

**DIVISION 1  
GENERAL REQUIREMENTS**

**SECTION 01000 - GENERAL**

**WORK INCLUDED**

- 01000 - General
- 01010 - Summary of Work
- 01040 - Coordination
- 01050 - Field Engineering
- 01060 - Codes, Standards, Reports, Permits
- 01200 - Project Meetings
- 01340 - Shop Drawings and Samples
- 01410 - Testing
- 01500 - Temporary Facilities
- 01501 - Landscape Preservation
- 01502 - Preservation of Trees and Shrubbery
- 01512 - Dust Control
- 01530 - Construction Site Barriers and Traffic Control
- 01560 - Cleaning Up
- 01565 - Water and Erosion Control
- 01700 - Project Closeout

Daily Reports: The General Contractor shall keep a daily record of all on-site activities and conditions. This daily record shall include a description of the work being performed, the weather conditions, manpower on-site, visitors, and any other data relevant to the progress of the work. Copies of these daily reports shall be submitted to the Owner's Representative no less than once a month.

Project Meetings: The General Contractor shall schedule and conduct regular job coordination and sub-contractor meetings at the site and shall notify in advance the Architect of such meetings. The Contractor shall keep a record of such meetings and distribute copies of such records to everyone in attendance, to others affected by decisions or actions taken at such meetings, and to the Architect whether in attendance or not.

Record Drawings: The General Contractor shall keep one (1) complete set of contract documents on the premises which shall be an "as-built" record set. All changes in the work from that shown on the original drawings shall be recorded thereon in red pencil. This set shall be turned over to the Architect with the final application for payment.

Operation and Maintenance Manuals: Where O & M manuals are called for, three (3) copies shall be required and shall be in 3 ring binders with hard covers and durable edge labeling.

Existing Conditions: Verify all existing conditions before ordering any fabrications and/or materials. Verify existing locations of all site utilities before beginning any site work.

Schedule of Values: The General Contractor shall provide a "Schedule of Values" within 20 days of receiving the Notice to Proceed.

End of Section

**SECTION 01010 - SUMMARY OF WORK**

The scope of this project includes all labor, materials, equipment, and incidental services required for the construction of a nursing education simulation laboratory building as indicated on the drawings and specifications offered herein.

**SECTION 01040 - COORDINATION**

The General Contractor shall employ a full-time, on-site, competent project superintendent experienced in projects of this scale and complexity and is fully authorized as his agent on the work. Proof of the adequate experience in projects of this scale and/or type shall be furnished to the Architect or Owner upon request. The superintendent shall be capable of reading and fully understanding the plans and specifications and shall receive and fulfill instructions from the Architect.

The superintendent shall direct and coordinate the work of the various sub-contractors to ensure the progress of the work. He shall familiarize himself fully with the Plans and Specifications in advance of work being constructed and shall notify the Architect immediately of any conflict or discrepancy.

End of Section

**SECTION 01050 - FIELD ENGINEERING**

Prior to the start of any construction, the Contractor's field engineer shall verify existing grades, lines levels, and dimensions as required for the construction. Notify the Architect immediately if any errors or inconsistencies are discovered.

Prior to the start of any excavation work stake out the construction layout lines in accordance with the plans and specifications and notify Architect if not consistent with dimensions shown on plans.

Existing Conditions: Prior to trenching, excavate trench at location where routing crosses existing utilities and verify that proposed pipe elevations do not conflict with existing utility lines, duct bank, etc. Notify Architect immediately if there is any conflict. Verify all existing conditions before ordering any fabrications and/or materials. Verify existing locations of all site utilities before beginning any site work.

End of Section

## **SECTION 01060 - CODES, STANDARDS, REPORTS, PERMITS**

### **CODES and LAWS**

These construction documents, and the joint and several phases of construction hereby contemplated are to be governed at all times by applicable provisions of the Federal Law(s), including but not limited to, the latest amendments of the following:

Williams - Steigler Occupational Safety and Health Act of 1970, Public Law 91-596  
Part 1910 - Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations  
Part 1518 - Safety and Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations  
Americans with Disabilities Act (ADA) Appendix B - 28 CFR Part 36  
Uniform Building Code, 1991 Edition  
Uniform Plumbing Code, 1991 Edition  
Uniform Mechanical Code, 1991 Edition  
Uniform Fire Code, 1991 Edition  
National Electric Code of the NFPA, latest edition  
National Board of Fire Underwriters, latest edition  
NFPA - latest edition

### **STANDARDS**

The following Standards are hereby made a part of these specifications to the same extent as if they were written herein, except that they may be amended or superseded by these Specifications or the Drawings. The date of the standard that is in effect is the date of the Contract Documents except when a specific date is specified.

American Concrete Institute Guide for Concrete Floor and Slab Construction, ACI-302, latest edition  
American Institute of Steel Construction, latest edition  
American Society for Testing and Materials, latest edition  
American Standards for Nursery Stock, current edition  
American Welding Society, latest edition  
Associated Landscape Contractors of Colorado Specifications, 1991 edition  
Fort Lewis College Minimum Standards for Landscape Irrigation, 1994 edition  
Fort Lewis College Sitework Construction Standards Manual, 1995 edition  
Manual on Uniform Traffic Control Devices (MUTCD), latest edition  
State of Colorado Division of Highways Standard Specifications for Road & Bridge Construction, latest edition

End of Section

## **SECTION 01200 - PROJECT MEETINGS**

The General Contractor shall schedule and conduct weekly job coordination and sub-contractor meetings at the site and shall notify in advance the Architect and the Owner's Representative of such meetings. The Contractor shall keep a record of such meetings and distribute copies of such records to everyone in attendance, to others affected by decisions or actions taken at such meetings, and to the Architect and Owner's Representative, whether in attendance or not.

The minimum agenda for the above meetings is as follows:

1. Previous meeting minutes
2. Project schedule
3. Submittal status
4. Problems that will impede progress
5. Material and equipment delivery schedules
6. Sub-Contractor coordination
7. Quality Control
8. Safety
9. Change Orders

End of Section

## SECTION 01230 ALTERNATES

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

- A. Description of Alternates.

#### 1.02 RELATED REQUIREMENTS

- A. Division 00 Documents, in their entirety.
- B. Document SBP-6.12 – Information to Bidders.

#### 1.03 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.

#### 1.04 SCHEDULE OF ALTERNATES

Specification sections and/or individual components of the specifications, related to Alternative Work, are not strictly identified as "alternate" due to the fact that most specification sections are required for the project as a whole.

- A. **Alternate No. 1** – Women's Room 110 and Men's Room 120 Toilet Room Renovations:
  - 1. **Base Bid:** Install vertical grab bars in Rooms 110 and 120; and Urinal Screen in Room 120. No additional work is required in these Rooms.
  - 2. **Alternate Item:** Provide the cost to demo and renovate the existing multi-stall Men's and Women's Toilet Rooms as detailed in the Construction Documents.
- B. **Alternate No. 2** - Replacement of Entry Doors:
  - 1. **Base Bid:** Provide security access capabilities to the existing door systems as described in the Construction Documents.
  - 2. **Alternate Items:** Provide the cost to remove, in their entirety, and install new aluminum doors, frames, openers, security access capabilities at the entry doors, identified on the drawings as Doors 100A and 100C. Surrounding finishes - not limited only to drywall, stucco, masonry veneer, flooring and sealants - on the interior and exterior sides shall be patched and repaired to new condition to match existing conditions.
- C. **Alternate No. 3** – Access Control and wood door replacement:
  - 1. **Base Bid:** Provide security access control capabilities to the existing and to remain interior wood doors and new wood doors and frames as described in the Construction Documents.
  - 2. **Alternate Item:** Provide the cost to replace all interior wood doors, frames and hardware and install security access control capabilities as described in the Construction Documents.
- D. **Alternate No. 4** – HVAC control points:
  - 1. **Base Bid:** Provide HVAC control points as described in the Construction Documents.
  - 2. **Alternate Item:** Provide the cost to supply additional HVAC control points as described in the Construction Documents.
- E. **Alternate No. 5** – Stucco repair:
  - 1. **Base Bid:** No work on the exterior walls' stucco finish system of the building except as required due to work being performed for the interior renovations and/or if Alternate No. 2 is accepted.
  - 2. **Alternate Item:** Provide the cost to patch and repair areas of the exterior walls' stucco finish system as indicated on the drawings.

### PART 2 PRODUCTS - NOT USED

### PART 3 EXECUTION - NOT USED

END OF SECTION

**SECTION 01340 - SHOP DRAWINGS AND SAMPLES****SHOP DRAWINGS**

The General Contractor shall be responsible for the submission of all shop drawings and samples to the Architect. Shop drawings or samples submitted directly by a sub-contractor will not be accepted. Shop drawings and other drawing submittals shall be accurately drawn and dimensioned and shall be submitted in the form of a rolled sepia and five sets of prints. Sepia and four sets of prints shall be submitted to Architect and remaining print shall be submitted directly to Owner's Representative. Exclusion of sepia shall be a cause for rejection. Approval of shop drawings is for design intent only. The Contractor is responsible for dimensions, quantities and coordination with other trades.

**SAMPLES**

The Contractor shall arrange for the submittal of up to date samples including a complete range of colors, textures and patterns manufactured for each specific product. Color samples shall be of actual colored material, not photographic reproductions. Larger size samples may be requested once a tentative selection has been made.

**SUBMITTAL SCHEDULE**

All shop drawings not requiring field measurements for fabrication and all color and/or finish samples shall be submitted no later than 8 weeks following the receipt of the Notice to Proceed. No color selections shall be made until all color samples are received and failure to meet this requirement shall not be cause for a delay claim by the Contractor. All remaining shop drawings shall be submitted in a timely manner and so as to allow a minimum of two weeks review and approval time. Note that submittals or shop drawings that are inaccurate, incomplete, incorrect or otherwise insufficient may be rejected and that the re-submitted material will also be subject to the two week approval period.

**REQUIRED SHOP DRAWINGS AND/OR SUBMITTALS**

- Traffic Control Plan
- Embedment and Base Course Aggregate
- Asphalt Paving Mix Design
- Concrete Mix Design
- Precast Concrete Drainage Structures
- Pipe and Pipe Accessories
- Sod Certification
- Colorado Commercial Pesticide Applicator Certification
- Turf Seed Mix
- Irrigation Controller Pedestal Installation

End of Section



**SECTION 01410 - TESTING**

The testing agency shall be an independent laboratory approved by the Owner. The Owner will pay for the costs of initial testing. The cost of subsequent retesting necessitated by the failure to meet the specifications based on the initial test shall be paid for by the Contractor. The Contractor shall be responsible for providing the Owner with advance notification as to when areas will be ready for testing and coordinating with the Testing Agency to see that their work is accomplished.

**COMPACTION TESTING**

- A. Compaction Testing. Testing shall be made prior to the placement of improvements at the top of the subbase, at the top of the base course, and as otherwise required by these Specifications. Contractor to cooperate fully with all persons engaged in testing. Contractor to excavate as required to allow testing; Contractor to backfill all test excavations in accordance to these Specifications.
- B. Reference Standards. Density/moisture relationships to be developed for all soil types encountered according to ASTM D698 or ASSHTO T99.
- C. Field Testing. Testing for density during compaction operations to be done in accordance with ASTM D2922 using nuclear density methods.
- D. Frequency of Testing. Conduct a minimum of one test for each layer of specified depth of fill or back-fill as follows:
  - Foundations: For each 100 lineal feet or less of trench.
  - Slabs on Grade: For each 2,000 square feet or less of building area.
  - Pavement and Walks: For each 2,000 square feet or less.
  - All Other Areas: For each 5,000 square feet or less.
  - Utility Trenches: For each 250 lineal feet or less of trench.
  - Other: As directed by Engineer or Owner's Representative.

**CONCRETE TESTING**

The Testing laboratory shall take four (4) cylinders for each test; break one (1) at seven days; two (2) at twenty-eight days; retain one (1) for forty-five day break if necessary.

During the progress of construction, tests under the direction of the engineer shall be made to determine whether the concrete being produced complies with the quality specified. The General Contractor shall cooperate in the making of such tests by furnishing the labor, cylinders, and concrete required, and providing protection of the specimens against injury or loss through his operations. The General Contractor shall notify the Owner's testing laboratory twenty-four (24) hours in advance of any pour.

**ASPHALT TESTING**

Asphalt compaction testing shall be done at a frequency as determined by the Engineer. Asphalt shall be compacted to a minimum 95% density of the laboratory specimen as determined by AASHTO T-209.

End of Section

**SECTION 01500 - TEMPORARY FACILITIES**

All temporary facility and utility costs shall be included in this Section. The Contractor shall arrange and pay for the temporary connection and provision of electrical power, space heating, and water. All services to the existing Campus shall be maintained at all times.

Temporary storage facilities shall be provided for the purpose of protecting stored materials that may be damaged by storage in the open. The Contractor shall do no work at any time, nor shall he permit work to be performed, under any conditions unsuited to its perfect execution, safety and permanence. At all times when the temperature is low enough to require it, the Contractor shall heat and protect any materials subject to injury by cold or frost.

Temporary fencing, barricades, sidewalks and walkways shall be provided as required for the duration of the construction period or until permanent facilities are in place and accepted by the Owner. Contractor shall be responsible for the removal of all temporary facilities at the completion of the job and the return of all areas damaged to their original condition before work began.

If temporary heat is required for the protection, or expediting of the work, the Contractor shall provide approved heating apparatus, and shall provide adequate and proper fuel, and shall maintain heat as required for protection, expediting or drying out of the work. The temporary heating apparatus shall be installed and operated in such a manner that the finished work will not be damaged, and any such damage shall be corrected at the expense of the Contractor.

The Contractor shall provide storage suitable for the protection of materials and tools. Provide temporary toilet facilities if required to comply with governing health and safety regulations. Provide drinking water for construction personnel through either water supply connected fixtures or by containerized dispensers.

Provide protection for existing trees and vegetation. Protection to be set at tree drip lines. Protection of existing vegetation is very important to the Owner. All trenching through the undisturbed area(s) outlined in the Drawings shall be approved by the Architect prior to construction. An attempt will be made to miss all large existing trees and shrubs, etc.

End of Section

**SECTION 01501 - LANDSCAPE PRESERVATION**

- A. General: The contractor shall exercise care to preserve the natural landscape and shall conduct his construction operations so as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. Except where clearing is required for permanent works, approved construction roads, or excavation operations, all trees, native shrubbery, and vegetation shall be preserved and shall be protected from damage by the contractor's operations and equipment. The edges of clearings and cuts through trees, shrubbery and vegetation shall be irregularly shaped to soften the undesirable visual impact of straight lines. Movement of crews and equipment within the right-of-way and over routes provided for access to the work shall be performed in a manner to prevent damage to property and existing landscaping. All unnecessary destruction, scarring, damage, or defacing of the landscape resulting from the contractor's operations shall be repaired, replanted, reseeded, or otherwise corrected as directed by the Owner and at the contractor's expense.
- B. Construction Roads: The location, alignment, and grade of construction roads shall be subject to the approval of the Owner. When no longer required by the contractor, all construction roads shall be returned to the original contour, surface scarified and revegetated as specified.
- C. Temporary Facilities: All construction temporary facilities shall be located and arranged in a manner to preserve tree and vegetation to the maximum extent possible. When no longer required, all temporary facilities shall be totally removed from the site. The area shall be regraded as required so that all surfaces drain naturally, blend with the natural terrain and are revegetated as specified.
- D. Borrow Areas and Quarry Sites: Borrow pits and quarry sites shall be so excavated that water will not collect and stand therein. Before being abandoned, the sides of borrow pits and quarry sites shall be brought to stable slopes with slope intersections shaped to carry the natural contour of adjacent undisturbed terrain into the pit or borrow area giving a natural appearance. All rubbish, construction equipment and structures shall be removed from the site.

End of Section

**SECTION 01502 - PRESERVATION OF TREES AND SHRUBBERY**

- A. Preservation: All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be preserved and shall be protected from any damage that may be caused by the contractor's construction operations and equipment. Special care shall be exercised where trees or shrubs are exposed to injuries by construction equipment, excavating, dumping, chemical damage, or other operations; and the contractor shall adequately protect such trees by the use of protective barriers or other methods as directed by the Owner's Representative. The removal of trees or shrubs shall only be permitted after written approval by the Owner.

The layout of the contractor's temporary facilities and operations in borrow and spoil areas shall be planned and conducted in such manner that all trees and shrubbery not approved for removal shall be preserved and adequately protected from either direct or indirect damage by the contractor's operations.

Except in emergency cases or when otherwise approved by the Owner, trees shall not be used for anchorages. Where such use is approved by the Owner, the trunk shall be wrapped with a sufficient thickness of protective material before any rope cable or wire is placed.

- B. Repair or Treatment of Damage: The contractor shall be responsible for injuries to trees and shrubs caused by his operations. The term "injury" shall include, without limitations, bruising, scarring, tearing, and breaking of roots, trunk or branches. All injured trees and shrubs shall be repaired or treated without delay, at the contractor's expense. If damage occurs, the Owner shall determine the method of repair or treatment to be used for the injured trees or shrubs as recommended by an experienced horticulturist or a licensed tree surgeon provided by and at the contractor's expense. All repairs or treatment of injured trees shall be performed under the direction of an experienced horticulturist or a licensed tree surgeon provided by and at the expense of the contractor.
- C. Replacement: Trees or shrubs that, in the opinion of the Owner, are beyond saving shall be removed and replaced early in the next planting season. The replacement shall be the same species, or other approved species, of equal size or the maximum size that is practical to plant and sustain growth in the particular environment. Replacement trees and shrubs shall be guyed if necessary, watered, and guaranteed for a period of 1 year. Any replacement tree or shrub that dies during this period shall be removed and replaced as noted in this paragraph.

End of Section

**SECTION 01512 - DUST CONTROL**

The Contractor shall employ all means necessary and shall furnish all labor, equipment and materials required to carry out proper and efficient dust control, and to prevent dust which has originated from his operations from damaging landscaped areas and structures and from causing a hazard to traffic or a nuisance to persons. The Contractor will be held liable for any damage resulting from dust originating from his operations under this Contract. The cost of sprinkling or of other methods of dust control shall be included in the prices bid for the other items of work.

End of Section

**SECTION 01530 - CONSTRUCTION SITE BARRIERS****1.00 GENERAL**

- 1.01 Scope. The work of this section consists of furnishing, installing and maintaining barricades, signage, temporary detours, etc., for control of automobile, bicycle and pedestrian traffic during construction. Also included in the work is furnishing, installing and maintaining suitable barriers to prevent public entry and to protect existing facilities, existing landscaping (identified to remain) and the public from construction operations.

1.02 Related Work Specified Elsewhere.

Section 01500 - Temporary Facilities  
Section 01512 - Dust Control

- 1.03 Submittals. Submit a traffic control plan for all phases of construction describing traffic patterns, control measures, and daily maintenance and cleanup measures. Improve and implement as directed by the College.

**2.00 MATERIALS**

- 2.01 General. Material may be new or used, but shall be suitable for intended purposes. Fences and barriers shall be structurally adequate and neat in appearance.

- 2.02 Fencing. Minimum height, 6 feet, unless authorized otherwise by the Owner.

- 2.03 Barricades and Signs. MUTCD, Part VI, Traffic Controls for Street and Highway Construction and Maintenance Operations, and Colorado Division of Transportation (CDOT) AS@ Standards. Where CDOT Type 4 precast concrete barriers are utilized, they shall have reflectors as specified in Standard S-614-51.

- 2.04 Wood Planking. Lumber, free of nails, large knot holes and splinters.

- 2.05 Material for Surface of Stabilized Construction Entrance. AASHTO Designation M43, Size No. 2 (8-1/2" to 1-1/2").

**3.00 METHODS AND PROCEDURES**

- 3.01 General. Any work within a public thoroughfare that involves the temporary closure of a lane of traffic shall be approved by the College in advance of the work and shall be completed between the hours of 8:00 A.M. and 6:00 P.M., at which time all barricades shall be removed and the roadway completely opened to traffic. All requirements herein shall be in accordance with the AManual on Uniform Traffic Control Devices@ (MUTCD), latest revision, as well as any additional requirements of the College.

- 3.02 Barricades, Flagging and Watchmen. The Contractor shall erect and maintain barricades and sufficient safeguards around all excavations, embankments, and obstructions; shall provide suitable warning lights near the work and keep them lighted at night or other times when visibility is limited and shall employ such watchmen as may be necessary for the protection of the public. When a traffic lane is temporarily closed and two way traffic must be maintained, the Contractor shall use flag personnel to control traffic movement.

- 3.03 Street and Service Drive Closures. No street or service drive shall be closed by the Contractor except as authorized by the Engineer and in accordance with procedures outlined herein. Wherever, in the prosecution of the work, the Contractor finds it necessary to close a street to traffic, he shall advise the College forty-eight (48) hours in advance of the time when the street will require closing. Twenty-four (24) hours prior to commencement of work, the Contractor shall furnish and install approved ANo Parking@ signs giving the day of the week; i.e. ANo Parking in this area on Thursday@. At the time of posting, verbal notice of intent shall be given to occupants of premises involved. In cases of emergency, involving conditions over which the Contractor has no control, the street may be closed. In these cases, the Contractor is required to immediately notify the Fort Lewis College Security Department.

- 3.04 Detours. Wherever streets or alleys are closed as provided herein, it will be the sole responsibility of the Contractor

to adequately mark and light the detours as determined by the Contractor and the Engineer after consultation with the College, and in accordance with standard details indicated on plans for this project.

Traffic shall not be routed over detours until they have been bladed and shaped (and paved where required) in such a way as to provide a reasonably safe and convenient roadway to the traveling public. Where detours are established over such areas or over unpaved streets, it shall be the responsibility of the Contractor to maintain such detours with a minimum of inconvenience to the public. The Contractor shall minimize inconvenience from dust.

- 3.05 Traffic Maintained Over Construction. Where traffic is maintained along the street or service drive under construction, care shall be used to shape and maintain the roadbed so that a safe and convenient roadway is available to the traveling public. Ramps from undisturbed streets into excavated areas shall be maintained for traffic on gradual grades and in no case shall a ramp be steeper than a 10:1 slope. The Contractor shall make full provisions for minimizing inconvenience from dust. During periods when actual construction is not in progress, streets shall be properly maintained and dust control measures shall be employed.
- 3.06 Protection of Street Signs, Traffic Signs, and Signals. Street signs, traffic signs, signals and other traffic control devices already in place for information and to safeguard traffic must be protected by the Contractor. Where it is necessary to disturb or remove any of these items, the Contractor shall secure approval of the Engineer prior to any such work.
- 3.07 Protection of the Public. Fence, barricade, or otherwise block off the immediate work area to prevent unauthorized entry to the work area. Erect and maintain barricades, lights, danger signals, and warning signs in accordance with ANSI/ANSI D6.1. Illuminate barricades and obstructions at night; keep safety lights burning from sunset to sunrise. Adequately barricade and post all open cuts including special provisions for those adjacent to thoroughfares. Protect pedestrian traffic by fences to channelize and direct pedestrian traffic along approved routes. When pedestrian traffic is detoured into a roadway, provide temporary walkways with any necessary protection at ends and overhead. For walkways, use lumber running parallel to direction of traffic movement and provide ramps at changes of elevation. Cover pipes, hoses, and power lines crossing sidewalks and walkways with troughs using beveled edge boards. Erect and maintain sufficient detour signs at road closures and along detour routes.
- 3.08 Removal. Completely remove barriers no longer needed and when approved by the Engineer.

End of Section

**SECTION 01560 - CLEANING UP**

The General Contractor shall be responsible on a regular basis for the sweeping, brushing, and other general cleaning of the completed work and the removal from the site of debris, surplus material, tools not in active use, and scaffolding or other equipment no longer needed. All trash container rental, hauling and dump fees are to be included in this Section. The final cleanup shall be done prior to the punch list being made and shall be done with care, removing all marks, stains and smears. All items that are stained, smeared, scratched or cannot be cleaned shall be replaced at no cost to the Owner.

End of Section



**SECTION 01565 - WATER AND EROSION CONTROL****1.00 GENERAL**

1.01 Scope. All work performed under this specification will be considered as part of the General Conditions of the contract. Furnish all labor, material and equipment necessary for completion of the following work during construction:

- A. To temporarily provide, place and maintain ample means and devices with which to promptly remove and properly dispose of all water entering excavations or which may flow along or across the site.
- B. To protect excavations from the effects of water entering or leaving the excavation.
- C. To control the amount of sediment-laden water leaving the construction site which is created from excavation, backfilling and any other construction operations.
- D. To control all surface water and/or ground water that impacts the construction site.

1.02 Related Work Specified Elsewhere.

Section 02140 - Dewatering

Section 02220 - Excavation, Backfilling and Compaction

Section 02221 – Trenching, Backfilling and Compaction

1.03 Project Conditions.

- A. The Contractor shall determine the methods by which he will temporarily divert, detain or otherwise control the flow of water from drainage through the construction area. The Contractor shall also determine the means by which he will control alluvial or subsurface flow, springs, surface runoff, irrigation water, excessive soil moisture and any and all other forms of water which may occur under normal or flood conditions. Any controlling of surface and/or ground water shall be performed in such a manner that recently constructed portions of the project are not damaged by either normal or flood flows. If necessitated by storm water events, the Contractor shall be responsible for the re-establishment of soil, topsoil, grading, reseeding, or sod replacement; replacement of damaged concrete work or riprap; removal of silt or debris which may be deposited within the project area by the flow of water; and other work as necessary to repair said damage.
- B. At no time during construction shall the Contractor affect existing drainage patterns of adjacent property owners. Any damage to adjacent properties which result from the Contractor's alteration of any drainage patterns, alluvial or ground water flows or subsurface drainage shall be repaired by the Contractor at no additional cost to the Owner.
- C. The Contractor may employ 24-hour per day pumping for control of water if necessary. Noise emitted from the pumping operations shall be controlled to conform to local requirements.

1.04 Submittals.

- A. A detailed Water and Erosion Control Plan shall be submitted to the Owner's Representative for review and approval prior to the start of construction. The following information is offered as guidance in preparation of this plan:
  - 1. Describe the sequence of construction.
  - 2. Describe the control facilities. Indicate the location of the vehicle tracking control areas, straw bales, sediment traps, silt fences, site fence and other facilities.

3. Describe inspection and maintenance. The Contractor should inspect the erosion control measures weekly during construction. Remove excessive sediment deposition upstream of the silt fences and redistribute up slope from the silt fences. Silt fences that are deflected from the vertical position or are unstable should be re-established. The vehicle tracking erosion control measure should be maintained daily by removing any dirt or gravel that has been moved out into the streets and placing new gravel as may be required to insure that the gravel is functioning properly to remove mud from the tires of construction equipment.
  4. Dust Prevention - During construction, and until final acceptance by the Owner, the Contractor shall be responsible for controlling dust emissions in the construction area. No earthwork activities shall be performed when the wind speed exceeds thirty miles per hour (30 mph). Whenever conditions exist that create airborne soil particles the Contractor shall, at his expense, wet all disturbed areas as often as necessary to control the dust. All fill areas shall be compacted daily or as directed by the Owner's Representative. Any dust control or clean up done by the Owner due to the Contractor's failure to comply with these requirements shall be charged to the Contractor.
- B. Schedule - Submit a detailed schedule showing dates for implementation of the required erosion control practices as they relate to proposed construction activities.
- 1.05 Permits. The Owner's Representative shall obtain the required discharge permit from the Colorado Department of Public Health and Environment local governing entity based upon the Contractor's approved Water and Erosion Control Plan.
- 2.00 MATERIALS
- 2.01 General. All materials necessary for the control of runoff, water and erosion shall be provided by the Contractor. These may include, but shall not be limited to, pumps and associated energy costs, well materials, sediment control materials and devices, inlets, pipe, and other devices as necessary to by-pass and control flow around or through the construction site.
- 3.00 METHODS AND PROCEDURES
- 3.01 General.
- A. The Contractor shall be required to temporarily relocate drainage ways, by-pass the flow, de-water excavated areas or otherwise control runoff and water so that the project can be constructed in accordance with the Drawings.
  - B. All excavations shall be kept dry until the structures and appurtenances to be built therein have been completed to such an extent that they will not be damaged. At that time, the Contractor may remove such temporary means and devices utilized in the control of runoff and water.

End of Section

**SECTION 01700 - PROJECT CLOSEOUT**

Record Drawings: The Contractor shall keep one (1) complete set of the Contract Documents, on the premises which shall be an "as-built" record set. All changes in the work from that shown on the original drawings shall be neatly recorded thereon in red pencil. This set shall be turned over to the Owner with the final application for payment.

Final acceptance shall be determined as follows: The Contractor shall give written notice to the Architect three (3) working days in advance of the proposed completion date stating that the work will be completed on that date. On the proposed completion date an inspection group consisting of representatives of the Owner, Contractor and Architect will conduct a joint inspection of the building and site. A list will be prepared of all incomplete and unacceptable items considered essential to the completion and use of the work. When the Contractor feels that the items on the above list are corrected and/or completed, he will again give written notice as outlined above and another joint inspection will be made. If additional inspections are necessary due to work still found to be incomplete or unacceptable, the above method will be used for further inspections. Note, however that the Architect shall not be required to make inspection trips if, in his opinion, there are obvious parts of the Work which are unacceptable or incomplete.

Upon final acceptance of the Work, the Contractor shall prepare and submit his final application for payment in accordance with the Contract Documents.

The final application for payment shall be accompanied by all undelivered operation and maintenance (O&M) instructions (3 copies required in 3-ring binders with hard covers), schedules, bonds, guarantees, specifications, record drawings, catalogs, certificates of inspection or any other documents whatsoever which are required or provided for by the Contract Documents.

The acceptance by the Contractor of final payment by the Owner shall constitute a release and waiver of any and all claims whatsoever by the Contractor against the Owner, provided, however, that acceptance of final payment shall not constitute a release or waiver of unsettled claims which had been presented to the Owner in writing prior to the tender of final payment by the Owner.

Proper completion of any and all requirements herein above set forth shall be a condition precedent to any final payment.

Refer to General Conditions for additional closeout requirements.

End of Section