

PREFACE

Codes and Standards: Unless otherwise indicated work and materials shall conform to the latest edition of the following codes and standards and any and all requirements of authorities having jurisdiction: Commonwealth of Massachusetts State Building Code; National Fire Protection Association (NFPA) 70, National Electrical Code; and Commonwealth of MassDOT Highway Division (MHD), "Standard Specifications for Highways and Bridges".

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

Document 000115 - List of Drawings

1. The List of Drawings, dated 08/31/2023, is as follows:

SURVEY

S0.0 Overall Site Survey (2017)
S1.0 Project Area Survey

LANDSCAPE

L1.0 Site Demolition and Prep Plan
L2.0 Layout and Materials and Grading Plan
L3.0 Site Details

SPECIFICATIONS

DIVISION 01 - GENERAL REQUIREMENTS

Section 011000 - Summary of Work

- A. Abbreviated Written Summary: The work of the Contract can be summarized by reference to the Contract Documents. Work of this Contract includes the coordination of the entire work indicated by the Contract Documents. Work of the Contract is also unavoidably affected or influenced by governing regulations, natural phenomenon including weather conditions, and other forces outside the Contract Documents. Briefly, without limitation the work can be summarized as follows:

1. Work to be completed:

Demolition of all materials as indicated on the drawings, protection and salvage of features as indicated on the drawings, all grading to subgrade of paved areas, installation of base and subbase materials, granite paving, and peagravel paving. Contractors to include an allowance of repairs to existing sill at building entry.

Repair of any site features, including lawns and grasses, that are disturbed during construction.

2. Coordination of the Contract includes, without limitation, full coordination and cooperation with local utility companies. The Owner shall pay all charges and fees related to temporary and permanent utility services.

Section 012100 - Allowances

1. This section specifies administrative and procedural requirements required for handling and processing allowances.
2. Types of allowances specified include:
 - a. Lump Sum allowances.
3. At Landscape Architect's request, obtain proposals for each allowance for use in making final selections. Include recommendations that are relevant to performing the Work.
5. Purchase products and systems selected by Landscape Architect.
6. Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.
7. Allowance shall include cost to Contractor of specific products and materials ordered by Owner under allowance and shall include taxes, freight, and delivery to Project site.
 - a. Contractor's costs for receiving and handling at Project site, labor, installation, overhead and profit, and similar costs related to products and materials ordered by Owner under allowance shall be included as part of the Contract Sum and not part of the allowance.
10. **Allowance No. 1:** Allow \$3,000.00 for the repair of the building sill and flooring.

Section 012200 – Unit Prices

1. This Section covers those items for which indefinite quantities can be expected and, therefore, pre-agreed prices per unit of work are established as means to determine adjustments to the Contract Price after actual quantities are determined.
2. Change Order amount for each unit cost item will be based on actual quantities multiplied by the unit cost. This unit cost includes all mark-ups applicable taxes, overhead, and profit as described below.
3. Should certain additional work be required, or should the quantities of certain classes of work be increased or decreased from those required by the Contract Documents, by authorization of the Owner, the below unit prices shall, at the option of the Owner, be the basis of payment to the Contractor or credit to the Owner, for such increase or decrease in the work. The Unit Prices shall represent the exact net amount per unit to be paid the Contractor (in the case of additions or increases) or to be refunded the Owner (in the case of decreases). No additional adjustment will be allowed for overhead, profit, insurance, or other direct or indirect expenses of the Contractor or Subcontractors. No additional adjustments will be allowed for over excavation, or other work without the prior written approval of the Owner.

<u>Unit</u>	<u>Add</u>	<u>Deduct</u>
1. (1) square foot of 2" Granite Paving on gravel base.	\$ _____	\$ _____
2. (1) square foot of decorative gravel for trench	\$ _____	

4. The above unit prices shall include all labor, materials, dewatering, shoring, removal, overhead, profit, insurance, etc., to cover the finished work of the several kinds called for. Changes in the Work shall be processed in accordance with the provisions of the Document 00500, AGREEMENT governing Changes in the Work and Section 012600, CONTRACT MODIFICATION PROCEDURES.

Section 012600 – Contract Modification Procedures

1. This Section specifies administrative and procedural requirements required for handling Change Orders including, but not limited to:
 - a. Preliminary procedures.
 - b. Documentation of proposals and claims.
 - c. Preparation of Change Orders.
2. Change Order, AIA Document G701.
3. Definitions:
 - a. Construction Change Authorization, AIA Document G713: A written order to the Contractor, signed by Owner and Landscape Architect which amends the Contract Documents as described, and authorizes Contractor to proceed with a change which affects the Contract Sum or the Contract Time, for inclusion in a subsequent Change Order.
 - b. Landscape Architect's Supplemental Instructions, AIA Document G710: A written order, instructions, or interpretations, signed by Landscape Architect making minor changes in the Work not involving a change in Contract Sum or Contract Time.
 - c. Proposal Request, AIA Document G709: A request to the Contractor, signed by the Landscape Architect, for submission of an itemized quotation for changes in the Contract Sum or Contract Time. This is not a Change Order or a direction to proceed with the Work.
 1. Comply with requirements indicated in Document 005210, Agreement Form (AIA Document A107, Abbreviated Standard Form of Agreement Between Owner and Contractor for Construction Projects of Limited Scope), regarding administrative and procedural requirements required for handling Change Orders.

Section 013300 – Submittal Procedures

1. Required Submittals: Submit shop drawings, product data, verification samples, calculations, coordination drawings, schedules, and all other submittals as specified for each part of the work.
2. Submittal Schedule: Within 14 days after award of contract and before first application for payment, prepare list of submittals in chronological sequence showing all submittals and proposed date first due at Landscape Architect's office and proposed date due to be returned to Contractor. Note relevant specification section numbers and contract drawing references on submittal schedule. Allow proper time for reviewing each submission and time for resubmission, if needed.
 - a. Delays: Delays in the work due to improper submittal scheduling or incomplete or improper submission is not justification for an extension of Contract Time.
3. Contractor's Preparation of Submittals: Modify and customize all submittals to show interface and coordination with adjacent work, all dimensions, and actual field conditions. Identify each

- submittal with name of project, date of organization. Contractor's name, subcontractor's name, manufacturer's name, fabricator's name, submittal name, relevant specification section numbers, and individual Submittal Schedule reference number. use the reference number exclusively in communications about submittals. Clearly note and fully describe all qualifications and all deviations from the requirements of the Contractor Documents. Stamp, date, and sign each submittal to show the Contractor's review and approval of each submittal before delivery to Landscape Architect's office; unstamped, undated, or unsigned submittals will be returned without action by the Landscape Architect. Leave 4" x 6" open space for Landscape Architect's "action" stamp.
4. **Product Data:** Provide manufacturer's preprinted literature including, without limitation, manufacturer's standard printed description of product, materials and construction, recommendations for application and use, certification of compliance with standards, instructions for installation, and special coordination requirements. Collect data into one submittal for each unit of work or system; clearly mark each copy with ink to show which choices and options are applicable to project.
 - a. **Submittal Quantities:** Submit at least 1 reproducible copy to the Landscape Architect. Provide, reproduce, and distribute additional copies as needed.
 - b. **Installer Copy:** Verify that the Installer has a current copy of the relevant product data, including installation instruction, before permitting installation to begin.
 5. **Samples:** Provide at least two sample units for each sample submission. Sample units shall be identical to final materials and products installed in the work and shall clearly show the complete and full range of finish, color, texture, and appearance variations expected; work in the field which falls outside the accepted range shown by the samples will be rejected. Where indicated, prepare samples to match Landscape Architect's sample. Label each sample with description, source, material name or manufacturer's name and model number. Landscape Architect will review samples for confirmation of visual design intent, color pattern, texture and type only; Landscape Architect will not test samples for compliance with other Contract requirements which shall remain the exclusive responsibility of the Contractor.
 - a. **Initial Selection Samples submittal Quantities:** For initial selection purposes, submit 1 set of samples showing the complete range of colors and finishes available.
 - b. **Verification Samples Submittal Quantities:** For verifications of an initial selection, submit 3 sets of samples; one set will be returned to Contractor to be maintained at project site for quality control comparisons. Discard rejected samples; do not store at the site.
 - c. **Additional Samples:** The Owner and Landscape Architect reserve the right to require additional samples or samples not listed in the Contract Documents. Provide these samples as indicated for specified samples.
 6. **Timing of Submittals:** Issue submittals in a timely fashion to allow at least 10 business days for review and handling by Landscape Architect.
 - a. **Testing:** Allow adequate time for testing and, if necessary, re-testing.
 7. **Landscape Architect's Action on Submittals:** Landscape Architect will review submittals, stamp with "action stamp," mark action, and return to Contractor. Landscape Architect will review submittals only for conformance with the design concept of the project. The Contractor is responsible for confirming compliance with other Contract requirements, including without limitation, performance requirements, field dimensions, fabrication methods, means, methods, techniques, sequences, procedures of construction and coordination with other work. The Landscape Architect's review and approval of submittals shall be held to the limitations stated in the Owner/ Landscape Architect Agreement and the General and Supplementary Conditions of the Contract for Construction. In no case shall approval or acceptance by the Landscape

Architect be interpreted as a release of Contractor of his responsibilities to fulfill all of the requirements of the Contract Documents.

Section 014500 – Quality Control

1. The Owner reserves the right to engage an independent testing laboratory to perform inspection and testing of materials and construction.
 - a. Contractor shall cooperate with the laboratory to facilitate the execution of its services.
 - b. Employment of the laboratory shall in no way relieve Contractor's obligations to perform the Work of the Contract.
2. Contractor's Inspections, sampling, and testing of materials and construction methods shall be as specified in individual technical specification sections.
 - a. Comply with specified standards, ASTM, ANSI, and other recognized authorities.
 - b. Conduct and interpret the tests and state in each report whether the test specimens comply with the requirements, and specifically state any deviations therefrom.
 - c. Obtain Contractor's written acknowledgment of each inspection, sampling, and test made.
3. Promptly notify Landscape Architect and Contractor of irregularities or deficiencies of Work or Products which are observed during performance of services.

Section 015000 – Temporary Facilities and Controls

1. Permits and Fees: Obtain all permits, fees, and charges related to temporary work. Owner to pay for permits.
2. Codes and Authorities Having Jurisdiction: Comply with all requirements of authorities having jurisdiction, codes, utility companies, OSHA, and industry standards.
3. Field: Keep current copies of all Contract Documents and project paperwork neatly on file at jobsite.
4. Toilet Facilities: Use of permanent facilities within buildings is permitted.
5. Equipment and Tools: Provide and maintain all equipment as needed for proper and safe execution of the work. Provide safe access to all parts of the work for review, inspection, and observation.
6. Protection: Protect the work and all nearby people and property. Provide and maintain barricades, warning signs and lights, railings, walkways, and the like. Immediately repair damaged property to its condition before being damaged.
7. Water: Provide all connections, piping, hoses, fittings, water barrels, and other temporary facilities needed. Do not waste.
8. Fire Prevention and Protection: Take every possible precaution to prevent fire. Arrange for periodic inspections by the local fire department and insurance underwriters, and abide by their instruction and recommendations.

9. Utilities: Notify utility companies at least 48 hours in advance and locate utilities prior to any digging, cutting, or work on utility lines. Utilities are shown at approximate locations; determine exact locations in the field. Protect and maintain all utilities and be responsible for all damage or injury resulting from work on or near utilities. If uncharted utilities are discovered, protect and maintain such utilities and notify the utility Owner, and Landscape Architect immediately. If unknown utilities are inadvertently damaged, take action as reasonably required to minimize the damage and restore the system to proper working order. Provide temporary utilities as needed. Cap, valve, or plug and seal ends of abandoned utilities to prevent entrance of moisture or other foreign matter.

Section 015690 – Tree and Plant Protection

1. Existing trees and shrubs which are indicated on the Drawings to remain shall be suitably protected during the life of the Contract. Such trees which are injured due to the Contractor's operations, shall be assessed by the Landscape Architect and Owner in accordance with the ISA Guide.
2. Materials and equipment shall not be stored or operated under the branches of existing trees which are to remain, except as actually required to construct the proposed work in those areas.
3. Suitable barricades, fences, or other barriers shall be provided at the drip line to protect existing trees from damage during construction.
4. Existing trees indicated to remain and which may, in the Landscape Architect's opinion, be damaged by the Contractor's equipment and operations shall be protected by:
 - a. Wire bound woodroll snow fence 4 ft. high minimum, with 3/8 in. x 1-1/2 in. wide pickets, spaced approximately 2 in. apart bound together with at least 13 gage galvanized steel wire. Alternatives to be approved by Landscape Architect.
 - b. Limits of proposed fence protection shall be reviewed and approved by Landscape Architect prior to tree protection fence installation.

Section 016000 – Product Requirements

1. Manufacturers: To the greatest degree possible, provide primary materials and products from one manufacturer for each type or kind. Provide secondary materials as recommended by manufacturers of primary materials.
2. Substitution Requests: Submit 3 copies. Identify product to be replaced by substitute by reference to specification sections and drawing numbers. Provide Contractor's certification and evidence to prove compliance with Contract Document requirements.
3. Substitution Conditions: Substitution requests will be returned without action unless one of the following conditions is satisfied. the Contractor shall state which of the following conditions applies to the requested substitution:
 - a. Request is due to an "or equal" clause.
 - b. Specified material or product cannot be coordinated with other work.
 - c. Specified material or product is not acceptable to authorities having jurisdictions.
 - d. Substantial advantage is offered to the Owner in terms of cost, time, or other valuable consideration.

4. Invalid Substitutions: Contractor's submittal and Landscape Architect's acceptance of shop drawings, samples, product data or other submittal is not a valid request for, nor an approval of a substitution unless the Contractor presents the information when first submitted as a Request for Substitution.

Section 017700 – Closeout Procedures

1. Complete the following prior to Substantial Completion:
 - a. Provide Contractor's Punch List of incomplete items stating reason for incompleteness and value of completion.
 - b. Submit all warranties, maintenance contracts, final certificates, and similar documents.
 - c. Obtain Certificate of Occupancy and similar releases which permit the Owner's full and unrestricted use of the areas claimed "Substantially Complete."
 - d. Submit record documents.
 - e. Deliver maintenance stocks of materials (where specified).
 - f. Complete final clean-up of all work.
 - g. Complete restoration of damaged finishes.
 - h. Remove all remaining temporary facilities that are no longer needed and surplus materials.
 - i. Request Landscape Architect's inspection for Substantial Completion.
2. Landscape Architect will either issue a Certificate of Substantial Completion or notify Contractor of additional work which must be performed prior to issue of certificate. The Contractor shall distribute copies of the revised Punch List and make reasonable efforts to ensure that items are completed or corrected within 30 days from the date of the revised Punch List or within the Contract Time, whichever is less.
3. Complete the following prior to Final Acceptance and payment:
 - a. Obtain Certificate of Substantial Completion.
 - b. Submit final application for payment, showing final accounting of changes in the work.
 - c. Submit certified copy of final punch list stating that Contractor has completed or corrected each item.
 - d. Submit evidence of Contractor's continuing insurance coverage (if required by Contract Documents).
 - e. Clean the work.

DIVISION 02 – EXISTING CONDITIONS

Section 024113 – Selective Site Demolition and Removals

1. Existing site features indicated on the Drawings to be demolished, shall be demolished and removed off-site and legally disposed of.
2. Remove from site, contaminated, vermin infested, or dangerous materials encountered and disposed of by safe means so as not endanger health of workers and public.
3. Backfill areas excavated as a result of demolition. Use backfill material specified in Section 312300, SITE EXCAVATING, BACKFILLING AND COMPACTING.

DIVISION 03 – 30

Not Used

DIVISION 31 - EARTHWORKSection 312300 – Site Excavating, Backfilling and Compacting

1. Provide all equipment and materials, and do all work necessary for site excavating, backfilling, and compacting, as indicated on the Drawings and as specified. The work shall be executed in such manner as to prevent any damage to adjacent property and any other property and existing improvements such as, but not limited to: streets, curbs, paving, utility lines and structures, monuments, bench marks and other public and private property. The work of this section shall include, but is not necessarily limited to the following:
 - a. Site excavation, filling, and grading.
 - b. Preparation of subgrade for slabs, pavements, and landscaping.
2. Perform field density tests in accordance with ASTM D 1556 or D 3017.
 - a. Make at least one field density test of the subgrade for every 200 sq. ft. of paved area, but in no case less than two tests.
 - b. In each compacted fill layer, make one field density test for every 200 sq. ft. of overlaying paved areas, but in no case less than two tests.
3. Uniformly grade areas within the limits of site grading under this section, including adjacent transition areas. Smooth finished surfaces within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.
 - a. Contractor shall work with Landscape Architect in the field to determine the final grades. Contractor shall plan to be available to work with Landscape Architect in order to achieve the desired results.
4. Place backfill and fill soil materials in layers not more than [8 inches (200 mm)] in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches (100 mm) in loose depth for material compacted by hand-operated tampers.
 - a. Place backfill and fill soil materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
5. Compact soil materials to not less than the following percentages of maximum dry density according to ASTM D 1557:
 - a. Under structures, building slabs, steps, and pavements, scarify and recompact top 12 inches (300 mm) of existing subgrade and each layer of backfill or fill soil material at 95 percent.
 - b. Under walkways, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at 95 percent.
 - c. Under lawn or unpaved areas, scarify and recompact top 6 inches (150 mm) below subgrade and compact each layer of backfill or fill soil material at [85] <Insert percentage> percent.
6. The degree of finish required will be that ordinarily obtainable from either blade-grader or scraper operations.

7. Pavements: Shape the surface of the areas under pavement to line, grade and cross-section, with the finish surface not more than 1/2 in. above or below the required subgrade elevation, compacted as specified, and graded to prevent ponding of water after rains. Include such operations as plowing, discing, and any moisture or aerating required to provide the optimum moisture content for compaction. Fill low areas resulting from removal of unsatisfactory soil materials, obstructions, and other deleterious materials, using satisfactory soil material. Shape to line, grade, and cross-section as shown on the Drawings.
8. Fill materials shall not be placed when subgrade or fill materials are frozen, excessively wet, or excessively dry.
9. Protect newly graded areas from traffic and erosion. Keep free of trash and debris. Repair and re-establish grades in settled, eroded, and rutted areas to the specified tolerances.
10. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, re-shape, and compact to the required density prior to further construction.
11. Transport excess excavated material in accordance with Landscape Architect's direction.
12. Material which does not contain sufficient moisture to be compacted to the specified densities shall be moisture conditioned by sprinkling, disking, windrowing, or other method approved by the Landscape Architect.
 - a. Material conditioned by sprinkling shall have water added before compaction. Uniformly apply water to surface of subgrade or layer of soil material to obtain sufficient moisture content. The Contractor shall maintain sufficient hoses and/or water distributing equipment at the site for this purpose.

DIVISION 32 – EXTERIOR IMPROVEMENTS

Section 321440 - Granite Pavers

1. Granite pavers installed on a flexible setting bed. Joints between pavers shall be handtight filled with sand joint filler.
2. Test Report: Submit reports from tests conforming to ASTM C 67 methods indicating:
 - a. Compressive strength, psi. (ASTM C 170)
 - b. Density, lbs./c.f. (ASTM C 97)
 - c. Absorption by weight, % (ASTM C 97)
 - d. Abrasion resistance (ASTM C 241)
 - e. Flexural strength psi, (MPa) (ASTM C 880)
3. A sample panel, 4 ft. x 6 ft. minimum, shall be constructed prior to start of granite pavers exhibiting paver pattern, jointing, expansion joints and interface with adjacent paving and structures. The work will be inspected by the Landscape Architect. If the original sample panel is not acceptable, the Contractor shall construct additional sample panels until an accepted panel is obtained. The accepted panel shall become the standard for the entire job, and shall remain undisturbed until completion of all concrete unit paving.

4. Samples: Furnish five individual granite pavers as samples, showing extreme variations in color and texture.
5. Granite pavers shall be locally sourced and to match existing on site. Contractor to submit samples for selection of color and texture.
 - a. Pavers shall have the bottom and the long sides sawn and the end joints pitched. Top shall be thermal with no projection or depression exceeding 1/4 in.
 - b. Side and end joints shall be 3/8 in. max width.
 - c. Color, texture, and finish shall match the sample at the office of the Landscape Architect, and shall be as approved by the Landscape Architect from samples submitted by the Contractor prior to delivery.
6. Compacted Aggregate Course: Material for aggregate base course shall be a graded, granular, non-frost susceptible, free-draining material, consisting of either durable stone and coarse sand or of blast furnace slag, practically free from loam and clay, and which can be readily compacted to form a stable foundation.
 - a. Material shall conform to MHD Specifications Section M1.03.0, with less than 8% by weight passing the No. 200 sieve.
 - a. Base to be compacted to 95% density.
7. Stone dust for setting bed and for filling joints between pavers shall be stone dust of decomposed granite or trap rock conforming to the gradation requirements of AASHTO M 43, No. 10, or "stone dust" minus 1/4 in. screenings.
8. Sand shall be a clean, sharp, natural sand conforming to ASTM C 33, except that the fineness modulus shall be 2.25 ± 0.10 .

1. Gradation for setting bed sand shall be as follows:

<u>Sieve Size</u>	<u>% Passing by Weight</u>
3/8 in.	100
No. 4	95 - 100
No. 8	80 - 100
No. 16	50 - 85
No. 50	10 - 30
No. 100	5 - 15
No. 200	0 - 10

9. Polymeric Joint Sand: Joint filler shall be polymeric joint sand, "TechniSeal Polymeric Joint Sand for Pavement Joints - HP", manufactured by TechniSeal, Inc., Boucherville, Canada J4B 7K2; Tel. 1-800-363-7560; "Alliance DP SuperSand Bond" Polymeric Sand, manufactured by Alliance Designer Products, Inc., Laval, Canada, H7L 6A1; Tel. 1-866-212-1611, or approved equal.
10. Aluminum edging shall be Sure-Loc A3622M, "L" shaped restraint. <https://surelocedging.com/> or approved equal
11. Surface tolerance shall be within 1/4 in. of required grade as measured with a 10 ft. straightedge in both the transverse and longitudinal directions.
12. Setting bed shall be protected from damage prior to setting pavers. Setting shall be done by competent workmen under adequate supervision, and in accordance with manufacturer's

recommendations. Pavers shall be placed on the setting bed, to true line and plane and in required position.

13. Pavers with chips, cracks, or other structural or aesthetic defects shall not be used.
14. Pavers shall be set true to the required lines and grades in the pattern detailed on the Drawings. Pavers shall be tightly butted. Joints between pavers shall be uniform and shall not exceed 1/8 in.
15. Where required, pavers shall be accurately cut with a masonry or concrete saw. Cut edges shall be plumb and straight. Scoring and breaking will not be acceptable.

END OF OUTLINE SPECIFICATION