

DIVISION 2 - SITEWORK

SECTION 02220 - DEMOLITION

Summary:

1. Provide site demolition including designated paving, curbing, site walls, and utility structures.
2. Provide demolition of below-grade foundations and site improvements to depth to avoid conflict with new construction and site work.
3. Remove hollow items or items which could collapse.
4. Remove abandoned utilities and wiring systems.
5. Notify Owner of schedule of shut-off of utilities which serve occupied spaces.
6. Provide temporary protection for the public from demolition operations.
7. Provide pollution control during demolition operations.
8. Provide removal and legal disposal of materials.

Submittals:

1. Submit demolition schedule. Include methods for protecting adjacent work and location of temporary partitions if applicable.
2. Submit proposed location for disposal of materials, and permit if applicable.

Demolition:

1. Survey existing conditions and correlate with Drawings and specifications to verify extent of demolition required.
2. Verify conditions at site to determine whether demolition methods proposed for use will not endanger existing structures by overloading, failure, or unplanned collapse.
3. Perform demolition operations by methods which do not endanger adjacent spaces, structures, or the public.
4. Perform demolition operations to prevent dust and pollutant hazards. Provide chutes as required to control dust and debris.

SECTION 02230 - SITE CLEARING

Summary:

1. Protect existing trees, vegetation, landscaping materials, and site improvements not scheduled for clearing which might be damaged by construction activities.
2. Trim existing trees and vegetation as acceptable to Architect in writing.
3. Clear and grub site of stumps, vegetation, debris, rubbish, designated trees, and designated site improvements.
4. Provide topsoil stripping and stockpiling at approved locations.
5. Provide temporary erosion control, siltation control, and dust control.
6. Provide temporary protection of adjacent property, structures, benchmarks, and monuments.
7. Provide temporary relocation of play structures, fencing, and site improvements scheduled for reuse.
8. Water trees and vegetation during construction activities.
9. Provide removal and legal disposal of cleared materials not to be stockpiled.

Products:

1. Tree protection, erosion control, siltation control, and dust control materials suitable

for site conditions.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.

SECTION 02300 - EARTHWORK

Summary:

1. Provide excavation, filling, compaction, and grading for buildings, site improvements, and utilities.
2. Provide suitable materials for subbase, drainage fill, and backfill for slabs, pavements, and improvements.
3. Provide rock excavation without blasting unless authorized.
4. Provide additional materials from offsite if required.
5. Provide removal and legal disposal of excavated materials.
6. Provide erosion control and control of runoff during earthwork operations.

Submittals:

1. Submit list and source of materials from offsite, and submit proposed location for disposal of excess materials.

Products:

1. Subbase Material: Graded mixture of natural or crushed gravel, crushed stone or slag, and natural or crushed sand.
2. Drainage Fill: Washed, evenly graded mixture of crushed stone or gravel, with 100 percent passing a 1-1/2 inch sieve and not more than 5 percent passing a No. 200 sieve.
3. Backfill and Fill Materials: Satisfactory soil materials free of clay, rock or gravel larger than 2 inches in any dimension, debris, waste, frozen materials, vegetation, and other unsuitable materials.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.
2. Provide compaction under structures, building slabs, steps, pavements, and walkways; 95 percent maximum density, ASTM D 698, standard Proctor.
3. Provide compaction under lawns or unpaved areas; 90 percent maximum density, ASTM D 698, standard Proctor.
4. Provide grading tolerance for lawns, unpaved areas, and walks of plus or minus 1 inch.
5. Provide grading tolerance for pavements of plus or minus 1/2 inch.
6. Provide grading tolerance for fill under building slabs of plus or minus 1/2 inch measured with 10 foot straightedge.

SECTION 02743 - BITUMINOUS CONCRETE PAVING

Summary:

1. Provide bituminous concrete paving over prepared subbase.

Submittals:

1. Submit product data.

Products:

1. Asphalt-Aggregate Mixture: Plant-mixed, hot-laid asphalt- aggregate mixture, ASTM D 3515, complying with local DOT and DPW regulations.
2. Prime Coat: Cut-back asphalt, ASTM D 2027.
3. Tack Coat: Emulsified asphalt, ASTM D 977.
4. Herbicide Treatment: Commercial chemical for weed control registered by Environmental Protection Agency and acceptable to authorities having jurisdiction.
5. Lane and Parking Area Marking Paint, White Color: Alkyd-resin type, ready-mixed, AASHTO M 248, Type I.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.
2. Provide construction tolerances as follows:
 - a. Base Course Thickness: Within 1/2 inch.
 - b. Surface Course Thickness: Within 1/4 inch.
 - c. Base Course Surface Smoothness: Within 1/4 inch.
 - d. Surface Course Surface Smoothness: Within 3/16 inch.
 - e. Crowned Surfaces: Within 1/4 inch from template.

SECTION 02780 - UNIT PAVERS

Summary:

1. Provide exterior brick pavers over prepared setting bed.
2. Provide exterior concrete pavers over prepared setting bed.
3. Provide exterior rough stone pavers over prepared setting bed.

Submittals:

1. Submit product data, samples, shop drawings, 4 foot by 4 foot mockup.

Products:

1. Products: Insert manufacturer's name and product.
2. Products: As selected by Architect complying with the following.
3. Brick Pavers:
 - a. Class: ASTM C 902, Weather Class SX for use subject to freezing.
 - b. Class: ASTM C 902, Weather Class MX for use not subject to freezing.
 - c. Class: ASTM C 902, Weather Class NX for interior application.
 - d. Traffic Type: ASTM C 902, Traffic Type I for driveways and entrances.
 - e. Traffic Type: ASTM C 902, Traffic Type II for exterior commercial walkways.
 - f. Traffic Type: ASTM C 902, Traffic Type III for low traffic walkways and patios.
 - g. Application: ASTM C 902, Application Type PS for general use.
 - h. Application: ASTM C 902, Application Type PX for installations without mortar.
 - i. Application: ASTM C 902, Application Type PA for special appearance and tolerance application.
4. Concrete Pavers: Solid concrete interlocking paving units, ASTM C 936, normal weight aggregates.
5. Asphalt Block Pavers: Solid asphalt units, asphalt cement, ASTM D 312, Type III, natural texture.

6. Rough Stone Pavers: Squared paving stones, with split faces and edges, granite, ASTM C 615.
7. Mortar and Grout:
 - a. Mortar: Portland cement and lime setting-bed mortar, ASTM C 270, Type M.
 - b. Bond Coat: Latex-modified Portland cement slurry.
 - c. Grout: Latex-modified Portland cement grout.
 - d. Integral Color: Pigment additive.
8. PVC Edge Restraints: Triangular PVC extrusions, rigid type for straight edges and flexible type for curved edges.
9. Steel Edge Restraints: Commercial steel edging with loops for support stakes.
10. Setting Bed: Mortar over concrete slab.
11. Setting Bed: Bituminous setting bed over concrete slab.
12. Setting Bed: Bituminous setting bed over prepared subbase.
13. Setting Bed: UngROUTED mortarless setting bed over filter fabric and stone dust bed and prepared subbase.
14. Joint Treatment: Hand-tight joints with stone dust filler.
15. Joint Treatment: Hand-tight joints with sand filler.
16. Joint Treatment: Latex Portland cement grout, 3/8 inch wide.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.
2. Construction Tolerance: Unit-to-unit offset tolerance of 1/16 inch from flush, 1/8 inch in 2 feet and 1/4 inch in 10 feet from level or required slope.

SECTION 02754 - CEMENT CONCRETE PAVING

Summary:

1. Provide cast-in-place concrete paving over prepared subbase.

Submittals:

1. Submit product data, mix design.

Products:

1. Concrete: ASTM C 150, Type 1, Portland cement; ASTM C 33, normal weight aggregates; potable water.
 - a. Design Mix: ASTM C 94, 3000 psi, 28 day minimum compressive strength.
 - b. Slump Limits: 8 inches minimum with superplasticizer, 3 inches otherwise.
 - c. Air Content: 5 to 8 percent.
 - d. Finish: Broom.
 - e. Finish: Exposed aggregate.
2. Wire Mesh: Welded plain steel wire fabric, ASTM A 185.
3. Reinforcing Bars: Deformed steel bars, ASTM A 615, Grade 60.
4. Fabricated Bar Mats: Steel bar or rod mats, ASTM A 184, using ASTM A 615, Grade 60 steel bars.
5. Joint Dowel Bars: Plain steel bars, ASTM A 615, Grade 60.
6. Hook Bolts: ASTM A 307, Grade A threaded bolts.
7. Liquid-Membrane Forming and Sealing Curing Compound: ASTM C 309, Type I, Class A.
8. Bonding Compound: Polyvinyl acetate or acrylic base.
9. Epoxy Adhesive: ASTM C 881.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.
2. Construction Tolerance: 1/8 inch in 10 feet for grade and alignment of top of forms; 1/4 inch in 10 feet for vertical face on longitudinal axis.

SECTION 02770 - CURBS AND GUTTERS

Summary:

1. Provide granite curbs.

Submittals:

1. Submit product data.

Products:

1. Granite:
 - a. Vertical Granite Curb: Sawed top and smooth quarry split face.
 - b. Sloped Granite Curb: Smooth quarry split face.
2. Joints: Mortar, color to match curbing.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.
2. Construction Tolerance: 1/8 inch in 10 feet for grade and alignment; 1/4 inch in 10 feet for vertical or sloped face on longitudinal axis.

SECTION 02800 - SITE IMPROVEMENTS AND AMENITIES

Summary:

1. Provide site improvements and furnishings.

Submittals:

1. Submit product data, samples, shop drawings, maintenance data.

Products:

1. Fencing: Wood stockade, design approved by owner.
2. Timber Retaining Walls: Pressure treated southern yellow pine.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.

SECTION 02810 - IRRIGATION SYSTEMS

Summary:

1. Provide irrigation system pipe, fittings, valves, sprinklers, and automatic controls.
2. Provide hydrostatic test of irrigation systems at 100 psi.

Submittals:

1. Submit product data, shop drawings, warranty, maintenance data.

Products:

1. Pressure Piping Aboveground: Copper tube, Type L.
2. Pressure Piping Aboveground: PVC, ASTM D 1785.
3. Pressure Piping Underground: Copper tube, Type L.
4. Pressure Piping Underground: PVC, ASTM D1785, Schedule 80.
5. Pressure Piping Underground: PVC, ASTM D 2441, SDR 17 pipe, ASTM D 2467 Schedule 80.
6. Circuit Piping: Copper tube, Type L.
7. Circuit Piping: Copper tube, Type M.
8. Circuit Piping: PVC, ASTM D 1785, Schedule 80.
9. Circuit Piping: PVC, ASTM D 1785, Schedule 40 pipe.
10. Circuit Piping: PVC, ASTM D 2241, SDR 17 pipe.
11. Circuit Piping: PVC plastic, ASTM D 2241, SDR 17 02 21.
12. Branches and Offsets at Sprinklers and Devices: PVC plastic, ASTM D 1785, Schedule 80 pipe with threaded ends; ASTM D 2464, Schedule 80, PVC plastic threaded fittings; threaded joints.
13. Drain Piping: Copper tube, Type M.
14. Drain Piping: PVC, ASTM D 1785, Schedule 40 pipe.
15. Drain Piping: PVC plastic, ASTM D 2241, SDR 21 02 26.
16. Sleeves: PVC, ASTM D 1785, Schedule 80 pipe.
17. Sleeves: PVC, ASTM D 1785, Schedule 40.
18. Valves with Cast Bronze Bodies:
 - a. Manual Circuit Valves: Globe valves.
 - b. Key Operated Valves: Manual valves fitted for key operation.
 - c. Automatic Circuit Valves: Globe valves solenoid operated.
 - d. Automatic Drain Valves: Automatic opening when pressure below 3 psi.
19. Backflow Preventer: Cast bronze.
20. Sprinklers: Flush, bubbler, shrubbery, and pop-up types as applicable.
21. Valve Box: Precast concrete.
22. Valve Cover and Frame: Cast iron, lockable.
23. Automatic Control System:
 - a. Exterior control enclosure.
 - b. Interior control enclosure.
 - c. Low voltage transformer.
 - d. Circuit control.
 - e. Timing device.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.

SECTION 02820 - FENCES AND GATES

Summary:

1. Provide chain link fence and gates.

Submittals:

1. Submit product data.

Products:

1. Steel Chain-Link Fence Fabric:
 - a. Mesh and Wire Size: 2 inch 6 gage
 - b. Mesh and Wire Size: 2 inch 9 gage
 - c. Mesh and Wire Size: 1-3/4 inch 11 gage
 - d. Mesh and Wire Size: 3/8 inch 11 gage mesh.
 - e. Coating: Aluminized
 - f. Coating: Galvanized
 - g. Coating: PVC coating.
2. Aluminum Alloy Fabric: 2 inch 6 gage
3. 2 inch 9 gage
4. 1-3/4 inch 9 gage
5. 1 inch 9 gage mesh.
6. Framework: Galvanized steel
7. Framework: Polymer coated steel
8. Framework: Aluminum.
9. Gates: Swinging type.
10. Gates: Overhead mounted sliding type.
11. Gates: Cantilevered sliding type.
12. Framing and Fittings: Posts, rails, tension wire, privacy slats and accessories.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.
2. Comply with ASTM F 567.

SECTION 02900 - PLANTING

Summary:

1. Provide Landscape Work:
 - a. Trees, shrubs, plants, and ground cover.
 - b. Finish grading and lawns.
 - c. Topsoil and soil amendments.
 - d. Initial maintenance of landscape materials.
 - e. Pruning and relocation of existing plant materials.
 - f. Reconditioning existing lawns.
2. Provide balled and burlapped plants and trees graded to American Standard for Nursery Stock, ANSI Z60.1.
3. Provide laboratory testing for suitable soil amendments and fertilizer.

Submittals:

1. Submit product data, warranty, maintenance data.

Products:

1. Refer to Section 01020 - Allowances.
2. Plant Materials:
 - a. Deciduous trees.
 - b. Deciduous shrubs.
 - c. Coniferous and broadleafed evergreen trees and shrubs.
 - d. Ground cover.
 - e. Plants.
3. Seeded Lawns: Seed, new crop seed mixture.

4. Sodded Lawns: Sod, strongly rooted, 2 years old.
5. Topsoil: Fertile, friable topsoil from site stockpile with additional fertile, friable topsoil from local source.
6. Soil Amendments: Based on laboratory recommendations.
7. Landscape Materials:
 - a. Gravel: Water-worn gravel.
 - b. Mulch: Shredded bark.
 - c. Anti-Erosion Mulch: Seed-free salt hay or threshed straw.
 - d. Anti-Desiccant: Emulsion type, film-forming.
 - e. Plastic Sheet: Black polyethylene, 8 mils.
 - f. Filtration Fabric: Water permeable fiberglass or polypropylene fabric.
 - g. Wrapping: Tree-wrap tape.
 - h. Stakes and Guys: New hardwood, treated softwood, or redwood.
 - i. Metal Edging: Commercial steel edging.
 - j. Wood Headers and Edging: All heart redwood or pressure treated southern yellow pine.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.

END OF DIVISION 2