

DIVISION 31 EARTHWORK and 32 EXTERIOR IMPROVEMENT

<u>Section No.</u>	<u>Title</u>	<u>Comments</u>
31 10 00	SITE CLEARING	<ol style="list-style-type: none"> 1. Upon tree removal, remove entire stump. Fill and compact depression. 2. Export all woody debris and dispose of properly off site.
31 21 00	EARTH MOVING	<ol style="list-style-type: none"> 1. Minimize grading to the maximum extent possible. 2. Prevent run-off from leaving site with the use of swales. 3. Discourage use of retaining walls. If required the use of Rockery Retention walls is preferred. 4. Note if soils are moisture sensitive. 5. Use non-moisture sensitive soil for structural backfill – see Geotech report for specific site. 6. Pipe bedding material shall be sand or peagravel for water, waste, storm and all conduit. 7. All utilities must have tracer tape 12” below finished grade. 8. Use sand bedding for irrigation lines. 9. Exterior grade shall be minimum 6-inches below subfloor and shall slope away from the building. 10. A 2-percent slope for all exterior surfaces is preferred.
31 62 00	DRIVEN PILES	<ol style="list-style-type: none"> 1. Discourage use.
31 63 00	BORED / AUGERED PILES	<ol style="list-style-type: none"> 1. Preferred over driven piles.
32 13 00	RIGID PAVING	<ol style="list-style-type: none"> 1. Class B asphaltic concrete per WSDOT Standard Specifications. See cement concrete paving below. 2. Sidewalks with light broom finish. No picture framing, no exposed aggregate finish. 3. Control/expansion joint spacing applicable to minimize cracking. 4. Cement concrete paving <ol style="list-style-type: none"> a. Minimum 6-inch thickness with 2-inch CSTC at standard sidewalks not designed for vehicle use. b. Minimum 6-inch thickness with 6-inch CSTC at standard sidewalks and areas intended for vehicle use. c. Use minimum 8-inch thickness with 6-inch CSTC at all designated fire lanes. Install metal dowels between cold joint panels.

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32 14 16	BRICK UNIT PAVING	<ol style="list-style-type: none"> 1. Manufacturer: Mutual Materials 2. Type: Light-traffic paving brick meeting ASTM C902, Class SX, Type I 3. Size: 4"x8"x1-1/2" 4. Color: Chestnut 5. Mortar Bed: Laticrete MVIS Premium Mortar Bed 6. Bond Coat Mortar: Laticrete Hi-Bond Masonry Veneer Mortar, or accepted equal 7. Grout: High-performance sanded cement grout meeting ANSI A118.7 <p>(Note: The College will continue to use brick paving at Red Square but is tending to get away from continuing its use on other areas of campus)</p>
32 16 00	CONCRETE CURBS	<ol style="list-style-type: none"> 1. All concrete curbs shall be cast-in-place, no extruded concrete curbs. 2. Mechanically fastened precast curb stops are preferred.
32 31 00	FENCES & GATES	<ol style="list-style-type: none"> 1. Chain link in compliance with DOT standards. 2. Galvanized – No vinyl coated unless program requires differently. 3. Height and fabric gauge at athletic fields appropriate to activities. 4. Provide concrete mow strips, extended 12" out from face of fence. 5. Vinyl vision slats are allowable, but must be screwed into top metal bar to prevent from being pulled out. 6. Ensure that all double gate latch mechanisms align properly and operate correctly.
32 80 00	IRRIGATION	<ol style="list-style-type: none"> 1. Toro Sentinel irrigation controller. Pedestal mount in a stainless steel enclosure set on a 4" thick concrete slab. 2. Toro TFS 2" flow sensor. Install with data connection to controller unit. 3. Toro 220 Master Valve. 4. Heads: Hunter Nozzles (MP rotator series, or other Hunter Nozzles as required to meet variations in irrigation conditions / needs) on Hunter Pros-Spray PRS40 bodies. 5. Wilkins 950XL (with union ball valves) backflow preventer. 6. Valve boxes for pedestrian areas shall be Carson HDPE 14"x19" below grade enclosures with cover set flush with adjacent grade. 7. Valve boxes for areas that might be driven over by

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		<p>maintenance equipment (not vehicular) Fibrelyte Composite. Size as needed, below grade enclosure with cover set flush with adjacent grade.</p> <ol style="list-style-type: none"> 8. Piping shall be PVC Sched 40 with equivalent fittings. 9. Tracer wire: 14-gauge with blue plastic coating. 10. Controller wire: Solid copper, UL listed for direct burial use, size as needed for length of wire run. 11. Do not install controller wires to zone valves under main line.
32 91 13	SOIL PREPARATION	<ol style="list-style-type: none"> 1. Subgrade material – Remove all concrete, riprap, asphalt materials prior to adding soil mix. Compacted subgrade shall be broken up to allow for proper drainage. Obtain owner’s approval prior to installation of topsoil. 2. 8” minimum depth topsoil at all planting beds and lawn areas. 3. Soil mix: 60 % clean loamy sand, 40% soil amendment as specified by Landscape Architect.
32 92 00	TURF & GRASSES	<ol style="list-style-type: none"> 1. Ornamental lawn (full sun) – 100% 3 way rye grass mix. 2. Ornamental lawn (partial shade) – 70% 3-way rye grass mix, 15% Chewing fescue, 15% Creeping red fescue. 3. Sports fields – 60% Perennial rye, 20% Fine fescue, 20% Kentucky bluegrass. 4. Provide 3 way rye sod at building perimeter if budget allows. Sod to be provided by Country Green Turf Farms. 5. All seed mixes to have less than 0.1% weed seed. 6. No turf areas less than 8’-0” wide. 7. Consider slope of 3:1 as maximum mowable slope.
32 93 00	PLANTS	<ol style="list-style-type: none"> 1. Landscaping shall be low maintenance. 2. Encourage use of indigenous drought resistant plants. 3. Use low growth shrubs next to buildings or ground cover with bark nuggets over weed blocking fabric. 4. Minimize use of lawns. 5. Minimize use of deciduous trees. 6. Encourage use of conifers. 7. Do not locate trees under parking light poles 8. Use high canopy trees at street approach and planting islands. 9. All planting locations shall avoid creating hiding spots. 10. Hold trees away from buildings, minimum. 20’-0” separation

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		11. Meet minimum Thurston County requirements. 12. Remove wire baskets from all trees prior to planting. 13. All plant material shall meet AAN standards and grades. #1 Grade to be used at all times. 14. Topsoil: loam with 20-percent composted organics. 15. Fertilizer: appropriate for season and region.

- NOTES:** PAVEMENT MARKINGS
1. Use WSDOT Standard Specifications.
 2. Thermoplastic bars at crosswalks.