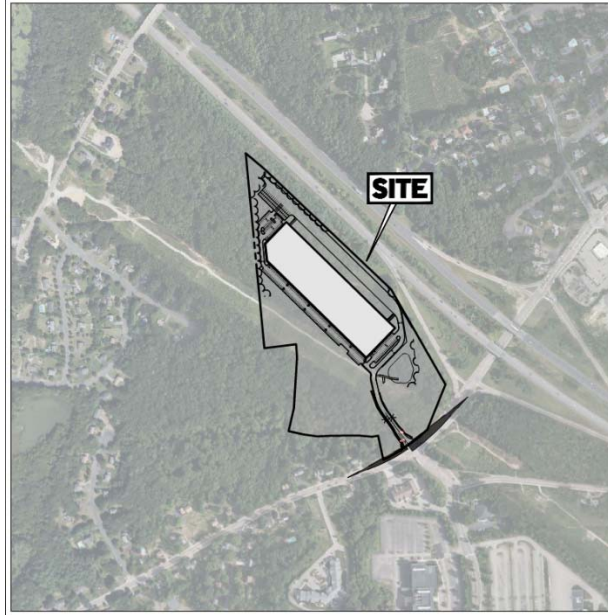


**Draft Environmental Impact Report
For
Warehouse Distribution Facility**

**585 King Street
Franklin, Massachusetts
Norfolk County
(EEA # 16534)**



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- Department of Energy Resources (DOER) Comment Letter on the ENF, dated April 20, 2022 (with coded comments)
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1 PROJECT DESCRIPTION

1.1 Site Context and Zoning

The project site (the “Site”) is identified as Map #313, Lots #7, 8, 53, 54, & 55 in the Town of Franklin assessor’s database. The Site is located on the Northern side of King Street near the intersection of Interstate 495 and is approximately 28.9± acres (1,258,859± sf). The site is bound to the south by King Street and residential properties, to the west and north by vacant properties, and to the east by Interstate 495. There is a large industrial development on the opposite side of King Street to the south of the property.

The site is primarily undeveloped and consists largely of wooded areas and wetlands. There are existing electric transmission lines running across the site through an easement to the benefit of New England Power Company. In addition to the power lines, there is an existing unpaved access drive underneath the power lines. The property is located entirely in the Business Zoning District and abuts the Residential Zone along the southwestern portions of the site. Refer to Appendix A for USGS and aerial site location maps.

The Site has access to King Street (to the South). King Street is a public roadway serving industrial and residential uses along the street and the portion of King Street where the site has frontage is under the jurisdiction of Massachusetts Department of Transportation (MassDOT). There is direct access from King Street to Interstate 495, a public roadway under jurisdiction of MassDOT.

There is a bordering vegetated wetland (BVW) located at the front of the site along King Street. There is an intermittent stream within the BVW complex that flows north to south and also flows from a culvert that discharges from King Street. According to the most recent Flood Insurance Rate Maps (FIRMs) prepared by the Federal Emergency Management Agency (FEMA), the Site is not located in a mapped flood zone (Appendix A). According to the latest edition of the Massachusetts Natural Heritage Atlas, 14th edition, the subject Site is not located within a priority or endangered species habitat (Appendix A). The resource areas were reviewed and approved by the Town of Franklin Conservation Commission through the ANRAD process. A copy of the Order of Resource Area Delineation (ORAD) is included in Appendix D.

Under existing conditions, the majority of the site drains south to the wetland system and stream along King Street. A small portion of the site drains to a northeasterly direction towards Interstate 495. There is no existing stormwater management infrastructure on the site. Elevations on the site range from 353 at the northern corner of the site to 320 at the bottom of the wetland area at the south of the site.

Please refer to the Project Maps provided in Appendix A and the ALTA/NSPS Land Title Survey provided in Appendix B.

1.2 Site and Project History

The project parcels included previous development and activity on the various parcels including single family homes, an active horse barn and haying (mowed, raked and baled) of fields into the early 2000's. The areas used for haying have since regrown with vegetation including wooded areas since the operations have ceased.

The property and other parcels in the area were rezoned to Business by the Town of Franklin circa 2012 to promote development. The current property owner contemplated multiple development scenarios, but formal plans were never filed/approved with the Town.

On February 25, 2022, the Proponent filed an Environmental Notification Form (ENF) (EEA# 16534) with MEPA for the proposed project. A Certificate on the ENF was issued by the MEPA office on April 22, 2022. Copy of the ENF Certificate and comments received are included in Appendix J. The Certificate and comments also include coded numbers that correspond to response to comments which are also provided in Appendix J.

1.3 ENF Preferred Alternative Site Plan

The Preferred Alternative Site Plan (the "ENF Plan") included in the ENF filing, depicted approximately 255,400± GSF warehouse distribution facility including single-load access for trucks, 275 standard parking spaces, truck loading and parking for 82 trucks, associated drive aisles, stormwater management features and utility infrastructure.

The project proposes one (1) curb cut along King Street, which is a public roadway under the jurisdiction of MassDOT. A State Highway Access Permit will be submitted to MassDOT prior to construction. The curb cut will be at an existing signalized intersection and aligned with the road on the opposite side of the intersection.

The project will connect to the existing water lines in King Street. There is no sewer service available in King Street along the site's frontage, so an on-site wastewater disposal system will be provided for the proposed use. The proposed wastewater disposal system will be located in the northerly portion of the site outside resource areas and their associated buffers.

The design of the ENF Plan has advanced and is the proposed project as described in the DEIR. Changes since the filing of the ENF are noted in Section 1.4 below. Refer to Appendix B for detailed Site Layout Plans depicting the proposed project.

1.4 Detailed Summary of Project Changes since ENF

At the time of the ENF filing, the proposed project had previously been designed for a 293,000± SF warehouse distribution facility and presented to the Town of Franklin as part of the local permitting process. Due to comments and concerns raised by the Town the project was reduced in size and redesigned to the 255,400± SF warehouse distribution facility as shown in the ENF Plan. Since the submittal of the ENF the plans for the proposed project have further evolved and been detailed as part of the local permitting process. Below is a summary of project changes and associated impacts since the ENF filing:

- Decrease in land alteration of 0.2± acres
- Increase in impervious area of 0.5± acres
- Decrease in wetland alteration of 960± SF
- Increase in wetland replication from 1:1 as noted in the ENF to a 2:1 ratio.
- Providing an additional 34,185 CF of volume within the stormwater system for water quality treatment and groundwater recharge.

Refer to Appendix B for detailed site, grading, drainage, and utility plans for the proposed project.

1.5 **Required Permitting**

Tables 1.1, 1.2 and 1.3 below provide and update on local, state and federal permitting.

Table 1.1: Local Permitting

Agency	Permit/ Approval/ Review	Status
Franklin Planning Board	Site Plan Review and Special Permit	An Application has been filed with the Franklin Planning Board and is currently going through the peer review process with the Town's consulting engineer
Franklin Conservation Commission	Abbreviated Notice of Resource Area Delineation	Approved see Appendix D for a copy of the ORAD
Franklin Conservation Commission	Notice of Intent	A Notice of Intent (NOI) has been filed with the Franklin Conservation Commission and is currently going through the peer review process with the Town's consulting engineer. A copy of the NOI is included in Appendix D along with supplemental information that has been provided to the Commission through the NOI process
Franklin Board of Health	Septic System Review	The septic system will be designed and submitted to the Board of Health for approval once an end user is known and definitive sewer flows can be calculated

Table 1.2: State Permitting

Local Agency	Permit/ Approval/ Review	Status
Mass DOT	Vehicular Access Permit / Traffic Signal Regulation / Traffic Signal Maintenance Agreement	The Project proponent has been coordinating with MassDOT with regard to the elements of the transportation improvement program, including the planned improvements along King Street and at the King Street/Constitution Boulevard. Upon completion of the MEPA process and the issuance of the necessary local approvals from the Town of Franklin, the Project proponent will submit an Application for Permit to Access State Highway to MassDOT with accompanying 25 Percent Design plans and supporting documents to initiate the formal permitting process with MassDOT
MassDEP	401 Water Quality Certification	Anticipated to be filed within 45-60 days of DEIR submission

Table 1.3: Federal Permitting

Local Agency	Permit/ Approval/ Review	Status
Army Corp of Engineers	Section 404 Clean Waters Act	Anticipated to be filed within 45-60 days of DEIR submission
Environmental Protection Agency (EPA)	National Pollutant Discharge Elimination System (NPDES) Construction General Permit	The SWPPP will be prepared and the eNOI filed for coverage under the CGP prior to the start of construction

1.6 Project Funding

The project as currently designed is proposed to be entirely privately funded.

2 ALTERNATIVES ANALYSIS

The following section provides a description of development alternatives considered by the Proponent. As requested by the EEA Secretary's Certificate on the ENF, this section includes additional information and updates regarding the following:

- Consideration of a "Reduced Impact Alternative"
- Tabular and quantitative comparison of the alternatives along with supporting narratives
- Discussion on EJ populations
- Alternatives analysis for project access location; and
- Alternative analysis regarding alternate property locations

2.1 Summary of Alternatives

2.1.1 No-Build Alternative

One alternative to the project is the no-build scenario, leaving the Site in its current condition. The No-Build Alternative would not benefit or work towards the Town's economic objectives, growth, and benefits. This alternative is not an option for the project proponent and would also deny the Town of Franklin of the proposed use, economic benefits, and associated employment opportunities in this currently under-utilized area adjacent to Interstate 495 and consistent with other areas adjacent to the Interstate. Refer to Table 2.1 for a quantitative comparison of the impacts from the proposed alternatives. Refer to Appendix C for a plan showing the No-Build Alternative.

The current site is undeveloped and has no impacts to the EJ communities.

2.1.2 Alternative 1 – Expanded 293,000 sf Warehouse Distribution Layout

Alternative 1 consists of a similar warehouse distribution development that proposed a larger 293,000± sf building with truck loading area, parking, access drives, and other associated improvements. This development has the following additional impacts when compared to the proposed project:

- It is noted that the 293,000 SF building was the originally proposed and preferred development program for this project site. This included the building orientation being reversed from the proposed project and the truck loading area was directed towards the residential neighborhood to the west of the site. This layout was fully designed and presented to the Town as part of the local permitting process. The noise associated with the loading operations was a concern of the neighboring residents as well as the local Planning Board and this layout was not supported by either.
- The larger warehouse building would support additional truck traffic and require more employees, resulting in increased trip generation. This layout is anticipated to increase average daily trips by 59 trips over the proposed project.
- Increase in total on-site parking (±23 spaces)

- Increase in total loading docks and trailer spaces (± 11 spaces)
- Increase in total impervious area (± 0.9 acres).
- Similar total land disturbance; and
- Minor increased demand on the Town's water (± 345 GPD) and increased wastewater discharge (± 345 GPD) to the on-site wastewater system based on Title V flow criteria

Based on the alternative analysis review summarized above, this alternative is not an option for the project Proponent. Refer to Table 2.1 for a quantitative comparison of the impacts from the proposed alternatives. Refer to Appendix C for a plan showing Alternative 1.

2.1.3 Alternative 2 – Commercial / Restaurant Layout

Alternative 2 consist of a mixed-use development including two retail buildings ($\pm 147,730$ sf and $\pm 49,920$ sf) and a $\pm 4,290$ SF (100 seat) quick serve restaurant (QSR) with drive thru. The restaurant use is allowed by right under existing zoning. The retail use is also a by right use in the Business district but would require a Special Permit from the Planning Board due to the square footage of the proposed development. This development has the following additional impacts when compared to the proposed project:

- Substantial increase in impacts to traffic due to the nature of the retail and QSR uses. Approximately $12,587 \pm$ increase in total vehicle trips to/from the Site compared to the preferred alternative
- Increase in total on-site parking (± 600 spaces)
- Decrease in total loading docks and trailer spaces (± 82 spaces)
- Increase in impervious area (± 1.9 acres)
- Increase in total site disturbance (± 1.2 Acres)
- Increased wetland impacts due to wider access and wetland crossing required to accommodate additional traffic ($\pm 4,792$ SF of BVW alteration, ± 97 LF of bank alteration).
- Increased demand on the Town's water ($\pm 7,488$ GPD) and increased wastewater discharge ($\pm 7,488$ GPD) to the on-site wastewater system based on Title V flow criteria.
- The proposed uses would be a land use with a higher potential pollutant load which would require additional stormwater treatment and increased potential for stormwater contaminants; and
- Potential shorter project lifespan due to the current challenges of commercial brick-and-mortar locations in light of growing online competition.

Based on the alternative analysis review summarized above, this alternative is not an option for the project proponent. Refer to Table 2.1 for a quantitative comparison of the impacts from the proposed alternatives. Refer to Appendix C for a plan showing Alternative 2.

2.1.4 Reduced Impact Alternative

As requested by the EEA Secretary's Certificate on the ENF the proponent has evaluated a further Reduced Impact Alternative. Since industrial development has been identified as a growth opportunity sector in the municipal land use plans the Reduced Impact Alternative analyzes a reduced size industrial development. The Reduced Impact Alternative is similar to the proposed project and consists of a warehouse distribution development that proposes a smaller 200,000± sf building with truck loading area, parking, access drives, and other associated improvements. This is a 22% reduction in building footprint over the DEIR proposed plan. This development has the following impacts when compared to the proposed project:

- Decrease in total impervious area (±3.4 acres)
- Decrease in total land disturbance (±2.0 acres)
- Decrease in total on-site parking (±38 spaces)
- Decrease in total loading docks and trailer spaces (±28 spaces)
- Decrease in total vehicle trips to/from the site (±88 trips)
- Reduced demand on Town's water and decreased wastewater discharge. (±570 GPD); and
- Same impacts to wetland resource areas. Refer to Section 2.3 below for detailed discussion on project access and its relation to wetland impacts.

Reducing the project further beyond the 37,600 Sf that it has already been reduced due to local permitting efforts does not work from an economic standpoint for the Proponent. The margins on the project are much tighter due to increased land acquisition and construction costs. In addition, the project also has cost premiums associated with approximately \$1.2M in off-site mitigation (refer to Section 12) to provide safe access to the site, and the proposed wetland crossing, both of which are required regardless of the size of the proposed development. For these reasons this alternative was not chosen.

Refer to Table 2.1 for a quantitative comparison of the impacts from the proposed alternatives. Refer to Appendix C for a plan showing the Reduced Impact Alternative.

2.1.5 DEIR Proposed Project (ENF Preferred Alternative Plan) – 255,400sf Warehouse Distribution

The DEIR Proposed Project proposes to develop the Site with a 255,400± sf warehouse distribution building with associated parking and access resulting in the following when compared to Alternatives 1 and 2:

- Reduced Impervious Area (-0.9 to -1.9 acres)
- Similar or Reduced Land Disturbance (+0 acres to -1.2 acres)
- Reduced total vehicle trips to/from the site. (-59 to -12,587 Trips)
- Decrease in total on-site parking (-23 to – 600 spaces)

- Reduced demand on Town's water and decreased wastewater discharge. (-345 GPD to -7,488 GPD)
- Retention of comparable job creation and economic benefits; and
- Rotates loading operations away from residential neighborhood to address concerns of neighboring residences and the Town.

This proposed project includes an industrial development which has been identified as a growth opportunity sector in the municipal land use plans in an area that has been determined appropriate for this use. As noted above the Site contains existing overhead electric transmission lines and an easement associated with the same, which restricts potential layouts as well as overall building size and location therefore limiting the development potential of the Site. Review of the project is ongoing through the Planning Board who are generally in support of the use on this parcel with the changes that have been incorporated based upon Town comments.

As noted above, the EEA Secretary's Certificate on the ENF requested that the proponent evaluate a Reduced Impact Alternative. When compared to the Reduced Impact Alternative the DEIR Proposed project results in the following:

- Increased Impervious Area (+3.4 acres)
- Increased Land Disturbance (+2.0 acres)
- Minor increase in total vehicle trips to/from the site (± 88 trips)
- Minor increase in total on-site parking (± 38 spaces)
- Minor increase in total loading docks and trailer spaces (± 28 spaces)
- Increased demand on Town's water and decreased wastewater discharge (± 570 GPD)
- Same impacts to wetland resource areas. Refer to Section 2.3 below for detailed discussion on project access and its relation to wetland impacts; and
- Increased job creation and economic benefits

It is important to note that downsizing the project will not substantially affect the proposed wetland impacts as discussed further in Section 2.3 below. Any distribution warehouse project on the Site will require tractor trailer access from King Street. Safely accommodating truck traffic would require the same wetland crossing as proposed, even if the building was reduced significantly in size as shown in the Reduced Impact Alternative. In addition, the proposed project has been designed such that the vast majority of the remaining portions of the project including the building are outside the 100-foot buffer zone. One stormwater basin is located between the 50-foot and 100-foot buffer zones and a small portion of a second basin (approximately 2,400 SF) is within the outer portions 100-foot buffer zone.

Refer to Table 2.1 for a quantitative comparison of the impacts from the proposed alternatives. Refer to Appendix B for detailed Site Layout Plans depicting the proposed project.

2.1.6 Reduced Impact Alternative and DEIR Proposed Project – Greenhouse Gas Comparison

In addition to the above the proponent is also providing a comparison of impacts for Greenhouse Gas and Air Quality related to the Reduced Impact Alternative and DEIR proposed project since the Reduced Impact Alternative was specifically added as part of the DEIR scope.

A greenhouse gas (GHG) emissions analysis was performed for the DEIR proposed project based on a single 255,400 sf building with 32-foot interior clear height; a portion of the building will be a 12,770-sf office. The warehouse space will be heated but will not be air conditioned. GHG emissions for the Project Design (Mitigation Case) are reduced by the following energy efficiency measures (EEMs):

- Higher efficiency than Code building envelope
- Higher efficiency than Code ASHPs for heating and cooling the office space
- Higher efficiency than Code gas-fired heating of the warehouse
- High efficiency heat pump hot water systems
- Inside and exterior lighting systems LED with a lower light power density than Code
- Three (3) installed EV charging stations and three (3) EV ready spaces; and
- Designating 80% of the warehouse flat roof as solar-ready space

For the mobile source CO₂ emissions reductions, the Proponent is committed to a program of Transportation Demand Management (TDM) strategies to reduce employee and customer vehicle trips, and which in aggregate it is estimated will reduce CO₂ transportation emissions by 2% for the DEIR proposed project.

The Reduced Impact Alternative is based on 200,000 sf building or 22% smaller footprint than the proposed project. Similarly, the office space is also assumed to be 22% smaller than the proposed project. Assuming the same EEMs and TDMs described above, the Reduced Impact Alternative total CO₂ emissions (stationary and mobile) would also be approximately 22% lower than the DEIR proposed project (424.0 tons/year compared to 543.6 tons/year).

2.1.7 Impacts to EJ Populations

As detailed in Section 10 the factors reviewed appear to show an absence of any “unfair or inequitable” environmental burden or related public health consequence borne by the identified EJ Populations as compared to the general population, therefore it is unlikely that the environmental and public health impacts from the proposed project, or the proposed alternatives, would have a disproportionate adverse effects on the EJ Populations.

In particular, the focus of the alternatives is around a proposed warehouse use. This type of development is the focus of the Proponent as industrial development has been identified as a growth opportunity sector in the municipal land use plans, and based upon feedback during the local permitting process Town staff are generally in support of the proposed use on this parcel. The alternatives analysis above and detailed in Table 2.1 shows that an increase or decrease to the

total square footage of the building will result in either a minor increase or minor decrease in anticipated impacts respectively. As noted above, the Proponent's original development plan for the site included a 293,000 SF warehouse building that was originally designed and submitted to the Town of Franklin. Based upon comments during the local permitting process the project was redesigned, and the building was reduced 37,600 SF. Based upon this redesign the current development program has already reduced anticipated environmental impacts (e.g. GHG, diesel emissions) than what was originally proposed.

In addition, the proposed project is directly adjacent to I-495 which provides close access to the site for truck traffic without the need to utilize local roads. As outlined in Section 7 the truck trips for the site are expected to be oriented to and from I-495, with approximately 60 percent expected to oriented to/from the north (toward I-90) and 40 percent oriented to/from the south (I-95 and Route 24), and will traverse the short segment of King Street between the I-495 ramps and the Project site. This distribution is anticipated to be the same regardless of size of the warehouse and truck traffic is not anticipated to be routed through the EJ populations. Also, regardless of the building size, the Proponent will also seek to engage and retain service providers for trash, recycling and other services from providers that are currently serving the area in order to reduce the overall number of new truck trips in the area and that may be traversing an EJ population area.

As outlined above the alternatives analysis also evaluated a potential commercial / retail development on the project site. This alternative shows another potential alternative based upon allowable uses within existing zoning and that would be suitable for the project site. This alternative is anticipated to have increased impacts, including GHG and diesel emissions, based upon the building program and estimated traffic generation. However, specific numbers for these impacts on EJ populations were not evaluated as the developer does not desire to build this as the proposed warehouse use is more suited for the area and is generally supported by the Town staff.

Lastly, the Reduced Impact Alternative would have minor reductions in anticipated impacts but is not viable since margins on the project are much tighter due to increased land acquisition and construction costs. In addition, the project also has cost premiums associated with approximately \$1.2M in off-site mitigation (refer to Section 12) to provide safe access to the site, and the proposed wetland crossing, both of which are required regardless of the size of the proposed development

2.2 Quantitative Comparison of Alternatives

Refer to Table 2.1 for a comparison of project alternative impacts. The impacts to wetland resources areas including Bordering Vegetated Wetlands (BVW), Bank, and Land Under Water (LUW) are required as there are no other means of accessing the upland area that would avoid or minimize wetland disturbance. Refer to Section 4 for more detailed information on wetland resource areas and associated permitting. An alternatives analysis of other available properties including potential alternate access to the property are described in Sections 2.3, 2.4 and 2.5 further below.

Table 2.1: Comparison of Impacts for Project Alternatives

Project Impacts	Alternative				
	No Build Alternative	Alternative 1 (293K Warehouse)	Alternative 2 (Commercial Restaurant)	Reduced Impact Alternative (200K Warehouse)	DEIR Proposed Project (255K Warehouse)
New Acres of Land Altered	0	18.4 ±	19.6 ±	16.4 ±	18.4 ±
Acres of Impervious Area	0	14.3 ±	15.3 ±	10.0 ±	13.4 ±
Impacts to BVW (SF)	0	10,990 ±	15,782 ±	10,990 ±	10,990 ±
Impacts to Bank (LF)	0	376 ±	473 ±	376 ±	376 ±
Impacts to LUW (SF)	0	1,821 ±	1,700 ±	1,821 ±	1,821 ±
Gross Square Footage	0	293,000 ±	201,940 ±	200,000 ±	255,400 ±
Number of Housing Units	0	0	0	0	0
Maximum Height (FT)	0	40 ±	35 ±	40 ±	40 ±
Vehicle Trips per day ⁽⁴⁾	0	501 ±	13,029 ±	354 ±	442 ± ⁽¹⁾
Parking Spaces ⁽²⁾	0	298 ±	875 ±	237 ±	275 ±
Loading Docks / Trailer Spaces	0	93 ±	0	54 ±	82 ±
Water Demand (GPD)	0	4,470 ±	11,613 ±	3,555 ±	4,125 ±
Water Withdrawal (GPD)	0	0	0	0	0
Wastewater Demand (GPD) ⁽³⁾	0	4,470 ±	11,613 ±	3,555 ±	4,125 ±
Length of water mains (miles)	N/A	N/A	N/A	N/A	N/A
Length of sewer mains (miles)	N/A	N/A	N/A	N/A	N/A

N/A= Not applicable

(1) Based on ITE Land Use Code (LUC) 150, Warehousing; 255,400 SF.

(2) Excludes trailer parking spaces.

(3) Based upon Title V flows for a warehouse use (15 GPD/Employee). Flows were estimating assuming one (1) parking spaces = one (1) employee. 275 Employees * 15 GPD/Employee = 4,125 GPD.

(4) Refer to Section 7 and Appendix F for traffic information

2.3 Alternatives Analysis for Project Access

The project team has worked with the Franklin Planning Board to ensure the proposed driveway is constructed to the narrowest width possible (30-foot) where it crosses wetlands, while providing sufficient space for large trucks and pedestrians to safely enter and exit the project site. The overall width of the wetland crossing has been minimized to the greatest extent practical by minimizing the width of pavement, minimizing use of grass shoulders, including only one sidewalk, and utilizing vertical concrete block retaining walls extending on each side of the driveway across the wetland.

The location of the driveway entrance along King Street is driven by traffic safety considerations associated with aligning the entrance to the existing signalized intersection with Constitution Boulevard across the street. As designed, the proposed project entrance will create a four-way signalized intersection with King Street and Constitution Boulevard which has been determined by the project traffic engineer to be the safest design, refer to Section 7 – Transportation for additional information on the intersection design. Locating the entrance further east would increase wetland impacts and would not align with Constitution Boulevard creating an unsafe intersection with King Street. Locating the entrance further west would modestly reduce wetland impacts but would also eliminate the alignment with Constitution Boulevard and thus create an unsafe intersection with King Street.

An Alternatives Access Plan is enclosed in Appendix C which depicts two alternative means of accessing developable upland portions of the property, referenced as Alternative Access Location A and Alternative Access Location B.

Alternative Access Location A would not align with Constitution Boulevard and create an unsafe intersection with the fire station located across King Street by inhibiting emergency response from the Station. The proposed alignment with Constitution Boulevard and the Franklin Fire Station is further illustrated Figure 7-2 in Section 7 and enclosed in Appendix F. In addition, Alternative Access Location A would involve approximately 9,000 square feet of wetland filling thereby only reducing wetland disturbances modestly (+/- 2,000 square feet) and would result in a new driveway very close to the abutting residential property at #627 King Street. In summary, Alternative Access Location A was dismissed because it would create an unsafe intersection and only reduces wetland disturbances by a small amount.

As noted above, locating the access driveway further east toward Interstate 495 also presents major traffic safety issues and would only reduce wetland impacts modestly. We also note that it is not feasible due to an existing MassDOT access restriction due to the proximity to the off-ramp, refer to Section 7.2.1 for additional detail. For these reasons, moving the driveway further east was dismissed.

Additional alternatives for accessing the property from King Street were also dismissed. These include purchasing residential properties (#627, #637, #651, #659 and/or #665 King Street, and Lot #50 King Street) for access purposes. Assuming the property owners would be willing to sell, accessing the developable upland from any of these properties was determined to be impractical as it would result in an increase in wetland disturbances due to the longer wetland crossing that would be required. In addition, utilizing these parcels, along with any and all parcels shown in

yellow on the Alternative Access Plan, would require rezoning since they are all currently zoned for residential use. All potential points of access located along King Street were dismissed because they would not reduce wetland impacts and/or require re-zoning.

Alternative Access Location B is depicted to further illustrate potential access from the north which could avoid all wetland disturbances associated with access from King Street. This would involve a long access driveway from Washington Street over multiple privately owned properties which are not part of the current project site and are all zoned for residential use. Assuming the Applicant could reach an agreement with the private property owners and obtain the necessary zoning change, this alternative presents a major traffic issue associated with directing truck traffic into the residential neighborhood on Washington Street. When compared to the immediate access to Interstate 495 from King Street afforded by the proposed project, Alternative Access Location B is significantly less sensitive to local residents and is unlikely to be supported by the neighbors and Planning Board. Alternative Access Location B was dismissed as it would negatively impact the neighborhood, requires acquisition of multiple private properties, and requires a zoning change.

The results of this analysis confirm that the current access from King Street is the only viable point of access from the perspective of minimizing wetland and traffic impacts. These options have been reviewed and vetted with the Town Conservation Commission and their peer review consultant.

2.4 Alternatives Analysis for Alternative Properties - Proponent

The proponent has also evaluated off-site properties in Franklin to determine if any property for sale or currently owned by the Proponent would accommodate a commercial warehouse development similar in size to the proposed project. Refer to Appendix C for a full copy of the evaluation.

As evidenced by the list of properties enclosed in the analysis, it is the Proponent's opinion that there are no properties for sale in Franklin adequate in size to accommodate a commercial development of similar size and scope to that proposed. In addition to reviewing other properties for sale in Franklin, the Proponent considered properties it currently owns in Franklin to determine if they may be suitable for redevelopment and construction of a project similar to that which is proposed. The Proponent and its affiliates currently own three properties in Franklin: 176 Grove Street, 206 Grove Street, and 210 Grove Street. These three properties serve as operational warehouse facilities, making redevelopment impracticable.

The analysis confirmed that there are no other properties on the market in Franklin or owned by the Proponent that are suitable for this project. These options have been reviewed and vetted with the Town Conservation Commission and their peer review consultant

2.5 Alternatives Analysis for Alternative Properties - Owner

2.5.1 *Ranieri Property Analysis*

The proponent has also evaluated other properties owned by the property owner, Ranieri Trust and Mine Brook Corporation (collectively “Ranieri”). Refer to Appendix C for a full copy of the Ranieri property evaluation.

The evaluation was limited to properties owned by Ranieri that can accommodate the project purpose and “Proposed Use”, a commercial warehouse development similar in scope to the proposed project. According to 310 CMR 10.58 (4)(c)(1)(c), Proposed Use is related to the concept of project purpose, as follows. “In the context of projects where the purpose implies a business component, such as residential subdivision, commercial, and industrial projects, the proposed use typically requires economic viability. Practicable and substantially equivalent economic alternatives include alternatives which are economically viable for the proposed use from the perspective of site location, project configuration within a site, and the scope of the project.”

Site location, project configuration and the scope of the project are all critical factors in this analysis. As a large warehouse project, the site location must be in close proximity to a highway for truck access. The project configuration involves accommodating a large building with space for parking and loading docks. The scope of the project involves a large building to accommodate the market demands for distribution warehouse spaces. Based on these factors listed in 310 CMR 10.58 (4), the evaluation of off-site alternatives considers site location and the ability to accommodate a development similar in scope to that which is proposed.

Based on the Proponent’s research, the 9.3-acre Grove Street property owned by Ranieri could be considered viable based on its size, zoning, and proximity to the highway; however, development of this property is not feasible due to site constraints, including topography and wetlands issues. As outlined in Appendix A of the Ranieri property evaluation, Mine Brook, a perennial stream, flows through the lot where it approaches Grove Street. As a result, any development would involve a major perennial stream crossing and is anticipated to have similar impacts to wetland resource areas as the proposed project including work within the riverfront area for the perennial stream. This property is discussed further in Section 2.5.2 below.

2.5.2 *Ranieri Property – Grove Street*

Based upon the Proponent’s research there are several logistical issues which make this property unviable for the intended use as outlined below. Refer to Appendix C for a full copy of the Grove Street property evaluations.

- The property does not have appropriate access for a commercial warehouse project. The only feasible means of access is limited to a 40-foot-wide swath of land, which is bordered by 15 Old Forge Hill Road (Lot #21 Map #276) to the east. This 40-foot swath is encumbered by an access easement which contains the residential driveway of 15 Old Forge Hill Road. Providing access to an industrial site off a residential driveway is not good engineering practice and would significantly impact the residential abutter.

- The road that this piece of land intersects with, Old Forge Hill Road, has been discontinued by the Town and is no longer a Town owed road. As such, the subject property does not have legal access. Assuming legal rights could be obtained to utilize Old Forge Hill Road, the Proponent would need to obtain property rights from at least four (4) direct abutters to utilize the driveway. The access itself is extremely narrow and has significant grades which would not be conducive to safely operating tractor trailers as would be intended for the proposed use.
- The Grove Street Property is challenging in its topography and size. The western portion of the property has a north-south grade change of over forty (40) feet, which would require intensive site work, on-site materials management, and off-site disposal of materials which would have significant schedule and cost implications. Cutting the site down to grade would also require the installation of a large retaining wall that would span much of the southern portion of the parcel. Additionally, the parcel is much smaller than the King Street property and is only 9.3 acres (as opposed to 28.9 acres) and very narrow. These constraints limit the footprint of a structure to 40,000 SF +/- (see Appendix A of the Grove Street evaluation). A structure of this size would significantly impact the economics of the proposed development.
- Developing a project on this site would also impact the 100-year flood plain, creating a requirement for compensatory flood storage elsewhere on site. It would also require a Variance from the Town of Franklin Bylaw Regulations for work in the 25-foot Buffer Zone to the bank of Mine Brook.

As outlined in Section 2.3 and 2.4 as well as the above, the research and analysis determined that there are no other properties available in the Town of Franklin nor owned by the Proponent or property owner that would accommodate a similar project.

3 LAND ALTERATION

As requested by the EEA Secretary's Certificate on the ENF and comment letters, this section includes additional information and updates regarding the following:

- Quantification of open space
- Quantitative measurements of proposed land alteration and altered vegetation
- Identifies areas of earthwork and provides quantifications of estimated earthwork
- Quantitative measurements of proposed impervious areas; and
- Description of proposed mitigations efforts associated with land alteration and creation of impervious areas

3.1 Existing Conditions

The Site is located on the Northern side of King Street proximate to the intersection of Interstate 495 and is approximately 28.9± acres (1,258,859± sf). The site is bound to the south by King Street and residential properties, to the west and north by vacant properties, and to the east by Interstate 495. There is a large industrial development on the opposite side of King Street to the south of the property.

The site is primarily undeveloped and consists largely of wooded areas and wetlands. There are existing electric transmission lines running across the site through an easement to the benefit of New England Power Company. In addition to the power lines, there is an existing unpaved access drive underneath the power lines.

The Site has considerable topographic relief with elevations ranging from a maximum of 352 feet to a minimum of 320 feet adjacent to wetlands. Slopes range from approximately 0.5±% to 25%. Development of the Site will involve earthwork efforts, including site clearing, earth excavation, stockpiling and removal of materials, and potential dewatering.

3.2 Open Space

The Proponent is committed to providing open space and landscaping as required by the Town of Franklin Zoning Bylaw. The project will leave approximately 10.5± acres of the site in its current undeveloped condition including all of the resource areas excluding the portion impacted for the roadway crossing which is required to access the site regardless of the desired development program as discussed in Section 2. A landscaped buffer strip at least fifteen (15) wide shall be provided adjacent to residentially zoned properties (exclusive of the existing electric easement), and one (1) tree shall be planted for every forty (40) parking spaces in accordance with the Town of Franklin Zoning Bylaw. An additional 104 Dark American Arborvitae and 33 Green Giant Arborvitae are proposed beyond what is required by zoning to provide additional landscaping and additional screening for abutting residential properties. Native trees and shrubs are used within proposed landscaped areas where practicable including all evergreen and deciduous trees proposed for this project are native to North America and common trees found throughout Massachusetts.

3.3 Site Clearing / Earthwork

As noted previously the site is currently undeveloped but portions have been previously disturbed for the development of the existing overhead wires and associated easement. The Project proposes to develop approximately 18.4± acres, resulting in approximately 64% of the overall Site developed in the final build-out condition. Refer to Tables 3.1 and 3.2 below for a breakdown of proposed land alteration.

Table 3.1: Proposed Land Alteration

Land Alteration	Area Altered (Acres)
Footprint of buildings	5.9 ±
Internal roadway areas /Parking and other paved areas	7.5 ±
Wastewater Infrastructure *	0.1 ±
Water Infrastructure *	0.0 ±
Stormwater Infrastructure *	2.2 ±
Landscaping / Other altered areas	2.7 ±
Total Proposed Land Alteration	18.4 ±

*Areas listed are that which are altered solely for development of said infrastructure. Other alteration is coincidental with roadway and parking construction.

Table 3.2: Types of Altered Vegetation

Type of vegetation to be altered	Area Altered (Acres)
Woods*	9.1 ±
Gravel Roads	0.7 ±
Grass	8.6 ±
Total Proposed Land Alteration	18.4 ±

*As outlined in Section 1.3, portions of the wooded areas were previously cleared for use by single-family homes including haying of fields into the early 2000's.

To accommodate the Project, tree clearing, stump removal, grubbing and excavation will be required at the start of construction. Topsoil will be stripped and stockpiled for re-use on-site and surplus quantities will be offered to local farmers. The Proponent will strive to preserve the existing nature of the Site, and limits of construction will be minimized to the maximum extent practicable.

Given the existing topographical relief across the Site, substantial earthwork is expected. The Project seeks to reduce the amount of material import or export on-site to the maximum extent practicable. A high-level cut/fill analysis was performed based on preliminary grades associated with the proposed Project and the project is anticipated to be in a generally balanced earthwork condition accounting for the various phases of the project. Refer to the Earthwork Exhibit in Appendix B. This analysis shows approximately 4,413 CY of export exclusive of topsoil.

3.4 Ledge Removal

Based upon existing soil testing and available soils information the amount of ledge to be encountered on site is anticipated to be minimal (if at all). Should ledge be encountered, removal will be managed in accordance with all Local, State and Federal regulations.

3.5 Building and Impervious Coverage

The project currently consists of 255,400± SF warehouse distribution facility. The total building coverage will be approximately 5.9± acres or 20% of the site. The project will include 275 parking spaces, truck loading and parking for 82 trucks, along with associated paved driveways and access. The project will result in approximately 13.4± acres of new impervious area consisting of the aforementioned building, parking and access areas. Refer to Table 3.3 below for a breakdown of the amount of on-site impervious area.

Table 3.3: Proposed Project Impervious Area

Impacts	Existing	Change	Total
Footprint of buildings (acres)	0	+5.9±	5.9±
Internal roadway areas / Parking and other paved areas (acres)	0	+7.5±	7.5±
Other altered areas (acres)	0	+5.0±	5.0±
Undeveloped areas (acres)	28.9	-18.4±	10.5±
Total: Project Site Acreage	28.9	0	28.9

3.6 Climate Change Adaptation and Resiliency

Several local and state resources¹ were reviewed and consulted relative to climate change adaptation and resiliency as part of the development of the site. Below is a summary of measures that were considered and /or implemented into the proposed project.

3.6.1 Extreme Heat

The project has evaluated the following items to help mitigate the impact of extreme heat and heat island effect:

- Project has incorporated rooftop solar PV systems on 80% of flat roof areas.
- Proponent will utilize white TPO roof materials in remaining areas, not set aside for solar PV, to help mitigate the impact of extreme heat and heat island effect.
- A high-performance building envelope will reduce cooling loads in the summer, installing high performance HVAC equipment, energy recovery ventilation systems.
- New landscaping and light-colored hardscape materials to reduce the urban heat island effect.

¹ RMAT Climate Resilience Design Standards and Guidelines; Towns of Bellingham and Franklin Municipal Vulnerability Preparedness Community Resilience Building Workshop Report – September 2020; Resilient MA Climate Change Clearinghouse for the Commonwealth web page (<https://resilientma.mass.gov/home.html>); US Environmental Protection Agency web page (<https://www.epa.gov/heatislands>); and Charles River Watershed Association (CRWA) – Building Blue: Framework for a Healthy Charles – Collaboration web page (<https://www.crwa.org/collaborate.html>)

- The project proposed 275 parking spaces to accommodate employees where 256 spaces are required under current zoning. The proponent will explore options with the Town of Franklin to reduce parking or make the additional nineteen (19) parking spaces banked parking that would be constructed should they be needed.
- Reducing the overall building footprint 37,600± SF from the originally proposed project.
- A greenhouse gas (GHG) stationary and mobile emissions analysis was performed for the Project, consistent with the EEA “Greenhouse Gas Emissions Policy and Protocol” (May 5, 2010). Refer to Section 8 for more information and Appendix G for a full copy of the report. Table 8.2 reveals that the Mitigation Case will reduce CO₂ emissions (for stationary sources) by 15.9% compared to the Base Case. Transportation Demand Management (TDM) measures for this project will reduce Project-related motor vehicle CO₂ emissions by 2%. The net reduction of the Project’s total CO₂ emissions (stationary sources plus transportation) is 11.6% compared to the Base Case. Table 8.3 shows the Proposed Design reduces building energy use 16.5% below the Base Case and thus confirms compliance with the Stretch Code; and
- The project will leave approximately 10.5± acres of the site in its current undeveloped condition.

3.6.2 Drought and landscaping

Vulnerability to droughts can be addressed with measures to increase groundwater recharge as well as water conservation programs to manage water demand. The project will provide a beneficial development and increased tax basis for the Town while minimizing the amount of water demand (±4,125 GPD). In addition, the project will consider the following efficient water-use strategies to reduce overall potable water use on-site.

- Use of drought tolerant plantings
- Installation of water conservation equipment on irrigation infrastructure
- Installation of low flow plumbing fixtures
- Restricted flow faucets
- Sensor operated sinks, toilets and urinals; and
- Development/Implementation of maintenance and employee education programs

The evergreen and deciduous trees proposed for this project are native plants and once established, will withstand periods of low natural rainfall. Supplemental watering during the establishment period will be necessary. An automatic drip irrigation system with smart sensors and rain gauges will be installed to supplement watering during periods of low natural precipitation.

The proposed stormwater system mitigates the amount of stormwater volume being discharged from the site in accordance with the Town of Franklin requirements, as well as providing 96,735 CF of storage for infiltration, or 5.4 times the required recharge volume. The additional volume will increase the amount of groundwater recharge on-site.

3.7 Mitigation

The following items were implemented or considered as part of the project in order to reduce minimize, and/or mitigate the amount of impervious area and land disturbance associated with the project:

- Working with the Franklin Planning Board to ensure the proposed driveway is constructed to the narrowest width possible (30-foot), while providing sufficient space for large trucks and pedestrians to safely enter and exit the project site.
- Reducing the overall building footprint 37,600± SF from the originally proposed project.
- The project proposed 275 parking spaces to accommodate employees where 256 spaces are required under current zoning. The proponent will explore options with the Town of Franklin to reduce parking or make the additional nineteen (19) parking spaces banked parking that would be constructed should they be needed.
- Porous pavement was considered but not deemed viable based upon the upon the project economics and concerns with functionality associated with truck usage.
- Gravel pavers were considered in the employee parking and trailer parking areas to reduce the amount of impervious area on site. Snowplows can plow the parking areas with the pavers but only to within approximately one (1) inch of the top of the paver as to not damage the pavers. This would leave standing snow in the parking areas which can also not be sanded as the sands/fines will clog the pavers. Leaving the untreated standing snow in the parking creates a safety and operational concern for the Proponent and therefore were not incorporated into the design.
- The drainage system has been designed to meet or exceed MassDEP Stormwater Standards and the Town of Franklin requirements by attenuating runoff rates to less than the pre-development condition for the 2-,10-,25- and 100-year 24-hour storm frequencies, providing 44% pre-treatment TSS removal prior to infiltration, providing a minimum 80% total TSS removal prior to discharge, and promoting groundwater recharge by retaining the volume of runoff equivalent to, or greater than, 1-inch multiplied by the total post-construction impervious surface area on the site. In addition, the proposed system mitigates the amount of stormwater volume being discharged from the site in accordance with the Town of Franklin requirements, as well as providing 96,735 CF of storage for infiltration, or 5.4 times the required recharge volume. The additional recharge volume and reducing the amount of stormwater volume being discharged from the site provides further mitigation for potential downstream flooding. Refer to Section 5 and Appendix H for detailed information on the design of the proposed stormwater system.
- A landscaped buffer strip at least fifteen (15) wide shall be provided adjacent to residentially zoned properties (exclusive of the existing electric easement), and one (1) tree shall be planted for every forty (40) parking spaces; and
- An additional 104 Dark American Arborvitae and 33 Green Giant Arborvitae are proposed beyond what is required by zoning to provide additional landscaping and additional screening for abutting residential properties.

4 WETLAND RESOURCE AREAS

As requested by the EEA Secretary's Certificate on the ENF and comment letters, this section includes additional information and updates regarding the following:

- Discussion of statutory and regulatory requirements as well as compliance with associated performance standards; and
- Mitigation / Section 61 Findings

4.1 Existing Conditions

The 28.9-acre site (Assessor's Map 313, Lot 7, 8, 53, 54, and 55) is situated within a mixed-use residential and industrial section of south-central Franklin, Massachusetts. The site is located immediately west of the intersection of the Route 495 southbound exit 16 off-ramp and King Street, and generally east of Emilio Drive, Wilson Road, and Taft Drive. Undeveloped forested upland occurs to the north and west of the site, forested wetlands are present to the west, residential development borders the site to the south, and Route 495 extends in a northwest/southeast direction to the east of the site.

The northern portion of the undeveloped site is comprised of forested upland and open field areas, and the southern portion of the site contains Bordering Vegetated Wetlands (BVW) associated with an intermittent stream. An approximately 200-foot-wide electric easement bisects the site in a northwest/southeast direction and a series of dirt paths meander throughout. A dirt road extends into the southwestern portion of the site from King Street, affording vehicular access to the property. Topography descends from the topographic high point in the northern upland portion of the site towards the BVW generally in a south direction.

The forested upland vegetation includes a moderately dense canopy layer consisting of red oak (*Quercus rubra*), white oak (*Quercus alba*), eastern white pine (*Pinus strobus*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), and sassafras (*Sassafras albidum*). The variably dense understory contains saplings from the canopy layer and a shrub layer dominated by sweet pepperbush (*Clethra alnifolia*) and huckleberry (*Gaylussacia baccata*), with patches and individuals of highbush blueberry (*Vaccinium corymbosum*), witch-hazel (*Hamamelis virginiana*), common buckthorn (*Rhamnus frangula*), autumn olive (*Elaeagnus umbellata*), multiflora rose (*Rosa multiflora*), and tatarian honeysuckle (*Lonicera tatarica*). The groundcover layer consists of seedlings from the overstory, lowbush blueberry (*Vaccinium angustifolium*), wild sarsaparilla (*Aralia nudicaulis*), hay-scented fern (*Dennstaedtia punctilobula*), bracken fern (*Pteridium aquilinum*), tree clubmoss (*Lycopodium obscurum*), and poison ivy (*Toxicodendron radicans*). Entanglements of common greenbrier (*Smilax rotundifolia*), poison ivy, and Asiatic bittersweet (*Celastrus orbiculatus*) are common in dense patches most notably in proximity to the electric easement.

Vegetation within the electric easement generally lacks a canopy, sapling, and shrub layer and is dominated by the above-referenced groundcover vegetation and patches of various grasses (*Gramineae* spp.) and sheep laurel (*Kalmia angustifolia*).

4.2 Proposed Conditions

The proposed project includes the construction of a 255,400 square foot warehouse distribution facility, a 30-foot-wide paved access driveway, paved parking spaces, a paved loading and parking area for trucks, a stormwater management system, a Title V septic system, supporting utilities and infrastructure and wetland and Buffer Zone Mitigation measures.

The new building, paved driveway and paved parking/loading areas will create 13.4± acres of new impervious coverage on site. The proposed stormwater management system is designed in accordance with both the Town of Franklin requirements and the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Handbook. In general, stormwater runoff generated from the project will be collected and treated through a combination of Best Management Practices (BMPs) consisting of deep-sump hooded catch basins, proprietary treatment units, underground infiltration basin, and surface infiltration basins, as depicted on the *Plans* and further described in the *Drainage Report*. Refer to Appendix B and Appendix H.

Utilities including gas, water, and electricity (electric, telephone, and cable) will all be installed within sub-surface conduits beneath the pavement of the access driveway. The water and gas conduits will connect with existing subsurface utility lines within the King Street ROW, and the subsurface electric conduit will daylight on the northern side of King Street to connect with an existing utility pole. Details of the utility connections are provided on the *Plans*.

The access driveway involves a BVW and intermittent stream crossing, resulting in temporary and permanent Wetland Resource Area disturbances. The project involves construction of an open bottom box culvert at the stream crossing in accordance with Massachusetts Stream Crossing Standards. As mitigation for the wetland disturbances, the project includes construction of wetland replication areas, Buffer Zone restoration areas, and restoration of an existing stream that currently flows through a culvert under the existing access road. Proposed mitigation measures are further described below.

4.3 Mitigation / Section 61 Findings

The project involves construction of four (4) wetland replication areas totaling approximately 22,980 square feet, restoration of 2,400 square feet of temporarily disturbed BVW, restoration of a 23-foot long culverted segment of the intermittent stream, and Buffer Zone restoration of disturbed areas where feasible. During construction and post-construction monitoring and reporting by a Wetland Scientist will be provided to ensure compliance with permits, as described below.

As mitigation for the 10,990 square feet of permanent BVW fill, the project includes construction of four (4) wetland replication areas totaling approximately 22,980 square feet. As required under the *Bylaw*, wetland replication is proposed at greater than a 2:1 ratio to wetland filling. Replication areas were selected in locations where topography is relatively flat to minimize the depth of excavation and grading necessary to create wetland hydrology. Replication area #2 will be created by removing the existing access driveway. The access driveway fill material will be excavated to restore the wetland in this location. It is noted that the location, shape, and size of the restoration areas are still being coordinated with the Franklin Conservation Commission as part of the Notice of Intent process and may vary from those shown on the Site Plans included in Appendix B. However, the project will provide at least a 2:1 replication ratio in accordance with the *Bylaw*.

The Wetland Replication Notes & Construction Sequence indicate that the replication area construction will include the following sequence of activities:

- Limit of work around each replication area will be staked in the field by a PLS
- Erosion controls will be installed at the limit of work
- Vegetation will be cleared and grubbed
- An excavator will remove soils down to subgrade (12 inches below finish grade)
- Organic rich topsoil (12 inches) will be imported and spread to finish grade; and
- Native plantings and seed mixes will be spread

Approximately 358 native shrubs and saplings shall be installed within the replication areas. The proposed species, size, planting specifications, and total number are listed on the LEC *Mitigation Plan*. The replication areas will be seeded with a wetland seed mix combining 50/50 ratio of FACW Meadow Mix from Ernst Seed Company and Northeast Wetland Diversity Mix from Southern Tier Consulting, Inc. Following the seeding, a biodegradable coir mat will be placed to minimize erosion and/or sedimentation during germination.

All wetland replication area construction and planting activities will be overseen by LEC, and reports will be submitted to the Commission at the following intervals: within two weeks of construction of the replication areas, at the end of the first, second and third full growing season after construction (prior to December 15 of the monitoring year), or until 75% cover of the replication areas are covered with native wetland species. The monitoring reports will provide data on the species composition of plants within the replication area, their relative abundance, representative site photographs, and the percentage of any invasive species. The report will make recommendations for additional plantings should the wetland scientist deem it necessary due to plant mortality, and recommendations for removal of invasive species, if present.

All mitigation measures outlined below will be implemented by the project Proponent prior to occupancy of the building.

4.3.1 Wetland Restoration Areas

To facilitate construction of the retaining walls and footings, the project involves approximately 2,400 square feet of temporary disturbance along the edge of the walls. The limit of work has been set approximately five feet off the wall. Erosion controls will be installed at the limit of work prior to construction.

The temporarily disturbed portions of the wetland will be restored by placing twelve (12) inches of organic rich topsoil (the same product used in replication areas) with a finish elevation that matches existing conditions in the adjacent BVW. Vegetation will be re-established by spreading a 50/50 mix of FACW Meadow Mix and Northeast Wetland Diversity Mix, provided by Ernst Seed Company and Southern Tier Consulting, Inc.

The temporarily disturbed wetlands will be included in the monitoring reports described above for the wetland replication areas and will be held to the same standard of achieving 75% coverage by native wetland indicator species.

4.3.2 Stream Restoration

The stream restoration will include removing the 23-foot-long, 42-inch diameter culvert beneath the existing access driveway and surrounding fill and reconstructing the stream channel to match conditions up and downstream of the culvert. The restoration will result in restoration of approximately 230 square feet of LUW and 46 linear feet of Bank. Adjacent areas will be restored to vegetated Buffer Zone or included in replication area #2.

The bottom of the stream channel will be reconstructed to match that of the upstream width, at an average width of ten (10) feet (See Sheet C-905 of the *Plans* in Appendix B). The stream substrate will consist of a cobble, stone, and sand mix to prevent erosion during high water or after

significant precipitation events. The new embankments will be supported by 12-inch coir logs which will provide additional erosion control functions along the edges of the channel. Details of the dewatering plan and stream bypass plan will be submitted to the Commission after the NOI filing.

Stream restoration construction will be performed by equipment positioned on the existing dirt driveway adjacent to the culvert. Existing fill will be removed, followed by the culvert and any remaining unsuitable material. The new stream channel will be graded and stabilized with coir logs and erosion control matting, as necessary. Post-construction monitoring of the stream restoration will be included with the monitoring reports associated with the wetland replication areas as described above.

4.3.3 *Buffer Zone Restoration*

Buffer Zone Restoration will occur in Buffer Zone areas disturbed for grading activities to support stormwater features, the proposed access driveway, and the replication areas. These areas will be restored by spreading four inches of topsoil and seeding with a 50/50 ratio of New England Conservation & Wildlife Mix and New England Semi-Shade Grass and Forbs Mix available from New England Wetland Plants, Inc. (or equivalent). The restoration areas will be stabilized with erosion control matting as well. This seed mix will also be used to restore a large additional area of temporarily disturbed land outside the 100-foot Buffer Zone.

Buffer Zone Restoration will be monitored by LEC and incorporated into the monitoring reports detailed above.

4.4 Regulatory Compliance

The *Act Regulations* and *Bylaw Regulations* provide specific performance standards for work within BVW, Bank, and LUW. The *Bylaw Regulations* establish further protection for work within the 0-25-foot Buffer Zone, the 25-50-foot Buffer Zone, and the 50-100-foot Buffer Zone. The project involves permanent impacts to BVW and Bank that exceed regulatory thresholds and thus the project is proposed as a Limited Project under 310 CMR 10.53(3)(e). Pertinent citations of the Limited Project provisions and *Bylaw Regulation* performance standards are provided below. Compliance with the *Stormwater Regulations* is demonstrated via the stormwater management design and associated documents and data outlined in Section 5 as well as on the *Plans* (Appendix B) and in the *Drainage Report* (Appendix H).

4.4.1 Limited Project Provisions

The project involves temporary and permanent wetland disturbances associated with the proposed roadway crossing, summarized above. The proposed project meets the criteria to be permitted as a Limited Project under 310 CMR 10.53(3)(e), and complies with or meets the standards:

310 CMR 10.53(3): Notwithstanding the provisions of 310 CMR 10.54 through 10.58 and 10.60, the Issuing Authority may issue an Order of Conditions and impose such conditions as will contribute to the interests identified in M.G.L. c. 131, § 40 permitting the following limited projects (although no such project may be permitted which will have any adverse effect on specified habitat sites of Rare Species, as identified by procedures established under 310 CMR 10.59). In determining whether to exercise its discretion to approve the limited projects listed in 310 CMR 10.53(3), the Issuing Authority shall consider the following factors: the magnitude of the alteration and the significance of the project site to the interests identified in M.G.L. c. 131, § 40, the availability of reasonable alternatives to the proposed activity, the extent to which adverse impacts are minimized, and the extent to which mitigation measures, including replication or restoration, are provided to contribute to the protection of the interests identified in M.G.L. c. 131, § 40.

(e) The construction and maintenance of a new roadway or driveway of minimum legal and practical width acceptable to the planning board, where reasonable alternative means of access from a public way to an upland area of the same owner is unavailable. Such roadway or driveway shall be constructed in a manner which does not restrict the flow of water. Reasonable alternative means of access may include any previously or currently available alternatives such as realignment or reconfiguration of the project to conform to 310 CMR 10.54 through 10.58 or to otherwise minimize adverse impacts on resource areas. The issuing authority may require the applicant to utilize access over an adjacent parcel of land currently or formerly owned by the applicant, or in which the applicant has, or can obtain, an ownership interest. The applicant shall design the roadway or driveway according to the minimum length and width acceptable to the Planning Board, and shall present reasonable alternative means of access to the Board. The applicant shall provide replication of bordering vegetated wetlands and compensatory flood storage to the extent practicable. In the Certificate of Compliance, the issuing authority may continue a condition imposed in the Order of Conditions to prohibit further activities under 310 CMR 10.53(3)(e).

The proposed roadway crossing is thirty (30) feet wide, which is the minimum width acceptable to the Franklin Planning Board based on vehicle use requirements for the project. As described above in Section 2.3, the Proponent has determined that there are no other ways to access the property that would avoid wetland disturbance, and there are no other configurations for the proposed driveway that would further reduce wetland disturbances, primarily due to traffic safety considerations (Refer to Section 7.2.1). Replication and restoration measures for impacts to BVW, Bank, and LUW are provided to the greatest extent practical, as described above.

The following demonstrates compliance with *Bylaw Regulations* requirements for providing a Functions & Characteristics Statement and an Alternatives Analysis. The project does not require a Variance from the *Bylaw Regulations*.

According to the *Bylaw*, when wetland alteration is necessary, the commission shall require that the applicant replicate the altered wetland at a minimum 2:1 ratio (the replication area must be at least twice the square footage of the natural wetland area impacted). The plan submitted shall comply with the requirements as presented in the most recent revision of the MassDEP wetland replication manual. The replication plan protocol and schedule shall also appear in the approved plan set along with along with cross sections of altered and proposed wetland replicated areas, ground water elevation data and planting lists and details.

Wetland functions & values shall be used in the evaluation of the existing wetland with respect to functions and values for the wetland and wildlife habitat.

The proposed project includes the permanent alteration of 10,990 square feet of BVW. As a result, four wetland replication areas totaling 22,980 square feet (greater than a 2:1 ratio) are proposed in accordance with the *Bylaw Regulations* §7.14.1 and 7.14.2. As noted above, the location, shape, and size of the restoration areas are still being coordinated with the Franklin Conservation Commission as part of the Notice of Intent process and may vary from those shown on the Site Plans included in Appendix B. However, the project will provide at least a 2:1 replication ratio in accordance with the *Bylaw*

Successful establishment of the appropriate surficial wetland hydrology is proposed to be achieved by relying on the existing hydrology of the BVW, which will mimic conditions of the area lost. The replication areas are proposed within the southern portion of the site proximate to the area lost.

The success of the proposed wetland replication activities will be monitored bi-annually for three (3) years by a qualified wetland scientist to ensure that at least 75% of the replacement areas has been re-established with indigenous wetland plant species. Exposed soil within the replacement area will be seeded with a wetland seed mix and planted with herbaceous wetland vegetation immediately following completion of the wetland replication areas construction.

The replication areas will continue to maintain the existing functions and values and wildlife habitat of the wetland impact area. The primary function of the BVW, as noted throughout section, is groundwater recharge, sediment/toxicant retention, nutrient removal, production export, sediment/shoreline stabilization, wildlife habitat, and visual quality/aesthetics. The wetland replication areas will continue to provide these functions over an area that is twice as large.

In accordance with *Bylaw Regulations* §7.10, the following functions and characteristics discussion documents that the project will not result in *any significant individual or cumulative adverse effect to the functions and characteristics of resource areas* (i.e., BVW, Bank, LUW, and Buffer Zone Resource Area).

Public Water Supplies

According to MassMapper, the nearest community groundwater well, identified as Well #6 (ID # 2101000-06G) and located off Grove Street and in the vicinity of Mine Brook, is roughly 0.77 miles west of the site. The site is not located within a Zone I or Zone II of a Town of Franklin Wellhead Protection Area, thus, no impact to public water supplies are anticipated.

Private Water Supplies

According to the Energy & Environmental Affairs Data Portal, the nearest private water supplies are located at Taft Drive and Wilson Road. As noted in the *Drainage Report*, stormwater is managed in compliance with Stormwater Management Policy Standard #6. No impacts to private water supplies are anticipated.

Flood Control

As previously noted, no portion of the site is located within the 100-year floodplain, and stormwater is managed in compliance with Stormwater Management Policy Standard #2 where post-development peak discharge rates do not exceed pre-development peak discharge rates. It is further noted that the post-development volume of runoff does not exceed the pre-development volume as required by local regulations. Refer to Section 5 and the *Drainage Report* included in Appendix H for further details. No impact to flood control is anticipated.

Erosion and Sedimentation

As detailed on the Erosion and Sediment Control plans submitted with the Notice of Intent, a sedimentation and erosion control program will be implemented to protect the adjacent Wetland Resource Area from sedimentation during the proposed construction activities. In addition, Bohler Engineering has designed a construction and post-construction phase comprehensive stormwater management system to manage stormwater runoff associated with the project in compliance with the Stormwater Management Policy. Refer to Section 5 and the *Drainage Report* included in Appendix H for further details. The project will also require a Stormwater Pollution and Prevention Plan (SWPPP). As such, erosion and sedimentation will not impact adjacent Wetland Resource Areas.

Storm Damage Prevention

Bohler Engineering has designed a construction and post-construction phase comprehensive stormwater management system to manage stormwater runoff associated with the project in compliance with the Stormwater Management Handbook and Stormwater Standards. Refer to Section 5 and the *Drainage Report* included in Appendix H for further details. As noted, the 100-year floodplain does not occur on-site.

Water Quality

The construction period erosion and sedimentation plan, SWPPP, and LEC's *Mitigation Plan* will ensure no adverse effects to Water Quality will occur during construction or post-construction. These *Plans* include measures to protect the wetland system from erosion and to maintain existing hydrological flow to the extent practical.

Fisheries

Not applicable. The project does not occur in or near an area supporting fisheries.

Wildlife Habitat

While a specific wildlife habitat was not performed, the project is not anticipated to result in any adverse impacts to wildlife habitat associated within the wetland resource areas. If necessary, LEC will perform a wildlife habitat evaluation utilizing the *Massachusetts Wildlife Habitat Protection Guidance for Inland Wetlands* (March 2006); however, as a Limited Project, this evaluation is not specifically required.

Habitat for State-listed Animal Species

According to the 15th Edition of the *Massachusetts Natural Heritage Atlas* (effective August 1, 2021) and NHESP MassMapper data layer, the proposed project is not located within a Priority/Estimated Habitat for rare species.

Land Containing Freshwater Mussel Beds

Land containing freshwater mussel beds is found within perennial rivers, ponds or lakes with appropriate substrate; conditions not associated with the on-site BVW and/or intermittent streams.

Wetlands and Waterbodies Known to Contain Open Water in Winter with Capacity to Serve as Waterfowl Winter Habitat

The on-site BVW and intermittent streams do not contain open water at the capacity to provide waterfowl winter habitat.

Turtle Nesting Areas

Turtles typically prefer nesting sites comprised of open sandy areas with little vegetation and appropriate sun exposure for incubation purposes. The on-site BVW and corresponding Buffer Zone does not offer these habitat conditions.

Vertical sandy banks (bank swallows, rough-winged swallows or kingfishers)

These bird species typically nest along larger river/pond systems and tall embankments that provide protection from nest predators. These conditions do not exist on-site.

Stream bed riffle zones (especially rare in eastern MA, Cape, and the Islands)

The intermittent streams located on-site contain fine to coarse sands, cobbles, stones, woody debris, and leaf litter. Muck is common within the main intermittent stream channel. Riffle zones are not common within this segment of the stream channel.

Springs (important for maintaining base flows and moderating water temperatures)

Two springs are identified in proximity to the project proximate to Bank flags TOB B90–TOB B97 and TOB B215–TOB B220. The springs are located to the east of proposed work activities and will not be directly impacted by the proposed conditions.

Gravel stream bottoms (trout and salmon nesting substrate)

The intermittent streams do not offer this habitat condition.

Plunge Pools (Deep Holes) in Rivers or Streams

A plunge pool is situated immediately downstream of the culvert beneath the existing gravel driveway crossing, proximate to Bank flags A104–A106. The proposed project involves daylighting the culverted portion of the stream and proposed conditions are designed to maintain the plunge pool post-construction.

Medium to Large, Flat Rock Substrates in Streams

No medium to large, flat rocks are present within the intermittent streams.

Activities Located in Mapped “Habitat of Potential Regional or Statewide Importance”

According to the “Habitat of Potential Regional or Statewide Importance” map for Franklin, the project site is not mapped as “Important Wildlife Habitat” by the MassDEP CAPS (Conservation Assessment and Prioritization Systems) program.

Activities Affecting Certified or Documented Vernal Pool Habitat (Including Habitat Within 100’ of a Certified or Documented Vernal Pool When Within a Resource Area)

No certified vernal pools or documented vernal pool habitat are located proximate to the proposed project.

Activities in Bank, Land Under Water, Bordering Land Subject to Flooding (Presumed Significant) Where Alterations are More than Twice the Size of Thresholds

Proposed alterations to Bank are greater than twice the size of thresholds (50 feet). As such, the project is proposed as a Limited Project in accordance with 310 CMR 10.53(3)(e). Compliance with the provisions for Limited Projects is described above.

Activities Affecting Vegetated Wetlands >5,000 Square Feet Occurring in Resource Areas Other Than Bordering Vegetated Wetlands

Not applicable.

Activities Affecting the Sole Connector Between Habitats >50 Acres in Size

The on-site Wetland Resource Areas do not function as a sole connector of habitats greater than 50 acres in size. As described above, the on-site wetland occurs adjacent to industrial and residential development that is highly fragmented.

Installation of Structures That Prevent Animal Movement

The proposed roadway crossing includes retaining walls that may affect animal movement; however, the proposed stream crossing is designed to include an open bottom box culvert spanning 1.2% of the width of the stream channel with embankments on either side of the stream channel. The embankments will allow safe passage for small wildlife beneath the roadway crossing. Movement of wildlife through the system is limited by the small size of the northerly portion of the wetland system and the presence of Route 495 as a physical barrier to wildlife movement to the north.

Activities for the purpose of Bank stabilization using hard structure solutions that significantly affect ability of stream channel to shift and meander, or disrupt continuity in cover that would inhibit animal passage

As noted above, the open bottom box culvert will span the stream channel in order to allow Bank stabilization to continue naturally and is not anticipated to affect the stream's ability to shift and meander.

Dredging (Greater Than 5,000 Square Feet)

No dredging is proposed.

Rare Species Habitat

As previously noted, no portion of the site is located within Rare Species Habitat.

Agriculture, Aquaculture and Recreation

Not applicable. The site is currently not used for agricultural or recreational purposes. As noted by the *Bylaw Regulations*, there are no aquaculture operations in the Town of Franklin.

4.5 Impacts to EJ Populations

The proposed wetland resource area alterations are outside of any EJ Populations and replication is proposed at a 2:1 ratio therefore no impacts are anticipated to the EJ Populations.

5 STORMWATER MANAGEMENT

As requested by the EEA Secretary's Certificate on the ENF and comment letters, this section includes additional information and updates regarding the following:

- Discussion of statutory and regulatory requirements as well as compliance with associated performance standards.
- Discussion on low impact development strategies and green infrastructure
- Discussion the proposed site relative to climate change adaptation and resiliency
- Information regarding phosphorous loading, the MS4 general permit and Charles River TMDL referenced by the Charles River Watershed Association (CRWA); and
- Description of proposed mitigations efforts associated with the proposed stormwater system.

5.1 Existing Conditions

The site consists of approximately 28.9± acres of land located at off King Street, in the Town of Franklin, Norfolk County, Massachusetts. The site is undeveloped and consists primarily of wooded areas and an easement with transmission lines.

Natural Resource Conservation Service (NRCS) mapping indicates that soils in the majority of the northwestern portion of the site are mapped as Woodbridge fine sandy loam. The southeastern portion is a mix of Paxton fine sandy loam, Scarboro and Birdsall soil and Merrimac fine sandy loam. Based upon onsite soil testing which confirmed the presence of loamy sands and sands, the soils have been classified as Hydrologic Soil Group (HSG) "B".

A small portion of the site drains in a northeasterly direction toward Interstate 495. The remainder of the site drains to the wetland complex to the south along King Street. On-site elevations range from 317 to 353 and slopes are gradual with the exception of areas in the southern portions of the site.

Refer to the Drainage Report included in Appendix H for detailed information on pre-development conditions and calculations.

5.2 Proposed Conditions

The proposed project includes the construction of a new 255,400±SF freestanding distribution/warehouse building along with new paved drive aisles and parking areas, loading areas, pedestrian walkways, landscaping, stormwater management components and associated utilities.

The majority of the developed site, including the proposed parking areas, has been designed to drain to deep-sump hooded catch basins. The catch basins will capture and convey stormwater runoff, via an underground pipe system, to one of several stormwater management systems. The stormwater management systems include three (3) surface infiltration basins and one (1) subsurface infiltrating system consisting of perforated pipe and stone. Pretreatment of stormwater

runoff will be provided by a mix of deep-sump hooded catch basins, water quality units, and forebays prior to discharge into the above grade basins. Pretreatment of runoff will be provided by deep-sump hooded catch basins and a water quality unit prior to discharge into the subsurface system. Rooftop runoff has been designed to flow to the surface and subsurface systems without pretreatment. Due to grading and wetland constraints a third area along the proposed driveway will be treated with proprietary treatment units and discharge to the wetlands.

Subsurface structures shall be registered with the MassDEP UIC program through the submittal of a BRP WS 06 UIC Registration – Stormwater Discharge Well.

5.3 MassDEP Stormwater Management Standards

A Drainage Report detailing the design of the proposed stormwater management system has been prepared as part of the local permitting process and is included in Appendix H of this report. Note that all Appendices noted in the description of the stormwater standards below refers to Appendices in the aforementioned Drainage Report. The system is in compliance with all applicable stormwater standards and the Town of Franklin Requirements as further described below.

Standard #1: No New Untreated Discharges: The project has been designed so that proposed impervious areas shall be collected and passed through the proposed drainage system for treatment prior to discharge.

Standard #2: Peak Rate Attenuation: The Project and associated proposed stormwater management systems has been designed so that post-development peak rates of runoff and volume are below pre-development conditions for the 2-, 10-, 25- and 100-year storm events at all design points. The pre-development versus post-development peak discharge rate and volume comparisons are contained in Tables 5.1 and 5.2 below.

Table 5.1: Design Point Peak Runoff Rate Summary

Point of Analysis	2-Year Storm			10-Year Storm			25-Year Storm			100-Year Storm		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
POA 1	4.23	1.75	-2.48	16.87	8.22	-8.65	25.62	20.37	-5.25	40.44	36.77	-3.67
POA 2	0.14	0.04	-0.10	0.82	0.22	-0.60	1.35	0.37	-0.98	2.30	0.63	-1.67

Table 5.2: Design Point Volume Summary

Point of Analysis	2-Year Storm			10-Year Storm			25-Year Storm			100-Year Storm		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
POA 1	0.854	0.558	-0.30	2.433	1.990	-0.44	3.478	3.161	-0.32	5.236	5.065	-0.17
POA 2	0.034	0.008	-0.03	0.113	0.027	-0.09	0.168	0.040	-0.13	0.263	0.063	-0.20

Rainfall values used in the hydrologic model are provided in Table 5.3 below and are derived from the Hydrology Handbook for Conservation Commissions prepared by MassDEP (TP-40 Maps).

Table 5.3: Rainfall Intensities

Frequency	2-year	10-year	25-year	100-year
Rainfall (inches)	3.20	4.70	5.50	6.70

Standard #3: Recharge: The stormwater runoff from the project will be collected and diverted to one of several stormwater management systems onsite. The stormwater management systems include three (3) surface infiltration basins, and one (1) subsurface infiltration system consisting of perforated pipe and stone. The project as proposed will involve the creation of approximately 13.4 acres of new impervious area and is required to infiltrate 17,696 cubic feet of stormwater as defined in Stormwater Standard 3. The proposed infiltration basins provide a total of 96,735 cubic feet of volume for groundwater recharge. This equates to 1.9 inches of runoff times the total post development impervious area or 5.4 times the required recharge volume. Refer to Appendix F of the Drainage Report for calculations documenting the required and provided recharge volumes.

Standard #4: Water Quality: Water quality treatment is provided via deep sump catch basins, water quality units, the surface detention basin, forebays and infiltration systems. TSS removal calculations are included in Appendix F of the Drainage Report. The project as proposed will involve the creation of 13.4 acres of new impervious area that requires water quality treatment and is required to treat 48,715 cubic feet of water quality volume as defined in Stormwater Standard 4. Water quality volume is equal to one (1) inch of runoff times the total impervious area of the post development project site in compliance with the Town of Franklin requirements. The proposed infiltration basins provide a total of 96,735 cubic feet of water quality volume for water quality treatment. Water quality units have been sized to meet the one (1) inch water quality flow rate for water quality treatment.

Standard #5: Land Use with Higher Potential Pollutant Loads: Not Applicable for this project.

Standard #6: Critical Areas: Not Applicable for this project.

Standard #7: Redevelopment: Not Applicable for this project.

Standard #8: Construction Period Pollution Prevention and Erosion and Sedimentation Control: The proposed project will provide construction period erosion and sedimentation controls as indicated within the site plan set provided for this project. This includes a proposed construction exit, protection for stormwater inlets, temporary sediment basins, protection around temporary material stockpiles and various other techniques as outlined on the erosion and sediment control sheets. Additionally, the project is required to file a Notice of Intent with the US EPA and implement a Stormwater Pollution Prevention Plan (SWPPP) during the construction period. The SWPPP will be prepared prior to the start of construction and will be implemented by the site contractor under the guidance and responsibility of the project's proponent

Standard #9: Operation and Maintenance Plan (O&M Plan): An Operation and Maintenance (O&M) Plan for this site has been prepared and is included in Appendix G of the Drainage report. The O&M Plan includes a list of responsible parties and outlines procedures and time tables for the long term operation and maintenance of the proposed site stormwater management system, including initial inspections upon completion of construction, and periodic monitoring of the system components, in accordance with established practices and the manufacturer's recommendations.

Standard #10: Prohibition of Illicit Discharges: The proposed stormwater system will only convey allowable non-stormwater discharges (firefighting waters, irrigation, air conditioning condensates, etc.) and will not contain any illicit discharges from prohibited sources. An Illicit Discharge Statement is included in Appendix G of the Drainage report.

5.4 Phosphorous Loading, MS4 General Permit and Charles River TMDL

Stormwater runoff from the site discharges to and is treated by an onsite stormwater system and does not discharge to the Town of Franklin MS4 Stormwater System and the project is not subject to the requirements of the MS4 permit. Regardless, the MS4 permit notes 43%-44% reduction in phosphorus load for Franklin. The project has been designed such that 94% of the proposed impervious area is directed to three (3) surface infiltration basins for water quality treatment. Surface infiltration basins provide approximately 97%-98% phosphorous load reduction based upon the BMP performance tables listed in the MA MS4 General Permit. When applying this rate to the site on a weighted average basis the stormwater system is anticipated to provide a 91% phosphorous load reduction. This removal rate exceeds the 43%-44% phosphorous load reduction noted in in the MS4 Permit. Refer to Appendix H for tables and figures from the MS4 permit.

Treated stormwater runoff from the system discharges to an on-site intermittent stream that is tributary to Mine Brook. The receiving segment of Mine Brook is several miles (6-7 miles+/-) upstream of the Charles River. Based upon the Final Massachusetts Integrated List of Waters for the Clean Water Act 2018/2020 the receiving segment of Mine Brook is listed as a Category 5 water requiring TMDL impairments, with impairments listed as Escherichia Coli (E. Coli), Habitat Assessment and Temperature and do not list phosphorous as an impairment. Even though the receiving waters do not have a TMDL for phosphorous the stormwater system is anticipated to provide a 91% phosphorous load reduction as noted above. This removal rate exceeds the 65% phosphorous load reduction for industrial projects referenced in the MS4 permit.

5.5 Low Impact Development and Green Infrastructure

The following Low Impact Development and Green Infrastructure techniques were either considered as part of the project or have been committed to by the proponent:

- Reducing the overall building footprint 37,600± SF from the originally proposed project
- Gravel pavers were considered in the employee parking and trailer parking areas to reduce the amount of impervious area on site. Snowplows can plow the parking areas with the pavers but only to within approximately one (1) inch of the top of the paver as to not damage the pavers. This would leave standing snow in the parking areas which can also not be sanded as the sands/fines will clog the pavers. Leaving the untreated standing snow

in the parking creates a safety and operational concern for the Proponent and therefore were not incorporated into the design.

- As noted above, the project proposed 275 parking spaces to accommodate employees where 256 spaces are required under current zoning. The proponent will explore options with the Town of Franklin to reduce parking or make the additional nineteen (19) parking spaces banked parking that would be constructed should they be needed. The stormwater system has been designed to presume that all 275 parking spaces will be constructed. This approach provides a design that will accommodate all 275 spaces should the Town not approve the banked parking or should the banked parking spaces need to be constructed in the future.
- Porous pavement was considered but not deemed viable based upon the upon the project economics and concerns with functionality associated with truck usage.
- All rooftop runoff is directed to the proposed infiltration basins in lieu of isolated rooftop cisterns.
- The project will provide infiltration volume equivalent to 1.9 inches of runoff over the total impervious area or 5.4 times the required recharge volume.
- Green roofs were considered as part of the design; however, the Proponent has committed to designating 80% of the warehouse flat roof area as solar ready space in lieu of green roofs; and
- Three (3) installed EV charging stations and three (3) EV ready spaces. Refer to Low Impact Development Exhibit in Appendix H.

5.6 Climate Change Adaptation and Resiliency

Several local and state resources² were reviewed and consulted relative to climate change adaptation and resiliency as part of the development of the site. Below is a summary of measures that were considered and /or implemented into the proposed project.

5.6.1 *Climate Projections – Rainfall Intensities*

The proposed project looked at the following data sources in evaluating the resiliency of the stormwater system and increased rainfall intensities. Tables 5.4 and 5.5 summarize the values from the various sources including the 2030, 2050 and 2070 planning horizons. Refer to Appendix H for all documents associated with the data listed in the tables below.

² RMAT Climate Resilience Design Standards and Guidelines; Towns of Bellingham and Franklin Municipal Vulnerability Preparedness Community Resilience Building Workshop Report – September 2020; <https://resilientma.org/home.html> ; and Charles River Watershed Association (CRWA) – Building Blue: Framework for a Healthy Charles – Collaboration Webpage (<https://www.crwa.org/collaborate.html>)

Table 5.4: NOAA Rainfall Data*

Frequency	2-year	10-year	25-year	50-year	100-year
Rainfall (inches)	3.36	5.22	6.37	7.23	8.16

*Values Derived from NOAA Atlas 14, Volume 10, Version 3

Table 5.5: Projected Rainfall Intensities

Planning Horizon	Recommended Return Period (Design Storm)	Projected 24-hr Total Precipitation Depth (in.)
RMAT Rainfall Intensities ³		
2030	5-Year	5.0
2050	10-Year	6.4
2070	10-Year	7.1
Climate Resilience Design Standards ⁴		
2070	25-Year	8.1”
2070	50-Year	9.5”
Bellingham-Franklin Community ⁵		
2015-2044	10-Year	5.6”
2055-2084	10-Year	6.4”

5.6.2 Stormwater Management – Projected Rainfall Intensities / Flooding

The HydroCAD model for the proposed stormwater system was evaluated considering the rainfall intensities noted in section 5.6.1, refer to Appendix H for a copy of the pre- and post-development HydroCAD models. The revised models show that the proposed system can accommodate up to a 7.23” rainfall event while maintaining post-development peak rates of runoff below pre-development rates. Refer to Table 5.6 below which provides a peak rate summary at each design point utilizing the NOAA rainfall data. This shows that the proposed system will accommodate storm events consistent with various planning horizons from the RMAT and Bellingham-Franklin

³ Values derived from the RMAT Climate Resilience Design Standards Tool

⁴ Values derived from the Climate Resilience Design Standards – Projected Peak Intensity Design criteria Methodology (April 2022)

⁵ Values derived from the Bellingham and Franklin Municipal Vulnerability Preparedness Community Resilience Building Workshop Report (September 2020)

Community sources noted Table 5.5 as well as the 2, 10, 25 and 50-year storm values derived from NOAA Atlas 14.

Table 5.6: Projected Peak Runoff Rate Summary

Point of Analysis	2-Year Storm			10-Year Storm			25-Year Storm			50-Year Storm		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
POA 1	5.25	2.25	-3.00	22.45	16.07	-6.38	36.21	33.40	-2.81	47.43	46.74	-0.69
POA 2	0.19	0.05	-0.14	1.16	0.31	-0.85	2.02	0.55	-1.47	2.75	0.75	-2.00

The project has been designed such that there is excess room to expand the proposed surface basins and the proposed underground stormwater system and/or add another underground stormwater system in the future. These new and/or expanded systems could be designed to provide additional stormwater attenuation and infiltration should it be needed due to increase stormwater rainfall intensities in the future. Refer to the Climate Resiliency Exhibit in Appendix H which shows the approximate limits of these additional stormwater areas.

5.7 Mitigation

The drainage system has been designed to meet or exceed MassDEP Stormwater Standards and the Town of Franklin requirements by attenuating runoff rates and volumes to less than the pre-development condition for the 2-,10-,25- and 100-year 24-hour storm frequencies, providing 44% pre-treatment TSS removal prior to infiltration, providing a minimum 80% total TSS removal prior to discharge, and promoting groundwater recharge by retaining the volume of runoff equivalent to, or greater than, 1-inch multiplied by the total post-construction impervious surface area on the site. The proposed infiltration basins provide a total of 96,735 cubic feet of water quality volume for water quality treatment. Water quality units have been sized to meet the one (1) inch water quality flow rate for water quality treatment. In addition, the stormwater system is anticipated to provide a 91% phosphorous load reduction.

6 UTILITY & INFRASTRUCTURE

As requested by the EEA Secretary’s Certificate on the ENF and comment letters, this section includes additional information and updates including discussion of statutory and regulatory requirements as well as compliance with associated performance standards.

6.1 Water Supply & Mitigation Strategies

The project will connect to the existing water lines in King Street via an eight (8) inch ductile iron water main and loop the new water service through the site for domestic water service and fire protection. The Project will require approximately 4,125 GPD of water from the municipal system, however the actual usage and generation may vary based on the final tenant. The proponent will continue to work closely with the Franklin Department or Public Works (DPW) as part of the local permitting processes to confirm adequate water capacity.

Buildings will incorporate fire suppression sprinkler systems, as required by the Massachusetts State Building Code. In addition, appropriate gate valves and backflow prevention devices will also be installed on each water service to allow individual services to be shut off and to prevent potential backflow of non-potable water or other contaminants into the public water supply.

Efficient water-use strategies will be considered to reduce overall potable water use on-site. These include but are not limited to the following:

- Use of drought tolerant plantings
- An automatic drip irrigation system with smart sensors and rain gauges will be installed to supplement watering during periods of low natural precipitation
- Installation of water conservation equipment on irrigation infrastructure
- Installation of low flow plumbing fixtures
- Restricted flow faucets
- Sensor operated sinks, toilets and urinals; and
- Development/Implementation of maintenance and employee education programs

6.2 Wastewater Supply & Mitigation Strategies

There is no sewer service available in King Street along the site's frontage, so an on-site wastewater disposal system will be provided for the proposed use and there are no anticipated impacts to municipal sewer systems. The system is anticipated to consist of a pressure dosed leaching system that will be designed in accordance with DEP Title V design criteria and reviewed and approved by the Franklin Board of Health (BOH). Based on DEP Title V Flow Design Criteria, the Site is expected to generate approximately 4,125 GPD of wastewater, however the actual usage and generation may vary based on the final tenant. The anticipated flows will not trigger thresholds for an underground injection permit, so no DEP approvals are anticipated at this time. In addition, the proposed wastewater disposal system will be located in the northerly portion of the site outside resource areas and their associated buffers.

The Project will implement efficient water use strategies, as indicated in the Water Supply section above. By reducing water consumption, the project will reduce wastewater discharges.

6.3 Other Utilities

Other utilities (cable, TV, electric) will be extended to the Site from King Street. All work performed in King Street will be fully coordinated with the Town and MassDOT to ensure safe and efficient construction practices are conducted.

7 TRANSPORTATION

Vanasse & Associates, Inc. (VAI) is providing supplemental information in support of this Draft Environmental Impact Report (DEIR) with regard to the potential impacts on the transportation infrastructure associated with the proposed warehouse building to be located at 585 King Street in Franklin, Massachusetts (hereafter referred to as the “Project”). This assessment is responsive to the scope of work that is identified in the April 22, 2022 Certificate issued by the Secretary of Energy and Environmental Affairs (EEA) on the March 9, 2022 Environmental Notification From (ENF) that was filed for the Project, and the associated comment letters. As identified in the Certificate that was issued on the ENF, the focus of this assessment is on the following specific items:

- *Permitting* – Update on the permitting requirements and process with the Massachusetts Department of Transportation.
- *Alternatives Analysis* – Review of alternative driveway locations and designs to minimize wetland impacts.
- *Impacts to EJ Populations* – Evaluation of traffic impacts on EJ population areas, including diesel vehicle traffic.
- *Transportation Improvement Program* – Summary of the elements of the transportation improvement program.

As described in the ENF, the Project has been designed to be consistent with municipal, regional, state and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services. A comprehensive TDM program is an integral part of the Project and will be facilitated by a transportation coordinator as a means to reduce the overall traffic and parking demands of the Project. Secure bicycle parking will be provided within the proposed building to encourage bicycle commuting. All work to be completed by the Proponent to support the Project will comply with local requirements and will be designed following Complete Streets design standards to accommodate all roadway users.

7.1 Permitting

As described in the ENF, the Project will require the following permits from MassDOT that are associated with the construction of the Project site driveway and the planned improvements along the King Street corridor that will be advanced as a part of the Project:

- *State Highway Access Permit* – for construction of the driveway and the associated roadway, intersection and traffic control improvements at the King Street/Constitution Boulevard/Project site driveway intersection.
- *Traffic Signal Regulation* – for the modifications to the traffic signal system along King Street, including the following intersections: King Street/Constitution Boulevard; King Street/I-495 Southbound Ramps; King Street/I-495 Northbound Ramps; King Street/Union Street.

- *Traffic Signal Maintenance Agreement* – to maintain traffic signal equipment that is associated with the operation of the Project site driveway.

The Project proponent has been coordinating with MassDOT with regard to the elements of the transportation improvement program, including the planned improvements along King Street and at the King Street/Constitution Boulevard. Upon completion of the MEPA process and the issuance of the necessary local approvals from the Town of Franklin, the Project proponent will submit an Application for Permit to Access State Highway to MassDOT with accompanying 25 Percent Design Plans and supporting documents to initiate the formal permitting process with MassDOT.

7.2 Alternatives Analysis

7.2.1 *Driveway Location*

A review of alternative driveway locations for the Project was undertaken as a part of the initial design development for the Project. The Project site has approximately 660 linear feet (LF) of frontage along King Street (as measured along the State Highway Layout line), of which 315 LF of the frontage to the west of the I-495 southbound off-ramp is located with a “No Access” area so designated by MassDOT due to proximity to the off-ramp, leaving 345 LF of frontage that is centered on Constitution Boulevard within which to locate the driveway to the Project site. In order to accommodate turning movements to and from King Street, the driveway requires 60-foot corner radii and a minimum roadway cross-section of 30-feet to accommodate 15-foot wide entering and exiting travel lanes for truck traffic. These minimum design parameters require a minimum of 150 LF feet of frontage to establish the driveway to be located within the 345 LF of frontage that is available for a driveway⁶ to serve the Project site, leaving 195 LF of frontage available to shift the alignment of the driveway to the east or west (345 LF of “accessible” frontage – 150 LF for the driveway = 195 LF). Shifting the alignment of the driveway to the east or west within the 345 LF of frontage that is available to locate the driveway creates an adverse off-set to Constitution Boulevard that would result in both operational and safety issues with respect to the intersection.

An off-set to the east would further impact wetland resource areas and place the driveway in close proximity to the I-495 southbound ramps. An offset to the west would place the driveway closer to the driveway to Franklin Fire Station No. 2 and would inhibit emergency response from the Station, refer to Section 7.4.3. As such and given the identified constraints, the optimal location for the Project site driveway was identified to be opposite Constitution Boulevard. This alignment is shown on Figure 7-2 and allows for the development of an intersection design that will afford safe and efficient access to the Project site in the context of the existing conditions along the King Street corridor and the frontage that is available along King Street within which the driveway can be located.

⁶ (2) 60-foot corner radii + 30 foot driveway = 150 lf.

7.2.2 Diesel Vehicle Traffic

As described in the ENF, the traffic characteristics of the Project were developed using trip-generation statistics published by the Institute of Transportation Engineers (ITE)⁷ for Land Use Code (LUC) 150, Warehousing, which was found to produce higher overall traffic volumes for the Project vs. the use of trip-generation data for a non-sortation warehouse given that an end user of the warehouse buildings has not been identified; the sortation-type warehouse produced a disproportionate volume of traffic in relation to the overall size of the buildings that are proposed. The resulting traffic volumes are summarized in Table 7.1 and have been disseminated into passenger car trips and truck trips.

Table 7.1: Trip Generation Summary

Time Period/Direction	(A) Passenger Car Trips	(B) Truck Trips	(A+B) Vehicle Trips
<i>Average Weekday Daily:</i>			
Entering	144	77	221
<u>Exiting</u>	<u>144</u>	<u>77</u>	<u>221</u>
Total	288	154	442
<i>Weekday Morning Peak Hour:</i>			
Entering	39	3	42
<u>Exiting</u>	<u>10</u>	<u>2</u>	<u>12</u>
Total	49	5	54
<i>Weekday Evening Peak Hour:</i>			
Entering	12	4	16
<u>Exiting</u>	<u>37</u>	<u>4</u>	<u>41</u>
Total	49	8	57

^aBased on ITE LUC 150, *Warehousing* (255,400 sf).

As can be seen in Table 7.1, the Project is expected to generate 442 vehicle trips on an average weekday (two-way volume over the operational day of the Project, or 221 vehicles entering and 221 exiting), consisting of 288 passenger car trips and 154 truck trips. During the weekday morning peak-hour, the Project is expected to generate 54 vehicle trips (42 vehicles entering and 12 exiting), consisting of 49 passenger car trips and 5 truck trips. During the weekday evening peak-hour, the Project is expected to generate 57 vehicle trips (16 vehicles entering and 41 exiting), consisting of 49 passenger car trips and 8 truck trips.

Focusing on the truck trips which would be considered as potential diesel vehicle traffic, the Project is expected to result in 154 truck trips on an average weekday and between 5 and 8 truck trips during the weekday peak commuter hours. Figure 7-1, included at the end of this Section and in Appendix F, depicts the truck trip distribution pattern for the Project. Truck trips are expected to be oriented to and from Interstate 495 (I-495) and will traverse the short segment of King Street

⁷ Trip Generation, 11th Edition; Institute of Transportation Engineers; Washington, DC; 2021.

between the I-495 ramps and the Project site. In the context of the I-495 corridor which accommodated approximately 87,332 vehicles per day in 2019 (pre-COVID)⁸, the additional truck trips would constitute an increase of 0.2 percent in overall traffic on a daily basis, which would be considered nominal and not readily apparent over current conditions. With respect to King Street, the segment of the roadway where the primary truck activity will occur is located within the State Highway Layout as a part of the King Street/I-495 interchange, and does not include residential uses or other sensitive receptors.

7.3 Impacts to EJ Populations

The Project is expected to result in 154 truck trips on an average weekday and between five (5) and eight (8) truck trips during the weekday peak commuter hours. Truck trips are expected to be oriented to and from I-495, with approximately 60 percent expected to be oriented to/from the north (toward I-90) and 40 percent oriented to/from the south (I-95 and Route 24), and will traverse the short segment of King Street between the I-495 ramps and the Project site and are not expected to be routed through the EJ populations. As stated previously in the context of the I-495 corridor which accommodated approximately 87,332 vehicles per day in 2019, the additional truck trips would constitute an increase of less than 0.2 percent in overall traffic on a daily basis when considered the dispersal of truck traffic to the north and south on I-495, which would be considered nominal and not readily apparent over current conditions. With respect to King Street, the segment of the roadway where the primary truck activity will occur is located within the State Highway Layout as a part of the King Street/I-495 interchange, and does not include residential uses or other sensitive receptors.

In order to reduce the overall number of new truck trips in the area and that may be traversing an EJ population area, the Project Proponent will seek to engage and retain service providers for trash, recycling and other services from providers that are currently serving the area.

7.4 Transportation Improvement Program

A detailed transportation improvement program has been developed that is designed to provide safe and efficient access to the Project site and address any deficiencies identified at off-site locations evaluated in conjunction with this study. The following improvements have been recommended that are intended to address current and predicted future transportation infrastructure needs and, where applicable, will be completed in conjunction with the Project subject to receipt of all necessary rights, permits, and approvals.

7.4.1 *Project Site Access*

Access to the Project site will be provided by way of a new driveway that will intersect the north side of King Street opposite Constitution Boulevard and will form the fourth leg of the intersection, which is under traffic signal control. The following recommendations are offered with respect to

⁸ MassDOT Traffic Volumes for the Commonwealth of Massachusetts; 2022.

the design and operation of the Project site access and internal circulation, many of which are reflected on the Site Plans:

- As shown on Figure 7-2 the Project site driveway will be incorporated into the traffic signal system at the King Street/Constitution Boulevard intersection and designed to accommodate two (2) travel lanes approaching King Street, consisting of a left-turn lane and a through/right-turn lane, and a single entering travel lane separated by a raised island or double-yellow centerline. Thereafter the driveway and internal circulating drives will be a minimum of twenty-four (24) feet in width where two-way traffic is to be conveyed and a minimum of twenty (20) feet in width for one-way travel. Figure 7-2 is included at the end of this section and Appendix F.
- The Project site driveway and internal circulating drives will be designed to accommodate the turning and maneuvering requirements of the largest anticipated responding emergency vehicle and a large tractor semi-trailer combination (WB-67 design vehicle).
- Where perpendicular parking is proposed within the employee parking areas, the drive aisle behind the parking will be a minimum of 24 feet in order to facilitate parking maneuvers.
- All signs and pavement markings to be installed within the Project site will conform to the applicable standards of the Manual on Uniform Traffic Control Devices (MUTCD)⁹.
- A sidewalk will be provided along at least one side of the Project site driveway and extend to the existing sidewalk along King Street.
- Americans with Disabilities Act (ADA)-compliant wheelchair ramps will be provided at all pedestrian crossings internal to the Project site.
- Signs and landscaping to be installed as a part of the Project within the intersection sight triangle areas of the Project site driveway will be designed and maintained so as not to restrict lines of sight; and
- Snow accumulations (windrows) within sight triangle areas of the Project site driveway should be promptly removed where such accumulations would impede sight lines.

7.4.2 Off-Site Improvements – King Street Traffic Signal System

In conjunction with the addition of the Project site driveway as the fourth leg of the King Street/Constitution Boulevard intersection and the reconstruction of the traffic signal system at the intersection, the Project Proponent will design and implement an optimal traffic signal timing, phasing and coordination plan for the King Street coordinated traffic signal system inclusive of the following intersections and is shown on Figure 7-3. Figure 7-3 is included at the end of this section and Appendix F.

- King Street/Constitution Boulevard
- King Street/I-495 Southbound Ramps

⁹ Manual on Uniform Traffic Control Devices (MUTCD); Federal Highway Administration; Washington, D.C.; 2009.

- King Street/I-495 Northbound Ramps
- King Street/Union Street

With these improvements, overall intersection operations will be maintained at a level-of-service (LOS) C or better, with no movement operating below LOS D, an improvement over No-Build condition. These improvements will be completed prior to the issuance of a Certificate of Occupancy for the Project and subject to receipt of all necessary rights, permits and approvals.

It is noted that the King Street improvements result in a minor increase in impervious area of 960 SF. The stormwater system for King Street in this area drains to the on-site wetlands where a vast majority of the proposed development drains to as well. The proposed on-site stormwater system as described in Section 5 and the Drainage Report in Appendix H provides a reduction in peak rates and volumes to this wetland system that more than offset the additional 960 SF of impervious area. Additional Improvements have been made by collecting the multiple discharges into a new pipe system and discharging onto a new rip rap plunge pool for energy dissipation and stabilization.

7.4.3 Off-Site Improvements – King Street at Franklin Fire Station No. 2

In conjunction with the reconstruction of the King Street/Constitution Boulevard intersection and the associated traffic signal system to accommodate the Project, the following improvements will be completed in order to reduce the potential for vehicle queues on the King Street northeast bound approach to Constitution Boulevard to block the driveway to Franklin Fire Station No. 2 and are shown on Figure 7-2. Figure 7-2 is included at the end of this section and Appendix F.

1. “Do Not Block” pavement markings and accompanying signs will be installed on King Street across the fire station driveway; and
2. The existing flashing emergency signal that is located to the west of the fire station driveway will be replaced with traffic signal indications that will be incorporated into the traffic signal system at the King Street/Constitution Boulevard intersection and will be timed to initiate a “red” traffic signal indication at the fire station driveway for King Street traffic prior to the initiation of a “red” signal on the same approach at Constitution Boulevard. A “Stop Here On Red” sign will be installed at the stop-line on King Street to the west of the driveway.

The existing traffic signal indications on the King Street northeast bound approach to Constitution Boulevard will be replaced with optically programmed signal indications in order to reduce the visibility of the signal indications approaching the stop-line to the west of fire station driveway.

The proposed improvements and the sequential termination of the “green” signal phase on the King Street northeast bound approach will limit the introduction of vehicles between the stop-line to the west of the fire station driveway and the stop-line at Constitution Boulevard so that the vehicle queue between the stop-lines will not block the fire station driveway. Upon pre-emption of the traffic signal system by an emergency vehicle leaving the fire station, the new traffic signal indications that are to be installed to the west of the driveway will display a “red” indication to hold traffic to the west of the driveway, with the signal indication on the King Street northeast

bound approach displaying a “green” indication to clear traffic in front of the responding emergency vehicle (all other traffic signals will display a “red” indication at the intersection).

The recommended improvements at the King Street Fire Station No. 2 driveway and at the King Street/Constitution Boulevard intersection will be designed and constructed prior to the issuance of a Certificate of Occupancy for the Project and subject to receipt of all necessary rights, permits and approvals.

7.4.4 Transportation Demand Management

As defined in the ENF, the Project proponent is committed to advancement of a Transportation Demand Management (TDM) program in an effort to encourage the use of alternative modes of transportation to single-occupant vehicles (SOVs). The TDM program will include the following measures:

- A transportation coordinator will be assigned for the Project to coordinate the TDM program.
- Information regarding commuting options will be posted in a central location and/or otherwise made available to employees of the Project.
- The transportation coordinator will facilitate a rideshare matching program for employees to encourage carpooling.
- A “welcome packet” will be provided to employees detailing available commuter options and will include the contact information for the transportation coordinator and information to enroll in the employee rideshare program.
- Specific amenities will be provided to discourage off-site trips, including providing a break-room equipped with a microwave and refrigerator; offering direct deposit of paychecks; allowing telecommuting or flexible work schedules; and other such measures to reduce overall traffic volumes and travel during peak-traffic-volume periods.
- Pedestrian accommodations have been incorporated within the Project site to link the employee parking areas to the warehouse building and to the existing sidewalk along King Street; and
- Secure bicycle parking will be provided at an appropriate location within the proposed building, refer to Low Impact Development Exhibit in Appendix H.

7.5 Summary

VAI has provided supplemental information in support of this DEIR with regard to the potential impacts on the transportation infrastructure associated with the proposed warehouse building to be located at 585 King Street in Franklin, Massachusetts. This information is responsive to the scope of work that is identified in the April 22, 2022 Certificate issued by the Secretary of EEA on the March 9, 2022 ENF that was filed for the Project, and the associated comment letters. As identified in the Certificate that was issued on the ENF, this assessment has focused is on the following specific items:

- *Permitting* – Update on the permitting requirements and process with the Massachusetts Department of Transportation.
- *Alternatives Analysis* – Review of alternative driveway locations and designs to minimize wetland impacts.
- *Impacts to EJ Populations* – Evaluation of traffic impacts on EJ population areas, including diesel vehicle traffic; and
- *Transportation Improvement Program* – Summary of the elements of the transportation improvement program.

The Project has been planned and designed in a manner that is intended to reduce impacts on EJ population areas by locating the use proximate to the highway system and the King Street/I-495 interchange. In addition, the Project includes a comprehensive transportation improvement program, the elements of which will serve to off-set the predicted impact of the Project on the transportation infrastructure, improve pedestrian and bicycle accommodations, promote the use of alternative modes of transportation to SOVs, and facilitate safe and efficient emergency response from Franklin Fire Station No. 2.

A full copy of the Traffic Impact Assessment prepared by VAI is included in Appendix F. Draft MassDOT Section 61 findings are included in Appendix E.

Figure 7.1: Truck Trip Distribution



Figure 7-1
Truck Trip Distribution



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Figure 7.2: Conceptual Improvement Plan King Street at Constitution Boulevard and the Project Site Driveway

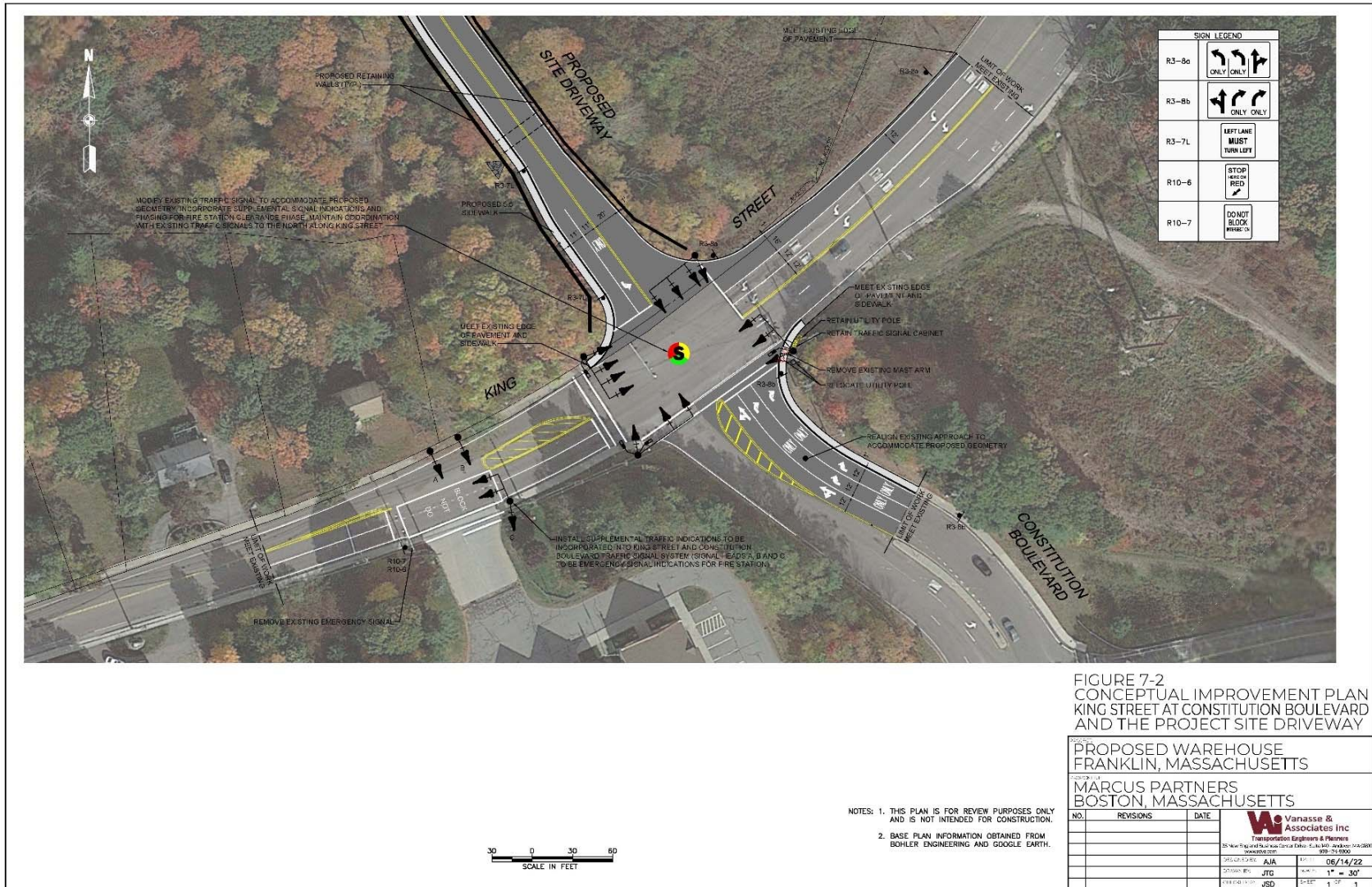
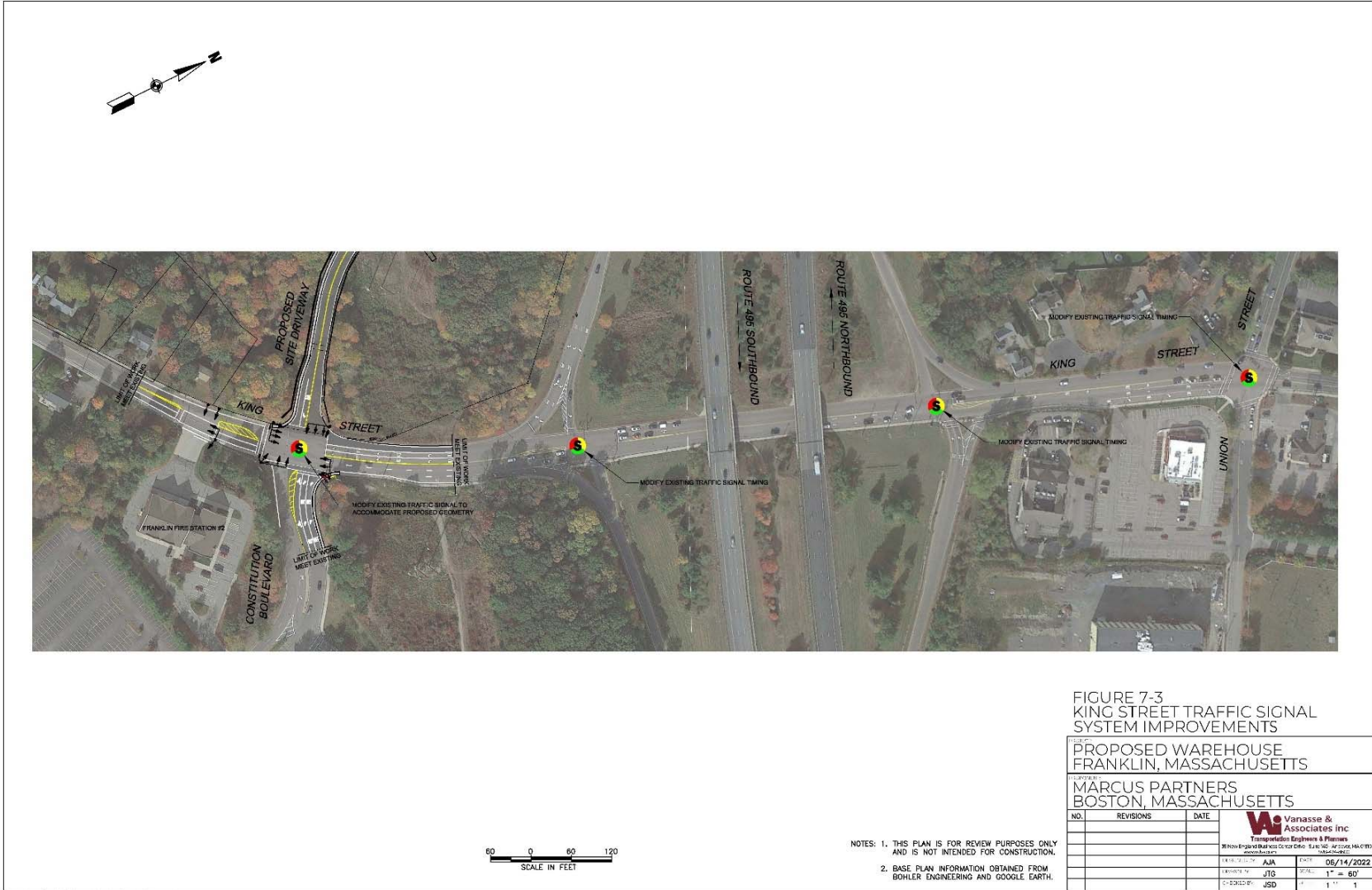


Figure 7.3: King Street Traffic Signal System Improvements



**FIGURE 7-3
KING STREET TRAFFIC SIGNAL
SYSTEM IMPROVEMENTS**

**PROPOSED WAREHOUSE
FRANKLIN, MASSACHUSETTS**

**MARCUS PARTNERS
BOSTON, MASSACHUSETTS**

NO.	REVISIONS	DATE

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DATE: 06/14/2022
 DRAWN BY: AJA
 CHECKED BY: JTG
 PROJECT NO.: 17-087
 SHEET NO.: 1 OF 1

- NOTES: 1. THIS PLAN IS FOR REVIEW PURPOSES ONLY AND IS NOT INTENDED FOR CONSTRUCTION.
 2. BASE PLAN INFORMATION OBTAINED FROM BOHLER ENGINEERING AND GOOGLE EARTH.

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8 ENERGY, GREENHOUSE GAS EMISSIONS & AIR QUALITY

As requested by the EEA Secretary's Certificate on the ENF and comment letters, this section includes additional information and updates regarding the following:

- Mesoscale and Microscale Air Quality Analysis
- A greenhouse gas (GHG) stationary and mobile emissions analysis including the Base Case and Mitigation Alternative
- Evaluation of impacts to EJ Populations including diesel vehicle traffic; and
- Description of proposed mitigations efforts

8.1 Mesoscale and Microscale Air Quality Analysis

Since the Project is expected to generate 150 or more new average daily trips of diesel vehicle traffic, a mesoscale analysis was performed as requested by Massachusetts Environmental Policy Act (MEPA). The mesoscale analysis was performed for diesel particulate matter (DPM) since DPM emissions can lead to serious health conditions such as asthma and can worsen existing heart or lung disease, which both fall under the category of vulnerable health criteria. This analysis used the US Environmental Protection Agency (EPA) MOVES3 Mobile Source Emission Factor Model and followed the Massachusetts Department of Environmental Protection (MassDEP) guideline for mesoscale analyses. Specifically, calculations were performed to compare area-wide DPM emissions after the Full Build of the Project is built with existing and future no-build emissions, and DPM emissions of non-EJ community versus EJ community was also assessed and compared to Norfolk County data.

Per the MEPA certificate, a microscale analysis was qualitatively evaluated. Since the level of service (LOS) will not be degraded by the project traffic, the Project is expected to cause a negligible increase in air quality impacts in EJ and non-EJ populations; thus, a quantitative microscale analysis is not required.

The mesoscale study area includes eight (8) roadway segments within the non-EJ community and four (4) roadway segments within the EJ community. The mesoscale analysis calculated DPM emissions over the Project study area for four cases:

- 2022 Existing
- 2029 No-Build
- 2029 Build
- 2029 Build with Mitigation.

The DPM emissions for each roadway segment were calculated by multiplying the truck miles per day by the EPA MOVES3 model predicted DPM emission factors in grams per mile. The MOVES model was run using input files provided by the MassDEP for 2022 and 2029. Average daily traffic volumes were provided by Vanasse & Associates, Inc. and with county specific truck data from MassDEP MOVES data it was determine that rough 11% of the daily traffic are trucks in Norfolk County. With this information the average daily truck volumes were calculated. Furthermore,

DPM emissions for idling trucks in the loading dock areas of the Project site were also calculated using the MOVES3 model. Appendix A of the Air Quality Environmental Justice Report presents the mesoscale DPM emissions calculations. Refer to Appendix G for a copy of the Air Quality Environmental Justice Report.

A summary of the results of the mesoscale analysis is presented in Table 8.1. The total DPM emissions for the 2022 Existing case are 0.432 kg/day. The total DPM emissions for the 2029 No-Build case are 0.182 kg/day. This is a 58% decrease from the 2022 Existing DPM emissions. The total DPM emissions for the 2029 Build case are 0.317 kg/day. This is a 27% decrease from the 2022 Existing DPM emissions. Since there are less roadway segments within the EJ community than the non-EJ community within the Project study area, the overall 2029 Build case DPM emissions affecting the EJ community are less.

The mesoscale analysis results show that the total DPM emissions for the 2029 Build case are 0.135 kg/day higher than those for the 2029 No-Build case. Compared to the Norfolk countywide DPM emissions of approximately 209.65 kg/day, this represents an insignificant area-wide increase of approximately 0.064%. Furthermore, the EJ community 2029 DPM emissions of 0.059 kg/day represents approximately 0.028% of the Norfolk countywide DPM emissions.

Table 8.1: Mesoscale Diesel Truck DPM Emissions Summary (kg/day)

Locations	2022 Existing	2029 No-Build	2029 Build	2029 Build With Mitigation
Non- EJ Community	0.293	0.123	0.128	0.126
EJ Community	0.139	0.059	0.060	0.059
Project Idling Trucks	--	--	0.129	0.127
Total	0.432	0.182	0.317	0.312

8.2 Greenhouse Gas Analysis

A greenhouse gas (GHG) stationary and mobile emissions analysis was performed for the Project, consistent with the EEA “Greenhouse Gas Emissions Policy and Protocol” (May 5, 2010). The Project will consist of a single 255,400 sf building with 32-foot interior clear height; a portion of the building will be a 12,770-sf office. The warehouse space will be heated but will not be air conditioned. The Base Case energy code is ASHRAE 90.1-2013 with Massachusetts Amendments including the Stretch Code. For the proposed warehouse, the three Section C406.1 extra efficiency code-options are:

- #2 Reduced lighting power density in accordance with Section C406.3
- #7 Enhanced envelope performance in conformance with Section C406.8
- #8 Reduced air infiltration in accordance with Section C406.9

GHG emissions for the Project Design (Mitigation Case) are reduced by the following energy efficiency measures (EEMs):

- Higher efficiency than Code building envelope
- Higher efficiency than Code ASHPs for heating and cooling the office space
- Higher efficiency than Code gas-fired heating of the warehouse
- High efficiency heat pump hot water systems
- Inside and exterior lighting systems LED with a lower light power density than Code
- Three (3) installed EV charging stations and three (3) EV ready spaces
- Designating 80% of the warehouse flat roof as solar-ready space
- The office space will use ASHPs for heating and cooling. The warehouse space will only be heated (not cooled) and will use direct-fired gas heaters. Heat pump hot water unit will be used throughout the building.
- Roof insulation will be R40ci and exceed Code.
- Concrete wall panels will have continuous insulation and construction will minimize thermal bridging.
- The design has no curtain walls or spandrels. Window area is a very small 4% of overall wall area; and
- All interior and exterior lighting will use LED lamps. The integrated lighting system will control light intensity in various area as a function of time and use.

The Proponent commits to the CO₂ reduction presented below but retains the flexibility to achieve this goal using energy efficiency measures that may be refined at the stage of detailed design for the Project. Table 8.2 reveals that the Mitigation Case will reduce CO₂ emissions (for stationary sources) by 15.9% compared to the Base Case. Transportation Demand Management (TDM) measures for this project will reduce Project-related motor vehicle CO₂ emissions by 2%. The net reduction of the Project's total CO₂ emissions (stationary sources plus transportation) is 11.6% compared to the Base Case. Table 8.3 shows the Proposed Design reduces building energy use 16.5% below the Base Case and thus confirms compliance with the Stretch Code.

Table 8.2: Greenhouse Gas (CO₂) Emissions Summary for the Base Case and Mitigation Alternative (tons/year)

Source	Base Case	Mitigation Alternative	Change in GHG Emissions
Direct Emissions	128.2	88.7	-30.8%
Indirect Emissions	295.5	267.7	-9.4%
Subtotal Direct and Indirect Emissions	423.7	356.4	-15.9%
Transportation Emissions	191.0	187.2	-2.0%
Total CO₂ Emissions	614.7	543.6	-11.6%

Table 8.3: Comparison of eQUEST Base and Mitigation Cases Energy Use Intensity to PNNL Prototype Building EUI for the IECC 2015 Code

Building	Base Case EUI (kBtu/SF)	Mitigation Case EUI (kBtu/SF)	PNNL EUI (kBtu/SF) ¹
Warehouse with Office	19.3	16.1% -16.5%	19.9 ²

¹ PNNL values are IECC 2015, Zone 5A. Office is 5% of the total floor area.

² (0.95*18.9) + (0.05*37.9) = 19.9.

In an April 20, 2022 comment letter on the ENF, DOER requested that the DEIR GHG report include an analysis of four Mitigation Alternatives for the warehouse portion of the building, assuming the installation of R45ci or R50ci roof insulation in combination with heating system designs of either 90% ASHP/10% gas-fired or 100% ASHP. The office portion of the building is analyzed with the same roof insulation in each alternative (R45ci or R50ci) and with ASHPs for all heating and cooling. As requested by DOER, the four Mitigation Alternatives assume wall air infiltration of 0.40 cfm/sf at 75 Pa, which is base code (Section C402.5). The Greenhouse Gas Analysis Report included in Appendix G presents the CO₂ emissions results for the four Mitigation Alternatives.

8.3 Section 61 Findings

At the completion of construction, the Proponent will provide a certification to the MEPA Office, signed by an appropriate professional. The certification will identify either of the following: 1) all of the energy efficiency mitigation measures adopted by the Project as part of the Proposed Design (Mitigation Case) have been implemented; or 2) an equivalent set of energy efficiency mitigation measures, which together are designed to achieve the same percentage reduction in CO₂ emissions

as the Mitigation Case, when compared to the Base Case, based on the same modeling assumptions in the GHG report (Refer to Appendix G), have been adopted.

8.4 Impacts to EJ Populations

8.4.1 *Diesel Vehicle Traffic*

As discussed in Section 8.1, the DPM emissions in the EJ community will be less than those in the non-EJ community by nearly 50 percent. To further ensure diesel vehicle traffic impacts will remain low, some achievable strategies to reduce DPM emissions from diesel trucks are the following¹⁰:

- Backhaul Optimization: Instead of driving empty backhauls, loads in drivers' route are found.
- Cube Optimization: Organization of items within the trailer, so that more of the volume of the trailer is used.
- Co-loading: Matching loads that have origins or destinations on similar routes.
- Electrification: Electrifying tractor trailers; and
- Trailer Pairing: Tractors pairing with an available compatible tractor.

The Project will implement cube optimization and continue to study the other mitigation measures mentioned above. The mitigation measure was used to calculate 2% emissions reductions for the diesel trucks of the DPM emissions mitigation analysis.

9 PUBLIC HEALTH

As requested by the EEA Secretary's Certificate on the ENF and comment letters, this section includes additional information and updates regarding the following:

- Discussions on reasonably foreseeable public health consequences that may result from the environmental impacts of the project; and
- Discussion on public health impacts and EJ Populations

9.1.1 *Air Quality*

A mesoscale analysis was performed for the project and a summary of the results is presented in Table 9.1, refer to Section 8 for additional detail and Appendix G for a full copy of the analysis. The total DPM emissions for the 2022 Existing case are 0.432 kg/day. The total DPM emissions for the 2029 No-Build case are 0.182 kg/day. This is a 58% decrease from the 2022 Existing DPM emissions. The total DPM emissions for the 2029 Build case are 0.317 kg/day. This is a 27% decrease from the 2022 Existing DPM emissions. Since there are less roadway segments within

¹⁰ Avi Merksy and Therese Langer, "Achieving Freight Transport GHG Emissions Reductions Through Emerging Technologies", November 2021.

the EJ community than the non-EJ community within the Project study area, the overall 2029 Build case DPM emissions affecting the EJ community are less.

The mesoscale analysis results show that the total DPM emissions for the 2029 Build case are 0.135 kg/day higher than those for the 2029 No-Build case. Compared to the Norfolk countywide DPM emissions of approximately 209.65 kg/day, this represents an insignificant area-wide increase of approximately 0.064%. Furthermore, the EJ community 2029 DPM emissions of 0.059 kg/day represents approximately 0.028% of the Norfolk countywide DPM emissions.

Table 9.1: Mesoscale Diesel Truck DPM Emissions Summary (kg/day)

Locations	2022 Existing	2029 No-Build	2029 Build	2029 Build With Mitigation
Non- EJ Community	0.293	0.123	0.128	0.126
EJ Community	0.139	0.059	0.060	0.059
Project Idling Trucks	--	--	0.129	0.127
Total	0.432	0.182	0.317	0.312

9.1.2 Greenhouse Gas

A greenhouse gas (GHG) stationary and mobile emissions analysis was performed for the Project, consistent with the EEA “Greenhouse Gas Emissions Policy and Protocol” (May 5, 2010). Refer to Section 8 for more information and Appendix G for a full copy of the report. The Proponent commits to the CO₂ reduction presented below but retains the flexibility to achieve this goal using energy efficiency measures that may be refined at the stage of detailed design for the Project. Table 9.2 reveals that the Mitigation Case will reduce CO₂ emissions (for stationary sources) by 15.9% compared to the Base Case. Transportation Demand Management (TDM) measures for this project will reduce Project-related motor vehicle CO₂ emissions by 2%. The net reduction of the Project’s total CO₂ emissions (stationary sources plus transportation) is 11.6% compared to the Base Case. Table 9.3 shows the Proposed Design reduces building energy use 16.5% below the Base Case and thus confirms compliance with the Stretch Code.

Table 9.2: Greenhouse Gas (CO₂) Emissions Summary for the Base Case and Mitigation Alternative (tons/year)

Source	Base Case	Mitigation Alternative	Change in GHG Emissions
Direct Emissions	128.2	88.7	-30.8%
Indirect Emissions	295.5	267.7	-9.4%
Subtotal Direct and Indirect Emissions	423.7	356.4	-15.9%
Transportation Emissions	191.0	187.2	-2.0%
Total CO₂ Emissions	614.7	543.6	-11.6%

Table 9.3: Comparison of eQUEST Base and Mitigation Cases Energy Use Intensity to PNNL Prototype Building EUI for the IECC 2015 Code

Building	Base Case EUI (kBtu/SF)	Mitigation Case EUI (kBtu/SF)	PNNL EUI (kBtu/SF) ¹
Warehouse with Office	19.3	16.1% -16.5%	19.9 ²

¹ PNNL values are IECC 2015, Zone 5A. Office is 5% of the total floor area.

² $(0.95*18.9) + (0.05*37.9) = 19.9$.

9.1.3 Truck Traffic

The Project is expected to result in 154 truck trips on an average weekday and between five (5) and eight (8) truck trips during the weekday peak commuter hours. Truck trips are expected to be oriented to and from I-495, with approximately 60 percent expected oriented to/from the north (toward I-90) and 40 percent oriented to/from the south (I-95 and Route 24), and will traverse the short segment of King Street between the I-495 ramps and the Project site. As outlined in Section 7 in the context of the I-495 corridor which accommodated approximately 87,332 vehicles per day in 2019, the additional truck trips would constitute an increase of less than 0.2 percent in overall traffic on a daily basis when considered the dispersal of truck traffic to the north and south on I-495, which would be considered nominal and not readily apparent over current conditions. With respect to King Street, the segment of the roadway where the primary truck activity will occur is located within the State Highway Layout as a part of the King Street/I-495 interchange, and does not include residential uses or other sensitive receptors.

9.1.4 Stormwater and Downstream Flooding

The RMAT Tool was utilized in the preparation of the ENF and a copy of the printout is included in Appendix H. The RMAT tool indicates that the proposed project has a “High Exposure” for Extreme Precipitation – Urban Flooding and a “Moderate Exposure” for Extreme Precipitation – Riverine Flooding. The project has a no exposure rating for Sea Level Rise / Storm Surge.

To mitigate for increased impervious area and potential flooding impacts the drainage system has been designed to meet or exceed MassDEP Stormwater Standards and the Town of Franklin requirements by attenuating runoff rates and volumes to less than the pre-development condition for the 2-,10-,25- and 100-year 24-hour storm frequencies, providing 44% pre-treatment TSS removal prior to infiltration, providing a minimum 80% total TSS removal prior to discharge, and promoting groundwater recharge by retaining the volume of runoff equivalent to, or greater than, 1-inch multiplied by the total post-construction impervious surface area on the site.

In addition, the proposed system mitigates the amount of stormwater volume being discharged from the site in accordance with the Town of Franklin requirements, as well as providing 96,735 CF of storage for infiltration, or 5.4 times the required recharge volume. The additional recharge volume and reducing the amount of stormwater volume being discharged from the site provides further mitigation for potential downstream flooding. Refer to Section 5 and Appendix H for detailed information on the design of the proposed stormwater system.

9.1.5 Water Supply

The project will connect to the existing water line in King Street via an eight (8) inch ductile iron water main and loop the new water service through the site for domestic water service and fire protection. The Project will require approximately 4,125 GPD of water from the municipal system, however the actual usage and generation may vary based on the final tenant. The proponent will continue to work closely with the Franklin Department of Public Works (DPW) as part of the local permitting processes to confirm adequate water capacity.

Appropriate gate valves and backflow prevention devices will also be installed on each water service to allow individual services to be shut off and to prevent potential backflow of non-potable water or other contaminants into the public water supply. In addition, efficient water-use strategies will be considered to reduce overall potable water use on-site. These include but are not limited to the following:

- Use of drought tolerant plantings
- Minimal irrigation (if applicable) & techniques to reduce irrigation losses due to evaporation
- Installation of water conservation equipment on irrigation infrastructure
- Installation of low flow plumbing fixtures
- Restricted flow faucets
- Sensor operated sinks, toilets and urinals; and
- Development/Implementation of maintenance and employee education programs

9.1.6 Wastewater

Municipal sewer is not available in the project area so an on-site wastewater disposal system will be provided for the proposed use, thus there are no anticipated impacts to municipal sewer systems. The system is anticipated to consist of a pressure dosed leaching system that will be designed in accordance with DEP Title V design criteria and reviewed and approved by the Franklin Board of Health (BOH). The Project will implement efficient water use strategies, as indicated in the Water Supply section above. By reducing water consumption, the project will reduce wastewater discharges. In addition, the proposed wastewater disposal system will be located in the northerly portion of the site outside resource areas and their associated buffers. Hence the project is not anticipated to have any public health impacts related to groundwater discharge, wastewater treatment or wastewater discharge.

9.1.7 Construction

Construction-related impacts associated with the Project's construction activities are temporary in nature and are typically related to noise, air quality, erosion and sedimentation control, vehicular and truck traffic, and construction waste. The following are key points relative to the project's construction related impacts to public health:

- Construction management and scheduling will minimize impacts on the surrounding environment and will include plans for construction worker parking, routing plans for trucking and deliveries, and control of noise and dust. Section 10 provides detailed information to minimize impacts on the areas surrounding the site during construction.
- A Stormwater Pollution Prevention Plan (SWPPP) will be prepared prior to construction to address construction period erosion control measures.
- Construction period erosion and sediment control measures, to be finalized in the Franklin Conservation Commission's Order of Conditions (OOC), will mitigate impacts to wetland resource areas; and
- The Project will comply with MassDEP's Solid Waste and Air Quality Control regulations, pursuant to M.G.L. Chapter 40, Section 54, during construction. The Project will comply with the conditions of all State and local permits related to noise, air quality and solid waste.

9.1.8 Public Health and EJ Populations

Assessment of Environmental Burdens

An assessment of existing unfair or inequitable environmental burden was performed in accordance with the MEPA Interim Protocol for Analysis of Project Impacts on EJ Populations ("the MEPA Protocol") and 301 CMR 11.07(6)(n)1. A summary of the following items from the analysis is below, refer to Section 10 for additional detailed information.

- The Massachusetts Department of Public Health (DPH) EJ Tool was used to identify whether any municipality or census tract that is within the EJ populations exhibits the following vulnerable health criteria. As shown in Table 10.1 all the vulnerable health

criteria are below the 110% statewide rate and are not exceeded in any of the Towns containing EJ populations within five (5) miles of the proposed project. Refer to printouts of DPH EJ Tool in Appendix I.

- The DPH EJ Tool was reviewed to survey for other potential sources of pollution within the boundaries of the EJ populations. As shown in Table 10.2 there are minimal potential sources of pollution (12) within the EJ Population in Franklin which is the closest EJ population being within one (1) mile of the project site. The enforcement history of those facilities permitted by Massachusetts Department of Environmental Protection (MassDEP) was researched and it was determined that there were zero (0) notices of non-compliance out of the twelve (12) potential sources of pollution since 2017.

Tables 10.3 and 10.4 outline the potential sources of pollution within Bellingham and Norfolk respectively which are within the five (5) mile radius of the project site. As shown in the tables there are minimal potential sources of pollution (3) within the EJ Population in Bellingham as well as within the EJ Population in Norfolk (10). The enforcement history of those facilities permitted by Massachusetts Department of Environmental Protection (MassDEP) was researched and it was determined that there were zero (0) notices of non-compliance out of the thirteen (13) potential sources of pollution since 2017. Refer to printout of DPH EJ Tool mapping with pollution source data layers in Appendix I.

- It is noted that the stormwater runoff from the project flows to the south and away from the closest EJ population in Franklin and therefore the EJ population is not anticipated to be impacted by potential flooding impacts from the project. In addition, the EJ populations in both Norfolk and Bellingham are at the outermost extent of the five (5) mile radius and are not anticipated to be impacted by potential flooding impacts from project.

To mitigate for increased impervious area and potential flooding impacts the drainage system has been designed to meet or exceed MassDEP Stormwater Standards and the Town of Franklin requirements by attenuating runoff rates to less than the pre-development condition for the 2-,10-,25- and 100-year 24-hour storm frequencies, providing 44% pre-treatment TSS removal prior to infiltration, providing a minimum 80% total TSS removal prior to discharge, and promoting groundwater recharge by retaining the volume of runoff equivalent to, or greater than, 1-inch multiplied by the total post-construction impervious surface area on the site. In addition, the proposed system mitigates the amount of stormwater volume being discharged from the site in accordance with the Town of Franklin requirements, as well as providing 96,735 CF of storage for infiltration, or 5.4 times the required recharge volume. The additional recharge volume and reducing the amount of stormwater volume being discharged from the site provides further mitigation for potential downstream flooding. Refer to Section 5 and Appendix H for detailed information on the design of the proposed stormwater system.

- The U.S. EPA’s Environmental Justice Screening and Mapping Tool¹¹ was used to obtain the values by census block group and statewide averages for eleven (11) environmental indicators. Table 10.5 shows the eleven (11) indicators and their values. Refer to Screen Reports in Appendix I. Out of the eleven (11) environmental indicators, three (3) indicators exceeded the state average in the Franklin EJ population, five (5) indicators exceeded the state average in the Bellingham EJ population, and two (2) indicators exceeded the state average in the Norfolk EJ population.

Of the environmental indicators that were exceeded, one was for lead paint which does not apply to this project as the project consists of a new building. Two of the others were for proximity to hazardous sites (TSDf and NPL) which do not apply to this project as the proposed project is for a new warehouse which will only generate standard domestic household type of waste and will not produce any hazardous waste or material. The remaining two indicators that were exceeded relate to air quality, Particulate Matter & Ozone, and are only slightly above the state average (+4% - +8%). Section 8 of the DEIR and the Air Quality Environmental Justice Report in Appendix G outlines how the mesoscale air quality analysis demonstrates that the Project will not have an adverse impact on regional air quality and or within the EJ community.

Truck Traffic and Diesel Emissions

As noted above, the truck traffic from the project will be oriented to and from I-495, will traverse the short segment of King Street between the I-495 ramps and the Project site and are not through the adjacent EJ Population. In addition, in order to reduce the overall number of new truck trips in the area and that may be traversing an EJ population area, the Project proponent will seek to engage and retain service providers for trash, recycling and other services from providers that are currently serving the area.

As discussed in Section 8.1, the DPM emissions in the EJ community will be less than those in the non-EJ community by nearly 50 percent. To further ensure diesel vehicle traffic impacts will remain low, some achievable strategies to reduce DPM emissions from diesel trucks are the following¹²:

- Backhaul Optimization: Instead of driving empty backhauls, loads in drivers’ route are found.
- Cube Optimization: Organization of items within the trailer, so that more of the volume of the trailer is used.
- Co-loading: Matching loads that have origins or destinations on similar routes.
- Electrification: Electrifying tractor trailers; and

¹¹ <https://www.epa.gov/ejscreen>

¹² Avi Merksy and Therese Langer, “Achieving Freight Transport GHG Emissions Reductions Through Emerging Technologies”, November 2021.

- Trailer Pairing: Tractors pairing with an available compatible tractor.

The Project will implement cube optimization and continue to study the other mitigation measures mentioned above. The mitigation measure was used to calculate 2% emissions reductions for the diesel trucks of the DPM emissions mitigation analysis.

Flooding

Relative to flooding impacts from the project there are no EJ populations that immediately surround the project site (i.e. EJ populations located whole or in part within the project boundaries) so the exposure rating for urban flooding and riverine flooding are not anticipated to be indicators of elevated climate risks for EJ populations. It is also noted that the stormwater runoff from the project flows to the south and away from the closest EJ population in Franklin and therefore the EJ population is not anticipated to be impacted by potential flooding impacts from the project. In addition, the EJ populations in both Norfolk and Bellingham are at the outermost extent of the five (5) mile radius and are not anticipated to be impacted by potential flooding impacts from project.

Based upon the information outlined in Section 9 and the additional analyses in Sections 8 and 10, the project is not expected to have undue or inequitable impacts on nearby EJ populations.

10 ENVIRONMENTAL JUSTICE POPULATIONS

As requested by the EEA Secretary's Certificate on the ENF and comment letters, this section includes a description of existing Environmental Justice (EJ) populations including an assessment of existing "unfair or inequitable environmental burden and related public health consequences", proposed mitigation relative to EJ populations, and EJ Population Public involvement strategies.

Per the Environmental Justice (EJ) Mapping, see Appendix A, there are four (4) EJ Census Blocks located within five (5) miles of the project site and two (2) of these blocks are located within one (1) mile of the project site. The blocks within one (1) mile of the project site are in the Town of Franklin to the northeast of the site and identified as a Minority EJ Block (Block Group 3, Census Tract 4422.02) site and an Income EJ Block (Block Group 2, Census Tract 4422.02). The blocks within one (1) mile to five (5) miles of the project site are located in the Town of Norfolk to the northeast of the project site and identified as a Minority EJ Block (Block Group 3, Census Tract 4091.01) and located in the Town of Bellingham to the southwest of the project site and identified as an Income EJ Block (Block Group 5, Census Tract 4431.02).

There are no languages identified as spoken by five (5) percent of the EJ population who also identify as not speaking English "very well" for any of the EJ Blocks within five (5) miles of the site. The Minority EJ Block (Block Group 2, Census Tract 4422.02) within one (1) mile of the site had 2% households with language isolation, all other blocks within five (5) miles had 0% households with language isolation, refer to EJ Language Map included in Appendix A.

As outlined above there are EJ populations within one (1) mile and five (5) miles of the proposed project. In addition, the proposed project is anticipated to generate greater than 150 diesel truck trips per day thereby impacting air quality. Therefore, the proposed project is within a designated geographic area and the following section provides an assessment of existing unfair or inequitable

environmental burden in accordance with the MEPA Interim Protocol for Analysis of Project Impacts on EJ Populations (“the MEPA Protocol”) and 301 CMR 11.07(6)(n)1.

10.1.1 Assessment of Existing Unfair or Inequitable Environmental Burden

The Massachusetts Department of Public Health (DPH) EJ Tool¹³ was used to identify whether any municipality or census tract that is within the EJ populations exhibits the following vulnerable health criteria:

- Heart attack hospitalization (tracked on a municipal level)
- Childhood asthma (tracked on a municipal level)
- Childhood blood lead (tracked on a census tract level); and
- Low birth weight (tracked on a census tract level)

Based upon the location of the EJ Populations within five (5) miles of the proposed project the analysis was limited to the Town of Franklin, Town of Norfolk and Town of Bellingham and the results are summarized in Table 10.1 below.

Table 10.1: Vulnerable Health Criteria Within 5 miles of the Project

Vulnerable Health Criteria	Franklin	Norfolk	Bellingham	110% Statewide Rate	Below 110% Statewide Rate
Childhood Asthma (per 10,000)	27	16	24	91	Yes
Heart Attack (per 10,000)	22	22	24	29	Yes
Elevated Blood Lead Prevalence (per 1,000)	5 ⁽³⁾	4 ⁽¹⁾	6 ⁽⁵⁾	16	Yes
Low Birth Weight (per 1,000)	139 ⁽⁴⁾	154 ⁽²⁾	142 ⁽⁶⁾	239	Yes

- ⁽¹⁾ Increase to 7 when tracked on a census-tract level
⁽²⁾ Increase to 338 when tracked on a census-tract level
⁽³⁾ DPH EJ tool does not provide a value when looking at a census-tract level
⁽⁴⁾ Increases to 152 when tracked on a census-tract level
⁽⁵⁾ Increases to 9 when tracked on a census-tract level
⁽⁶⁾ Increases to 148 when tracked on a census-tract level

¹³ <https://matracking.ehs.state.ma.us/Environmental-Data/ej-vulnerable-health/environmental-justice.html>

As shown Table 10.1 all the vulnerable health criteria are below the 110% statewide rate and are not exceeded in any of the Towns containing EJ populations within five (5) miles of the proposed project. Refer to printouts of DPH EJ Tool in Appendix I.

It is noted that when viewed on a census tract level the low birth weight for Norfolk exceeds the 110% statewide rate. As outlined in the MEPA Interim Protocol, health criteria exceeding the 110% statewide rate could be viewed as exhibiting “vulnerable health EJ criteria,” and therefore potentially bearing an “unfair or inequitable” environmental burden and related public health consequences. However, the DPH EJ Tool lists only one (1) case count at the census-tract level, only a small portion of the EJ population is within the five-mile radius while the vast majority is outside of five miles, and the community level tracking is well below the statewide rate. Therefore, it is not anticipated that this health criteria represents an unfair or inequitable environmental burden or related public health consequences even when looked at on the census-tract level.

10.1.2 Potential Sources of Pollution within Boundaries of EJ Populations

As outlined in the MEPA Interim Protocol additional data layers in the DPH EJ Tool were reviewed to survey for other potential sources of pollution within the boundaries of the EJ populations. As shown in Table 10.2 below there are minimal potential sources of pollution (12) within the EJ Population in Franklin which is the closest EJ population being within one (1) mile of the project site. The enforcement history of those facilities permitted by Massachusetts Department of Environmental Protection (MassDEP) was researched and it was determined that there were zero (0) notices of non-compliance out of the twelve (12) potential sources of pollution since 2017.

Tables 10.3 and 10.4 outline the potential sources of pollution within Bellingham and Norfolk respectively which are within the five (5) mile radius of the project site. As shown in the tables there are minimal potential sources of pollution (3) within the EJ Population in Bellingham as well as within the EJ Population in Norfolk (10). The enforcement history of those facilities permitted by Massachusetts Department of Environmental Protection (MassDEP) was researched and it was determined that there were zero (0) notices of non-compliance out of the thirteen (13) potential sources of pollution since 2017.

Refer to printout of DPH EJ Tool mapping with pollution source data layers in Appendix I.

Table 10.2: Potential Sources of Pollution-Franklin

Source of Pollution	Facility Name / Description	#of Sources	Notice of Non-Compliance *
MassDEP Major Air and Waste Facilities	-----	0	N/A
M.G.L. c. 21E sites	-----	0	N/A
“Tier II” toxics use reporting facilities	National Grid – Franklin 341	1	0
MassDEP sites with AULs	Bennys Oil Terminal Cloucester Co. Inc Shell Service Station	4 ⁽¹⁾	0 0 0
MassDEP groundwater discharge permits	-----	0	0
Wastewater treatment plants	-----	0	0
MassDEP public water suppliers	-----	0	0
Underground storage tanks	Shell TFE Food Mart ⁽²⁾ Drake Petroleum Co.	2	0
EPA facilities	-----	0	N/A
Road infrastructure	MassDOT Roads	2	N/A
MBTA bus and rapid transit	MBTA Commuter Rail Lines (Franklin Line)	1	N/A
Other transportation infrastructure	Railroad Tracks	1	N/A
Regional transit agencies	RTA Stops (Central Park Terrace)	1	N/A
Energy generation and supply	-----	0	N/A

*From 2017-2022

⁽¹⁾ 4 locations shown on mapping but data for site at 138 East Central Street shows AUL terminated 4/6/2022 (<https://eeaonline.eea.state.ma.us/portal#!/wastesite/2-4014495>)

⁽²⁾ Listed as same property address as the Shell Service Station under MassDEP Sites with AUL

Table 10.3: Potential Sources of Pollution-Bellingham

Source of Pollution	Facility Name / Description	#of Sources	Notice of Non-Compliance *
MassDEP Major Air and Waste Facilities	-----	0	N/A
M.G.L. c. 21E sites	-----	0	N/A
“Tier II” toxics use reporting facilities	-----	0	0
MassDEP sites with AULs	-----	0	0
MassDEP groundwater discharge permits	-----	0	0
Wastewater treatment plants	-----	0	0
MassDEP public water suppliers	-----	0	0
Underground storage tanks	Stop & Shop Supermarket	1	0
EPA facilities	-----	0	N/A
Road infrastructure	MassDOT Roads	1	N/A
MBTA bus and rapid transit	-----	0	N/A
Other transportation infrastructure	-----	0	N/A
Regional transit agencies	RTA Stops (Hilltop Farms)	1	N/A
Energy generation and supply	-----	0	N/A

*From 2017-2022

Table 10.4: Potential Sources of Pollution-Norfolk

Source of Pollution	Facility Name / Description	#of Sources	Notice of Non-Compliance *
MassDEP Major Air and Waste Facilities	-----	0	N/A
M.G.L. c. 21E sites	MCI Norfolk	1	N/A
“Tier II” toxics use reporting facilities	-----	0	0
MassDEP sites with AULs	-----	0	0 0 0
MassDEP groundwater discharge permits	-----	0	0
Wastewater treatment plants	-----	0	0
MassDEP public water suppliers	-----	0	0
Underground storage tanks	Daley Service Inc MCI-Norfolk MCI-Cedar Junction Bay State Correctional Center	4	0
EPA facilities	-----	0	N/A
Road infrastructure	MassDOT Roads	1	N/A
MBTA bus and rapid transit	MBTA Commuter Rail Lines (Franklin Line) Parking lots – Commuter Rail	1 1	N/A
Other transportation infrastructure	-----	0	N/A
Regional transit agencies	RTA Stops (MCI Norfolk & Pond St. Recreational Facility)	2	N/A
Energy generation and supply	-----	0	N/A

*From 2017-2022

10.1.3 RMA Climate Resilience Design Standards Tool

The RMA Climate Resilience Design Standards Tool (RMA Tool)¹⁴ was utilized in the preparation of the ENF and a copy of the printout is included in Appendix H. The RMA tool indicates that the proposed project has a “High Exposure” for Extreme Precipitation – Urban Flooding and a “Moderate Exposure” for Extreme Precipitation – Riverine Flooding. The project has a no exposure rating for Sea Level Rise / Storm Surge.

Relative to flooding impacts from the project there are no EJ populations that immediately surround the project site (i.e. EJ populations located whole or in part within the project boundaries) so it is not anticipated that the exposure ratings for Urban Flooding or Riverine Flooding are indicators of elevated climate risks for EJ populations. It is also noted that the stormwater runoff from the project flows to the south and away from the closest EJ population in Franklin and therefore the EJ population is not anticipated to be impacted by potential flooding impacts from the project. In addition, the EJ populations in both Norfolk and Bellingham are at the outermost extent of the five (5) mile radius and are not anticipated to be impacted by potential flooding impacts from project.

To mitigate for increased impervious area and potential flooding impacts the drainage system has been designed to meet or exceed MassDEP Stormwater Standards and the Town of Franklin requirements by attenuating runoff rates to less than the pre-development condition for the 2-,10-,25- and 100-year 24-hour storm frequencies, providing 44% pre-treatment TSS removal prior to infiltration, providing a minimum 80% total TSS removal prior to discharge, and promoting groundwater recharge by retaining the volume of runoff equivalent to, or greater than, 1-inch multiplied by the total post-construction impervious surface area on the site. In addition, the proposed system mitigates the amount of stormwater volume being discharged from the site in accordance with the Town of Franklin requirements, as well as providing 96,735 CF of storage for infiltration, or 5.4 times the required recharge volume. The additional recharge volume and reducing the amount of stormwater volume being discharged from the site provides further mitigation for potential downstream flooding. Refer to Section 5 and Appendix H for detailed information on the design of the proposed stormwater system.

10.1.4 Environmental Indicators

The U.S. EPA’s Environmental Justice Screening and Mapping Tool¹⁵ was used to obtain the values by census block group and statewide averages for eleven (11) environmental indicators. Table 10.5 shows the eleven (11) indicators and their values. Refer to EJScreens Reports in Appendix I.

¹⁴ https://resilientma.mass.gov/rmat_home/designstandards/?focus=I2dyYW50QmFubmVYSGVhZGVy

¹⁵ <https://www.epa.gov/ejscreen>

Out of the eleven (11) environmental indicators, three (3) indicators exceeded the state average in the Franklin EJ population, five (5) indicators exceeded the state average in the Bellingham EJ population, and two (2) indicators exceeded the state average in the Norfolk EJ population.

Of the environmental indicators that were exceeded, one was for lead paint which does not apply to this project as the project consists of a new building. Two of the others were for proximity to hazardous sites (TSDf and NPL) which do not apply to this project as the proposed project is for a new warehouse which will only generate standard domestic household type of waste and will not produce any hazardous waste or material.

The remaining two indicators that were exceeded relate to air quality, Particulate Matter & Ozone, and are only slightly above the state average (+4% - +8%). Section 8 of the DEIR and the Air Quality Environmental Justice Report in Appendix G outlines how the mesoscale air quality analysis demonstrates that the Project will not have an adverse impact on regional air quality and or within the EJ community including the following:

- Section 8.1 presents a summary of the 2022 Existing, 2029 No-Build, 2029 Build and 2029 Build with Mitigation diesel particulate matter emissions (DPM) based on vehicle miles traveled (VMT) for each modeling scenario. The Air Quality Environmental Justice Report in Appendix G provides the VMT and DPM emissions calculations.
- The DPM emissions in the EJ community will be less than those in the non-EJ community by nearly 50 percent; and
- The mesoscale analysis results show that the total DPM emissions for the 2029 Build case are 0.135 kg/day higher than those for the 2029 No-Build case. Compared to the Norfolk countywide DPM emissions of approximately 209.65 kg/day⁶, this represents an insignificant area-wide increase of approximately 0.064%. Furthermore, the EJ community 2029 DPM emissions of 0.059 kg/day represents approximately 0.028% of the Norfolk countywide DPM emissions.

Table 10.5: Environmental Indicators - EJ Population Block Groups

Environmental Indicators	Franklin EJ Population Value*	Bellingham EJ Population Value*	Norfolk EJ Population Value*	State Average	Key Medium
NATA Air Toxics Cancer Risk (lifetime exposure)	20	20	24	24	Air
NATA Respiratory Hazard Index Ratio	0.3	0.3	0.3	0.3	Air
NATA Diesel PM (DPM)	0.195	0.175	0.197	0.295	Air
Particulate Matter (PM2.5) (annual average)	<u>7.26</u>	<u>7.16</u>	<u>7.31</u>	6.78	Air
Ozone (summer seasonal average, daily 8-hr max)	<u>41</u>	<u>41.1</u>	<u>40.7</u>	39.5	Air
Lead Paint (% of housing built before 1960)	0.43	<u>0.66</u>	0.45	0.49	Dust / Lead Paint
Traffic Proximity and Volume Count of vehicles (average annual)	1700	1200	240	2100	Air
Proximity to RMP (Risk Management Plan / hazardous waste cleanup) Sites	0.25	<u>1.0</u>	0.093	0.7	Waste / Water / Air
Proximity to TSDFs (Hazardous waste Treatment, Storage, and Disposal Facilities)	1.5	<u>5.4</u>	0.52	5.2	Waste / Water / Air
Proximity to NPLs (National Priority List / Superfund sites)	1.2	0.15	0.2	0.17	Waste / Water / Air
Wastewater Discharge Toxicity (based on NPDES permitted discharge locations)	N/A	0.00024	0.0034	0.21	Water

*Underlined and bold numbers indicate values that exceed state average

10.1.5 Feedback from Community-Based Organizations, Tribes, or other Individuals

Consistent with the MEPA Public Involvement Protocol for EJ Populations (Jan. 1, 2022), the Proponent sent advance notice using the EJ Screening Form to the EJ Reference List (“the List”) provided by the MEPA Office and consisting of Community Based Organizations (CBOs) and tribes/indigenous organizations. In addition, an electronic copy of the ENF was provided to all parties on the List. At this time the Proponent has not received any comments, questions or concerns from any of the parties provided on the List. An electronic copy of the DEIR will be distributed to all CBOs and tribes included in the List that was utilized to provide notice of the ENF. Refer to Appendix K for a copy of the distribution list.

10.1.6 Analysis of Project Impacts to Determine Disproportionate Adverse Effect

As noted in the MEPA Protocol, *“Based on the information gathered as described in this Part II, and any other data or information obtained through the Proponent’s own research, the Proponent should provide a qualitative assessment of whether the factors reviewed appear to show that the identified EJ populations are impacted by an existing “unfair or inequitable” environmental burden and related public health consequences as compared to the general population. As a general matter, the Proponent should conclude that any identified EJ population that is located in a municipality or census tract demonstrating “vulnerable health EJ criteria,” or an EJ population immediately surrounding a project location that has a “High” risk rating in the RMA tool for sea level rise/storm surge or extreme precipitation (urban or riverine flooding), is highly likely to be impacted by an unfair or inequitable environmental burden, such that the Proponent should move to Part III.”*

As shown Table 10.1 all the health criteria are below the 110% statewide rate and are not exceeded in any of the Towns containing EJ populations within five (5) miles of the proposed project.

Relative to flooding impacts from the project there are no EJ populations that immediately surround the project site (i.e. EJ populations located whole or in part within the project boundaries) so it is not anticipated that exposure ratings for Urban Flooding or Riverine Flooding are indicators of elevated climate risks for EJ populations. It is also noted that the stormwater runoff from the project flows to the south and away from the closest EJ population in Franklin and therefore the EJ population is not anticipated to be impacted by potential flooding impacts from the project. In addition, the EJ populations in both Norfolk and Bellingham are at the outermost extent of the five (5) mile radius and are not anticipated to be impacted by potential flooding impacts from project.

The MEPA Protocol further states, *“Unless the assessment in Part II shows the absence of any “unfair or inequitable” environmental burden or related public health consequence impacting the identified EJ population as compared to the general population, the Proponent must further analyze whether the environmental and public health impacts from the project will likely result in a disproportionate adverse effect on such population.”*

The assessment in Section 10.1.1 – 10.1.6 was prepared in accordance with Part II of the MEPA Protocol, and based upon the information provided in these sections, as well as the information outlined in Section 9, the factors reviewed appear to show an absence of any unfair or inequitable” environmental burden or related public health consequence borne by the identified EJ Populations

as compared to the general population, therefore it is unlikely that the environmental and public health impacts from the proposed project would have a disproportionate adverse effect on the EJ Populations, and in accordance with the MEPA Protocol no further analysis is required.

10.1.7 Section 61 Findings

Traffic

The Project is expected to result in 154 truck trips on an average weekday and between 5 and 8 truck trips during the weekday peak commuter hours. Truck trips are expected to be oriented to and from I-495, with approximately 60 percent expected to oriented to/from the north (toward I-90) and 40 percent oriented to/from the south (I-95 and Route 24), and will traverse the short segment of King Street between the I-495 ramps and the Project site and are not expected to be routed through the EJ populations. As stated previously in the context of the I-495 corridor which accommodated approximately 87,332 vehicles per day in 2019, the additional truck trips would constitute an increase of less than 0.2 percent in overall traffic on a daily basis when considered the dispersal of truck traffic to the north and south on I-495, which would be considered nominal and not readily apparent over current conditions. With respect to King Street, the segment of the roadway where the primary truck activity will occur is located within the State Highway Layout as a part of the King Street/I-495 interchange, and does not include residential uses or other sensitive receptors.

In order to reduce the overall number of new truck trips in the area and that may be traversing an EJ population area, the Project proponent will seek to engage and retain service providers for trash, recycling and other services from providers that are currently serving the area

Air quality

As discussed in Section 8.1, the DPM emissions in the EJ community will be less than those in the non-EJ community by nearly 50 percent. To further ensure diesel vehicle traffic impacts will remain low, some achievable strategies to reduce DPM emissions from diesel trucks are the following¹⁶:

- Backhaul Optimization: Instead of driving empty backhauls, loads in drivers' route are found.
- Cube Optimization: Organization of items within the trailer, so that more of the volume of the trailer is used.
- Co-loading: Matching loads that have origins or destinations on similar routes.
- Electrification: Electrifying tractor trailers; and
- Trailer Pairing: Tractors pairing with an available compatible tractor.

¹⁶ Avi Merksy and Therese Langer, "Achieving Freight Transport GHG Emissions Reductions Through Emerging Technologies", November 2021.

The Project will implement cube optimization and continue to study the other mitigation measures mentioned above. The mitigation measure was used to calculate 2% emissions reductions for the diesel trucks of the DPM emissions mitigation analysis.

At the completion of construction, the Proponent will provide a certification to the MEPA Office, signed by an appropriate professional. The certification will identify either of the following: 1) all of the energy efficiency mitigation measures adopted by the Project as part of the Proposed Design (Mitigation Case) have been implemented; or 2) an equivalent set of energy efficiency mitigation measures, which together are designed to achieve the same percentage reduction in CO₂ emissions as the Mitigation Case, when compared to the Base Case, based on the same modeling assumptions in the GHG report (Refer to Appendix G), have been adopted.

10.1.8 EJ Population Public Involvement

As requested in the MEPA ENF Certificate the Proponent contacted the MEPA office to schedule a meeting prior to submission of the DEIR to discuss EJ public involvement strategies. However, based upon various factors including the MEPA reviewer departing the MEPA office and scheduling conflicts the Proponent was unable to meet with the MEPA office prior to filing of the DEIR. The Proponent has scheduled a meeting with the MEPA office on July 18, 2022 to discuss developing EJ public involvement strategies for the project including those committed to by the Proponent outlined below.

- An electronic copy of the DEIR will be distributed to all CBOs and tribes included in the List that was utilized to provide notice of the ENF. Refer to Appendix K for a copy of the distribution list.
- The proponent will pay for translation of the DEIR for individuals or parties upon request.
- The proponent will create a file sharing website that makes project information available to the public.
- The proponent will ensure outreach to the public is communicated in clear, understandable language that is presented in a user-friendly format.

11 CONSTRUCTION IMPACTS

As requested by the EEA Secretary's Certificate on the ENF and comment letters, this section includes a description of construction period impacts and mitigation efforts relative to noise, air quality, water quality and traffic.

11.1 Construction Schedule and Hours

Construction of the Project is expected to commence in the Spring of 2023 and last for approximately eighteen (18) months, with an estimated completion date in Fall 2024. However, this schedule is subject to changed based on market conditions and other factors that that cannot be anticipated at this time. Hours of construction will be consistent with those required by the Town of Franklin, which are from 7:00 a.m. to 9:00 p.m. Monday through Friday and 8:00 a.m. to 9:00 p.m. on weekends.

11.2 Construction Phasing

The proposed Project is anticipated to be constructed in one phase.

11.3 Temporary Construction Impacts

Project impacts during construction will be confined within the property boundary and adjacent roadways for utility connections, access and offsite improvements. Temporary construction impacts include, but are not limited to, site mobilization, clearing and grubbing, earthwork, material stockpiling, stormwater runoff and erosion control, dewatering and ledge removal (if required), soil stabilization for earth disturbing activities, construction noise and emissions, solid waste management, sanitary waste management, anti-tracking controls, construction traffic and parking, and construction access.

11.4 Construction Control Techniques and Practices

The Proponent will take the following reasonable efforts to minimize impacts associated with construction efforts:

- Minimize amount of land disturbance at one time. The Project will be constructed so as to limit the amount of open earth at any given time including those required for the transport and stockpile of materials. The Operator shall only engage in earth disturbing activities that can be adequately controlled and protected.
- Erosion Control Best Management Practices will be implemented and maintained on the site at all times during construction including, but not limited to, temporary sediment basins, diversion berms, diversion swales, temporary stabilization (e.g. seeding, mulch, erosion control matting), perimeter controls (e.g. straw bales, silt fence, compost socks), inlet filter protection, street sweeping and gravel anti-tracking pads. The use of each of these BMPs will be detailed within the Stormwater Pollution Prevention Plan.
- Erosion controls will be installed in accordance with the SWPPP, EPA CGP and Conservation Commission Order of Conditions. In addition, duplicative erosion controls

have been added in the most sensitive areas where work is within fifty (50) feet of resource areas. Excess erosion controls will be kept on site and used if conditions warrant.

- Dewatering is expected to be minimal given the significant depths to groundwater on the Project Site. Should construction dewatering be required it shall be done in accordance with the provisions outlined in the Stormwater Pollution Prevention Plan (SWPPP) including all monitoring and reporting. Based upon the Proponent's initial research the project is not anticipated to require a Dewatering General Permit, however, should the permit be deemed to be required at a later point it will be filed for prior to construction.
- Temporary and permanent soil Stabilization Measures for earth disturbing activities.
- The proposed work will be constructed in accordance with standard best management practices including keeping the amount of land disturbed at one time to the minimum needed in order to avoid environmental impacts. The Project will also be subject to a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) and a Multi-Sector General Permit (MSGP) and will have a Stormwater Pollution Prevention Plan (SWPPP) that will be utilized to minimize construction related impacts. .
- The contractor will adhere to the Stormwater Pollution Prevention Plan(s) to be prepared for the Project including, but not limited to, the following:
 - The selection, installation, and maintenance of soil erosion and sediment control BMPs must use good engineering practices and follow manufacturer's specifications. The Contractor shall install all storm water controls in accordance with good engineering practices, including applicable design specifications. All temporary sediment and erosion control measures will be repaired or replaced in compliance with the NPDES SWPPP.
 - At a minimum, all erosion and sediment control practices should be installed and maintained to the standards set forth in the SWPPP and in the site engineering plans. Areas that will not be paved or covered with non-erosive material should be stabilized using procedures in substantial conformance with the SWPPP and site engineering plans. The installation of any additional erosion and sediment control measures will be completed as necessary to minimize erosion and sedimentation.
 - The appropriate soil erosion and sediment controls should be implemented on site and modified to reflect the current phase of construction.
 - A fundamental principal for preventing erosion and controlling sedimentation is to minimize the extent of land disturbance. For areas where disturbances cannot be avoided, rapid stabilization of the surface is the most effective method of controlling erosion. Areas that are disturbed during construction activity must be stabilized as soon as practicable in accordance with the provisions outlined in the SWPPP. The Contractor shall consider the pro-active application of surface protections such as seeding, woodchip berms, sodding, mulching, erosion control blankets, hydro mulch, gravel, etc. prior to potential erosion rather than as a response to active erosion.
 - Stone construction entrances will be implemented to minimize soil tracking onto area roadways.

- Regular street sweeping will be conducted to remove any sediment that is deposited on local roadway adjacent to the site.
- The inspection and maintenance of the erosion and sediment control measures (BMPs) is critical to their effectiveness. Maintenance will be an ongoing process for the duration of construction and will continue until the site has been deemed stabilized. As required by the NPDES CGP, the erosion and sediment control measures will be inspected at regular intervals and repairs will be made as required. The contractor will be required to maintain a logbook documenting the contractor's observations during inspection and documenting any corrective actions made to the erosion control BMPs; and
- Topsoil and borrow stripped from the site or other processed material shall be stockpiled in areas that will not interfere with construction phases and shall be located outside of the 100-foot buffer zone to resource areas. A silt fence (or equivalent) shall be installed around the perimeter of each stockpile. Soil stockpiles should be stabilized in accordance with the provisions outlined in the SWPPP.
- The project will comply with the Massachusetts Idling Regulation (310 CMR 7.11). The regulation prohibits motor vehicles from idling their engines more than five minutes unless the idling is necessary to service the vehicle or to operate engine assisted power equipment or other associated power.
- The Proponent acknowledges the importance of emission controls and will encourage contractors to comply with MassDEP's "Diesel Engine Retrofits in the Construction Industry: A How to Guide" and the use of ultra-low sulfur diesel in off-rad engines. The construction contractor is encouraged to use equipment fitted with diesel oxidation catalyts (DOC) or diesel particulate filters (DPF) to reduce emissions.
- Air Pollution Control is regulated by MassDEP through 310 CMR 7.09 – Dust, Odor, Construction and Demolition. All construction and demolition for this project shall comply with these regulations.
- Dust mitigation measures shall be implemented on site as necessary. Dust control will be implemented as needed once site grading has been initiated and during windy conditions while site grading is occurring. Dust from the site shall be controlled by using a mobile pressure-type distributor truck to apply water to disturbed areas. At least one mobile unit shall be available at all times to distribute water to control dust on the project area. If field observations indicate that additional protection from wind erosion (in addition to, or in place of watering) is necessary, alternative dust suppressant controls should be implemented. The following list of control measures may be implemented on site to limit the generation of dust as needed:
 - Provide water suppression to minimize the generation of dust from demolition activities, excavation operations and on-site vehicle traffic.
 - Spreading calcium chloride during the construction period
 - Cover loads on construction vehicles.
 - Cover tops of stockpiles and /or temporarily stabilize in accordance with the SWPPP.

- Monitor construction means and methods to ensure disturbed areas are minimized and disturbed areas are stabilized as soon as earthwork activities are completed.
- Install crushed stone tracking pads at site construction entrances.
- Sweep streets to remove sediment should construction related sediment be tracked onto public ways; and
- Utilization of mulch, stone or spray-on soil treatments for temporary stabilization as needed
- Noise is regulated by MassDEP through 310 CMR 7.10 – Noise (also known as the “Noise Regulation”) with further guidance is provided in MassDEP “Noise Guideline Document” dated 4/2003 and MassDEP Division of Air Quality Control Policy Number 90-001. All construction and demolition for this project shall comply with these regulations and guidelines.
- Efforts will be made to minimize the impact of noise resulting from construction activities. The following noise mitigation measures will be implemented at the site and will remain in effect for the duration of construction.
 - All exhaust mufflers on construction equipment will be in good working order, contracts will include language requiring contractors to properly maintain their equipment.
 - Back up alarms on vehicles and equipment will be adjusted as low as possible to reduce noise, without compromising safety.
 - Equipment will not needlessly idle on-Site during construction. When feasible, equipment that is not being used will be turned off.
 - Noise creating equipment on site will be located as far as possible from sensitive receptors.
 - Engine housing panels on all equipment will be kept closed
 - Electricity will be obtained from the electric grid as soon as feasible to reduce the use of portable generators.
 - No construction vehicle and/or equipment shall commence warming up prior to the permitted hours of construction; and
 - Enclosures or barriers will be provided on small equipment that operates continuously.
- As noted, the project site is primarily undeveloped and consists largely of wooded areas and wetlands. Therefore, demolition debris (e.g. asphalt, brick, concrete, gypsum, metal, wood) is not expected to be produced as part of the project.
- Construction materials that can be recycled (brick, concrete, gypsum wallboard, wood, metal and asphalt roofing) will be processed in accordance with the Waste Management Plan – Plan to Execute LEED V4 contained in Appendix E. Any materials that cannot be recycled will be processed as noted below.

- Solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed of offsite. The trade/contractor is responsible to acquire the permit required for such disposal. Burning on site will not be permitted. All waste materials should be collected and stored in approved receptacles. No wastes should be placed in any location other than in the approved containers appropriate for the materials being discarded. There should be no liquid wastes deposited into dumpsters or other containers which may leak. Receptacles with deficiencies should be replaced as soon as possible and the appropriate clean-up procedure should take place, if necessary. Construction waste material and tree stumps are not to be buried or otherwise disposed of on site.
- Hazardous materials and all other material on site should be stored in accordance with manufacturer or Material Safety Data Sheet (MSDS) specifications. When disposing of hazardous materials, follow manufacturer, local, or State recommended methods.
- Collection and disposal of solid waste during construction will be provided by a licensed contractor. The private contractor will obtain any necessary permits for removal and transport of rubbish from the Town of Franklin.
- It is expected that cleanup on on-site debris will be conducted on at least a weekly basis. At the very least, the clean-up should occur by 12:00 pm Friday every week; and
- Although not anticipated to be encountered, the Proponent acknowledges that any contaminated material encountered during construction will be managed in accordance with the MCPA and with prior notification to MassDEP.

12 MITIGATION SUMMARY – SECTION 61 FINDINGS

As requested by the EEA Secretary's Certificate on the ENF and comment letters, this section includes additional information and updates regarding the following:

- A comprehensive summary list of the mitigation efforts proposed as part of the Project are included below. Refer to the associated Sections of the DEIR for more detailed discussions of each project element and proposals for mitigation.
- Summary of mitigation efforts relative to EJ populations; and
- Summary overview of mitigation commitments in tabular format including estimated cost, responsible parties, and timing of implementation.

12.1 Land Alteration and Impervious Surfaces

The following measures will be implemented to mitigate the impacts associated with land alteration as part of the Project:

- Working with the Franklin Planning Board to ensure the proposed driveway is constructed to the narrowest width possible (30-foot), while providing sufficient space for large trucks and pedestrians to safely enter and exit the project site.
- Reducing the overall building footprint 37,600± SF from the originally proposed project.

- The project proposed 275 parking spaces to accommodate employees where 256 spaces are required under current zoning. The proponent will explore options with the Town of Franklin to reduce parking or make the additional nineteen (19) parking spaces banked parking that would be constructed should they be needed.
- The drainage system has been designed to meet or exceed MassDEP Stormwater Standards and the Town of Franklin requirements by attenuating runoff rates to less than the pre-development condition for the 2-,10-,25- and 100-year 24-hour storm frequencies, providing 44% pre-treatment TSS removal prior to infiltration, providing a minimum 80% total TSS removal prior to discharge, and promoting groundwater recharge by retaining the volume of runoff equivalent to, or greater than, 1-inch multiplied by the total post-construction impervious surface area on the site. In addition, the proposed system mitigates the amount of stormwater volume being discharged from the site in accordance with the Town of Franklin requirements, as well as providing 96,735 CF of storage for infiltration, or 5.4 times the required recharge volume. The additional recharge volume and reducing the amount of stormwater volume being discharged from the site provides further mitigation for potential downstream flooding. Refer to Section 5 and Appendix H for detailed information on the design of the proposed stormwater system.
- A landscaped buffer strip at least fifteen (15) wide shall be provided adjacent to residentially zoned properties (exclusive of the existing electric easement), and one (1) tree shall be planted for every forty (40) parking spaces; and
- An additional 104 Dark American Arborvitae and 33 Green Giant Arborvitae are proposed beyond what is required by zoning to provide additional landscaping and additional screening for abutting residential properties.

12.2 Wetland Resource Areas

As mitigation for the 10,990 square feet of permanent BVW fill, the project includes construction of four (4) wetland replication areas totaling approximately 22,980 square feet. As required under the Town of Franklin Bylaw, wetland replication is proposed at greater than a 2:1 ratio to wetland filling. Replication areas were selected in locations where topography is relatively flat to minimize the depth of excavation and grading necessary to create wetland hydrology. Replication area #2 will be created by removing the existing access driveway. The access driveway fill material will be excavated to restore the wetland in this location. It is noted that the location, shape, and size of the restoration areas are still being coordinated with the Franklin Conservation Commission as part of the Notice of Intent process and may vary from those shown on the Site Plans included in Appendix B. However, the project will provide at least a 2:1 replication ratio.

Stream restoration will include removing the 23-foot-long, 42-inch diameter culvert beneath the existing access driveway and surrounding fill and reconstructing the stream channel to match conditions up and downstream of the culvert. The restoration will result in restoration of approximately 230 square feet of LUW and 46 linear feet of Bank. Adjacent areas will be restored to vegetated Buffer Zone or included in replication area #2.

Buffer Zone Restoration will occur in Buffer Zone areas disturbed for grading activities to support stormwater features, the proposed access driveway, and the replication areas. These areas will be restored by spreading four inches of topsoil and seeding with a 50/50 ratio of New England Conservation & Wildlife Mix and New England Semi-Shade Grass and Forbs Mix available from New England Wetland Plants, Inc. (or equivalent). The restoration areas will be stabilized with erosion control matting as well. This seed mix will also be used to restore a large additional area of temporarily disturbed land outside the 100-foot Buffer Zone.

12.3 Stormwater Management

The stormwater management system for the proposed project is designed to meet the Town of Franklin stormwater requirements and the MassDEP Stormwater Standards as described below:

- The proposed drainage design maintains natural drainage flow patterns to the extent practicable.
- Stormwater runoff will be treated for TSS removal using a mix of deep-sump, hooded catch basins, proprietary stormwater quality units, and forebays prior to infiltration or discharge.
- Stormwater management systems will be designed to provide 44% TSS removal for pretreatment prior to infiltration where required, and a total of 80% minimum TSS removal prior to discharge across the site.
- Surface and subsurface infiltration systems will be designed to promote groundwater recharge and retain the 1-inch water quality volume for the total impervious cover proposed onsite.
- The stormwater system is anticipated to provide a 91% phosphorous load reduction.
- Stormwater management systems will be designed to attenuate peak rates of runoff and volumes for the 2-, 10-, 25- and 100-year, 24-hour design storms.
- The proposed system mitigates the amount of stormwater volume being discharged from the site in accordance with the Town of Franklin requirements, as well as providing 96,735 CF of storage for infiltration, or 5.4 times the required recharge volume; and
- All rooftop runoff has been directed to infiltration basins for recharge.

12.4 Climate Change Adaptation and Resiliency

- Project has incorporated rooftop solar PV systems on 80% of flat roof areas.
- Proponent will utilize white TPO roof materials in remaining areas, not set aside for solar PV, to help mitigate the impact of extreme heat and heat island effect.
- A high-performance building envelope will reduce cooling loads in the summer, installing high performance HVAC equipment, energy recovery ventilation systems.
- New landscaping and light-colored hardscape materials to reduce the urban heat island effect.

- The project proposed 275 parking spaces to accommodate employees where 256 spaces are required under current zoning. The proponent will explore options with the Town of Franklin to reduce parking or make the additional nineteen (19) parking spaces banked parking that would be constructed should they be needed.
- Reducing the overall building footprint 37,600± SF from the originally proposed project
- A greenhouse gas (GHG) stationary and mobile emissions analysis was performed for the Project, consistent with the EEA “Greenhouse Gas Emissions Policy and Protocol” (May 5, 2010). Refer to Section 8 for more information and Appendix G for a full copy of the report. Table 8.2 reveals that the Mitigation Case will reduce CO2 emissions (for stationary sources) by 15.9% compared to the Base Case. Transportation Demand Management (TDM) measures for this project will reduce Project-related motor vehicle CO2 emissions by 2%. The net reduction of the Project’s total CO2 emissions (stationary sources plus transportation) is 11.6% compared to the Base Case. Table 8.3 shows the Proposed Design reduces building energy use 16.5% below the Base Case and thus confirms compliance with the Stretch Code; and
- The project will leave approximately 10.5± acres of the site in its current undeveloped condition.
- The Project includes the construction of a comprehensive stormwater management system to help mitigate anticipated increases in stormwater runoff and downstream flooding. The proposed stormwater will also provide 96,735 CF of storage for infiltration, or 5.4 times the required recharge volume. The additional volume will increase the amount of groundwater recharge on-site.
- The project design allows for expansion of stormwater areas in the future if needed due to increased storm intensities. Refer to Climate Resiliency Exhibit in Appendix H.

12.5 Water and Wastewater Supply

The Proponent will work with the Town and end-user to ensure that efficient water use strategies are implemented to reduce overall potable water use on-site and wastewater generation, and to ensure that the necessary water supply is available. Mitigation strategies proposed by the Proponent for water use and wastewater generation are as follows:

- Efficient water use strategies that will be considered to reduce overall portable water use on-site are listed below:
 - Use of drought tolerant plantings
 - An automatic drip irrigation system with smart sensors and rain gauges will be installed to supplement watering during periods of low natural precipitation
 - Installation of water conservation equipment on irrigation infrastructure
 - Installation of low flow plumbing fixtures
 - Restricted flow faucets
 - Sensor operated sinks, toilets and urinals; and

- Development/Implementation of maintenance and employee education programs
- The Project will implement efficient water use strategies, as indicated above, to reduce overall sewer discharges. By reducing water consumption, the project will reduce wastewater discharges; and
- The project will discharge to the private on-site treatment plant and there are no anticipated impacts to municipal sewer systems.

12.6 Transportation

Transportation mitigation measures are discussed in Section 7 of this report and include:

- In conjunction with the addition of the Project site driveway as the fourth leg of the King Street/Constitution Boulevard intersection and the reconstruction of the traffic signal system at the intersection, the Project proponent will design and implement an optimal traffic signal timing, phasing and coordination plan for the King Street coordinated traffic signal system.
- In conjunction with the reconstruction of the King Street/Constitution Boulevard intersection and the associated traffic signal system to accommodate the Project, the following improvements will be completed in order to reduce the potential for vehicle queues on the King Street northeast bound approach to Constitution Boulevard to block the driveway to Franklin Fire Station No. 2:
 - “Do Not Block” pavement markings and accompanying signs will be installed on King Street across the fire station driveway; and
 - The existing flashing emergency signal that is located to the west of the fire station driveway will be replaced with traffic signal indications that will be incorporated into the traffic signal system at the King Street/Constitution Boulevard intersection and will be timed to initiate a “red” traffic signal indication at the fire station driveway for King Street traffic prior to the initiation of a “red” signal on the same approach at Constitution Boulevard. A “Stop Here On Red” sign will be installed at the stop-line on King Street to the west of the driveway.
- The existing traffic signal indications on the King Street northeast bound approach to Constitution Boulevard will be replaced with optically programmed signal indications in order to reduce the visibility of the signal indications approaching the stop-line to the west of fire station driveway; and
- In an effort to encourage the use of alternative modes of transportation to single-occupant vehicles, the following Transportation Demand Management (TDM) measures will be implemented as a part of the Project:
 - A transportation coordinator will be assigned for the Project to coordinate the TDM program.
 - Information regarding commuting options will be posted in a central location and/or otherwise made available to employees of the Project.

- The transportation coordinator will facilitate a rideshare matching program for employees to encourage carpooling.
- A “welcome packet” will be provided to employees detailing available commuter options and will include the contact information for the transportation coordinator and information to enroll in the employee rideshare program.
- Specific amenities will be provided to discourage off-site trips, including providing a break-room equipped with a microwave and refrigerator; offering direct deposit of paychecks; allowing telecommuting or flexible work schedules; and other such measures to reduce overall traffic volumes and travel during peak-traffic-volume periods.
- Pedestrian accommodations have been incorporated within the Project site to link the employee parking areas to the warehouse building and to the existing sidewalk along King Street; and
- Secure bicycle parking will be provided at an appropriate location within the proposed building.

A full copy of the Traffic Impact Assessment prepared by VAI is included in Appendix F. Draft MassDOT Section 61 findings are included in Appendix E.

12.7 Energy, Greenhouse Gas Emissions & Air Quality

GHG emissions are reduced by the following building design and operational energy efficiency measures (EEMs):

- Using higher efficiency than Code building envelope (roof and wall insulation)
- Installing cool roofs with a light-colored material
- Using higher efficiency than Code heating and cooling systems
- Using higher efficiency than Code domestic hot water systems
- Interior and exterior lighting systems with a lower light power density than Code
- Sealing, insulating, and testing HVAC supply ducts
- Energy management systems
- Using Energy STAR electric appliances, where possible
- The project commits to 80% of the flat roof area as being solar ready
- The parking lot will have three installed EV charging stations plus three EV-ready spaces
- The office space will use ASHPs for heating and cooling. The warehouse space will only be heated (not cooled) and will use direct-fired gas heaters. Heat pump hot water unit will be used throughout the building.
- Roof insulation will be R40ci and exceed Code.
- Concrete wall panels will have continuous insulation and construction will minimize thermal bridging.

- The design has no curtain walls or spandrels. Window area is a very small 4% of overall wall area; and
- All interior and exterior lighting will use LED lamps. The integrated lighting system will control light intensity in various area as a function of time and use.

At the completion of construction, the Proponent will provide a certification to the MEPA Office, signed by an appropriate professional. The certification will identify either of the following: 1) all of the energy efficiency mitigation measures adopted by the Project as part of the Proposed Design (Mitigation Case) have been implemented; or 2) an equivalent set of energy efficiency mitigation measures, which together are designed to achieve the same percentage reduction in CO₂ emissions as the Mitigation Case, when compared to the Base Case, based on the same modeling assumptions in the GHG report (Refer to Appendix G), have been adopted.

12.8 Construction Control

Construction period mitigation measures are discussed in Section 11 of this report and include:

- Construction materials that can be recycled (brick, concrete, gypsum wallboard, wood, metal and asphalt roofing) will be processed in accordance with the Waste Management Plan – Plan to Execute LEED V4 contained in Appendix E. Any materials that cannot be recycled will be processed as noted below.
- Construction fencing will be installed around all construction areas prior to the commencement of work. Access to the site will be closed at the end of each workday.
- Designated construction entrances will be established with appropriate warning signage.
- Prior to mobilization, the contractor will consult with Town officials as part of the pre-construction process to determine the appropriate trucks routes to and from the site including any desired restrictions.
- The Project will be constructed so as to limit the amount of open earth at any given time including those required for the transport and stockpile of materials. The Operator shall only engage in earth disturbing activities that can be adequately controlled and protected.
- Erosion Control Best Management Practices will be implemented and maintained on the site at all times during construction.
- The contractor will adhere to the Stormwater Pollution Prevention Plan(s) to be prepared for the project.
- The project will comply with all applicable Federal, State and local requirements regarding the handling, recycling, and disposal of solid waste generated by the project.
- The project will comply with the Massachusetts Idling Regulation (310 CMR 7.11). The regulation prohibits motor vehicles from idling their engines more than five minutes unless the idling is necessary to service the vehicle or to operate engine assisted power equipment or other associated power.
- The Proponent acknowledges the importance of emission controls and will encourage contractors to comply with MassDEP’s “Diesel Engine Retrofits in the Construction Industry: A How to Guide” and the use of ultra-low sulfur diesel in off-rad engines. The

construction contractor is encouraged to use equipment fitted with diesel oxidation catalysts (DOC) or diesel particulate filters (DPF) to reduce emissions.

- Air Pollution Control is regulated by MassDEP through 310 CMR 7.09 – Dust, Odor, Construction and Demolition. All construction and demolition for this project shall comply with these regulations.
- Dust mitigation measures shall be implemented on site as necessary. Dust control will be implemented as needed once site grading has been initiated and during windy conditions while site grading is occurring. Dust from the site shall be controlled by using a mobile pressure-type distributor truck to apply water to disturbed areas. At least one mobile unit shall be available at all times to distribute water to control dust on the project area. If field observations indicate that additional protection from wind erosion (in addition to, or in place of watering) is necessary, alternative dust suppressant controls should be implemented.
- Efforts will be made to minimize the impact of noise resulting from construction activities. Noise is regulated by MassDEP through 310 CMR 7.10 – Noise (also known as the “Noise Regulation”) with further guidance is provided in MassDEP “Noise Guideline Document” dated 4/2003 and MassDEP Division of Air Quality Control Policy Number 90-001. All construction and demolition for this project shall comply with these regulations and guidelines.

12.9 Summary of Mitigation Efforts Relative to EJ Populations

As detailed in Section 10 the factors reviewed appear to show an absence of any “unfair or inequitable” environmental burden or related public health consequence borne by the identified EJ Populations as compared to the general population, therefore it is unlikely that the environmental and public health impacts from the proposed project, or proposed alternatives, would have a disproportionate adverse effects on the EJ Populations.

As discussed in Section 8.1, the DPM emissions in the EJ community will be less than those in the non-EJ community by nearly 50 percent. To further ensure diesel vehicle traffic impacts will remain low, some achievable strategies to reduce DPM emissions from diesel trucks are the following¹⁷:

- Backhaul Optimization: Instead of driving empty backhauls, loads in drivers’ route are found.
- Cube Optimization: Organization of items within the trailer, so that more of the volume of the trailer is used.
- Co-loading: Matching loads that have origins or destinations on similar routes.
- Electrification: Electrifying tractor trailers; and

¹⁷ Avi Merksy and Therese Langer, “Achieving Freight Transport GHG Emissions Reductions Through Emerging Technologies”, November 2021.

- Trailer Pairing: Tractors pairing with an available compatible tractor.

The Project will implement cube optimization and continue to study the other mitigation measures mentioned above. The mitigation measure was used to calculate 2% emissions reductions for the diesel trucks of the DPM emissions mitigation analysis.

As outlined in Section 7, The Project is expected to result in 154 truck trips on an average weekday and between five (5) and eight (8) truck trips during the weekday peak commuter hours. Truck trips are expected to be oriented to and from I-495, with approximately 60 percent expected to oriented to/from the north (toward I-90) and 40 percent oriented to/from the south (I-95 and Route 24), and will traverse the short segment of King Street between the I-495 ramps and the Project site and are not expected to be routed through the EJ populations. As stated previously in the context of the I-495 corridor which accommodated approximately 87,332 vehicles per day in 2019, the additional truck trips would constitute an increase of less than 0.2 percent in overall traffic on a daily basis when considered the dispersal of truck traffic to the north and south on I-495, which would be considered nominal and not readily apparent over current conditions. With respect to King Street, the segment of the roadway where the primary truck activity will occur is located within the State Highway Layout as a part of the King Street/I-495 interchange, and does not include residential uses or other sensitive receptors.

In order to reduce the overall number of new truck trips in the area and that may be traversing an EJ population area, the Project proponent will seek to engage and retain service providers for trash, recycling and other services from providers that are currently serving the area.

12.10 Summary Overview of Mitigation Commitments

Table 12.1 below provides an outline of mitigation commitments including estimated individual costs for each, parties responsible for implementation, schedule of implementation and associated agency action/permit.

Table 12.1: Proposed Mitigation Commitments

Mitigation Category / Category / Commitment	Responsible Party	Schedule of Implementation	Estimated Cost	Agency Action or Permit
<i>Traffic</i>				
Design and construct the Project site Driveway opposite Constitution Blvd. and incorporate into the traffic signal system at the King St./Constitution Blvd intersection.	Project Proponent	Prior to Occupancy	\$970,000	Mass DOT
Design and implement an optimal traffic signal timing, phasing and coordination plan for the King St. coordinated traffic signal system	Project Proponent	Prior to Occupancy	\$45,000	
Replace the emergency signal on King St. at Franklin Fire Station No. 2 with a traffic signal to be operated in conjunction with the traffic signal at the King St./Constitution Blvd intersection and install “Do Not Block” signs and pavement marking on King St at the Fire Station No.2 driveway	Project Proponent	Prior to Occupancy	\$185,000	
Implement TDM Program	Project Proponent	Prior to Occupancy and On-Going Thereafter	N/A	
<i>GHG</i>				
Project Design Mitigation Case Items ¹	Developer & Tenant	Prior to Occupancy	\$450,000	N/A ²
<i>Wetlands</i>				
Wetland Replication Areas	Project Proponent	Prior to Occupancy	\$100,000	DEP, Franklin Conservation Commission / Army Corps
Bank Restoration	Project Proponent	Prior to Occupancy	\$25,000	
Buffer Zone Restoration	Project Proponent	Prior to Occupancy	\$10,000	
<i>Environmental Justice</i>				
DPM emissions reduction Strategies (Backhaul optimization, cube optimization, co-loading; electrification and trailer pairing)	Developer & Tenant	Prior to Occupancy and On-Going Thereafter	N/A	N/A
Engage and retain service providers for trash, recycling and other services from providers that are currently serving the area	Tenant	After Occupancy	N/A	N/A

¹GHG Mitigation case committed to as part of response to DOER comments however it will have a positive impact or the air quality for the nearby EJ Population.

²Refer to self-certification noted in Section 12.7