**TECHNICAL SPECIFICATIONS** 

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# SECTION 1.00 GENERAL REQUIREMENTS

# 1.01 SUMMARY OF WORK

# 1.01.1 Description:

The work required under this contract covers the following:

Installation of approximately 43,000 s.f. of concrete sidewalk with associated improvements.

The contractor shall purchase, provide, and install all materials and equipment necessary to complete the work specified.

The entire work provided for in these technical specifications and on the Drawings shall be constructed and finished in every respect in a good workmanlike and substantial manner. It is not intended that the Drawings shall show every detail piece of material or equipment, but such parts and pieces as may be in accordance with the best practices and regulatory requirements, even though not shown, shall be furnished and installed. All materials and equipment shall be new unless specifically stated otherwise in these Contract Documents.

#### 1.01.2 Location of Site:

The work site for this contract lies in Lisbon on Sergeant Way, Strawberry Street and Penny Lane as shown on the Contract Drawings.

### 1.01.3 Work Sequence

Work shall be sequenced so as to allow for the uninterrupted flow of vehicular traffic.

The Contractor shall submit a construction schedule and modify it from time to time as need arises. The Construction schedule shall be based on the specified completion time. The Construction Schedule shall show the order of work including such significant tasks as construction of lines, connections, backfill and compaction, temporary and permanent restoration. The Construction Schedule shall be submitted for the Owner's approval prior to start of Construction and updated at the time of submitting each request for progress payment.

#### 1.01.4 Survey Assistance:

Furnish helpers on an as needed basis to assist the Engineer in checking work.

# 1.01.5 Project Coordination

The work included in these Contract Documents is to be performed under the responsibility of a single prime contract. The Contractor is responsible for the coordination of all

the work, whether performed by its own personnel or its subcontractor, and will maintain such procedures as necessary to keep its workman and suppliers informed of project progress so as not to unnecessarily delay completion of the Work.

# 1.01.6 Standard Specifications

The Standard Specifications for Roads, Bridges, and Incidental Construction, Form 817, dated 2016 of the State of Connecticut, as specifically referenced to in the Technical Specifications, shall apply and be considered a part of this specification as though it were bound herein. The Standard Specification is available from the:

Department of Transportation Engineer of Contracts 2800 Berlin Turnpike P.O. Box 317546 Newington, CT 06131-7546

# SECTION 2.01 MAINTENANCE AND PROTECTION OF TRAFFIC

#### 1.0 DESCRIPTION

The Contractor shall maintain traffic in the project area to the satisfaction of the Owner. The Contractor must maintain pedestrian and vehicular traffic and permit access to businesses, factories, residences, and intersecting streets. Where detours will be required, the Owner may require the Contractor to submit a proposed detour plan for all portions of the work to the Owner. This submittal shall be made at least seven days prior to commencing construction. It shall be the sole responsibility of the Contractor to keep the Local Agencies (including but not limited to the Police and Fire Departments) prewarned at least 72 hours in advance of changes in traffic patterns due to reduction of pavement widths or closing of streets. The Contractor shall supply, install, maintain, adjust, move, relocate, and store all signs, suitably lighted barricades, traffic cones and traffic delineators, as necessary to carry out the traffic routing plan and maintain vehicular and pedestrian traffic. All of this work shall meet with the requirements of the Local Agencies and the Owner.

The Contractor shall furnish, light, and maintain such signs as may be directed, or may be necessary for the safe regulation, or convenience of traffic. Said signs shall be adequate for the regulation, safety and convenience of traffic. The Contractor shall provide, erect, and maintain suitably lighted barricades, warning lights, etc., as needed, or as directed in order to keep people, animals and vehicles from excavations, obstacles, etc. The Contractor may be required to employ trafficmen and take other such reasonable means of precautions as the Owner may direct, or as may be needed to prevent damage or injury to persons, vehicles, or other property, and to minimize the inconvenience and danger to the public by his construction operations. He shall arrange his operations to provide access to properties along the street including temporary bridges to driveways, and provide access to fire hydrants, manholes, gate boxes, or other utilities. Whenever any trench obstructs traffic in or to any public street, private driveway, or property entrance, the Contractor shall take such steps as required to maintain necessary traffic and access including temporary bridging if required. The Contractor shall confine his occupancy of public or traveled ways to the smallest space compatible with the efficient and safe performance of the work contemplated by the contract.

The Contractor shall observe and obey all local and state laws, ordinances, regulations and permits in relation to the obstruction of streets and highways, keeping passageways open and protecting traffic where there may be danger from blasting or other construction activities.

Suitable lighted barriers or barricades shall be furnished by the Contractor and put up and maintained at all times during the night or daytime, around all open ditches, trenches, excavations, or other work potentially dangerous to traffic. Such barricades shall be securely supported and braced at least 3 feet high above the ground. Barricades shall be placed on all sides and throughout the entire length and width of all open ditches, trenches, excavations, or other work which must be barred to the general public. Barricades shall be properly painted to

the satisfaction of the Owner in order to retain a high degree of visibility to vehicular and pedestrian traffic.

Suitably lighted barricades shall be defined as barricades lit by flashers in accordance with this paragraph or other lighting methods approved by the Owner in lieu thereof. Flashers shall be placed along the entire length of the barricades at an interval no greater than 8 feet, center to center. Flashers shall be power operated, lens directed, enclosed light units which shall provide intermittent light from 70 to 120 flashes per minute, with the period of light emittance occurring not less than 25 percent of each on-off cycle, regardless of temperature. The emitted light shall be yellow in color and the area of light on at least one face of the unit shall be not less than 12 square inches. The discernible light shall be bright enough to be conspicuously visible during the hours of darkness at a minimum distance of 800 feet from the unit under normal atmospheric conditions. For units which beam light in one or more directions, the foregoing specifications shall apply 10 degrees or more to the side and 5 degrees or more above and below the photometric axis.

The Contractor shall furnish and securely fasten flashing units to signs, barricades, and other objects in such numbers and for such lengths of time as are required for the maintenance and protection of traffic, or as the Engineer may order. The flasher shall be in operation during all hours between sunset and sunrise, and during periods of low visibility. The Contractor shall maintain, relocate and operate barricades and flashers throughout the life of the contract. No special payment will be made for barricades or flashers.

Should the Contractor or his employees neglect to set out and maintain barricades or lights, as required in these specifications, the Owner immediately, and without notice, may furnish, install and maintain barricades or lights. The cost thereof shall be borne by the Contractor any may be deducted from any amount due or to become due to the Contractor under this contract.

If the Contractor's operations or occupancy of any public street or highway, or the uneven surfaces over any trenches being maintained by the Contractor shall interfere with the removal or sanding of now or ice by the public authorities or adjoining land owners, in an ordinary manner with regular highway equipment, the Contractor shall be required to perform such services for the public authorities or adjoining owners without charge. If the Contractor fails to do so, he shall reimburse the said authorities or adjoining owners for any additional cost to them for doing such occasioned by conditions arising from the Contractor's operations, occupancy, or trench surfaces, together with any damage to the equipment of said parties by those conditions, or claims of any parties for damage or injury or loss by reason of failure to remove snow or ice or to sand icy spots under these conditions.

#### 4.0 MEASUREMENT AND PAYMENT

"Maintenance and Protection of Traffic" will be paid monthly in proportion to the amount of work done as determined by the Owner. Said payments will be a proportionate amount of the Lump Sum Price bid for the Maintenance and Protection of which shall include all costs for furnishing lighted barricades and traffic protection devices and for labor, equipment and services

involved in the erecting, maintaining, moving, adjusting, relocating and storing of signs, flashers, lights, barricades, traffic cones, traffic delineators and other devices furnished by the Contractor, as well as the cost of all labor and equipment involved in the maintenance of traffic lanes and detours ordered or included in the approved scheme for maintenance of traffic. Sufficient signing for all approved detours shall be erected to adequately guide traffic around construction.

The Contractor will be required under the Contract Lump Sum Price for "Maintenance and Protection of Traffic" to maintain and protect the traffic throughout the entire duration of the contract. No claim for additional payment due to unusual construction conditions encountered or delay caused by the Contractor or other outside agencies shall be considered.

# SECTION 2.03 WORK ON OR NEAR PRIVATE PROPERTY

#### 1.0 DESCRIPTION

The work under this Section includes the protection of private property and the restoration of areas near or on private property.

Every effort shall be made to protect private or public property during construction. All damaged areas shall be replaced in kind by the Contractor at no additional cost to the Owner.

#### 2.0 MATERIALS

All materials not specifically described in other Sections, but required for work included in this Section, shall be new, first quality of their respective kinds, and subject to the approval of the Owner.

# 3.0 CONSTRUCTION METHODS

All areas affected by the construction outside of the work limits shall be repaired to the complete satisfaction of the Owner. This work shall also include the reinstallation of all mailboxes, signs, and posts that may be affected during construction. Should these items become damaged by the construction, the Contractor shall replace the damaged items at no additional cost to the Owner.

# 4.0 MEASUREMENT AND PAYMENT

# SECTION 2.04 DEWATERING, CONTROL AND DIVERSION OF WATER

# 1.0 DESCRIPTION

The work covered under this Section includes furnishing all labor, equipment and materials, and performing all operations in connection with the dewatering, control and diversion of water, and all other operations necessary to maintain in a dry condition all excavation and work areas of this Contract.

The Contractor shall be responsible for performing all required dewatering in such a manner as to prevent injury to persons or public health, or damage to existing facilities of the work in progress.

#### 2.0 MATERIALS

The Contractor shall be responsible for providing, maintaining, operating and removing all dewatering, and other facilities, including all pumping and appurtenant equipment, required to maintain in a dry condition the areas in which construction of this Contract is to be conducted.

# 3.0 CONSTRUCTION METHODS

#### A. DEWATERING EXCAVATIONS:

The excavations for work required under this Contract are to some extent below existing ground water levels. The Contractor shall provide, operate and maintain all pumps, drains, well points, screens or any facility necessary for the control, collection and disposal of all surface and subsurface water encountered in the performance of the Contract work. All excavations shall be performed in the dry.

Any damage to existing facilities or new work resulting from the failure of the Contractor to maintain the work areas in a dry condition shall be repaired by the Contractor, as directed by the Owner, at no additional expense to the Owner. Pumping shall be continuous where specified or directed, or as necessary to protect the work and to maintain satisfactory progress.

The Contractor's pumping and dewatering operation shall be carried out in such a manner that no loss of ground will occur. All pipelines or structures not stable against up-lift during construction or prior to completion shall be thoroughly braced or otherwise protected against movement or damage.

Water being disposed of by the pumping and dewatering operations shall be disposed of in such a manner to avoid injury to persons or public or private property, or to the work completed or in progress. Dewatering shall be accomplished by approved methods which have a successful record of dewatering similar excavations and subsurface conditions similar to those expected to be encountered in the work.



# B. DIVERSION OF WATER:

The Contractor shall be responsible for providing and maintaining all ditching, grading, sheeting and bracing, pumping and appurtenant work for the temporary diversion of water courses and protection from flooding as necessary to permit the construction of work in the dry.

Upon completion of the Contract work, the Contractor shall remove all temporary construction and shall do all necessary earthwork and grading to restore the area disturbed to their original condition or to such other condition as indicated or directed by the Owner.

Water shall not be permitted to flow into or through excavations in which work is underway or had been partially completed. The Contractor shall not restrict or close off the natural flow of water in such a way that ponding or flooding will occur, and shall at all times prevent flooding of public and private property. All damages resulting from flooding or restriction of flows shall be the sole responsibility of the Contractor, at no additional expense to the Owner.

The Contractor shall be responsible during the course of his work to provide all erosion protection and siltation prevention facilities required by the Contract and to carry out his operation by methods acceptable to the applicable local, State or Federal agencies.

#### **4.0 MEASUREMENT AND PAYMENT**

# <u>SECTION 2.06</u> CALCIUM CHLORIDE FOR DUST CONTROL

# 1.0 DESCRIPTION

This item shall consist of furnishing calcium chloride and spreading it on the subgrade or in other areas of a project under construction, for the purpose of reducing dust conditions.

# 2.0 MATERIALS

Calcium chloride shall conform to the requirements of AASHTO M 144, except that the pellet form and the flake form shall be equally acceptable.

#### 3.0 CONSTRUCTION METHODS

Calcium chloride shall be applied only at the locations, at such times and in the amount as may be directed by the Engineer. It shall be spread in such manner and by such devices that uniform distribution is attained over the entire area on which it is ordered placed.

# **4.0 MEASUREMENT AND PAYMENT**

# <u>SECTION 2.09</u> SEDIMENTATION AND EROSION CONTROL

# 1.0 DESCRIPTION

The work and materials required by this Section consists of the furnishing of all plant, labor, equipment and materials and in performing all operations in connection with providing and maintaining in an acceptable condition, the various erosion and sediment control devices specified below in accordance with these Specifications and as directed by the Owner.

The Contractor shall furnish all equipment, labor, materials and related work necessary for the proper execution of the intent of this Section. The Contractor shall operate and maintain and provide means and devices necessary to minimize, to the greatest extent possible, erosion within the work area of this Contract and to prevent the entrance of any silt laden runoff from the work areas into any standing or moving bodies of water on or adjacent to the Work.

# 2.0 MATERIALS

Filter fabric fence shall conform to the requirements of the Form 817, Section 7.55.02.

Hay bales shall conform to the requirements of Form 817, Article 2.19.02.

# 3.0 CONSTRUCTION METHODS

All sediment and erosion control devices shall be properly installed, in a manner acceptable to the Owner, as necessary to minimize erosion within the work area of this contract and to prevent the entrance of any silt laden runoff from the work areas into any standing or moving bodies of water on or adjacent to the work, or as directed by the Owner.

The filter fabric fence shall be installed as recommended by the manufacturer. The bottom of the fabric shall be buried by either digging a six (6") inch on the ground and placing six inches of soil on the fence fabric. All erosion control devices shall be removed when ordered by the Owner after the regulated disturbed area has been reestablished. The Contractor's attention is called to particular notes on the drawings regarding erosion and sedimentation control and coordination with public agencies.

#### 4.0 MEASUREMENT AND PAYMENT

# SECTION 3.05 REMOVAL OF PAVEMENT

# 1.0 DESCRIPTION

Pavement removal shall consist of the satisfactory removal of pavements as required for construction of improvements under this contract. It shall include asphalt, bituminous concrete pavements and bases as required by the contract or as directed by the Engineer.

#### 3.0 CONSTRUCTION METHODS

Pavement shall be cut to neat lines as required by the contract drawings, or as directed by the Engineer. Pavement shall be excavated to the dimension shown on the plan. Excavated material shall be disposed of as directed by the Engineer and in the same manner as described for surplus material elsewhere in these specifications. No sections or pieces of pavement shall be used in trench backfill and pavement shall be kept separate from other excavated material.

## 4.0 MEASUREMENT AND PAYMENT

This item will not be measured for payment.

No separate payment will be made for removal of bituminous pavement associated with sidewalk installation, and all costs in connection therewith shall be included in the unit price bid for sidewalk and appurtenances as it applies.

# SECTION 3.06 SUBBASE

#### 1.0 DESCRIPTION

The work under this Section shall be the construction of a subbase for highways, roads, streets, etc., consisting of gravel, crusher-run stone or a combination thereof placed on the prepared subgrade in accordance with these specifications and in conformity with the lines, grades, compacted thickness and typical cross-section as shown on the Contract Drawings.

# 2.0 MATERIALS

All materials for this work shall conform to the requirements of Article M.02.02. Maximum aggregate size shall not exceed 3-1/2 inches.

# 3.0 CONSTRUCTION METHODS

Construction methods shall conform to the provisions of Article 2.12.03 of the Standard Specifications.

# 4.0 MEASUREMENT AND PAYMENT

No separate payment will be made for this item and all costs in connection therewith, including the formation or reformation of the subgrade and all materials, equipment, tools, labor and work incidental to or necessary for the completion of the work, shall be included in other items.

# SECTION 3.07 PROCESSED GRAVEL BASE

#### 1.0 DESCRIPTION

The Contractor shall furnish and place processed gravel base to the compacted thickness shown on the contract drawings, prior to placement of permanent pavement.

The processed gravel base shall be placed on the prepared subgrade prior to placing of the pavement.

# 2.0 MATERIALS

Gravel base shall conform to the requirements of Sub article M.05.01,1, M.05.01-2, M.05.01-3 of the standard specifications, Form 816.

# 3.0 CONSTRUCTION METHODS

Gravel base shall be placed and compacted in accordance with Article 3.04.03 of the Standard Specification - Form 817.

# 4.0 MEASUREMENT AND PAYMENT

No separate payment will be made for this item and all costs in connection therewith, including all costs of furnishing and placement of processed gravel base, preparation of subgrade and all other materials, labor and equipment necessary to satisfactorily complete the work, shall be included in other items.

# SECTION 4.06 BITUMINOUS CONCRETE PAVEMENT DRIVEWAY APRONS

#### 1.0 DESCRIPTION

Pavement shall consist of a one coarse, two (2") inch compacted thickness bituminous concrete surface course, constructed on the compacted thickness processed gravel base in the locations and in accordance with the details shown on the Contract drawings or as directed by the Engineer.

#### 2.0 MATERIALS

- 1. Tack coat shall consist of RC-O oil.
- 2. Bituminous concrete surface course shall conform to Article M.04 of the Standard Specifications for surface course, Class 2.
- 3. Processed gravel base is specified in Section 3.07 of these Contract Specifications.

# 3.0 CONSTRUCTION METHODS

The existing pavement shall be cut in straight lines along the edges of the roadway and existing driveway using approved power tools, and the processed gravel base placed and compacted as specified in these Contract Specifications and in accordance with the details shown on the Contract Drawings.

Tack coat shall be applied to the edge of existing pavement where it meets the new pavement.

The two (2") inch compacted thickness bituminous pavement shall be placed in one lift in accordance with the requirements of Article 4.06.03 of the Standard Specification.

#### 4.0 MEASUREMENT AND PAYMENT

This work will be measured for payment by the actual number of square feet of completed and accepted driveway aprons to the thickness shown on the contract drawings.

# SECTION 4.08 CONCRETE SIDEWALKS AND RAMPS

# 1.0 DESCRIPTION

The work under this section shall be the construction of new concrete sidewalks, and of the replacement or extension of existing sidewalks damaged or removed by construction under other work of this Contract. They shall be constructed on a gravel base course at the locations and to the dimensions and details shown on the contract drawings or as ordered by the Owner.

# 2.0 MATERIALS

#### 2.1 CONCRETE

Materials for this work shall conform to the requirements of Article M.03.01 of Form 817. Sidewalks and pedestrian ramps shall be Class "F" Concrete. Concrete shall have a minimum compressive strength of 4,000 psi at 28 days.

#### 2.2 EXPANSION JOINT

Performed Expansion Joint Filler shall comply with the provisions of ASTM D 1751 (AASHTO M 213).

#### 2.3 ADMIXTURES

Air-entraining admixtures shall conform to Article M.03.01 of the Standard Specifications.

#### 2.4 GRAVEL

Gravel for the base course shall conform to Article M.02.01 of the Standard Specifications for gravel fill.

### 2.5 REINFORCEMENT

Reinforcement where indicated on the Contract Drawings shall conform to the requirements of Article M.06.01 of the Standard Specifications.

#### 2.6 EPOXY

Epoxy for dowels shall be Hilti H-150, or approved equal

# 2.7 BONDING AGENT

Bonding agent on saw cut surfaces shall be Sika Armatcc 110 bonding or approved equal.

# 2.8 CONCRETE WATER & SALT BARRIER

Saltguard WB deep penetrating water & salt barrier, or approved equal.

#### 2.9 DETECTABLE WARNING STRIPS

Detectable warning strips shall conform to the details shown on the Contract Drawing and to the requirements of sections 4.7.7 and 4.29 of the ADA Standards for Accessible Design.

## 3.0 CONSTRUCTION METHODS

Installation of concrete sidewalks shall follow the applicable portions of Article 9.21.03.

Concrete sidewalks shall be cured and protected in conformity with the requirements of Article 4.01.03 for concrete pavement.

After concrete has cured for a minimum of 14 days, all exposed concrete surfaces shall be sealed with Saltguard WB deep penetrating water & salt barrier, or approved equal installed per the manufacturer's recommendations. Adjustments to the cure duration may be made with prior approval from the Engineer and Manufacturer.

# **4.0 MEASUREMENT AND PAYMENT**

This work will be measured for payment by the actual number of square feet of completed and accepted concrete sidewalk to the thickness and width shown on the contract drawings.

Any sidewalks, driveways, driveway ramps and/or pedestrian ramps which during the course of construction are damaged by negligent operations of the Contractor shall be repaired or replaced by the Contractor at his own expense as directed by the Engineer. Said repairs/replacements will not be measured for payment.

Saw cutting and removal of existing sidewalk, excavation, backfilling and disposal of removed concrete or other surplus material will be paid for under this item.

Gravel Base: This work will not be measured for payment, but the cost shall be considered as included in the price bid for the sidewalk, driveway, driveway ramp or pedestrian ramp.

Reinforcement: This material will not be measured for payment but the cost included in the price bid for the sidewalk, driveway, driveway ramp or pedestrian ramp.

Concrete Sealer: This material will not be measured for payment but the cost included in the price bid for the sidewalk, driveway, driveway ramp or pedestrian ramp.

This work will be paid for at the contract unit price per square foot for "Concrete Sidewalk and Ramps" complete in place, which price shall include all gravel base, concrete, expansion joints, reinforcement, curing and all materials, equipment, tools, labor and work incidental to or necessary for the completion of the work.

The contractor shall include in the cost of this construction all resetting to grade existing or newly constructed grates, frames, covers, water gates, valve boxes, access covers, and other items which normally must have a fixed relationship to finished grade.		

# SECTION 8.01 TOPSOIL, SEED, FERTILIZE AND MULCH

#### 1.0 DESCRIPTION

This work shall consist of placing topsoil, furnishing topsoil when required, fertilizing, seeding and mulching all areas disturbed by the work and the Contractor's operations.

#### 2.0 MATERIALS

Materials for this work shall conform to the following requirements:

Topsoil excavated from the project shall be used whenever possible. Topsoil supplied by the Contractor shall conform to the requirement of Article M.13.01-1.

Fertilizer shall conform to the requirement of Article M.13.03.

Mulch shall conform to Article M.13.05-1 and shall be hay or wood fiber.

Seed mixture for seeding shall conform to Article M.13.04.

# 3.0 CONSTRUCTION METHODS

All topsoil excavated from the project shall be used. When, in the opinion of the Engineer, sufficient topsoil is not available, the Contractor shall supply topsoil from other sources. The areas on which topsoil is to be placed shall be graded to a reasonable true surface. Topsoil shall then be spread and shaped to the lines and grades shown on the plans, or as directed by the Owner. The depth shown on the plans to which the topsoil is to be placed is that required after settlement of the material has taken place. All stones, roots, debris, sod, weeds and other undesirable material shall be removed. After shaping and grading, all trucks and other equipment shall be excluded from the topsoil area to prevent excessive compaction. The Contractor shall perform such work as required to provide a friable surface for seed germination and plant growth prior to seeding. During hauling and spreading operations, the Contractor shall immediately remove any material dumped or spilled on pavement.

It shall be the Contractor's responsibility to restore to the line, grade and surface all eroded areas with approved material and to keep topsoiled areas in acceptable condition until the completion of the construction work.

The areas to be seeded shall be made friable and receptive to seeding by approved methods which will not disrupt the line and grade of the slope surface. In no event will seeding be permitted on hard or crusted soil surface. All areas shall be free from weeds taller than three (3) inches.

The normal seeding seasons shall be March 15th to June 15th and August 15th to October 15th. Seeding at other times shall be done only when ordered by the Engineer.

Areas of disturbed soil which will contribute significantly to air and stream pollution shall be established to the designated vegetative cover as soon as feasible or when directed by the Engineer.

Seed shall be uniformly applied by any ergonomically acceptable and feasible method approved by the Engineer. Seed mixture shall be applied at the rate of 200 pounds per acre. Fertilizer shall be uniformly placed at the rate of 640 pounds per acre.

All seeded areas shall be mulched with hay or, if hydroseeding is used, wood fiber. Hay shall be uniformly applied by an approved method to a placed depth of two (2) inches. Hay shall be held in place by one uniform Application of asphalt emulsion, Type SS-1, applied at the rate of 0.08 gallons per square yard. The emulsion shall have a temperature range within 50 to 120 degrees F. at the time of the application. The emulsion may be applied during or immediately after the application of the mulch. Wood fiber mulch shall be uniformly applied at the rate of one (1) tone per acre.

The Contractor shall keep all equipment and vehicular and pedestrian traffic off areas that have been seeded to prevent excessive compaction and damage to young plants.

The Contractor shall be required to replant areas damaged by water, wind, fire, equipment or pedestrian traffic when ordered by the Owner at no cost to the Owner.

Work under this item shall not be complete until all stones and debris have been removed from the seeded areas. In areas where topsoil and seeding are not required, all disturbed areas shall be neatly graded and cleared of all debris.

#### 4.0 MEASUREMENT AND PAYMENT

Lump Sum Price bid for the Topsoil, Seed, Fertilize and Mulch of which shall include all costs for establishing and maintaining sufficient vegetative cover.

# SECTION 9.16 PAVEMENT MARKINGS

# 1.0 DESCRIPTION

This work shall consist of installing painted pavement markings as shown on the Contract Drawings.

# 2.0 MATERIALS

Painted pavement markings shall conform to Article 12.09.02 of the Standard Specifications.

Traffic signage and sign posts shall conform to Article 12.08.02 of the Standard Specifications and the details shown on the Contract Drawings.

# 3.0 CONSTRUCTION METHODS

The installation of painted pavement markings shall conform to Article 12.09.03 of the Standard Specifications.

#### 4.0 MEASUREMENT AND PAYMENT

The cost of this work shall be paid for as a lump sum for "Pavement Markings" and shall include all materials, equipment, tools, and labor incidental to the completion of this item.