APPLICATION OF GALES FERRY INTERMODAL, LLC TO LEDYARD INLAND WETLANDS AND WATERCOURSES COMMISSION

NARRATIVE DESCRIPTION OF CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION CONTROL PLAN RELATIVE TO AGGREGATE REMOVAL AND PROCESSING FOR THE PREPARATION OF AN INDUSTRIAL SITE FOR FUTURE INDUSTRIAL DEVELOPMENT AT 1737 AND 1761 ROUTE 12, LEDYARD, CONNECTICUT

DATE: APRIL 3, 2023

OVERVIEW

The instant application is an application for a permit to conduct regulated activities in conjunction with a regrading operation to create additional building pads for future industrial development on real property owned of record by Gales Ferry Intermodal, LLC (the "Applicant") at 1737 and 1761 Route 12, Gales Ferry, Connecticut as depicted as Lots 1737 and 1761 on Ledyard Assessor's Map 61 (hereinafter, the "Property"). The application parcel is located in an Industrial Zoning District and contains 165 acres of land, more or less. The proposed regrading operation is contemplated on approximately 38 acres of the Property in order to ready the Property for future industrial development in conjunction with the placement of approximately 300,000 square feet of industrial space. The proposed site regrading and preparation application will be conducted in four (4) phases with each phase of the proposed site regrading being maintained at or less than ten (10) acres of disturbed land in accordance with the requirements of the Town of Ledyard Zoning Regulations. Based upon test borings conducted on the Property, the site preparation will require the removal of topsoil and bedrock with the result being the creation of approximately 30-usable acres of the project site suitable for the placement of future industrial buildings and the finished grading resulting in a rock cut along the southerly periphery of the site regrading area.

It is anticipated that the majority of the earthen material removed from the site will be processed on site and removed from the site primarily by way of barge or rail, both of which are located near the westerly periphery of the Property.

Site testing conducted on the Property evidences the fact that the proposed site grading area is overlaid with a layer of surficial material (as is more particularly described in the Soil Characteristics section of this Narrative) and underlaid with bedrock.

While the instant application has been formulated in order to take advantage of (i) the industrial zoning district classification of the Property (ii) the fact that the Property is located on the shore of the Thames River with deep water access suitable for the shipping of materials and (iii) the fact that the Property is bisected by the rail line of the Providence and Worcester Railroad Company; and is therefore a strategically located site for future industrial development, the removal of aggregate material to ready the site for future industrial development provides an essential product in the marketplace in and of itself. Due to the nature of the site preparation activities, proper design controls and cultural controls must be utilized in order to ensure that the regrading operation is conducted in an environmentally and ecologically appropriate manner,

giving due consideration to the inland wetland and watercourse resources which are located on and in proximity to the area of proposed regrading. The plans for this proposed regrading activity to ready the site for future industrial development, prepared by Loureiro Engineering Associates, Inc., and this Narrative, specify, in detail, the manner in which the proposed material removal operation will be conducted in accordance with the applicable Town of Ledyard Inland Wetlands and Watercourses Regulations and the Ledyard Zoning Regulations; and in a manner which will provide for compensatory mitigation for the wetland removed in the Phase 4 extraction area; and in the event that an adverse impact occurs to the hydrology of the wetland systems located northerly and westerly of the location for the proposed grading operation for the loss of the functionality in those systems.

In conjunction with the proposed regrading of the southerly portion of the application parcel, the Applicant proposes to conduct certain regulated activities delineated in the next section of this Narrative. These regulated activities are required to create future industrial land suitable for the accommodation of up to 300,000 square feet of future industrial building development.

DELINEATION OF REGULATED ACTIVITIES

- 1. Removal of an isolated pocket of inland wetlands delineated by the Z series of flagging in the Phase 4 site regrading area resulting in the loss of approximately 1,700 square feet of inland wetland area.
- 2. Culverting of 200 linear feet of intermittent watercourse to provide site access for site vehicles to the regrading area and to provide for future vehicular access to this area of the Property for future industrial uses.
- 3. Disturbance of 225,591 square feet of upland review area, of which 125,901 square feet is currently disturbed as a result of historic industrial operations dating back for nearly 200 years, in conjunction with the regrading activities easterly and southeasterly of isolated pockets of wetlands and the intermittent watercourse delineated by Wetland Flags WC-1 to WC-22.

SOIL CHARACTERISTICS ON THE PROPERTY

The portion of the Property located southerly and southwesterly of the existing American Styrenics manufacturing facility contains primarily upland soils, with small wetland areas and two (2) intermittent watercourses; (i) the first located in the Phase 1 project area and (ii) the second located in the Phase 4 project area. The first intermittent watercourse is located adjacent northwesterly to the proposed site development area and intervening between the proposed site development area and the Thames River to the west. The second intermittent watercourse is located northerly of the Phase 4 project area and adjacent southerly to the Americas Styrenics leasehold area. Soil characteristics on the site are as follows:

WETLAND SOILS

Ridgebury-Leicester-Whitman Soils (3). These poorly drained and very poorly drained soils are found in drainageways and depressions on glacial till, upland hills, ridges, plains and

drumloidal landforms. Stones and boulders cover 8-25% of the surface. Slopes range from 0-30%. The mapped acreage of this undifferentiated group is about 35% Ridgebury soil, 30% Leicester soil, 20% Whitman soil and 15% other soils. Some mapped areas consist of one of these soils, and other areas consist of two or three. These soils were mapped together because there are no major differences in use and management.

The soil stratification for the Ridgebury soil is as follows:

- 0" 1" Partly decomposed leaves.
- 0"-4" Black, fine sandy loam; weak medium granular structure; friable; common fine roots; 5% rock fragments; strongly acid; clear wavy boundary.
- 4" 13" Gray fine sandy loam; common medium distinct strong brown mottles and common, medium faint yellowish brown mottles; massive; friable; 5% rock fragments; strongly acid; gradual wavy boundary.
- 13" 20" Brown fine sandy loam; many medium distinct yellowish brown mottles and few fine faint grayish brown mottles; massive; friable; firm in place; 10% rock fragments; slightly acid; clear wavy boundary.
- 20" 60" Grayish brown sandy loam; few fine faint yellowish brown mottles; massive; very firm, brittle; 5% rock fragment; slightly acid.

The soil stratification of the Leicester soil is as follows:

- 0" 2" Decomposed leaves.
- 2"-6" Very dark gray fine sandy loam; weak fine granular structure; very friable; few fine and medium roots; 5% rock fragments; very strongly acid; abrupt smooth boundary.
- 6" 12" Dark grayish brown, fine sandy loam; few fine faint yellowish-brown mottles and many medium distinct light brownish gray mottles; weak medium subangular blocky structure; very friable; few medium roots; 5% rock fragments; strongly acid; clear wavy boundary.
- 12" 24" Grayish brown, fine sandy loam; few medium distinct yellowishbrown and dark grayish brown mottles; weak medium subangular blocky structure; friable; 10% rock fragments; strongly acid; gradual wavy boundary.
- 24" 32" Pale olive fine sandy loam; many course distinct yellowish brown mottles; weak medium subangular blocky structure; friable; 15% rock fragments; strongly acid; gradual wavy boundary.

32" – 60" Light olive gray gravelly fine sandy loam; many medium distinct yellowish-brown mottles; massive; friable; 25% rock fragment; strongly acid.

The soil stratification of the Whitman soil is as follows:

- 0" 1" Decomposed leaf litter.
- 1" 9" Black fine sandy loam; weak medium granular structure; friable; common fine and medium roots; strongly acid; abrupt wavy boundary.
- 9" 16" Dark grayish brown fine sandy loam; few fine faint yellowish brown mottles; weak medium subangular blocky structure; friable; few fine roots; 5% rock fragments; medium acid; clear wavy boundary.
- 16" 22" Grayish brown, fine sandy loam; common medium distinct strong brown mottles and few medium light brownish gray mottles; moderate medium platy structure; very firm, brittle; 5% rock fragments; slightly acid; gradual wavy boundary.
- 22" 60" Grayish brown fine sandy loam; common medium distinct strong brown mottles and few medium faint light brownish gray mottles; massive; firm, brittle; 5% rock fragments; slightly acid.

Included with these soils in mapping are small areas of moderately well drained Rainbow, Sutton and Woodbridge soils and very poorly drained Adrian and Palms soils. The Ridgebury soil has a seasonal high water table at a depth of about 6". Permeability is moderate or moderately rapid in the surface layer and subsoil and slow or very slow in the substratum. The Leicester soil has a seasonal high water table at a depth of about 6". Permeability is moderate or moderately rapid. The Whitman soil has a high water table at or near the surface for most of the year. Permeability is moderate or moderately rapid in the surface layer and subsoil and slow or very slow in the substratum.

Aquent Soils - These poorly drained and very poorly drained soils are formed in human transported material or on excavated (cut) landscapes on flood plains. Slopes range from 0 to 3 percent.

The soil stratification for the Aquent soil is as follows:

- 0" 4" Black silt loam, light brownish gray dry; weak fine to medium granular structure; very friable; may fine to coarse roots; slightly alkaline; abrupt wavy boundary
- 4" 14" Dark grayish brown fine sand; single grain; loose; many fine to coarse roots; 10 % light olive gray lenses of stratified loamy fine sand to sand; common fine to coarse prominent strong brown soft masses of iron

accumulation and few fine to coarse faint gray iron depletions; slightly alkaline; gradual wavy boundary

14" – 21"	Very dark grayish brown very fine sand; single grain; loose; common fine to medium roots; many fine to coarse prominent strong brown soft masses of iron accumulation; slightly alkaline; abrupt wavy boundary
21" – 38"	Very dark gray silt loam; massive; very friable; few fine to medium roots; 1" thick lense of medium sand; common partially decomposed wood fragments; common fine prominent yellowish red soft masses of iron accumulation; slightly alkaline; clear wavy boundary
38" – 45"	Very dark gray fine sandy loam; massive; very friable; many charcoal fragments; common fine prominent yellowish red soft masses of iron accumulation; slightly alkaline; clear smooth boundary
55''-60''	Black fine sandy loam; massive; very friable; neutral.

Permeability of the Aquent soil is moderate to very rapid.

UPLAND SOILS

Hinckley Soils - HkD. This moderately steep and steep, excessively drained soil is found on stream terraces, outwash plains, kames and eskers. Mapped areas are dominantly irregular in shape and mostly 2 to 35 acres. Typically, the Hinckley soil has a dark brown, gravelly sandy loam surface layer 2 inches thick.

The soil stratification of the Hinckley soil is as follows:

0" – 7"	Dark brown gravelly sandy loam; weak fine granular structure; very friable; many fine roots; 20% coarse fragments; medium acid; abrupt wavy boundary.
7" – 14"	Yellowish brown gravelly loamy sand; single grain; loose; few fine roots; 25% coarse fragments; medium acid; gradual wavy boundary.
14" – 22"	Yellowish brown gravelly loamy sand; single grain; loose; few fine roots; 40% coarse fragments; strongly acid; clear wavy boundary.
22" – 60"	Brownish yellow very gravelly coarse sand; single grain; loose; 60% coarse fragments; medium acid

Permeability of the Hinckley soil is rapid in the surface layer and subsoil and very rapid in the substratum. The available water capacity is low. Runoff is very rapid.

Hollis – Charlton – Rock Outcrop Complex (also characterized as the Hollis-Chatfield Complex) (HrD) 15 - 45% Slopes. This moderately steep to very steep complex consists of somewhat excessively drained and well-drained soils and rock outcrop found on glacial till

uplands. Stones and boulders cover 1 to 8% of the surface. Mapped areas are irregular in shape and mostly 2 to 45 acres. The soils and rock outcrop in this complex are so intermingled on the landscape that it was not practical to separate them in mapping at the scale used. This complex is about 40% Hollis soil, 25% Charlton soil, 20% rock outcrop and 15% other soils.

The soil stratification of the Hollis soil is as follows:

- 0"-2" Very dark brown fine sandy loam; weak medium granular structure; very friable; many fine roots; 5% rock fragments; strongly acid; clear wavy boundary.
- 2"-5" Dark brown fine sandy loam; weak medium granular structure; very friable; common fine roots; 5% rock fragments; strongly acid; gradual wavy boundary.
- 5" 12" Dark yellowish brown fine sandy loam; weak medium subangular structure; very friable; common fine roots; 5% rock fragments; strongly acid; gradual wavy boundary.
- 12" 17" Dark yellowish brown fine sandy loam; weak medium subangular blocky structure; very friable; common fine roots; 5% rock fragments; strongly acid.
- 17" Hard, unweathered schist bedrock

The soil stratification of the Charlton soils is as follows:

0"-4"	Fine sandy loam.
4" – 7"	Fine sandy loam.
7 – 19"	Fine sandy loam.
19" – 27"	Gravelly fine sandy loam.
27" – 65"	Gravelly fine sandy loam.

The soil stratification of the Chatfield soil is as follows:

0" – 1"	Highly decomposed plant material
1"-6"	Gravelly fine sandy loam.
6" – 15"	Gravelly fine sandy loam.
15" – 29"	Gravelly fine sandy loam.

 $29^{\circ}-80^{\circ}$ Unweathered bedrock.

Hollis – Charlton – Rock Outcrop Complex 3-15% slopes (also characterized as the Hollis-Chatfield Complex) (HrC). This gently sloping to sloping complex consists of somewhat excessively drained and well-drained soils and rock outcrop on glacial till uplands. Stones and boulders cover 1 to 8% of the surface. Mapped areas are irregular in shape and mostly 2 to 45 acres. The soils and rock outcrop in this complex are so intermingled on the landscape that it was not practical to separate them in mapping at the scale used. This complex is about 40% Hollis soil, 25% Charlton soil, 20% rock outcrop and 15% other soils.

The soil stratification of this Hollis – Charlton – Rock Outcrop soil is as follows:

- 0" 2" Very dark brown fine sandy loam; weak medium granular structure; very friable; many fine roots; 5% rock fragments; strongly acid; clear wavy boundary.
- 2" 5" Dark brown fine sandy loam; weak medium granular structure; very friable; common fine roots; 5% rock fragments; strongly acid; gradual wavy boundary.
- 5" 12" Dark yellowish brown fine sandy loam; weak medium subangular structure; very friable; common fine roots; 5% rock fragments; strongly acid; gradual wavy boundary.
- 12" 17" Dark yellowish brown fine sandy loam; weak medium subangular blocky structure; very friable; common fine roots; 5% rock fragments; strongly acid.
- 17" Hard, unweathered schist bedrock

The soil stratification of the Charlton soils is as follows:

0" – 4"	Fine sandy loam.
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- 4" 7" Fine sandy loam.
- 7-19" Fine sandy loam.
- 19" 27" Gravelly fine sandy loam.
- 27" 65" Gravelly fine sandy loam.

The soil stratification of the Chatfield soil is as follows:

0" – 1" Highly decomposed plant material.

1"-6"	Gravelly fine sandy loam.
6" – 15"	Gravelly fine sandy loam.
15" – 29"	Gravelly fine sandy loam.
29" - 80"	Unweathered bedrock.

Rock Outcrop – Hollis Complex (Rp). This gently sloping to very steep complex consists rock outcrop and a somewhat excessively drained soil on glacial till uplands. Stones and boulders cover 1 to 8% of the surface. Mapped areas are irregular in shape and mostly 2 to 15 acres. Slopes range from 3 to 45%. Rock Outcrop and Hollis soil are so intermingled on the landscape that it was not practical to separate them in mapping at the scale used. This complex is about 50% rock outcrop, 30% Hollis soil, and 20% other soils. Rock outcrop is hard, unweathered, exposed bedrock. It is mainly gneiss and schist.

The soil stratification for the Hollis component of this complex has been previously stated in this Narrative.

Udorthent – Urban Land Complex (Ud). This complex consists of excessively drained and moderately well-drained soils that have been disturbed by cutting or filling and areas that are covered by buildings or pavement. Mapped acres are mostly 5 to 40 acres. Slopes range from 0 to 15%. About 60% of this complex is Udorthents, 25% is urban land, and 15% is other soils. The areas of Udorthents and urban land are so intermingled on the landscape that it was not practical to map them separately. Some areas of Udorthents have been cut to a depth of 2 feet or more, and some have been covered with more than 2 feet of fill. Permeability of the Udorthents is slow to very rapid. The available water capacity and runoff are variable. Most areas were cut or filled in order to smooth sites for community developments, recreational facilities, and roads. This complex requires onsite investigation and evaluation for most uses. Udorthents are found on the landscape with excessively drained Hinckley soils, somewhat excessively drained Hollis and Merrimack soils; well-drained Canton, Charlton, Narragansett, Agawam, Paxton and Montauk soils; and moderately well-drained Sutton, Woodbridge, Rainbow, Sudbury and Ninigret soils. Udorthents are found in a complex pattern on the landscape with urban land and pits, gravel. Coarse fragments range from 0-65% in the soil. Udorthents are very strongly acid to slightly acid.

GENERAL PROCEDURES

 Prior to the initiation of construction activities on the project site, the applicant shall meet with the Zoning Enforcement Officer and Wetlands Enforcement Officer of the Town of Ledyard to agree upon the methodology for the installation, maintenance and repair of erosion and sediment control measures as delineated on a plan entitled "Gales Ferry Intermodal Industrial Site Preparation Plans 1737 and 1761 Route 12 Gales Ferry, CT 06335 April 3, 2023 Property Owner / Applicant: Gales Ferry Intermodal LLC 549 South Street Quincy, MA 02169 Prepared By: Loureiro Engineering Associates, Inc. 100 Northwest Drive Plainville, Connecticut 06062 Phone: 860-747-6181 Fax: 860-747-8822" (hereinafter the "Plan"). In no event shall actual excavation and extraction operations commence until such time as erosion and sediment control measures have been installed and inspected and approved by the Town of Ledyard Zoning Enforcement Officer and Ledyard Wetlands Enforcement Officer.

- 2. The Applicant's engineer shall delineate in the field the limits within which the Phase 1 excavation and extraction operations shall occur.
- 3. All operations approved under the permit issued by the Town of Ledyard Inland Wetlands and Watercourses Commission shall be conducted by the Applicant in accordance with the approved Plan and this Narrative. This Narrative and the approved Plan delineated herein shall be incorporated into any permit to conduct regulated activities approved by the Town of Ledyard Inland Wetlands and Watercourses Commission and/or the Town of Ledyard Planning and Zoning Commission.
- 4. All erosion and sediment control measures shall be inspected at least weekly while activities are ongoing and after every storm event resulting in a discharge and repaired and maintained as necessary. Sediment traps shall be restored to their design capacity when they reach 50% of their design capacity. Removed surficial material shall be utilized as structural site fill.
- 5. During the stabilization period (after construction has been completed in each phase of the regrading activities, but prior to certification of approval by the Zoning Enforcement Officer of the Town of Ledvard and the Wetlands Enforcement Officer of the Town of Ledyard for the removal thereof), the structural integrity of silt fence and water quality and sediment traps shall be maintained. Alan Perrault, consultant to Gales Ferry Intermodal, LLC, or his designee, shall be responsible for compliance with all erosion and sediment control measures in conjunction with the extraction operation. The addresses of Alan Perrault and Chase Davis is 549 South Street, Quincy, Massachusetts 02169. Their e-mail addresses are aperrault@jaycashman.com, cdavis@jaycashman.com. All erosion and sediment control measures shall be inspected, maintained and/or repaired, as necessary, on a weekly basis during the stabilization period and after each storm occurrence resulting in a discharge. Perrault and Davis shall be the designated representative for the implementation of all of the terms and conditions of the erosion and sedimentation control plan for the industrial regrading of the Property in order to ready the same for future industrial development.
- 6. During the stabilization period, any erosion which occurs shall be immediately repaired by the Applicant, reseeded with the seeding mixes set forth in the Construction Sequencing section of this Narrative and restabilized. Since the southerly limits of the improved industrial site will be a semi-vertical rock cut, no stabilization measures are contemplated or required along the finished face of the rock cut.
- 7. Once stabilization has been completed and certification thereof obtained in writing from the Zoning Enforcement Officer of the Town of Ledyard and the Wetlands Enforcement Officer of the Town of Ledyard, all erosion and sediment control measures as delineated on the Plan shall be removed by the Applicant and the operating floor of the rock removal area shall be stabilized as described in the Construction Sequencing section of this Narrative until such time as that area is developed for future industrial development.

8. The extraction contemplated by this application will render the Property in a condition suitable for future utilization for industrial development pursuant to the Zoning Regulations of the Town of Ledyard in the Industrial Zoning District. Until such uses have been implemented, the area of extraction shall be stabilized in accordance with the procedures delineated in the Construction Sequencing section of this Narrative.

CONSTRUCTION SEQUENCING

- 1. The Applicant shall, prior to the commencement of operations on the Property, secure all necessary local, state and federal permits and file all applicable stormwater registrations as required by applicable law.
- 2. The Applicant, together with its contractor, shall engage in the pre-construction meeting with the Town of Ledyard staff as required by Paragraph 1 of the General Procedures section of this Narrative.
- 3. The Applicant shall install a double row of mulch sock immediately down gradient from the Phase 1 site preparation area where there are wetlands downgradient. Otherwise, a single row of mulch sock down gradient of Phase 1 site preparation area.
- 4. The Applicant shall install the Phase 1 temporary sediment trap in the location delineated on Sheet 7 of 13 of the Plan and associated piping, pump, fractionalization tank and weir tank as shown on Sheet 6 of 13 and Sheet 7 of 13 of the Plan.
- 5. The Applicant's contractor shall install an anti-tracking pad in accordance with the antitracking pad detail contained on Sheet 13 of 13 of the Plan at the interface of the active construction area with the haul road to the Applicant's processing facility to be installed on the Property. See Sheets 6 of 13 and 7 of 13 of the Plan for location of anti-tracking pad construction entrance to site preparation area.
- 6. The crossing of the intermittent watercourse shall be effected by excavating to design grade for the installation of the cross culvert. Upon attaining rough grade, the area for culvert installation shall be bedded with not less than 18" of riprap and 6" of gravel. A 36" reinforced concrete pipe (RCP) culvert shall be installed with flared end sections at the inlet and outlet. Plunge pool outlet protection shall be installed at the outlet of the cross culvert in accordance with the detail delineated on Sheet 13 of 13 of the Plan. The cross culvert shall be backfilled with not less than 12" cover sand or other bedding material which will protect integrity of the RCP culvert. Thereafter, the area of the crossing shall be backfilled to grade with site materials and improved with not less than 8" of compacted bankrun gravel suitable for the accommodation of the weight of loaded site trucks.
- 7. The Applicant shall strip the topsoil and subsoil in the Phase 1 excavation area. All topsoil and subsoil shall be retained onsite for use in the final stabilization and reclamation of the site. The topsoil shall and subsoil shall be retained in a surface soil stockpile which shall be formed with slopes not exceeding the angle of repose. The surface soil stockpile shall be encircled with a single row of silt fence installed in accordance with the silt fence detail

delineated on Sheet 6 of 13 of the Plan. The surface soil stockpile shall be stabilized by seeding with a perennial ryegrass mix and mulch. The perennial ryegrass mix shall be applied at a rate of 40 pounds per acre. Mulch shall be applied at a rate of 80 pounds per 1,000 square feet, and shall be spread by hand or with a mulch blower.

- 8. The proposed site preparation for future development will involve the extraction of rock from the project site.
- 9. Surficial material (other than topsoil and subsoil) shall be excavated from the Phase 1 extraction area and removed by truck to the processing facility of the Applicant to be located as depicted on Sheet 6 of 13 of the Plan.
- 10. Bedrock will be severed from the land in well-designed and controlled blasts in order to produce "shot rock" for processing. Prior to engaging in any blasting activities on the Property, the Applicant's blasting contractor shall conduct a complete pre-blast survey. The Applicant's geotechnical/blasting consultant will determine a safe pre-blasting survey radius. The pre-blast survey will include collecting background water quality data for nearby domestic wells and surface water. Each blast will be monitored with a seismograph at pre-determined locations in order to record the data (ground vibration and air overpressure (decibel levels)) associated with each blast to ensure that each blast is being conducted in a safe and proper manner which will not result in any property damage.
- 11. Throughout the duration of the excavation operation and thereafter on a permanent basis, a chain link fence will be maintained along the top of the operating face of the excavation operation in order to prohibit the inadvertent trespass onto the operating portion of the Property.
- 12. Shot rock shall be removed from the Phase 1 extraction site by site trucks for processing to marketable material at the processing plant of the Applicant to be installed on the Property in the location delineated on Sheet 6 of 13 of the Plan. It is anticipated that the majority of the processed material will be removed from the Property by rail or barge.
- 13. The Phase 1 operating area shall be over-excavated to a depth of 6 feet and thereafter backfilled with stone dust or equally suitable material order to accommodate the installation of future underground utilities necessary to serve the future industrial development of the Property.
- 14. Upon completion of the extraction of stone in each phase of the project, the Applicant shall backfill the future development pad with a minimum of 6 feet of compacted stone dust (or equally suitable material) as delineated in the preceding paragraph and place sufficient fill material, specified by the Applicant's engineer, to support the growth of the hereinafter specified vegetation until such time as an industrial end-user for the Property has been identified. Thereafter, the building pad area shall be loamed with not less than 4 inches of topsoil which has been stripped from the project site and stored in temporary soil stockpile locations. Areas to be seeded will be prepared by spreading ground limestone equivalent to 50% calcium plus magnesium oxide applied at a rate of 100 pounds per 1,000 square feet. Fertilizer (10-10-10) is to be applied at a rate of 15 pounds per 1,000 square feet.

Following the initial application of lime and fertilizer, there are to be no periodic applications of lime and fertilizer. After seeding, the area shall be stabilized with hay mulch immediately applied at a rate of 80 pounds per 1,000 square feet and anchored after spreading by tracking. Seeding shall be applied with a conservation mix specified by the project engineer based upon soil types from one of the following categories: (i) switchgrass applied at a rate of 4 pounds per acre, big bluestem applied at a rate of 4 pounds per acre, little bluestem applied at a rate of 2 pounds per acre, sand lovegrass applied at a rate of 1.5 pounds per acre and bird's-foot trefoil applied at a rate of 2 pounds per acre for a total application of 13.5 pounds per acre or (ii) flatpea applied at a rate of 10 pounds per acre, perennial pea applied at a rate of 2 pounds per acre, crown vetch applied at a rate of 10 pounds per acre and tall fescue applied at a rate of 2 pounds per acre for a total application of 24 pounds per acre or (iii) orchardgrass applied at a rate of 5 pounds per acre, tall fescue applied at a rate of 10 pounds per acre, redtop applied at a rate of 2 pounds per acre and bird's-foot trefoil applied at a rate of 5 pounds per acre for a total application of 22 pounds per acre. Seeding shall only occur during the periods April 15 to June 15 and August 15 to October 1.

- 15. The stabilization measures delineated in the preceding paragraph of the Construction Sequencing section of this Narrative are intended to stabilize the disturbed area of the Property until such time as an end-user for industrial development is identified and the site is fully developed in accordance with a final site plan approved by the Town of Ledyard Planning and Zoning Commission.
- 16. The methodologies delineated in Paragraphs 1 to 14 of the Construction Sequencing section of this Narrative shall be followed sequentially for Phases 2, 3 and 4 of the proposed site preparation endeavor.

WETLAND MITIGATION

The proposed regrading area (i) encompasses a small pocket of wetlands in the Phase 4 regrading area (ii) the culverting of 200 linear feet of intermittent watercourse and (iii) is abutted to the north and northwest by a series of wetland and watercourse systems, the characteristics of which are more particularly described in a report entitled "Wetlands Assessment and Mitigation Site Preparation for Future Industrial Development 1737 and 1761 Route 12, Gales Ferry (Ledyard), CT REMA Job #23-2596-LED5" prepared by REMA Ecological Services, LLC and submitted or to be submitted to the Town of Ledyard Inland Wetlands and Watercourses Commission with respect to this permit application. Activities proposed in conjunction with this application will result in the elimination of an isolated pocket of wetlands containing 1,700 square feet and the elimination of 200 linear feet of intermittent watercourse; and, the Applicant recognizes the fact that the proposed extraction raises an area of possible concern and/or impact with respect to the adjacent wetland/watercourse areas to the north and west of the proposed regrading area. The possible indirect impact is that the reduction of contributing watershed area to the adjacent wetland systems and/or the time of concentration will adversely impact the hydrology of these adjacent resources.

The Applicant is proposing complete mitigation for the area of direct wetland and watercourse impact. In addition, to mitigate against possible adverse impacts, the Applicant is

proposing that the Applicant be required to monitor the hydrology of the adjacent northerly and westerly wetland systems on a semi-annual basis commencing with the date of commencement of extraction in the Phase 1 extraction area and continuing through and including a period of five (5) years subsequent to the date that the Applicant completes the regrading–on the Property. The monitoring of the wetland system shall be conducted by a wetland scientist approved by the Ledyard Inland Wetlands and Watercourses Commission. The wetland scientist shall be required to submit written reports to the Ledyard Inland Wetlands and Watercourses Commission. In the event that the wetland scientist notes that the regrading authorized by this Application is resulting in an adverse hydrologic impact to the adjacent northerly and westerly wetland systems, the Applicant shall be required, as a condition of the wetland permit issued in conjunction with this permit application, to create additional compensatory wetlands as a component of the closure plan for this project (the "Mitigation").

The Applicant shall create a Mitigation area equal to three hundred (300%) percent of the area of regulated inland wetlands and/or watercourses which have been adversely impacted by the site regrading and associated activities. The wetland Mitigation area shall be identified by the Applicant's wetland consultant and shall be constructed within the limits of the Property. The wetland Mitigation area shall be constructed and planted under the supervision of a wetland scientist and/or wetland biologist experienced in wetland creation and mitigation. The wetland Mitigation area shall be designed in order to create a diverse wetland environment that currently does not exist on the Property. The wetland creation area will be constructed in accordance with the protocol established in the report prepared by REMA Ecological Services, LLC and submitted to the Ledyard Inland Wetlands and Watercourses Commission with this application.

The final site grading shall be modified to provide a positive gradient to the mitigation area in order to ensure that an adequate water supply exists to support the wetland plants specified for the Mitigation. The wetland scientist and/or wetland biologist experienced in the science of wetland creation shall specify a planting scheme and monitoring plan for the Mitigation, which planting scheme shall be submitted to, and approved by, the Ledyard Inland Wetlands and Watercourses Commission prior to commencement of the construction of the Mitigation. The specific planting scheme will not be determined until such time as the Mitigation has been finally shaped and the depth of inundation in the Mitigation determined which will control the species of plants which will have the greatest likelihood of survival within said environment and which will be most successful in inhibiting the infestation of invasive species.

Contemporaneously with the approval of any permit for the regulated activities proposed in conjunction with this Application, the Ledyard Inland Wetlands and Watercourses Commission shall establish a performance bond for the Mitigation. Prior to the commencement of site regrading operations on the Property, the Applicant shall be required to post the performance bond with the Town of Ledyard, which performance bond shall be continued in full force and effect until such time as either (i) it is determined by the Applicant's wetland scientist that no adverse impacts have occurred or (ii) the Mitigation has been completed.

CERTIFICATIONS

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The Applicant hereby certifies pursuant to Section 7 of the Ledyard Inland Wetlands and Watercourses Regulations that:

- (a) That the Applicant is familiar with all information provided in the permit application and is aware of the penalties for obtaining a permit through deception or through inaccurate or misleading information.
- (b) The Applicant hereby authorizes the members and agents of the Town of Ledyard Inland Wetlands and Watercourses Commission to inspect the permit application property, at reasonable times, during the pendency of the submitted application and for the life of any permit issued thereunder.
- (c) No traffic attributable to the completed project on the application parcel will use streets within any adjoining municipality to enter or exit the site.
- (d) A portion of the Property on which the regulated activity is proposed is located within 500 feet of the municipal boundary of the Town of Montville.
- (e) Water drainage from the project site will not flow through and/or impact the drainage system within any adjoining municipality.
- (f) Water runoff from the improved site will not impact streets or other municipal or private property within an adjoining municipality.
- (g) No portion of the application parcel is located within the watershed of a water company as defined in Section 25-32a of the Connecticut General Statutes.

GALES FERRY INTERMODAL, LLC

By: