SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

A. Submit Shop Drawings, Product Data, and Samples required by the Contract Documents.

1.02 RELATED DOCUMENTS

A. The Conditions of the Contract and General Requirements of the Contract Documents apply to the General Contractor, Subcontractors, materials suppliers and all other persons furnishing labor and materials under this Section.

1.03 SHOP DRAWINGS

A. Drawings shall be presented in a clear and thorough manner.

1. Details shall be identified by reference to sheet and detail, schedule, or room numbers shown on Contract Drawings.

1.04 PRODUCT DATA

A. Preparation:

1. Clearly mark each copy to identify pertinent products or models.
2. Show performance characteristics and capacities.
3. Show dimensions and clearances required.
4. Show wiring or piping diagrams and controls.

B. Manufacturer's standard schematic drawings and diagrams:

1. Modify drawings and diagrams to delete information which is not applicable to the Work.
2. Supplement standard information to provide information specifically applicable to the Work.

1.05 SAMPLES

A. Office samples shall be of sufficient size and quantity to clearly illustrate:
1. Functional characteristics of the product, with integrally related parts and attachment devices.
2. Full range of color, texture and pattern.

1.06 CONTRACTOR RESPONSIBILITIES

A. Review Shop Drawings, Product Data, and Samples prior to submission.

B. Determine and verify:

1. Field measurements.
2. Field construction criteria.
3. Catalog numbers and similar data.
4. Conformance with specifications.

C. Coordinate each submittal with requirements of the Work and of the Contract Documents.

D. Notify the Engineer in writing, at time of submission, of any deviations in the submittals from requirements of the Contract Documents.

E. Begin no fabrication or work which requires submittals until return of submittals with Engineer approval.

1.07 SUBMISSION REQUIREMENTS

A. Make submittals promptly in accordance with the approved schedule, and in such sequence as to cause no delay in the Work or in the work of any other contractor.

B. Number of submittals required:

1. Shop Drawings: Submit the number of opaque reproductions which the Contractor requires, plus three copies, which will be retained by the Engineer.
2. Product Data: Submit the number of copies which the Contractor requires, plus three copies, which will be retained by the Engineer.
3. Samples: Submit the number stated in each individual specification section, or as appropriate for review and approval.

C. Submittals shall contain:

1. The date of submission and the dates of any previous submissions.
2. The Project title and number.
3. Contract identification
4. The names of:
   a. Contractor.
   b. Supplier.
   c. Manufacturer.
5. Identification of the product, with the specification section number.
6. Field dimensions, clearly identified as such.
7. Relation to adjacent or critical features of the Work or materials.
8. Applicable standards, such as ASTM or Federal Specification numbers.
9. Identification of deviations from the Contract Documents.
10. Identification of all revisions on resubmittals.
11. A blank space for Contractor and Engineer review stamps.
12. Contractor's stamp, initialed or signed, certifying review of the submittal, verification of products, field measurements and field construction criteria, and coordination of the information within the submittal with requirements of the Work and Contract Documents.

1.08 RESUBMISSION REQUIREMENTS

A. Make any corrections or changes in the submittals required by the Engineer and resubmit until approved.

B. Shop Drawings and Product Data:

1. Revise initial drawings or data, and resubmit as specified for the initial submittal.
2. Indicate any changes which have been made other than those requested by the Engineer.

C. Samples: Submit new samples as required for initial submittal.

1.09 DISTRIBUTION

A. Distribute reproductions of Shop Drawings and copies of Product Data which carry the Engineer stamp of approval to:

1. Job site file.
2. Record documents file.
3. Other affected contractors.
4. Subcontractors.
5. Supplier or Fabricator.
6. Others as required.

B. Distribute samples which carry the Engineer stamp of approval as directed by the Engineer.

1.10 ENGINEER DUTIES

A. Review submittals with reasonable promptness and in accord with the established project schedule.

B. Affix review stamp and initials or signature, and indicate requirements for resubmittal, or approval of submittal.

C. Return submittals to the Contractor for distribution, or for resubmissions.

END OF SECTION

TESTING LABORATORY SERVICES

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. The Conditions of the Contract and General Requirements of the Contract Documents apply to the General Contractor, Subcontractors, materials suppliers and all other persons furnishing labor and materials under this Section.

1.02 DESCRIPTION OF WORK

A. Work included:

1. Cooperate with the Owner's selected testing agency and all others responsible for testing and inspecting the Work.

2. Provide such other testing and inspecting as are specified to be furnished by the Contractor in this Section and/or elsewhere in the Contract Documents.

1.03 QUALITY ASSURANCE

A. The testing laboratory will be qualified to the Owner's approval.

B. Testing, when required, will be in accordance with all pertinent codes and regulations, and with selected standards of the American Society for Testing Materials.

PART 2 – PRODUCTS

2.01 PAYMENT FOR TESTING

A. Initial services: The Owner will pay for initial testing services requested by the Owner.

B. Retesting: When initial tests indicate noncompliance with the Contract Documents, subsequent retesting caused by the noncompliance shall be performed by the same testing agency, and those costs will be deducted by the Owner from the Contract Sum.

2.02 CODE COMPLIANCE TESTING

A. Inspections and tests required by codes or ordinances, or by a plan approval authority, shall be the responsibility of and shall be paid for by the Contractor, unless otherwise provided in the Contract Documents.

2.03 CONTRACTOR'S CONVENIENCE TESTING

A. Inspecting and testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.

PART 3 – EXECUTION

3.01 COOPERATION WITH TESTING LABORATORY

A. Representatives of the testing laboratory shall have access to the Work at all times and at all locations where the Work is in progress.

3.02 TAKING SPECIMENS

A. All specimens and samples for testing, unless otherwise provided in the Contract Documents, shall be taken by the testing personnel. All sampling equipment and personnel will be provided by the testing laboratory. All deliveries of specimens and samples to the testing laboratory will be performed by the testing laboratory.

3.03 SCHEDULES FOR TESTING

A. Establishing schedule:

1. By advance discussion with the testing laboratory selected by the Owner, determine the time required for the laboratory to perform its tests and to issue each of its findings.

2. Notify laboratory sufficiently in advance of operations to allow for laboratory assignment of personnel and scheduling of tests.

B. Revising schedule:

1. When changes of construction schedule are necessary during construction, coordinate all such changes with the testing laboratory as required.

C. Adherence to schedule:

1. When the testing laboratory is ready to test according to the established schedule, but is prevented from testing or taking specimens due to incompleteness of the Work, all extra charges for testing attributable to the delay may be back-charged to the Contractor and shall not be borne by the Owner.

END OF SECTION

GENERAL SPECIFICATIONS

The Standard Specifications shall refer to the Vermont Agency of Transportation Standard Specifications for Construction (Latest Edition). All site work shall also be completed in accordance with any Town of Ferrisburgh Public Works standards. Any discrepancies with the plans or specifications shall be reported to the Engineer prior to beginning that work.

A. Earthwork

1. The site shall be cleared of all debris and vegetation, and all topsoil shall be stripped prior to placing any fill material. Debris and vegetation shall be disposed of at an approved location.

2. The excavated material from on site shall not be used within five feet (5') of any structure or under parking lots, roads or sidewalks unless approved by the Engineer. General imported fill material shall not be larger than two inches (2") or have more than 20% passing the NO. 200 sieve. All excess excavated material shall be disposed of at an approved location.

3. Grading

a. Perform all rough grading, including excavation, formation of embankments, shaping, sloping, compaction, construction of ditches, disposal of surplus or unsuitable material, and any work necessary to prepare the subgrades of all roadways, walks and parking areas. Grading shall be brought to the bottom of the base course under paved or surfaced areas and to within a minimum of 24 inches of finished grade under side slopes and/or embankment areas to receive loam along roadways, walks or parking areas.

b. Accomplish all excavation and fill within the slope and grade lines as indicated on the Drawings unless otherwise authorized in writing by the Owner. Parking lots shall be graded to full cross section width at sub-grade before placing any type of sub-base or pavement except that partial width construction is permissible where necessary for the maintenance of traffic.

c. Do not use frozen material in the construction of embankments

d. Embankments shall be constructed in accordance with Section 203.11 of the Standard Specifications.
Place all material being used in embankments in horizontal layers of uniform thickness across the full width of embankment, except when it is impractical to construct full width of the embankment and partial width layers are authorized by the Owner. Do not allow or place stumps, trees, rubbish or other unsuitable material in embankments. Begin layers of embankment at the deepest part of the fill.

e. Areas of soft, yielding or otherwise unsuitable material that will not meet compaction requirements shall be removed, replaced with suitable material and properly compacted at no cost to the Owner.

f. Place embankments for paved or surface areas in horizontal layers of depths which will result in layers of compacted material not exceeding 8 inches. Compact each layer as specified before placing each new layer. Use effective spreading equipment on each layer to obtain uniform thickness prior to compacting. Each layer shall be kept crowned to shed water to the outside edges of embankment and continuous leveling and manipulating will be required to assure uniform density. Construction equipment shall be routed over the entire surface of each layer.

g. If, during the construction of the embankments, there is any indication that serious bulging, cracking, or unsafe movement may occur, the placing of fill shall be stopped or retarded to allow the material to stabilize.

h. All ditches and drains shall be constructed so they will effectively drain the roadway or parking lot before any sub-base or surface course material is placed. In handling materials, tools and equipment, the Contractor shall protect the subgrade from damage. In no case shall vehicles be allowed to travel in a single track and form ruts. If ruts are formed, the subgrade shall be reshaped and compacted and any pockets of clay, sand or soft material that may have been left in the subgrade shall be removed, replaced with approved material and properly compacted at the Contractor's expense. The subgrade shall be kept in such condition that it will drain. Sub-base, base or surface material shall not be deposited on the sub-grade until the sub-grade has been checked and approved by the Owner. After the sub-grade has been approved, hauling shall not be done nor equipment moved over the sub-grade which will distort the cross section. A tolerance of 1/2 inch above or below the finished sub-grade will be allowed provided that this 1/2 inch above or below sub-grade is not maintained for a distance longer than 50 feet, and that the required cross section is maintained.

4. Compaction:

a. General: Control soil compaction during construction providing minimum percentage of density specified for each area classification.

b. Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages of maximum dry density for soils which exhibit a well defined moisture-density relationship determined in accordance with ASTM D 2049, for soils which will not exhibit a well-defined moisture-density relationship.

1. Lawn or unpaved areas: Compact top 6" of sub-grade and each layer of backfill or fill material to 90% maximum dry density.

2. Compaction under paved and surfaced areas:
The entire area of each layer shall be uniformly compacted to at least the required minimum density by use of compaction equipment consisting of rollers, compactors or a combination thereof. Earth-moving and other equipment not specifically manufactured for compaction purposes will not be considered as compaction equipment. Each layer for its full width shall be compacted to not less than 90 percent of the maximum dry density as determined by the Standard Method of Test for Moisture-Density Relations of Soils, ASTM-D698, Method C, except that the material in the top two feet of any embankment, immediately below the sub- grade shall be compacted to not less than 95 percent of the maximum dry density. The field density determination will be made by a qualified testing laboratory using a nuclear density gauge.

3. Concrete Slabs: Compact each layer of backfill or material to 95% maximum dry density.

c. Moisture Control: Where sub-grades or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of sub-grade, or layer of soil material. Free water shall not be permitted to collect or sub-grade during or subsequent to compaction operations. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.

B. Access Drive and Parking Lot

1. The sub-grade shall be prepared in accordance with Section 203.12 of the Standard Specifications.

2. Gravel for sub-base: Shall meet the following grading requirements (Section 704.04):

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
No. 4	20 – 60
No. 100	0 – 12
No. 200	0 – 6

The gravel shall be uniformly graded from coarse to fine and the maximum size stone particle shall not exceed 2/3 of the thickness of the layer being placed. The gravel sub-base shall be compacted to 95% of the maximum dry density as determined by AASHTO–T99.

3. Crushed Gravel for Sub-base: All materials shall be secured from approved sources. This gravel shall consist of angular and round fragments of hard durable rock of uniform quality throughout, reasonably free from thin elongated pieces, soft or disintegrated stone, dirt, organic or other objectionable matter. The grading requirements shall conform to the following table (Section 704.05 – Fine):

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
2"	100
1 1/2"	90 – 100
No. 4	30 – 60
No. 100	0 – 12
No. 200	0 – 6

The crushed gravel shall be compacted to 95% of the maximum dry density as determined by AASHTO–T99.

4. Dense Graded Crushed Stone for Sub-base: Dense graded crushed stone for sub-base shall consist of clean, hard, uniformly graded, crushed stone. It shall be reasonably free from dirt, deleterious material and pieces which are structurally weak and shall meet the following requirements:

a. Source: This material shall be obtained from approved sources and the area from which this material is obtained shall be stripped and cleaned before blasting.

b. Grading: This material shall meet the requirements of the following table:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieves
3 1/2"	100
3"	90 – 100
2"	75 – 100
1"	50 – 80
1/2"	30 – 60
No. 4	15 – 40
No. 200	0 – 6

5. Bituminous Concrete Pavement: The materials, grading and composition, placement, and finishing for bituminous concrete pavement (Type I, II and III) shall meet the requirements of the Vermont Agency of Transportation Standard Specifications Sections 406, 702 and 704.10. Other requirements are as follows: Application of bituminous concrete pavement shall meet all the requirements of the Vermont Standard Specifications for Construction, Section 406, or as periodically amended, but not limited to, the following:

a. Weather Limitations: Bituminous material shall not be placed between November 1, and May 1. Material shall not be placed when the air temperature at the paving site in the shade and away from artificial heat is 40 degrees Fahrenheit or below.

b. Compaction: Immediately after the bituminous mixture has been spread, struck off, and surface irregularities adjusted, it shall be thoroughly and uniformly compacted by rolling. Along forms, curbs, headers, walls and other places not accessible to the rollers, the mixture shall be thoroughly compacted with hot or lightly oiled hand tampers, smoothing irons, or mechanical tampers. On depressed areas, a trench roller may be used, or slected compression strips may be used under the roller to transmit compression to the depressed area.

c. Surface Tolerances: The surface will be tested by the Engineer using a 16-foot straightedge at selected locations parallel with the centerline. Any variations exceeding 3/16 of an inch between any two contacts shall be satisfactorily eliminated. A 10-foot straight-edge may be used on a vertical curve. The straightedges shall be provided by the Contractor.

d. Matching Surfaces: When a new pavement is to match an existing bituminous pavement for a roadway or trench, the Contractor shall vertically smooth cut the existing pavement along a straight line a minimum of one foot (1') into the existing pavement, over the existing gravel base. The smooth cut shall be thoroughly cleaned and coated with Emulsified Asphalt, RS–1, just prior to paving.

6. Stabilization Fabric: Stabilization fabric where required by the Engineer shall be Mirafi 550X or equal. The fabric shall be installed in accordance with manufacturer's requirements.

7. All pavement markings shall be VT. 7.05 Fast Dry White Traffic Point.

C. Drainage Systems

1. All culverts and storm drains shall meet the requirements of Section 601 of the Standard Specifications.

2. At the Contractor's option, the following materials may be used for the storm drainage:

a. Polyvinyl Chloride pipe conforming to ASTM Specification D3034 or F679, (PVC) sewer pipe and fittings SDR 35.

b. Reinforced concrete pipe meeting the requirements of Section 710.01.

c. Corrugated Polyethylene pipe meeting the requirements of Section 710.03.

d. Corrugated aluminum alloy pipe meeting the requirements of Section 711.02.

D. Underground Utilities

For underground electrical and telephone (cable) services, the Contractor shall trench, place bedding, place conduit, and backfill in accordance with the utility company's requirements.

E. Sanitary Sewer

1. Description

This item shall consist of the excavation and backfilling required for the connection of the new force main to the existing unused force main. This work shall include all pipe, tanks, structures and other appurtenances necessary to complete the system indicated in the drawings. All sanitary sewer materials and construction of same shall be as shown on the contract drawings and shall meet the requirements of the Town of Ferrisburgh.

2. Materials

a. PVC Gravity Sewer Pipe: PVC sewer pipe shall conform in all respects to the latest revision of ASTM Specifications D–3034 or F679, Type PSM Polyvinyl Chloride (PVC) Sewer Pipe and Fittings, SDR 35. Wall thickness of all PVC pipe shall meet ASTM Specifications for SDR 35 pipe. All pipe and fittings shall be clearly marked as follows:

– Manufacturer's Name and Trademark
– Nominal Pipe Size – 8"
– Material Designation 12454C PVC
– Legend "Type PSM SDR 35 PVC Sewer Pipe" or "PS 46 PVC Sewer Pipe"
– Designation ASTM D–3034 or F679

Joints shall be push-on type using elastomeric gaskets and shall conform to ASTM D–3212. The gaskets shall be factory installed. The pipe shall be furnished in nominal 13–foot lengths. Sufficient numbers of short lengths and full machine fittings shall be provided for use at manholes and connections. All connections will require the use of manufactured fittings. Field fabricated, saddle–type connections will not be considered acceptable.

3. Installation

a. Excavations shall be made at a point at least six inches (12" where trench is in ledge) below the pipe invert to accommodate the bedding material. All excavations are to be kept dry while pipe is being laid and until each joint and pipe have been inspected by the Engineer and approval given to commence backfilling operations.

b. The bell end of the pipe shall face upgrade at all times and be placed in such a position as to make the invert even when the succeeding section is inserted. Where required by adverse grading conditions, the Contractor shall fill any gully to make a suitable bedding for the sewer pipe. The fill shall be pneumatically or mechanically compacted to a 90 % dry density (95% in roads) as determined by the AASHTO–T–99, Method A (Standard Proctor) test, upon which the six inches (6") of bedding material shall be placed. Any pipe which is not laid to grade and alignment shall be re–laid to the satisfaction of the Engineer. The bedding material shall be placed and compacted on each side of the pipe to a height of one–half the pipe diameter for the full width of the excavated trench and as shown on the accepted plans.

c. Backfill shall consist of approved material placed in six–inch (6") layers with each layer being thoroughly compacted to not less than 95 percent of maximum dry density as determined by the ASSHTO–T–99 Standard Proctor by means approved by the Engineer.

No stones in excess of one and one–half inch (1 1/2") diameter shall be placed within two feet (2') of the outside of the pipe. Particular precautions shall be taken in placement and compaction of the backfill material in order not to damage and/or break the pipe. The backfill shall be brought up evenly on both sides of the pipe for its full length. Walking or working on the completed pipeline except as may be necessary in tamping or backfilling shall not be permitted until the trench has been backfilled to a height of at least two feet (2') on the top of the pipes. During construction, all openings to the pipe lines shall be protected from the entering of earth or other materials.

4. Force Main

Pressurization:

i. Each valved section of pipe shall be filled with water slowly and the specified test pressure, based on the elevation of the lowest point of the line or section under test and corrected to the elevation of the test gauge, shall be applied by means of a pump connected to the pipe.

ii. Air Removal: Before applying the specified test pressure, air shall be expelled completely from the pipe valves.

iii.Examination: All exposed pipe, fittings, valves and joints shall be examined carefully during the test. Any damaged or defective pipe, fittings or valves that are discovered following the pressure test shall be repaired or replaced with sound material and the test shall be repeated.

Leakage Test: A leakage test shall be conducted concurrently with the pressure test.

i. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within 5 psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water.

ii. Allowable Leakage: No pipe installation will be accepted if the leakage is greater than that determined by the following formula:

$$L = \frac{ND\sqrt{P}}{7400}$$

S = Length of Pipe Testing
L = Allowable Leakage in Gals/HR
D = Nominal Diameter of Pipe (")
P = Average Test Pressure (psi)
N = Number of Joints in the Pipeline Tested

EROSION CONTROL

1. General Notes

a. The Contractor shall construct and maintain all erosion measures in accordance with the "Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites, Special Publication no. 3".

2. Construction Sequence

a. The Contractor shall be responsible for establishing all erosion control measures delineated on the plans and any additional measures that are necessary to minimize erosion. The Contractor shall have erosion control materials and installation equipment on site at all times.

b. Silt fences shall be installed along the base of the fill slopes. This shall remain in place until the project site has been stabilized. Install stone check dams in grass–lined swales 50 feet on center to prevent silt from washing into the drainage system during construction. Check dams shall be removed when vegetation is established.

c. Dust shall be controlled through the application of calcium chloride or water.

d. Excavated material from earth excavation and ditch digging shall be disposed of offsite or used for project fill material if determined suitable by the Owner's Representative.

e. All temporary erosion control measures required for any proposed winter work shall be installed prior to October 1. These measures shall be in place prior to the commencement of any site work or earth–moving.

3. Temporary Measures

a. Stone Check Dam – Shall be placed according to detail 7, sheet C–6.

Check dams shall be repaired as needed. Once vegetation is established and the check dams are no longer needed for erosion control, they shall be removed. Sediment deposits shall then be removed and placed in an upland area where there is no danger of further erosion.

b. Silt Fences – The silt fences shall be constructed in accordance with the construction detail. The fence shall generally be placed 10 feet from the toe of the slope or as shown on the plan. The ends of the fence shall be placed uphill to form a horseshoe shape to trap all runoff.

The silt fences shall be inspected periodically for damage or buildup of sediment. All damaged silt fence shall be repaired or replaced. Sediment deposits shall be removed from the fence as they accumulate and placed in an area where there is no danger of further erosion.

c. Erosion Matting – Erosion matting shall be placed on all grass–lined swales with profile grades exceeding 5.0% and shall be placed and maintained in accordance with the Vermont Agency of Transportation Standard Specifications Sections 654 and 755.07.

d. Dust Control – During construction, dust will be controlled with water distributed by a truck–mounted spray bar. At the direction of the Engineer, Calcium Chloride AASHTO M 144 or Sodium Chloride M 143 may be used.

e. All stockpile material (topsoil, borrow, etc.) will a have a stone dike or silt fence constructed around the perimeter. Seed and mulch stockpile material as soon as possible to prevent soil erosion and sedimentation off site. Locate stockpiles on the uphill side of disturbed areas, if possible. During windy conditions, stockpiled material shall be covered or watered appropriately to prevent wind erosion.

f. Slopes greater than 1:3 shall have erosion control netting installed to stabilize the slope and reduce the erosion potential. Install netting over mulched slopes so that all parts are in contact with the soil and mulch. Pin netting with wire staples 3 feet o.c. to ensure full bonding with soil surface.

4. Permanent Measures

a. Grass Lined Swales – All swales that are not stone–lined shall be topsoiled, seeded, fertilized and mulched. Any area which shows signs of erosion shall be reseeded immediately and maintained until permanent vegetation is established.

b. Restoration – As soon as construction is completed in a given area, it shall be topsoiled, seeded, fertilized and mulched.

The topsoil shall be submitted to the Extension Service for analysis. Fertilizer shall be applied at approximately a rate of 400 pounds per acre depending on soil analysis. If necessary, lime shall be applied to the topsoil to produce a soil PH of approximately 6.0.

After the finished grade has been established and the fertilizer spread, plant the specific seed mixture and work firmly into the soil. Apply seed on the prepared seed bed with approved mechanical seeders or hydroseeding equipment. Upon completion of the above planting operations, roll all areas, leaving the surface of all area true to grade, smooth, and free from hollows or other irregularities. Thoroughly water all newly planted areas immediately after planting using a fine spray. Protect banks and swales from erosion and repair erosion that occurs. Banks, swales or other graded areas that have been washed out or have become damaged shall be repaired immediately. Unless approval is granted by the Engineer to plant off season, seeding will be conducted only during the period from April 15th to October 15th. Seeding shall not proceed before other phases of the work have progressed sufficiently and shall not interfere with other phases of work.

After seeding, mulch shall be applied at a rate of 2 tons per acre.

5. Winter Construction

a. If due to the project schedule, construction during the winter months is necessary, the contractor shall follow the winter construction procedures outlined in the "Vermont Handbook for Soil Erosion and Sediment Control on Construction Sites"

i. Minimize disturbance between October and May.

ii. All erosion control measures shall be in place prior to the ground freezing.

iii. Mulch shall be applied to all disturbed area at a rate of 90 pounds per 1,000 square feet. The Contractor shall maintain all areas that are mulched until permanent vegetation can be established.

6. Maintenance, Guarantee and Acceptance

a. The Contractor shall be responsible for the care and maintenance including watering of seeded areas, until the seeding is inspected and accepted by the Owner.

b. Reseeding shall be done until all areas are completely covered with a mature stand of grass. An area shall be considered covered when the entire surface contains a vedurous stand of grass. Areas that, in the opinion of the Engineer, are predominantly weeds shall be plowed up, fine graded, fertilized and reseeded in the manner specified previously, exercising caution not to cause damage to new or existing plant material.

c. Maintain and guarantee all seeded area until acceptance.

SEEDING SPECIFICATION

URBAN MIX GRASS SEED		
% BY WEIGHT	LBS. LIVE SEED PER ACRE	TYPE OF SEED
37.5	45	CREEPING RED FESCUE
31.25	37.5	KENTUCKY BLUEGRASS
31.25	37.5	WINTER HARDY, PERENNIAL RYE
100	120 # LIVE SEED/ACRE	

CONSERVATION MIX GRASS SEED		
% BY WEIGHT	LBS. LIVE SEED PER ACRE	TYPE OF SEED
35	35	CREEPING RED FESCUE
23	23	KENTUCKY BLUEGRASS
15	15	ANNUAL RYE
11	11	WINTER HARDY, PERENNIAL RYE (VARIETY PENNFINE, MANHATTAN OR SIMILAR VARIETY)
6	6	WHITE CLOVER
10	10	HIGHLAND BENTGRASS
100	100 # LIVE SEED/ACRE	

FERTILIZER – 10 LBS PER 1000 SQ FT
SPRING SEEDING
FALL SEEDING

LIME – 90 LBS PER 1000 SQ FT
DOLOMITIC GROUND LIMESTONE
NOT LESS THAN 85% OF THE TOTAL CARBONATE

TOPSOIL
4" MINIMUM APPROVED TOPSOIL

STRAW MULCH – 2 BALES PER 1000 SQ FT
APPLY BINDER OR NETTING AS NEEDED

MAINTENANCE, GUARANTEE AND ACCEPTANCE OF SEEDING
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CARE AND MAINTENANCE, INCLUDING WATERING, OF SEEDED AREA UNTIL THE SEEDING IS INSPECTED AND ACCEPTED BY THE ENGINEER. INSPECTION SHALL BE MADE AFTER THE SECOND MOWING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE WHEN THE SECOND MOWING IS SCHEDULED.
RESEEDING SHALL BE DONE UNTIL ALL AREAS ARE COMPLETELY COVERED WITH A MATURE STAND OF GRASS. AN AREA SHALL BE CONSIDERED COVERED WHEN THE ENTIRE SURFACE CONTAINS A VIGOROUS STAND OF GRASS. AREAS THAT, IN THE OPINION OF THE ENGINEER, ARE PREDOMINANTLY WEEDS SHALL BE TILLED, FINE GRADED, FERTILIZED AND RESEEDED IN THE MANNER SPECIFIED ABOVE.

C–8 SITE RESTORATION
N.T.S.

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STATE OF VERMONT
DEPARTMENT OF BUILDINGS AND GENERAL SERVICES
AGENCY OF ADMINISTRATION
MONTPELIER, VERMONT

REVISIONS

SCALE: AS NOTED
DATE: 01/04/06
DRAWN BY: CCE
APPR. BY: PD

FERRISBURGH
MAINTENANCE GARAGE
DETAILS

C–8

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AGENCY OF TRANSPORTATION
N. FERRISBURGH MAINTENANCE FACILITY
N. FERRISBURGH, VERMONT