

PROJECT COORDINATION

PART 1 - GENERAL

PART 3 - EXECUTION

3.01 PROCEDURES

- A. The Owner shall be notified (5) days prior to commencement of Work by the Contractor.
- B. The Contractor shall coordinate with the Owner to arrange on-site pre-construction meeting prior to commencement of construction. The meeting shall be attended by the Contractor, the Owner, and the Engineer. The meeting shall be held at the project site and shall include the following items:
  1. Review of the contract documents and specifications.
  2. Review of the construction schedule and construction methods.
  3. Review of the site conditions and the proposed construction.
  4. Review of the safety and health program.
  5. Review of the environmental protection program.
- C. The Contractor will coordinate all phases of the Work, so as not to interfere with the normal work procedures in the area.
- D. The Contractor shall conduct his work in such a manner as to not interfere with or endanger work or traffic in areas adjacent to the construction area, except as permitted by the Contractor. The Contractor shall be responsible for the protection of existing utilities and shall provide access for emergency vehicles and equipment to the work site at all times.

1.02 LABOR

- A. The Contractor and subcontractors will employ mechanics skilled in their respective trades.
- B. All labor will be performed in a neat and workmanlike manner.

1.03 PROTECTION OF PERSONS AND PROPERTY

- A. The Contractor shall be responsible for providing and maintaining all OSHA safety precautions in connection with the Work.
- B. Fire Protection: The Contractor shall take all necessary precautions to prevent fire on the Work and shall provide fire extinguishers and fire hoses in accordance with the OSHA regulations. The Contractor shall also provide fire in project related buildings and shall prevent the spread of fires to areas outside the limits of the Work.
- C. Safety Precautions: Prior to commencement of Work, the Contractor shall be familiar with all safety regulations and practices applicable with construction operations. No additional payments will be made for equipment and procedures necessitated by these safety precautions.

1.04 INSURANCE

- A. Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to the commencement of the Work.

1.05 CORRECTION OF WORK

- A. The Contractor shall promptly correct all Work rejected by the Owner as defective or as failing to conform to the contract documents. The Contractor shall bear all cost of correcting such rejected Work.

1.06 WEATHER CONDITIONS

- A. No Work shall be done when, in the opinion of the Owner, the weather conditions are such that the Work cannot be completed in a safe and expeditious manner. If there is delay or interruption in the Work due to weather conditions, the necessary precautions must be taken to avoid new Work to do.
- B. Protection Against Water and Storm: The Contractor shall take all precautions to prevent damage to the Work by storms or by water entering the site of the Work directly or through the ground. In case of damage by storm or water, the Contractor, at his own expense, shall make repairs or replacement of the Work damaged. The Contractor shall be responsible for the cost of any additional Work required by the Engineer. The Contractor may require in order that the finished work may be completed as required by the Drawings and Specifications.

1.07 DISPOSAL OF DEBRIS

- A. All debris and excess materials, other than that which is authorized to be reused, because of the property of the Contractor and shall be promptly removed from the property. The Contractor shall receive title to all debris and/or excess material. The Owner will not be responsible for the disposal of debris or excess material created by the Contractor.

1.08 PROJECT LAYOUT

- A. The Contractor shall be responsible for providing all necessary survey staking.
  1. Locate and protect control points before starting work on the site.
  2. Preserve permanent reference points during progress of the work.
  3. Establish a minimum of two permanent benchmarks on the site, referenced to data established by survey control points.
  - a. Record locations, with horizontal and vertical data, on Project Record Documents.

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes:
  1. Trench, backfill and compact as specified herein and as needed for installation of underground utilities located as shown on the drawings.

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.
- C. Comply with all requirements of governmental agencies having jurisdiction.

PART 2 - SOIL MATERIALS

2.01 SOIL MATERIALS

- A. Fill and backfill materials: free from organic matter and deleterious substances, containing no rocks or lumps more than 6" in greatest dimension.
- 2. Fill material is subject to approval from the Engineer, and a hot material removed from excavations shall be replaced with approved material. The Contractor shall provide a hot material free from roots and other deleterious matter.
- 3. Do not permit rocks having a dimension greater than 2" to be placed in the trench. Rocks and other foreign material shall be removed from the trench and approved by the Engineer.

PART 1 - GENERAL

3.01 PROCEDURES

- A. Eriking Utilities:
  1. Unless shown to be removed, protect active utility lines when the digging of otherwise made known to the Contractor. The Contractor shall be responsible for the protection of all utility lines.
  2. When existing underground utilities, which are not scheduled for removal or abandonment, are encountered in the trench, the Contractor shall stop work and shall be notified by the Engineer. The Contractor shall be responsible for the protection of these utilities and shall provide access for emergency vehicles and equipment to the work site at all times.
  3. If the service is interrupted as a result of work under the trench, the Contractor shall be responsible for the restoration of the utility to its normal operating condition. The Contractor shall be responsible for the cost of any additional Work required by the Engineer.
  4. If existing utilities are found to interfere with the permanent facilities being constructed under the trench, the Contractor shall be responsible for the relocation of these utilities.
  5. Do not proceed with permanent relocation of utilities until written instructions are received from the Engineer.
- B. Protection of persons and property:
  1. Barricade open holes and depressions occurring as part of the work, and post warning lights during hours from dusk to dawn each day and on otherwise required.
  2. Operate warning lights during hours from dusk to dawn.
  3. Protect structures, utilities, sidewalks, pavements, and listed monuments, water, and other hazards created by operations under the section.
  4. Dewatering: The Contractor, at all times, shall conduct his operations so as to prevent the accumulation of water, ice, and snow in excavations or in the vicinity of excavated areas, and to prevent water from interfering with the work. The Contractor shall be responsible for the removal of water by dewatering or by other means. The Contractor shall be responsible for the cost of any additional Work required by the Engineer.
  5. Accumulated water, ice, and snow shall be properly removed and disposed of by pumping or other approved means. Disposal shall be carried out in a manner which will not create a hazard to public health, nor cause injury to public utility property, nor create a hazard to the safety of the public. The Contractor shall be responsible for the cost of any additional Work required by the Engineer.
  6. Eriking: The Contractor shall be responsible for the protection of existing utilities and shall provide access for emergency vehicles and equipment to the work site at all times.

3.02 TRENCHING

- A. Care shall be exercised by the Contractor to guard against the operation of existing facilities without approval of the Engineer.
- B. Provide shoring and shoring necessary for protection of the trench walls and bottom. The Contractor shall be responsible for the cost of any additional Work required by the Engineer.
- C. Trenching shall be done in such a manner as to avoid interference with the work of other trades. The Contractor shall be responsible for the cost of any additional Work required by the Engineer.
- D. The completed trench bottom shall be firm for its full length and width.
- E. If indicated on the plans or directed by the Engineer, a foundation material shall be placed below the trench bottom. The Contractor shall be responsible for the cost of any additional Work required by the Engineer.
- F. Where pipes are to be placed in an excavation, the Contractor shall be responsible for the cost of any additional Work required by the Engineer.
- G. Excavating for foundations:
  1. Excavation shall be done to a depth of at least 12" clear between outer surfaces and the embankment or shoring that may be used to hold and protect the banks.
  2. The excavation shall be completed and the trench bottom shall be compacted and finished to the satisfaction of the Engineer, and of an additional cost to the Owner.
- H. Excavation shall not interfere with normal 45' bearing capacity of foundations.
- I. All trenching shall be in accordance with the latest OSHA regulations.
- J. Where utility runs traverse public property or are subject to public utility regulations, the Contractor shall be responsible for the cost of any additional Work required by the Engineer.
- K. Where trenching occurs in existing lawns, remove turf in sections and keep damp. Replace turf upon completion of the backfilling.

3.03 BEDDING

- A. Pipe Bedding Area: Prior to laying pipe, bedding material shall be placed to the limits of the excavation and to a depth beneath the pipe as specified. The material shall be either sand, gravel, or crushed stone and shall not contain large lumps and stones over one inch in diameter. The bedding shall be compacted and finished to the satisfaction of the Engineer, and of an additional cost to the Owner.
- B. Where trenching occurs in existing lawns, remove turf in sections and keep damp. Replace turf upon completion of the backfilling.
- C. Excavating for foundations:
  1. Excavation shall be done to a depth of at least 12" clear between outer surfaces and the embankment or shoring that may be used to hold and protect the banks.
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2.02 BANK RIM GRAVEL

- A. This material shall meet the following grading requirements:
 

Percent by Weight:	20 - 60
No. 4	25 - 50
No. 10	0 - 12
No. 20	0 - 6

2.03 COMPACTED FILL/GRANULAR BEDDING

- A. This material shall be free of shale, clay, friable material, debris, and organic matter, graded in accordance with AASHTO M 197 within the following limits:
 

Percent by Weight:	75 - 100
No. 4	20 - 100
No. 10	0 - 20
No. 20	0 - 12

PART 3 - EXECUTION

3.01 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Identify known below grade utilities. Stake and flag locations.
- C. Monitor and protect existing utilities remaining which pass through work area.
- D. Upon discovery of unknown utility or concealed conditions, discontinue affected work, notify Engineer.
- E. Erosion control must be installed prior to beginning any construction operations.
- F. Other areas required for access to site and execution of Work.

3.02 EROSION CONTROL

- A. Erosion control must be installed prior to beginning any construction operations.
- B. Other areas required for access to site and execution of Work.

3.03 SITE CLEARING

- A. Other areas required for access to site and execution of Work.
- B. Mention access to the site of all lines.

PART 1 - GENERAL

1.01 SUMMARY

- A. Section includes:
  1. Base Course
  2. Leveling Course
  3. Finish Course
- B. General: This work shall consist of one or more courses of bituminous concrete, constructed on a prepared foundation in accordance with these Specifications and the type of surface being paved, and in conformity with the lines, grades, and elevations shown on the drawings and specifications. The Contractor shall be responsible for the cost of any additional Work required by the Engineer.

1.02 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
- B. The Contractor shall be responsible for the cost of any additional Work required by the Engineer.

1.03 PROJECT CONDITIONS

- A. Bituminous concrete shall not be placed between November 1 and May 1. Material shall not be placed when the granular subgrade is wet or when the air temperature of the paving site in the shade and away from artificial heat is as follows:
 

AT Temperature	Pavement
Degrees Fahrenheit	Compacted Depth
50 Degrees or below	Greater than 1 1/4"
40 Degrees or below	Less than 1 1/4"
- B. Materials shall be combined and graded to meet the criteria as defined in the VDOT Standard Specifications, Division 700 for bituminous concrete.
- C. Thickness of paving for drains and parking lots shall be as specified on the plans, consisting of base course and finish course.
- D. For pavement reconstruction areas due to trenching, the depth of base course shall be increased by 1/2". Pavement reconstruction shall be done in accordance with the VDOT Standard Specifications, Section 708.08.

2.02 TRAFFIC MARKINGS

- A. Traffic markings shall be factory-finished, meeting the criteria as defined in the VDOT Standard Specifications, Section 708.08.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install in accordance with VDOT Standard Specifications, Section 406.

3.02 EXAMINATION

- A. Verify base conditions under the provisions of Section 0210 - SITE EARTHWORK.
- B. Verify that compacted granular base is dry and ready to support paving and imposed loads.
- C. Verify gradients and elevations of base are correct.

3.03 PREPARATION

- A. Matching surfaces: When a new pavement is to match an existing bituminous pavement for a roadway or trench, the Contractor shall verify smooth cut the existing pavement surface. The Contractor shall be responsible for the cost of any additional Work required by the Engineer.
- B. Cold surfaces of granular and clay base shall be thoroughly dried and covered with Emulsified Asphalt, RS-1, just prior to paving.

3.04 PREPARATION - TACK COAT

- A. When the bottom course of bituminous concrete pavement is left over the winter, or paving is to be made over an existing bituminous concrete pavement, the existing surface shall be covered with Emulsified Asphalt applied before the next course is applied.
- B. Also apply to contact surfaces of cuts.
- C. Cold surfaces of granular and clay base shall be thoroughly dried and covered with Emulsified Asphalt, RS-1, just prior to paving.

3.05 PAVING ASPHALT PAVEMENT

- A. Place to compacted thickness identified on the plans.
- B. Compact pavement by rolling. Do not displace or extrude to rolling equipment.
- C. Develop rolling with compressive passes to achieve even and smooth finish, without roller marks.
- D. Joints between old and new pavements or between successive courses shall be made in accordance with the VDOT Standard Specifications, Section 406.03. Whenever the spreading process is interrupted long enough for the mixture to attain its initial stability, the power shall be removed from the mat and a joint constructed.
- E. Both joints shall be formed by cutting the pavement in a straight-line. The butt joint shall be thoroughly coated with Emulsified Asphalt, Type RS-1, just prior to depositing the paving mixtures.

SITE ENGINEER:

CIVIL ENGINEERING ASSOCIATES, INC.

P.O. BOX 448 SHELBURNE, VT 05482

802-895-2222 FAX 802-895-2277 E-MAIL: info@ceai.com

DEAN PUM

OWNER: STATE OF VERMONT

BUILDINGS and GENERAL SERVICES

MONTPELIER, VERMONT

PROJECT: MIDDLEBURY AIRPORT

MIDDLEBURY, VERMONT

DATE: 6/5/2002

SHEET: AS BROWN

DRAWING NUMBER: C5

DATE: 6/5/2002

CHECKED: REVISION

DATE: 6/5/2002

CHECKED: REVISION

DATE: 6/5/2002

CHECKED: REVISION

DATE: 6/5/2002

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