Project: Adna School District  
Adna High School Gym Addition  
Project Number 2019-14  

Notice to Contractor:  
The following changes in the Contract Documents, including the Drawings and Specifications, constitute this Addendum. All changes included in Addenda shall become a part of the Contract Documents for this Project. Any changes herein offset only the specific Drawings or Notes on Drawings or words or paragraphs in Specifications referenced to and the balance of the Drawings shall remain in full force.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>SHEET NO./SECTION NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>WLK-THRU ATT</td>
<td>See page 3 for the pre-bid walk-through list. Additionally, Five Rivers Construction, Kassel &amp; Associates, Inc., and Jones &amp; Roberts Co. are prospective bidders for this project.</td>
</tr>
<tr>
<td>2.1</td>
<td>BID OPENING</td>
<td>The bid opening date has been changed to August 18th @ 3:00 PM. To assist the architect in answering all questions, please try to send in all inquiries by August 15th.</td>
</tr>
<tr>
<td>2.2</td>
<td>FRONT END</td>
<td>See pages 4 - 5 for revisions to the Notice to Bidders.</td>
</tr>
<tr>
<td>2.3</td>
<td>07 2500</td>
<td>ABAA accredited installers are not required for the installation of the weather barriers. Approved manufactures are Dupont (Tyvec Drainwrap), Henry (Weather Smart Drainable), and Benjamin Obdyke (Hydrogap Drainable Housewrap). For substitutions see spec section 01 6000.</td>
</tr>
<tr>
<td>2.4</td>
<td>CIVIL SPECS</td>
<td>Division 31, 32, and 34 sections missing from the project manual, see pages 6-49 for the missing specification sections.</td>
</tr>
<tr>
<td>2.5</td>
<td>A3.0 &amp; E3.0</td>
<td>Keynote #7 on A3.0 refers to the electrical work described in keynote #20 on E3.0.</td>
</tr>
<tr>
<td>2.6</td>
<td>E0.1</td>
<td>See revisions to lighting types on E0.1, see page 50.</td>
</tr>
<tr>
<td>2.7</td>
<td>E3.0</td>
<td>See addition of note #26 and added power to door operators on E3.0. See page 51.</td>
</tr>
<tr>
<td>2.8</td>
<td>E4.1</td>
<td>See page 52 for revisions to the panel schedules.</td>
</tr>
</tbody>
</table>
2.9 E5.0 See revision to note #8 on E5.0. See page 53.

2.10 E10.0 See page 54 for revisions to E10.0 revising the 2x2 gym lights to be shown as recessed, updating of lighting types, and the correction of lighting switches at door 110A & 110C.

2.11 E10.1 See page 55 or revisions to E10.1 revising the 2x2 gym lights to be shown as recessed and other clouded revisions.

Product Approvals:

<table>
<thead>
<tr>
<th>Specified Product</th>
<th>Approved Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gym Equipment</td>
<td><strong>Performance Sports Systems</strong> – Side-swing Backboard</td>
</tr>
<tr>
<td></td>
<td><strong>Porter Athletics</strong> - Side-swing Backboard and volleyball anchors</td>
</tr>
<tr>
<td>Lighting</td>
<td><strong>TLG Lighting</strong> – Partial Approval – see page 56.</td>
</tr>
</tbody>
</table>

END OF ADDENDUM 2
Pre-Bid Walkthrough – 8/4/2022 @ 3:30 PM

ADNA HIGH SCHOOL GYM ADDITION Walkthrough Attendance

<table>
<thead>
<tr>
<th>NAME</th>
<th>CONTACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Carroll – JH Kelly</td>
<td><a href="mailto:gcarroll@jhkelly.com">gcarroll@jhkelly.com</a> 360-506-1561</td>
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<td>Greg Latimer – Travers Electric</td>
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<td>Aaron Randall – Betschart Electric</td>
<td><a href="mailto:aaronr@betschartelectric.com">aaronr@betschartelectric.com</a> 360-943-4545</td>
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<tr>
<td>Tracy Cutler – Lewis/Cutler Construction</td>
<td><a href="mailto:tlcutler@live.com">tlcutler@live.com</a> 360-866-1711</td>
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<tr>
<td>Kurt Moyer – Pacific Tech Const.</td>
<td><a href="mailto:estimating@pactechgroup.com">estimating@pactechgroup.com</a> 360-414-8084</td>
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<tr>
<td>Adam McKenzie – JH Kelly</td>
<td><a href="mailto:Jhkellybids@jhkelly.com">Jhkellybids@jhkelly.com</a></td>
</tr>
<tr>
<td>Mike Haupert – Construct, Inc.</td>
<td><a href="mailto:mikeh@constructinc.biz">mikeh@constructinc.biz</a> 360-236-8200</td>
</tr>
</tbody>
</table>
REVISED NOTICE TO BIDDERS

Construction and permit documents were prepared for this project prior to a budget reduction by the Owner. The construction documents reflect the full scope of work to complete the project as envisioned by the School District. A much-reduced scope of work will be bid for this project in accordance with the following Base Bid and Alternate Bid Packages. Bidders shall only bid those items of work outlined in the descriptions. Not all items indicated in the contract documents are necessarily part of the base or alternate bids.

**BASE BID - STRUCTURE SHELL**
1. All sitework for the project including storm water provisions, new sidewalks, restoration of disturbed areas.
2. Foundations for the full project.
3. All under slab waste rough-in.
5. Completion of all work related to Corridor 109 including addition of partition and door at door 107B, all mechanical and electrical work.
6. Exterior wall framing; framing from first floor at Grid Line 3 to underside of 2nd floor framing, 2nd floor framing, roof framing.
7. Installation of HVAC louvers within exterior walls.
8. Roof on full addition.
9. Siding on full addition.
10. Windows.
13. Pull down stair to 2nd floor.
15. Drywall, fire-rated plywood (with fire-rated paint), and painting in Riser/Electrical Rm. 102.
16. All receptacles and lighting installed in Riser/Electrical Rm 102.
17. All data and communications rough-in in the Riser/Electrical Rm 102.
18. Fire sprinkler riser and installation of a fully functional dry fire sprinkler system throughout the addition.
19. Installation of the fire alarm panel to monitor the fire riser with connection to the existing school system to facilitate cross tripping.
20. Electrical service and installation of Panels J-1, J-2 with all future breakers installed.

**ALTERNATE BID NO. 1 - GYM INTERIOR**
1. Interior partitions at restroom vestibules.
2. Frame wall from 2nd floor to ceiling on Grid line 3. Leave openings large enough to install HVAC equipment in the 2nd floor space.
3. Installation of backing in walls and roof for future backboard installation, future mat hoist.
4. Installation of doors and hardware at openings 102, 104, 105, 106, 108.
5. Electrical rough-in full building (install wire nuts on wires that will not be terminated with devices)
6. HVAC rough-in Gymnasium (less units).
7. Insulate all walls and roof.
8. Install MDO finish on Gym walls, GWB finish on Gym ceiling and walls and ceiling of Vestibule #1 and #2.
10. Reposition fire sprinkler heads in the gym to finish ceiling.
ALTERNATE BID NO. 2 - GYM HEATING SYSTEM
1. Install Gym heating units complete and functional including units, ductwork within 2nd floor space, controls, grilles.
2. Electrical connection to Gym heating system.

ALTERNATE BID NO. 3 - ELECTRICAL TRIM-OUT OF GYM
1. Trim-out of electrical devices (light fixtures, lighting invertor, switches, receptacles) in Gym
2. Installation of Fire Alarm devices in Gym and Second Floor Storage/Mechanical area.

ALTERNATE BID NO. 4 - WOOD FLOOR IN GYM.
1. Installation of volleyball pole anchors.
2. Installation of Gymnasium wood floor including game striping and finish.
3. Installation of two ceiling mounted main court basketball backboards.
PART 1  CIVIL ENGINEER

1.01 CIVIL ENGINEERING CONSULTANT

A. Company Name: Robertson Engineering, PC, 1101 Broadway Street #201, Vancouver, Washington, 98660, (360) 975-4995

B. Contact: Craig Bozarth, PE, Office (360) 831-0640, Mobile (360) 751-0294, bozarth@robertsonengineering.us

1.02 SECTIONS INCLUDED UNDER THIS SEAL

A. 02 40 01 – DEMOLITION
B. 31 11 00 – SITE PREPARATION
C. 31 22 00 – GRADING
D. 31 23 19 – DEWATERING
E. 31 23 33 – TRENCHING, BACKFILLING, AND COMPACTING
F. 31 25 00 – EROSION AND SEDIMENTATION CONTROL
G. 32 13 13 – CONCRETE PAVING
H. 32 91 13 – SOIL PREPARATION
I. 33 11 13 – WATER SYSTEM
J. 33 41 14 – STORM DRAINAGE

1.03 SEAL

END OF SECTION
PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. The other Contract Documents complement the requirements of this section.
B. Other sections of this Specification may relate and may impose additional work and/or additional materials upon this section. Contractor to coordinate any cross-referencing of Specification sections.
C. Survey
   1. Metes and bounds and topographical data as shown is based on a survey by Butler Surveying Inc. dated December 8, 2021.
D. See Section 31 22 00 for Grading.
E. See Section 31 25 00 for Erosion and Sedimentation Control.
F. The Contractor shall always comply with Federal, State, or local laws, ordinances, and regulations that affect the work.

1.02 DESCRIPTION OF WORK

A. The scope of work under this section includes all labor, materials, equipment, transportation and services to perform the following work:
   1. Clearing and grubbing
   2. Topsoil stripping and removal

1.03 DEFINITIONS

A. Site - Owner’s entire property on which improvements are to be constructed and as shown on the Site Plan.
B. Finish Grade - Elevation of finished surface of planting soil.
C. Topsoil - Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
D. Subgrade - Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath topsoil.
E. AHJ – Authority Having Jurisdiction

1.04 PERMITS

A. This project is not subject to the requirements of a DOE Construction Stormwater General Permit (CSGP), however a SWPPP is required by Lewis County. The Contractor will be provided a copy of the SWPPP from the engineer.

1.05 WARRANTY/BONDING

A. Furnish labor and material warrantee or maintenance bond for all work in the public right-of-way, or easement, in accordance with requirements of the AHJ.
1.06 PROJECT CONDITIONS
   A. Traffic
      1. Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities.

   B. Utilities Locate
      1. Contractor shall call for utility locator service for the project area prior to any grading, excavation or utility work.

   C. State and local code requirements shall control disposal of debris, which shall be at an approved off-site location.

1.07 SALVAGE
   A. Refer to Section 02 40 01 Demolition.

   B. Items not designated for salvage or removal by the Owner shall become the contractor's property for his/her removal and legal salvage.

1.08 RECYCLING
   A. The owner encourages voluntary Contractor participation in recycling programs for any appropriate materials generated by demolition/site preparation activities.

PART 2 PRODUCTS

2.01 SUBMITTALS
   A. Provide materials certificates showing that products in Part 2 meet or exceed specifications.

   B. For each item specified in Part 2 (except native materials), submit the following for approval prior to delivery:
      1. Gradation test reports per ASTM D421 and D422.

   C. Submittals shall be labeled so as to identify for which product(s) the Contractor is seeking approval. **Unlabeled or unorganized submittals will be returned unreviewed.**

2.02 MATERIALS
   A. Erosion Control
      1. See Section 31 25 00 Erosion and Sedimentation Control.

PART 3 EXECUTION

3.01 PREPARATION
   A. Layout
      1. Accept site for development “as-is”.

   2. Locate existing utilities on and adjacent to the project site.

3.02 CONSTRUCTION REQUIREMENTS
   A. Dust Control and Debris Removal
      1. Take all necessary and required precautions in controlling dust generated from the construction activities.

   2. Control and protect all drain systems from contamination by run-off from silt-laden water.
3. Debris from work activities shall be disposed of legally at an approved off-site facility.

B. Temporary Erosion and Sedimentation Control
   1. Refer to Section 31 25 00, Erosion and Sedimentation Control, for requirements.
   2. Refer to the Drawings for plan and details.

C. Clearing and Grubbing
   1. Clear site of brush, saplings, trees (and all stumps), rotten wood, rubbish, boulders, and other debris.
   2. Grubbing shall be as necessary to remove roots, vegetable matter, large rocks, boulders, and other organic materials.
   3. Do not allow cleared materials and debris resulting from clearing and grubbing to accumulate or become buried on site.
   4. Remove all cleared and grubbed materials from site, and legally dispose off Owner’s property.

D. Topsoil Stripping
   1. Re-use of Existing Topsoil (if allowed by the landscape specifications)
      a. Refer to landscape specifications for requirements regarding potential re-use of existing site topsoil.
      b. If stockpiling topsoil for future use, refer to landscape specifications for required preparatory work prior to stripping and stockpiling topsoil. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil.
      c. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
   2. Topsoil not re-used on-site shall be disposed of by the Contractor at his expense at an approved off-site location in accordance with all federal, state, and local regulations.

3.03 PROTECTION
A. General
   1. Protect existing adjacent property from damage during work under this Contract.
   2. Existing fences in adjoining areas to be cleared and grubbed that may be damaged or disturbed by such operations shall be carefully removed and then re-installed after earthwork operations.
   3. Do not store equipment nor materials adjacent to trees (under area of branch/limb overhang).

END OF SECTION
PART 1  GENERAL

1.01  RELATED DOCUMENTS

A. The other Contract Documents complement the requirements of this section.

B. Other sections of this Specification may relate and may impose additional work and/or additional materials upon this section. Contractor to coordinate any cross-referencing of Specification sections.

C. Survey
   1. Metes and bounds and topographical data as shown is based on a survey by Butler Surveying Inc. dated December 8, 2021.

D. See Section 31 11 00 for Site Preparation.

E. See Section 31 23 19 for Dewatering.

F. See Section 31 25 00 for Erosion and Sedimentation Control.

G. The Contractor shall always comply with Federal, State, or local laws, ordinances, and regulations that affect the work.

1.02  DESCRIPTION OF WORK

A. The scope of work under this section includes all labor, materials, equipment, transportation and services to perform excavation, filling, grading, and compaction in accordance with this Specification and to the extent shown on the Drawings.
   1. Preparing subgrades
   2. Excavating, backfilling and compacting
   3. Drainage and granular base for concrete slabs
   4. Borrow pits for the purpose of extracting gravel are not allowed.

B. Except as noted in the plans and Contract Drawings, removing from site and disposing of all debris, excess and unsuitable material from earthwork operations.

C. Providing imported materials.

D. Sheet ing, shoring, pumping and dewatering, and temporary drainage operations related to earthwork and/or excavation activities.

E. Fine grading and excavations for all construction not specifically excluded from this section.

1.03  DEFINITIONS

A. Site - Owner’s entire property on which improvements are to be constructed and as shown on the Site Plan.

B. Finish Grade - Elevation of finished surface of planting soil.

C. Topsoil - Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.

D. Subgrade - Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath topsoil.
E. Proof Roll - Where proof roll is required on the plans in lieu of density testing, the material shall be compacted to a non-yielding state as approved by the geotechnical engineer. Non-yielding state shall be confirmed with proof rolls using a fully loaded dump truck or approved equal as determined by the geotechnical engineer.

F. AHJ – Authority Having Jurisdiction

1.04 STANDARD SPECIFICATION

A. Standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications for Road, Bridge and Municipal Construction.

B. Reference specification shall be the latest edition of the International Building Code (IBC), with its revisions and supplements.

C. For work to be performed off-site within the public right-of-way, standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications as prepared by the Washington State Department of Transportation as modified by the Agency Having Jurisdiction.

D. For work to be performed on-site, the requirements of this section shall apply.

1.05 PERMITS

A. This project is not subject to the requirements of a DOE Construction Stormwater General Permit (CSGP), however a SWPPP is required by the Lewis County. The Contractor will be provided a copy of the SWPPP from the engineer.

1.06 WARRANTY/BONDING

A. Furnish labor and material warrantee or maintenance bond for all work in the public right-of-way, or easement, in accordance with requirements of the AHJ.

1.07 PROJECT CONDITIONS

A. Traffic
   1. Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities.

B. Utilities Locate
   1. Contractor shall call for utility locator service for the project area prior to any grading, excavation or utility work.

C. State and local code requirements shall control disposal of debris, which shall be at an approved off-site location.

PART 2 PRODUCTS

2.01 SUBMITTALS

A. Provide materials certificates showing that products in Part 2 meet or exceed specifications.

B. For each item specified in Part 2 (except native materials), submit the following for approval prior to delivery:
   1. Gradation test reports per ASTM D421 and D422.

C. Submittals shall be labeled so as to identify for which product(s) the Contractor is seeking approval. Unlabeled or unorganized submittals will be returned unreviewed.
2.02 MATERIALS

A. Erosion Control
   1. See Section 31 25 00 Erosion and Sedimentation Control.

B. Topsoil
   1. Refer to the landscape specifications for all topsoil requirements, including information regarding potential re-use of existing native topsoil material as project topsoil. If allowed, the existing material will likely require preparation and amendments.

C. Native Soils
   1. Existing native site materials may not be utilized for structural fills.

D. Controlled Density Fills
   1. The use of Controlled Density Fills, (CDF), a sand, cement and water slurry capable of attaining over 100 psi has proven to be an efficient method of backfill. Where compaction requirements around utilities or tight structure is necessary, CDF may be a cost effective alternate to mechanically compacted fills.

E. Crushed Rock
   1. All crushed rock shall be manufactured from ledge rock, talus or gravel, uniform in quality and substantially free from wood, bark and other extraneous materials.
   2. Round rock (from alluvial quarries) shall not be acceptable for structural fills or crushed surfacing. If used for drain rock, it shall still have fractured faces.
   3. Crushed Surfacing
      a. C.S.T.C. shall mean Crushed Surfacing Top Course per Section 9-03.9(3) of the Standard Specifications.
      b. C.S.B.C. shall mean Crushed Surfacing Base Course per Section 9-03.9(3) of the Standard Specifications.
   4. Drain Rock/Gravel Backfill for Drywells/Infiltration Trenches
      a. Gravel backfill for drywells shall meet the requirements of Section 9-03.12(5) of the Standard Specifications.
   5. Structural Slab Base Rock
      a. Structural Slab Top Course shall meet the requirements of Crushed Surfacing Top Course per Section 9-03.9(3) of the WSDOT Standard Specifications.
      b. Structural Slab Base Course shall meet the requirements of Crushed Surfacing Base Course per Section 9-03.9(3) of the WSDOT Standard Specifications.

F. Utility Trenches
   1. Refer to Section 31 23 33 Trenching, Backfilling, and Compacting for bedding and backfill material requirements.

G. Imported Structural Fill
   1. Within Building Footprint (or within 2H:1V zone of influence from bottom of foundation)
      a. All-weather granular material only.
b. Imported structural fills shall be crushed or partially crushed granular material of pit run rock, quarry run rock, crushed rock or crushed gravel and sand, generally well-graded. Maximum particle size shall be three inches in any dimension.

c. Products
1) Imported structural fill may be crushed surfacing meeting the requirements of Section 9-03.9(3) of the Standard Specifications.

2) Ballast
   a) Imported structural fill may be ballast meeting the requirements of Section 9-03.9(1) of the Standard Specifications.
   
   b) If ballast is used, the depth of fill allowed will be limited in the field by the geotechnical engineer based on the open graded nature of the material. A choker course will be required prior to the CTB.

3) Approved equal.

2. Outside Building Footprint (and zone of influence)
   a. Any material approved for use as structural fill within the building footprint.
   
   b. Borrow
      1) General imported soil may be utilized for structural fills, provided that the materials is free from organics, deleterious material, oversize material (greater than 6” diameter), and can achieve the specified compaction.
      
      2) The soil moisture content shall be within two percentage points of optimum conditions. If an all-weather granular material is not selected, the contractor shall be aware that significant efforts may be required to aerate, farm, and/or otherwise work the material in order to obtain proper moisture content and compaction.
      
      3) Material shall meet the requirement for Common Borrow per Section 9-03.14(3) of the Standard Specifications.

H. Use of Recycled Materials for Fill
   1. The owner takes no exception to incorporating recycled concrete, asphalt, masonry block or brick into embankment structural fills provided the recycled material meets the following specifications:
      
      a. It shall be inert and free of rebar and other deleterious and objectionable matter as defined by WSDOT.
      
      b. It shall be pulverized, crushed, or otherwise processed to meet the gradation specification identified in WSDOT Section 9-03.14(2) Select Borrow.
      
      c. It shall be mixed and blended uniformly with naturally occurring soils and aggregates at a ratio of no greater than 1 part recycled materials to 1 part soil/aggregate.
      
      d. Recycled materials shall not be used in embankment fills within 2 feet (vertical or horizontal) of the bottom of structures, foundations, slabs, pavements, or any other structural facilities.
PART 3  EXECUTION

3.01  WEATHER LIMITATIONS

A. The Contractor shall be advised that existing near surface site soils can be moisture sensitive, and therefore subgrade preparation during wet or wintertime construction may require additional efforts and/or materials.

B. The Contractor shall be advised that wet weather construction requires separate methods and techniques, and often requires additional materials. Refer to project geotechnical report for wet weather construction recommendations.

C. Section depths indicated on the Drawings under asphalt pavements, building slabs, and other locations are designed for dry weather construction. Depths may be required to be increased if placed during wet weather and shall be at the contractor’s expense.

D. Contractor shall be responsible for providing granular working blankets and imported structural fill as needed for haul road(s). Actual extent of granular material shall be determined by the Contractor. All additional granular material required to accommodate wet weather construction shall be at the Contractor’s expense.

E. Construction traffic on saturated soils can result in over compaction. Soils that have been disturbed by construction activities shall be excavated and re-placed to proper compaction specifications.

F. Restrictions for excavation and fill operations during inclement weather include, but are not limited to:
   1. Do not backfill or construct fills or embankments during freezing weather.
   2. Do not place backfill or construct fills or embankments on frozen surfaces.
   3. Do not place frozen materials, snow or ice in backfill or embankment.
   4. Do not deposit, tamp, roll or otherwise mechanically compact backfill in water.

3.02  PREPARATION

A. Layout
   1. Accept site for development “as-is”.
   2. Employ and pay for professional, licensed surveyor to verify existing contours, elevations and to lay out the work as required.
   3. Locate and work from existing monuments, and benchmarks.
   4. Locate existing utilities on and adjacent to the project site.
   5. Mark proposed sawcut lines and protect existing asphalt areas to remain.

B. Preparation of site for excavation and fill operations shall include but not be limited to; stripping, inspection of existing fills, dewatering, shoring, proof-rolling, and aerating or adding water to provide for optimum moisture.

C. Contractor shall use all means necessary to control dust on and near the work site if such dust is caused by the Contractor’s operations during the performance of the work or as a result of same.

D. Excavate to the necessary depth to remove all organic or unsuitable material.
3.03 CONSTRUCTION REQUIREMENTS

A. Temporary Erosion and Sedimentation Control
   1. See Section 31 25 00, Erosion and Sedimentation Control, for additional requirements.
   2. Refer to the Drawings for plan and details.

D. Grading
   1. Excess Earth Disposal
      a. Contractor may place native material that is deemed suitable in accordance with the
         Contract Documents.
      b. Contractor must dispose of all excess earth from excavation off-site in a legal fashion.
      c. Unsuitable material must be disposed of off-site in a legal fashion.
      d. Contractor shall comply with all applicable Washington State Laws when hauling.
      e. The Contractor shall be responsible for removal from roadways any mud or debris
         which is tracked onto the road by earth hauling operations.
      f. The contractor shall provide erosion control as shown on the Drawings and required by
         the local codes and regulations. This includes but is not limited to truck wash off mats,
         storm drain protection, silt fencing and related measures.
      g. The Contractor must obtain all necessary permits from the appropriate jurisdiction as
         required for hauling that will occur over city, county and state streets, roads and
         highways.

   2. Underground Obstructions
      a. Existing utilities as shown on the Drawings are a best effort compilation of a “Utilities
         Locate” surface locations and As-Built drawings. The contractor shall verify locations
         and elevations of all existing utilities prior to construction.
      b. The Contractor is to call the Utility Notification Center 48 hours prior to commencing
         excavation activities.
      c. The Contractor shall immediately notify the Project Manager and Owner’s
         Representative in the event an underground obstruction or uncharted utility is
         encountered.
      d. The Contractor shall expose and verify size, location and elevation of underground
         utilities and structures where conflicts might exist. This work shall be done sufficiently
         in advance to permit changes in the event of conflict without affecting the project
         schedule.
      e. The Contractor is responsible for all costs for damage to utilities shown on the drawings
         or identified by location service.

3. Drainage and Groundwater Control
   a. Dewatering shall meet the requirements noted in Section 31 23 19 Dewatering.
   b. The Contractor shall maintain excavations and trenches free from water during
      construction.
   c. The Contractor shall remove water encountered in the trenches to the extent necessary
      to provide a firm subgrade, to permit joints to be made in the dry, and to prevent the
      entrance of water into any pipeline or conduit.
d. Contractor shall divert surface runoff and use sumps, gravel blankets, well points, drain lines, bypass pumping or other means necessary to accomplish the above.

e. Contractor shall maintain the excavation or trenches free from water until the structure, or pipe to be installed therein, is completed to the extent that no damage from hydrostatic pressure, flotation, or other cause will result.

4. It shall be the Contractor’s responsibility to verify overall cut and fill quantities required to meet the grades, details and intent shown on the drawings. Allow for structural pavement sections, trench spoils, and similar items and activities that affect overall earthwork quantities. If additional material is required to be imported, or excess material is required to be hauled off-site, it shall be at the Contractor’s expense.

a. Compact materials in accordance with the Geotechnical Report. Unless otherwise noted on the Drawings, compact to the densities indicated in the Geotechnical Report.

b. Coordinate with Owner’s inspector for inspections. Obtain approvals prior to proceeding with succeeding lifts.

1) Inspection of grubbed and stripped surfaces before grading operations.

2) Inspection of cut areas to detect presence of unsuitable soil areas.

3) Inspection of each lift of fill materials before proceeding with succeeding lifts.

4) Inspection and approval of off-site materials.

5) Inspection and compaction tests for compaction.

5. Areas identified for grading or other construction activities shall first be stripped of topsoil, roots, unsuitable fills, etc., i.e. excavated to non-organic, native undisturbed surface, engineered structural fill, or existing undocumented fill provided it is firm, competent, and exhibits density and index properties consistent with those observed during the geotechnical investigation.

6. Uniformly grade areas to a smooth surface, free from irregular surface changes, to bring site to elevations and contours shown in drawings.

7. Proof roll subgrades, before filling or placing aggregate courses, with heavy pneumatic-tired equipment to identify unsuitable soil areas and areas of excess yielding. Do not proof roll wet or saturated subgrades, see geotechnical report for wet weather construction.

8. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities.

9. Remove unsuitable soils and replace with suitable fill as directed by Engineer.

10. Under Concrete Slabs-on-Grade

a. Place granular base (see Interior Concrete Slab) on prepared underslab fill. Compact to required sections and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D1557.

11. Structural Fill

a. See materials requirements in Part 2 of this section

b. Imported

1) Place in maximum 12-inch deep lifts and compact each lift to not less than 95 percent of maximum dry density, as determined by ASTM D1557.
E. ADA Ramps
   1. ADA ramps shall meet current ADA requirements, including the following:
      a. Longitudinal slope no greater than 1 unit of rise in 12 units of run in the direction of travel.
      b. Cross slope no greater than 1 unit of rise in 48 units of run.
      c. On private property, ramp length shall not be greater than 6-feet without handrail.
         1) Ramp design shall not be changed in the field without written approval by the project civil engineer. Any ramp that is changed without permission is subject to rejection.

3.04 QUALITY ASSURANCE

A. The Contractor is responsible for project quality control in ensuring that the project is constructed per the Drawings and specifications.

B. Engineering Control
   1. Personnel from an independent testing and inspection laboratory will assist the Engineer as Owner’s representative at the site. Earthwork operations are subject to inspections and approvals.
   2. Intermittent, rather than continuous, inspections are anticipated.
   3. Contractor shall inform the Engineer and Inspectors of schedules so that inspections can be made at appropriate times.
   4. Unapproved earthwork buried by fills prior to approvals is subject to rejection. Any fill that does not meet Specification requirements is subject to removal, replacement, and re-compaction at Engineer’s discretion.

C. The Owner is responsible for project quality assurance, to the satisfaction of the Owner. The Owner may retain a Testing Agency to perform on site observation and testing during the following phases of the construction operations. The services of the Testing Agency may include, but are not limited to, the following:
   1. Observation of compaction of subgrades.
   2. Observation during placement and compaction of material.
   3. Observation of subgrade preparation for field and paved areas.
   4. Observation during placement and compaction of backfill utility trenches.
   5. Observation of over-excavations (both defined and unforeseen), including approval of bottom of over-ex.
   6. Laboratory testing and analysis of fill and bedding materials specified, as required.
   7. Observe construction and perform water content, gradation, and compaction tests at a frequency and at locations determined by the Geotechnical Consultant. The results of these tests will be submitted to the Owner and Engineer, a copy to the Contractor, on a timely basis so that the Contractor can take such action as is required to remedy indicated deficiencies. During the course of construction, the Testing Agency will advise the Owner and Engineer in writing with copy to Contractor if, at any time, in his opinion, the work is not in substantial conformity with the Contract Documents.
   8. Observation of fills following interruptions by rains or other inclement weather.
D. Neither the presence of the Geotechnical Consultant, nor any observations and testing performed by him shall excuse the Contractor from defects discovered in his work.

E. The Owner reserves the right to modify or waive Testing Agency services.

F. Payment for initial material testing shall be the responsibility of the Owner. Costs for any test(s) which must be repeated on materials that have failed to meet specifications shall be the responsibility of the Contractor.

3.05 REPAIR

A. Repair and re-establish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction.

B. Where settling occurs before project correction period elapses, remove finished surfacing, backfill with additional soil material, compact and perform surface restoration.

C. Remove surplus soil, trash, debris and other material and legally dispose at the Contractor’s expense at an approved facility in accordance with all federal, state and local regulations.

3.06 PROTECTION

A. General

1. Protect existing adjacent property from damage during work under this Contract.

2. Protect existing trees shown to remain. Keep trees intact and root balls free from disruption. Any trees damaged shall be replaced with like species and size.

3. Existing fences in adjoining areas to be cleared and grubbed that may be damaged or disturbed by such operations shall be carefully removed, reserved and re-installed after earthwork operations.

4. Do not store equipment or materials adjacent to trees (under area of branch/limb overhang).

5. Mark proposed sawcut lines and protect existing asphalt areas to remain.

B. The Contractor shall be responsible for maintaining correct backfill, fill and embankment settlement and make necessary repairs to pavement, sidewalks or other structures which may be damaged as a result of settlement.

C. Protect newly graded areas from traffic, and erosion. Keep free of trash and debris.

D. Tree Protection

1. Except when excavating directly adjacent to existing trees, erect and maintain a temporary fence around drip line of individual trees or around perimeter drip line of groups of trees to remain. Remove fence when construction is complete.

2. When excavating within the drip line of existing trees, use extreme caution so as to not damage existing tree roots.

3. When roots are encountered, use hand-held non powered equipment to complete excavation work. The owner or engineer shall observe any exposed roots and determine limits of potential removal. Do not rip or tear existing tree roots. Any roots to be removed shall be cut with a saw after approval by the owner or their representative.

END OF SECTION
PART 1  GENERAL

1.01  RELATED DOCUMENTS

A. The other Contract Documents complement the requirements of this section.
B. Other sections of this Specification may relate and may impose additional work and/or additional materials upon this section. Contractor to coordinate any cross-referencing of Specification sections.
C. Survey
   1. Metes and bounds and topographical data as shown is based on a survey by Butler Surveying Inc. dated December 8, 2021.
D. See Section 31 25 00 for Erosion and Sedimentation Control.
E. The Contractor shall always comply with Federal, State, or local laws, ordinances, and regulations that affect the work.

1.02  DESCRIPTION OF WORK

A. The scope of work under this section includes all labor, materials, equipment, transportation and services to design, furnish, install, operate, monitor, modify, and remove site dewatering system(s) as needed to keep open trenches and excavations free from water and hydrostatic pressure, in accordance with local, state and federal requirements.
B. Dewatering activities are generally understood to include the following:
   1. Diversion of surface water runoff around open trenches and excavations.
   2. Removal of groundwater as needed to keep open trenches and excavations free from water and hydrostatic pressure, and to accommodate proper construction.
C. The extent of dewatering will depend on actual site conditions, contractor means and methods, the location of the work on the site, the time of year, and other factors. Based on the existence of high groundwater levels, the need for dewatering for excavations is possible.
D. All elements of the dewatering work are the responsibility of the contractor, including but not limited to:
   1. Identification of need.
   2. Design, furnishing, installation, operation, monitoring, modifications, and removal of site dewatering system(s).
   3. Any required permit associated with dewatering system (i.e. temporary wells, etc.).
   4. Proper discharge of dewatered volume, with treatment if required.
   5. Conformance with local, state, and federal regulations.

1.03  DEFINITIONS

A. AHJ – Authority Having Jurisdiction

1.04  STANDARD SPECIFICATION

A. Standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications for Road, Bridge and Municipal Construction.
1.05 PERMITS
A. This project is not subject to the requirements of a DOE Construction Stormwater General Permit (CSGP), however a SWPPP is required by the Lewis County. The Contractor will be provided a copy of the SWPPP from the engineer.

1.06 WARRANTY/BONDING
A. Furnish labor and material warrantee or maintenance bond for all work in the public right-of-way, or easement, in accordance with requirements of the AHJ.

PART 3 EXECUTION
3.01 GENERAL
A. Site dewatering system(s) shall be employed as needed to meet the following criteria:
   1. Diversion of surface water runoff around open trenches and excavations.
   2. Removal of groundwater as needed to keep open trenches and excavations free from water and hydrostatic pressure, and to accommodate proper construction.
B. Contractor is responsible for investigating and becoming familiar with all site conditions which may affect the extent of dewatering work required to accommodate construction, including groundwater elevations, soils information, topography, surface water features, construction schedule, and other factors.
C. Contractor’s responsibility for water management shall be continuous throughout the entire contract. Suspension of dewatering work for weekends, holidays, and work stoppages shall not be an acceptable rationale for damage, delay, or adding time to the contract.
D. Dewatered volumes shall be treated (prior to discharge) if required by federal, state, and/or local requirements.
E. Do not block natural drainage courses that may be needed for passage of large storm events.
F. Dewatering discharge flows shall not cause erosion or flooding, or alter flow paths.
G. Contractor shall remove all elements of the dewatering system prior to completion of the project. Any excavations utilized for dewatering shall be properly backfilled and compacted (observed by the project geotechnical engineer).

3.02 CONSTRUCTION REQUIREMENTS
A. Damages
   1. Dewatering work shall be performed in such a manner that surface and subsurface drainage patterns of adjacent properties are not affected.
   2. The Contractor shall be responsible for and shall repair without cost to the Owner any damage caused by heave, soil loss, removal of material, pumping from the excavated area, negligence, inadequate or improper installation of the temporary dewatering system, inadequate maintenance and operation of temporary dewatering system, and any mechanical or electrical failure of temporary dewatering system.
B. Stormwater Pollution Prevention Plan (SWPPP)
   1. The Construction Stormwater General Permit (Dept. of Ecology) is not required for this project, however the Lewis County requires a SWPPP.
2. Basic dewatering techniques are described in the SWPPP as applicable to small volumes of localized dewatering. The Contractor shall be responsible for updating the SWPPP to include additional dewatering techniques employed, as well as to accommodate means and methods.

END OF SECTION
SECTION 31 23 33
TRENCHING, BACKFILLING, AND COMPACTING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. The other Contract Documents complement the requirements of this section.

B. Other sections of this Specification may relate and may impose additional work and/or additional materials upon this section. Contractor to coordinate any cross-referencing of Specification sections.

C. Survey

1. Metes and bounds and topographical data as shown is based on a survey by Butler Surveying Inc. dated December 8, 2021.

D. See Section 31 25 00 for Erosion and Sedimentation Control.

E. See Section 31 23 19 for Dewatering.

F. Where conflicts exist, the bedding and backfill requirements stated in the following sections shall take precedence over the requirements in this section:

1. Section 33 11 13 Water System

2. Section 33 41 14 Storm Drainage

G. Where conflict exists between the Drawings and the Specifications, the bedding and backfill requirements on the Drawings shall take precedence over the requirements in the Specifications.

H. The Contractor shall always comply with Federal, State, or local laws, ordinances, and regulations that affect the work.

1.02 DESCRIPTION OF WORK

A. The scope of work under this section includes all labor, materials, equipment, transportation and services to perform all trenching, shoring, foundation preparation, backfilling and compaction required to accomplish site utility and conduit installation work.

1.03 DEFINITIONS

A. AHJ – Authority Having Jurisdiction

1.04 STANDARD SPECIFICATION

A. Standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications for Road, Bridge and Municipal Construction.

B. Reference specification shall be the latest edition of the International Building Code (IBC), with its revisions and supplements.

C. For work to be performed off-site within the public right-of-way, standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications as prepared by the Washington State Department of Transportation as modified by the Agency Having Jurisdiction.

D. For work to be performed on-site, the requirements of this section shall apply.
1.05 PERMITS
A. This project is not subject to the requirements of a DOE Construction Stormwater General Permit (CSGP), however a SWPPP is required by Lewis County. The Contractor will be provided a copy of the SWPPP from the engineer.

1.06 WARRANTY/BONDING
A. Furnish labor and material warrantee or maintenance bond for all work in the public right-of-way, or easement, in accordance with requirements of the AHJ.

1.07 PROJECT CONDITIONS
A. Traffic
   1. Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities.

B. Utilities Locate
   1. Contractor shall call for utility locator service for the project area prior to any grading, excavation or utility work.

C. State and local code requirements shall control disposal of debris, which shall be at an approved off-site location.

PART 2 PRODUCTS

2.01 SUBMITTALS
A. Provide materials certificates showing that products in Part 2 meet or exceed specifications.
B. Gradation test reports per ASTM D421 and D422.
C. Moisture density test reports per ASTM D-1557, Method D.
D. Submittals shall be labeled so as to identify for which product(s) the Contractor is seeking approval. **Unlabeled or unorganized submittals will be returned unreviewed.**

2.02 MATERIALS
A. Unless otherwise noted on the Contract Drawings or specifically mandated by the utility purveyor, bedding and backfill for utility trench excavations shall meet the following requirements:
   1. Pipe Bedding
      a. Bedding Material for Rigid Pipe:
         1) Gravel backfill for pipe bedding shall consist of crushed, processed, or naturally occurring granular material. It shall be essentially free from various types of wood waste or other extraneous or objectionable materials. It shall have such characteristics of size and shape that it will compact readily and shall meet the following specifications for grading and quality:

```
<table>
<thead>
<tr>
<th>US Sieve Size</th>
<th>Percent Passing</th>
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</thead>
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<tr>
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<td>100</td>
</tr>
<tr>
<td>1/4&quot;</td>
<td>25-80</td>
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<tr>
<td>#200</td>
<td>10 Maximum</td>
</tr>
<tr>
<td>Sand Equivalent</td>
<td>35 Minimum</td>
</tr>
</tbody>
</table>
```

   All percentages are by weight.
b. Bedding Material for Flexible Pipe:

1) Bedding material for flexible pipe shall be clean sand/gravel mixture free from organic matter and conforming to the following gradation:

<table>
<thead>
<tr>
<th>US Sieve Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<td>70-100</td>
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<tr>
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<td>0-10</td>
</tr>
<tr>
<td>#200</td>
<td>0-3</td>
</tr>
</tbody>
</table>

All percentages are by weight.

2. Trench Backfill

a. Granular (areas under or within 5’ of paved surfaces): Section 9-03.12(4) Gravel Backfill for Drains

b. Native (areas more than 5’ from paved surfaces): Section 9-03.15 Native Material for Trench Backfill

PART 3 EXECUTION

3.01 GENERAL

A. All pipe and conduit shall be bedded.

B. Imported Backfill Material shall be placed in maximum 8-inch lifts with each lift compacted to 95 percent maximum dry density per ASTM D1557. Dispose of excess material from the trench off-site in accordance with all applicable state and local regulations.

C. Work shall be performed per the requirements of Section 7-08.

D. All trench backfill shall be compacted, including infiltration trenches.

3.02 CONSTRUCTION REQUIREMENTS

A. Drainage and Groundwater Control

1. Dewatering shall meet the requirements noted in Section 31 23 19 (Dewatering).

2. The Contractor shall maintain excavations and trenches free from water during construction.

3. The Contractor shall remove water encountered in the trenches to the extent necessary to provide a firm subgrade, to permit joints to be made in the dry, and to prevent the entrance of water into any pipeline or conduit.

4. Contractor shall divert surface runoff and use sumps, gravel blankets, well points, drain lines, bypass pumping or other means necessary to accomplish the above.

5. Contractor shall maintain the excavation or trenches free from water until the structure, or pipe to be installed therein, is completed to the extent that no damage from hydrostatic pressure, flotation, or other cause will result.
B. Sheeting and Shoring
   1. All excavation and trenching operations are to be conducted in accordance with WAC 296-155 Part N. The contractor shall protect all persons entering and working in excavations and trenches through the use of sloping, shoring and shield systems.
   2. Where the stability of adjoining buildings, wall or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures in accordance with WAC 296-155, Part N.
   3. The general public is to be protected from open excavations and trenches by means of barricades and fences clearly marked or identified by flagging or warning signs.

C. Tracer Wire
   1. All non-metallic pipe shall be installed with tracer wire.

D. Pavement Cuts and Surface Restoration
   1. Sawcut
      a. Trenches through existing pavement or hardscape areas shall be sawcut with a wet machine. Broken or damaged edges shall be re-cut prior to backfill and re-surfacing.
   2. Pavement Restoration
      a. On-site Private
         1) Meet or exceed the pavement sections (pavement over crushed rock) noted on the Contract Drawings. Cold mix asphalt is not permitted except for temporary patches, and shall be removed prior to permanent patch. Sand and seal edges prior to overlay or seal coat.
      b. Off-site Public
         1) Meet the Agency Having Jurisdiction requirements for section depth, trench width, sawcut, and sand and seal requirements.

3.03 QUALITY ASSURANCE
A. Testing
   1. The contractor shall be responsible for coordinating with the owner’s certified testing agency to obtain trench compaction tests. The trench compaction tests shall be performed at approximate 250’ intervals, with a minimum of one test per trench regardless of trench length. Test locations shall be field determined by the owner’s inspector. Test results shall be submitted to the owner within 24 hours.

END OF SECTION
SECTION 31 25 00
EROSION AND SEDIMENTATION CONTROL

PART 1 GENERAL

1.01 RELATED DOCUMENTS

A. The other Contract Documents complement the requirements of this section.

B. Other sections of this Specification may relate and may impose additional work and/or additional materials upon this section. Contractor to coordinate any cross-referencing of Specification sections.

C. Survey
   1. Metes and bounds and topographical data as shown is based on a survey by Butler Surveying Inc. dated December 8, 2021.

D. The Contractor shall always comply with Federal, State, or local laws, ordinances, and regulations that affect the work.

1.02 DESCRIPTION OF WORK

A. The scope of work under this section includes all labor, materials, equipment, transportation and services to provide project erosion and sedimentation control (ESC) in accordance with local, state and federal requirements.

B. Erosion/Sedimentation Control (ESC) is required on this project. Erosion control shall be implemented and maintained in accordance with Lewis County Erosion Control Ordinance and the Department of Ecology (DOE) standards and regulations. The implementation of the ESC and the construction, maintenance, replacement, and upgrading of these ESC facilities is the responsibility of the Contractor until all construction is completed and approved and the permanent vegetation/landscaping is established.

C. The ESC facilities shown on this Drawing and/or details must be constructed in conjunction with all rough grading and site utility construction, in such a manner as to ensure that sediment and sediment-laden water do not enter drainage systems, roadways, or permanent stormwater facilities, or violate applicable water standards.

D. The ESC facilities shown on the Drawings are the minimum requirements for anticipated site conditions. During the construction period, the contractor shall upgrade these ESC facilities as needed for unexpected storm events, site conditions, or construction practices to ensure that sediment and sediment-laden water do not leave the site or enter storm drainage systems.

1.03 DEFINITIONS

A. AHJ – Authority Having Jurisdiction

1.04 STANDARD SPECIFICATIONS

A. Standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications for Road, Bridge and Municipal Construction.

B. For work to be performed off-site within the public right-of-way, standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications as prepared by the Washington State Department of Transportation as modified by the Agency Having Jurisdiction.

C. For work to be performed on-site, the requirements of this section shall apply.
D. Reference specifications shall be the Lewis County Erosion Control Ordinance, including the standard construction details.

1.05 PERMITS
A. This project is not subject to the requirements of a DOE Construction Stormwater General Permit (CSGP), however a SWPPP is required by Lewis County. The Contractor will be provided a copy of the SWPPP from the engineer.

1.06 WARRANTY/BONDING
A. Furnish labor and material warrantee or maintenance bond for all work in the public right-of-way, or easement, in accordance with requirements of the AHJ.

1.07 PROJECT CONDITIONS
A. Traffic
   1. Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities.
B. Utilities Locate
   1. Contractor shall call for utility locator service for the project area prior to any grading, excavation or utility work.
C. State and local code requirements shall control disposal of debris, which shall be at an approved off-site location.

PART 2 PRODUCTS
2.01 MATERIALS
A. See Contract Drawings.
B. Per AHJ standard erosion control details.

PART 3 EXECUTION
3.01 CONSTRUCTION REQUIREMENTS
A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil bearing water runoff or airborne dust to adjacent properties and walkways, according to requirements of AHJ and the sediment and erosion control Drawings.
B. Erosion control as shown on the Drawings are the base recommendations and are in no way intended to represent all of the potential erosion control measures that may be required during construction. Contractor shall be responsible for grading of temporary cut-off ditches, sedimentation ponds, bladder bags, sumps, Baker Tanks™, bypass pumping, dewatering and other means as required and necessary to control storm water runoff during construction so that no silt-laden water leaves the project site. All such measures shall be at Contractor’s expense.
C. At no time shall more than one foot of sediment be allowed to accumulate within a trapped catch basin. All catch basins and conveyance systems shall be cleaned prior to paving. The cleaning operation shall not flush sediment-laden water into the downstream system.
D. Stabilized construction entrance(s) will be constructed at the beginning of construction. Locations shall be reviewed and approved by the Owner. These entrance(s) shall be maintained by the contractor of this project for the duration of the project. Additional measures
may be required to ensure that all paved areas adjacent to the project are kept clean for the duration of the project.

E. Sediment fences, bio-bags, and other ESC measures shall be removed when they have served their useful purpose and when approved by the engineer, but not before the upslope area has been permanently stabilized. Upon completion of construction and full site establishment, remove erosion and sedimentation controls and restore and stabilize any areas that are disturbed during removal.

F. Construction and maintenance of graveled construction entrances, temporary sediment fences, and straw bale sediment barriers, and other erosion control work shall conform to the AHJ’s requirements.

G. All materials shall be in good physical condition to provide proper sediment retention.

H. Sediment fences and barriers shall be inspected by the contractor immediately after each rainfall and at least daily during prolonged rainfall. Inspect all other ESC facilities daily and provide repair and/or maintenance as necessary to ensure their continued functioning. Any required repairs shall be made immediately.

I. Silt-laden construction stormwater runoff shall not be conveyed to permanent stormwater treatment, detention, or infiltration facilities until the finished grade surfaces are complete and established.

J. Stormwater Pollution Prevention Plan (SWPPP)
   1. Contractor shall provide a certified CECSL as required for the SWPPP.
   2. Any fines resulting from lack of conformance with the requirements of the SWPPP shall be the responsibility of the Contractor.

END OF SECTION
SECTION 32 13 13
CONCRETE PAVING

PART 1 GENERAL

1.01 RELATED DOCUMENTS
A. The other Contract Documents complement the requirements of this section.
B. Other sections of this Specification may relate and may impose additional work and/or additional materials upon this section. Contractor to coordinate any cross-referencing of Specification sections.
C. Survey
   1. Metes and bounds and topographical data as shown is based on a survey by Butler Surveying Inc. dated December 8, 2021.
D. The Contractor shall always comply with Federal, State, or local laws, ordinances, and regulations that affect the work.

1.02 DESCRIPTION OF WORK
A. The scope of work under this section includes all labor, materials, equipment, transportation and services to place rock base, concrete curb and flatwork, and appurtenant items as shown on the Drawings.

1.03 DEFINITIONS
A. AHJ – Authority Having Jurisdiction

1.04 STANDARD SPECIFICATION
A. Standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications for Road, Bridge and Municipal Construction.
B. Reference specification shall be the latest edition of the International Building Code (IBC), with its revisions and supplements.
C. For work to be performed off-site within the public right-of-way, standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications as prepared by the Washington State Department of Transportation as modified by the Agency Having Jurisdiction.
D. For work to be performed on-site, the requirements of this section shall apply.

1.05 PROJECT CONDITIONS
A. Traffic
   1. Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities.

PART 2 PRODUCTS

2.01 SUBMITTALS
A. Provide materials certificates showing that products in Part 2 meet or exceed specifications.
B. Layout Plan
   1. Provide hand-marked sketch or exhibit indicating proposed location of expansion, construction, and contraction joints. All joints not marked otherwise shall be assumed as surface joints.
   2. Layout plan shall be reviewed and approved by the engineer a minimum of 48 hours prior to pour. For complex pours, allow additional time for review, approval, and related revisions to pour plan and formwork. No additional time or cost shall be added to the contract for formwork revisions.

2.02 MATERIALS
   A. Subgrade
      1. Crushed Surfacing (Gravel Base): The gravel base shall meet the requirements of Section 9-03.9(3) of the Standard Specifications.
   B. Concrete
      1. Concrete sidewalks, plazas and walkways:
         a. Public Portland Cement
            1) ASTM C150; normal type II
         b. Fine and Coarse Aggregates
            1) Clean, hard, durable particles of natural sand conforming to ASTM C33 for fine aggregate. Clean, uniformly hard, durable particles of gravel or crushed stone conforming to ASTM C33 for coarse aggregate.
         c. Water
            1) Potable
         d. Strength
            1) Class 3,000 (psi)
         e. Slump
            1) 3 1/2” maximum
         f. Fiber (where noted on the drawings)
            1) Product shall be Microfiber by Grace Construction Products, Fiberstrand 100 by Euclid, Fibermesh 150 by Propex or approved equal.
               2) Strand length shall be 3/4”.
               3) Dose at one (1) pound per cubic yard.
      2. Concrete curbs
         a. Conform to the specifications listed in the drawings.
      3. Driveways and concrete flatwork within the limits of vehicular traffic
         a. Conform to the specifications listed in the drawings.
   C. Formwork and Accessories
1. Formwork
   a. Straight forms
      1) **Metal side forms** with base width sufficient to support finishing equipment. Maximum variation 1/8” in 10 feet.
   b. Curved forms
      1) Metal or wood.

2. Joint Filler
   a. Width as specified herein
   b. Products
      1) Asphaltic impregnated fiberboard
      2) Nomaflex™ semi-rigid, closed cell polypropylene pre-formed joint filler by Nomaco
      3) Approved equal

3. Expansion Joint Sealer
   a. Self-leveling, Sikaflex-1c SL or approved equal.

D. Concrete Mix
   1. Mix and proportion to produce minimum specified strength concrete at 28 days with 5 to 7 percent air entrainment, ASTM C94 and ASTM C260. Cement concrete conforming to the requirements of WSDOT Section 6-02.3(2)B for Commercial Concrete.
   2. Use set-retarding admixtures during hot weather only when acceptable to Owner.

E. Bonding Agent

F. ADA Truncated Dome
   1. Product shall be a cast-in-place product; surface applied products are not permitted.
   2. Product shall meet all state and local ADA requirements.
   3. Color shall be yellow unless noted otherwise on the Drawings.
   4. Select widths which allow for symmetrical installations, i.e. use two 2’ x 3’ tiles or three 2’ x 2’ tiles for a 6’ wide ramp, not one 2’ x 2’ and one 4’ x 2’.
   5. Unless noted on the Drawings, tiles shall not be cut without written approval of the engineer.
   6. Include maintenance and warranty requirements in project O&M manual.
   7. Product shall be Armor-Tile ™ Cast In Place or approved equal.

**PART 3  EXECUTION**

3.01 PREPARATION

A. Moisten base to minimize absorption of water from fresh concrete.

B. Notify Engineer minimum 24 hours prior to commencement of concreting operations.
3.02 CONSTRUCTION REQUIREMENTS

A. Forming
   1. Place and secure forms to correct location, dimension, and profile.
   2. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
   3. Place joint fillers vertical in position, in straight lines. Secure to formwork during concrete placement.
   4. Provide expansion and contraction joints in accordance with industry standards.
   5. For curved section, provide adequate staking in order to provide a smooth curve without angle points or compound curvature. Ensure that there are no angle points at the point-of-curvature/tangency with adjoining straight sections. As-constructed radius length shall not vary more than ½” over a 2 L.F. distance along face of curb/sidewalk.
   6. Any changes to grades or dimensions of curb or flatwork shall be approved in writing by the engineer prior to forming.
   7. Upon complete of formwork, re-tamp crushed rock surfacing inside the forms (with a hand tamp) as necessary to ensure compaction and a firm stable subgrade.
   8. Form Review
      a. Owner/engineer shall review constructed formwork prior to pour.
      b. Allow time for revisions to formwork based on Owner review. No additional time or cost shall be added to the contract for formwork revisions.
      c. Concrete placed prior to form review is subject to rejection.

B. ADA Ramps
   1. Refer to Section 31 22 00 for grading requirements at ADA ramps.

C. Placing Concrete
   1. Place concrete in accordance with ACI 301.
   2. Hot Weather Placement
      a. ACI 301
   3. Place concrete over the entire width of subgrade between forms to prevent segregation and minimize rehandling.
   4. Thoroughly vibrate along forms or sides and along expansion joints.

D. Concrete Finishing
   1. Samples
      a. Prepare 3’ x 3’ samples of both “light broom finish” and “medium broom finish” for the Owner’s approval.
      b. Samples shall include an example tooled joint in addition to edge banding (if included in the project).
   2. Screed accurately to elevations and slopes shown without irregularities. Place expansion joints. Allow concrete time to bleed naturally before working. Float to compact plastic mass. Do not overwork. Provide finish in direction shown on the Drawings or as directed. Tool a pattern as shown or directed.
3. For on-site work, provide broom finish as shown in the Contract Plans and Details. Be aware that the required finish may vary at different locations and conditions within the project.

4. Broom finishing patterns shall conform with the Drawings – do not provide or create any alternative or additional broom patterns.

5. Bleed water shall not be finished into the concrete surface.

6. Wire brush all tooled joints and edges. Delay wire brushing until enough cure has occurred that wire brushing activity does not mark the concrete.

E. Joints

1. General
   a. Provide layout Drawing for review and approval as required in Part 1 Submittals.
   b. Contraction joints maybe used in place of surface joints

2. Expansion/Isolation Joints
   a. At all structures, slabs, curbs, foundations, and other features.
   b. Joint shall be 3/8-inch wide at sidewalks, ramps, curbs and sidewalks. Joint shall be 1/2-inch wide at structures (columns, light poles, manholes, catch basins, etc.) and footings.
   c. Filled with pre-molded joint filler and sealed with joint sealant.
   d. Finish edges with 3/8-inch radius tool.

3. Construction/Cold Joints
   a. At close of each day’s work or when the work is stopped or interrupted for more than 30 minutes.
   b. Shall be located at a pre-approved joint location.
   c. Form with wood header.
   d. Construct per the requirements for expansion/isolation joints (radius, filler and sealant).

4. Contraction/Control Joints
   a. Not less than 1/4-inch thick by 1/4 depth of slab.
   b. Tool joint with 3/8-inch radius tool.
   c. Install at maximum spacing of 15’.

5. Surface Joints

6. Sawcut joints
   a. Not permitted without written approval of the engineer.

7. Tee intersections
   a. Drill hole at all tee intersections to prevent sympathy cracks.
   b. Hole diameter shall be joint width minus 1/16”.
8. Sealant
   a. As specified in Part 2 of this Section. Install in all expansion/isolation joints prior to use.

F. Curing
   1. Conform with ACI 308 for water curing.
   2. Immediately after finishing, as soon as marring of concrete will not occur, install white polyethylene sheeting over entire surface. Lap sheeting 18 inches, minimum. Leave sheeting in place a minimum of 7 days.

3.03 QUALITY ASSURANCE

A. The evaluation of concrete flatwork and curbing for acceptance shall occur near the end of the project after the concrete has cured and after the majority of construction activities have been completed. It shall be the contractor’s responsibility to protect concrete work throughout the construction duration.

3.04 TOLERANCE ACCEPTANCE

A. Cracks
   1. Hairline cracks shall be repaired with a sand/cement slurry worked into the crack with a fine brush. Utilize fine sand with similar color properties in order to minimize the appearance of the repair.
   2. Panels or small lengths of curb with multiple hairline cracks are subject to rejection at the owner’s discretion. Rejected panels shall be removed and replaced at no additional cost to the owner.
   3. Panels with cracks exceeding 1/32” are subject to rejection at the owner’s discretion. Rejected panels shall be removed and replaced at no additional cost to the owner.

B. Chips or Other Damage
   1. Chips or other damage to newly poured concrete flatwork and curbs shall be evaluated on a case-by-case basis. The contractor shall review the damage and propose a repair. The proposed repair shall be submitted to the engineer for review and approval prior to any work being performed. The contractor shall be aware that patches may not be acceptable in some cases, and cutting, removal, and replacement may be required at the owner’s discretion, and at no additional cost to the owner.

C. Rejection
   1. Cracked, chipped, or damaged panels are subject to potential rejection as described above.
   2. Any pours which occur without the required call for formwork inspection are subject to rejection if found to be non-compliant for grade, width, jointing, exposure, or forming issues.
   3. Any changes to the approved plans made without written approval of the engineer are subject to rejection, regardless of other approvals.

3.05 PROTECTION

A. Provide protection from premature drying, excessive hot or cold temperatures, and vandalism. Remove damaged or vandalized concrete from site and replace per specification at no extra cost to Owner.

B. Protect all new concrete from spills, adjacent work (asphalt, painting, etc.), wash water, test water, and other sources of staining.
C. No vehicles of any kind shall be permitted on the new concrete surfaces for 7 days after the pour. Beyond 7 days, access will be allowed on a case-by-case basis and will require that the surface be protected plywood (plastic or geo-fabric will not be an acceptable level of protection).

D. Protect ADA Truncated Domes during remainder of construction with plywood or alternative.

E. Any marks on concrete flatwork, curbs, or truncated domes that are the result of construction activities shall be removed and/or repaired so that the work is turned over to the owner in a “new” condition. This includes scrapes, gouges, tire marks, spillage, etc.

END OF SECTION
SECTION 32 91 13
SOIL PREPARATION

PART 1  GENERAL

1.01  RELATED DOCUMENTS

A. The other Contract Documents complement the requirements of this section.
B. Other sections of this Specification may relate and may impose additional work and/or additional materials upon this section. Contractor to coordinate any cross-referencing of Specification sections.
C. Survey
   1. Metes and bounds and topographical data as shown is based on a survey by Butler Surveying Inc. dated December 8, 2021.
D. See Section 31 25 00 for Erosion and Sedimentation Control.
E. See Section 31 23 19 for Dewatering.
F. The Contractor shall always comply with Federal, State, or local laws, ordinances, and regulations that affect the work.
G. References
   1. Soil classifications standards used herein for existing and imported soils include but are not limited to the following.
      a. ASTM Soil Quality Standards.
      b. Classification: ASTM D 2487-00.
      e. Moisture-Density Relations: ASTM D 1557-00.

1.02  DESCRIPTION OF WORK

A. The scope of work under this section includes all labor, materials, equipment, transportation and services for testing, preparation, coordination, and placement of topsoil and required soil amendments with the establishment of rough grades as indicated by the Drawings and as specified.

1.03  DEFINITIONS

A. Finish Grade - Elevation of finished surface of planting soil.
B. Topsoil - Native or imported topsoil, manufactured topsoil, or surface soil modified to become topsoil; mixed with soil amendments.
C. Subgrade - Surface or elevation of subsoil remaining after completing excavation, or top surface of a fill or backfill immediately beneath topsoil.
D. AHJ – Authority Having Jurisdiction
1.04 PERMITS
   A. This project is not subject to the requirements of a DOE Construction Stormwater General Permit (CSGP), however a SWPPP is required by Lewis County. The Contractor will be provided a copy of the SWPPP from the engineer.

1.05 WARRANTY/BONDING
   A. Furnish labor and material warrantee or maintenance bond for all work in the public right-of-way, or easement, in accordance with requirements of the AHJ.

1.06 PROJECT CONDITIONS
   A. The Contractor shall examine the entire site for conditions that will adversely affect execution, permanence and quality of work. Proceed with installation only after unsatisfactory conditions have been corrected.
   
   B. Prior to the work of this section all rough graded subgrade surfaces shall be free of:
      1. Concrete, asphalt, and other construction or demolition debris;
      2. Limbs, twigs, cones, seedpods and other woody material; and
      3. Rock, gravel or other material not suitable for plant growth.
   
   C. The Contractor shall prepare topsoil only when weather and soil conditions allow. Do not attempt soil preparation work when weather or soil conditions would contribute to poor or improper mixing, voids, or other adverse conditions.
   
   D. The Contractor shall take all precautions to prevent runoff of topsoil and fertilizers from leaving site or entering storm systems, or any waterway.

PART 2 PRODUCTS

2.01 SUBMITTALS
   A. Prior to use on site or the start of work, the Contractor shall submit the following information to the Testing Laboratory. All product samples must include sufficient volume for the Testing Laboratory to make a reasonable analysis.

   1. Certified Analysis
      a. All compost mixture components required by these specifications or as required by testing laboratories to bring soil into compliance with these specifications.
      b. All fertilizer mixes required by the specifications or as required by testing laboratories to bring soil into compliance with these specifications.
      c. All on-site or imported topsoil required by these specifications.

   2. Where any tests show results failing to conform to the required standards the Contractor shall include with the testing report a recommended treatment plan to bring the material into conformance.

   3. Available Testing Laboratories
      a. Soil and Plant Laboratory, Inc. – 503-557-4959.
      b. Western Agricultural Laboratories – 503-968-9225.

   4. Product Samples
      a. Topsoil Mixture.
2.02 MATERIALS

A. Topsoil

1. Meet the requirements of Washington State Department of Ecology BMP T5.13 “Post-Construction Soil Quality and Depth” as stated on the Drawings.

2. Acidity range (pH) of 6.0 to 8.0.

3. Organic matter content (OMC) shall be minimum 5 percent in turf areas and 10% minimum in planting areas (by volume). OMC shall be maximum of 20 percent organic material content by volume.

4. A maximum of 25 percent decaying content by volume.

5. Free of stones 1 inch or larger in any dimension and other extraneous materials harmful to plant growth.

6. Textural Class Requirements - Topsoil textural analysis shall fall within the following gradations.

<table>
<thead>
<tr>
<th>Textural Class</th>
<th>% of Total Weight</th>
<th>Average %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand (0.05-2.0mm dia.)</td>
<td>45-75</td>
<td>60</td>
</tr>
<tr>
<td>Silt (0.002-0.05mm dia.)</td>
<td>15-35</td>
<td>25</td>
</tr>
<tr>
<td>Clay (less than 0.002mm dia.)</td>
<td>5-20</td>
<td>15</td>
</tr>
</tbody>
</table>

B. Inorganic Soil Amendments

1. Lime
   a. ASTM C 602, agricultural limestone containing a minimum 80 percent calcium carbonate equivalent:

2. Class
   a. Class T, with a minimum 99 percent passing through No. 8 sieve and a minimum 75 percent passing through No. 60 sieve.
   b. Class O, with a minimum 95 percent passing through No. 8 sieve and a minimum 55 percent passing through No. 60 sieve.

3. Provide lime in form of dolomitic limestone.

4. Sulfur
   a. Granular, biodegradable, containing a minimum of 90 percent sulfur, with a minimum 99 percent passing through No. 6 sieve and a maximum 10 percent passing through No. 40 sieve.

5. Iron Sulfate
   a. Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.

6. Aluminum Sulfate
   a. Commercial grade, unadulterated.

7. Agricultural Gypsum
   a. Finely ground, containing a minimum of 90 percent calcium sulfate.
8. **Sand**  
   a. Clean, washed, natural or manufactured, free of toxic materials.

9. **Diatomaceous Earth**  
   a. Calcined, diatomaceous earth, 90 percent silica, with approximately 140 percent water absorption capacity by weight.

10. **Calcined Clay**  
    a. An inorganic soil amendment formed by expanding clay at high temperatures (calcining), and used to alter soil strength by affecting its ability to retain moisture.

11. **EarthLite Filter Media**  
    a. As manufactured by Sunmark Seeds; 1.888.214.7333; Contact – Robin Cook.

12. **Zeolites**  
    a. Mineral clinoptilolite with at least 60 percent water absorption by weight.

C. **Compost/Mulch**  
   1. Shall meet the definition of “Composted Materials” per WAC 173-350-220.
   2. Shall be coarse mulch (non-floating).
   3. Organic matter content shall be between 35% and 65%.
   5. Compost shall be well-composted, stable, and weed-free organic matter with pH range of 5.5 to 8 and 100 percent passing through 3/4-inch sieve. Compost shall not have contents exceeding 0.5 percent inert contaminants and shall be free of substances toxic to plantings.

**PART 3 EXECUTION**

3.01 **PREPARATION**  
   A. The Contractor shall eliminate uneven areas and low spots, remove lumber, stones, sticks, mortar, concrete, rubbish, debris, contaminated soil and any other material harmful to plant life.

   B. **Rock Picking**  
      1. The contractor shall perform hand-based rock picking activities to remove visible rocks larger than 3/4" in any dimension. Rock picking shall be performed:
         a. Prior to placement of topsoil to remove rocks from the finished subgrade.
         b. After placement of topsoil to remove rocks from the finished surface grade.

   C. **Weeding**  
      1. The Contractor shall verify that invasive species and weeds have been eliminated prior to the placement of topsoil.
      2. The Contractor shall apply weed killer to all stripped surfaces, RoundUp™ Weed & Grass Killer, or approved equal, prior to mass grading efforts. For where blackberry bushes and brush are cleared, RoundUp™ Wild Blackberry Plus Vine and Brush Killer, or approved equal, shall be applied.
D. Newly Graded Subgrades
   1. Loosen subgrade to a minimum depth of 4 inches.
   2. Perform rock picking, and remove sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner’s property.
   3. Thoroughly blend topsoil mix before spreading.
   4. Spread topsoil mix to a minimum depth of 8 inches, but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if topsoil or subgrade is frozen, muddy, or excessively wet.
      c. Spread planting soil mix over loosened subgrade. Mix thoroughly into top 2 inches of subgrade.

E. Finish Grading
   1. Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.

3.02 CONSTRUCTION REQUIREMENTS

A. Rough Grading Inspection
   1. Contractor shall notify Owner’s Representative a minimum of 24 hours in advance for inspection of rough grades.

B. The Contractor shall verify that rough grades of areas to be planted are set at sufficient depth to allow for placement of specified materials. If the site is not suitable for landscaping operations, the Contractor shall perform necessary corrective work.

C. Topsoil placement or backfilling in areas to be landscaped shall not occur until the Owner’s Representative has issued written approval of both the subgrade preparation and topsoil material submittal.

D. The Contractor shall provide sample of stockpiled topsoil from project site for laboratory testing.

E. Existing topsoil shall be amended per recommendations of the laboratory testing, or else topsoil meeting these specifications shall be imported from off-site.

F. Planting soil shall be placed at specified grades and compacted to a minimum depth as shown on the contract Drawings.

3.03 QUALITY ASSURANCE

A. All soil preparation work shall be done under the supervision of a Contractor having experience in landscape construction. All work shall be done in accordance with proper horticultural practices.

B. The Contractor shall store fertilizer and other required materials in a dry place and free from the intrusion of moisture.

C. All topsoil and compost must be tested by an independent testing laboratory and certified that it is in conformance with the requirements of these specifications.

D. Soil/Compost Testing Laboratory Qualifications
   1. An independent laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
E. Topsoil Analysis

1. Furnish soil analysis by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of topsoil.

   a. Topsoil Analysis Report must include analysis of suitability of topsoil for plant growth. State recommended quantities of nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory topsoil.

3.04 CLEAN-UP

A. Keep project site free from accumulation of debris, topsoil, and other material.

B. At completion of work, completely remove debris, equipment and surplus materials.

C. Any paved area or surfaces stained or soiled from landscaping materials shall be cleaned with a power sweeper using water under pressure. Building surfaces that have been stained or discolored by topsoil the work shall be washed with proper equipment and materials as approved by the Owner’s Representative.

END OF SECTION
1.01 RELATED DOCUMENTS

A. The other Contract Documents complement the requirements of this section.

B. Other sections of this Specification may relate and may impose additional work and/or additional materials upon this section. Contractor to coordinate any cross-referencing of Specification sections.

C. Survey
   1. Metes and bounds and topographical data as shown is based on a survey by Butler Surveying Inc. dated December 8, 2021.

D. See Section 31 25 00 for Erosion and Sedimentation Control.

E. See Section 31 23 19 for Dewatering.

F. The Contractor shall always comply with Federal, State, or local laws, ordinances, and regulations that affect the work.

1.02 DESCRIPTION OF WORK

A. The scope of work under this section includes all labor, materials, equipment, transportation and services for the installation of public and private water main piping and appurtenances of the types and sizes designated in accordance with the Drawings, these Specifications, and the Standard Drawings, in conformity with the lines and grades as shown on the Drawings, in general 5-feet outside of the building footprint (sitework).

1.03 DEFINITIONS

A. AHJ – Authority Having Jurisdiction

1.04 STANDARD SPECIFICATIONS

A. Standard specification shall be Lewis County Water Standards.

B. Reference specifications shall be the latest edition of the WSDOT Standard Specifications for Road, Bridge and Municipal Construction.

C. Reference specification shall be the latest edition of the Uniform Plumbing Code (UPC), with its revisions and supplements.

D. For work to be performed off-site within the public right-of-way, standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications as prepared by the Washington State Department of Transportation as modified by the Agency Having Jurisdiction.

E. For work to be performed on-site, the requirements of this section shall apply.

1.05 WARRANTY/BONDING

A. Furnish labor and material warrantee or maintenance bond for all work in the public right-of-way, or easement, in accordance with requirements of the AHJ.
1.06 PROJECT CONDITIONS

A. Traffic
   1. Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities.

B. Utilities Locate
   1. Contractor shall call for utility locator service for the project area prior to any grading, excavation or utility work.

C. State and local code requirements shall control disposal of debris, which shall be at an approved off-site location.

D. Existing water lines are located throughout the project site. These mains and pipes will be either protected, abandoned, removed, or re-connected as indicated on the Drawings. The existing system shown is based on record drawings and may vary in the field. Prior to performing any of the abandoning and relocation work, the Contractor shall verify the lines and inform the Engineer of any discrepancies.

PART 2 PRODUCTS

2.01 SUBMITTALS

A. Provide materials certificates showing that products in Part 2 meet or exceed specifications.

B. Submittals shall be labeled so as to identify for which product(s) the Contractor is seeking approval. Unlabeled or unorganized submittals will be returned unreviewed.

C. Furnish reproducible “as-built” drawings.

2.02 MATERIALS

A. Public Water - Conform to the standards of the AHJ.

B. Private Water
   2. Fire Service. The fire service, from the POC at the public main to the mechanical room, is subject to design by a licensed fire sprinkler contractor, and is not covered by this specification. All materials shall meet the requirements stated in the licensed fire design.

2.03 PRODUCT HANDLING

A. Use all means necessary to protect the materials of this section before, during, and after installation.

B. Deliver all materials to the job site in their original containers with labels intact and legible, when applicable. Store in accordance with manufacturer's recommendations.

PART 3 EXECUTION

3.01 GENERAL

A. Public Water
   1. Public water system installation shall be in conformance with the standards of the AHJ.
   2. Joint restraint shall be provided by mechanical means. Refer to Drawings for locations.
B. Private Water
   1. Install private domestic water per plumbing code requirements and as indicated on the Drawings.

3.02 ORDER OF WORK
   A. Proposed water system and fire hydrants shall be installed, accepted, and operational prior to the start of combustible construction on the new building.

3.03 ABANDONMENT OF EXISTING UTILITIES
   A. Utilities to be abandoned under or within 20’ of new building footprint shall be pressure grouted or removed.
   B. Utilities to be abandoned outside of (or more than 20’ from) new building footprint shall be plugged and abandoned in place, or removed as necessary to allow for new construction. Plug all cut or abandoned ends of pipe.
   C. Abandonment of water lines shall be per WSDOT standards.

3.04 CONSTRUCTION REQUIREMENTS
   A. Grade Control - Establish and maintain required lines and elevations.

3.05 QUALITY ASSURANCE
   A. Hydrostatic Pressure Test - Test water mains under hydrostatic pressure as required by the Standard Specifications.
   B. Sterilization - Water mains shall be sterilized before placing in service.
   C. All deficiencies revealed in the testing of the system as indicated above will be corrected and re-tested for approval of the systems.

3.06 PROTECTION
   A. All new fire hydrants shall be protected during construction. All chips, scratches, and other marks shall be repaired, including proper rust removal, priming, and application of approved coating.

3.07 AS-BUILTS
   A. Contractor shall be responsible for supplying reproducible water system “as-built” drawings along with record documents under the provisions of this contract.
   B. Contractor as-builts shall include changes in elevation, alignment, pipe size, material, and other pertinent information.

END OF SECTION
SECTION 33 41 14
STORM DRAINAGE

PART 1 GENERAL

1.01 RELATED DOCUMENTS
A. The other Contract Documents complement the requirements of this section.
B. Other sections of this Specification may relate and may impose additional work and/or additional materials upon this section. Contractor to coordinate any cross-referencing of Specification sections.
C. Survey
1. Metes and bounds and topographical data as shown is based on a survey by Butler Surveying Inc. dated December 8, 2021.
D. See Section 31 25 00 for Erosion and Sedimentation Control.
E. See Section 31 23 19 for Dewatering.
F. The Contractor shall always comply with Federal, State, or local laws, ordinances, and regulations that affect the work.

1.02 DESCRIPTION OF WORK
A. The scope of work under this section includes all labor, materials, equipment, transportation and services to construct manholes, grate inlets, drop inlets, catch basins, curb inlets, combination curb inlets, area drains, cleanouts, detention systems, water quality facilities, storm drainage pipe, foundation drain, and related appurtenances in reasonable close conformity with the lines and grades as shown on the drawings, in general 5-feet outside of the building footprint (sitework).

1.03 DEFINITIONS
A. AHJ – Authority Having Jurisdiction

1.04 STANDARD SPECIFICATIONS
A. Standard specification shall be the Lewis County Design and Construction Standards.
B. Reference specifications shall be the latest edition of the WSDOT Standard Specifications for Road, Bridge and Municipal Construction.
C. Reference specification shall be the latest edition of the Uniform Plumbing Code (UPC), with its revisions and supplements.
D. For work to be performed off-site within the public right-of-way, standard specifications referenced herein shall be the latest edition of the WSDOT Standard Specifications as prepared by the Washington State Department of Transportation as modified by the Agency Having Jurisdiction.
E. For work to be performed on-site, the requirements of this section shall apply.

1.05 WARRANTY/BONDING
A. Furnish labor and material warrantee or maintenance bond for all work in the public right-of-way, or easement, in accordance with requirements of the AHJ.
1.06 PROJECT CONDITIONS

A. Traffic
   1. Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities.

B. Utilities Locate
   1. Contractor shall call for utility locator service for the project area prior to any grading, excavation or utility work.

C. State and local code requirements shall control disposal of debris, which shall be at an approved off-site location.

D. Existing storm drainage lines are located throughout the project site. These mains and pipes will be either protected, abandoned, removed, or re-connected as indicated on the Drawings. The existing system shown is based on record drawings and may vary in the field. Prior to performing any of the abandoning and relocation work, the Contractor shall verify the lines and inform the Engineer of any discrepancies.

PART 2 PRODUCTS

2.01 SUBMITTALS

A. Provide materials certificates showing that products in Part 2 meet or exceed specifications.

B. Submittals shall be labeled so as to identify for which product(s) the Contractor is seeking approval. **Unlabeled or unorganized submittals will be returned unreviewed.**

C. Furnish reproducible “as-built” drawings.

2.02 MATERIALS

A. Storm Piping
   1. Acceptable pipe material shall be:
      a. Smooth interior, high density polyethylene corrugated pipe per section 9-05.1(6) for pipe diameters less than or equal to 10” (AASHTO M252), or per section 9-05.1(7) for 12” through 36” diameter pipe (AASHTO M294). MEGA GREEN™ water-tight recycled content pipe by ADS shall also be an approved material.
      b. ASTM D3034 PVC (SDR 35)
      c. Approved equal.
   2. For tight-line pipe, all storm drainage joints shall be gasketed and water tight. Soil tight shall not be acceptable.

B. Grates
   1. All grates shall be one-piece cast iron (not welded), manufactured to conform to an H-20 wheel load. Grates in pedestrian areas shall comply with Americans With Disabilities Act (ADA) requirements.
   2. All catch basins shall be set to final grade by use of concrete rings and adjustment collars made for that purpose.
   3. All catch basin grates within the project limits shall have the wording "Dump No Waste - Drains to Streams" painted on the adjacent pavement using a stencil.
C. Bedding and Backfill
   1. Storm Piping
      a. Refer to Contract Drawings for bedding and backfill material requirements.
   2. Drain Rock
      a. Provide crushed rock meeting WSDOT 9-03.12(5) Gravel Backfill for Drywells

D. Underdrainage Piping
   1. Piping (underdrainage)
      a. Pipe for underdrainage systems shall be corrugated HDPE piping meeting ASTM D3350.
      b. 2" diameter HDPE perforated tubing shall be Hancor Turf-Flow with narrow slots, or approved equal.
      c. 3" diameter HDPE perforated tubing shall be single wall heavy duty pipe with narrow slots, or approved equal.
      d. 4" diameter HDPE perforated tubing shall be smooth interior meeting AASHTO M252. Provide Hancor Sure-Lok with narrow slots, or approved equal.
      e. Provide compatible fittings meeting manufacturer’s recommendations. Fittings within the perforated drainage system shall provide a soil-tight joint. All other fittings shall provide a watertight joint.
   2. Bedding and Backfill (underdrainage)
      a. Bedding and backfill material for field underdrain pipe shall be clean sand free from organic matter and conforming to the following gradation:

<table>
<thead>
<tr>
<th>Particle Size</th>
<th>Percent Passing</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0-3.4 mm</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>0.5-1.0 mm</td>
<td>&lt; 10*</td>
</tr>
<tr>
<td>0.25-0.50 mm</td>
<td>60 min.</td>
</tr>
<tr>
<td>0.15-0.25 mm</td>
<td>&lt; 20</td>
</tr>
<tr>
<td>0.05-0.15 mm</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>0.002-0.05 mm</td>
<td>&lt; 5</td>
</tr>
<tr>
<td>&lt;0.002 mm</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>Very Fine</td>
<td>&lt; 10</td>
</tr>
</tbody>
</table>

All percentages are by weight.
*This total includes any material within the upper dia. (2.0-3.4mm)

E. Other
   1. Other materials shall meet the requirements stated on the Drawings.

2.03 PRODUCT HANDLING
   A. Use all means necessary to protect the materials of this section before, during, and after installation.
   B. Deliver all materials to the job site in their original containers with labels intact and legible, when applicable. Store in accordance with manufacturer's recommendations.
PART 3  EXECUTION

3.01  ORDER OF WORK

A. Installation of storm underdrainage systems in natural grass areas shall be performed after final topsoil grades have been achieved (if seeded), or after sod is placed (if sodded). No material shall be placed over the top of underdrainage trenches except for sand, grass seed, or fertilizer (no topsoil).

3.02  ABANDONMENT OF EXISTING UTILITIES

A. Utilities to be abandoned under or within 20’ of new building footprint shall be pressure grouted or removed.

B. Utilities to be abandoned outside of (or more than 20’ from) new building footprint shall be plugged and abandoned in place or removed as necessary to allow for new construction. Plug all cut or abandoned ends of pipe.

C. Abandonment of storm drainage lines shall be per WSDOT standards.

3.03  CONSTRUCTION REQUIREMENTS

A. The Contractor shall perform all work in accordance with the Drawings, details, specifications, and best industry practices.

B. Storm drainage pipe shall be constructed per the requirements of Section 7 of the Standard Specifications. Catch basins, manholes, and other storm structures shall be constructed per the requirements of Section 7 of the Standard Specifications.

C. All trench backfill shall be compacted, including infiltration trenches.

D. All work shall be performed so as to eliminate sediments from being transported into the drainage system during the construction phase. Provide all necessary temporary filtration devices and drain inlet protection to capture runoff sediment.

   1. Best Management Practices (BMP’s) shall be used to protect drainage system and catch basins from soil erosions and other pollutants.

E. The contractor shall leave the pipe joints uncovered until visual observation by the owner’s representative is completed.

F. Tracer wire shall be installed with all non-metal pipe. Tracer wire shall be #14 copper wire.

   1. Tracer wire not required for underdrainage systems.

G. Foundation drains shall be installed at the building footings. Foundation drains shall be connected to site storm mains at one or more locations to be determined in the field by the contractor. Install backwater valve at all points-of-connection to the site storm main per the detail on the Contract Drawings.

3.04  QUALITY ASSURANCE

A. Inspection

   1. Inspect interior of piping to determine whether line displacement or other damage has occurred.

      a. Make inspections after pipe between manholes and manhole locations have been installed and approximately 2 feet of backfill is in place, and again at completion of project.

      b. Inspection of pipes is required from manhole to manhole using natural or artificial light.
c. If inspection indicates poor alignment, debris, displaced pipe, infiltration, or other defects, the Contractor shall correct such defects and notify Owner for re-inspection.

B. Testing
   1. Testing of private storm lines shall be per the Uniform Plumbing Code.
   2. Additional testing as identified on the Contract Drawings.

3.05 TOLERANCE ACCEPTANCE
   A. Tolerances for storm drainage shall be as indicated in the WSDOT Standard Specifications.

3.06 AS-BUILTS
   A. Contractor shall be responsible for supplying reproducible storm drainage “as-built” drawings along with record documents under provisions of the Contract.
   B. As-builts shall be based on post-construction topographic survey shots of rim, invert and riser elevations of all storm structures (catch basins, manholes, outfalls, control structures, etc.). Elements that are found to be in non-conformance with the approved Drawings are subject to rejection and repair/replacement as determined by the Engineer and at the Contractor’s expense.
   C. Contractor’s as-builts shall include changes in elevation, alignment, pipe size, material, and other pertinent information.

END OF SECTION
GENERAL NOTES:
1. ELECTRICAL CONDUCTORS SHALL BE THOSE CONDUCTORS RECOMMENDED FOR USE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AS RECOMMENDED BY THE MANUFACTURER.
2. COORDINATE ELECTRICAL POWER CIRCUIT "OFF" AND ENCLOSED CIRCUIT "OFF" WITHIN ARCHITECTURAL AND MECHANICAL DRAWINGS PRIOR TO THROUGH-IN.
3. COMPLETE ELECTRICAL SD 12 THRU 18 WITH PERMITTED SD 19.
4. ELECTRICAL SD 20 THRU 28 ARE PERMITTED TO BE CONNECTED TO THE EXISTING SD 19 AND SD 18 IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
5. PROVIDE EXTERIOR PAGING SPEAKER WITH WEATHERPROOF SPEAKER BAFFLE.

KEYED NOTES:
1. PROVIDE 3/4" X 8' TALL FIRE RETARDANT PLYWOOD BACKBOARD, PAINTED WHITE, TO PROJECT SPECIFICATIONS.
2. PROVIDE CEILING MOUNTED PAGING SPEAKER IN RESTROOM. SPEAKER: RAULAND DT900-6-2005.
3. PROVIDE DRINKING FOUNTAIN / BOTTLE FILLER EQUIPMENT. VERIFY EXACT LOCATION WITH SHEET NO. J2-32,34,36.
4. PROVIDE 120V, ELECTRICAL CONNECTION FOR FIRE SPRINKLER RISER FLOW SWITCH.
5. PROVIDE 120V ELECTRICAL CONNECTION TO DIGITAL CLOCK CONVERTER. LOCATE UP.
6. PROVIDE 1-GANG SWITCH BOX FOR MOTORIZED BACKBOARD CONTROL SWITCH WITH (1) 1/2" CONDUIT TO BACKBOARD MOTOR. PROVIDE CONDUCTOR AND CONNECT AS NECESSARY TO CONNECT TO EXISTING INTERIOR CORRIDOR PAGING RECEPTACLES, AS TAMPER RESISTANT, PER PROJECT SPECIFICATIONS AND TO PROJECT SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS.
7. PROVIDE EXTERIOR PAGING SPEAKER WITH WEATHERPROOF SPEAKER BAFFLE.
8. PROVIDE 120V, ELECTRICAL CONNECTION FOR FIRE SPRINKLER RISER FLOW SWITCH.
9. PROVIDE 1-GANG SWITCH BOX FOR MOTORIZED BACKBOARD CONTROL SWITCH WITH (1) 1/2" CONDUIT TO BACKBOARD MOTOR. PROVIDE CONDUCTOR AND CONNECT AS NECESSARY TO CONNECT TO EXISTING INTERIOR CORRIDOR PAGING RECEPTACLES, AS TAMPER RESISTANT, PER PROJECT SPECIFICATIONS AND TO PROJECT SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS.
10. PROVIDE NEW SPEAKER FINISH COVER. MATCH EXISTING INTERIOR SPEAKER EQUIPMENT. PROVIDE (1) 2" CONDUIT STUBBED INTO ACCESSIBLE CEILING OF GYM, EQUIPMENT. PROVIDE (1) 2" CONDUIT STUBBED INTO ACCESSIBLE CEILING OF STEM CLASSROOM, EQUIPMENT. PROVIDE DOUBLE GANG, DOUBLE DEEP JUNCTION BOX WITH 1-GANG MUD RING, COORDINATE ELECTRICAL CONNECTION AND LOCATION OF DISCONNECT AND OVERCURRENT PROTECTION.
11. PROVIDE 120V, ELECTRICAL CONNECTION FOR FIRE SPRINKLER RISER FLOW SWITCH.
12. PROVIDE EXTERIOR PAGING SPEAKER WITH WEATHERPROOF SPEAKER BAFFLE.
14. TO SHUFFLE CHORES, MWT CP CONTROL PANEL PROVIDE 1-GANG SWITCH AND ACTUATOR STYLE FURNITURE. PROVIDE DOUBLE GANG, DOUBLE DEEP J-BOX WITH BLANK COVER.
15. TO SHUFFLE MWT CP CONTROL PANEL PROVIDE NEW CYLINDER LOCK AND ACTUATOR STYLE FURNITURE. PROVIDE DOUBLE GANG, DOUBLE DEEP J-BOX WITH BLANK COVER.
16. PROVIDE COMBINATION DIGITAL CLOCK PAGING SPEAKER CASE 120V, 1PH, 1 HP, 1 1/2" CONDUIT. PROVIDE COMBINATION DIGITAL CLOCK PAGING SPEAKER CASE 120V, 1PH, 1 HP, 1 1/2" CONDUIT. PROVIDE COMBINATION DIGITAL CLOCK PAGING SPEAKER CASE 120V, 1PH, 1 HP, 1 1/2" CONDUIT.
17. PROVIDE SPRINKLER SYSTEM INSTALLER.
18. PROVIDE EXTERIOR PAGING SPEAKER WITH WEATHERPROOF SPEAKER BAFFLE.
19. PROVIDE 3/4" X 8' TALL FIRE RETARDANT PLYWOOD BACKBOARD, PAINTED WHITE, TO PROJECT SPECIFICATIONS.
20. PROVIDE ANGULAR WIREMOLD RFB4-CI-NA SERIES, OR APPROVED EQUAL.
21. PROVIDE 304 STAINLESS STEEL FLORIDA CONDUIT. PROVIDE 120V, ELECTRICAL CONNECTION TO DIGITAL CLOCK CONVERTER. LOCATE UP.
22. PROVIDE ANGULAR WIREMOLD RFB4-CI-NA SERIES, OR APPROVED EQUAL.
23. PROVIDE COMBINATION DIGITAL CLOCK PAGING SPEAKER CASE 120V, 1PH, 1 HP, 1 1/2" CONDUIT. PROVIDE COMBINATION DIGITAL CLOCK PAGING SPEAKER CASE 120V, 1PH, 1 HP, 1 1/2" CONDUIT. PROVIDE COMBINATION DIGITAL CLOCK PAGING SPEAKER CASE 120V, 1PH, 1 HP, 1 1/2" CONDUIT.
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**Revision Schedule**

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GENERAL NOTES:
1. ACCEPTABLE CONCRETE REINFORCEMENT SHOWN IN THE ROOM.
2. FIREVICE CORD LESS THAN THE MINIMUM FIRE VICE DISTANCE.
3. CONSUMERS ARE REQUIRED TO SUBMIT THE NECESSARY INFORMATION TO THE LOCAL ELECTRICAL DISTRICT.
4. COORDINATE WITH LOCAL BUILDING OFFICIALS IN THE ROOM.
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KEYED NOTES:
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EQUIPMENT AND CONTROLS WITH ARCHITECTURAL AND MECHANICAL
ELECTRICAL CONDUITS SHALL BE EITHER CONCEALED IN THE ROOM.
CONNECTED TO UN-SWITCHED LEG OF CIRCUIT INDICATED.
CONNECT LIGHTS IN STOR/MECH 201 TO TOGGLE PILOT LIGHT
WHITE LIGHTING CONTROLS.
PROVIDE LOCAL NETWORK POWER PACK DEVICE FOR TUNEABLE
OS SPECIFICATIONS MANUAL FOR ADDITIONAL INFORMATION.
CONNECT NEW CORRIDOR LIGHT TO EXISTING SWITCHED LEG OF
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1. In Gymnasium there are no light fixtures located within the Daylit Zone, so no daylighting controls are required.
2. In Classroom there are at least three light fixtures located within the Daylit Zone. All light fixtures located within the Classroom are specified with integral daylight sensors.

General Notes:

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The undersigned requests consideration of the following:

**SPECIFIED ITEM:** Lighting

265100 1-6 1.01-3.8 Lighting

**PROPOSED SUBSTITUTION:** Attached

Attach complete technical data, including laboratory tests, if applicable.

Include complete information on changes to Drawings and/or Specifications which proposed substitution will require for its proper installations.

Fill in Blanks Below:

1. Does the substitution affect dimensions shown on drawings? Yes
2. Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitution? No
3. What affect does substitution have on other trades? Proposed has no affect on other trades.
4. Differences between proposed substitution and specified item? Proposed is equal or better
5. Manufacturer’s guarantees of the proposed and specified items are:
   - [X] SAME
   - [ ] DIFFERENT (explain on attachment)

The undersigned further states that the function, appearance and quality of the Proposed Substitution are equivalent or superior to the Specified Item.

**Signature:** Chris Hamaker

**Firm:** Lighting Group LLC

**Address:** 5700 6th Ave S

Seattle, Wa 98108

**Date:** August 3, 2022

**Telephone:** 206-298-9000

Type A1 & A1E match fixtures added as part of Addendum #2 - Recommend approval.

Type D - Recommend Not Approve.

Type HE & H1E Recommend Approval

Isolite Inverter - Recommend Not Approve as the enclosure will likely not fit in the room with other equipment