onto the tipping floor inside the building is insignificant compared to that from mechanical equipment inside the building.

The source sound power levels (L_w) for each sound source used in the modeling are as follows:

- Front-End Loader: 107 dBA
- Excavator: 109 dBA
- Idling Haul Truck: 91 dBA
- C&D Recycling System: 110 dBA
- Yard Truck/Railcar Mover: 100 dBA
- Street Sweeper: 102 dBA
- Compactor: 107 dBA
- Ventilation Fans: 85 dBA
- Haul Truck Traffic: 100 dBA

The acoustic modeling, presented herein, assumes that all the sound sources operate simultaneously. The modeling also assumes that during end-of-day time periods that a front-end loader or skid steer will not be needed outside the building, and that at least one (1) of the 40-foot-tall roll-up doors will be closed, although it is expected that most roll-up doors will be kept closed except when it is necessary for a truck or rail car to enter or leave the building. The number of haul trucks traveling to and from the facility is expected to be no more than thirty (30) per hour during normal daytime periods, and no more than seven (7) per hour during end-of-day periods (based on the traffic analysis). Sound data for each piece of equipment were either based on literature reference data or sound measurements collected by Tech on other similar projects.

Calculated Future Sound Levels

Future maximum sound levels at the nearest residential receptors were calculated with the CadnaA acoustic model assuming simultaneous operation of all regulated sound sounds at their maximum loads. CadnaA is a sophisticated 3-D model for sound propagation, attenuation and atmospheric absorption based on International Standard ISO 9613[1]. Absorption of sound assumed standard day conditions and is

[1] International Standard, ISO 9613-2, Acoustics – Attenuation of Sound During Propagation Outdoors, -- Part 2 General Method of Calculation.

significant at large distances and at high frequencies. ISO 9613 was also used to calculate propagation and attenuation of sound energy by hemispherical divergence with distance, surface reflection, ground, and shielding effects by barriers, buildings, and ground topography. Offsite topography was determined using official MassGIS digital elevation data for the study area.

Future maximum sound levels were predicted at twenty-two (22) residential receptors surrounding the facility. Those sound modeling receptor locations are illustrated in the attached Figure 1. The results of acoustic modeling calculations are presented in Table 3 and Table 4 and demonstrate that the Facility will fully comply with the MassDEP Noise policy at all nearby noise-sensitive locations. Future predicted maximum daytime sound levels from the Facility range from 37 dBA to 51 dBA at the surrounding residences, and future predicted end-of-day sound levels from the Facility range from 34 dBA to 49 dBA at the surrounding residences. The acoustic modeling calculations also confirm that the Facility will not create any pure tone nuisance conditions as described in the MassDEP Noise Policy. A demonstration of compliance with the MassDEP Noise Policy infers compliance with the Leominster Noise Ordinance.

TABLE 3. SUMMARY OF PREDICTED DAYTIME SOUND LEVELS

Receptor Locations	Daytime Period MassDEP Noise Limits	Predicted Daytime Sound Levels from the Facility	Complies with the MassDEP Noise Policy?
149 Malburn Street	51 dBA	40 dBA	**Yes**
145 Malburn Street	51 dBA	42 dBA	**Yes**
141 Malburn Street	51 dBA	39 dBA	**Yes**
137 Malburn Street	51 dBA	39 dBA	**Yes**
131 Malburn Street	51 dBA	38 dBA	**Yes**
119 Malburn Street	51 dBA	41 dBA	**Yes**
107 Malburn Street	51 dBA	41 dBA	**Yes**
97 Malburn Street	51 dBA	39 dBA	**Yes**
91 Malburn Street	51 dBA	37 dBA	**Yes**
299 Tanzio Road	51 dBA	45 dBA	**Yes**
78S Meadow Pond Drive	51 dBA	43 dBA	**Yes**
78O Meadow Pond Drive	51 dBA	48 dBA	**Yes**
78A Meadow Pond Drive	51 dBA	42 dBA	**Yes**
49C Meadow Pond Drive	51 dBA	50 dBA	**Yes**
30 Abbey Road	51 dBA	49 dBA	**Yes**
256 Litchfield Street	51 dBA	51 dBA	**Yes**
261-265 Litchfield Street	51 dBA	48 dBA	**Yes**
12 Calza Street	51 dBA	43 dBA	**Yes**
27 Calza Street	51 dBA	41 dBA	**Yes**
37 Calza Street	51 dBA	42 dBA	**Yes**
5 Ruth Street	51 dBA	43 dBA	**Yes**
3 Ruth Street	51 dBA	40 dBA	**Yes**

TABLE 4. SUMMARY OF PREDICTED END-OF-DAY SOUND LEVELS

Receptor Locations	End-of-Day MassDEP Noise Limits	Predicted End-of-Day Sound Levels from the Facility	Complies with the MassDEP Noise Policy?
149 Malburn Street	49 dBA	38 dBA	**Yes**
145 Malburn Street	49 dBA	40 dBA	**Yes**
141 Malburn Street	49 dBA	37 dBA	**Yes**
137 Malburn Street	49 dBA	36 dBA	**Yes**
131 Malburn Street	49 dBA	34 dBA	**Yes**
119 Malburn Street	49 dBA	37 dBA	**Yes**
107 Malburn Street	49 dBA	36 dBA	**Yes**
97 Malburn Street	49 dBA	35 dBA	**Yes**
91 Malburn Street	49 dBA	34 dBA	**Yes**
299 Tanzio Road	49 dBA	43 dBA	**Yes**
78S Meadow Pond Drive	49 dBA	40 dBA	**Yes**
78O Meadow Pond Drive	49 dBA	45 dBA	**Yes**
78A Meadow Pond Drive	49 dBA	39 dBA	**Yes**
49C Meadow Pond Drive	49 dBA	48 dBA	**Yes**
30 Abbey Road	49 dBA	46 dBA	**Yes**
256 Litchfield Street	49 dBA	49 dBA	**Yes**
261-265 Litchfield Street	49 dBA	45 dBA	**Yes**
12 Calza Street	49 dBA	41 dBA	**Yes**
27 Calza Street	49 dBA	38 dBA	**Yes**
37 Calza Street	49 dBA	40 dBA	**Yes**
5 Ruth Street	49 dBA	41 dBA	**Yes**
3 Ruth Street	49 dBA	38 dBA	**Yes**

Conclusions

This study demonstrates that the facility with the proposed increase in throughput, pursuant to 310 CMR 16.40(4)(g), will not cause a nuisance sound condition which would constitute a danger to the public health, safety, or the environment. This assessment shows that the impacts from all sounds due to the Project demonstrates compliance with the MassDEP Noise Policy and the Leominster Noise Ordinance, and therefore will not cause a condition of noise pollution.

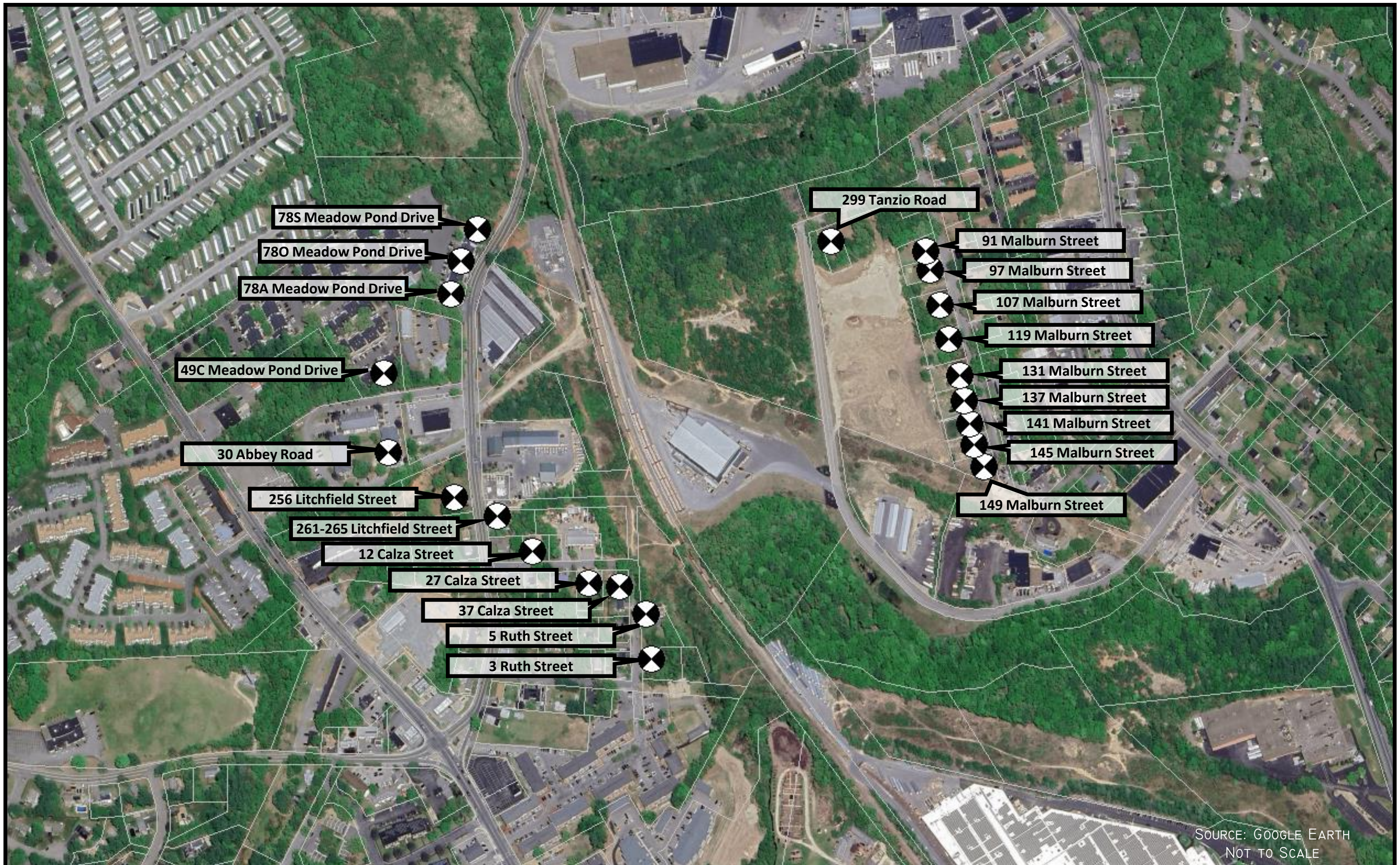


Figure 1
Sound Modeling Receptor Locations
United Materials Management, Leominster, Massachusetts

ATTACHMENT 7

AIR QUALITY STUDY

TECH environmental
FOCUSED KNOWLEDGE. REAL SOLUTIONS.

MEMORANDUM

To: Laura A. Bugay, Green Seal Environmental
From: Michael Lannan & Marc Wallace, Tech Environmental
Date: July 10, 2024
Subject: Air Quality Study of United Materials Management, Leominster, Massachusetts Ref. 4885

United Materials Management Leominster ("UMML") currently operates a 1,000 tons per day ("tpd") municipal solid waste ("MSW") and construction and demolition ("C&D") waste handling and transfer station (the "Facility") at 200 Tanzio Road in Leominster, Massachusetts. The Facility consists of a 32,400 square foot (sf") solid waste transfer/waste handling building (the "Building") (including 1,260 sf of attached office space for a total footprint of 33,660 sf). The site also includes a rail yard, scale house and scales, parking areas, paved access roads, and associated appurtenances.

The Facility is located on 13.46 acres of land and is comprised of two (2) parcels (9.621 acres and 3.841 acres in size) of which 11.33 acres are site assigned per 310 CMR 16.00 as a solid waste handling facility. The Facility is designed to accept MSW, and C&D delivered by truck for subsequent transfer into rail cars and secondarily, as conditions dictate, larger trucks for transport to various locations throughout the country for disposal and/or recycling. Solid waste handling activities occur within the enclosed building, which is adequately sized so that all unloading, handling, and loading onto rail cars and/or trucks occurs within the building interior. The handling building is equipped with overhead doors.

UMML intends to increase their permitted daily tonnage from 1,000 tpd (300,000 tons annually) to 1,500 tpd of C&D and MSW with a maximum annualized capacity of 450,000 tons. As presently approved, the Facility operates six (6) days per week and accepts waste from 6:00 a.m. to 7:00 p.m. Monday through Friday, and from 7:00 a.m. to 3:00 p.m. on Saturdays. The Facility is not intending to change their hours of waste acceptance at this time.

The objective of this study was to determine whether the operation of the proposed Facility will comply with the Massachusetts Ambient Air Quality Standards (MAAQS) and the National Ambient Air Quality Standards (NAAQS) for coarse and fine particulate matter (PM_{10} and $PM_{2.5}$). The results of the dispersion modeling analysis of the UMML Facility shows that it will comply with these limits and therefore will not result in adverse air quality effects at the closest neighbors to the Site even under the conservative operating assumptions used as outlined below of the idling trucks and all waste being C&D. Any mixture of MSW and C&D will be lower, as MSW is less friable and therefore less likely to become airborne upon handling.

Facility Sources

The dispersion modeling included the following sources of air pollution: 1) the loading and unloading of materials into and out of trucks inside the Building; 2) the conveying, screening, and sorting of C&D inside the Building; 3) non-road diesel equipment exhaust emissions inside and outside the Building, and

4) on-road diesel trucks idling inside and outside the Building. The maximum PM_{10} and $PM_{2.5}$ from the Building to the outside air conservatively assumes all 1,500 tpd of material received, processed, and stored consist only of C&D, since C&D tends to generate higher dust emissions than MSW, and is typically delivered in smaller trucks thereby reducing the tonnage received per truck rate and increasing inbound truck volumes to overestimate potential emissions for this study. The Facility was modeled to operate from 6:00 a.m. to 7:00 p.m. Monday through Friday, and 7:00 a.m. to 3:00 p.m. on Saturdays, 52 weeks per year.

Best Management Practices (BMPs) for the Facility include: 1) all waste-handling will occur within the Building, 2) use of a water-based misting system with odor control agents in the waste-unloading area and around the doorways, 3) paved surfaces for all access roads and handling areas, and 4) all equipment used at the Facility will comply with the latest EPA emission standards for diesel engines.

Truck Loading and Unloading Fugitive Emissions

Emissions from truck loading and unloading will consist solely of fugitive PM_{10}, and $PM_{2.5}$ from the batch dropping of materials. Using the EPA batch drop emission factor[1], the fugitive dust emissions potential is equal to 2.39E-04 lb of PM_{10} per ton of C&D waste and 3.65E-05 lb of $PM_{2.5}$ per ton of C&D waste, based on a wind speed of 6.2 mph, and an estimated mean moisture content of 7.4%.

The wind speed was determined by calculating the required velocity of wind through all doors open based on the open area of each door, and the Building doors to replace the volume of air being removed by the Building's ventilation system (138,454cubic feet per minute (cfm). The potential wind speed inside of the Building is equal to 6.2 miles per hour (mph).

It is estimated that every ton of C&D waste will go through two batch drop events inside the Building (truck drop to tipping floor, and loader drop into outgoing trucks or railcars), and will occur over 13 hours/day, Monday through Friday and 8 hours/day on Saturday. With a maximum capacity of 1,500 tpd, truck loading and unloading fugitive PM_{10} and $PM_{2.5}$ emissions inside the Building are 0.064 and 0.008 tons/year, respectively.

As part of the Facility's Best Management Practices, the Building is equipped with a water-based dust mitigation system that also can meter in odor control agents in the atomized water spray. This practice is conservatively assumed to reduce Building fugitive emissions by 50%.

C&D Processing-Fugitive Emissions

Emissions from C&D processing will also consist solely of fugitive PM_{10} and $PM_{2.5}$ emissions. The C&D processing includes conveying and screening the materials plus the drops accounted for in the previous section. The EPA PM_{10} emission factors for conveyor transfer points and screening of crushed stone are 1.10E-03 and 8.70E-03 lbs of PM_{10} per ton of processed material, respectively.[2] And the EPA $PM_{2.5}$

[1] U.S. EPA, Compilation of Air Pollutant Emission Factors, Volume 1 (Fifth Edition), Publication No. AP-42, Research Triangle Park, NC, 1995, Section 13.2.4.

[2] U.S. EPA, Compilation of Air Pollutant Emission Factors, Volume 1 (Fifth Edition), Publication No. AP-42, Research

emission factors for conveyor transfer points and screening of crushed stone are 2.00E-04 and 1.30E-03 lbs of $PM_{2.5}$ per ton of processed material, respectively. Although the line itself can run faster, in order for it to be operated effectively, the average daily C&D processing rate will not exceed 40 tons per hour (tph), and the maximum daily C&D processing rate will not exceed 50 tph even at a maximum 1,500 tons per day acceptance rate. In order for the maximum C&D acceptance rate to be achieved, there is an assumption that some of that C&D will arrive in bulk and not require sorting. The fugitives from the dropping of both the srted and unsorted material is accounted for in the previous section.

For C&D processing, each ton of waste processed will go through approximately five (5) conveyors transfer points and screeners. C&D waste-processing will occur 6:00 a.m. and 7:00 p.m. Monday through Friday, and between 7:00 a.m. and 3:00 p.m. Saturdays, 52 weeks a year.

With the process sorting line running continuously, C&D processing PM_{10} and $PM_{2.5}$ fugitive emissions with 50% control from the Building's misting system would only be 0.50 and 0.075 tpy, respectively.

Non-Road Equipment Exhaust Emissions

PM_{10}, and $PM_{2.5}$ exhaust emissions from diesel-powered non-road equipment used inside the Building were calculated using emissions data from the EPA NONROAD User's Guide[3]. One loader will also be used both inside and outside the Building to help clear tipping bays and effectively manage interior stockpiles. All pieces of equipment will use ultra-low sulfur diesel fuel (ULSD) with a sulfur content of approximately 15 ppm (0.0015%). All emissions from the diesel equipment were calculated assuming overall load factors for that type of equipment: 59% (Loader), 59% (Excavator), and 21% (Track Mobile Unit). These factors adjust for the fact that this equipment does not constantly operate at full power. In addition, the EPA reference states that $PM_{2.5}$ from these sources represents 97% of the PM_{10} emissions, which was included in the emissions calculations. Assuming all equipment is used continuously between 6:00 a.m. and 7:00 p.m. Monday through Friday, and between 7:00 a.m. and 3:00 p.m. Saturdays, 52 weeks a year, and using the recommended load factors, it was determined that the non-road equipment would contribute 0.032 and 0.031 tpy of PM_{10} and $PM_{2.5}$, respectively.

Truck Exhaust Emissions

Tech calculated PM_{10} and $PM_{2.5}$ emissions from trucks idling inside and outside the Building. The idling emission rate for the trucks were determined using EPA's MOVES model. It was assumed that each truck carrying inbound and outbound material will idle for five minutes while outside of the Building and an additional five minutes while inside of the Building. Per the Massachusetts Department of Environmental Protection (MassDEP) *310 CMR 7.11(1)(b)* anti-idling regulation, each truck is limited to five minutes of continuous idling. In reality, the turnaround time, and therefore the idling time for truck activity at both locations will be less than 5 minutes on average.

Triangle Park, NC, 1995, Section 11.19.2.

[3] U.S. EPA, Exhaust and Crankcase Emission Factors for Nonroad Engine Modeling Compression-Ignition, EPA-420-R-10-018 (July 2010), Page A10.

Truck exhaust emissions calculations were based on the Facility operating 6:00 a.m. to 7:00 p.m., Monday through Friday, and 7:00 a.m. to 3:00 p.m. Saturdays, 52 weeks/year, excluding Sundays and holidays contributed 0.071, and 0.065 tpy of PM_{10}, and $PM_{2.5}$, respectively.

A summary of the Facility-wide PM_{10} and $PM_{2.5}$ emissions are presented in Table 1. As one can see from this table, the potential to emit is well less than 1 ton per year and below the typical air permitting thresholds in Massachusetts. Therefore, this analysis is focused on the potential impact at the nearest residences.

TABLE 1

SUMMARY OF FACILITY-WIDE AIR EMISSIONS
(tons per year)

Emissions Source	PM_{10}	$PM_{2.5}$
Truck Loading/Unloading Fugitives	0.064	0.008
C&D Processing Fugitives	0.50	0.075
Non-Road Equipment Exhaust	0.032	0.031
Idling Truck Exhaust	0.071	0.065
Total	**0.66**	**0.18**

Air Quality Standards

The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for coarse particulate matter (PM_{10}) of 150 $\mu g/m^3$ (24-hours), and NAAQS for fine particulate matter ($PM_{2.5}$) of 35 $\mu g/m^3$ (24-hours) and 12 $\mu g/m^3$ (annual). The NAAQS are designed to protect the public's health and welfare, with a margin for safety on a regional basis. Given the low air emission potential on a tons per year basis, this facility cannot adversely affect regional NAAQS compliance. Many states, including Massachusetts, historically adopted the NAAQS and the local air quality standards as well. Compliance with the stringent local health standards ensures that an activity will not adversely affect persons living nearby, including those with asthma and other lung diseases. On February 7, 2024, EPA promulgated a lower $PM_{2.5}$ annual NAAQS of 9 $\mu g/m^3$. While we expect the new standard to be incorporated by Massachusetts, it cannot be formally changed until the state holds the proper public meetings and submits an updated State Implementation Plan (SIP) to EPA for approval. Thus, we are using the current Massachusetts $PM_{2.5}$ annual limit as part of the compliance demonstration, but it should be noted that the Facility can also comply with the lower EPA standard of 9 $\mu g/m^3$ as well.

Air Quality Dispersion Modeling

EPA's recommended model for near-source impact assessments is the AERMOD dispersion model (40 CFR 51 Appendix W). The AERMOD model is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The most recent available version of AERMOD is Version No. 23132. The graphical user interface, BEEST, created by

Beeline Software, was used to facilitate model setup and post-processing. AERMOD was used in "refined" mode, with full receptor grids and five years of meteorological data.

Volume sources representing idling trucks, a loader and a track mobile unit outside the Building were modeled with an elevation equal to ground level and an initial vertical dimension of 3.7 feet (1.1 meters), 5.1 feet (1.6 meters) and 5.5 feet (1.7 meters) to represent the release height of the truck, loader and track mobile unit exhausts, respectively.

Model regulatory default options were selected, and rural dispersion parameters were used. The emission rates for all 8 sources were set by the model to be zero for the hours between 7:00 p.m. and 5:00 a.m. Monday through Friday, 3:00 p.m. and 12:00 a.m. Saturdays, and all-day Sundays. Thirty-three percent of all emissions originating inside of the Building were conservatively assumed to escape through up to four open Building overhead doors. Please note that this assumption is not intended to reflect actual overhead door operations but is used in the modeling assumptions to be extremely conservative for this assessment. The emissions escaping through the Building doors were modeled as a single volume source with an initial vertical dimension of 23.6 feet (7.2 meters), assuming 50% control from the Building's misting system during the months when the ambient temperature is above freezing. During the coldest months, the number of doors open will be less and therefore more dust will be contained. Assuming the fraction of fugitive emissions through the open doors with misting for all year is therefore conservative.

The remaining 67 percent of the Building's emissions were modeled as four horizontal point sources exhausted from the sides of the Building. The three western-most exhaust vents and the fourth northern exhaust vent were modeled with stack heights of 37 feet (11.3 meters) and flow rates of 34,322 cfm (12.7 m^3/s). The exit velocities of each exhaust were set to 0.0328 feet per second (0.001 meters per second) to represent horizontal discharge. The stack exhausts were assumed to have an ambient temperature of 68ºF.

A receptor grid was set up in the model to conservatively represent where the general public may have frequent and prolonged access to the ambient air. This grid included receptors spaced at 164-foot (50-meter) intervals along the fence line, a Cartesian receptor grid with 328-foot (100-meter) spacing extending from the fence line out to 1,640 feet (500 meters), and 656-foot (200-meter) spacing extending from the 500-meter grid out to 3,280 feet (1,000 meters). A total of 394 receptors were included in AERMOD. The elevation and hill height for each receptor were calculated with the EPA AERMAP program, using digital terrain data with 98-foot (30-meter) spacing from the US Geological Survey (USGS) digital map.

The modeling was performed using five years of hourly surface meteorological data from Worcester, MA Airport and using twice-daily mixing heights from Albany, New York for 2017-2021 obtained from MassDEP4. The model was set to predict 24-hour concentrations of PM_{10} and 24-hour and annual average concentrations of $PM_{2.5}$. For $PM_{2.5}$, five-year averages of the highest, eighth-highest 24-hour average concentration and the annual concentration at each receptor were used to represent the modeled impacts, as described in the AERMOD User's Guide. For PM_{10}, the highest, sixth-highest 24-hour average over the five-year period was used to represent the modeled impacts.

[4] https://www.mass.gov/info-details/meteorological-data

The modeling results were summed with background PM_{10} and $PM_{2.5}$ levels. PM_{10} and $PM_{2.5}$ background levels are from the Massachusetts Department of Environmental Protection (MassDEP) monitoring station in Worcester, MA (2020-2022 data)[5]. Table 2 presents the selected background PM_{10} and $PM_{2.5}$ concentrations used to represent the Site. The resulting total concentrations are summarized in Table 3. Both 24-hour PM_{10} and $PM_{2.5}$ and annual $PM_{2.5}$ maximum impacts occurred at the Facility property line.

The results in Table 3 demonstrate that the Facility will not adversely affect air quality. Maximum air concentrations of PM_{10} and $PM_{2.5}$ will be safely in compliance with the applicable NAAQS. Furthermore, the Facility is safely in compliance with new PM2.5 annual NAAQS of 9 ug/m^3.

TABLE 2

MONITORED AIR POLLUTANT CONCENTRATIONS (2020-2022)
WITH SELECTED BACKGROUND VALUES

Pollutant	Monitoring Location	Averaging Period	2020	2021	2022	Selected Background
$PM_{2.5}$	Summer St., Worcester, MA	24-Hour Annual	13.3 7.00	19.0 9.07	17.9 8.61	16.7 8.2
PM_{10}	Summer St., Worcester, MA	24-Hour	33.0	31.0	45.0	45.0

TABLE 3

COMPLIANCE WITH AIR QUALITY STANDARDS
FOR THE UMML FACILITY

Pollutant	Averaging Period	Maximum Predicted Impact-UMML (ug/m^3)	Year	Background Concentration (ug/m^3)	Total Impact (ug/m^3)	NAAQS (ug/m^3)
$PM_{2.5}$	24-Hour Annual	1.9 0.4	2020-2022	16.7 8.2	18.6 8.6	35 12
PM_{10}	24-Hour	11.0	2020-2022	45.0	56.0	150

[5] http://www.mass.gov/dep/air/aq/aq_repts.htm.

Conclusions and Mitigation Summary

The dispersion modeling analysis of the UMML Facility shows that there will not be adverse air quality effects on the closest neighbors to the Site with the increase in tonnage proposed, even under these conservative operating assumptions of the idling trucks and all inbound waste being C&D.

The Facility will be designed using Best Management Practices to further ensure that particulate matter impacts from the Facility will be safely in compliance with air quality standards for PM_{10} and $PM_{2.5,}$ which have been designed to protect public health for the most sensitive individuals with a margin for safety.

ATTACHMENT 8

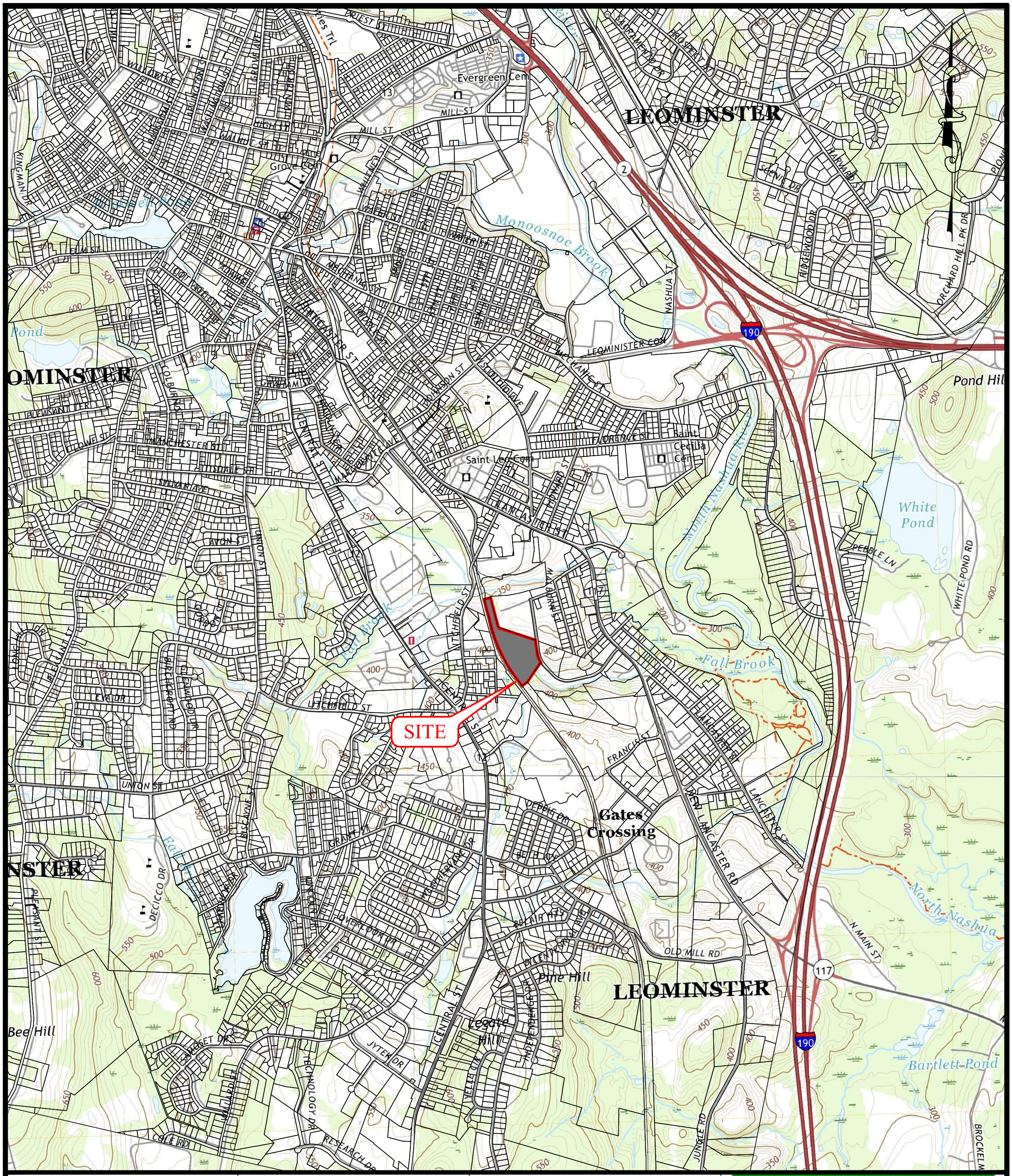
CERTIFICATE OF SERVICE

TO BE INSERTED AS PART OF THE MASSDEP SITE SUITABILITY PERMITTING PROCESS

FIGURES

FIGURE 1

USGS TOPOGRAPHIC LOCUS MAP



NOTE: USGS TOPOGRAPHIC MAP WAS PROVIDED BY THE OFFICE OF GEOGRAPHIC AND ENVIRONMENTAL INFORMATION (MassMapper), COMMONWEALTH OF MASSACHUSETTS EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS CURRENT TO JUNE 2021.

REVISIONS	
NO./ DATE	COMMENT

DRAWING TITLE:

SITE LOCUS MAP

CAD TECH: D. HAZEN

CHECKED BY: L. BUGAY

ENGINEER: L.BUGAY

DATE: 5/22/2024

PREPARED FOR:

UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC

Green Seal Environmental, LLC
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.gseenv.com

LOCUS:

200 TANZIO ROAD
LEOMINSTER, MA 01453

SCALE:

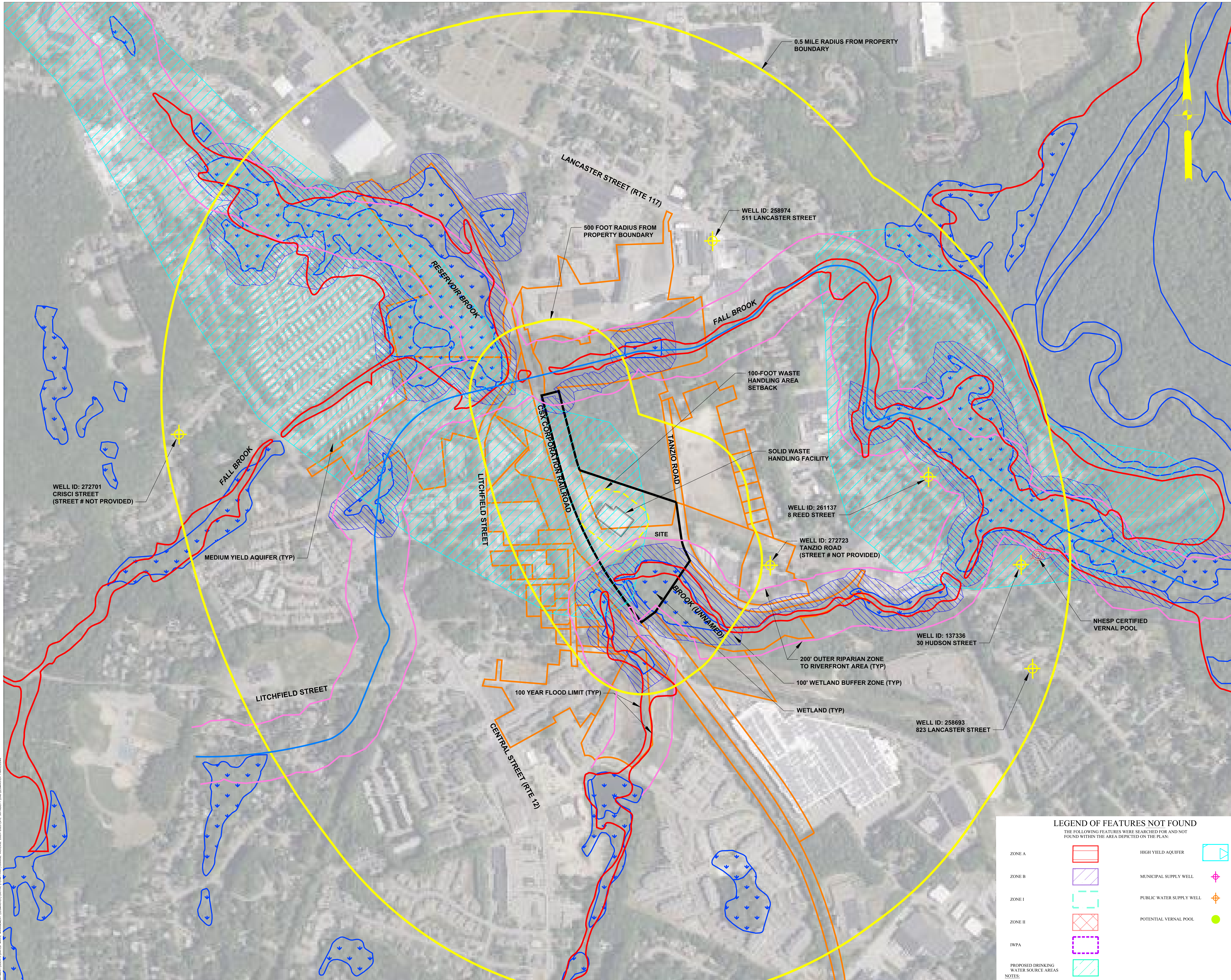
1" = 2,500'

SHEET:

FIGURE 1

FIGURE 2

WATER RESOURCES PLAN



NOTES:

1. THE INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM MASSMAPPER.
2. WELL RECORDS WERE RESEARCHED AT MASS GOV EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS DATA PORTAL AND CITY OF LEOMINSTER HEALTH DEPARTMENT.
3. PROPOSED DRINKING WATER SOURCE AREAS RESEARCHED ON MASSDEP WATER MANAGEMENTACT PERMITS AND DECISIONS WEBSITE

Green Seal Environmental, LLC
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.gseenv.com

Dimensions 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

PURPOSE:

SITE SUITABILITY MODIFICATION

LOCUS:

200 TANZIO ROAD
LEOMINSTER, MA 01453

PREPARED FOR:

UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC

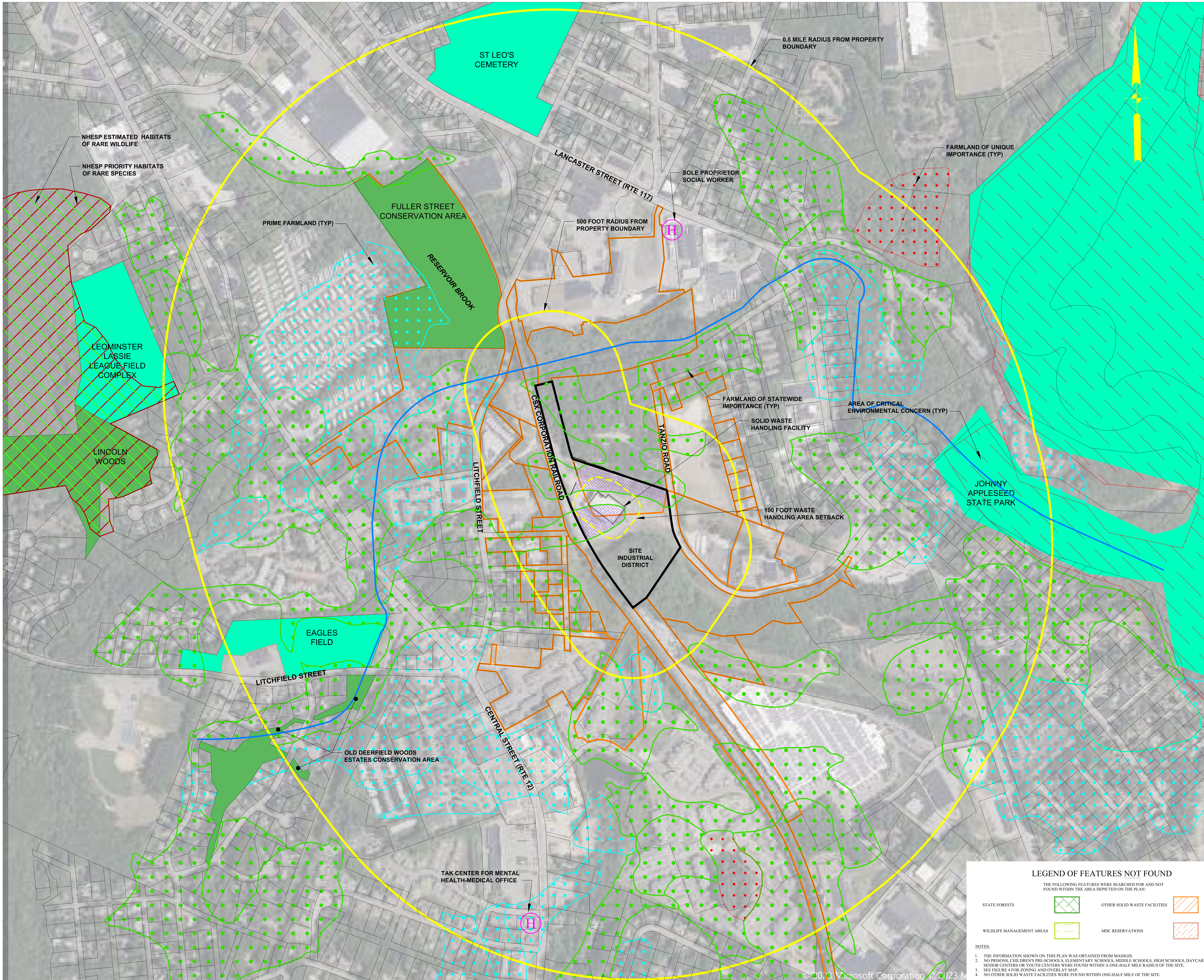
DRAWING TITLE:

WATER RESOURCES PLAN

CAD TECH:	CHECKED BY:
D. HAZEN	L. BUGAY
ENGINEER:	DATE:
L. BUGAY	5/22/2024
	SCALE:
	1" = 200'
	SHEET:
	FIGURE 2

FIGURE 3

LAND USE PLAN



LEGEND OF FEATURES NOT FOUND

THE FOLLOWING FEATURES WERE SEARCHED FOR AND NOT FOUND WITHIN THE AREA DEPICTED ON THE PLAN:

STATE FORESTS

OTHER SOLID WASTE FACILITIES

WILDLIFE MANAGEMENT AREAS

MDC RESERVATIONS

NOTES:

1. THE INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM MASSGIS.
2. NO PRISONS, CHILDREN'S PRE-SCHOOLS, ELEMENTARY SCHOOLS, MIDDLE SCHOOLS, HIGH SCHOOLS, DAYCARES, SENIOR CENTERS OR YOUTH CENTERS WERE FOUND WITHIN A ONE-HALF MILE RADIUS OF THE SITE.
3. SEE FIGURE 4 FOR ZONING AND OVERLAY MAP.
4. NO OTHER SOLID WASTE FACILITIES WERE FOUND WITHIN ONE-HALF MILE OF THE SITE.

LEGEND

FARMLAND OF UNIQUE IMPORTANCE

FARMLAND OF STATEWIDE IMPORTANCE

PRIME FARMLAND

AREA NO LONGER FARMLAND

CONSERVATION LAND

CONSERVATION AND RECREATION AREA

HISTORICAL/CULTURAL AREA

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

NHESP ESTIMATED HABITATS OF RARE WILDLIFE

NHESP PRIORITY HABITATS OF RARE SPECIES

SITE SETBACK

WASTE HANDLING AREA SETBACK

SITE PROPERTY LINES

ABUTTER PROPERTY LINE

HEALTHCARE

ENVIRONMENTAL · SURVEY · ENERGY · ENGINEERING
Est. GREEN SEAL 1997
Green Seal Environmental, LLC
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.gseenv.com

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Use of this plan constitutes acceptance of terms and conditions set forth in accompanying project documentation.

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REVISIONS

NO.	DATE	COMMENT

PURPOSE:

SITE SUITABILITY MODIFICATION

LOCUS:

200 TANZIO ROAD
LEOMINSTER, MA 01453

PREPARED FOR:

UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC

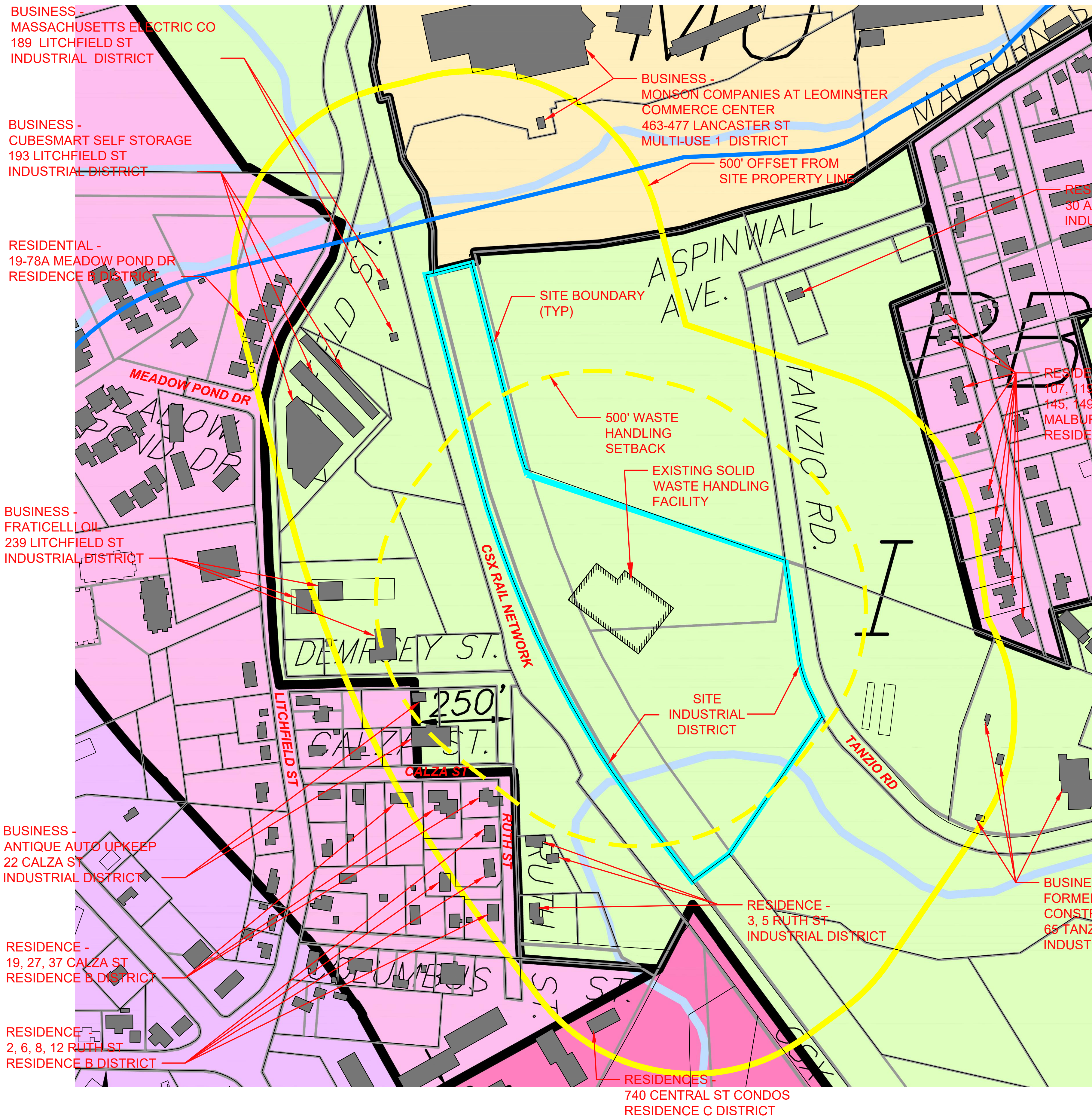
DRAWING TITLE:

LAND USE PLAN

CAD TECH:	CHECKED BY:
D. HAZEN	L. BUGAY
ENGINEER: L. BUGAY	DATE: 5/22/2024
	SCALE: 1" = 200'
	SHEET: FIGURE 3

FIGURE 4

PROPERTY IDENTIFICATION AND ZONING MAP



January 14, 2013

Sheet 1 of 2:

Water Supply Protection and Underlying Districts

LEGEND

	WSP	WATER SUPPLY PROTECTION DISTRICT
		UNDERLYING DISTRICTS:
	RR	RURAL RESIDENCE AND AGRICULTURE
	RA	RESIDENCE A
	RB	RESIDENCE B
	RC	RESIDENCE C
	BA	BUSINESS A
	BB	BUSINESS B
	C	COMMERCIAL
	I	INDUSTRIAL
	MU1	MULTI-USE 1
	MU2	MULTI-USE 2
	V	VILLAGE
		AREA OF CITY DEPICTED ON SHEET 2
		INTERSTATE HIGHWAY
		STATE NUMBERED ROUTE
		PUBLIC OR PRIVATE STREET OR WAY
		HIGHWAY OR STREET TRAVEL LANE
		PARCEL PROPERTY LINE
		WATER BODY
		WATER COURSE
		EXISTING STRUCTURE
		SITE PROPERTY LINES

NOTE:

THE INFORMATION SHOWN ON THIS PLAN WAS OBTAINED FROM THE CITY OF LEOMINSTER AND MASSMAPPER.

Green Seal Environmental, LLC
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.gseenv.com

REVISIONS

NO.	DATE	COMMENTS

PROJECT:

SITE SUITABILITY MODIFICATION

LOCUS:

200 TANZIO ROAD
LEOMINSTER, MA 01453

PREPARED FOR:

UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC

DRAWING TITLE:

ZONING & OVERLAY MAP

ENGINEER: L. BUGAY

CAD TECH: D. HAZEN

CHECKED BY: L. BUGAY

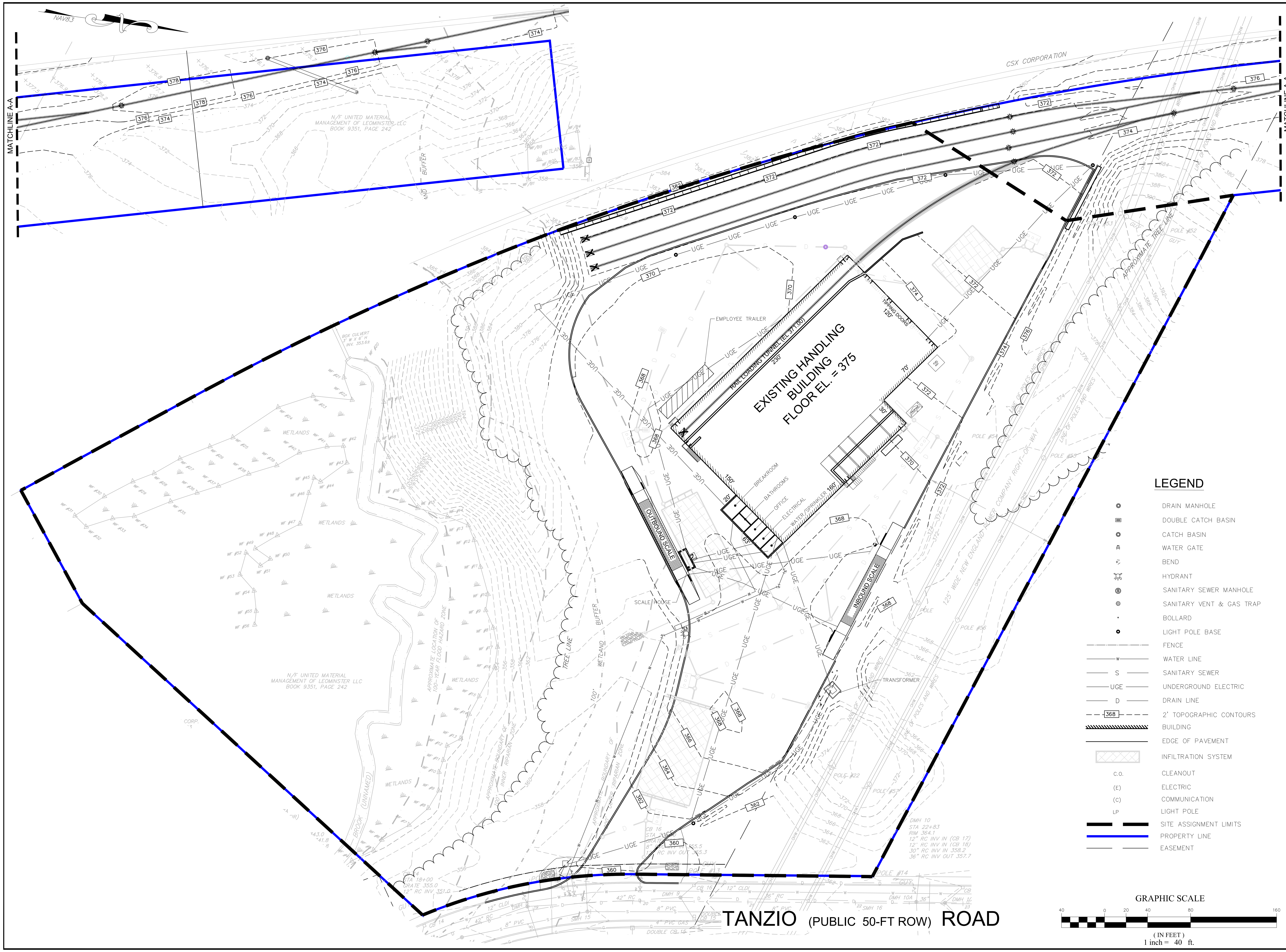
SCALE: Not to Scale

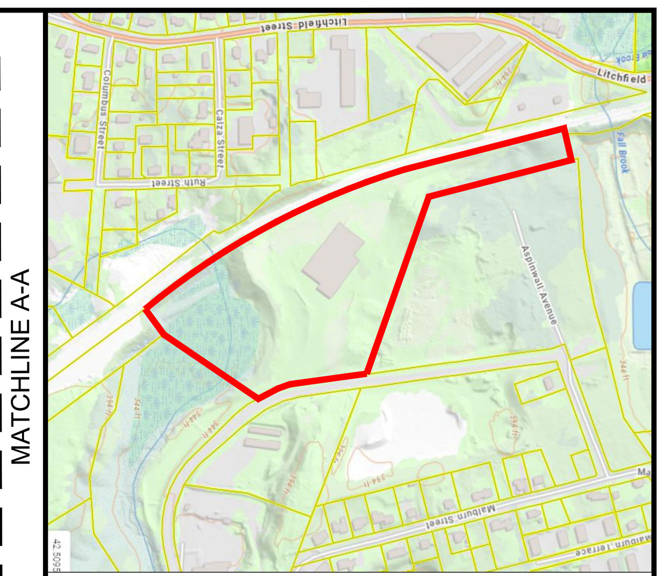
DATE: 5/22/2024

SHEET: FIGURE 4

FIGURE 5

EXISTING AND PROPOSED CONDITIONS PLAN (EXTERIOR)





LOCUS MAP
N.T.S.

Green Seal Environmental, LLC
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.gseenv.com

REVISIONS

NO.	DATE	COMMENT

PURPOSE:

SITE SUITABILITY MODIFICATION

LOCUS:

200 TANZIO ROAD
LEOMINSTER, MA 01453

PREPARED FOR:

UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC

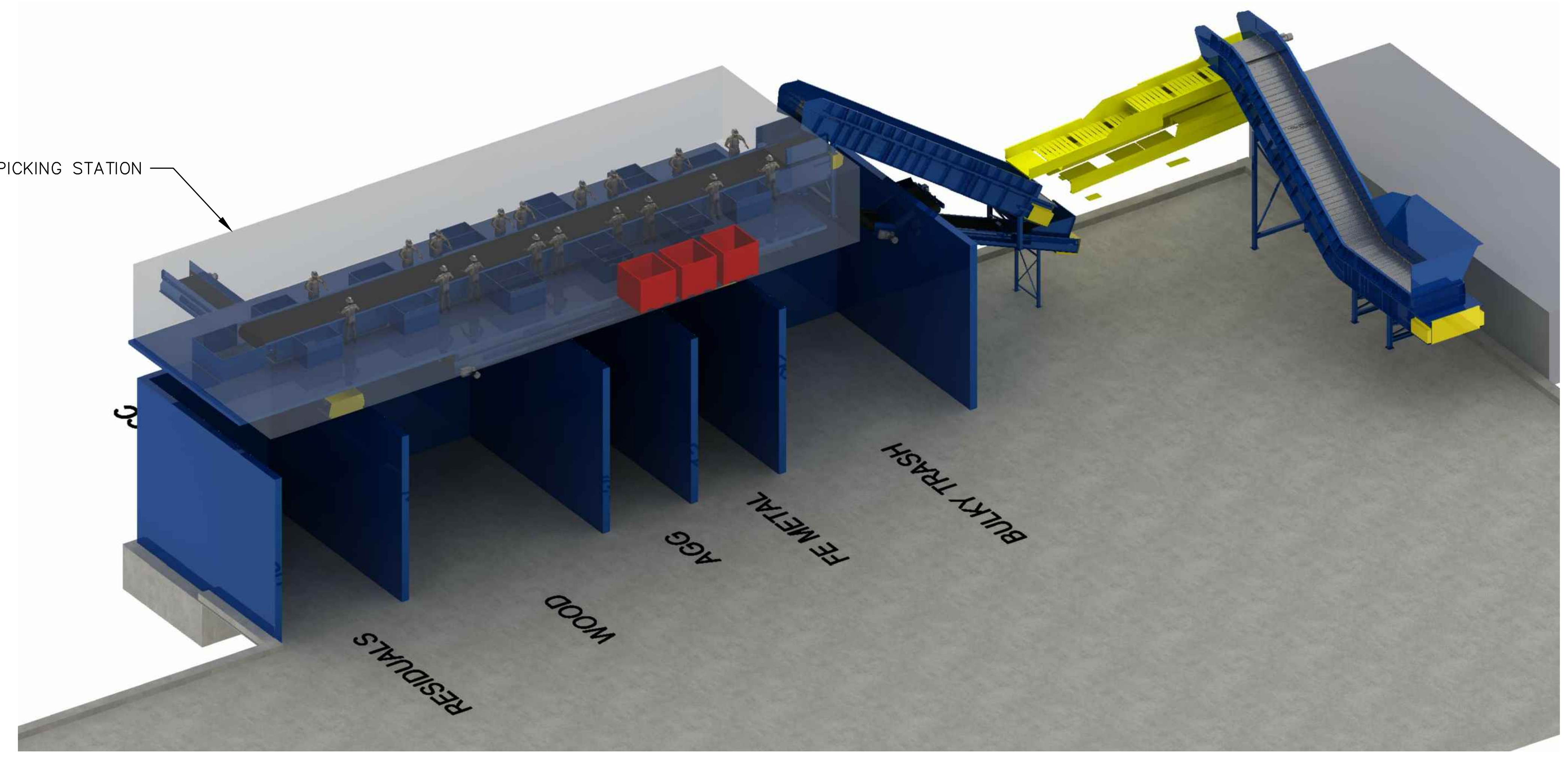
DRAWING TITLE:

EXISTING AND PROPOSED CONDITIONS PLAN - EXTERIOR

CAD TECH:	CHECKED BY:
M. MIXON	L. BUGAY
ENGINEER:	DATE:
L. BUGAY	8/15/2024
	SCALE: 1"=40'
	SHEET: FIGURE 5

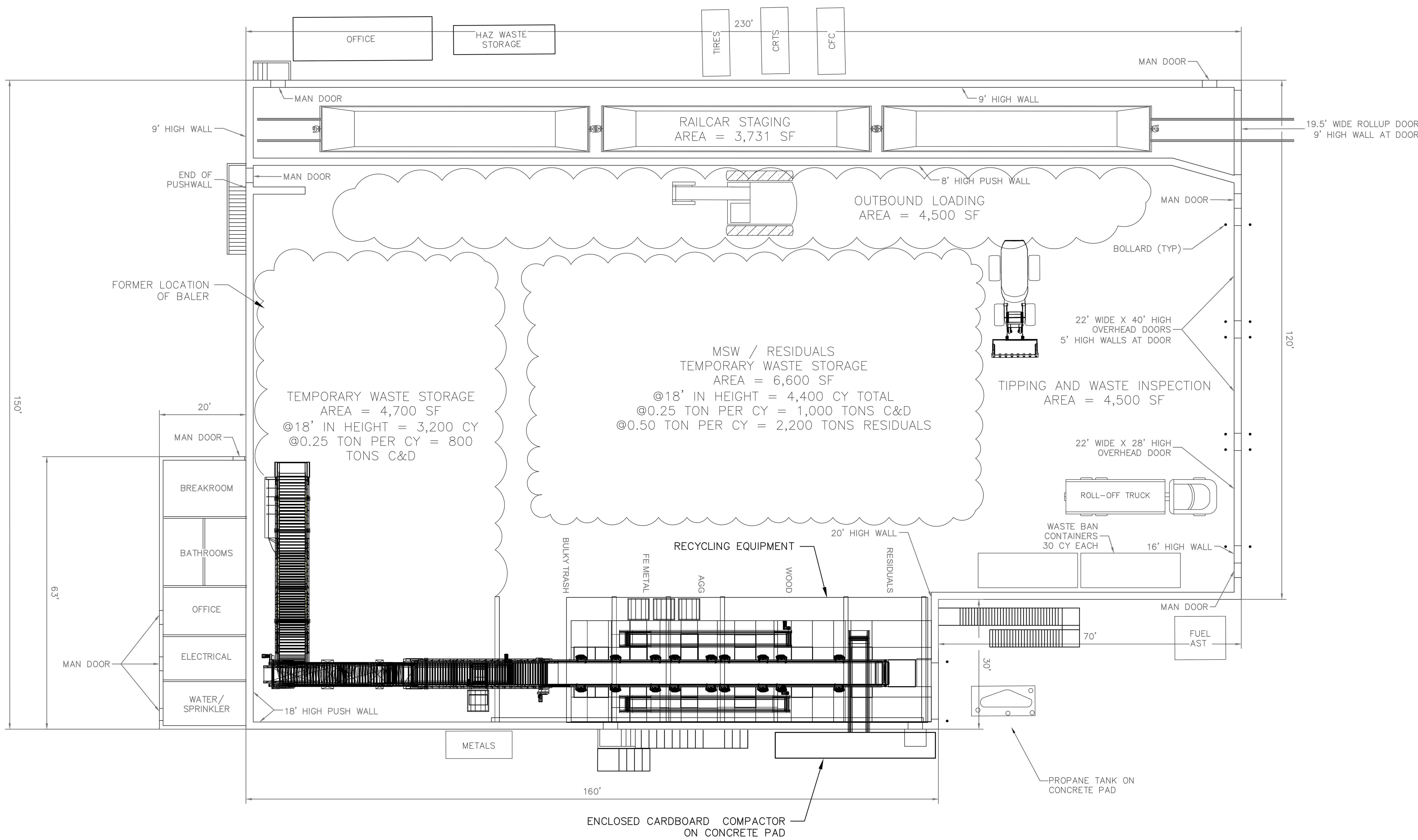
FIGURE 6

EXISTING AND PROPOSED CONDITIONS PLAN (INTERIOR)



GENERAL ARRANGEMENT FOR RECYCLING EQUIPMENT

NOT TO SCALE



NOTE: LOCATION OF WASTE BAN CONTAINERS AND/OR RECYCLING CONTAINERS MAY VARY

INTERIOR LAYOUT

SCALE:1/16" = 1'-0"

S:\Solid Waste Department\Clients\United Waste Management (Leominster)\Active\Permitting\Tonnage Increase 2023-2025\Site Suitability\CAD\Figure 6.dwg

LOCUS MAP

N.T.S.

Green Seal Environmental, LLC
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.gseenv.com

REVISIONS

NO.	DATE	COMMENT

PURPOSE:

SITE SUITABILITY MODIFICATION

LOCUS:

200 TANZIO ROAD
LEOMINSTER, MA 01453

PREPARED FOR:

UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC

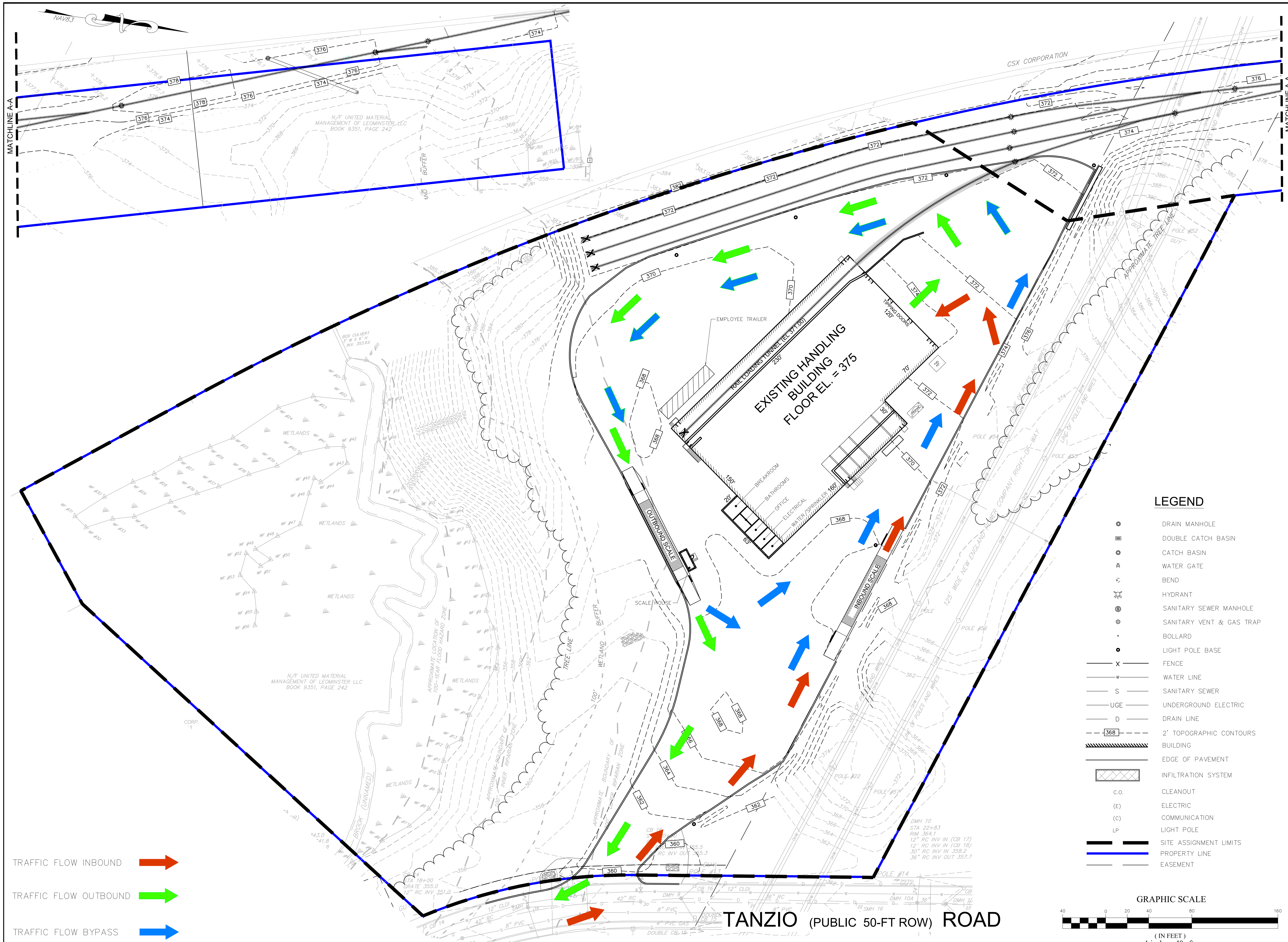
DRAWING TITLE:

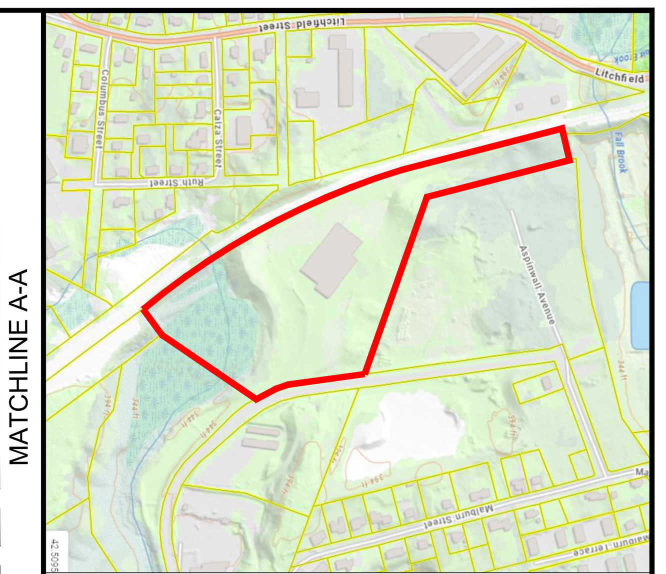
EXISTING AND PROPOSED CONDITIONS PLAN - INTERIOR

CAD TECH:	CHECKED BY:
D. HAZEN	L. BUGAY
ENGINEER:	DATE:
L. BUGAY	5/22/2024
	SCALE: AS NOTED
	SHEET: FIGURE 6

FIGURE 7

TRAFFIC PATTERN PLAN





LOCUS MAP
N.T.S.

Green Seal Environmental, LLC
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.gseenv.com

Dimensions 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

PURPOSE:

SITE SUITABILITY MODIFICATION

LOCUS:

200 TANZIO ROAD
LEOMINSTER, MA 01453

PREPARED FOR:

UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC

DRAWING TITLE:

TRAFFIC PATTERN PLAN

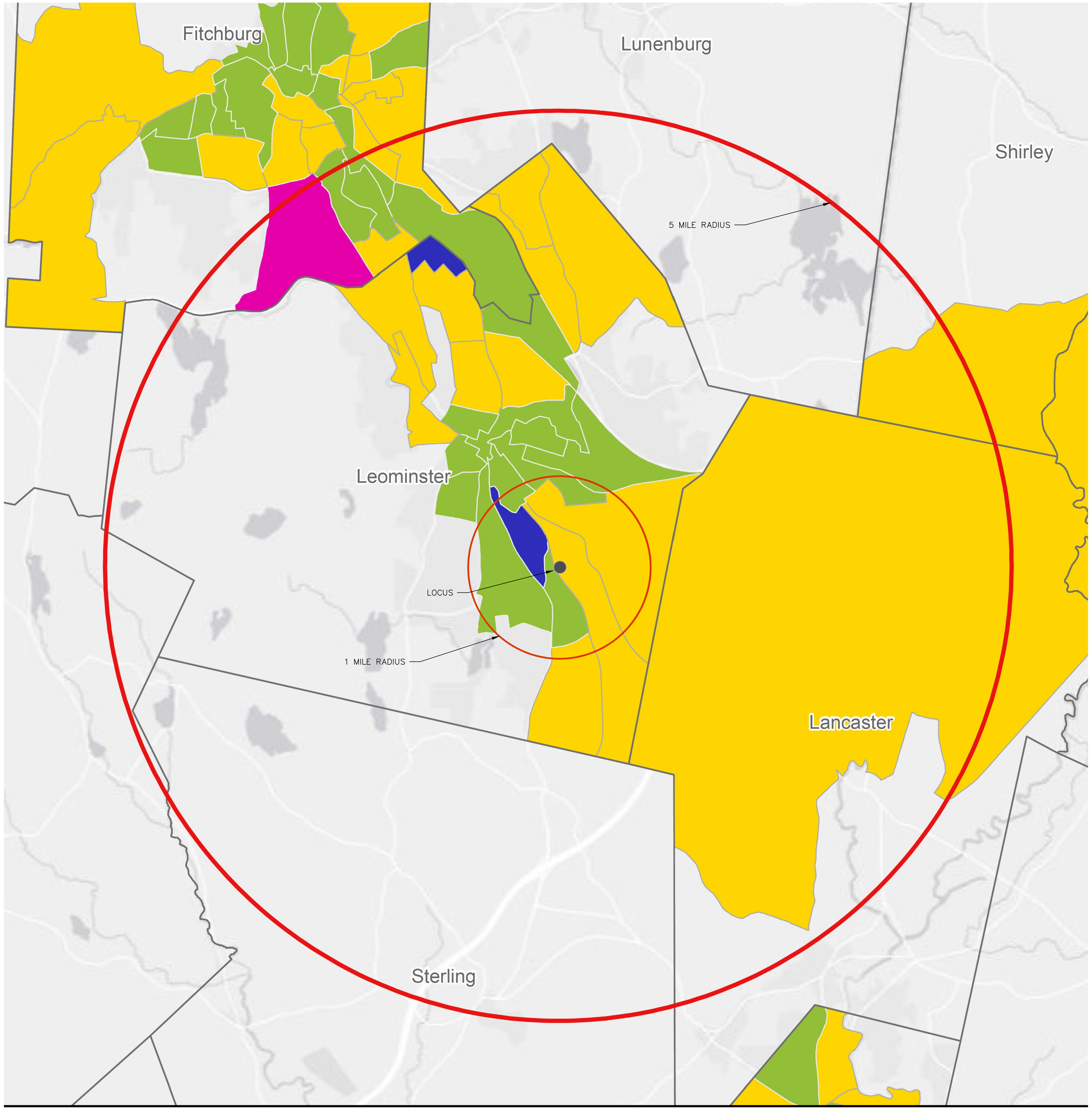
CAD TECH:	CHECKED BY:
M. MIXON	L. BUGAY
ENGINEER:	DATE:
L. BUGAY	8/15/2024

SCALE: 1"=40'

SHEET: FIGURE 7

FIGURE 8

ENVIRONMENTAL JUSTICE POPULATIONS PLAN



- Minority: the block group minority population is >= 40%, or the block group minority population is >= 25% and the median household income of the municipality the block group is in is < 150% of the Massachusetts median household income
- Income: at least 25% of households have a median household income 65% or less than the state median household income
- Language isolation: 25% or more of households do not include anyone older than 14 who speaks English very well
- Minority and Income
- Minority and English isolation
- Income and English isolation
- Minority, Income and English isolation

NOTES:
1. THESE DATA WERE OBTAINED FROM https://www.mass.gov/info-details/massgis-data-2020-environmental-justice-populations
2. PER GUIDELINES, PROJECT IS SUBJECT TO THE 1-MILE DESIGNATED GEOGRAPHIC AREA (DGA) FOR ENVIRONMENTAL JUSTICE RELATED PROTOCOLS.

LOCUS MAP
N.T.S.

Green Seal Environmental, LLC
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.gseenv.com

Dimensions 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

PURPOSE:

SITE SUITABILITY MODIFICATION

LOCUS:

200 TANZIO ROAD
LEOMINSTER, MA 01453

PREPARED FOR:

UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC

DRAWING TITLE:

ENVIRONMENTAL JUSTICE POPULATIONS 2020

CAD TECH: D. HAZEN

CHECKED BY: L. BUGAY

ENGINEER: L. BUGAY

DATE: 5/22/2024

SCALE: 1"=3000'

SHEET: FIGURE 8

EXHIBIT 3

ALTERNATIVES ANALYSIS

114 State Road, Bldg. B, Sagamore Beach, MA 02562
T: 508.888.6034 **F:** 508.888.1506
www.gseenv.com

Exhibit 3 – Alternatives Analysis

United Materials Management of Leominster

Proposed Tonnage Increase - C&D/MSW Transfer Facility

The following Alternatives Analysis has been prepared to provide information on the alternatives considered for the proposed tonnage increase at the existing solid waste handling facility (the Facility) located at 200 Tanzio Road in Leominster (the Site) as part of initial permitting. This alternatives analysis presents the consideration of alternatives for increasing solid waste transfer capacity in the region and ultimately identifies the proposed project as the best alternative and least impactful to the environment.

The original Massachusetts Environmental Policy Act (MEPA) filing (EEA #15896) was for the development of a proposed solid waste handling facility at 200 Tanzio Drive in Leominster, Massachusetts, with a capacity of 1,000 tons per day (tpd). This facility has since been constructed and is currently in operation. The current MEPA filing is for a change in the operation of that facility to permit an increase in tonnage of 500 tpd, to bring the facility capacity to 1,500 tpd.

The alternatives analysis included in the original MEPA filing in 2018 compared other potential site locations of a new handling facility, expansion of existing facilities, and a “no-build” alternative to the proposed project. All of the sites assessed, including the subject Site, had been chosen because of their potential to fulfill a long-term need to handle solid waste in the Leominster and Nashoba Valley area as two major nearby landfills in Worcester County have closed, with another landfill in Fitchburg/Westminster set to reach capacity by 2024. A preliminary site screening study had identified three potential alternative sites for consideration, including the preferred site. Additionally, other sites that had been identified as potential candidates were quickly found to be unsuitable and do not merit discussion in this alternatives analysis.

During the original MEPA review, the preferred alternative was confirmed and subsequently constructed and has been in operation since 2020. The other alternatives considered during the original MEPA review were inferior to the preferred alternative at the time and were rejected. The reasons for rejection include lack of rail access, space limitations that prevented construction of a facility able to handle 1,000 tons per day, and proximity to residential dwellings and other criteria that would not meet “suitability” following 310 CMR 16.40. These limitations apply even more to an increased tonnage of 1,500 tons per day, and therefore these former alternate locations are not evaluated in this analysis.

The current site has been in operation for three years and its function is well-established, with a record of successful operation and compliance. It has a major advantage over any other new facility locations – incumbency. The impacts from construction have already occurred, the operation has been fine-tuned, and ongoing regulatory compliance is established. Any new location, if available, would not provide these beneficial characteristics and could have greater impacts to the community and the environment. Considering these factors, analysis of potential new locations would provide no environmental benefit and has not been explored.

This alternatives analysis compares three alternatives:

1. Tonnage Increase at Leominster facility.
2. No Tonnage Increase at Leominster facility.
3. Tonnage Increase at Millbury sister-facility.

Alternative #1 - Tonnage Increase at Leominster Facility

A tonnage increase of 500 tons per day at the existing UMML facility at 200 Tanzio Road in Leominster, MA is the preferred alternative. The Facility is sited on a 13.46-acre parcel of land located west of Tanzio Road and east of the existing CSX Corporation Railroad line. To the north of the Site is land containing a power easement with transmission towers with vacant, industrially-zoned land beyond. To the south is an unnamed brook with commercial properties beyond. The Facility has no nearby residences. The Facility is zoned Industrial, which allows transfer stations. The Facility currently is permitted for the operation as a C&D and MSW solid waste handling facility. A modified site assignment from the Leominster Board of Health would be required to allow the tonnage increase, along with a positive report on Site Suitability and subsequent Permit Modification from the Massachusetts Department of Environmental Protection.

The Facility has exceptional truck access to both Tanzio Road and Route 117, which provide access to Route 2 via I-190. The Facility is of sufficient size to accommodate truck traffic and on-site queuing from an expanded operation without modification. The closest residential homes are located over 500 feet away with the elevated existing CSX railroad line between the existing Facility and nearest residential properties.

This Facility is the preferred alternative due to its direct access and proximity to the rail line, location within an industrial park, proximity to major roads, overall distances to resource and sensitive receptors, and parcel size. It is already constructed and in operation, so no new construction-related impacts will occur. This use has an already established presence on the roadway and rail network.

Local permits required would be limited to a Leominster Board of Health major modification to an existing Solid Waste Site Assignment.

Required MassDEP Permits would include a positive report on Site Suitability and a Permit Modification to a Large Handling Facility (BWP SW 07). The permitting of a tonnage increase at this Facility would also require a MEPA filing (e.g., Environmental Notification Form) and a mandatory Environmental Impact Report (EIR) due to proximity to Environmental Justice Communities per 301 CMR 11.06(7)(b) which is the reason this Alternatives Analysis was prepared.

Alternative #2 - No Tonnage Increase at Leominster Facility

The alternative is to not increase tonnage and continue the current operation of operation, conveying MSW or C&D in excess of the existing 1,000 tons per day capacity to the nearest disposal facility by direct haul via trucks. It should be noted that based on the inevitable closures of the Fitchburg/Westminster landfill and others there will be a continuation of the ongoing disruption in waste management in the Commonwealth. The primary impacts with the no increase alternative will likely be increased haul distances, with the resulting air pollution including diesel particulate, nitrogen oxides, and greenhouse gas emissions; and the inconvenience and loss of operational efficiencies for the waste hauling companies that service the commercial sector. Additionally, the use of rail significantly reduces fuel consumption when long haul alternatives are utilized as viable options for disposal, which reduces environmental impacts. In GSE’s opinion, given the lack of future incinerator and/or landfill capacity, exportation will be the primary method of waste disposal in Massachusetts.

Alternative #3 - Tonnage Increase at Millbury Facility

United Materials Management operates a sister facility in Millbury, Massachusetts, which is the nearest UMM-owned solid waste operation to the UMML facility. This facility is currently approved for 1,000 tpd of MSW and C&D and, which not fully evaluated, this throughput could possibly be increased by 500 tpd. This facility, however, is served by trucks only, and no rail component exists.

As presented in the ENF, rail is 4 times as efficient than trucking in terms of fuel usage and emissions. Therefore, having a solid waste handling facility that has the ability to utilize rail as a viable alternative for transportation reduces environmental impacts of this needed service. Since this Facility is not equipped with rail service, it does not pose an advantage over the proposed Leominster facility. Additionally, the Millbury Facility is far enough away that it will not serve the local businesses, who will be forced to drive further away for disposal and recycling which in turn increases costs, fuel usage, and other traffic and air relate impacts.

Based on the above analysis, the tonnage increase at the Leominster facility alternative is the optimal choice when compared to the other alternatives.

EXHIBIT 4

DISTRIBUTION LIST

- EXHIBIT 4 -

Massachusetts Environmental Policy Act
Environmental Notification Form
ENF Agencies Circulation List

Agency	Email Address	Address
MEPA Office	MEPA@mass.gov	Secretary Rebecca Tepper Executive Office of Energy and Environmental Affairs (EEA) Attn: MEPA Office 100 Cambridge Street, Suite 900 Boston, MA 02114
MassDEP Boston	helena.boccadoro@mass.gov	Commissioner's Office One Winter Street Boston, MA 02108
MassDEP CERO	andrea.briggs@mass.gov	MassDEP Central Regional Office Attn: MEPA Coordinator 8 New Bond Street Worcester, MA 01606
MassDOT Boston	MassDOTPPDU@dot.state.ma.us	Massachusetts Department of Transportation Public/Private Development Unit 10 Park Plaza, Suite 4150 Boston, MA 02116
Massachusetts DOT District Office	Kevin.R.Robenhymer@dot.state.ma.us Eric.Nascimento@dot.state.ma.us	District #3 Attn: MEPA Coordinator 499 Plantation Parkway Worcester, MA 01605
Massachusetts Historical Commission – 1 copy	Hard copy	Massachusetts Historical Commission Massachusetts Archives Building 220 Morrissey Boulevard Boston, MA 02125-3314
Regional Planning Agency	mrpc@mrpc.org	Montachusett Regional Planning Commission 464 Abbott Avenue Leominster, MA 01453
City of Leominster agencies	David R. Cormier, President dcormier@leominster-ma.gov	Leominster City Council City Hall c/o: Clerks Office 25 West Street Leominster, MA 01453
	nkremp@leominster-ma.gov	Leominster Conservation Commission City Hall 25 West Street Leominster, MA 01453

(Continued on next page)

- EXHIBIT 4 -

Massachusetts Environmental Policy Act
Environmental Notification Form
ENF Agencies Circulation List *(continued)*

Agency	Email Address	Address
City of Leominster agencies	ewood@leominster-ma.gov	Leominster Office of Planning & Development City Hall (Lower Level) Attn: Elizabeth Wood, AICP 25 West Street Leominster, MA 01453
	mpowell@leominster-ma.gov	Leominster Health Department Attn: Michelle Powell, Director 25 West Street – Suite 11 Leominster, MA 01453
Department of Public Health	dphtoxicology@massmail.state.ma.us	Department of Public Health Director of Environmental Health 250 Washington Street Boston, MA 02108
MWRA	Hillary.Monahan@mwra.com	Massachusetts Water Resource Authority Attn: MEPA Coordinator 100 First Avenue Charlestown Navy Yard Boston, MA 02129
Additional Outreach (EJ)		
City of Leominster agencies	dmazzarella@leominster-ma.gov	Mayors Office 25 West Street Leominster, MA 01453
	LCC01453@gmail.com	Leominster Cultural Council
	rracine@leominster-ma.gov	Leominster DPW Director
Local Library – 1 copy	Hard Copy and electronic nbutler@leominster-ma.gov	Leominster Public Library Nicole Butler, Asst. Director 30 West Street Leominster, MA 01453
MEPA – EJ Coordinator	MEPA-EJ@mass.gov	MEPA Office Attn: EJ Director 100 Cambridge Street, Suite 900 Boston, MA 02144
Spanish American Center	info@spanishamericancenter.org	112 Spruce Street Leominster, MA 01453
State Representative	Natalie.Higgins@mahouse.gov	
Project-Specific EJ Distribution List	Via email, refer to List in Project Involvement Plan in Exhibit 8.	

Note: Per MEPA, all submittals are to be electronic unless otherwise stated per www.mass.gov/doc/mepa-electronic-distribution-list/download, revision date 7/17/2024.

EXHIBIT 5

LIST OF PERMITS

- EXHIBIT 5 -

Massachusetts Environmental Policy Act
Environmental Notification Form
List of Municipal, State and Federal Permits and Reviews Required

- MassDEP Site Suitability Report for a Major Modification to an Existing Site Assignment, BWP SW 38
- Leominster Board of Health – Major Modification to an Existing Site Assignment
- MassDEP Modification of a Large Handling Facility, BWP SW 07

EXHIBIT 6

PUBLIC NOTICE

PUBLIC NOTICE OF ENVIRONMENTAL REVIEW

PROJECT: United Material Management of Leominster, LLC__________

LOCATION: 200 Tanzio Road, Leominster, MA 01453 _______________

PROPONENT: United Material Management of Leominster, LLC________

The undersigned is submitting an Environmental Notification Form ("ENF") to the Secretary of Energy & Environmental Affairs on or before September 3, 2024.

This will initiate review of the above project pursuant to the Massachusetts Environmental Policy Act ("MEPA," M.G.L. c. 30, ss. 61-62L). Copies of the ENF may be obtained from:

Green Seal Environmental, LLC
Attn: Laura Bugay, P.E.
114 State Road, Building B
Sagamore Beach, MA 02562
(508) 888-6034
l.bugay@gseenv.com

Electronic copies of the ENF are also being sent to the Health Department, Office of Planning and Development, City Council, and the Leominster Public Library in the City of Leominster.

The Secretary of Energy & Environmental Affairs will publish notice of the ENF in the Environmental Monitor, receive public comments on the project, and then decide if an Environmental Impact Report is required. A site visit and/or remote consultation session on the project may also be scheduled. All persons wishing to comment on the project, or to be notified of a site visit and/or remote consultation session, should email MEPA@mass.gov or the MEPA analyst listed in the Environmental Monitor. Requests for language translation or other accommodations should be directed to the same email address. Mail correspondence should be directed to the Secretary of Energy & Environmental Affairs, 100 Cambridge St., Suite 900, Boston, Massachusetts 02114, Attention: MEPA Office, referencing the above project.

By: United Material Management of Leominster, LLC *(Proponent)*
Green Seal Environmental, LLC (*Agent for Proponen*t)

AVISO PÚBLICO DE REVISIÓN AMBIENTAL

PROYECTO: United Material Management of Leominster, LLC______________

UBICACIÓN:_200 Tanzio Road, Leominster, MA 01453___________________

PROPONENTE: United Material Management of Leominster, LLC___________

El abajo firmante presentará un formulario de notificación ambiental ("ENF") al Secretario de Energía y Asuntos Ambientales el 3 de Septiembre de este 2024 o antes.

Esto iniciará la revisión del proyecto anterior en conformidad con la Ley de Política Ambiental de Massachusetts ("MEPA", Ley General de Massachusetts [M.G.L.], capítulo 30, secciones 61-62L). Se pueden obtener copias del ENF en:

Green Seal Environmental, LLC
Attn: Laura Bugay, P.E.
114 State Road, Building B
Sagamore Beach, MA 02562
(508) 888-6034
l.bugay@gseenv.com

También se enviarán copias electrónicas del ENF al Ayuntamiento de la Ciudad, a la Oficina de Planificación y Desarrollo, a el Departamento de Salud, y a la Biblioteca Pública de la Ciudad de Leominster.

El Secretario de Energía y Asuntos Ambientales publicará un aviso del ENF en *Environmental Monitor*, recibirá comentarios públicos sobre el proyecto y luego decidirá si se requiere un informe de impacto ambiental. También se puede programar una visita al sitio o una sesión de consulta remota sobre el proyecto. Todas las personas que deseen hacer comentarios sobre el proyecto, o ser notificados de una visita al sitio o una sesión de consulta remota, deben enviar un correo electrónico a MEPA@mass.gov o al analista de MEPA que figura en *Environmental Monitor.* Las solicitudes de traducción de idiomas u otras adaptaciones deben enviarse a la misma dirección de correo electrónico. La correspondencia por correo debe dirigirse a Secretary of Energy & Environmental Affairs, 100 Cambridge St., Suite 900, Boston, Massachusetts 02114, Attention: MEPA Office, haciendo referencia al proyecto anterior.

Por: United Material Management of Leominster, LLC *(Proponente)*
Green Seal Environmental, LLC *(Representante del Proponente)*

EXHIBIT 7

PREVIOUS MEPA CERTIFICATE

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

Matthew A. Beaton
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
http://www.mass.gov/eea

September 7, 2018

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: United Materials Management of Leominster
PROJECT MUNICIPALITY	: Leominster
PROJECT WATERSHED	: Nashua River
EEA NUMBER	: 15896
PROJECT PROPONENT	: United Material Management of Leominster, LLC
DATE NOTICED IN MONITOR	: August 8, 2018

Pursuant to the Massachusetts Environmental Policy Act (MEPA) (M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the project consists of the construction of a waste transfer station that will collect and handle Municipal Solid Waste (MSW) and Construction and Demolition (C&D) debris. The facility will have a capacity of 1,000 tons per day (tpd) and up to 300,000 tons per year (tpy). It will be operated 24 hours per day, seven days per week and will accept material from both large commercial haulers and smaller haulers.

All unloading, handling and loading activities will take place within an enclosed 32,500-square foot (sf) metal building. Four doors on the east side of the building will provide access to the tipping floor. The tipped waste will be visually inspected and any recyclables or waste ban items will be separated and shipped in covered trucks to the appropriate facilities for processing. The C&D and MSW will be pushed into separate storage areas in the north and south ends of the building, respectively. The material will be loaded into railcars or trailers in the loading area occupying the western portion of the building for removal from the site by rail or truck.

Loaded trucks will enter the site from Tanzio Road, stop at a scale south of the building, then drive in a clockwise direction around the west side (back) of the building to the tipping area doors on the east side of the building. After unloading waste, trucks will travel in a counter-clockwise direction around the back of the building, stop at the outbound scale south of the building and exit the site onto Tanzio Road. A rail spur will be constructed from the railroad west of the site to the interior loading area through a door on the north side of the building. Additional tracks will be constructed west of the building to provide storage and maneuvering of rail cars.

Project Site

The 13.46-acre project site is located on the west side of Tanzio Road in an industrial area in southeastern Leominster. The majority of the site has been disturbed and has been cleared of large trees. It is covered in brush and shrub vegetation with an unpaved road through the site. The site is bordered to the west by a CSX rail line, to the north by Fall Brook, an electrical transmission line and vacant properties, to the east by Tanzio Road and an active sand and gravel facility, and to the south by an undeveloped area with wetlands and woods. Tanzio Road is located off Route 117 (New Lancaster Road), which provides vehicular access to Interstate-291 (I-291) approximately 1.5 miles south of the site.

An unnamed perennial stream passes through the southernmost portion of the site. Bordering Vegetated Wetlands (BVW), Bordering Land Subject to Flooding (BLSF) and Riverfront Area associated with the stream are located on the project site. The Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) number 25027C0288E effective date July 4, 2011 shows the project site as "Zone Area Not Included." According to MassDEP, the FIRM number 2503140007 (dated September 16, 1982) indicates that a portion of the site is within the 100-year floodplain. A small area in the northernmost part of the project site, in which no activities are proposed, is within the Outer Riparian Zone of the Riverfront Area associated with Fall Brook.

Permitting and Jurisdiction

The project is undergoing MEPA review pursuant to 301 CMR 11.03(9)(b)(1) and 301 CMR 11.03(3)(b)(f), respectively, because it will require State Agency Actions and the project will: provide New Capacity or Expansion in Capacity for combustion or disposal of any quantity of solid waste, or storage, treatment or processing of 50 or more tpd of solid waste, unless the Project is exempt from site assignment requirements; and will alter ½ or more acres of any other wetlands (0.94 acres of Riverfront Area). The project will require a Site Suitability Report for a New Site Assignment, an Authorization to Construct and an Authorization to Operate from the Massachusetts Department of Environmental Protection (MassDEP). The project is subject to the Executive Office of Energy and Environmental Affairs' (EEA) Environmental Justice (EJ) Policy.

The project requires a Solid Waste Site Assignment from the Leominster Board of Health. It requires an Order of Conditions (OOC) from the Leominster Conservation Commission (and, if the

Order is appealed, a Superseding Order of Conditions (SOC) from MassDEP) and a National Pollutant Discharge Elimination System (NPDES) Stormwater Permit for Construction Activities from the U.S. Environmental Protection Agency (EPA).

Because the project is not seeking Financial Assistance from the Commonwealth for the project, MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required, or potentially required, State Agency Actions and that may cause Damage to the Environment as defined in the MEPA regulations. The subject matter of the Site Assignment regulations is sufficiently broad to confer the equivalent of broad scope jurisdiction over the potential environmental impacts of the project. Therefore, MEPA jurisdiction is broad in scope and extends to all aspects of a project that are likely, directly or indirectly, to cause Damage to the Environment, as defined in the MEPA regulations.

Environmental Impacts

According to the ENF, potential environmental impacts will include alteration of 6.67 acres of land, 3.69 acres of new impervious area, 274 new average daily vehicle trips (adt), alteration of 40,984 sf (0.94 acres) of Riverfront Area, consumption of 3,600 gallons per day (gpd) of potable water and generation of 600 gpd of wastewater. The project will generate noise and air emissions in connection with its construction and operation.

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, requiring vehicles transporting material from the site to be covered, use of rail to transport 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, a stormwater management system and implementation of best management practices to minimize dust, noise, and litter impacts.

Review of the ENF

The ENF included a detailed project description, described existing and proposed conditions plans, provided an alternatives analysis and identified measures to avoid, minimize and mitigate project impacts. It included a copy of the draft Site Suitability Application that has been submitted to MassDEP and a Traffic Impact Study.

The project exceeds a solid waste threshold and is located within one mile of an Environmental Justice (EJ) community. Consistent with the enhanced outreach requirements of the EJ Policy, the Proponent published a Spanish-language version of the MEPA Public Notice in the Vocero Hispano newspaper, a local paper that is circulated in Leominster.

Alternatives Analysis

The ENF reviewed a No Build alternative and two alternative project locations, including an alternative site off Tanzio Road (Alternative A) and expansion of an existing transfer station located off Route 117 in Leominster (Alternative B). The No Build alternative would avoid the project's impacts, including land alteration, new impervious area and noise and air quality impacts. According to the ENF, in the absence of a new transfer station and with the expected closures of local and regional landfills, MSW and C&D would have to be transported even greater distances for disposal. The No Build alternative would increase waste disposal costs and increase emissions of air contaminants and Greenhouse Gases (GHG).

Alternative A includes the construction of a transfer station at the 7.61-acre sand and gravel facility on Tanzio Road east of the project site. This alternative site has some of the benefits of the Preferred Alternative, including zoning for industrial use, is a previously disturbed site of adequate size and has good truck access to regional highways. This alternative is infeasible because it would require filling the sand and gravel pit to establish construction grades, the irregular shape of the site would not provide the required 500-ft setbacks to residences and it lacks rail access. It would generate more truck traffic than the Preferred Alternative.

Alternative B includes the expansion of a nearby MSW transfer station with an existing capacity of 650 tpd. The facility has good truck access to regional highways and has been site assigned. To increase its capacity by 1,000 tpd, the 20,000-sf building would have to be expanded to at least 37,000 sf. The Proponent has indicated that Alternative B is infeasible because in order to meet residential setback requirements, the building would have to be expanded in an L-shaped configuration that would not be well-suited to handling MSW and C&D. In addition, the facility does not have rail access and would generate more truck trips and associated air emissions than the Preferred Alternative.

The Preferred Alternative will meet the regional need for new waste handling capacity. It involves the use of a previously-disturbed site that is zoned for industrial use and will meet residential setback requirements. The facility will be connected via rail spur to the railroad abutting the site to the west and will transport waste primarily by rail. The Preferred Alternative will avoid impacts to BVW and Inner Riparian Zone, minimize impacts to the Outer Riparian Zone and construct a stormwater management system that will treat and attenuate peak flows to maintain existing runoff patterns.

Solid Waste

The ENF included a draft of the Site Suitability Application (BWP SW 01) submitted to MassDEP. According to MassDEP, the Proponent will be required to meet the site suitability criteria for solid waste handling facilities in the Site Assignment regulations at 310 CMR 16.40. 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 ENF, the project design and location conform with the criteria.

The facility will not accept hazardous waste or other waste streams. The Proponent must manage, process, handle, and dispose of all solid waste and recyclable materials in accordance with Site Assignment Regulations for Solid Waste Facilities (310 CMR 16.00) and Solid Waste Facility Regulations (310 CMR 19.00), including the waste ban regulations (310 CMR 19.017). As noted by MassDEP, transfer stations such as the proposed facility help conserve landfill space by managing waste, including the reuse and recycling of C&D material banned from disposal in landfills.

Site operations should be managed in accordance with applicable MassDEP Solid Waste and Air Pollution Control regulations pursuant to M.G.L. c.40, §54. Nuisance odors, dust and noise will be managed by the following means:

- Conducting all handling within the fully-enclosed building;
- Using an atomized misting system with odor agents;
- Sweeping paved areas at regular intervals;
- Wetting paved surfaces to control dust;
- Orienting the tipping doors so that they open away from the closest residential receptor; and,
- Using a small track mobile to move rail cars around the site.

At the MEPA site visit on August 16, 2018, the Proponent committed to conducting a noise study, including noise associated with the facility's planned rail operations, as part of its application to the Leominster Board of Health. MassDEP and/or the Board of Health may require the use of additional odor control measures using Best Available Control Technology (BACT) or otherwise condition, restrict or limit activities at the site.

Transportation

The ENF included a Traffic Impact Study (TIS) that reviewed existing and future traffic conditions. It analyzed traffic operations at three intersections under Existing 2018, No Build 2025 and Build 2025 conditions. According to the TIA, the project will generate 274 adt, including 226 trucks and 48 cars, including 15 vehicle trips in the morning peak hour and 12 trips in the evening peak hour. The TIS concluded that project-generated trips will not have any significant effects on traffic operations at these intersections.

The TIS evaluated traffic conditions under the assumption that trucks would be used to transport waste from the site in order to provide a conservative analysis of the project's traffic impacts. According to the ENF, most waste will be transported from the site by rail. A rail line will extend through the loading area at the back of the proposed building so that waste can be loaded directly onto rail cars. At the MEPA site visit, the Proponent stated that loaded rail cars would be expected to be removed from the site approximately two times per week. To minimize noise and air quality impacts associated with locomotives, rail cars will be moved into transport position by a small trackmobile rather than by locomotive.

Wetlands and Stormwater

The project will impact 40,984 sf of Riverfront Area, all of which is located in the Outer Riparian Zone. The impacts include an area of 12,000 sf that will be permanently covered by pavement, the truck scales and small sections of track. A stormwater detention basin and a small corner of a subsurface infiltration system will also be located in the Outer Riparian Zone. According to the ENF, a small area of BLSF is confined to either side of the stream and will not be affected by project activities. MassDEP recommends that the Proponent consult with previously-published FIRMs and consult FEMA flood studies to verify the 100-year flood elevation.

According to the ENF, the stormwater management system has been designed to comply with MassDEP's Stormwater Management Standards (SMS), including requirements to remove 80 percent of the Total Suspended Solids (TSS) and to maintain pre-construction peak flow volumes and rates. Runoff will be directed to deep sump catch basins, routed through water quality treatment units and discharged into Best Management Practices (BMPs) such as a subsurface infiltration system and a detention basin. During the construction erosion control measures (ECMs) and BMPs will be implemented and maintained to minimize and mitigate potential stormwater runoff impacts. I refer the Proponent to comments from MassDEP which indicate pretreatment of roof runoff may be required, note that the project must comply with the Underground Injection Control Regulations (310 CMR 27.00), and that additional soil and groundwater investigations may be required to inform the design of the stormwater management system.

Construction Period

The Proponent will prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the NPDES Construction General Permit requirements to manage erosion and sedimentation during the construction process. The Proponent is advised that the project must comply with both Solid Waste and Air Pollution Control regulations pursuant to M.G.L. Chapter 40, Section 54. Construction and operation activities must also conform to current Massachusetts Air Pollution Control regulations governing nuisance conditions at 310 CMR 7.09 and 7.10. The Proponent should implement measures to alleviate dust, noise, and odor nuisance conditions that may occur during the construction period.

Conclusion

Based on a review of the ENF and comments received, and in consultation with State Agencies, I have determined that the ENF has sufficiently defined the nature and general elements of the project for the purposes of MEPA review and demonstrated that the project's environmental impacts can be avoided, minimized and/or mitigated to the extent practicable. No further MEPA review is required. The project may proceed to state permitting.

September 7, 2018
Date

Matthew Beaton
Matthew A. Beaton

Comments received:

08/24/2018	Anthony J. Bilotta
08/24/2018	Allison Clifford
08/27/2018	Peter Dandini
08/27/2018	Gregg Lisciotti
08/28/2018	Massachusetts Department of Environmental Protection (MassDEP) - Central Regional Office (CERO)

MAB/AJS/ajs

Strysky, Alexander (EEA)

From:	bilottacpa <bilottacpa@verizon.net>
Sent:	Tuesday, August 28, 2018 10:51 AM
To:	Strysky, Alexander (EEA)
Subject:	Support for the facility to be developed on 200 Tanzio Road, Leominster, MA

August 24, 2018

Mr. Alex Strysky
MEPA Analyst
MEPA Office
100 Cambridge St., Suite 900
Boston, MA 02114

Dear Mr. Alex Strysky:

I am writing to express my support for the facility to be developed on 200 Tanzio Road, Leominster, MA. My family has lived in Leominster for over 40 years and I currently live at 89 Cumberland Rd, Leominster, MA 01453-2009. Government subsidies and investments in infrastructure have been made for industry to locate on Tanzio Road. We are happy to finally see the additional jobs, taxes, and services become a reality for City of Leominster. I operate my CPA office in Leominster and many of my clients are concerned about increasing disposal costs because of diminished landfill capacity. Having rail to efficiently move material longer distances will be helpful and makes sense.

Thank you for considering my comments and feel free to contact me with any questions.

Respectfully yours,

Anthony J Bilotta

Strysky, Alexander (EEA)

From: allison clifford <allisonclifford@yahoo.com>
Sent: Tuesday, August 28, 2018 10:11 AM
To: Strysky, Alexander (EEA)
Subject: Tanzio Rd. Leominster

Allison Clifford

---

72 Sargent Ave.

Leominster, Ma. 01453

August 24, 2018

Mr. Alex Strysky

MEPA Analyst

MEPA Office

100 Cambridge St., Suite 900

Boston, MA 02114

Dear Mr. Alex Strysky:

I am writing to express my support for the proposed project located at 200 Tanzio Road In Leominster. The industrial park that it is to be located in has been in planning since 1997 and the road for the park was finally built in 2009, but has yet to be developed. I support the creation of this industrial park and any business wanting to develop here and bring jobs to the City. I am pleased to see someone finally trying to develop and fulfill the vision of this industrial park and bring jobs and revenue to the City.

Thank you for your consideration of my comments.

Sincerely,

Allison Clifford

Strysky, Alexander (EEA)

From:	Peter Dandini <dandini@verizon.net>
Sent:	Monday, August 27, 2018 5:23 PM
To:	Strysky, Alexander (EEA)
Subject:	RE: EEA# 15896, United Material Management of Leominster, LLC, 200 Tanzio Road Leominster, MA

Dear Mr. Strysky,
We are a local waste hauler that operates in the Leominster area. Over the past few years, we have seen the waste market change and feel the pressure to find outlets for our clientele's generated waste. From a business standpoint, we would like to see this project move forward which will provide a much-needed benefit not only for our growing communities but also for the local businesses. I live in Leominster, am an active member of the community, and am excited to see the ability to efficiently rail material.

Regards,

Peter Dandini

Peter Dandini
Dandini Landscaping Co., Inc.
P.O. Box 187
Leominster, MA 01453
[P] 978.422.0575

DANDINI LANDSCAPING CO., INC. DANDINI DISPOSAL SERVICES

Click the logos to see our websites!

LISCIOTTI DEVELOPMENT

August 27, 2018

Alexander Strysky
MEPA Office
100 Cambridge Street, 9th Floor
Boston, MA 02114

Re: EEA 15896 UMM-Leominster

Dear Alexander,

I am writing to express my support for the rail served transfer facility that is currently being permitted on Tanzio Road in Leominster MA. I have completed substantial development projects throughout Leominster (i.e. Orchard Hill Park) and the U.S. My family and I have resided in Leominster for decades as proud residents and business owners.

I was involved in the development of the industrial park on Tanzio Road (location of facility) which included working with the Commonwealth of Massachusetts and the City of Leominster. The intent of the industrial park is to promote industry and infrastructure in Leominster; the new rail served facility is a perfect fit with that original intent, as it achieves these goals. The industrial park was built on Tanzio Road because of its: i) excellent access for industrial traffic, ii) industrial zoning, iii) distances to sensitive receptors, and iv) access to utilities.

Diminishing landfill capacity in the area will require this type of rail facility to help mitigate increasing disposal and transportation costs. The community, residents, contractors and businesses will all benefit from this infrastructure. The property has been vacant for years and now it can serve as a valuable resource while creating taxes and jobs.

Thank you for considering my comments and feel free to contact me with any questions.

Sincerely,

Gregg Lisciotti
President

MassDEP

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 8 New Bond Street, Worcester MA 01606 • 508-792-7650

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

August 28, 2018

Secretary Matthew A. Beaton
Executive Office of Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

Attention: MEPA Unit – Alex Strysky

Re: Environmental Notification Form (ENF)
United Material Management
Leominster
EEA #15896

Dear Secretary Beaton,

The Massachusetts Department of Environmental Protection's ("MassDEP") Central Regional Office (CERO) has reviewed the ENF for the United Material Management Project in Leominster (the "Project"). The Project is proposed by United Material Management of Leominster, LLC (the "Proponent") to construct a 32,500 square foot (sf) building and associated driveways and infrastructure across a 6.67 acre portion of a 13.46 acre lot. The site will be used to collect and handle 1,000 tons per day (tpd), up to 300,000 tons per year, of Municipal Solid Waste and Construction and Demolition waste. The facility will operate 24 hours per day, 7 days per week. The Project also includes the construction of a scale, a scale house, a stormwater management system and landscaping. The Project will generate 274 vehicle trips per day, including 226 truck trips per day. The Project will alter 6.67 acres of land, create 3.69 acres of impervious surface, consume 3,600 gallons per day of water, and generate 600 gallons per day of waste water.

The Project is under MEPA review because it meets or exceeds the following review thresholds for an ENF:

- 11.03(9)(b)(1) – New Capacity or Expansion in Capacity for combustion or disposal of solid waste, or storage, treatment or processing of 50 or more tpd of solid waste

The Project requires the following State Agency Permits:

- MassDEP – Site Suitability Report, Authorization to Construct, and Authorization to Operate

MassDEP offers the following comments on the Project:

Wetlands

The Proponent proposes to construct and operate a 1,000 tons/day municipal solid waste and construction and demolition debris handling and transfer station. Portions of the construction work will occur within the 200-foot Riverfront Area and the 100-foot buffer zone associated with Fall Brook, an unnamed perennial stream, and associated Bordering Vegetated Wetland (BVW). Approximately 40,980 sf of work will occur within the 200-foot Riverfront Area.

The Proponent will be required to submit a Notice of Intent (NOI) for the proposed work to the Leominster Conservation Commission and MassDEP. Upon receipt of the NOI filing, MassDEP may provide project-specific comments to the Leominster Conservation Commission and the Proponent as part of the File Number Issuance Notification Letter. The Project shall be designed to meet all performance standards identified in the Massachusetts Wetlands Protection Act Regulations 310 CMR 10.00 for work proposed in Riverfront Area. As determined by the Flood Insurance Rate Maps (Community Panel Numbers 2503140007, effective Date September 16, 1982), prepared by the Federal Emergency Management Agency, the site is located within the 100-year floodplain. The limit of Bordering Land Subject to Flooding (BLSF) should be established on the plan to determine if the proposed work will alter that resource area. If work is proposed within BLSF all impacts should be accounted for (and noted on the NOI form) and the Proponent must provide a discussion of compliance with general performance standards under 310 CMR 10.57(4)(a). Based on the information contained in the ENF, the Project will not require 401 Water Quality Certification.

The proposed stormwater management system will be comprised of surface and subsurface infiltration/detention basins. The ENF states that the site design will be in full compliance with the Massachusetts Stormwater Standards. MassDEP will review the final stormwater management design during the NOI technical review.

Solid Waste

The Project will be required to meet the site suitability criteria for a solid waste handling facility as described in section 16.40 of the *Site Assignment Regulations for Solid Waste Facilities* at 310 CMR 16.00 in order to be eligible for site assignment by the Leominster Board of Health, in accordance with the Massachusetts General Laws (M.G.L.) Chapter 111, Section 150A.

Site Assignment Regulations at 310 CMR 16.40 establish the criteria and process for MassDEP to determine whether a given site is suitable for a proposed solid waste management facility. The local board of health also applies these criteria as a basis to grant or deny a site assignment application. These criteria are intended to make the siting of facilities subject to consistent standards and provide for the protection of public health and safety and the environment.

MassDEP notes that the Proponent properly indicates in the ENF that the Project is subject to the referenced BWP SW01 Site Suitability Application Review Process (a draft copy of which was provided with the ENF) and the subsequent BWP SW 05 Authorization to Construct application and BWP SW 06 Authorization to Operate application permitting procedures established under 310 CMR 19.000 - Solid Waste Management regulations and 310 CMR 4.00 –Timely Action and Fees Provisions.

The Department encourages this type of solid waste handling and transfer facility to assist in managing Massachusetts waste including the reuse/recycling of construction and demolition materials which are banned from disposal in landfills. Proper waste management and waste diversion is important to conserve the state's declining landfill space and resources if accomplished in an environmentally sound manner.

MassDEP appreciates the opportunity to comment on the Project. If you have any questions regarding these comments, please do not hesitate to contact Stella Tamul, Central Regional Office MEPA Coordinator, at (508) 767-2763.

Very truly yours,

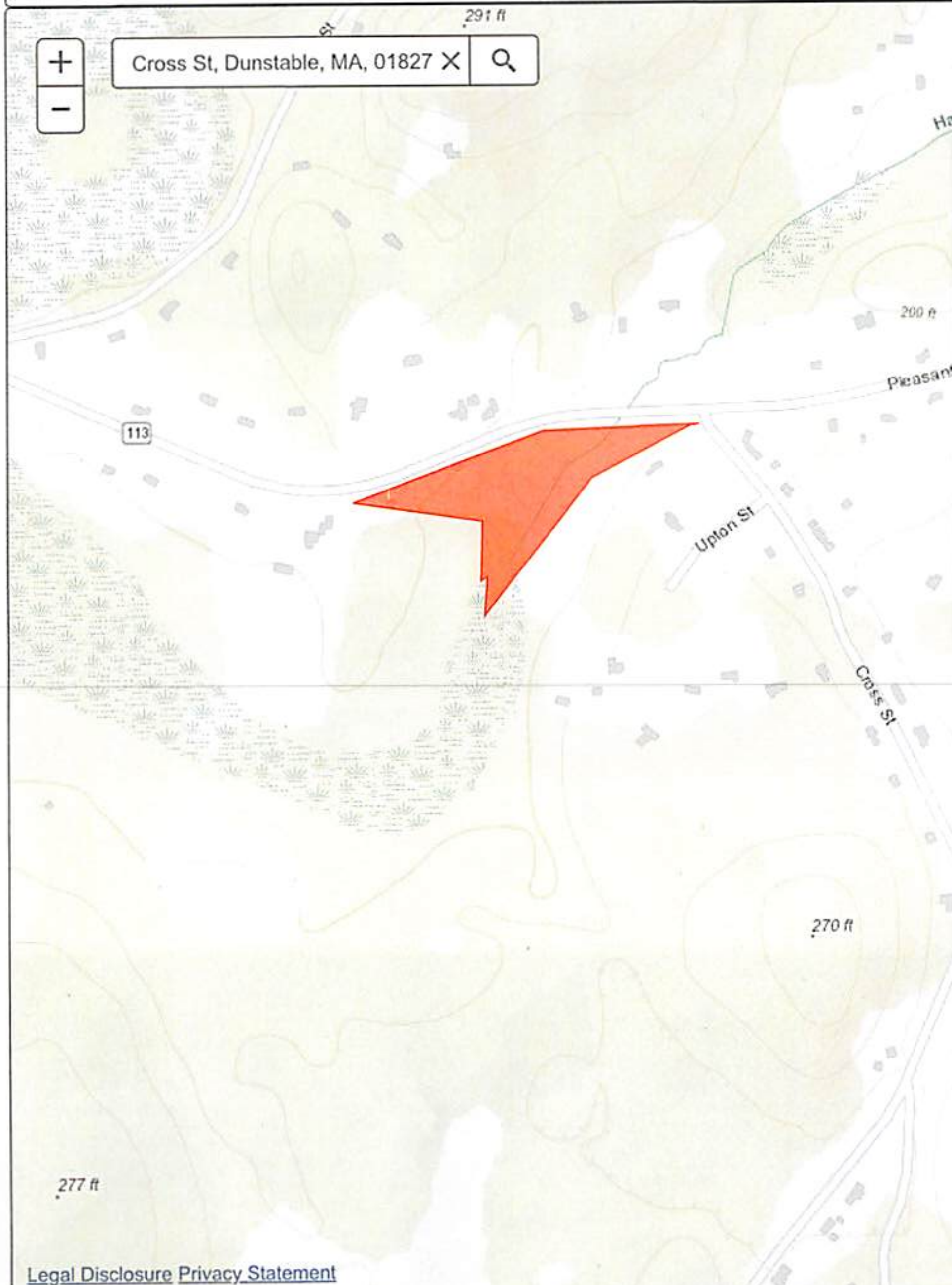
Mary Jude Pigsley

Mary Jude Pigsley
Regional Director

cc: Commissioner's Office, MassDEP

The Nature Conservancy **Resilient Land Mapping Tool**

Cross St, Dunstable, MA, 01827



Resilient Land Summary

Total area: 6.2 acres

Resilient and Connected Network Res

Outside Prioritized Network: 6.2 Acres

Terrestrial Resilience

Resilience	Landscape Diversity	Local Connectedness
Below Average (-1.74 SD)	Below Average (-1.77 SD)	Below Average (-1.71 SD)

Geophysical Setting Results

The three most common geophysical settings in the polygon are:

- Very Low Elevation Mafic : 4 acres
- Very Low Elevation Loam : 2 acres
- Very Low Elevation Sand : 0 acres

Legal Disclosure Privacy Statement

MassGIS, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA

EXHIBIT 8

PUBLIC INVOLVEMENT

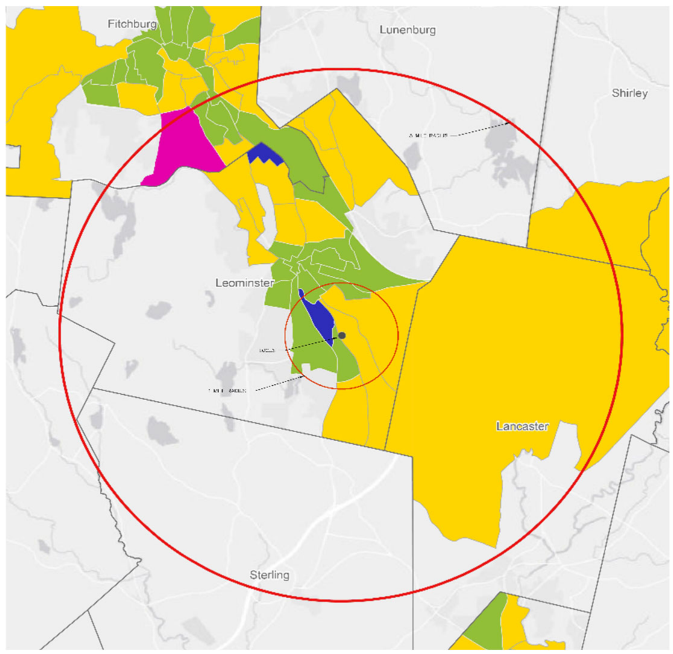
Project Background and Purpose of PIP

Intro	This Public Involvement Plan (PIP) outlines the actions and efforts planned to obtain meaningful public comment from the community for the United Materials Management of Leominster Expansion Project. This document will be updated as necessary as the Project progresses through permitting to capture any identified appropriate changes in outreach strategy.
Project Background	United Materials Management of Leominster (UMML) is a rail-served solid waste handling and transfer station located at 200 Tanzio Road in Leominster, Massachusetts. The Facility has been in operation since May of 2020, as a 1,000 ton per day Facility that accepts Municipal Solid Waste and Construction and Demolition Debris. The Facility is located on a 13.46-acre parcel of land within an Industrial Park and includes an access driveway, parking areas, an existing 32,500-square-foot building with a metal frame and sheathing, and rail spur and siding.
Purpose of PIP	As UMML is requesting to increase its daily tonnage from 1,000 tons per day (tpd) to 1,500 tpd, which is considered an Expansion per 301 CMR 11.03(9), there are permitting efforts associated with obtaining approval. As part of the initial permitting step through the Executive Office of Environmental Affairs, MEPA Office, this PIP has been requested.

Existing Community Conditions

EJ Populations in DGA

The Project's Designated Geographic Area (DGA) for which Environmental Justice-related outreach is based upon whether or not the Project will either exceed any air threshold at 301 CMR 11.03(8) or generate greater than 150 or more adt of diesel traffic over a duration of 1 year or more. As this Project will not exceed or generate either impacts noted, the DGA is a 1-mile radius. The below figure summarizes the EJ communities surrounding the project area and those within the 1-mile DGA. A larger Figure with expanded legend is included as Attachment 1.



	UMML site
	1 and 5-mile radii
	Minority
	Minority and income
	Minority, income, and English isolation
	Minority and English isolation

Existing Health Vulnerabilities

The DPH EJ Tool shows that the City of Leominster contains one Vulnerable Health EJ neighborhood, for heart attack criteria. The Lancaster municipal boundary is within 1 mile of the project although Lancaster does not have any Vulnerable Health EJ criteria.

Potential Impacts and Mitigation

Potential Impacts	There will be no physical building expansion to the existing Facility for this Project. The potential environmental and public health impacts to the local EJ Population are expected to be limited to that associated with traffic, however, will not necessarily lead to more vehicles in the surrounding EJ areas. There will be more vehicle activity with the increased capacity but mainly at the Facility. The Facility provides a local outlet for locally generated waste so that vehicles already travelling on local roads won't have to travel as far to dispose/recycle waste materials, which saves fuel and reduces emissions. The increased vehicle activity and the associated emissions will be mitigated through compliance with MassDEP's Anti-Idling law, Tier IV-compliant vehicle usage, and facility design that includes two truck scales to minimize time trucks are on site and air handling systems for equipment operating inside. EPA's March 2024, Greenhouse Gas Emissions Standards for Heavy Duty Vehicles – Phase 3 Rule will further regulate GHG emissions from refuse and tractor trailer heavy duty trucks starting in 2027 that will further reduce GHG emissions associated with this project.
Mitigation and BMPs	The Facility's advanced Best Management Practices for air quality include: 1. Enclosing all tipping, handling, and loading operations within the handling building. 2. Utilizing a misting system in the handling building to control dust and odor. 3. Conducting daily cleanups and sweeping. 4. Using covered transportation for trucks and railcars. 5. Applying first in/first out procedures to reduce the time municipal solid waste (MSW) remains on site, minimizing the potential for nuisance conditions. 6. Using two vehicle scales to increase efficiency and minimize time trucks are on site. UMML will continue to utilize advanced sorting equipment for the recovery of recyclables and use low-carbon rail for transport. These efficiencies preserve precious natural resources and reduce CO_2 emissions as moving waste by rail is four times more fuel efficient than using tractor trailers.

Outreach Strategy

Notification

Notification of upcoming public meetings will include the following at a minimum:

1. Post notice in City Hall, Spanish American Center, Leominster Library
2. Publish in Sentinel (English) and Vocero (Spanish)
3. Send notice to Project Distribution list
4. Send notices to City for inclusion on City calendar
5. Post notice on website
6. Post in Environmental Monitor (for MEPA submittals and MassDEP Site Suitability)

Notice of submittals to MEPA will include the following at a minimum:

1. Post in Environmental Monitor as required
2. Post in Sentinel (English) and Vocero (Spanish), as required
3. Send notice to Project Distribution list
4. Post on website

Notice of Site Suitability Application to MassDEP (post-MEPA process) will include the following at a minimum:

1. Post on website
2. Notify Distribution List
3. Notify MassDEP distribution list per 310 CMR 16.08(2)
4. Notify Abutters via certified mail

Notice of Public Comment Periods for MassDEP Site Suitability Application (post-MEPA process) will include the following at a minimum:

1. Post on website
2. Notify Distribution List
3. Notify MassDEP distribution list per 310 CMR 16.08(2)
4. Notify Abutters via certified mail

Outreach Efforts

In addition to providing Advance Notification of the ENF submittal and hosting a public meeting, UMML has reached out not only to the Spanish American Center, but to other City Departments like the Cultural Council and Mayor’s office. A website was established, as described below, to function as a single-source of information and communication platform as part of outreach. Fact Sheets have been prepared in both English and Spanish (see Attachment 4).

Continued on next page

Outreach Strategy, Continued

Public Meetings

The anticipated Public Meetings for the Project include the following:

1. Pre-MEPA filing Advance Notification: June 19, 2024 (translation services were provided)
2. MEPA Site Walk: Anticipated Mid- September 2024 following submittal and notice in Environmental Monitor
3. Pre-DEIR filing Meeting if requested by public
4. Pre-FEIR filing Meeting if requested by public
5. Post-MEPA Site Assignment Hearings

Public Engagement

The Public engagement strategy for the Project includes the following:

1. Provide Advance Notification of the Project to the Project-Specific EJ Distribution List that includes Community based organizations, indigenous organizations, tribes, City officials, and other appropriate organizations, residents, etc that requests to be on contact list or comments on submittals/reports.
2. Continue to communicate with public officials (State Representative, Mayor's office, Spanish American Center, and local City officials).
3. Continue outreach and notification of upcoming submittals and public meetings.
4. Maintain and update Project website and Distribution List.
5. Provide online virtual tour video of Facility on the Project website which will include Spanish translation.
6. Post virtual tour flyer on community bulletin boards with QR code to view virtual tour and link to Project website for more information.
7. Conduct "door-knocking" at nearby residences upon submittal of ENF.

Communication

A Project website was established as a source for information and to facilitate communication on the Project:

www.ummleominster.com

The website functions as an information repository with links to Project factsheets, copies of submitted reports, presentations, public notices, virtual tour video, and distribution list.

Continued on next page

Outreach Strategy, Continued

Communication, Continued

It also will provide updated schedules of upcoming hearings and public comment periods; and will provide a contact for questions or requests to be added to the Distribution/Contact list. Translation services will be provided as requested, during public meetings. The Project website will be continually updated throughout the MEPA permitting process.

Advance Notification Summary

UMML provided Advance Notification prior to submitting the Environmental Notification Form to engage the public and provide awareness about the Project and the upcoming permitting process. This advance notification included sending EJ Screening Forms in English and Spanish (see Attachment 3) to the Project-Specific EJ Distribution List with information on the upcoming pre-application public informational meeting. This Distribution List is included as Attachment 2 and has been since amended following the initial July 22, 2024 public hearing. Additional Town entities and the State Representative were included in the Advance Notification.

The Public Meeting notice was published in the Sentinel in English and Vocero in Spanish prior to the meeting. It was also posted on the Leominster Public Library's bulletin board and sent to the City to be included on the City's meeting calendar.

Following the public informational meeting, additional Project information was provided and a site walk was held on August 16, 2024 for City Board of Health Officials and the State Representative's office.

Attachments

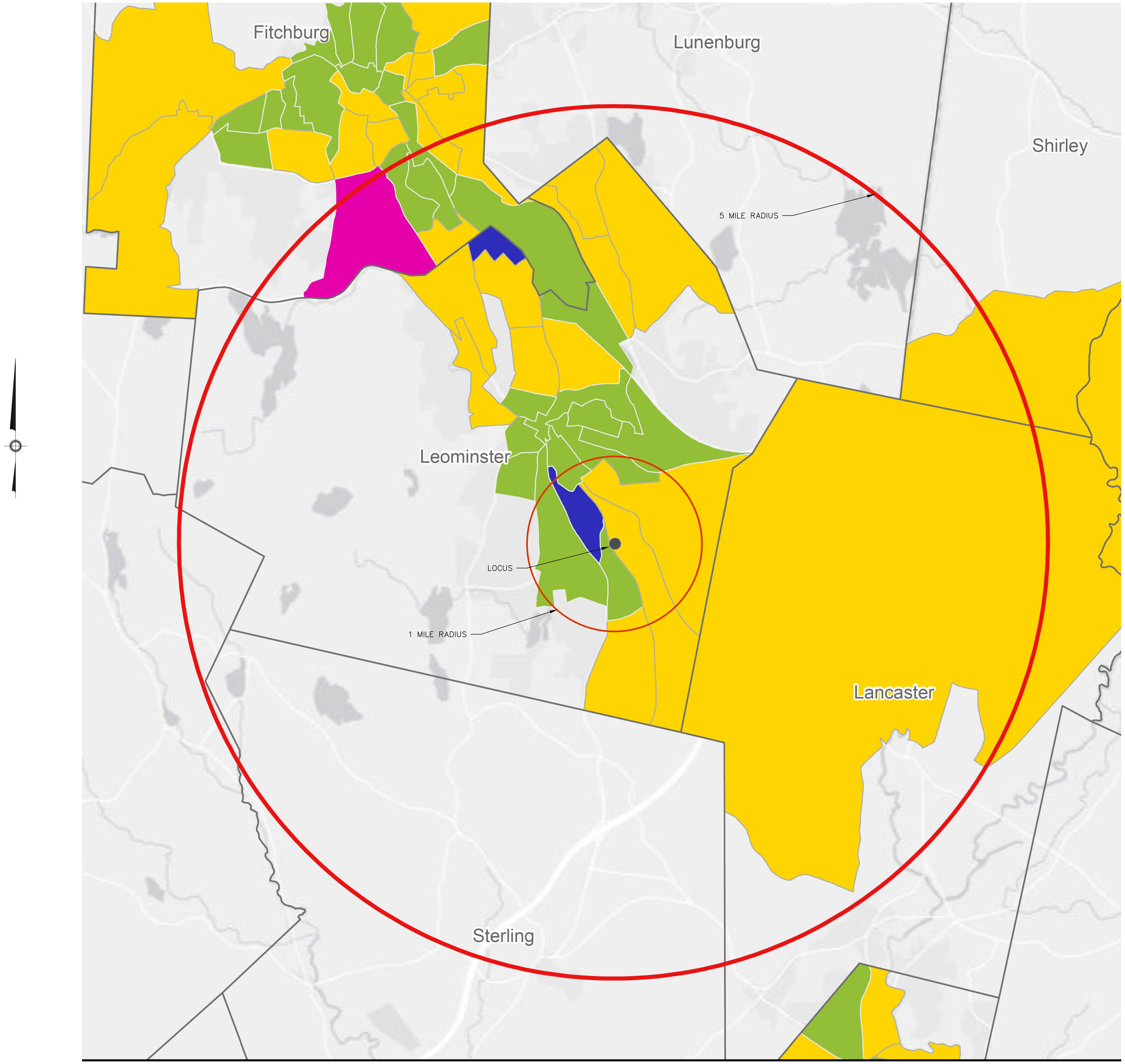
Attachments

The following supporting documents can be found as Attachments to this Public Involvement Plan:

Item	Attachment
Environmental Justice Populations- Figure 8	1
Project-Specific EJ Distribution List	2
EJ Screening Form (English and Spanish)	3
Project Fact Sheet (English and Spanish)	4

ATTACHMENT 1

ENVIRONMENTAL JUSTICE POPULATIONS - FIGURE 8



Minority: the block group minority population is >= 40%, or the block group minority population is >= 25% and the median household income of the municipality the block group is in is < 150% of the Massachusetts median household income

Income: at least 25% of households have a median household income 65% or less than the state median household income

Language isolation: 25% or more of households do not include anyone older than 14 who speaks English very well

Minority and Income

Minority and English isolation

Income and English isolation

Minority, Income and English isolation

NOTES:

1. THESE DATA WERE OBTAINED FROM https://www.mass.gov/info-details/massgis-data-2020-environmental-justice-populations
2. PER GUIDELINES, PROJECT IS SUBJECT TO THE 1-MILE DESIGNATED GEOGRAPHIC AREA (DGA) FOR ENVIRONMENTAL JUSTICE RELATED PROTOCOLS.

LOCUS MAP
N.T.S.

Green Seal Environmental, LLC
114 State Road, Building B
Sagamore Beach, MA 02562
Tel: (508) 888-6034
Fax: (508) 888-1506
www.gseenv.com

Dimensions 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

PURPOSE:

SITE SUITABILITY MODIFICATION

LOCUS:

200 TANZIO ROAD
LEOMINSTER, MA 01453

PREPARED FOR:

UNITED MATERIAL MANAGEMENT OF LEOMINSTER, LLC

DRAWING TITLE:

ENVIRONMENTAL JUSTICE POPULATIONS 2020

CAD TECH:	CHECKED BY:
D. HAZEN	L. BUGAY
ENGINEER:	DATE:
L. BUGAY	5/22/2024
	SCALE: 1"=3000'
	SHEET: FIGURE 8

ATTACHMENT 2

PROJECT- SPECIFIC EJ DISTRIBUTION LIST

Project-Specific EJ Distribution List

Populate this Project-Specific Distribution List with the appropriate contacts from all 4 tabs in the EJ Reference List workbook

Project Name: United Material Management of Leominster

Project Address: 200 Tanzio Road, Leominster MA 01453

MA Municipalities in Project's DGA: Leominster

Date Generated: 6/3/2024

Filing Type: ☑ ENF/EENF ☐ DEIR/FEIR ☐ SEIR ☐ Other

First Name	Last Name	Title	Phone	Email	Affiliation	Contact Source
Claire	B.W. Muller	Movement Building Director	(508) 308-9261	claire@uumassaction.org	Unitarian Universalist Mass Action Network	Statewide CBO
Julia	Blatt	Executive Director	(617) 714-4272	juliablatt@massriversalliance.org	Mass Rivers Alliance	Statewide CBO
Jodi	Valenta	Massachusetts State Director	(617) 367-6200	Jodi.Valenta@tpl.org	The Trust for Public Land	Statewide CBO
Kerry	Bowie	Board President	Not Provided	kerry@msaadapartners.com	Browning the GreenSpace	Statewide CBO
Sylvia	Broude	Executive Director	(617) 292-4821	sylvia@communityactionworks.org	Community Action Works	Statewide CBO
Heather	Clish	Director of Conservation & Recreation Policy	(617) 523-0655	hclish@outdoors.org	Appalachian Mountain Club	Statewide CBO
Johannes	Epke	Staff Attorney	(617) 850-1761	jepke@clf.org	Conservation Law Foundation	Statewide CBO
Brittney	Jenkins	Vice President		Bjenkins@clf.org	Conservation Law Foundation	Statewide CBO
Amy	Boyd Rabin	Vice President of Policy	(617) 221-8258	aboydrabin@environmentalleague.org	Environmental League of Massachusetts	Statewide CBO
Zahra	Saifee	Policy & Advocacy Coordinator	(435) 632-9482	zsaifee@environmentalleague.org	Environmental League of Massachusetts	Statewide CBO
Ben	Hellerstein	MA State Director	(617) 747-4368	ben@environmentmassachusetts.org	Environment Massachusetts	Statewide CBO
Robb	Johnson	Executive Director	(978) 443-2233	robb@massland.org	Mass Land Trust Coalition	Statewide CBO
Cindy	Luppi	New England Director	(617) 338-8131 x208	cluppi@cleanwater.org	Clean Water Action	Statewide CBO
Lena Miles	Entin Gresham	Interim Co-Directors	Not Provided	Lena@N2NMa.org Miles@N2NMa.org	Neighbor to Neighbor Mass.	Statewide CBO
Rob	Moir	Executive Director	Not Provided	rob@oceanriver.org	Ocean River Institute	Statewide CBO
Deb	Pasternak	Director, MA Chapter	(617) 423-5775	deb.pasternak@sierraclub.org	Sierra Club MA	Statewide CBO
Heidi	Ricci	Director of Policy	Not Provided	hricci@massaudubon.org	Mass Audubon	Statewide CBO
Alma	Gordon	President	Not Provided	tribalcouncil@chappaquiddickwampanoag.org	Chappaquiddick Tribe of the Wampanoag Nation	Indigenous Org
Cheryll	Toney Holley	Chair	(774) 317-9138	crwritings@aol.com	Nipmuc Nation (Hassanamisco Nipmucs)	Indigenous Org
John	Peters, Jr.	Executive Director	(617) 573-1292	john.peters@mass.gov	Massachusetts Commission on Indian Affairs (MCIA)	Indigenous Org
Melissa	Ferretti	Chair	(508) 304-5023	melissa@herringpondtribe.org	Herring Pond Wampanoag Tribe	Indigenous Org
Patricia	D. Rocker	Council Chair	Not Provided	rockerpatriciad@verizon.net	Chappaquiddick Tribe of the Wampanoag Nation, Whale Clan	Indigenous Org
Raquel	Halsey	Executive Director	(617) 232-0343	rhalsey@naicob.org	North American Indian Center of Boston	Indigenous Org
Cora	Pierce	Not Provided	Not Provided	Coradot@yahoo.com	Pocassett Wampanoag Tribe	Indigenous Org
Elizabeth	Solomon	Not Provided	Not Provided	Solomon.Elizabeth@gmail.com	Massachusetts Tribe at Ponkapoag	Indigenous Org
Brian	Weeden	Chair	(774) 413-0520	Brian.Weeden@mwtribe-nsn.gov	Mashpee Wampanoag Tribe	Federal Tribe
David	Weeden	THPO/Director	(774) 327.0068	David.Weeden@mwtribe-nsn.gov	Mashpee Wampanoag Tribe	Federal Tribe
Nakia	Hendricks Jr.	Office Manager	Not Provided	106Review@mwtribe-nsn.gov	Mashpee Wampanoag Tribe	Federal Tribe
Bettina	Washington	Tribal Historic Preservation Officer	(508) 560-9014	thpo@wampanoagtribe-nsn.gov	Wampanoag Tribe of Gay Head (Aquinnah)	Federal Tribe
Neddy	Latimer	Not Provided	(978) 534-3145	info@spanishamericancenter.org	Spanish American Center	Supplemental Research
Vicki	Briggs	Chair	978-549-8533	LCC01453@gmail.com	Leominster Cultural Council	Supplemental Research
Dean	Mazzarella	Mayor	978-534-7500	dmazzarella@leominster-ma.gov	Leomsinster Mayor	Supplemental Research
Raymond	Racine	Director	978-534-7590	rracine@leominster-ma.gov	Leominster DPW	Supplemental Research
Natalie	Higgins	State Rep		natalie.higgins@mahouse.gov	State House of Representatives	Supplemental Research
Nicole	Butler	Assistant Director		nbutler@leominster-ma.gov	Leominster Public Library	Supplemental Research

ATTACHMENT 3

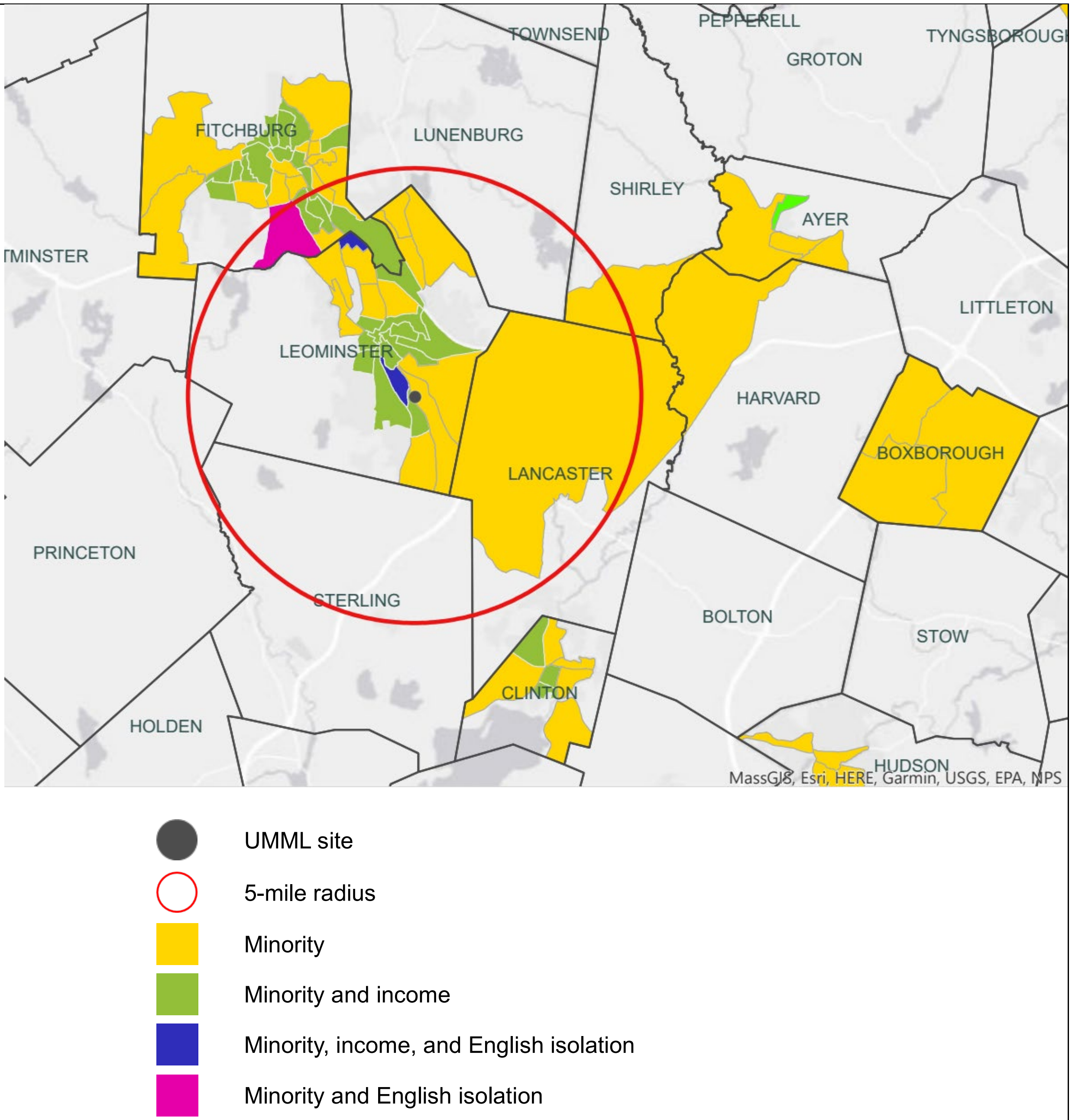
EJ SCREENING FORMS
(ENGLISH AND SPANISH)

Environmental Justice Screening Form

Project Name	Permit Modification at United Material Management of Leominster, LLC
Anticipated Date of MEPA Filing	September 3, 2024
Proponent Name	United Material Management of Leominster, LLC
Contact Information (e.g., consultant)	**Environmental Consultant:** Laura Bugay, PE Green Seal Environmental, LLC l.bugay@gseenv.com 508-888-6034 **Community Involvement Contact:** UMM of Leominster Mary Urban, Senior Director of Communications and Community Relations comms@win-waste.com (866) 946-9278
Public website for project or other physical location where project materials can be obtained (if available)	www.ummleominster.com
Municipality and Zip Code for Project (if known)	Municipality: Leominster, MA Zip Code: 01453
Project Type* (list all that apply)	Solid Waste, Industrial
Is the project site within a mapped 100-year FEMA flood plain? Y/N/ unknown	No
Estimated GHG emissions of conditioned spaces (click here for GHG Estimation tool)	N/A, as there will be no modification to existing facility/conditioned spaces. The existing facility was constructed in 2019-2020 with three conditioned spaces including the employee facility trailer, offices, and scale house. According to the GHG estimation tool, these spaces currently generate 13 tons per year of CO_2 emissions (less than 2 single-family houses). No changes are proposed.

Project Description

1. Provide a brief project description, including overall size of the project site and square footage of proposed buildings and structures if known. United Material Management of Leominster (UMML) is a state-of-the-art municipal solid waste (MSW) and construction & demolition (C&D) waste handling and transfer station with an integrated rail line. The facility, located at 200 Tanzio Road in Leominster, Massachusetts, specializes in the recycling of C&D debris and the transfer of residuals for responsible end disposal. In order to meet the growing demand for waste handling in Massachusetts, UMML is proposing a project, subject to Massachusetts Environmental Policy Act (MEPA) review, that will increase the handling capacity at its current facility in Leominster. The facility will not require any building expansion to accommodate the increased handling capacity. The facility is currently permitted to process up to 1,000 tons of waste per day (TPD). This project would increase that capacity to 1,500 TPD. The UMML facility is located on a 13.46-acre parcel of land within an Industrial Park and includes an access driveway, parking areas, and an existing 32,500-square-foot building with a metal frame and sheathing. Even with this proposed capacity increase, all waste handling functions will continue to be performed entirely within the existing material processing building and its confines, including tipping and inspection, temporary waste storage, and outbound rail and truck loading. C&D processing activities will continue to utilize sorting equipment for the removal and recovery of recyclables. The facility will continue to predominantly ship material for end disposal via rail, the least carbon-intensive mode for land transport.
2. List anticipated MEPA review thresholds (301 CMR 11.03) (if known) (9) Solid Waste
3. List all anticipated state, local and federal permits needed for the project (if known) Local: Leominster Board of Health – Major Modification to an Existing Site Assignment State: MassDEP Site Suitability (BWP SW 38); MassDEP Permit Modification (BWP SW 07)
4. Identify EJ populations and characteristics (Minority, Income, English Isolation) within 5 miles of project site (can attach map identifying 5-mile radius from EJ Maps Viewer in lieu of narrative)



5. Identify any municipality or census tract meeting the definition of "vulnerable health EJ criteria" in the DPH EJ Tool located in whole or in part within a 1 mile radius of the project site

The DPH EJ Tool shows that the City of Leominster contains one Vulnerable Health EJ neighborhood, for heart attack criteria. The Lancaster municipal boundary is within 1 mile of the project although Lancaster does not have any Vulnerable Health EJ criteria.

6. Identify potential short-term and long-term environmental and public health impacts that may affect EJ Populations and any anticipated mitigation

There will be no physical building expansion to the existing facility for this project. The potential environmental and public health impacts to the local EJ Population are expected to be limited to that associated with traffic, however, will not necessarily lead to more vehicles in the surrounding EJ areas. There will be more vehicle activity with the increased capacity but mainly at the facility.

The facility provides a local outlet for locally generated waste so that vehicles already travelling on local roads won't have to travel as far to dispose/recycle waste materials, which saves fuel and reduces emissions. The increased vehicle activity and the associated emissions will be mitigated through compliance with MassDEP's Anti-Idling law, Tier IV-compliant vehicle usage, and facility design that includes two truck scales to minimize time trucks are on site and air handling systems for equipment operating inside. EPA's March 2024, Greenhouse Gas Emissions Standards for Heavy Duty Vehicles – Phase 3 Rule will further regulate GHG emissions from refuse and tractor trailer heavy duty trucks starting in 2027 that will further reduce GHG emissions associated with this project.

The facility's advanced Best Management Practices for air quality include:

1. Enclosing all tipping, handling, and loading operations within the handling building.
2. Utilizing a misting system in the handling building to control dust and odor.
3. Conducting daily cleanups and sweeping.
4. Using covered transportation for trucks and railcars.
5. Applying first in/first out procedures to reduce the time municipal solid waste (MSW) remains on site, minimizing the potential for nuisance conditions.
6. Using two vehicle scales to increase efficiency and minimize time trucks are on site.

UMML will continue to utilize advanced sorting equipment for the recovery of recyclables and use low-carbon rail for transport. These efficiencies preserve precious natural resources and reduce CO_2 emissions as moving waste by rail is four times more fuel efficient than using tractor trailers.

7. Identify project benefits, including "Environmental Benefits" as defined in 301 CMR 11.02, that may improve environmental conditions or public health of the EJ population

Key project benefits include:

Meeting the demand for waste management – The need for economical and environmentally-sensitive handling of both MSW and C&D waste in the City of Leominster is a critically-important, growing challenge. If its service capability is expanded under this project, the UMML facility will be able to better address that challenge for the city, its residents, and its businesses. Additionally, the facility will also be an important asset for the region's ability to provide an economically competitive and efficient means to manage C&D and MSW due to its unique use of rail for transport. This rail-served facility will allow the region to access disposal outlets that are generally not economically viable through traditional trucking alone.

It should also be noted that based on the inevitable closure of the Fitchburg/Westminster landfill and others, more disruptions in waste management across the region as well as the entire Commonwealth can be expected. This will place additional pressures on a statewide system that is already struggling to keep pace with demand. The UMML facility is perfectly positioned and able to alleviate some of that pressure with no new construction required.

Providing a driver for economic development – According to the Leominster Economic Development Office, industrial development in Leominster is a priority. This region continues to boast of a highly skilled workforce, particularly within manufacturing industries.

The existing UMML facility was approved for construction in 2019 and the current service expansion proposal will offer a unique opportunity to further both economic and environmental goals without additional construction impact to the surrounding environment. It will create more employment opportunities for residents and grow the tax base.

Additionally, it is very likely that with the anticipated shortage of adequate disposal and landfill capacity in the future, exportation of waste will become more significant in Massachusetts. It is this fact that differentiates the UMML site from other waste handling facilities in that it has access to railway transport and can export waste with considerably less environmental impact that trucking transfer.

Increasing recycling – UMML specializes in the sorting and recycling of C&D materials and is a MassDEP-compliant C&D processor. An increase in permitted daily capacity would increase the quantity of materials the facility is recycling. The facility recovers hundreds of tons of recyclables each month. Asphalt, brick, concrete, cardboard, ferrous and non-ferrous metals, asphalt shingles, gypsum, tires, and wood are all sent to recycling facilities for reuse in new products — helping conserve our natural resources for future generations. What we cannot recycle is transferred to its final disposal by rail, the lowest carbon mode of land transport.

Reducing GHGs in the waste management handling process – The UMML facility is committed to sustainable business practices by taking the most efficient transport routes, recycling materials for reuse, and investing in sustainable technologies.

UMML's state-of-the-art waste handling process uses numerous GHG-reduction tactics to protect our planet, but the most impactful at this site includes consolidating waste prior to transport, using rail transport instead of traditional truck transport whenever possible, and diverting as much waste from near-capacity landfills via recycling, reuse, and recovery.

Rail transport is four times more efficient than trucking in terms of fuel use and emissions since trains can move a ton of freight more than 470 miles on a single gallon of fuel compared to trucks that can move the same for only 134 miles (approximately). Thanks to this fuel-efficient transport option at UMML, negative environmental impacts from traditional trucking such as the emission of diesel particulate, carbon dioxide, nitrogen oxides, and other greenhouse gases, are greatly reduced.

Protects open space – The existing UMML facility does not impact open space as it has adequate separation to any designated open space, is outside of mapped habitats, and is located in an existing industrial park that is zoned for this type of facility. By utilizing the existing facility, no new facility must be constructed. Therefore, no demand for additional land space is required to increase waste handling capacity.

8. Describe how the community can request a meeting to discuss the project, and how the community can request oral language interpretation services at the meeting. Specify how to request other accommodations, including meetings after business hours and at locations near public transportation.

A public meeting has been scheduled for Monday, July 22, 2024, at 6 p.m., in the Community Room at Leominster Public Library located at 30 West St, Leominster, MA 01453, which is within walking distance to bus stops along the MART Fitchburg/Leominster Bus Route System. More information about the meeting is included in the attached public meeting notice. To request language interpretation services at the meeting please email comms@win-waste.com. Please allow a two-weeks' notice prior to the meeting to request interpretation services.

Formulario de evaluación de justicia ambiental

Nombre del proyecto	Modificación del permiso en United Material Management of Leominster, LLC
Fecha prevista de presentación ante MEPA	3 de septiembre, 2024
Nombre del proponente	United Material Management of Leominster, LLC
Información de contacto (p. ej., consultor)	**Consultor ambiental:** Laura Bugay, PE Green Seal Environmental, LLC l.bugay@gseenv.com 508-888-6034 **Contacto de participación comunitaria:** UMM of Leominster Mary Urban, Director sénior de Comunicaciones y Relaciones Comunitarias comms@win-waste.com (866) 946-9278
Sitio web público para el proyecto u otra ubicación física donde se pueden obtener materiales del proyecto (si está disponible)	www.ummleominster.com
Municipio y código postal del proyecto (si se conoce)	Municipio: Leominster, MA Código postal: 01453
Tipo de proyecto* (indique todos los que correspondan)	Desechos sólidos, industriales
¿Se encuentra el sitio del proyecto dentro de un terreno inundable dentro de 100 años mapeado por la FEMA? S/N/Se desconoce	No
Emisiones estimadas de GEI de los espacios acondicionados (haga clic aquí para acceder a la herramienta de estimación de GEI)	N/A, ya que no habrá modificaciones en las instalaciones ni en los espacios acondicionados existentes. La instalación existente se construyó en 2019-2020 con tres espacios acondicionados, incluido el remolque con instalaciones para empleados, las oficinas y la estación de pesaje. Según la herramienta de estimación de GEI, estos espacios actualmente generan 13 toneladas por año de emisiones de CO_2 (menos que 2 casas unifamiliares). No se proponen cambios.

Descripción del proyecto

1. **Proporcione una breve descripción del proyecto, incluido el tamaño total del sitio del proyecto y los pies cuadrados de los edificios y estructuras propuestos, si se conocen.**

   United Material Management of Leominster (UMML) es una estación de última generación de transferencia y manejo de desechos sólidos municipales (municipal solid waste, MSW), y desechos de construcción y demolición (construction & demolition, C&D) que cuenta con una línea ferroviaria integrada. La instalación, ubicada en 200 Tanzio Road en Leominster, Massachusetts, se especializa en el reciclaje de desechos de C&D y la transferencia de residuos para la eliminación final responsable.

   A fin de satisfacer la creciente demanda de manejo de desechos en Massachusetts, UMML propone un proyecto, sujeto a la revisión de la Massachusetts Environmental Policy Act (MEPA), que aumentará la capacidad de manejo en sus instalaciones actuales en Leominster. La instalación no requerirá ninguna expansión del edificio para adaptarse al aumento de la capacidad de manipulación. Actualmente, la instalación tiene permiso para procesar hasta 1,000 toneladas de desechos por día (TPD). Este proyecto aumentaría esa capacidad a 1,500 TPD.

   La instalación de UMML está ubicada en una parcela de terreno de 13.46 acres dentro de un parque industrial e incluye una entrada de acceso, áreas de estacionamiento y un edificio existente de 32,500 pies cuadrados con un marco de metal y revestimiento. Incluso con este aumento de capacidad propuesto, todas las funciones de manejo de desechos se seguirán realizando completamente dentro del edificio de procesamiento de materiales existente y sus límites, incluidos el volcado y la inspección, el almacenamiento temporal de desechos y la carga saliente en trenes y camiones. Para las actividades de procesamiento de C&D, se seguirán utilizando equipos de clasificación para eliminar y recuperar los materiales reciclables. La instalación continuará enviando material para su eliminación final predominantemente por ferrocarril, el modo de menor generación de carbono para el transporte terrestre.

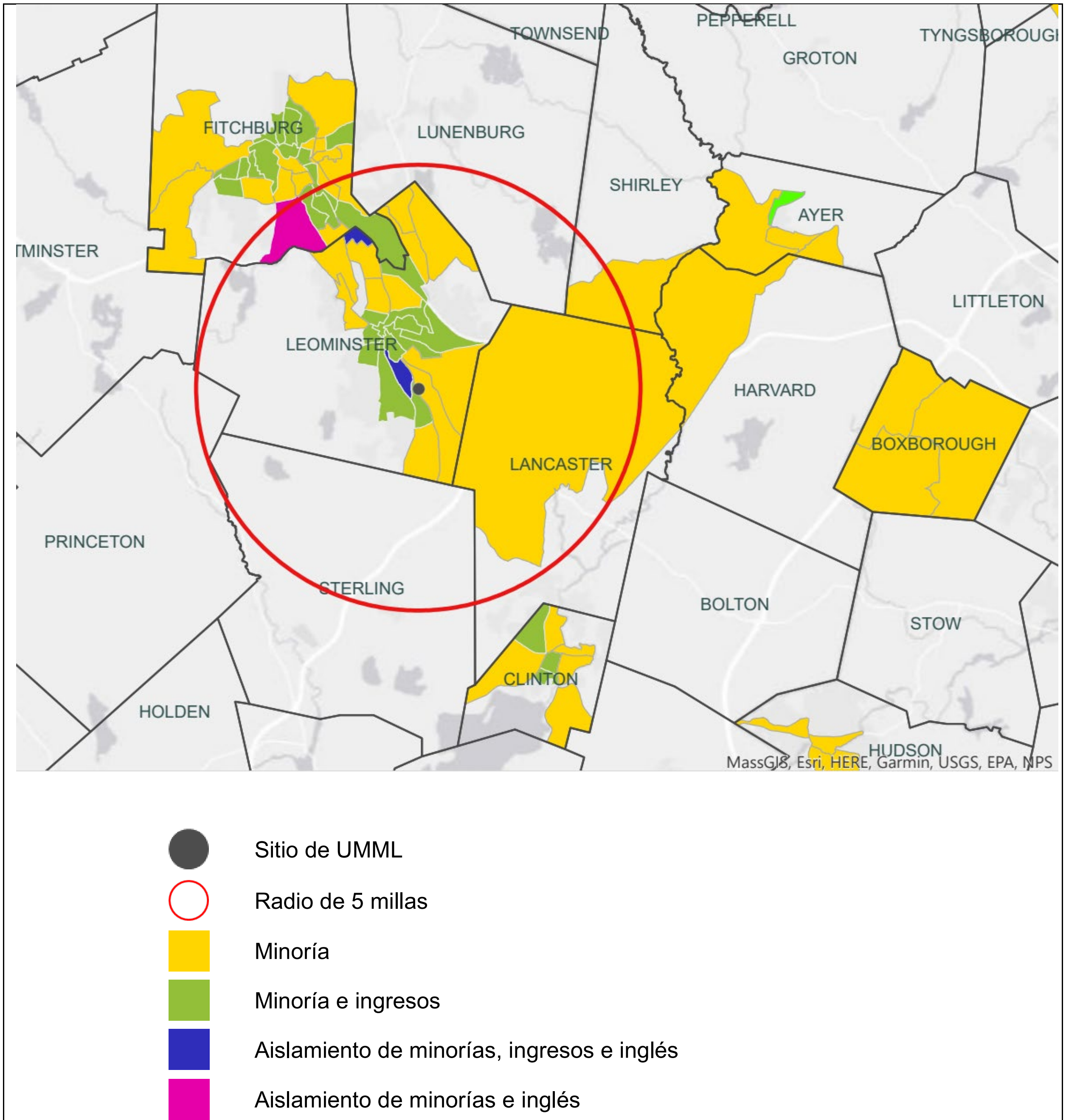
2. **Indique los niveles de revisión anticipada de MEPA (301 CMR 11.03) (si se conocen).**

   (9) Desechos sólidos

3. **Enumere todos los permisos estatales, locales y federales previstos necesarios para el proyecto (si se conocen).**

   Local: Junta de Salud de Leominster: principal modificación a una asignación de sitio existente
   Estado: idoneidad del sitio de MassDEP (BWP SW 38); modificación del permiso de MassDEP (BWP SW 07)

4. **Identifique las poblaciones y características de justicia ambiental (EJ) (minoría, ingresos, aislamiento inglés) dentro de las 5 millas del sitio del proyecto (puede adjuntar un mapa que identifique un radio de 5 millas desde la opción Visor de mapas de EJ en lugar de texto)**



5. **Identifique cualquier municipio o sección censal que cumpla con la definición de "criterios de población de EJ con salud vulnerable" en la [Herramienta de EJ del Departamento de Salud Pública (DPH)](#) ubicado en su totalidad o en parte dentro de un radio de 1 milla del sitio del proyecto.**

La herramienta DPH EJ muestra que la ciudad de Leominster contiene un vecindario de EJ de salud vulnerable, para los criterios de ataque cardíaco. El límite municipal de Lancaster está a menos de 1 milla del proyecto, aunque Lancaster no tiene ningún criterio de EJ de salud vulnerable.

6. **Identifique los potenciales impactos a corto y largo plazo sobre el ambiente y la salud pública que pueden afectar a las poblaciones de EJ y cualquier mitigación prevista.**

No habrá expansión física de construcción de las instalaciones existentes para este proyecto. Se espera que los posibles impactos ambientales y de salud pública para la población de EJ se limiten a los asociados con el tráfico; sin embargo, no necesariamente generarán más vehículos en las áreas de EJ circundantes. Habrá más actividad vehicular con el aumento de la capacidad, pero principalmente en las instalaciones.

La instalación ofrece una salida local para los desechos generados localmente, de modo que los vehículos que ya circulan por carreteras locales no tienen que circular tanto para desechar/reciclar los materiales de desecho, lo que ahorra combustible y reduce las emisiones. El aumento de la actividad vehicular y las emisiones asociadas se mitigarán mediante el cumplimiento de la ley contra la inactividad de MassDEP, el uso de vehículos conforme al Nivel IV y el diseño de instalaciones que incluye dos básculas de pesaje de camiones para minimizar el tiempo que los camiones están en el sitio y sistemas de manejo de aire para los equipos que operan en el interior. Normas de emisiones de gases de efecto invernadero para vehículos de servicio pesado de la EPA de marzo de 2024: la regla de fase 3 regulará aún más las emisiones de GEI de los camiones de servicio pesado de desechos y remolques de tractores a partir de 2027, lo que reducirá aún más las emisiones de GEI asociadas con este proyecto.

Las Mejores prácticas de gestión avanzadas para la calidad del aire incluyen:

- Realizar todas las operaciones de volcado, manipulación y carga dentro del edificio de manipulación.
- Utilizar un sistema de rociado en el edificio de manipulación para controlar el polvo y el olor.
- Realizar limpiezas y barridos diarios.
- Usar transporte cubierto para camiones y vagones.
- Aplicar el procedimiento de primero en entrar/primero en salir para reducir el tiempo que los desechos sólidos municipales están en el sitio, lo que minimiza el potencial de condiciones molestas.
- Usar dos básculas para vehículos para aumentar la eficiencia y minimizar el tiempo que los camiones permanecen en el sitio.

UMML continuará utilizando equipos de clasificación avanzados para la recuperación de materiales reciclables y utilizará para el transporte el ferrocarril, que genera un bajo nivel de carbono. Estas eficiencias preservan los valiosos recursos naturales y reducen las emisiones de CO_2, ya que el consumo de combustible para transportar los desechos por ferrocarril es cuatro veces más eficiente que hacerlo con remolques de tractores.

7. **Identifique los beneficios del proyecto, incluidos los "beneficios ambientales", tal como se definen en 301 CMR 11.02, que pueden mejorar las condiciones ambientales o la salud pública de la población de EJ.**

Los beneficios clave del proyecto incluyen:

Satisfacer la demanda de gestión de desechos: la necesidad de un manejo económico y respetuoso con el medioambiente de los desechos de MSW y C&D en la ciudad de Leominster es un desafío creciente con una importancia crítica. Si su capacidad de servicio se amplía en virtud de este proyecto, la instalación de UMML podrá abordar mejor ese desafío para la ciudad, sus residentes y sus negocios. Además, la instalación también será un activo importante, ya que la región podrá proporcionar un medio económicamente competitivo y eficiente para gestionar C&D y MSW gracias a su uso único del ferrocarril para el transporte. Esta instalación ferroviaria permitirá que la región acceda a salidas de desecho que generalmente no son económicamente viables a través de camiones tradicionales.

También se debe tener en cuenta que, en función del cierre inevitable del vertedero de Fitchburg/Westminster y otros, es posible que se interrumpa más la gestión de desechos en toda la región, así como en toda la Mancomunidad. Esto supondrá presiones adicionales al sistema estatal que ya tiene dificultades para mantenerse al día con la demanda. La instalación de UMML está perfectamente situada y puede aliviar parte de esa presión sin la necesidad de nuevas construcciones.

Proporcionar un impulsor para el desarrollo económico: según la Oficina de Desarrollo Económico de Leominster, el desarrollo industrial en Leominster es prioridad. Esta región sigue contando con una fuerza laboral altamente calificada, particularmente en las industrias manufactureras.

La construcción de la instalación existente de UMML se aprobó en 2019 y la propuesta actual de expansión del servicio ofrecerá una oportunidad única para promover objetivos económicos y ambientales sin impacto adicional de construcción en el entorno circundante. Creará más oportunidades de empleo para los residentes y aumentará la base impositiva.

Además, es muy probable que, debido a la escasez prevista de la capacidad adecuada de desecho y vertedero en el futuro, la exportación de desechos se vuelva más significativa en Massachusetts. Este hecho es lo que diferencia al sitio de UMML de otras instalaciones de manejo de desechos, ya que tiene acceso a transporte ferroviario y puede exportar desechos con un impacto ambiental considerablemente menor que el traslado en camiones.

Aumentar el reciclaje: UMML se especializa en la clasificación y el reciclaje de materiales de C&D, y procesa C&D en cumplimiento con el MassDEP. Un aumento en la capacidad diaria permitida incrementaría la cantidad de materiales que la instalación recicla. La instalación recupera cientos de toneladas de materiales reciclables cada mes. Asfalto, ladrillo, concreto, cartón, metales ferrosos y no ferrosos, tejas de asfalto, yeso, neumáticos y madera se envían a instalaciones de reciclaje para su reutilización en nuevos productos, lo que ayuda a conservar nuestros recursos naturales para las generaciones futuras. Lo que no podemos reciclar se transfiere para su eliminación final por ferrocarril, el modo de transporte terrestre con menos generación de carbono.

Reducir los GEI en el proceso de manejo de desechos: la instalación de UMML asume el compromiso de cumplir prácticas comerciales sostenibles al elegir las rutas de transporte más eficientes, reciclar materiales para su reutilización e invertir en tecnologías sostenibles.

El proceso de manejo de desechos de última generación de UMML utiliza numerosas tácticas de reducción de GEI para proteger nuestro planeta, pero la más impactante en este sitio incluye compactar los desechos antes del transporte, usar el transporte ferroviario en lugar del transporte tradicional de camiones siempre que sea posible y desviar la mayor cantidad de desechos de los vertederos casi colapsados a través del reciclaje, la reutilización y la recuperación.

El transporte ferroviario es cuatro veces más eficiente que el transporte en camiones en términos de uso de combustible y emisiones, ya que los trenes pueden transportar una tonelada de carga más de 470 millas con un solo galón de combustible en comparación con los camiones que pueden transportar la misma carga solo 134 millas (aproximadamente). Gracias a esta opción de transporte de bajo consumo de combustible en UMML, los impactos ambientales negativos de los camiones tradicionales, como la emisión de partículas diésel, dióxido de carbono, óxidos de nitrógeno y otros gases de efecto invernadero, se reducen en gran medida.

	Proteger el espacio abierto: la instalación existente de UMML no afecta el espacio abierto, ya que se encuentra lo suficientemente apartada de cualquier espacio abierto designado, está fuera de los hábitats asignados y se ubica en un parque industrial existente que está zonificado para este tipo de instalación. Al utilizar las instalaciones existentes, no es necesario construir instalaciones nuevas. Por lo tanto, no se requiere demanda de espacio terrestre adicional para aumentar la capacidad de manejo de desechos.
8.	**Describa cómo la comunidad puede solicitar una reunión para analizar el proyecto y cómo la comunidad puede solicitar servicios de interpretación de lenguaje oral en la reunión. Especifique cómo solicitar otras adaptaciones, incluidas reuniones fuera del horario laboral y en lugares cercanos al transporte público.** Se programó una reunión pública para el lunes 22 de julio de 2024, a las 6 p. m., en la sala comunitaria de la Biblioteca pública de Leominster ubicada en 30 West St, Leominster, MA 01453, que está cerca de las paradas de autobús del sistema de rutas de autobús MART Fitchburg/Leominster. Se incluye más información sobre la reunión en el aviso adjunto de la reunión pública. Para solicitar servicios de interpretación de idiomas en la reunión, envíe un correo electrónico a comms@win-waste.com. Envíe un aviso con dos semanas de anticipación antes de la reunión para solicitar los servicios de interpretación.

ATTACHMENT 4

PROJECT FACT SHEET
ENGLISH AND SPANISH

UNITED MATERIAL MANAGEMENT OF LEOMINSTER

A TRANSFER STATION IN LEOMINSTER, MASSACHUSETTS

United Material Management of Leominster (UMML), located at 200 Tanzio Road in Leominster, is a state-of-the-art waste transfer station with an integrated rail line. The facility specializes in the recycling of construction & demolition (C&D) waste and the transfer of municipal solid waste (MSW) and residuals for responsible end disposal. The site recovers hundreds of tons of recyclables each month, which are sent to recycling facilities for reuse in new products – helping conserve our natural resources for future generations. What we cannot recycle is transferred to its final disposal by rail, the lowest carbon mode of land transport.

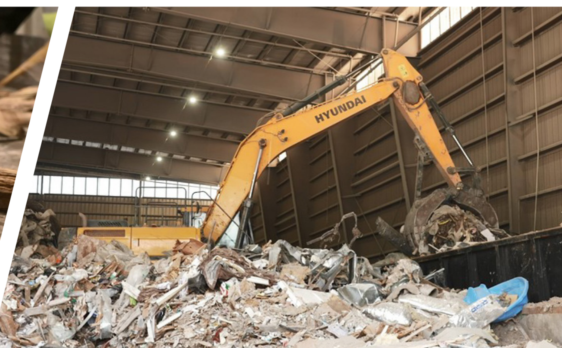
Permit modification increases region's critical disposal capacity

In order to meet the growing demand for waste handling in Massachusetts, UMML is proposing a project, subject to Massachusetts Environmental Policy Act (MEPA) review, that will increase the handling capacity at the existing Leominster facility. The facility is currently permitted to process up to 1,000 tons of waste per day (TPD). This project would increase that capacity to 1,500 TPD without requiring any building expansion to accommodate the increase in daily handling.

Essential to the region's waste management infrastructure

Meets regional demand: With recent and inevitable closures of large landfills in the Commonwealth, there is a disposal capacity shortage in the region putting pressure on statewide systems that are already struggling to meet demand. By increasing the capacity and efficiency of an existing transfer station, UMML can help meet the demands of the growing population and changing waste patterns in the region.

Integrated rail provides access to disposal outlets: The facility exists in an area that has direct access to rail. UMML's rail connectivity provides the unique ability to move waste where there's space, alleviating the state's declining capacity and supports MassDEP's Solid Waste Master Plan. The region is better served by utilizing disposal outlets that are not generally accessible or viable through traditional long-haul trucking.



UNITED MATERIAL MANAGEMENT OF LEOMINSTER

A TRANSFER STATION IN LEOMINSTER, MASSACHUSETTS

Delivers a more sustainable waste management solution

Enhanced recycling: UMML specializes in the sorting and recycling of C&D materials and is a MassDEP-compliant C&D processor. The site recovers hundreds of tons of recyclables each month for reuse in new products, and an increase in permitted daily capacity would further expand recycling quantities at the site. Recyclable materials include asphalt, brick, concrete, cardboard, metals, and wood.

Reduces greenhouse gas emissions: UMML employs several strategies to reduce GHG emissions. The most impactful tactics involve consolidating waste before transport, utilizing rail transport over traditional trucking whenever feasible, and diverting waste from near-capacity landfills. Moving waste by rail is four times more fuel efficient than trucks on a highway and has the lowest carbon footprint per ton of waste transported, reducing GHG emissions by up to 75 percent.

Existing facility located in industrial park: The existing facility has adequate separation to any designated open space, is outside of mapped habitats and residential areas, and is within an industrial zoned area. By utilizing the existing facility, we can increase regional waste disposal capacity without the need for new construction or additional land space.

Supports the local economy: UMML significantly contributes to the local economic landscape and generates revenue for the City of Leominster in the form of taxes and royalties. Increasing regional disposal capacity at UMML creates jobs, encourages local investment, and further expands the tax base and revenue for the city, while also reducing disposal costs for local waste haulers. According to the Leominster Economic Development Office, industrial development in Leominster is a priority as the region boasts a highly-skilled workforce within manufacturing industries.

State-of-the-art facility: The existing building was constructed in 2019 and is equipped with translucent panels to reduce the need for artificial light and energy usage. When lighting is required, energy efficient lighting such as LED was installed on both the interior and exterior of the building.

How it works: Waste handling is performed entirely within the existing 32,500-square-foot building. The building includes tipping and inspection areas, temporary waste storage areas, and outbound rail and truck loading areas. Processing activities include advanced sorting equipment for the recovery of recyclables, which are then transported to recycling facilities. What we cannot recycle is transferred to its final disposal by rail.

Learn more

The proposed permit modification is subject to MEPA review, and MEPA will welcome public comment. Information about UMML, MEPA filings, and supporting documents can be found at www.ummleominster.com. Should you have questions about the UMML project, please contact comms@win-waste.com.

UNITED MATERIAL MANAGEMENT OF LEOMINSTER

UNA ESTACIÓN DE TRANSFERENCIA EN LEOMINSTER, MASSACHUSETTS

United Material Management of Leominster (UMML), ubicada en 200 Tanzio Road en Leominster, es una estación de transferencia de desechos de última generación con una línea ferroviaria integrada. La instalación se especializa en el reciclaje de desechos de construcción y demolición (construction & demolition, C&D) y la transferencia de desechos sólidos municipales (municipal solid waste, MSW) y desechos para la eliminación final responsable. La instalación recupera cientos de toneladas de materiales reciclables cada mes, que se envían a instalaciones de reciclaje para su reutilización en nuevos productos, lo que ayuda a conservar nuestros recursos naturales para las generaciones futuras. Lo que no podemos reciclar se transfiere para su eliminación final por ferrocarril, el modo de transporte terrestre con menos generación de carbono.

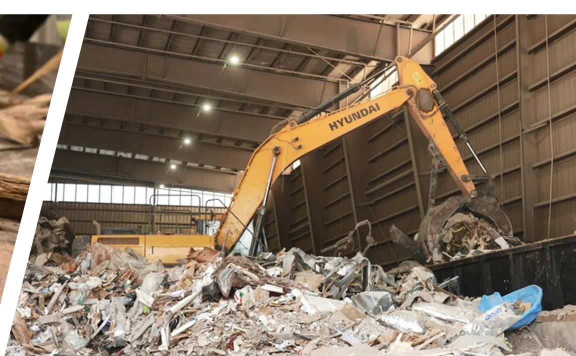
La modificación del permiso aumenta la capacidad de eliminación crítica de la región

A fin de satisfacer la creciente demanda de manejo de desechos en Massachusetts, UMML propone un proyecto, sujeto a la revisión de la Ley de Política Ambiental de Massachusetts (Massachusetts Environmental Policy Act, MEPA), que aumentará la capacidad de manejo en sus instalaciones actuales en Leominster. Actualmente, la instalación tiene permiso para procesar hasta 1,000 toneladas de desechos por día (TPD). Este proyecto aumentaría esa capacidad a 1,500 TPD sin requerir ninguna expansión del edificio para adaptarse al aumento en la manipulación diaria.

Esencial para la infraestructura de gestión de desechos de la región

Satisface la demanda regional: Con los recientes e inevitables cierres de grandes vertederos en la Mancomunidad (Commonwealth), existe una escasez de capacidad de desecho en la región que ejerce presión sobre los sistemas estatales que ya están haciendo un gran esfuerzo para satisfacer la demanda. Al aumentar la capacidad y la eficiencia de una estación de transferencia existente, UMML puede ayudar a satisfacer las demandas de la creciente población y cambiar los patrones de desechos en la región.

La línea ferroviaria integrada proporciona acceso a las salidas de desechos: La instalación está ubicada en un área que tiene acceso directo al ferrocarril. La conectividad ferroviaria de UMML proporciona la capacidad única de mover desechos donde hay espacio, lo que alivia la capacidad decreciente del estado y apoya el Plan Maestro de Desechos Sólidos del Departamento de Protección Ambiental de Massachusetts (MassDEP). La región recibe un mejor servicio mediante el uso de salidas de desechos que generalmente no son accesibles o viables a través de camiones tradicionales de larga distancia.



UNITED MATERIAL MANAGEMENT OF LEOMINSTER

UNA ESTACIÓN DE TRANSFERENCIA EN LEOMINSTER, MASSACHUSETTS

Ofrece una solución de gestión de desechos más sostenible

Reciclaje mejorado: UMML se especializa en la clasificación y el reciclaje de materiales de C&D y es un procesador de C&D en cumplimiento con el MassDEP. El sitio recupera cientos de toneladas de materiales reciclables cada mes para su reutilización en nuevos productos, y un aumento en la capacidad diaria permitida expandiría aún más las cantidades de reciclaje en el sitio. Los materiales reciclables incluyen asfalto, ladrillo, concreto, cartón, metales y madera.

Reduce las emisiones de gases de efecto invernadero: UMML emplea varias estrategias para reducir las emisiones de GEI. Las tácticas más impactantes implican consolidar los desechos antes del transporte, utilizar el transporte ferroviario en lugar de los camiones tradicionales siempre que sea posible y desviar los desechos de los vertederos que están llegando a su capacidad. Mover los desechos por ferrocarril es cuatro veces más eficiente en el consumo de combustible que los camiones en una autopista y tiene la huella de carbono más baja por tonelada de desechos transportados, lo que reduce las emisiones de GEI hasta en un 75 por ciento.

Instalaciones existentes ubicadas en un parque industrial: La instalación existente tiene una separación adecuada con cualquier espacio abierto designado, está fuera de hábitats y áreas residenciales mapeados, y está dentro de un área zonificada industrial. Al utilizar las instalaciones existentes, podemos aumentar la capacidad de eliminación de desechos regionales sin la necesidad de nuevas construcciones o espacio terrestre adicional.

Apoya la economía local: UMML contribuye significativamente al panorama económico local y genera ingresos para la ciudad de Leominster en forma de impuestos y regalías. El aumento de la capacidad de eliminación regional en UMML crea empleos, fomenta la inversión local y amplía aún más la base fiscal y los ingresos para la ciudad, al tiempo que reduce los costos de eliminación para los transportistas de desechos locales. Según la Oficina de Desarrollo Económico de Leominster, el desarrollo industrial en Leominster es una prioridad, ya que la región cuenta con una fuerza laboral altamente calificada dentro de las industrias manufactureras.

Instalaciones de última generación: La instalación existente se construyó en el 2019 y está equipada con paneles translúcidos para reducir la necesidad de luz artificial y uso de energía. Se instaló una iluminación de bajo consumo, como LED, tanto en el interior como en el exterior del edificio para cuando se requiere iluminación.

Cómo funciona: La manipulación de desechos se realiza completamente dentro del edificio existente de 32,500 pies cuadrados. El edificio incluye áreas de vuelco e inspección, áreas de almacenamiento de desechos temporales y áreas de carga saliente de trenes y camiones. Las actividades de procesamiento incluyen equipos de clasificación avanzados para la recuperación de materiales reciclables, que luego se transportan a instalaciones de reciclaje. Lo que no podemos reciclar se transfiere para su eliminación final por ferrocarril.

Más información

La modificación del permiso propuesta está sujeta a la revisión de la MEPA, y la MEPA aceptará comentarios públicos. Puede encontrar información sobre UMML, presentaciones de la MEPA y documentos de respaldo en www.ummleominster.com. Si tiene preguntas sobre el proyecto de UMML, envíe un correo electrónico a comms@win-waste.com.

EXHIBIT 9

RMAT TOOL REPORT

Climate Resilience Design Standards Tool Project Report

UMML

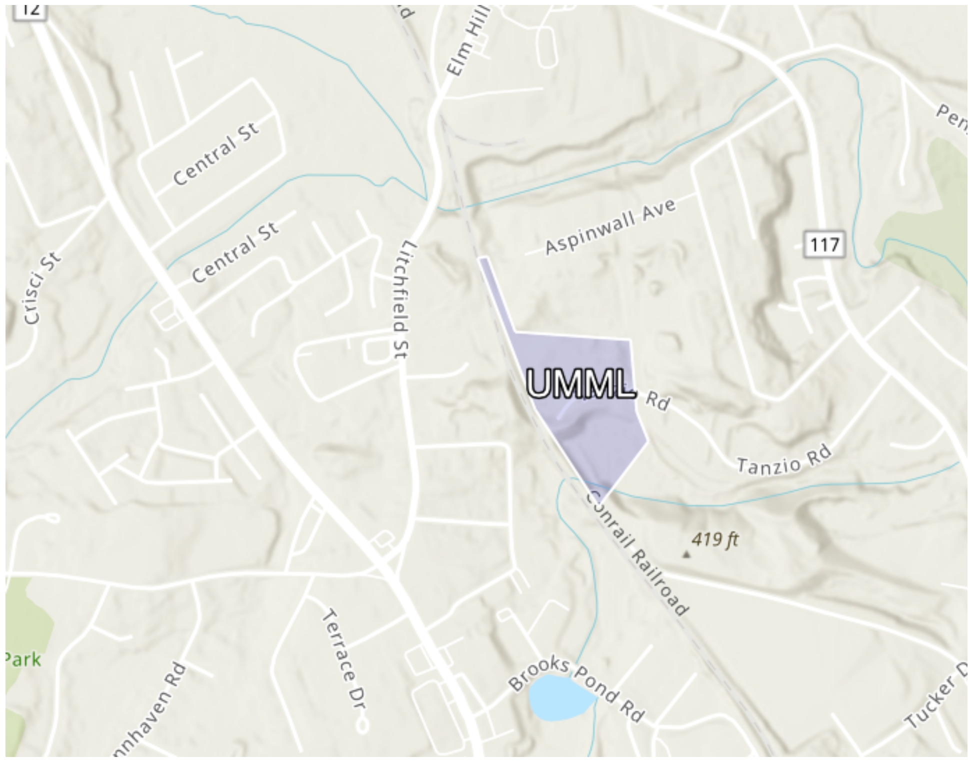
Date Created: 9/19/2024 2:02:00 PM
Created By: labugay
Date Report Generated: 9/19/2024 6:46:22 PM
Tool Version: Version 1.2
Project Contact Information: Johannes Kohn (jkohn@win-waste.com)

Project Summary

Link to Project

Estimated Capital Cost: $0.00
End of Useful Life Year: 2054
Project within mapped Environmental Justice neighborhood: Yes

Ecosystem Service Benefits	Scores
Project Score	Low
Exposure	**Scores**
Sea Level Rise/Storm Surge	Not Exposed
Extreme Precipitation - Urban Flooding	Moderate Exposure
Extreme Precipitation - Riverine Flooding	High Exposure
Extreme Heat	Moderate Exposure



Asset Preliminary Climate Risk Rating Summary

Number of Assets: 1

Asset Risk	Sea Level Rise/Storm Surge	Extreme Precipitation - Urban Flooding	Extreme Precipitation - Riverine Flooding	Extreme Heat
Transfer Station	Low Risk	Moderate Risk	High Risk	Moderate Risk

Climate Resilience Design Standards Summary

	Target Planning Horizon	Intermediate Planning Horizon	Percentile	Return Period	Tier
Sea Level Rise/Storm Surge					
Transfer Station					
Extreme Precipitation					
Transfer Station	2050			25-yr (4%)	Tier 2
Extreme Heat					
Transfer Station	2050		90th		Tier 2

Scoring Rationale - Project Exposure Score

The purpose of the Exposure Score output is to provide a preliminary assessment of whether the overall project site and subsequent assets are exposed to impacts of natural hazard events and/or future impacts of climate change. For each climate parameter, the Tool will calculate one of the following exposure ratings: Not Exposed, Low Exposure, Moderate Exposure, or High Exposure. The rationale behind the exposure rating is provided below.

Sea Level Rise/Storm Surge

This project received a "Not Exposed" because of the following:

- Not located within the predicted mean high water shoreline by 2030
- No historic coastal flooding at project site
- Not located within the Massachusetts Coast Flood Risk Model (MC-FRM)

Extreme Precipitation - Urban Flooding

This project received a "Moderate Exposure" because of the following:

- Maximum annual daily rainfall exceeds 10 inches within the overall project's useful life
- No historic flooding at project site
- No increase to impervious area
- Existing impervious area of the project site is less than 10%

Extreme Precipitation - Riverine Flooding

This project received a "High Exposure" because of the following:

- Part of the project is within a mapped FEMA floodplain, outside of the Massachusetts Coast Flood Risk Model (MC-FRM)
- Part of the project is within 100ft of a waterbody
- Project is potentially susceptible to riverine erosion
- No historic riverine flooding at project site

Extreme Heat

This project received a "Moderate Exposure" because of the following:

- Between 10% and 40% of the existing project site has canopy cover
- 10 to 30 day increase in days over 90 deg. F within project's useful life
- Located within 100 ft of existing water body
- No increase to the impervious area of the project site
- No tree removal

Scoring Rationale - Asset Preliminary Climate Risk Rating

A Preliminary Climate Risk Rating is determined for each infrastructure and building asset by considering the overall project Exposure Score and responses to Step 4 questions provided by the user in the Tool. Natural Resource assets do not receive a risk rating. The following factors are what influenced the risk ratings for each asset.

Asset - Transfer Station
Primary asset criticality factors influencing risk ratings for this asset:

- Asset must be operable at all times, even during natural hazard event
- Loss/inoperability of the asset would have state-wide or greater impacts
- The infrastructure provides services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.
- Inoperability of the asset would not be expected to result in injuries
- Inoperability may moderately impact other facilities, assets, or buildings, but is not expected to affect their ability to operate
- Spills and/or releases of hazardous materials would be relatively easy to clean up

Project Climate Resilience Design Standards Output

Climate Resilience Design Standards and Guidance are recommended for each asset and climate parameter. The Design Standards for each climate parameter include the following: recommended planning horizon (target and/or intermediate), recommended return period (Sea Level Rise/Storm Surge and Precipitation) or percentile (Heat), and a list of applicable design criteria that are likely to be affected by climate change. Some design criteria have numerical values associated with the recommended return period and planning horizon, while others have tiered methodologies with step-by-step instructions on how to estimate design values given the other recommended design standards.

Asset: Transfer Station | Infrastructure

Sea Level Rise/Storm Surge | Low Risk

Applicable Design Criteria

Projected Tidal Datums: NOT APPLICABLE

Projected Water Surface Elevation: NOT APPLICABLE

Projected Wave Action Water Elevation: NOT APPLICABLE

Projected Wave Heights: NOT APPLICABLE

Projected Duration of Flooding: NOT APPLICABLE

Projected Design Flood Velocity: NOT APPLICABLE

Projected Scour & Erosion: NOT APPLICABLE

Extreme Precipitation | Moderate Risk

Target Planning Horizon: 2050
Return Period: 25-yr (4%)

LIMITATIONS: The recommended Standards for Total Precipitation Depth & Peak Intensity are determined by the user drawn polygon and relationships as defined in the Supporting Documents. The projected Total Precipitation Depth values provided through the Tool are based on the climate projections developed by Cornell University as part of EEA's Massachusetts Climate and Hydrologic Risk Project, GIS-based data as of 10/15/21. For additional information on the methodology of these precipitation outputs, see Supporting Documents.

While Total Precipitation Depth & Peak Intensity for 24-hour Design Storms are useful to inform planning and design, it is recommended to also consider additional longer- and shorter-duration precipitation events and intensities in accordance with best practices. Longer-duration, lower-intensity storms allow time for infiltration and reduce the load on infrastructure over the duration of the storm. Shorter-duration, higher-intensity storms often have higher runoff volumes because the water does not have enough time to infiltrate infrastructure systems (e.g., catch basins) and may overflow or back up during such storms, resulting in flooding. In the Northeast, short-duration high intensity rain events are becoming more frequent, and there is often little early warning for these events, making it difficult to plan operationally. While the Tool does not provide recommended design standards for these scenarios, users should still consider both short- and long-duration precipitation events and how they may impact the asset.

The projected values, standards, and guidance provided within this Tool may be used to inform plans and designs, but they do not provide guarantees for future conditions or resilience. The projected values are not to be considered final or appropriate for construction documents without supporting engineering analyses. The guidance provided within this Tool is intended to be general and users are encouraged to do their own due diligence

Applicable Design Criteria

Tiered Methodology: Tier 2

Projected Total Precipitation Depth & Peak Intensity for 24-hr Design Storms: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period (Design Storm)	Projected 24-hr Total Precipitation Depth (inches)	Step-by-Step Methodology for Peak Intensity
Transfer Station	2050	25-Year (4%)	7.4	Downloadable Methodology PDF

Projected Riverine Peak Discharge & Peak Flood Elevation: APPLICABLE
Methodology to Estimate Projected Values : Tier 2

Extreme Heat Moderate Risk

Target Planning Horizon: 2050
Percentile: 90th Percentile

Applicable Design Criteria

Tiered Methodology: Tier 2

Projected Annual/Summer/Winter Average Temperatures: APPLICABLE
Methodology to Estimate Projected Values : Tier 2

Projected Heat Index: APPLICABLE
Methodology to Estimate Projected Values : Tier 2

Projected Growing Degree Days: NOT APPLICABLE

Projected Days Per Year With Max Temp > 95°F, >90°F, <32°F: APPLICABLE
Methodology to Estimate Projected Values : Tier 2

Projected Number of Heat Waves Per Year & Average Heat Wave Duration: APPLICABLE
Methodology to Estimate Projected Values : Tier 2

Projected Cooling Degree Days & Heating Degree Days (base = 65°F): NOT APPLICABLE

Project Inputs

Core Project Information

Name:	UMML
Given the expected useful life of the project, through what year do you estimate the project to last (i.e. before a major reconstruction/renovation)?	2054
Location of Project:	Leominster
Estimated Capital Cost:	$0
Who is the Submitting Entity?	Private Other United Material Management of Leominster, LLC Johannes Kohn (jkohn@win-waste.com)
Is this project being submitted as part of a state grant application?	No
Which grant program?	
What stage are you in your project lifecycle?	Permitting
Is climate resiliency a core objective of this project?	No
Is this project being submitted as part of the state capital planning process?	No
Is this project being submitted as part of a regulatory review process or permitting?	Yes
Brief Project Description:	The Project includes an increase to permitted daily tonnage at an existing solid waste transfer station. No additional construction is proposed. The existing Facility was previously constructed outside of and well above floodplain, with stormwater management systems meeting state stormwater standards. Following MEPA review, the project will require a positive determination of site suitability from MassDEP, a modification to site assignment from Leominster Board of Health, and a subsequent permit modification from MassDEP.
Project Submission Comments:	There is no construction proposed for the project proposed under this ENF. When constructed in 2019-2020, the project was built in accordance with the code requirements in effect at the time of construction, and additional measures (translucent wall panels, etc.) were incorporated to reduce energy consumption and greenhouse gases. The project location itself was chosen in part to reduce greenhouse gas emissions by being sited next to a rail line, so that materials can be more efficiently transported. Stormwater collection and treatment systems were previously designed for the 25-year storm event and incorporated infiltration to the maximum extent practicable; the on-site buildings were constructed well above nearby floodplain elevations. This RMAT tool required a construction year of no earlier than 2024 be inputted, although this Project does not include any new construction.

Project Ecosystem Service Benefits

Factors Influencing Output

✓ Project recharges groundwater
✓ Project improves water quality
✓ Project prevents pollution

Factors to Improve Output

✓ Incorporate nature-based solutions that may provide flood protection
✓ Incorporate nature-based solutions that may reduce storm damage
✓ Protect public water supply by reducing the risk of contamination, pollution, and/or runoff of surface and groundwater sources used for human consumption
✓ Incorporate strategies that reduce carbon emissions
✓ Incorporate green infrastructure to filter stormwater
✓ Incorporate nature-based solutions that sequester carbon carbon
✓ Increase biodiversity, protect critical habitat for species, manage invasive populations, and/or provide connectivity to other habitats
✓ Preserve, enhance, and/or restore coastal shellfish habitats
✓ Incorporate vegetation that provides pollinator habitat
✓ Identify opportunities to remediate existing sources of pollution
✓ Provide opportunities for passive and/or active recreation through open space
✓ Increase plants, trees, and/or other vegetation to provide oxygen production
✓ Mitigate atmospheric greenhouse gas concentrations and other toxic air pollutants through nature-based solutions
✓ Incorporate education and/or protect cultural resources as part of your project

Is the primary purpose of this project ecological restoration?

No

Project Benefits

Provides flood protection through nature-based solutions	No
Reduces storm damage	No
Recharges groundwater	Yes
Protects public water supply	No
Filters stormwater using green infrastructure	No
Improves water quality	Yes
Promotes decarbonization	No
Enables carbon sequestration	No
Provides oxygen production	No
Improves air quality	No
Prevents pollution	Yes
Remediates existing sources of pollution	No
Protects fisheries, wildlife, and plant habitat	No
Protects land containing shellfish	No
Provides pollinator habitat	No
Provides recreation	No
Provides cultural resources/education	No

Project Climate Exposure

Is the primary purpose of this project ecological restoration?	No
Does the project site have a history of coastal flooding?	No
Does the project site have a history of flooding during extreme precipitation events (unrelated to water/sewer damages)?	No
Does the project site have a history of riverine flooding?	No
Does the project result in a net increase in impervious area of the site?	No
Are existing trees being removed as part of the proposed project?	No

Project Assets

Asset: Transfer Station
Asset Type: Solid and Hazardous Waste
Asset Sub-Type: Solid Waste Facility/Transfer Station
Construction Type: New Construction
Construction Year: 2024
Useful Life: 30

Identify the length of time the asset can be inaccessible/inoperable without significant consequences.

Infrastructure must be accessible/operable at all times, even during natural hazard event.

Identify the geographic area directly affected by permanent loss or significant inoperability of the infrastructure.

State-wide or greater impacts

Identify the population directly served that would be affected by the permanent loss or significant inoperability of the infrastructure.

Less than 5,000 people

Identify if the infrastructure provides services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.

The infrastructure provides services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.

Will the infrastructure reduce the risk of flooding?

No

If the infrastructure became inoperable for longer than acceptable in Question 1, how, if at all, would it be expected to impact people's health and safety?

Inoperability of the infrastructure would not be expected to result in injuries

If there are hazardous materials in your infrastructure, what are the extents of impacts related to spills/releases of these materials?

Spills and/or releases of hazardous materials are expected with relatively easy cleanup

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts on other facilities, assets, and/or infrastructure?

Moderate – Inoperability may impact other facilities, assets, or buildings, but cascading impacts do not affect the ability of other facilities, assets, or buildings to operate

If the infrastructure was damaged beyond repair, how much would it approximately cost to replace?

Less than $10 million

Does the infrastructure function as an evacuation route during emergencies? This question only applies to roadway projects.

No

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the environmental impacts related to natural resources?

No impact on surrounding natural resources is expected

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts to government services (i.e. the infrastructure is not able to serve or operate its intended users or function)?

Loss of infrastructure is not expected to reduce the ability to maintain government services

What are the impacts to loss of confidence in government resulting from loss of infrastructure functionality (i.e. the infrastructure asset is not able to serve or operate its intended users or function)?
No Impact

Report Comments

There is no construction proposed for the project proposed under this ENF. When constructed in 2019-2020, the project was built in accordance with the code requirements in effect at the time of construction, and additional measures (translucent wall panels, etc.) were incorporated to reduce energy consumption and greenhouse gases. The project location itself was chosen in part to reduce greenhouse gas emissions by being sited next to a rail line, so that materials can be more efficiently transported. Stormwater collection and treatment systems were previously designed for the 25-year storm event and incorporated infiltration to the maximum extent practicable; the on-site buildings were constructed well above nearby floodplain elevations. This RMAT tool required a construction year of no earlier than 2024 be inputted, although this Project does not include any new construction.

Providing Innovative Solutions For:

- Environmental Services
- Solid Waste Management
- Hazardous Waste
- Facilities Management
- Survey & Land Development
- Civil Engineering
- Construction Management
- Wetland Restoration