

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: Addendum 04 - Narrative

Prepared by: Mario Lewis

Please find included under cover the following Addendum 04 documents.

- Updated Specifications
- Civil dwgs and specifications
- Updated Arch dwgs per BID RFI responses
- BID RFI Responses (Batch 04)

SECTION 00 01 10

TABLE OF CONTENTS

SECTIONS	PAGES
COVER & TABLE OF CONTENTS	
00 01 01 - PROJECT COVER	1
00 01 10 - TABLE OF CONTENTS	6
DIVISION 00 — PROCUREMENT AND CONTRACTING REQUIREMENTS	
00 01 03 - PROJECT DIRECTORY	1
00 01 07 - SEALS PAGE	1
00 11 13 - NOTICE TO CONTRACTORS	3
00 21 13 - INSTRUCTIONS TO BIDDERS	3
00 41 13 - CONTRACTOR BID FORM	2
00 43 13 - CONTRACTOR BID BOND - SAMPLES	2
00 43 16 - SUBCONTRACTOR BID BOND - SAMPLES	2
00 52 13 - CONTRACT AGREEMENT - SAMPLE	4
00 52 16 - SUBCONTRACT AGREEMENT - SAMPLE	4
00 61 13.13 - CONTRACTOR PERFORMANCE BOND - SAMPLE	2
00 61 13.16 - CONTRACTOR PAYMENT BOND - SAMPLE	2
00 71 00 - DEFINITIONS	6
00 72 13 - GENERAL CONDITIONS	22
00 73 46 - WAGE DETERMINATION SCHEDULE	2
00 73 46.13 - WAGE RATES - 2026 B2 CUMBERLAND COUNTY	1
DIVISION 01 — GENERAL REQUIREMENTS	
01 00 00 - GENERAL REQUIREMENTS	11
01 00 30 - ELECTRONIC MEDIA	3

01 23 00 - ALTERNATES	2
01 30 00 - ADMINISTRATIVE REQUIREMENTS	9
01 40 00 - QUALITY REQUIREMENTS	7
01 45 33 - CODE-REQUIRED SPECIAL INSPECTIONS AND PROCEDURES	3
01 45 34 - GENERAL STATEMENT OF SPECIAL INSPECTIONS - IBC 2021	5
01 50 00 - TEMPORARY FACILITIES	8
01 57 21 - INDOOR AIR QUALITY CONTROLS	2
01 60 00 - PRODUCT REQUIREMENTS	5
01 60 01 - CONTRACTOR SUBSTITUTE REQUEST FORM	1
01 61 15 - FASTENER REQUIREMENTS	2
01 71 00 - CUTTING AND PATCHING	4
01 74 19 - CONSTRUCTION WASTE MANAGEMENT	2
01 78 00 - PROJECT CLOSE-OUT	9
01 78 10 - WARRANTIES	2
DIVISION 02 — EXISTING CONDITIONS	
02 41 00 - SELECTIVE DEMOLITION	3
DIVISION 03 — CONCRETE	
03 05 16 - UNDERSLAB VAPOR BARRIER	2
03 30 00 - CAST-IN-PLACE CONCRETE	13
03 54 00 - CAST UNDERLAYMENT	3
DIVISION 05 — METALS	
05 12 00 - STRUCTURAL STEEL FRAMING	6
05 51 00 - METAL STAIRS AND RAILINGS	6
DIVISION 06 — WOOD, PLASTICS, AND COMPOSITES	
06 10 54 - WOOD BLOCKING AND CURBING	6

06 41 00 - ARCHITECTURAL WOOD CASEWORK	6
--	---

DIVISION 07 — THERMAL AND MOISTURE PROTECTION

07 21 00 - THERMAL INSULATION	4
-------------------------------------	---

07 54 23 - THERMOPLASTIC -POLYOLEFIN ROOFING (TPO)	11
--	----

07 81 00 - APPLIED FIRE PROTECTION	5
--	---

07 84 00 - FIRESTOPPING	11
-------------------------------	----

07 90 05 - JOINT SEALERS	8
--------------------------------	---

DIVISION 08 — OPENINGS

08 06 71 - DOOR HARDWARE SCHEDULE	6
---	---

08 11 13 - HOLLOW METAL DOORS AND FRAMES	7
--	---

08 31 00 - ACCESS DOORS AND PANELS	3
--	---

08 71 00 - DOOR HARDWARE	14
--------------------------------	----

08 80 00 - GLAZING	5
--------------------------	---

DIVISION 09 — FINISHES

09 05 61 - COMMON WORK RESULTS FOR FLOORING PREPARATION	4
---	---

09 21 16 - GYPSUM BOARD ASSEMBLIES	15
--	----

09 30 00 - TILING	7
-------------------------	---

09 51 00 - ACOUSTICAL CEILINGS	6
--------------------------------------	---

09 65 00 - RESILIENT FLOORING	7
-------------------------------------	---

09 68 13 - TILE CARPETING	3
---------------------------------	---

09 72 00 - WALL COVERINGS	3
---------------------------------	---

09 91 23 - INTERIOR PAINTING	8
------------------------------------	---

DIVISION 10 — SPECIALTIES

10 11 01 - VISUAL DISPLAY UNITS.....	3
--------------------------------------	---

10 14 24 - INTERIOR SIGNAGE	3
-----------------------------------	---

10 21 23 - CUBICLE CURTAINS AND TRACK	2
10 26 01 - WALL PROTECTION	3
10 28 00 - TOILET AND HEALTHCARE ACCESSORIES	3
10 44 00 - FIRE PROTECTION SPECIALTIES	3
DIVISION 11 — EQUIPMENT	
11 31 00 - APPLIANCES	1
DIVISION 12 — FURNISHINGS	
12 24 00 - WINDOW SHADES	4
12 36 00 - COUNTERTOPS	4
DIVISION 21 — FIRE SUPPRESSION	
21 10 00 – FACILITY WATER DISTRIBUTION PIPING	0
DIVISION 22 — PLUMBING	
22 11 13 – FACILITY WATER DISTRIBUTION PIPING	12
22 11 16 - DOMESTIC WATER PIPING	10
22 13 16 - PLUMBING SANITARY AND STORM PIPING	12
22 40 00 - PLUMBING FIXTURES	10
22 63 13 - GAS PIPING FOR LABORATORY AND HEALTHCARE FACILITIES	5
DIVISION 23 — HEATING VENTILATING AND AIR CONDITIONING	
23 05 00 - COMMON WORK RESULTS FOR MECHANICAL	27
23 05 93 - TESTING, ADJUSTING, AND BALANCING FOR HVAC	5
23 07 00 - MECHANICAL INSULATION	11
23 09 00 - DIRECT DIGITAL CONTROL (DDC) SYSTEM	31
23 09 93 - SEQUENCE OF OPERATIONS	19
23 23 00 - REFRIGERANT PIPING	9
23 31 13 - DUCTWORK	19

23 36 00 - AIR TERMINALS	4
23 37 13 - DIFFUSERS, REGISTERS, AND GRILLES	4
23 74 13 - ROOFTOP AIR CONDITIONERS	11
23 81 30 - DUCTLESS SPLIT-SYSTEM AIR-CONDITIONING UNITS	9
DIVISION 26 — ELECTRICAL	
26 01 00 - BASIC ELECTRICAL REQUIREMENTS	4
26 05 13 - MEDIUM-VOLTAGE CABLES	8
26 05 19 - LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES	7
26 05 26 - GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS	7
26 05 29 - HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS	5
26 05 33 - RECEWAYS AND BOXES FOR ELECTRICAL SYSTEMS	9
26 05 43 - UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS	30
26 05 44 - SLEEVES AND SLEEVE SEALS FOR ELECTRICAL RECEWAYS AND CABLING	4
26 05 48 - SEISMIC CONTROLS FOR ELECTRICAL SYSTEMS	6
26 05 53 - IDENTIFICATION FOR ELECTRICAL SYSTEMS	6
26 08 00 - COMMISSIONING OF ELECTRICAL SYSTEMS	7
26 09 23 - LIGHTING CONTROL DEVICES	5
26 12 19 - PAD-MOUNTED, LIQUID-FILLED, MEDIUM-VOLTAGE TRANSFORMERS	15
26 24 13 - SWITCHBOARDS	14
26 27 26 - WIRING DEVICES	13
26 28 13 - FUSES	3
26 28 16 - ENCLOSED SWITCHES AND CIRCUIT BREAKERS	7
26 29 13 - ENCLOSED CONTROLLERS	8
26 51 19 - LED INTERIOR LIGHTING	7
26 52 19 - EMERGENCY AND EXIT LIGHTING	9

26 56 00 - EXTERIOR LIGHTING	10
------------------------------------	----

DIVISION 27 — COMMUNICATIONS

27 11 00 - COMMUNICATIONS EQUIPMENT ROOM FITTINGS	6
---	---

DIVISION 28 — ELECTRONIC SAFETY AND SECURITY

28 05 13 - CONDUCTORS AND CABLES FOR ELECTRONIC SAFETY AND SECURITY	7
---	---

28 46 21.11 - ADDRESSABLE FIRE-ALARM SYSTEMS	26
--	----

DIVISION 31 — EARTHWORK

31 10 00 – SITE CLEARING	5
--------------------------------	---

31 20 00 – EARTH MOVING	18
-------------------------------	----

31 12 16 – SEDIMENTATION AND EROSION CONTROL	7
--	---

DIVISION 32 — EXTERIOR IMPROVEMENTS

32 12 16 – ASPHALT PAVING	8
---------------------------------	---

DIVISION 33 — UTILITIES

33 00 00 – UTILITY AS-BUILT DOCUMENTATION	4
---	---

APPENDIX

APPENDIX A - DOC STANDARD TERMS AND CONDITIONS.....	53
---	----

APPENDIX B - INSTRUCTIONS FOR SUBMITTING BABAA CERTIFICATIONS.....	2
--	---

00 11 13
Notice to Contractors

SMCC - Health Science Center Renovations

BGS #3809

Renovation of SMCC Health Science Center including a new simulation lab on the ground floor, classrooms and laboratory on the second floor, and miscellaneous renovations/alterations on all levels. Renovation includes a new fire protection system in accordance with NFPA 13 and other MEP renovations.

The contract shall designate the Substantial Completion Date on or before *2 April 2027*, and the Contract Final Completion Date on or before *2 May 2027*.

1. Submit bids on a completed Contractor Bid Form (section 00 41 13), provided in the Bid Documents, include bid security when required, and scan each item as an attachment to an email addressed to: BGS.Architect@Maine.gov, so as to be received no later than **1:30:00 p.m. on 06 August 2026**. The email subject line shall be marked "**Bid for SMCC - Health Science Center Renovations**".

Bid submissions will be opened and read aloud at **2:00 p.m.** on the date noted above at the Bureau of General Services office, accessible as a video conference call. Those who wish to participate in the call must submit a request for access to BGS.Architect@Maine.gov.

Any bid received after the noted time will not be considered a valid bid and will remain unopened. Any bid submitted by any other means will not be considered a valid bid. In certain circumstances, the Bureau of General Services may require the Bidder to surrender a valid paper copy of the bid form or the bid security document. The Owner reserves the right to accept or reject any or all bids as may best serve the interest of the Owner.

2. Questions and comments on the *bid opening process* shall be addressed to: Division of Planning, Design & Construction, Bureau of General Services, 77 State House Station, Augusta, Maine 04333-0077, BGS.Architect@Maine.gov.
3. Questions and comments regarding the *project* design specifications or drawings shall be directed in writing to the Consultant during the bid period prior to the question and comment deadline of 5:00 p.m. on *29 July 2026*.

Lavallee Brensinger Architects
Ben Patane
Ben.Patane@lbpa.com

4. ☒ Bid security is required on this project.
The Bidder shall include a satisfactory Bid Bond (section 00 43 13) or a certified or cashier's check for 5% of the bid amount with the completed bid form submitted to the Owner. The Bid Bond form is available on the BGS website.
or
☐ Bid security is not required on this project.

00 11 13
Notice to Contractors

5. ☒ Performance and Payment Bonds are required on this project.
If noted above as required, or if any combination of Base Bid and Alternate Bids amounts selected in the award of the contract exceeds \$125,000.00, the selected Contractor shall furnish a 100% contract Performance Bond (section 00 61 13.13) and a 100% contract Payment Bond (section 00 61 13.16) in the contract amount to cover the execution of the Work. Bond forms are available on the BGS website.
or
☐ Performance and Payment Bonds are not required on this project.
6. Filed Sub-bids *are not required* on this project.
7. ☐ Pre-qualified General Contractors are utilized on this project.
or
☒ Pre-qualified General Contractors are not utilized on this project.
8. ☒ An on-site pre-bid conference (☒ *mandatory* or ☐ *optional*) will be conducted for this project. The pre-bid conference is intended for General Contractors. Subcontractors and suppliers are welcome to attend. Contractors who arrive late or leave early for a mandatory meeting may be prohibited from participating in this meeting and bidding.
26 May 2026 at 2PM
79 Fort Road
South Portland, ME 04106
or
☐ An on-site pre-bid conference will not be conducted for this project.
9. Bid Documents - full sets only - will be available on or about *22 May 2026* and may be obtained *at market cost* from:
Xpress Copy
17 Westfield Street
Portland, ME 04102
(207) 775-2444, orders@xcopy.com
10. Bid Documents may be examined at:
AGC Maine
188 Whitten Road, Augusta, ME 04330
207-622-4741
Construction Summary
734 Chestnut Street, Manchester, NH 03104
603-627-8856

SECTION 22 11 13
FACILITY WATER DISTRIBUTION PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Local water utility regulations and standards, latest edition.

1.2 SUMMARY

- A. This Section includes water-distribution piping and related components outside the building for fire-service mains.
- B. This Section does not include tapping of utility company water main. Verify requirements with utility company.

1.3 DEFINITIONS

- A. Combined Water Service and Fire Service Main: Exterior water piping for both domestic water and fire-suppression piping.
- B. DI: Ductile-iron.
- C. Fire Service Main: Exterior fire-suppression water piping.
- D. Fire-Suppression Water Piping: Interior fire-suppression water piping.
- E. LLDPE: Linear, low-density polyethylene plastic.
- F. PVC: Polyvinyl chloride plastic.
- G. Water Distribution Piping: Interior domestic water piping.
- H. Water Service: Exterior domestic water piping.

1.4 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Piping specialties.
 - 2. Valves and accessories.
 - 3. Pipe (including pipe material class, cement lining, etc.).
 - 4. Fittings.

5. Retainer glands.
6. Warning tape.
7. Pipe encasement.
8. Bituminous coating.
9. Tie-rods.
10. Mid-span restraints.

1.5 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: For piping and specialties including relation to other services in same area, drawn to scale. Show piping and specialty sizes and valves, meter and specialty locations, and elevations.
- B. Test Reports:
 1. Hydrostatic test.
 2. Flushing and disinfection.
- C. The contractor shall provide progress as-built drawings on a monthly basis.

1.6 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For water valves and specialties to include in emergency, operation, and maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Product Options: Drawings indicating size, profiles, and dimensional requirements of piping and specialties are based on the specific system indicated. Refer to Division 01.
- B. Regulatory Requirements:
 1. Comply with requirements of utility company supplying water. Include tapping of water mains and backflow prevention.
 2. Comply with standards of authorities having jurisdiction for potable-water-service piping, including materials, installation, testing, and disinfection.
 3. Comply with standards of authorities having jurisdiction for fire-suppression water-service piping, including materials, hose threads, installation, and testing.
- C. Piping materials shall bear label, stamp, or other markings of specified testing agency.
- D. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- E. Comply with FMG's "Approval Guide" or UL's "Fire Protection Equipment Directory" for fire-service-main products.

- F. NFPA Compliance: Comply with NFPA 24 for materials, installations, tests, flushing, and valve and hydrant supervision for fire-service-main piping for fire suppression and combined water service and fire mains.
- G. NSF Compliance:
 - 1. Comply with NSF 61 Annex G for materials for water-service piping and specialties for domestic water.
- H. Listing and Labeling Agency Qualifications: A "Nationally Recognized Testing Laboratory" as defined in OSHA Regulation 1910.7.
- I. Piping shall be manufactured in the United States of America.
- J. Work can be performed only by a contractor holding a valid license in the state where the work is installed.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Preparation for Transport: Prepare valves, including fire hydrants, according to the following:
 - 1. Ensure that valves are dry and internally protected against rust and corrosion.
 - 2. Protect valves against damage to threaded ends and flange faces.
 - 3. Set valves in best position for handling. Set valves closed to prevent rattling.
- B. During Storage: Use precautions for valves, including fire hydrants, according to the following:
 - 1. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
 - 2. Protect from weather. Store indoors and maintain temperature higher than ambient dew-point temperature. Support off the ground or pavement in watertight enclosures when outdoor storage is necessary.
- C. Handling: Use sling to handle valves if size requires handling by crane or lift. Rig valves to avoid damage to exposed parts. Do not use handwheels or stems as lifting or rigging points.
- D. Deliver piping with factory-applied end caps. Maintain end caps through shipping, storage, and handling to prevent pipe-end damage and to prevent entrance of dirt, debris, and moisture.
- E. Protect stored piping from moisture and dirt. Elevate above grade. Do not exceed structural capacity of floor when storing inside.
- F. Protect flanges, fittings, and specialties from moisture and dirt.

1.9 PROJECT CONDITIONS

- A. Perform site survey, research public records, and verify existing utility locations. Contact utility locating service for area where project is located.

- B. Interruption of Existing Water-Distribution Service: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary water-distribution service according to requirements indicated:

- 1. Do not proceed with interruption of water-distribution service without Architect's and Owner's written permission.

1.10 COORDINATION

- A. Coordinate connection to water main with utility company and College.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

- A. Comply with requirements in Part 3 articles where materials shall be applied.

2.2 PIPING MATERIALS

- A. Comply with requirements in "Piping Application" Article for applications of pipe, tube, fitting materials, and joining methods for specific services, service locations, and pipe sizes.
- B. Potable-water piping and components shall comply with NSF 14, NSF 61, and NSF 372. Include marking "NSF-pw" on piping.

2.3 DUCTILE-IRON PIPE AND FITTINGS

- A. Push-on-Joint, Ductile-Iron Pipe: AWWA C151, Class 52 minimum, double cement-lined with push-on-joint bell and plain spigot end unless grooved or flanged ends are indicated. Piping shall be UL listed and/or FM approved for combined water/fire service and fire service mains. All pipe shall be coated inside and outside with an approved bituminous material in accordance with AWWA C104 and AWWA C151.
 - 1. Mechanical-Joint, Ductile-Iron Fittings: AWWA C110, ductile-iron standard pattern, double-cement lined and coated inside and outside with an approved bituminous material in accordance with AWWA C104 and AWWA C110.
 - 2. Glands, Gaskets, and Bolts: AWWA C111, ductile-iron glands, rubber gaskets, and Type 316 stainless steel bolts. Gasket shall be of styrene butadiene rubber (SBR).
 - 3. All joints shall be furnished with ductile-iron retainer glands, including push-on joints.
- B. Flanges: ASME 16.1, cast iron. Class to match pipe class rating.
- C. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. U.S. Pipe and Foundry Co.
 - 2. McWane Ductile Iron.
 - 3. American Cast Iron Pipe Company.

2.4 JOINING MATERIALS

A. Retainer Glands:

1. The joint restraint ring and its wedging components shall be of Grade 65-45-12 ductile-iron conforming to ASTM A536. The wedges shall be ductile-iron heat treated to a minimum hardness of 370 BHN. The device shall be UL listed and FM approved, and shall be rated for 350 psig working pressure. The device shall be manufactured in the United States of America.
2. Restrained Joints, Mechanical Joint Systems: Provide one of the following:
 - a. Series 1100 Megalug by EBAA Iron, Inc.
 - b. Series 1400 Uni-Flange by Ford Meter Box Company.
 - c. Series 3000 Stargrip by Star Pipe Products.
3. Restrained Joints, Push-On Joint Systems: Provide one of the following:
 - a. Series 1700 Megalug by EBAA Iron, Inc.
 - b. Series 1450 Uni-Flange by Ford Meter Box Company.
 - c. Series 3100P Stargrip by Star Pipe Products.
4. Restrained Joints, Mid Span Restraint Systems: Provide one of the following:
 - a. Series 1100 SDB Megalug by EBAA Iron, Inc.
 - b. Series 1495 Uni-Flange by Ford Meter Box Company.
 - c. Series 3000S Stargrip by Star Pipe Products.

B. Tie-Rods:

1. 3/4" diameter Type 316 stainless steel threaded rods and Type 316 stainless steel nuts and washers.

C. Ductile Lugs:

1. Ductile-iron lug applicable for use with restrained joint piping systems. Ductile-iron per ASTM A536, Grade 65-45-12.

2.5 PIPING SPECIALTIES

- ### A. Transition Fittings: Manufactured fitting or coupling same size as, with pressure rating at least equal to and ends compatible with, piping to be joined.

2.6 CORROSION-PROTECTION PIPING ENCASEMENT

A. Encasement for Underground Water and Fire:

1. Standards: AWWA C105, ANSI A21.5.
2. Form: Flat Tube
3. Material: High-density, cross-laminated PE film of 4 mils minimum thickness or LLDPE film of 8 mils minimum thickness and meet or exceed the minimum standards established by AWWA C105, current edition.

4. Color:
 - a. Domestic Water and Fire Protection: Black.
 5. Adhesive Tape: A 2-inch-wide plastic adhesive tape, such as Calpico Vinyl, Polyken, U.P.C. Tape, or approved equal shall be used for sealing seams, cuts, or tears in polyethylene encasement. Duct tape shall not be allowed.
 6. The film is marked showing trademark, year of manufacture, type of resin, specification conformance, applicable pipe sizes, and a corrosion protection warning.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. North Town Company.
 2. AA Thread and Seal Tape, Inc.
 3. Sigma Corp.
 4. Or approved equal.

2.7 GATE VALVES

A. UL/FMG, Cast-Iron Gate Valves:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Cast Iron Pipe Company.
 - b. Clow Valve Company; a subsidiary of McWane, Inc.
 - c. Crane; Crane Energy Flow Solutions.
 - d. Kennedy Valve Company; a division of McWane, Inc.
 - e. M & H Valve Company; a division of McWane, Inc.
 - f. McWane, Inc.
 - g. Mueller Co.
 - h. NIBCO INC.
 - i. Stockham; Crane Energy Flow Solutions.
 - j. U.S. Pipe and Foundry Company.
 - k. Zurn Industries, LLC.
2. UL/FMG, Nonrising-Stem, Resilient-Sealed Gate Valves:
 - a. Description: Iron body and bonnet with flange where indicator post is indicated on drawings, bronze seating material, and inside screw.
 - 1) Standards: UL 262 and FMG approved.
 - 2) Minimum Pressure Rating: 250 psig.
 - 3) End Connections: Mechanical joint with retainer glands and tie rods.
 - 4) Opening Direction: Verify with Local AHJ.

2.8 GATE VALVE ACCESSORIES AND SPECIALTIES

A. Tapping-Sleeve Assemblies:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Cast Iron Pipe Company.
 - b. Clow Valve Company; a subsidiary of McWane, Inc.
 - c. Flowserve Corporation.
 - d. Kennedy Valve Company; a division of McWane, Inc.
 - e. McWane, Inc.
 - f. Mueller Co.
 - g. U.S. Pipe and Foundry Company.
2. Description: Sleeve and valve compatible with drilling machine.
 - a. Standard: MSS SP-60.
 - b. Tapping Sleeve: Ductile-iron, two-piece bolted sleeve with flanged outlet for new branch connection. Include sleeve matching size and type of pipe material being tapped and with recessed flange for branch valve.
 - c. Valve: AWWA, cast-iron, nonrising-stem, resilient-seated gate valve with one raised face flange mating tapping-sleeve flange.
 - d. Comply with utility standards.

B. Valve Boxes: Comply with AWWA M44 for cast-iron valve boxes. Include top section, adjustable extension of length required for depth of burial of valve, plug with lettering "WATER," and bottom section with base that fits over valve and with a barrel approximately 5 inches in diameter.

1. Operating Wrenches: Steel, tee-handle with one pointed end, stem of length to operate deepest buried valve, and socket matching valve operating nut.

C. Indicator Posts: UL 789, FMG-approved, vertical-type, cast-iron body with operating wrench, extension rod, and adjustable cast-iron barrel of length required for depth of burial of valve.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Cast Iron Pipe Co.; American Flow Control Div.
 - b. American Cast Iron Pipe Co.; Waterous Co.
 - c. Grinnell Corp.; Grinnell Supply Sales Co.
 - d. Grinnell Corp.; Mueller Co.; Water Products Div.
 - e. McWane, Inc.; Clow Valve Co., Div. (Oskaloosa).
 - f. McWane Inc.; Kennedy Valve Inc.
 - g. NIBCO, INC.
 - h. Penn-Troy Machine Co.
 - i. Stockham Valves & Fittings, Inc.
 - j. United States Pipe & Foundry Co.

2.9 BITUMINOUS COATING

- A. After assembly, all exterior surfaces not coated including all the bolts, nuts, rods, and restraint devices shall be completely coated with two coats of heavy-duty protective asphaltic coating. Provide coating products by one of the following:
 - 1. Denso Single Component Bitumen Mastic Coating.
 - 2. HY-TECH Coatings - Bituminous Mastic 50-HT.
 - 3. Christy's - HD50 Bituminous Tar Mastic.

PART 3 - EXECUTION

3.1 EARTHWORK

- A. Refer to Section 312000 "Earth Moving" for excavating, trenching, and backfilling.

3.2 PIPING APPLICATIONS

- A. General: Use pipe, fittings, and joining methods for piping systems according to the following applications.
- B. Transition couplings and special fittings with pressure ratings at least equal to piping pressure rating may be used, unless otherwise indicated.
- C. Do not use flanges or unions for underground piping.
- D. Underground Fire-Service-Main Piping NPS 6 to NPS 12 shall be the following:
 - 1. Ductile-iron, push-on-joint pipe; gasketed; ductile-iron, mechanical-joint fittings. Restrain all joints with retainer glands. Changes in direction shall be restrained by tie-rods in addition to retainer glands.

3.3 VALVE APPLICATIONS

- A. General Application: Use mechanical-joint-end valves for NPS 4 and larger underground installation. Use UL/FMG, nonrising-stem gate valves for shut-off valves.
- B. Where specific valve types are not indicated, the following requirements apply:
 - 1. Underground Valves, NPS 4 and Larger, for Indicator Posts: UL/FMG, cast-iron, nonrising-stem gate valves with indicator post.

3.4 PIPING INSTALLATION

- A. Water-Main Connection: Arrange with utility company for tap of size and in location indicated in water main.

- B. Comply with NFPA 24 for fire-service-main and combined water service and fire service main piping materials and installation.
- C. Install ductile-iron, water-service piping according to AWWA C600 and AWWA M41.
- D. Bury piping with depth of cover over top at least 12 inches below local frost elevation, but not less than 6 ft. Refer to drawings for additional information.
- E. Extend fire service main piping and connect to water supply source and building fire-suppression water piping systems at outside face of building wall in locations and pipe sizes indicated.
 - 1. Terminate fire service piping at building wall until building fire-suppression water piping systems are installed. Terminate piping with caps, plugs, or flanges as required for piping material. Make connections to building fire-suppression water piping systems when those systems are installed. Restrain joints with retainer glands.
- F. Sleeves are specified in Section 220500 "Common Work Results for Plumbing."
- G. Mechanical sleeve seals are specified in Section 220500 "Common Work Results for Plumbing."
- H. Install underground piping with restrained joints. Refer to RESTRAINED JOINT INSTALLATION.
- I. See Section 211200 "Fire-Suppression Standpipes," Section 211313 "Wet-Pipe Sprinkler Systems," and Section 211316 "Dry-Pipe Sprinkler Systems" for fire-suppression-water piping inside the building.

3.5 JOINT CONSTRUCTION

- A. Make pipe joints according to the following:
 - 1. Ductile-Iron Piping, Mechanical Joints for Fire-Service-Main and Combined Water-Service and Fire-Service-Main Piping: UL 194.

3.6 RESTRAINED JOINT INSTALLATION

- A. Restrained joints, General: Install water-service, fire-service, main and combine water-service and fire-service main piping with two separate methods of joint restraint at horizontal and vertical changes in direction and fittings and one method of joint restraint on straight sections of pipe. Use restrained-joint piping, retainer glands, and tie-rods. Thrust blocks, pipe clamps, and gripper-type gaskets are not allowed. Anchorages and restrained-joint types that may be used include the following:
 - 1. Locking mechanical joints.
 - 2. Set-screw mechanical retainer glands.
 - 3. Set-screw mechanical retainer glands and tie-rods.
- B. Install two tie-rods on piping 6 inches and smaller. Install four tie-rods on piping larger than 6 inches.

- C. Install anchorages for tees, plugs and caps, bends, crosses, valves, and hydrant branches. Include anchorages for the following piping systems:
 - 1. Fire-Service-Main Piping and Combined Water-Service and Fire-Service Main Piping: According to NFPA 24.
- D. Apply full coat of bituminous coating corrosion-resistant material to surfaces of installed ferrous anchorage devices.

3.7 CORROSION-PROTECTION PIPING ENCASEMENT INSTALLATION

- A. Polyethylene encasement shall be installed per ANSI/AWWA C105/A21.5, Method 'A' in accordance with Section 2.15 of DIPRA's Installation Guide for Ductile Iron Pipe.
- B. A fabric type or padded sling shall be used when handling polyethylene encased pipe to prevent damage to the polyethylene encasement.
- C. All seams in the polyethylene encasement shall be sealed completely with approved 2-inch wide plastic adhesive tape.
- D. Extreme care shall be taken to ensure that all rips or tears in the polyethylene encasement are properly repaired with additional tape and film as described in ANSI/AWWA C105/A21.5.
- E. Extreme care shall be taken when backfilling to avoid damaging the polyethylene encasement.

3.8 VALVE INSTALLATION

- A. UL/FMG, Gate Valves: Comply with NFPA 24. Install each underground valve and valves in vaults with stem pointing up.
- B. UL/FMG, Valves Other Than Gate Valves: Comply with NFPA 24.

3.9 CONNECTIONS

- A. Connect fire-service main piping to utility water main. Use tapping sleeve and tapping valve as specified by water authority having jurisdiction.
- B. Connect fire-service main piping to interior fire-suppression piping..
- C. Ground equipment according to Section 260526 "Grounding and Bonding for Electrical Systems."
- D. Connect wiring according to Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

3.10 FIELD QUALITY CONTROL

- A. Piping Tests: Conduct piping tests before joints are covered. Fill pipeline 24 hours before testing and apply test pressure to stabilize system. Use only potable water. The test pressure shall be

read from a gage located at the low elevation point of the system or portion being tested. Leakage shall be defined as the quantity of water that must be supplied into the tested system to maintain pressure within 5 psi (above) of the specified test pressure.

- B. Hydrostatic Tests: Test at not less than 200 psig and not more than 250 psig for two hours.
 - 1. The water pressure is to be increased in 50 psi increments until the test pressure described is attained. After each increase in pressure, observations are to be made of the stability of the joints. These observations are to include such items as protrusion or extrusion of the gasket, leakage, or other factors likely to affect the continued use of a pipe in service. During the test, the pressure is not to be increased by the next increment until the joint has become stable. This applies particularly to movement of the gasket. After the pressure has been increased to the required maximum value and held for one hour, the pressure is to be decreased to 0 psi while observations are made for leakage. The pressure is again to be slowly increased to the value specified and held for one more hour while observations are made for leakage and the leakage measurement is made. Maximum allowable leakage is 2 quarts per hour per 100 joints (irrespective of pipe diameter). Remake leaking joints with new materials and repeat test until leakage is within allowed limits. If valves or hydrants are included in the test, the allowable leakage can be increased by the amount indicated in NFPA 24.
- C. Prepare reports of testing activities using the NFPA 24 form.

3.11 IDENTIFICATION

- A. Install continuous underground detectable warning tape during backfilling of trench for underground water-distribution piping. Locate 18 to 24 inches directly over piping. Underground warning tapes are specified in Section 312000 "Earth Moving."

3.12 FLUSHING AND DISINFECTION

- A. Flush and disinfect water distribution, fire-service main and combined water-service and fire-service main piping as follows:
 - 1. Provide plan and schedule for proposed activities. Provide isolation valves, blow-off assemblies, and other additional specified components in the new system to accommodate maximum lengths of piping being treated (not-to-exceed 1,100 ft. or as directed by the local authority having jurisdiction).
 - 2. Purge new piping systems and part of existing systems that have been altered, extended, or repaired before use.
 - 3. Fire-Service Main and Combined Fire-/Water-Service Piping: Flushing shall be performed at not less than one of the following:
 - a. Hydraulically calculated water demand rate of the system, including hose stream requirements.
 - b. Flow necessary to provide a velocity of 10 ft./sec. in accordance with NFPA 24.
 - c. Maximum flow rate available to the system under fire conditions, if the existing system cannot provide flows to attain 10 ft./sec. (exception per NFPA 24).
 - 4. Flush piping system with clean, potable water until dirty water does not appear at points of outlet.

5. Flush water-service piping per applicable AWWA standards and utility requirements.
 6. Water-Service Piping and Combined Fire-/Water-Service Piping: Use purging and disinfecting procedure prescribed by authorities having jurisdiction, or if method is not prescribed by authorities having jurisdiction, use procedure described in AWWA C651 or do as follows:
 - a. Fill system or part of system with water/chlorine solution containing at least 50 ppm of chlorine; isolate and allow to stand for 24 hours.
 - b. Drain system or part of system of previous solution and refill with water/chlorine solution containing at least 200 ppm of chlorine; isolate and allow to stand for 3 hours.
 - c. After standing time, flush system with clean, potable water until chlorine level drops to level in water coming from system.
 - d. Engage a qualified testing agency to make bacteriological, physical, and chemical analyses of water from each installed pipe system and report the results. Make analyses according to requirements of authorities having jurisdiction. Repeat procedure if biological examination shows evidence of contamination, at no additional cost to the Owner.
- B. Prepare reports of purging and disinfecting activities.

3.13 AS-BUILT DRAWINGS

- A. Refer to Section 330000 "Utility As-Built Documentation" for as-built requirements.

END OF SECTION 22 11 13

SECTION 31 10 00
SITE CLEARING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Protecting existing vegetation to remain.
 - 2. Removing existing vegetation.
 - 3. Clearing and grubbing.
 - 4. Stripping and stockpiling topsoil.
 - 5. Removing above- and below-grade site improvements.
 - 6. Disconnecting, capping or sealing, and removing site utilities and/or abandoning site utilities in place.

1.3 DEFINITIONS

- A. Subsoil: Soil beneath the level of subgrade; soil beneath the topsoil layers of a naturally occurring soil profile, typified by less than 1 percent organic matter and few soil organisms.
- B. Surface Soil: Soil that is present at the top layer of the existing soil profile. In undisturbed areas, surface soil is typically called "topsoil," but in disturbed areas such as urban environments, the surface soil can be subsoil.
- C. Topsoil: Top layer of the soil profile consisting of existing native surface topsoil or existing in-place surface soil; the zone where plant roots grow.
- D. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction and indicated on Drawings.
- E. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction.
- F. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 MATERIAL OWNERSHIP

- A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site.

1.5 INFORMATIONAL SUBMITTALS

- A. Existing Conditions: Documentation of existing trees and plantings, adjoining construction, and site improvements that establishes preconstruction conditions that might be misconstrued as damage caused by site clearing.
 - 1. Use sufficiently detailed photographs or video recordings.
 - 2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plant designated to remain.
- B. Topsoil stripping and stockpiling program.
- C. Record Drawings: Identifying and accurately showing locations of capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

- A. Topsoil Stripping and Stockpiling Program: Prepare a written program to systematically demonstrate the ability of personnel to properly follow procedures and handle materials and equipment during the Work. Include dimensioned diagrams for placement and protection of stockpiles.

1.7 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed trafficways if required by Owner or authorities having jurisdiction.
- B. Improvements on Adjoining Property: Authority for performing site clearing indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
 - 1. Do not proceed with work on adjoining property until directed by Architect.
- C. Utility Locator Service: Notify Dig Safe System for area where Project is located before site clearing.
- D. Do not commence site clearing operations until temporary erosion- and sedimentation-control measures are in place.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Satisfactory Soil Material: Requirements for satisfactory soil material are specified in Section 312000 "Earth Moving."

1. Obtain approved borrow soil material off-site when satisfactory soil material is not available on-site.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points from disturbance during construction.
- B. Verify that trees, shrubs, and other vegetation to remain or to be relocated have been flagged.
- C. Protect existing site improvements to remain from damage during construction.
 1. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- 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 erosion- and sedimentation-control drawings and specification.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.

3.3 TREE AND PLANT PROTECTION

- A. Protect trees and plants remaining on-site.
- B. Repair or replace trees, shrubs, and other vegetation indicated to remain.

3.4 EXISTING UTILITIES

- A. Locate, identify, disconnect, and seal or cap utilities indicated to be removed or abandoned in place.
 1. Arrange with utility companies to shut off indicated utilities.
- B. Locate, identify, and disconnect utilities indicated to be abandoned in place.

- C. Interrupting Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner or others, unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - 1. Do not proceed with utility interruptions without Architect's written permission.
- D. Excavate for and remove underground utilities indicated to be removed.

3.5 CLEARING AND GRUBBING

- A. Remove obstructions, trees, shrubs, and other vegetation to permit installation of new construction.
 - 1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
 - 2. Grind down stumps and remove roots, obstructions, and debris to a depth of 18 inches below exposed subgrade.
 - 3. Use only hand methods or air spade for grubbing within protection zones.
 - 4. Chip removed tree branches and dispose of off-site.
- B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.
 - 1. Place fill material in horizontal layers not exceeding a loose depth of 8 inches, and compact each layer to a density equal to adjacent original ground.

3.6 TOPSOIL STRIPPING

- A. Remove sod and grass before stripping topsoil.
- B. Strip topsoil to required depth in a manner to prevent intermingling with underlying subsoil or other waste materials.
 - 1. Remove subsoil and nonsoil materials from topsoil, including clay lumps, gravel, and other objects larger than 2 inches in diameter; trash, debris, weeds, roots, and other waste materials.
- C. Stockpile topsoil away from edge of excavations without intermixing with subsoil or other materials. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust and erosion by water.
 - 1. Limit height of topsoil stockpiles to 72 inches.
 - 2. Do not stockpile topsoil within protection zones.
 - 3. Stockpile surplus topsoil to allow for respreading deeper topsoil.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut along line of existing pavement to remain before removing adjacent existing pavement. Saw-cut faces vertically.

3.8 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris, and legally dispose of them off Owner's property.
- B. Separate recyclable materials produced during site clearing from other nonrecyclable materials. Store or stockpile without intermixing with other materials, and transport them to recycling facilities. Do not interfere with other Project work.

END OF SECTION 31 10 00

SECTION 31 20 00
EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. American Society for Testing and Materials (ASTM) Standards:
 - 1. ASTM C 136: Method for sieve analysis of fine and coarse aggregates.
 - 2. ASTM C 117: Standard test method for materials finer than No. 200 sieve in mineral aggregate washing.
 - 3. ASTM D 422: Standard test method for particle size analysis of soils.
 - 4. ASTM D 1140: Test for amount of material in soils finer than No. 200 sieve.
 - 5. ASTM D 1556: Test method for density of soil in place by the sand cone method.
 - 6. ASTM D 1557: Test methods for moisture-density relations of soils and soil aggregate mixtures using 10 lb. hammer and 18-inch drop. AASHTO Standard T-180 may be substitute for ASTM D 1557.
 - 7. ASTM D 6938: Standard test methods for in-place density and water content of soil and soil aggregate by nuclear methods (shallow depth).
 - 8. ASTM D 4318: Test method for liquid limit, plastic limit and plasticity index of soils.

1.2 SUMMARY

- A. Section Includes:
 - 1. Excavating and filling for rough grading the Site.
 - 2. Preparing subgrades for equipment pads, walks and pavements.
 - 3. Excavating and backfilling for utility structures.
 - 4. Base and subbase course for concrete walks and pavements.
 - 5. Subbase course and base course for asphalt paving.
 - 6. Excavating and backfilling trenches for utilities and pits for buried utility structures.
 - 7. Excavation and off-site disposal of all unsuitable and excess materials, and stockpiling of all suitable on-site materials required for reuse.
 - 8. Provision, transportation and placement of all required fill and backfill materials.
 - 9. Drainage and dewatering required to perform the work in the dry.

1.3 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
- B. Base Course: Aggregate layer placed between the subbase course and hot-mix asphalt paving.
- C. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.
- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.

- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
 - 1. Authorized Additional Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions as directed by Geotechnical Engineer and/or Owner's testing agency. Authorized additional excavation and replacement material will be paid for according to Contract provisions for changes in the Work.
 - 2. Bulk Excavation: Excavation more than 10 feet.
 - 3. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by Geotechnical Engineer and/or Owner's testing agency. Unauthorized excavation, as well as remedial work directed by Geotechnical Engineer and/or Owner's testing agency, will be without additional compensation.
- F. Fill: Soil materials used to raise existing grades.
- G. Rock:
 - 1. Rock material in beds, ledges, unstratified masses, conglomerate deposits, and boulders of rock material that exceed 1 cu. yd. for bulk excavation or 3/4 cu. yd. for footing, trench, and pit excavation that cannot be removed by rock-excavating equipment equivalent to the following in size and performance ratings, without systematic drilling, ram hammering, ripping, or blasting, when permitted:
 - a. Equipment for Footing, Trench, and Pit Excavation: Late-model, track-mounted hydraulic excavator; equipped with a 42-inch- maximum-width, short-tip-radius rock bucket; rated at not less than 138-hp flywheel power with bucket-curling force of not less than 28,700 lbf and stick-crowd force of not less than 18,400 lbf with extra-long reach boom.
 - b. Equipment for Bulk Excavation: Late-model, track-mounted loader; rated at not less than 230-hp flywheel power and developing a minimum of 47,992-lbf breakout force with a general-purpose bare bucket.
- H. Structures: Retaining walls, equipment pads, tanks, curbs, mechanical and electrical appurtenances, or other fabricated stationary features constructed above or below the ground surface.
- I. Subbase Course: Aggregate layer placed between the subgrade and base course.
- J. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase.
- K. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings limits.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of the following manufactured products required:
 - 1. Filter fabric.
 - 2. Warning tapes.
- B. Earth Material Samples: Contractor shall be responsible for obtaining samples of earthwork materials proposed to be used and transporting them to the site 7 calendar days in advance of

the time planned for incorporating them into the work. Use of proposed materials by the Contractor prior to testing and approval or rejection shall be at the Contractor's risk. The following information shall be submitted:

1. Location of borrow source site.
 2. Present and past usage of the source site and material.
 3. Any previously existing report(s) associated with an assessment of the source site, as relates to the presence of oil or hazardous material.
 4. Location within the source site from which the material will be obtained.
- C. Up to three test series (gradation and laboratory compaction) will be completed by the Geotechnical Engineer or Owner's testing agency for off-site borrow sources for each category of earth materials defined in PART 2 of this Section at the Owner's cost. Testing of additional samples or sources shall be at the Contractor's cost.
1. Sieve analysis to be based on washed sieve analysis in accordance with appropriate ASTM standard.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:
1. Classification according to ASTM D2487.
 2. Laboratory compaction curve according to ASTM D1557.
- C. Flowable Fill Mix Design: Submit mix design with admixture information for review and approval a minimum of 15 days prior to start of work.

1.6 QUALITY ASSURANCE

- A. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E329 and ASTM D3740 for testing indicated.
- B. Earthwork Observation and Testing:
1. The Owner will retain a qualified Geotechnical Engineer and/or Testing Agency to perform on-site observation and testing during work under this and related sections and as indicated in the "Schedule of Special Inspections." The services of the Geotechnical Engineer and/or Owner's testing agency may include, but not be limited to the following:
 - a. Observation during excavation, subgrade preparation and backfill for footings, pavements, walks, utility trenches, equipment pads and subsurface drainage construction, etc.
 - b. Determination of requirements for additional excavation to remove unsuitable materials.
 - c. Observation and testing during placement and compaction of fill and backfill.
 - d. Laboratory testing and analysis of fill material specified.
 - e. Review of submittals.

2. During the course of construction, the Geotechnical Engineer and/or Owner's testing agency shall advise the Owner's Agent, in writing, with a copy to the Architect and Contractor, if at any time, in his opinion, the work is not in substantial conformity with the plans and specifications. The Geotechnical Engineer's and/or the Owner's testing agency's presence does not include supervision of direction of the actual work by the Contractor, his employees, subcontractors or agents. Neither the presence of the Geotechnical Engineer and/or Owner's testing agency, nor any observations and testing performed by him shall excuse the Contractor from defects discovered in his work.
3. Testing equipment will be provided by and testing performed by the Geotechnical Engineer and/or Owner's testing agency, except as otherwise provided by contract. Upon request by Owner's Agent, the Contractor shall provide such auxiliary personnel and services as needed to accomplish testing work and to repair damage caused thereby to permanent work.
4. References herein to observations, testing, and determinations by the "Engineer" include services to be provided by the Geotechnical Engineer and/or Owner's testing agency when appropriate and when so authorized by the Engineer or Owner.
5. The Contractor shall not proceed without the Testing Agency in place. Contractor to coordinate with Testing Agency.

1.7 FIELD CONDITIONS

A. Existing Utilities:

1. Notify utility locator service for area where project is located before site clearing or excavating. Hire private utility mark-out service for areas not marked by utility companies. See General Conditions of the construction contract.
2. Before starting excavation, establish location and extent of any underground utilities occurring in work area. Make arrangements with appropriate utility company for removal and relocation of lines which are in the way of excavation. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations.
3. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult utility owner immediately for directions. Cooperate with Owner, Owner's Agent, and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
4. Inactive or abandoned utilities encountered during construction operations shall be removed, plugged or capped. The location of such utilities shall be noted on record drawings and reported in writing to Owner's Agent. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shutoff of services if lines are inactive.
5. Do not interrupt existing utilities serving facilities occupied and used by Owner or others, during occupied hours, except when permitted in writing by Owner's Agent and then only after arranging to provide acceptable temporary utility services. Provide minimum of 48 hours' notice to Owner's Agent and receive written notice to proceed before interrupting any utility. Do not proceed with utility interruptions without Owner's written permission.
6. When in the course of the work it is necessary to connect a utility to a main in a public way, all the requirements of both the authorities governing the utility and those governing the public way shall be met. Pavement shall be temporarily and permanently replaced as directed by these authorities at no additional cost to the Owner.

B. Site Information:

1. Information in the Contract Plans and Specifications relating to subsurface conditions, existing utilities and structures is from the best sources presently available. Such information is furnished only for the information and convenience of the Contractor, and

- the accuracy and completeness of this information is not guaranteed. The Owner will not be responsible for interpretations or conclusions drawn from this data by the Contractor.
2. The Contractor may, at his own expense and upon application to the Owner, conduct additional subsurface explorations and testing.
- C. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth-moving operations.
1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- D. Improvements on Adjoining Property: Authority for performing earth moving indicated on property adjoining Owner's property will be obtained by Owner before award of Contract.
1. Do not proceed with work on adjoining property until directed by Architect.
- E. Do not commence earth-moving operations until temporary site fencing and erosion- and sedimentation-control measures specified in are in place.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: All rock and soil materials furnished for use as fill or backfill shall be free of grease, oil, solvents, pesticides, herbicides or other hazardous or deleterious materials and/or contaminants. All rock and soil materials specified in this Section shall also be free from ice, snow, trash, debris, stumps, roots and organic material.
- B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D2487, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D2487, contaminated soils or a combination of these groups. Symbols shall not be used as fill or backfill except where impervious fill is specified or detailed. Satisfactory soils which have been rendered wet, such that the contractor cannot establish a stable soil mass compacted as specified in this Section, also shall not be used as fill or backfill.
1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. 3/4" Crushed Stone: Maine DOT 703.13. Crushed Stone should be separated from soil subgrades, excavation sidewalls, and backfill using a non-woven geotextile (such as Mirafi 140N or similar)
- E. Structural/Granular Fill: Maine DOT 703.06 Aggregate for Base, Type B
- F. Pavement Base Course: Maine DOT 703.06 Aggregate for Base, Type A
- G. Pavement Sub-Base: Maine DOT 703.06 Aggregate for Subbase, Type D

- H. Non-Frost Susceptible Fill: Maine DOT 703.22 Underdrain Backfill Material, Type B
- I. Utility Bedding Material:
 - 1. Type "B" Bedding: Maine DOT 703.05 Aggregate for Sand Leveling, and with 100% passing the 1/2" sieve.
- J. General Fill: Maine DOT 703.18 - Common Borrow
- K. Sand: ASTM C33/C33M; fine aggregate.
- L. Flowable/Excavatable Fill: Mixture of cement, GranCem, sand, water and admixtures to produce a flowable/excavatable fill with a compressive strength at 28 days of 50 psi minimum and 150 psi maximum.

2.2 FILTER FABRIC

- A. When filter fabric is required, it shall conform to the requirements of TC MIRAFI Product 140N or an approved equal.
 - 1. Grab Tensile Strength: 120 lbf (minimum); ASTM D 4632.
 - 2. Trapezoid Tear Strength: 50 lbf (minimum); ASTM D 4533.
 - 3. CBR Puncture Strength: 310 lb (minimum); ASTM D 6241.
 - 4. Flow Rate: 135 gal/min/ft² (minimum); ASTM D 4491.
 - 5. Apparent Opening Size: No. 70 (maximum); ASTM D 4751.

2.3 ACCESSORIES

- A. Detectable Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, a minimum of 6 inches wide and 4 mils thick, continuously inscribed with a description of the utility, with metallic core encased in a protective jacket for corrosion protection, detectable by metal detector when tape is buried up to 30 inches deep; colored as follows:
 - 1. Red: Electric.
 - 2. Yellow: Gas, oil, steam, and dangerous materials.
 - 3. Orange: Telephone and other communications.
 - 4. Blue: Water systems.
 - 5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth-moving operations.

- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.
- D. Provide protective construction fence around all landscaping in work area to remain.

3.2 DEWATERING

- A. Provide dewatering system of sufficient scope, size, and capacity to control hydrostatic pressures and to lower, control, remove, and dispose of ground water and permit excavation and construction to proceed on dry, stable subgrades.
- B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- C. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - 1. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. The contractor shall grade and ditch the site as necessary to direct surface runoff away from open excavations. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding project site and surrounding areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.
 - 2. The Contractor shall provide, at his own expense, adequate pumping and drainage facilities to keep all excavations and work sufficiently dry from groundwater and/or surface runoff so as not to adversely affect construction product or procedures nor cause excessive disturbance of underlying natural ground or footing and slab subgrades. Contractor shall similarly control water entering the excavation as a result of construction operations, such as washing of concrete equipment and tools and the like.
 - 3. Protect subgrades and foundation soils from softening, undermining, washout, and damage by water accumulation.
 - 4. Install dewatering as required to keep subgrades dry and convey groundwater away from excavations. Maintain until dewatering is no longer required.
 - 5. Water from trenches and excavations shall be disposed of in such a manner as will not cause injury to public health, nor damage to public or private property, existing work, or work in progress, nor to the surface of roads, walks and streets, nor cause any undue interference with the use of the same by the public. The Contractor shall comply with all applicable environmental protection and/or sediment/erosion control regulations.
 - 6. Under no circumstances place concrete or fill, or lay piping or install appurtenances in excavations containing free water. Keep utility trenches free from water until pipe joint material has hardened.
- D. Dispose of water removed by dewatering in a manner that avoids endangering public health, property, and portions of work under construction or completed. Dispose of water and sediment in a manner that avoids inconvenience to others.

3.3 EXPLOSIVES

- A. Explosives:
 - 1. Do not use explosives.

3.4 EXCAVATION, GENERAL

- A. Classified Excavation: Excavate to subgrade elevations. Material to be excavated will be classified as earth and rock. Do not disintegrate or excavate rock until it has been classified by the Geotechnical Engineer and/or Owner's agent and cross-sectioned by the Owner's registered land surveyor. The Contract Sum will be adjusted for rock excavation according to contract provisions for changes in the work. Changes in the Contract Time may be authorized for rock excavation.
1. Earth excavation includes excavating pavements and obstructions visible on surface; underground structures, utilities, and other items indicated to be removed; and soil, boulders, and other materials not classified as rock or unauthorized excavation.
 - a. Intermittent drilling; ram hammering; or ripping of material not classified as rock excavation is earth excavation.
 2. Rock excavation includes removal and disposal of rock and includes replacement with approved materials.
 - a. Uncover and expose all rock surfaces to be removed.
 - b. Notify Owner in writing before rock removal proceeds.
 - c. The Owner will engage a registered land surveyor to cross section the top of rock and determine the quantity of rock for payment. Measurements for payment will be based on in place cubic yards of rock removed to paylines, as defined:
 - 1) For Walls with Footings: The measurements will be taken horizontally parallel to and 12 inches outside of the edges of the concrete footings and vertically 12 inches below bottom of footing elevation as indicated in the Contract Documents.
 - 2) For Walls without Footings: The measurements will be taken horizontally parallel to and 12 inches outside of the edges of the concrete limits and vertically 12 inches below bottom of concrete elevation as indicated in the Contract Documents.
 - 3) For Walks, Pavements and Equipment Pads: The measurement will be taken vertically 12 inches below slab subgrade elevation as indicated in the Contract Documents.
 - 4) For Utility Trenches: The measurement will be taken vertically 6 inches below bottom of pipe and horizontally 24 inches wider than the nominal diameter of pipe/conduit as indicated in the Contract Documents.
 - 5) For Structures: The measurement will be taken horizontally 24 inches greater in both length and width or diameter than the actual exterior dimensions of the structures and vertically 12 inches below bottom elevation of structure as indicated in the Contract Documents.
 - d. No payment will be made for overblasted rock and/or shattered layers below paylimits, associated removal and replacement with suitable fill material.
- B. Dimensions:
1. Excavate to elevations and dimensions indicated on the drawings or as otherwise required for the work. Do all necessary excavation, including, but not limited to, excavation for structures, footings, foundations, grade beams, walls and slabs below grade, paving, utility lines, mechanical work, mechanical and drainage structures, drains, and other below grade work. Excavate sufficient material so as to allow ample space for

construction operations including placing and removal of forms, installation of waterproofing, dampproofing or utilities and inspection of excavated areas.

2. Side forms will be required for all concrete work unless omission of forms is requested by the Contractor, in writing, to the Engineer. Where omission of forms is requested by the Contractor, and accepted by the Engineer, the Contractor shall bear the cost of any additional concrete volume required beyond the minimum profiles and dimensions of the footing, wall, or utility trench as detailed.

C. Disposition of Excavated Material:

1. Sort and stockpile excavated material according to its suitability for re-use and job requirements. Onsite stockpile room will be limited and the Contractor shall plan his operations to facilitate prompt reuse of excavated material or provide offsite stockpile locations as required.
2. Stockpile soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
3. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.
4. Offsite Disposal: Remove surplus satisfactory soil and waste material, including unsatisfactory soil, trash, and debris and legally dispose of it off Owner's property.

D. Unauthorized Excavation: Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimension without specific direction of the Engineer or Owner's agent. Unauthorized excavation, as well as remedial work specified by the Engineer, shall be at the Contractor's expense.

1. In areas below structures, pavements and walks, backfill unauthorized excavation with granular fill placed and compacted in accordance with this Section, unless otherwise directed by the Engineer.
2. Elsewhere, backfill and compact unauthorized excavations with general fill, compacted to the requirements of this Section.
3. Where the excavation of otherwise suitable materials is required due to these materials being rendered unsuitable due to disturbance, construction activity, freezing, or lack of protection from the elements, the Contractor shall excavate these materials and provide remedial work as specified above at no additional cost to the Owner.

E. Authorized Additional Excavation: In the case that unsuitable materials, as determined by the Geotechnical Engineer or Owner's Testing Agency, are encountered at the specified subgrade elevation, the Engineer may direct the removal of the unsuitable material and refill with granular fill placed and compacted in accordance with the requirements of this Section. Authorized addition excavation with granular fill backfill will be paid according to Unit Prices and Allowances

1. It is anticipated that clay layers exist that will need to be stripped from the site and excavation within the wetlands will need to be brought down to a sound layer. Refer to the Geotechnical Report for additional detail.

F. Backfilling Prior to Acceptance of Work Installed:

1. Do not allow or cause the work performed or installed to be covered up or enclosed by work of this Section prior to all required inspections, tests, and acceptances.
2. Should any of the work be so enclosed or covered up before it has been accepted, uncover all such work at no additional cost to the Owner.
3. After the work has been completed, tested, inspected, and accepted, make all repairs and replacements necessary to restore the work to the condition in which it was found at the time of uncovering, all at no additional cost to the Owner.

G. Sheeting, Shoring, and Bracing:

1. Provide sheeting, shoring and/or bracing at excavations as required to assure safety against collapse of earth or rock at sides of excavations; as required for support of adjacent structures, streets, or utilities; or as required to comply with federal, state or local regulations, codes or ordinances.
2. Provide materials for sheeting, shoring and bracing, such as sheet piling, uprights, stringers and cross braces, in good serviceable condition. Maintain shoring and bracing in excavations regardless of time period excavations will be open. Carry down sheeting, shoring and bracing as excavation progresses.
3. All sheeting and bracing not ordered left in place shall be carefully removed in such a manner as not to endanger the construction of other structures, utilities or property whether public or private. All voids left after withdrawal of sheeting shall be immediately refilled with sand and rammed with tools especially adapted to that purpose or otherwise compacted as directed to achieve the required density.
4. Wood sheeting shall not be completely withdrawn if driven below mid-diameter of any pipe, and under no circumstances shall any wood sheeting be cut off at a level lower than one foot above the top of pipe.
5. Refer to related requirements in Section 315000 "Excavation Support and Protection."

H. Dust and Erosion Control:

1. The Contractor shall take all necessary measures and provide equipment and/or materials to minimize dust from rising and blowing across the site and also to control surface water throughout the operation so that it does not run onto paved ways without being filtered. In addition, the Contractor shall control all dust created by construction operations and movement of construction vehicles, both on site and on paved ways.
2. Thoroughly moisten all surfaces as required to prevent dust being a nuisance to the public, neighbors and performance of other work on the site.
3. Repair any broken or damaged sections of hay bales or other erosion and siltation control measures damaged during excavation and grading operations and install any additional sections necessary for proper control.

I. Frost Protection and Snow Removal:

1. The Contractor shall, at his own expense, keep the operations under this contract clear and free of accumulations of snow or as required to carry out the work.
2. Do not excavate to full indicated depth when freezing temperatures may be expected, unless footings or slabs can be cast immediately after excavation has been completed. Protect the excavation from frost if placing of concrete is delayed. Do not cast concrete on frozen ground.
3. Completed foundations which have not been backfilled or which have less than 42 inches of earth cover above the bottom of the foundation shall be protected from freezing by temporary additional earth cover, insulating blankets, heaters, or other methods.

J. Protection of Persons and Property:

1. 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, service utility lines, structures, monuments, benchmarks and other public or private property. Protect existing improvements from damage caused by settlement, lateral movements, undermining, washout, vibration and other hazards created by earthwork operations.
2. In the case of any damage or injury caused in the performance of the work, the Contractor shall, at his own expense, make good such damage or injury to the

satisfaction of and without cost to, the Owner. Existing roads, sidewalks, and curbs damaged during the project work shall be repaired or replaced to their original condition at the commencement of operations. The Contractor shall replace, at his own expense, existing benchmarks, monuments, and other reference points which are disturbed or destroyed.

3. Barricade open excavations occurring as part of this work and post with warning lights. Operate warning lights during hours from dusk to dawn each day and otherwise as required.
4. Buried structures, utility lines, etc., including those which project less than 18 inches above grade, which are subject to damage from construction equipment shall be clearly marked to indicate the hazard.
5. Provide protective construction fence around all landscaping in work area to remain.

3.5 EXCAVATION FOR UTILITY STRUCTURES

- A. Excavate to indicated elevations and dimensions within a tolerance of plus or minus 1 inch. If applicable, extend excavations a sufficient distance from structures for placing and removing concrete formwork, for installing services and other construction, and for inspections.

1. General: Do not disturb bottom of excavation. Excavate by hand to final grade just before placing concrete reinforcement. Trim bottoms to required lines and grades to leave solid base to receive other work.

- B. Excavation for Structures and Piping, Etc.:

1. Excavate to elevations and dimensions indicated within a tolerance of plus or minus one inch. Do not disturb bottom of excavations intended for bearing surface.
2. Allow the Geotechnical Engineer to view the excavated subgrade. The Geotechnical Engineer shall determine whether authorized additional excavation is required to remove unsuitable material. Remove and replace such unsuitable material as directed by the Geotechnical Engineer or Owner's Testing Agency.

3.6 EXCAVATION FOR WALKS AND PAVEMENTS

- A. Excavate surfaces under walks and pavements to indicated lines, cross sections, elevations, and subgrades.

1. Walks, pavements, and equipment pads shall be supported on subbase/base course(s) as indicated on the drawings.
2. Remove and replace excessively wet, disturbed or unstable material and proof compact the subgrade for the subbase/base course with at least six passes of a vibratory plate or vibratory roller compactor immediately prior to placement of slab base course material unless otherwise directed.
3. The final surface of the subgrade for the walks, pavements and equipment pads shall be proof rolled with at least four passes of an approved vibratory plate or vibratory drum compactor immediately prior to placing the reinforcing and/or concrete (as may be applicable).

3.7 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.

- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe, conduit or duct bank. Excavate trench walls vertically from trench bottom to 12 inches higher than top of pipe, conduit or duct bank unless otherwise indicated.

- 1. Clearance: As indicated on Contract Documents.

- C. Trench Bottoms:

- 1. Excavate trenches to depth indicated on Contract Documents to allow for bedding course. Hand-excavate deeper for bells of pipe.

3.8 SUBGRADE INSPECTION

- A. Notify Geotechnical Engineer and/or Owner's testing agency when excavations have reached required subgrade.
- B. If Geotechnical Engineer and/or Owner's testing agency determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed and in accordance with excavation requirements of this Section.
- C. Proof-roll subgrade as directed by the Geotechnical Engineer and/or Owner's testing agency.
- D. Authorized additional excavation and replacement material will be paid for according to Contract provisions for unit prices.
- E. Reconstruct subgrades damaged by freezing temperatures, frost, rain, accumulated water, or construction activities, as directed by Geotechnical Engineer and/or Owner's testing agency, without additional compensation.

3.9 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.10 PLACEMENT AND COMPACTION OF FILL AND BACKFILL

- A. Place and compact backfill in excavations promptly, but not before completing the following:
 - 1. Construction below finish grade including, where applicable, subdrainage, dampproofing, waterproofing, and perimeter insulation.
 - 2. Surveying locations of underground utilities for Record Documents.
 - 3. Testing and inspecting underground utilities.
 - 4. Removing concrete formwork.
 - 5. Removing trash and debris.
 - 6. Removing temporary shoring, bracing, and sheeting.
 - 7. Installing permanent or temporary horizontal bracing on horizontally supported walls.
- B. Place backfill on subgrades free of mud, frost, snow, or ice.

- C. Unless otherwise specified or indicated on the drawings, the products specified in Part 2 of this Section shall be employed in the various fill and backfill applications indicated in the part. When using crushed stone, filter fabric is to be used to completely separate crushed stone from surrounding soils. Place and compact fill material in layers to required elevations as follows:
1. Under topsoil, use general fill material.
 2. Under walks, use base material.
 3. Under pavements, use subbase and base material.
 4. Under steps, ramps, and site walls, use granular fill material.
 5. Under footings, use granular fill.
 6. Under utilities, use bedding material (see drawings for type).
 7. Under equipment pads and structures, use crushed stone.
- D. All vegetation, peat, organic topsoil or subsoil, trash, debris, roots, stumps, and any compressible or otherwise deleterious materials shall be stripped from the existing ground surface and removed from excavations prior to placement of fill or backfill.
- E. All fill and backfill materials shall be placed in horizontal layers. Each layer shall be spread evenly and thoroughly mixed during spreading to ensure uniformity of material in each layer. Layer thickness shall not exceed that specified in Paragraph L of this Section.
- F. Where horizontal fill layers meet a natural or excavated slope, the layer shall be keyed into the slope by cutting a bench. The surface of benches shall be compacted to the same requirements as apply to the area being filled.
- G. In no instance place fill over materials that were permitted to freeze prior to compaction or over ice or snow. Removal of such materials will be required as directed by the Engineer. In no case will frozen material be allowed for use in fill or backfill.
- H. No fill shall be placed or compacted during unfavorable weather conditions. When work is interrupted by heavy rains or snow, fill operations shall not be resumed until the moisture content and density of previously placed fill are as specified hereinafter.
- I. Allow the Geotechnical Engineer and/or Owner's testing agency sufficient time to make necessary observations and tests. The degree of compaction shall be based on a maximum dry density as determined by ASTM D 1557 or AASHTO Standard T180. All fill and backfill placed in various areas shall be compacted in individual layers to minimum dry densities as follows:
1. Under Site Walls, Within Building Foundations Backfill Limits, Equipment Pads, Structures, Steps and Pavements (Other Than Stone Base): 95 percent.
 2. Under and Around Utilities (Other Than Stone): 95 percent.
 3. Under Walkways: 92 percent.
 4. Under Lawn or Unpaved Areas: 90 percent.
 5. Uniformly graded crushed stone materials which are not suited to field density testing shall be compacted in accordance with the minimum compactive effort indicated in Paragraph 3.11 L of this Section.
- J. The term "under", as applied to buildings, structures and paved areas, shall be construed to include all materials immediately below the plan area of the building, as well as those materials within a line sloping at one vertical and one horizontal drawn downward and outward from the exterior of building foundation, structure foundation or paved area.
- K. Compaction shall be by mechanical means designed specifically for compaction and approved by the Engineer. The Engineer reserves the right to disapprove any device of inadequate capacity or of type unsuited to the character of the material being compacted. In areas which

are too restricted to permit the use of mechanical compactors, fill may be placed in 3-inch layers and compacted by hand rammer or pneumatic tools.

- L. In addition to the stated degree of compaction, all fill and backfill shall receive at least the compactive effort given in the following table. Lift thickness shall not exceed that shown for the compaction method selected, except that the first lift of fill or backfill placed over natural ground in wet conditions may be as much as 12 inches thick. Application of the minimum compactive effort does not relieve the Contractor from his requirement to achieve the specified degree of compaction.

Compaction Method	Maximum Stone Size	Maximum Loose Lift Thickness		Minimum Number of Passes	
		Below Structures and Pavement	Less Critical Areas	Below Structures and Pavement	Less Critical Areas
Hand-operated vibratory plate or light roller in confined areas	4"	6"	8"	6	4
Hand-operated vibratory drum rollers weighing at least 1,000 lbs.	6"	8"	10"	6	4
Light vibratory drum roller, minimum dynamic force 3,000 lbs. per ft. of drum width	6"	10"	14"	6	4
Medium vibratory drum roller, minimum dynamic force 5,000 lbs. per ft. of drum width	8"	12"	18"	6	4
Large vibratory drum roller, minimum dynamic force 8,000 lbs. per ft. of drum width	10"	16"	24"	6	4

M. Moisture Control:

1. Water shall be added to fill material which does not contain sufficient moisture to be compacted to the specified densities. Fill and backfill material containing excess moisture shall be required to dry prior to or during compaction to a moisture content not greater than two percentage points (2%) above optimum except that material which displays pronounced elasticity or deformation underfoot or under load shall be required to dry to

- optimum moisture content before it is placed and compacted, if that is required to achieve specified compaction. At the Contractor's option, material which is too wet may be removed and replaced with satisfactory material at no additional cost to the Owner.
2. The Contractor is alerted to the potential silty nature of the on-site soil which renders them sensitive to moisture. On-site silty soils are difficult to handle and compact and are easily disturbed when wet. The Contractor shall plan and conduct his excavation and filling operations considering the nature of the onsite materials.
- N. Where the Engineer, Geotechnical Engineer and/or Owner's testing agency determines that fill or backfill does not conform to the compacted density specified, or did not receive the minimum compactive effort specified, such fill shall be removed and replaced with conforming materials at the Contractor's own cost.
- O. Backfilling of Walls:
1. In placing backfill, take special care to prevent any wedge action, eccentric loading or overloading by equipment used in backfilling and compaction. See Contract Documents for additional requirements.
 2. Do not use equipment weighing more than 5,000 lbs. within 10 feet of all walls. Equipment weighing more than 5,000 lbs. shall not be used adjacent to walls, except as expressly approved by the Engineer.
 3. Prevent damage to wall waterproofing or dampproofing when backfilling.
- 3.11 DISTURBANCE OF EXCAVATED AND FILLED AREAS DURING CONSTRUCTION
- A. The Contractor shall take the necessary steps to avoid disturbance of subgrade during excavation and filling operations. Methods of excavation and filling shall be revised as necessary to avoid disturbance of the subgrade, including restricting the use of certain types of construction equipment and their movement over sensitive or unstable materials, dewatering and other acceptable control measures. The Contractor shall cooperate with the Engineer to modify his operations as necessary to mitigate disturbance and protect bearing soils, based on the Engineer's observations.
 - B. All excavated or filled areas disturbed during construction; damaged by freezing temperatures, frost, rain, accumulated water, or construction activities; all loose or saturated soil, and other areas that do not meet compaction requirements as specified herein shall be removed and replaced with compacted fill materials specified. Costs of removal of disturbed material and refill with compacted fill shall be borne by the Contractor.
- 3.12 UTILITY TRENCH BACKFILL
- A. Place backfill on subgrades free of mud, frost, snow, or ice.
 - B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
 - C. Do not excavate trenches under new or existing footings unless approved by Engineer. If approved, backfill trenches excavated under footings and within 18 inches of bottom of footings; fill with concrete to an elevation of 4 inches above bottom of footings.

- D. Trenches under Roadways: Provide 4-inch- thick, concrete-base slab support for piping or conduit less than 30 inches below surface of roadways. After installing and testing, completely encase piping or conduit in a minimum of 4 inches of concrete before backfilling or placing roadway subbase course. Concrete is specified in Section 033000 "Cast-in-Place Concrete."
- E. Backfill voids with satisfactory soil while removing shoring and bracing.
- F. Initial Backfill:
 - 1. Soil Backfill: Place and compact initial backfill of material as shown on the drawings, free of particles larger than 1 inch in any dimension, to a height over the pipe or conduit as indicated in the Contract Documents.
 - a. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- G. Final Backfill:
 - 1. Soil Backfill: Place and compact final backfill of satisfactory soil to final subgrade elevation.
 - 2. Coordinate backfilling with utilities testing.

3.13 GRADING

- A. General: Uniformly grade areas to a smooth surface, free of irregular surface changes. Comply with compaction requirements and grade to cross sections, lines, and elevations indicated.
 - 1. Provide a smooth transition between adjacent existing grades and new grades.
 - 2. Cut out soft spots, fill low spots, and trim high spots to comply with required surface tolerances.
- B. Site Rough Grading: Slope grades to direct water away from buildings and to prevent ponding. Finish subgrades to elevations required to achieve indicated finish elevations, within the following subgrade tolerances:
 - 1. Turf or Unpaved Areas: Plus or minus 1 inch.
 - 2. Walks: Plus or minus 1 inch.
 - 3. Pavements: Plus or minus 1/2 inch.

3.14 SUBBASE AND BASE COURSES UNDER PAVEMENTS AND WALKS

- A. On prepared subgrade, place subbase course and base course under pavements and walks as follows:
 - 1. Place base course material over subbase course under hot-mix asphalt pavement.
 - 2. Shape subbase course and base course to required crown elevations and cross-slope grades.
 - 3. Place subbase course and base course 6 inches or less in compacted thickness in a single layer.

4. Place subbase course and base course that exceeds 6 inches in compacted thickness in layers of equal thickness, with no compacted layer more than 6 inches thick or less than 3 inches thick.
5. Compact subbase course and base course at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry density according to ASTM D1557.

3.15 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified geotechnical engineering testing agency to perform tests and inspections.
- B. Allow testing agency to inspect and test subgrades and each fill or backfill layer. Proceed with subsequent earth moving only after test results for previously completed work comply with requirements.
- C. Footing Subgrade: At footing subgrades, each soil stratum will be verified by the Geotechnical Engineer and/or Owner's testing agency based on the required design bearing capacities.
- D. Testing agency will test compaction of soils in place according to ASTM D1556, ASTM D2167, ASTM D2937, and ASTM D6938, as applicable.
 1. Field in-place density tests may also be performed by the nuclear method according to ASTM D 6938, provided that calibration curves are periodically checked and adjusted to correlate to tests performed using ASTM D 1556. With each density calibration check, check the calibration curves furnished with the moisture gages according to ASTM D 6938.
 2. When field in-place density tests are performed using nuclear methods, make calibration checks for both density and moisture gages at beginning of work, on each different type of material encountered, and at intervals as directed by the Engineer.
- E. Tests will be performed at the following locations and frequencies, subject to the discretion of the Geotechnical Engineer and/or Owner's testing agency.
 1. Paved Areas and Walks: At subgrade and at each compacted fill and backfill layer, at least one test for every 2000 sq. ft. or less of paved area or building slab but in no case fewer than three tests.
 2. Site Wall Backfill and Base, and Structure Base: At each compacted backfill layer, at least one test for every 100 feet or less of wall length but no fewer than two tests along a wall face.
 3. Trench Backfill and Base: At each compacted initial and final backfill layer, at least one test for every 150 feet or less of trench length but no fewer than two tests.
- F. When testing agency reports that subgrades, fills, or backfills have not achieved degree of compaction specified, scarify and moisten or aerate, or remove and replace soil materials to depth required; recompact and retest until specified compaction is obtained.

3.16 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion. Keep free of trash and debris.

- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
 - 1. Scarify or remove and replace soil material to depth as directed by Geotechnical Engineer and/or Owner's testing agency; reshape and recompact.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional soil material, compact, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

3.17 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION 31 20 00

SECTION 31 20 05
SEDIMENTATION AND EROSION CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Examine all Drawings and all other Sections of the Specifications for requirements therein affecting the intent of this Section.

1.2 SUMMARY

- A. The work under this Section includes, but is not limited to, the following:
 - 1. Provide all labor, equipment, and materials for the installation of required site related erosion control measures if not otherwise directed on the plans. Erosion control shall be in strict conformance with the latest revision of the local and state guidelines for soil erosion and sediment control.
 - 2. Installation of temporary erosion and sedimentation control measures.
 - 3. Maintenance of temporary erosion and sedimentation control measures.
 - 4. Monitoring of site conditions and installation of supplemental temporary erosion and sedimentation control measures.
 - 5. Sediment removal and disposal.
 - 6. Removal of temporary erosion and sedimentation control measures.
 - 7. Monitoring documentation.
 - 8. Final cleanup.
 - 9. Recommended post construction Owner sediment maintenance.
- B. Erosion and sediment control techniques include, but are in no way limited to, silt fence, straw bales, drainage structure inserts/filters, mulching with straw, netting/matting, grassing, stone dikes/berms/check-dams, compost blankets and berms, barriers, diversions, traps, basins, and appurtenances which will ensure that erosion and sediment pollution will be either eliminated or maintained within acceptable limits.
- C. The measures specified herein are the minimum requirements that the Contractor shall comply to control erosion and siltation throughout execution of the work. The Contractor shall provide additional work if necessary to control erosion and siltation throughout the duration of the construction as conditions dictate, or as directed by the Owner or Engineer.
- D. All sedimentation and erosion control measures and installations shall conform to the Maine Erosion and Sediment Control Best Management Practices.

1.3 GENERAL NOTES

- A. The discharge of sediment-laden water from the project site is prohibited. All discharged water from dewatering operations shall discharge into approved dewatering measures as required by the latest revision of the local and state guidelines for soil erosion and sediment control.
- B. The Contractor shall install all erosion control measures as depicted on the plans and as required to adhere to latest revision of the local and state guidelines for soil erosion and sediment control.
- C. The Contractor shall also be responsible for inspecting and maintaining all erosion control measures until the project is completed.

1.4 ACTION SUBMITTALS

- A. Provide product data for the following:
 - 1. Filter fabric.
 - 2. Silt fence.
 - 3. Erosion control socks.
 - 4. Calcium chloride.

1.5 INFORMATIONAL SUBMITTALS

- A. Prior to the start of the construction, submit schedule for the construction of required stormwater detention basins, temporary and permanent erosion and sedimentation control measures, clearing and grubbing, grading, structures at watercourses, construction, and paving.
- B. During construction, submit to Engineer schedule changes that affect timing of construction.

1.6 CLOSEOUT SUBMITTALS

- A. Submit copies of all inspection and maintenance report forms.

1.7 QUALITY CONTROL

- A. Contractor shall be responsible for the timely installation and maintenance of all sedimentation control devices necessary to prevent the erosion of soil or movement of sediment from construction activities to off-site areas via surface runoff or underground drainage systems. Measures in addition to those shown on the Drawings necessary to prevent the movement of sediment off site shall be installed, maintained, removed, and cleaned up at the expense of Contractor.
- B. Owner and Engineer have the authority to order immediate, additional, temporary control measures to prevent contamination of adjacent streams or other watercourses, or other areas of water impoundment and damage by erosion.
- C. If Owner or Engineer observes construction procedures and operations that jeopardize erosion control provisions, Owner or Engineer will notify Contractor. If such construction procedures and operations are not corrected promptly, Owner or Engineer may suspend the performance of any

or all construction until corrections have been made, and such suspension shall not be the basis of any claim by Contractor for additional compensation, nor for an extension of time to complete the Work.

- D. Should construction materials be washed away or otherwise rendered ineffective in the opinion of the Owner or Engineer during the progression of the Work, Contractor shall replace the installations at no additional cost to the Owner.

PART 2 - PRODUCTS

2.1 FILTER FABRIC

- A. When filter fabric is required, it shall be a nonwoven geotextile and conform to the requirements of TC MIRAFI Product 140N or an approved equal.
1. Grab Tensile Strength: 120 lbf (minimum); ASTM D 4632.
 2. Trapezoid Tear Strength: 50 lbf (minimum); ASTM D 4533.
 3. CBR Puncture Strength: 310 lbf (minimum); ASTM D 6241.
 4. Flow Rate: 135 gal/min/ft² (minimum); ASTM D 4491.
 5. Apparent Opening Size: No. 70 (maximum); ASTM D 4751.

2.2 SILT FENCE

- A. When silt fence is required, it shall contain a woven polypropylene geotextile and conform to the requirements of TC MIRAFI Product 100X or an approved equal.
1. Grab Tensile Strength: 124 lbf (minimum); ASTM D 4632.
 2. Tear Strength: 65 lbf (minimum); ASTM D 4533.
 3. CBR Puncture Strength: 325 lbf (minimum); ASTM D 6241.
 4. Flow Rate: 8 gal/min/ft² (minimum); ASTM D 4491.
 5. Apparent Opening Size: No. 20 - No. 30 (U.S. Sieve); ASTM D 4751.
- B. Silt fence shall be constructed of a minimum 36-inch-wide continuous woven geotextile. The material shall have a high sediment filtration capacity, high slurry flow and minimum clogging characteristics. Edges of the fabric shall be finished to prevent the outer fibers from pulling away from the geotextile. Geotextile shall be free of defects or flaws that significantly affect its physical and/or filtering properties.
- C. Fabric shall be securely fastened to stakes a minimum of 42 inches long and made of hardwood with a minimum dimension of 1-1/2 inch by 1-1/2 inch normal size such that a 12-inch length of fabric is unattached at the bottom for anchorage in soil. Metal stakes may be used instead of wooden stakes. Metal stakes shall be round, "U", "T", "L", or "C" shaped with a minimum weight of 0.5 pounds per foot. Stakes shall be spaced not greater than 6 ft. apart. When required, wire or another type of support shall be constructed between the geotextile fabric and the posts to improve the load carrying capacity of the silt fence.

2.3 EROSION CONTROL SOCKS

- A. Tubular netting filled with compost hardwood, 100% agricultural straw or 100% aspen wood fibers.
 - 1. Photodegradable or biodegradable.
 - 2. Continuous HDPE filament, tubular knit mesh netting with openings of size recommended by manufacturer.
 - 3. 12-inch diameter for normal conditions and 18-inch diameter for high flow areas.

2.4 CALCIUM CHLORIDE

- A. Calcium chloride shall conform to the requirements of AASHTO M 144. Either regular flake calcium chloride, Type 1, or concentrated flake, pellet or other granular calcium chloride, Type 2, may be used.

2.5 WATER

- A. All water used shall be clean and free of harmful amounts of oil, salt, acids, alkalis, sugar, organic matter, and other substances incurious to the finished product, plant life, or the establishment of vegetation.

2.6 STONE

- A. Refer to Division 31 Section "Earth Moving" for additional information.

PART 3 - EXECUTION

3.1 GENERAL

- A. Refer to the soil erosion and sediment control narrative and specification on the Contract Drawings for additional information and requirements.
- B. Install erosion and sedimentation control measures as shown on the Contract Drawings prior to any site disturbance.
- C. No work shall be started until erosion control products and installation have been accepted by the Engineer and/or the Qualified Inspector.
- D. Engineer has the authority to control the surface area of each material exposed by construction operations and to direct Contractor to immediately provide permanent or temporary pollution control measures to prevent contamination of adjacent watercourses or other areas of water impoundment. Every effort shall be made by Contractor to prevent erosion on the site and abutting properties or areas.
- E. Contractor shall construct all permanent erosion and sediment control features at the earliest practical time. Temporary erosion and sediment control measures shall be used to correct conditions that develop during construction, which were unforeseen, but are needed prior to

installation of permanent control features, or that are needed temporarily to control erosion or sedimentation which develops during construction operations.

- F. Contractor shall limit as necessary the surface area of the earth material exposed to sufficiently maintain and protect the slopes to prevent pollution. Where erosion is likely to be a problem, clearing and grubbing operations shall be scheduled and performed so that grading operations and permanent erosion and sediment control features can follow immediately thereafter, if conditions permit; otherwise, temporary control measures will be required between successive construction stages.
- G. Erosion control features installed by Contractor shall be maintained by Contractor, and he shall remove such installations only upon completion of the work and the site is stabilized or when authorized to do so by Engineer.
- H. Contractor shall operate all equipment and perform all construction operations so as to minimize pollution. Contractor shall cease any of his operations, which will increase pollution during rainstorms.
- I. Failure by Contractor to control erosion, pollution, and siltation shall be cause for the Engineer to employ outside assistance to provide the necessary corrective measures. The cost of such assistance, including engineering costs, will be charged to Contractor and appropriate deductions made to Contractor's payment.

3.2 FILTER FABRIC

- A. Inlet Protection:
 - 1. Install filter fabric between the grate and frame of inlet structures that have the potential to receive construction stormwater where the use of catch basin inlet protection is not feasible. In addition, a straw bale, or similar barrier shall be installed around the inlet structure and maintained in place until binder pavement is placed or disturbed areas draining to it are stabilized.
- B. Install filter fabric around subsurface drainage as required by the Contract Drawings.
- C. Install filter fabric as required by the Contract Documents.

3.3 EROSION CONTROL SOCKS

- A. Install along slopes, drainage paths, drainage inlets, areas to be protected from runoff and as indicated on the Drawings.
- B. Use 2" x 2" wooden stakes to hold the erosion control socks in place. Where hard surfaces prevent the use of wooden stacks, CMU blocks shall be used on the low side of the socks.

3.4 SILT FENCE

- A. Install silt fence prior to construction and remove after full surface restoration has been achieved and coordinate with construction phasing. Install silt fence as indicated on the Contract Drawings and/or as necessary to prevent off site movement of sediment produced by, or as a result of

construction activities. Install silt fence per the latest revision of the local and state guidelines for soil erosion and sediment control. When two sections adjoin each other, they shall be overlapped by 6 inches, folded and stapled.

- B. Inlet structures are to be surrounded by silt fence as indicated on the Contract Drawings.
- C. All stockpile material (topsoil, borrow, etc.) shall have a silt fence constructed around the perimeter. Topsoil stockpiles left in place for a greater than 14 days shall be temporarily seeded to minimize erosion of the soil constituents and release of soluble nutrients. During windy conditions, stockpiled material shall be covered or watered appropriately to prevent wind erosion.
- D. Install silt fence as follows:
 - 1. Hand shovel and/or carefully excavate a small trench a minimum of 6 inches wide by 6 inches deep on the upslope side of the desired fence line location.
 - 2. Unroll the siltation fence system, position the post in the back of the trench (downhill side), and hammer the post at least 18 inches into the original ground.
 - 3. Fabric rolls shall be spliced at posts. The fabric shall be overlapped by 6 inches, folded and securely fastened to posts.
 - 4. Lay the bottom 12 inches of the fabric into the trench to prevent undermining by storm water run-off.
 - 5. Backfill the trench and compact. Compaction is necessary to prevent the run-off from eroding the backfill.
 - 6. For slope and swale installations, extend the ends of the trench sufficiently up slope such that the bottom end of the fence will be higher than the top of the lowest portion of the fence.

3.5 CALCIUM CHLORIDE

- A. Control dust through the application of calcium chloride or water. An average application of one pound of calcium chloride per square yard of exposed area should be considered for each treatment. The exact number of applications and amount of dust control shall be based upon field and weather conditions. It shall be spread in such a manner and with such devices so that uniform distribution is attained. Calcium chloride shall not be applied within 50 feet of a stream bank or wetland.

3.6 RESTORATION

- A. As soon as construction is completed in a given area, it shall be top-soiled, seeded, fertilized, and/or mulched as specified on the Drawings and in Part 2 of this Specification.
- B. The responsibility for satisfactory results on the work carried out under this item rests on the Contractor regardless of the prior approval of materials and methods on the part of the Engineer. The Contractor shall maintain the restored areas until such time as the work is accepted by the Owner. Maintenance shall include all regarding, refertilizing, reseeding, remulching, etc., which may be necessary in the opinion of the Owner and the Engineer.

3.7 INSPECTIONS AND MAINTENANCE

- A. Routine erosion and sediment control system inspections shall be conducted by the Contractor's Qualified Inspector throughout the project duration. At a minimum, Contractor shall conduct weekly inspections, maintain erosion control systems in good operating condition and the. Report the results of the inspection and the recommended maintenance and/or repair requirements to Engineer. Maintain copies of all inspection and maintenance reports onsite in a binder.
- B. Additional inspections are required within 24 hours of the end of a rainfall event that generates a discharge. For storm events that end on a weekend, holiday or other time after which normal working hours will not commence within 24 hours, inspections are required within 24 hours only for storms that equal or exceed 0.5 inches. If storms are less than 0.5 inches, the inspection shall occur immediately upon the start of the subsequent normal working hours. Erosion control measures shall be repaired and employed as necessary within 24 hours.
- C. In the event that the sedimentation and erosion control measures employed by Contractor prove to be inadequate as determined by the Qualified Inspector, Owner or Engineer, the Contractor shall adjust operations to the extent necessary to prevent erosion and sediment transport, at no additional cost to the Owner.
- D. Surface water shall be pumped to maintain excavations free of water. Comply with applicable requirements of the state and local authorities.
- E. Refer to maintenance schedule on the drawings for additional requirements.
- F. Any catch basins and piping within or outside the project site that collect sediment as a result of Contractor's work shall be thoroughly cleaned out by Contractor at no additional cost to the Owner.
- G. Contractor is responsible to maintain the sediment and erosion control measures at all times throughout the project duration. Routine inspections shall be conducted at least weekly until final stabilization has been achieved.
 - 1. Final stabilization for a site means that no disturbed areas remain exposed, there is no active erosion or sedimentation present on the site, and that vegetation with 90% grass cover or permanent non-vegetative ground cover have been fully established over the entire site.

END OF SECTION 31 20 05

SECTION 32 12 16
ASPHALT PAVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Maine Department of Transportation Standard Specifications Latest Edition

1.2 SUMMARY

- A. Section Includes:
 - 1. Hot-mix asphalt paving.
 - 2. Hot-mix asphalt patching.
 - 3. Detectable warning material.

1.3 ACTION SUBMITTALS

- A. Product Data: Include technical data and tested physical and performance properties.
 - 1. Joint sealant.
- B. Hot-Mix Asphalt Designs:
 - 1. Certification, by authorities having jurisdiction, of approval of each hot-mix asphalt design proposed for the Work.
 - 2. For each hot-mix asphalt design proposed for the Work.
 - 3. Traffic marking paint.
- C. Materials Information:
 - 1. Detectable warning material.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For paving-mix manufacturer and testing agency.
- B. Material Certificates: For each paving material.
- C. Field quality-control reports.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A paving-mix manufacturer registered with and approved by authorities having jurisdiction or the DOT of state in which Project is located.
- B. Testing Agency Qualifications: Qualified in accordance with ASTM D3666 for testing indicated.
- C. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of all governing authorities for asphalt paving work.
 - 1. Measurement and payment provisions and safety program submittals included in standard specifications do not apply to this Section.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Do not apply asphalt materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure, or if the following conditions are not met:
 - 1. Tack Coat: Minimum surface temperature of 60 deg. F.
 - 2. Asphalt Base Course and Binder Course: Minimum surface temperature of 40 deg. F and rising at time of placement.
 - 3. Asphalt Surface Course: Minimum surface temperature of 60 deg. F at time of placement.
- B. Pavement-Marking Paint: Proceed with pavement marking only on clean, dry surfaces and in accordance with manufacturer's requirements.

PART 2 - PRODUCTS

2.1 AGGREGATES

- A. General: Use materials and gradations that have performed satisfactorily in previous installations.
- B. Coarse Aggregate: MaineDOT Section 703.07, crushed stone or crushed gravel, shall consist of clean, tough, durable fragments free from an excess of soft or disintegrated pieces and free from stone coated with dirt or other objectional matter.
- C. Fine Aggregate: MaineDOT Section 703.07, natural sand, manufactured sand, or a combination of these, shall consist of hard, tough grains, free from injurious amounts of clay, loam, or other deleterious substances.
 - 1. For hot-mix asphalt, limit natural sand to a maximum of 20 percent by weight of the total aggregate mass.

2.2 ASPHALT MATERIALS

- A. Asphalt Binder: AASHTO M 332. Performance grade as required by state DOT specifications where project is located.

- B. Tack Coat: ASTM D977 emulsified asphalt, or ASTM D2397/D2397M cationic emulsified asphalt, slow setting, diluted in water, of suitable grade and consistency for application. Verify acceptance with state DOT where project is located.
- C. Water: Potable.

2.3 AUXILIARY MATERIALS

- A. Sand: ASTM D1073, Grade No. 2 or No. 3.
- B. Joint Sealant: ASTM D6690, Type II or III, hot-applied, single-component, polymer-modified bituminous sealant.
- C. Pavement-Marking Paint:
 - 1. Waterborne pavement marking paint complying with state DOT where project is located.
 - a. Color: White unless noted otherwise.

2.4 MIXES

- A. Hot-Mix Asphalt: Dense-graded, hot-laid, hot-mix asphalt plant mixes approved by authorities having jurisdiction and complying with the following requirements:
 - 1. Provide mixes with a history of satisfactory performance in geographical area where Project is located.
 - 2. Asphaltic Top Wearing Course – MaineDOT Section 703.09, Type 9.5 mm
 - 3. Asphaltic Binder Course – MaineDOT Section 703.09, Type 19 mm
- B. Emulsified-Asphalt Slurry: ASTM D3910 Type 2

2.5 DETECTABLE WARNING MATERIALS

- A. Detectable Warning Tile: Tile to be cast in wet concrete.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - a. ADA Solutions, LLC.
 - b. Ultra Tech.
 - 2. Color/Material: Unpainted/Cast Iron

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that subgrade is dry and in suitable condition to begin paving.

- B. Proceed with paving only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Protection: Provide protective materials, procedures, and worker training to prevent asphalt materials from spilling, coating, or building up on curbs, driveway aprons, manholes, and other surfaces adjacent to the Work.
- B. Proof-roll subgrade below pavements with heavy pneumatic-tired equipment to identify soft pockets and areas of excess yielding. Do not proof-roll wet or saturated subgrades.
 - 1. Completely proof-roll subgrade in one direction, repeating proof-rolling in direction perpendicular to first direction. Limit vehicle speed to 3 mph.
 - 2. Proof-roll with a loaded 10-wheel, tandem-axle dump truck weighing not less than 15 tons.
 - 3. Excavate soft spots, unsatisfactory soils, and areas of excessive pumping or rutting, as determined by Engineer, and replace with compacted backfill or fill as directed.

3.3 PATCHING

- A. Asphalt Pavement: Saw cut perimeter of patch and excavate existing pavement section to sound base. Excavate rectangular or trapezoidal patches, extending 12 inches into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Remove excavated material. Recompact existing unbound-aggregate base course to form new subgrade.
- B. Portland Cement Concrete Pavement: Break cracked slabs and roll as required to reseal concrete pieces firmly.
 - 1. Undersealing: Pump hot undersealing asphalt under rocking slab until slab is stabilized or, if necessary, crack slab into pieces and roll to reseal pieces firmly.
 - 2. Remove disintegrated or badly cracked pavement. Excavate rectangular or trapezoidal patches, extending into perimeter of adjacent sound pavement, unless otherwise indicated. Cut excavation faces vertically. Recompact existing unbound-aggregate base course to form new subgrade.
- C. Tack Coat: Before placing patch material, apply tack coat uniformly to vertical asphalt surfaces abutting the patch. Apply at a rate of 0.05 to 0.15 gal./sq. yd..
 - 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.
- D. Placing Two-Course Patch Material: Partially fill excavated pavements with hot-mix asphalt base course mix and, while still hot, compact. Cover asphalt base course with compacted layer of hot-mix asphalt surface course, finished flush with adjacent surfaces.

3.4 REPAIRS

- A. Leveling Course: Install and compact leveling course consisting of hot-mix asphalt surface course to level sags and fill depressions deeper than 1 inch in existing pavements.

1. Install leveling wedges in compacted lifts not exceeding 3 inches thick.
- B. Crack and Joint Filling: Remove existing joint filler material from cracks or joints to a depth of 1/4 inch.
 1. Clean cracks and joints in existing hot-mix asphalt pavement.
 2. Use emulsified-asphalt slurry to seal cracks and joints less than 1/4 inch wide. Fill flush with surface of existing pavement and remove excess.
 3. Use hot-applied joint sealant to seal cracks and joints more than 1/4 inch wide. Fill flush with surface of existing pavement and remove excess.

3.5 SURFACE PREPARATION

- A. Ensure that prepared subgrade has been proof-rolled and is ready to receive paving. Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces.
- B. Cutback Prime Coat: Apply uniformly over surface of compacted unbound-aggregate base course at a rate of 0.15 to 0.50 gal./sq. yd.. Apply enough material to penetrate and seal, but not flood, surface. Allow prime coat to cure.
 1. If prime coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.
 2. Protect primed substrate from damage until ready to receive paving.
- C. Emulsified Asphalt Prime Coat: Apply uniformly over surface of compacted unbound-aggregate base course at a rate of 0.10 to 0.30 gal./sq. yd. per inch depth. Apply enough material to penetrate and seal, but not flood, surface. Allow prime coat to cure.
 1. If prime coat is not entirely absorbed within 24 hours after application, spread sand over surface to blot excess asphalt. Use enough sand to prevent pickup under traffic. Remove loose sand by sweeping before pavement is placed and after volatiles have evaporated.
 2. Protect primed substrate from damage until ready to receive paving.
- D. Tack Coat: Apply uniformly to surfaces of existing pavement that has been in place three calendar days or longer at a rate of 0.05 to 0.15 gal./sq. yd..
 1. Allow tack coat to cure undisturbed before applying hot-mix asphalt paving.
 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.6 HOT-MIX ASPHALT PLACEMENT

- A. Machine place hot-mix asphalt on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand in areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness when compacted.
 1. Place hot-mix asphalt base course and binder course in number of lifts and thicknesses as specified by state DOT where project is located.
 2. Place hot-mix asphalt surface course in number of lifts and thicknesses as specified by state DOT where project is located.

3. Spread mix at a minimum temperature of 250 deg. F.
 4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes unless otherwise indicated.
 5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet wide unless infill edge strips of a lesser width are required.
1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Overlap mix placement about 1 to 1-1/2 inches from strip to strip to ensure proper compaction of mix along longitudinal joints.
 2. Complete a section of asphalt base course and binder course before placing asphalt surface course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.7 JOINTS

- A. Construct joints to ensure a continuous bond between adjoining paving sections. Construct joints free of depressions, with same texture and smoothness as other sections of hot-mix asphalt course.
1. Clean contact surfaces and apply tack coat to joints.
 2. Offset longitudinal joints, in successive courses, a minimum of 6 inches.
 3. Offset transverse joints, in successive courses, a minimum of 24 inches.
 4. Construct transverse joints at each point where paver ends a day's work and resumes work at a subsequent time. Construct these joints using either "bulkhead" or "papered" method in accordance with AI MS-22, for both "Ending a Lane" and "Resumption of Paving Operations."
 5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.
 6. Compact asphalt at joints to a density within 2 percent of specified course density.

3.8 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot hand tampers or with vibratory-plate compactors in areas inaccessible to rollers.
1. Complete compaction before mix temperature cools to 185 deg. F.
- B. Breakdown Rolling: Complete breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Correct laydown and rolling operations to comply with requirements.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:

1. Average Density: Each course placed at a depth of 1-1/2 inches or greater shall have the mat and longitudinal joints compacted to a minimum of 92.0 percent and not more than 97.0 percent density as determined by AASHTO T209 (modified).
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while asphalt is still hot; compact thoroughly.
- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.9 INSTALLATION TOLERANCES

- A. Pavement Thickness: Compact each course to produce thickness indicated within the following tolerances:
 1. Surface Binder Course: Plus or minus 1/2 inch.
 2. Surface Wearing Course: Plus 1/4 inch, no minus.
- B. Pavement Surface Smoothness: Compact each course to produce surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to paved areas:
 1. Surface Binder Course: 1/4 inch.
 2. Surface Wearing Course: 1/8 inch.
 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch.

3.10 PAVEMENT MARKING

- A. Do not apply pavement-marking paint until layout, colors, and placement have been verified with Architect and/or Engineer.
- B. Allow paving to age for 30 days before starting pavement marking.
- C. Sweep and clean surface to eliminate loose material and dust.
- D. Apply paint with mechanical equipment to produce pavement markings, of dimensions indicated, with uniform, straight edges. Apply at manufacturer's recommended rates to provide a minimum wet film thickness of 15 mils.

3.11 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.
- B. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined in accordance with ASTM D3549/D3549M.
- C. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.
- D. In-Place Density: Field density of in-place compacted pavement shall be determined by nuclear method according to ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726.
 - 1. Provide one test for every 2,000 sq. ft. or less of installed pavement, with no fewer than three tests taken.
- E. Replace and compact hot-mix asphalt where core tests were taken.
- F. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

3.12 WASTE HANDLING

- A. General: Handle asphalt-paving waste in accordance with approved waste management plan required in Section 017419 "Construction Waste Management and Disposal."

3.13 INSTALLATION OF DETECTABLE WARNINGS

- A. Install per manufacturer's recommendations.

3.14 AS-BUILT DRAWINGS

- A. The contractor shall provide as-built drawings mark-ups on a monthly basis. As work progresses, all construction activities shall be documented. The record documents shall include:
 - 1. Location and extent of curbs, pavements, wheel stops, traffic calming devices.
 - 2. The contractor shall hire the services of a surveyor licensed in the state where the work is being performed to determine parameters stated above or completed work and record the results and update the electronic files. As-builts shall include horizontal and vertical locations (elevations) at 50-foot increments.
 - 3. Final documents (drawings and electronic files in AutoCAD format, latest edition), shall be submitted to the designated owner's representative not later than 30 days after substantial completion of the project. All comments shall be incorporated into the final documents within 14 days after receiving them from the owner's representative. The final record set (hard copy and electronic files) shall be submitted to the owner's representative.

END OF SECTION 32 12 16

SECTION 33 00 00
UTILITY AS-BUILT DOCUMENTATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:

- 1. Utility Record "As-Built" documentation submittals.

1.3 AS-BUILT SURVEY RECORDING DOCUMENTATION FOR UNDERGROUND UTILITIES AND STRUCTURES.

- A. General:

- 1. When the subsurface is open and there are new and/or existing utilities, known or unforeseen, or abandon piping/duct bank conditions exposed, Contractor is responsible for subcontracting with a surveyor licensed in the State the work is being performed and proficient in as-built survey mapping to collect the data as outlined in this Section for all new and/or existing utilities or abandon piping/ductbanks prior to backfilling. Should Contractor fail to properly survey the conditions, at the Contractor's cost, they shall open up the subsurface so that such conditions can be properly documented as outlined.

- B. Preparation: Provide field survey of each newly installed utility and exposed existing or abandon utilities while performing the work. Not all utilities listed within this Section may be encountered.

- 1. Maintain one complete electronic Utility As-Built Set of actual field locations of newly installed utilities and exposed existing or abandon utilities. Such As-Built Set is to be kept current and must be delivered to the Owner in the form of both electronic PDFs and most current version of AutoCAD .dwg file format as a condition of reaching completion and final payment on the Project.
 - 2. Contractor shall submit progress utility as-built documentation on a monthly basis. Monthly progress mapping shall be in the form of both electronic PDFs and most current version of AutoCAD .dwg file format. Progress mapping shall be complete with the information required in this Section for work completed at the time of the progress submission.
 - 3. Updates shall be continuous with progress recorded within two weeks of the installation. Upon request, Contractor shall provide electronic PDF and most current version of AutoCAD .dwg file format of surveys documented to date of newly installed utilities and exposed existing utilities with all information as required.
 - 4. Document installation with photographs in digital high quality JPG2 format, especially but not limited to, field joints, bedding material, anchors, and pipe connections to buildings. Identify where photos are taken on a site map/drawing.

5. Contractor shall submit final utility as-built documentation not later than 30 days after substantial completion of the project. Contractor shall incorporate all comments into the final documents within 14 days after receiving them from the Owner's representative. Final utility as-built documentation shall be in the form of both electronic PDFs and the most current version of AutoCAD .dwg file format. Final documents shall be complete with the information required in this Section for all work completed for the project.
- C. Format: As-built set shall be submitted in the form of both electronic PDFs and most current version of AutoCAD .dwg file format and in a format as follows:
1. All information added to the base AutoCAD drawing shall be on layers starting with AB-XXXX (example, as-built gas shall be on a drawing layer titled AB-GAS).
 2. For utility as-built documentation, utilize survey equipment capable to locate infrastructure to a Utility Quality Level A as defined in the ASCE38-02 Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data.
 3. "Red-lined" mark-ups of the designers' documents will not be accepted. Provide DWG and PDF for as-built drawings.
- D. As-Built Data:
1. Aboveground surface fixtures data shall be measured data limited to the following data points:
 - a. Light Fixtures:
 - 1) Location, type.
 - b. Access Valve Boxes:
 - 1) Location, type.
 - c. Post Indicator Valves (PIV):
 - 1) Location, type.
 - d. Hydrants:
 - 1) Location, type.
 2. Utility measuring data to be provided shall be limited to the following data points:
 - a. Sanitary Sewer:
 - 1) Manhole: Size, horizontal location, rim elevation, and invert elevation.
 - 2) Pump Stations: Size, horizontal location, rim elevation, and invert elevation.
 - 3) Cleanout: Horizontal location, rim elevation, and invert elevation.
 - 4) Gravity Pipe: Size, material, elevation at all changes in direction vertical and horizontal.
 - 5) Force Main: Size, material, elevation at all changes in direction vertical and horizontal and at every 50 feet.
 - 6) Building Invert: Size, material, horizontal location, and invert at face of building.

b. Storm Sewer:

- 1) Inlet/Manhole: size, horizontal location, rim elevation, and invert elevation.
- 2) Cleanout: Horizontal location, rim elevation, and invert elevation.
- 3) Gravity Pipe: Size, material, elevation at all changes in direction vertical and horizontal.
- 4) Force Main: Size, material, elevation at all changes in direction vertical and horizontal and at every 50 feet.
- 5) Building Invert: Size, material, horizontal location, and invert at face of building.
- 6) Underground Detention/Infiltration System: Size, material, horizontal location, top of system (pipe or chamber) elevation.

c. Water/Fire and Reclaimed Water:

- 1) Valves: Type, horizontal location, rim/cover elevation, and top of valve (pipe) elevation.
- 2) Hydrants: Horizontal location, base elevation.
- 3) Piping: Type, size, material, elevation (top of pipe) at all changes in direction vertical and horizontal and at every 50 feet.
- 4) Building Lateral: Type, size, material, horizontal location and elevation (top of pipe) at face of building.

d. Steam, Condensate (All types), Hot Water, Chilled Water and Geothermal Piping and Bore Field:

- 1) Valves: Type, horizontal location, rim/cover elevation, and top of valve (pipe) elevation.
- 2) Vaults: Type, horizontal location, rim elevation, bottom structure (interior floor) elevation, location and elevation of outer edges of structure (corners), elevation of piping at face of vault (top of carrier pipe).
- 3) Piping: Type, size, material, elevation (top of carrier pipe) at all changes in direction vertical and horizontal, field joints, and at every 50 feet.
- 4) Tracer Wire Boxes: Type, horizontal location and rim elevation.
- 5) Tracer Wire Splice Points: Type and horizontal location.
- 6) Building Lateral: Type, size, material, horizontal location and elevation (top of carrier pipe) at face of building.
- 7) Vent Structures: Horizontal location, rim elevation, and top of pipe elevation.
- 8) Vent Piping: Size, material, elevation (top of pipe) at all changes in direction vertical and horizontal.
- 9) Geothermal Field - Bores: Horizontal location, elevation of top of bore.

e. Low-Voltage and Medium-Voltage Electrical (Including Site Lighting, Telecommunications, Fire Alarm, and Emergency Phones):

- 1) Provide electrical utilities, telecommunications, fire alarm, site lighting, and emergency phones on separate layers, including applicable duct banks, vaults, etc.
- 2) Vaults/Manholes: Type, horizontal location, rim elevation, bottom structure (interior floor) elevation, location and elevation of outer edges of structure (corners), elevation and width of concrete and/or conduit at face of vault (top of concrete/conduit(s)).
- 3) Duct Bank/Conduits: Type, size, quantity, material, elevation (top of concrete for encased in concrete/conduit for direct bury) at all changes in direction vertical and horizontal and at every 50 feet.

- a) Triangulation reference distances from permanent landmarks to points along path of duct bank to identify duct bank vault locations, changes in path direction, changes in configuration, and termination points.
- 4) Building Lateral: Type, size, quantity, material, elevation (top of concrete for encased in concrete/conduit for direct bury) at face of building.
- 5) Site Lighting/Emergency Phone: Type, horizontal location, elevation of concrete base. Identify source of voltage location and routing.
- 6) Transformer/Switchgear/Generator: Type, horizontal location, elevation of outer edges of concrete base (corners).
- f. Gas:
 - 1) Valves: Horizontal location, rim/cover elevation, and top of valve (pipe) elevation.
 - 2) Piping: Size, elevation (top of pipe) at all changes in direction vertical and horizontal and at every 50 feet.
 - 3) Building Lateral: Size, horizontal location and elevation (top of pipe) at face of building.
- g. Uncovered Structures:
 - 1) Existing structures that are uncovered during excavation for contracted work shall be measured for location and when easily known, identify the utility or structure it is. The Contractor and Surveyor shall not be required to perform additional excavation beyond what was already performed during performing contract work. Such location, identification and type of structure shall be logged and incorporated into the overall survey as-built as base contract work.
- h. Utility record data (survey shots) shall also be provided in the form of a separate Excel spreadsheet for each utility, with utility identification, northing, easting, elevation, and size at each location.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 33 00 00

NO.	DESCRIPTION	DATE
1	ADDENDUM 04	07/23/2026

CONTENT:	
CIVIL ABBREVIATIONS, SYMBOL LEGEND AND GENERAL NOTES	
DRAWN BY:	GIMAS
PROJECT NO:	25-062-00
DATE:	07/23/2026
REVISED:	
SCALE:	
C0.1	
Project Phase	
CONSTRUCTION DOCUMENTS	
COPYRIGHT © 2025 BY LAVALLEEBRENSINGER PROFESSIONAL ASSOCIATION. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

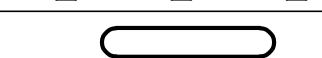
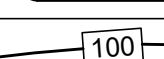
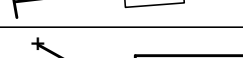
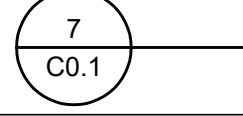
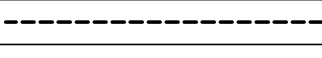
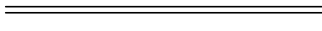
NEW CIVIL ABBREVIATIONS LEGEND

(NOTE: NOT ALL ABBREVIATIONS USED)

AD	AREA DRAIN	HTHW	HIGH TEMPERATURE HOT WATER
AFF	ABOVE FINISH FLOOR	HTHWS	HIGH TEMPERATURE HOT WATER SUPPLY
ALT	ALTERNATE		
ARCH	ARCHITECTURAL	HTHWR	HIGH TEMPERATURE HOT WATER RETURN
AVG	AVERAGE	HWR	HOT WATER RETURN
BC	BOTTOM OF CURB	HWRR	HOT WATER REVERSE RETURN
BIT	BITUMINOUS	HWS	HOT WATER SUPPLY
BLDG	BUILDING	ID	INSIDE DIAMETER
BM	BENCH MARK	IN	INCH OR INCHES
BOT	BOTTOM	INV	INVERT
BSMT	BASEMENT	JT	JOINT
BW	BOTTOM OF WALL	LP	LOW POINT
C	CENTER LINE	LPC	LOW PRESSURE CONDENSATE
CB	CATCH BASIN	LPS	LOW PRESSURE STEAM
CHWR	CHILLED WATER RETURN	MAX	MAXIMUM
CHWS	CHILLED WATER SUPPLY	MECH	MECHANICAL
CJ	CAST IRON	MH	MANHOLE
CL	CONTROL JOINT	MIN	MINIMUM
CLL	CONTRACT LIMIT LINE	MISC	MISCELLANEOUS
CMP	CORRUGATED METAL PIPE	MPC	MEDIUM PRESSURE CONDENSATE
CMU	CONCRETE MASONRY UNIT	MPS	MEDIUM PRESSURE STEAM
CO	CLEAN OUT	N	NORTH
CONC	CONCRETE	NIC	NOT IN CONTRACT
COND	CONDENSATE	NO	NUMBER
CONST	CONSTRUCTION	NTS	NOT TO SCALE
CONT	CONTINUOUS, CONTINUE	O/C	ON CENTER
CU FT	CUBIC FEET	OD	OUTSIDE DIAMETER
CU YD	CUBIC YARD	P	POLE/PHASE
CW	COLD WATER	PCR	PUMPED CONDENSATE RETURN
CWR	CONDENSER WATER RETURN	(STEAM)	
CWS	CONDENSER WATER SUPPLY	PE	PRIMARY ELECTRIC
DBL	DOUBLE	PNL	PANEL
DET	DETAIL	PSI	POUNDS PER SQ IN
DI	DUCTILE IRON	PT	POINT
DIA	DIAMETER	PVC	POLYVINYL CHLORIDE
DIAG	DIAGONAL	QTY	QUANTITY
DIM	DIMENSION	R	RADIUS
DWG	DRAWING	RCP	REINFORCED CONCRETE PIPE
E	EAST	RGS	RIGID GALVANIZED STEEL
EA	EACH	REINF	REINFORCED
EF	EACH FACE	ROW	RIGHT OF WAY
EJ	EXPANSION JOINT	S	SOUTH
ELEV	ELEVATION	SAN	SANITARY
ELEC	ELECTRIC	SDMH	STORM DRAINAGE MANHOLE
EOP	EDGE OF PAVEMENT	SE	SECONDARY ELECTRIC
EP	EMERGENCY PHONE	SMH	SANITARY MANHOLE
EQ	EQUAL	SPEC	SPECIFICATIONS
EW	EACH WAY	SQ	SQUARE
EX	EXISTING	SS	STAINLESS STEEL
EXT	EXTERIOR	SD	STORM DRAINAGE
FA	FIRE ALARM	STA	STATION
FD	FOOTING DRAIN	STD	STANDARD
FDN	FOUNDATION	STM	STEAM
FF	FINISHED FLOOR	T & B	TOP AND BOTTOM
FM	FORCE MAIN	TC	TOP OF CURB
F	FIRE SERVICE	TEL	TELECOMMUNICATIONS
FT	FEET	TF	TOP OF FRAME
FTG	FOOTING	TW	TOP OF WALL
GALV	GALVANIZED	TYP	TYPICAL
GC	GENERAL CONTRACTOR	UG	UNDERGROUND
GEN	GENERATOR	VERT	VERTICAL
GFI	GROUND FAULT INTERRUPTER	VIF	VERIFY IN FIELD
GND	GROUND	W	WEST/WATER SERVICE
HDPE	HIGH DENSITY POLYETHYLENE	WP	WORKING POINT
HORIZ	HORIZONTAL	WWF	WELDED WIRE FABRIC
HP	HIGH POINT	YD	YARD DRAIN
HPC	HIGH PRESSURE CONDENSATE		
HPS	HIGH PRESSURE STEAM		

NEW CIVIL SYMBOL LEGEND

(NOTE: NOT ALL SYMBOLS USED)

	VALVE
	POST INDICATOR VALVE
	WATER DISTRIBUTION
	SILT FENCE
	EROSION CONTROL SOCK
	CONTOUR
	SPOT ELEVATION
	FLUSH
	DETAIL REFERENCE NUMBER
	SEE THIS DETAIL DRAWING
	PAVEMENT SAW CUT LINE
	BITUMINOUS CURB

CIVIL GENERAL NOTES

1. BASE INFORMATION IS TAKEN FROM AVAILABLE SURVEY PLANS PREPARED BY SAM, NEWMARKET, NEW HAMPSHIRE DATED JUNE 24, 2026. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF NEW WORK. BVH INTEGRATED SERVICES A SALAS O'BRIEN COMPANY ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE SURVEY NOR CHANGES TO THE WORK DUE TO ERROR IN THE SURVEY.
2. PRIOR TO COMMENCING CONSTRUCTION NOTIFY DIGSAFE (811) OR 1-888-DIGSAFE FOR FIELD LOCATION AND MARKING OF SUBSURFACE UTILITIES AT LEAST 48 HOURS IN ADVANCE BUT NO MORE THAN 30 DAYS. THE CONTRACTOR SHALL ALSO OBTAIN THE SERVICES OF A QUALIFIED UNDERGROUND UTILITY LOCATION FIRM, AT NO COST TO THE OWNER, TO VERIFY LOCATIONS OF UNDERGROUND UTILITIES NOT IDENTIFIED BY DIGSAFE (811) OR 1-888-DIGSAFE.
3. ALL CONSTRUCTION METHODS SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS AND ANY REFERENCED STANDARDS SUCH AS BUT NOT LIMITED TO THE FOLLOWING:
 - A. THE STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS (LATEST EDITION, AS AMENDED).
 - B. MATERIAL AND INSTALLATION SPECIFICATIONS OF EACH UTILITY COMPANY.
 - C. SPECIFIC CITY OF SOUTH PORTLAND REQUIREMENTS.
 - D. MAINE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (LATEST EDITION, AS AMENDED).ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND SPECIFICATIONS AND REFERENCED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
4. PROVIDE ALL NECESSARY SURVEY WORK REQUIRED FOR THE CONSTRUCTION STAKE-OUT AND PRODUCTION OF AS-BUILT PLANS. AS-BUILT PLANS SHALL SHOW LOCATION AND ELEVATION OF CONSTRUCTED BUILDINGS, STRUCTURES, EQUIPMENT, PIPING AND CONDUITS. CONTRACTOR TO PROVIDE RECORD DRAWINGS TO THE OWNER AT THE END OF THE PROJECT. REFER TO SPECIFICATIONS FOR REQUIREMENTS.
5. OBTAIN ALL NECESSARY PERMITS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DEVELOP THE CONSTRUCTION SCHEDULE AND PHASING. COORDINATE ALL ACTIVITIES WITH THE STATE OF MAINE AND THE CITY OF SOUTH PORTLAND AND NOTIFY ADJACENT PROPERTY OWNERS, AS REQUIRED. NOTIFY NECESSARY PARTIES AT LEAST 5 DAYS IN ADVANCE.
7. ALL EXISTING SITE UTILITIES WHICH ARE NOT INDICATED ON PLANS SHALL NOT BE INTERRUPTED FROM CONTINUOUS SERVICE. CONTRACTOR TO NOTIFY ENGINEER OF ANY CONFLICTS OR CONCERNS. EXISTING UTILITIES TO REMAIN ARE TO BE PROTECTED DURING CONSTRUCTION.
8. ESTABLISH AND MAINTAIN AT LEAST TWO BENCHMARKS ON SITE FOR VERTICAL AND HORIZONTAL CONTROL.
9. SAFETY ISSUES & HOURS OF OPERATION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE TO BE COORDINATED & APPROVED BY THE OWNER.

SMCC

**HEALTH SCIENCE
CENTER**

BGS NUM: 3809

79 Fort Road, South Portland, Maine,
04106

NO.	DESCRIPTION	DATE
1	ADDENDUM 04	07/23/2026

DEMOLITION GENERAL NOTES:

- ALL EXISTING UTILITIES, PLANTINGS, SIGNS, CURBING, PAVEMENT, SITE WALLS, ETC. SHOWN IN BOLD TO BE REMOVED.
- COORDINATE LIMIT OF DEMOLITION WITH ALL PROPOSED WORK.
- EXISTING BITUMINOUS PAVEMENT TO BE SAWCUT AT ALL LOCATIONS WHERE EXISTING BITUMINOUS PAVEMENT WILL MATCH NEW BITUMINOUS PAVEMENT.
- EXISTING SIDEWALKS (BITUMINOUS AND CONCRETE) TO BE SAWCUT AT ALL LOCATIONS WHERE EXISTING SIDEWALKS MATCH NEW SIDEWALKS. CONCRETE SIDEWALKS TO BE SAWCUT AT JOINTS.
- CONTRACTOR IS TO PROTECT AND MAINTAIN ALL EXISTING UTILITIES AND SITE IMPROVEMENTS TO REMAIN.
- CONTRACTOR TO INSTALL ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AND TREE PROTECTION FENCING PRIOR TO START OF DEMOLITION OR CONSTRUCTION.

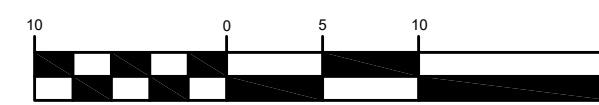
SITE DEMOLITION MATERIAL LEGEND:



**SOIL EROSION AND SEDIMENTATION
CONTROL GENERAL NOTES:**

- REFER TO C6.1 FOR SOIL EROSION AND SEDIMENTATION CONTROL NARRATIVE.
- THE CONTRACTOR SHALL PROVIDE FINAL STABILIZATION IN ALL AREAS WHERE WORK HAS BEEN COMPLETED. CONTRACTOR SHALL MAINTAIN PERIMETER CONTROL MEASURES UNTIL SUCH TIME THE ENGINEER, OWNER AND QUALIFIED INSPECTOR DEEM THE SITE STABILIZED. THE CONTRACTOR, AT THAT TIME, SHALL REMOVE ANY REMAINING TEMPORARY MEASURES INCLUDING RESTORATION OF DISTURBED AREAS DUE TO REMOVAL OF TEMPORARY MEASURES.

GRAPHIC SCALE



(IN FEET)
1 inch = 10 ft.



CONTENT:	
SITE DEMOLITION, SOIL EROSION AND SEDIMENTATION CONTROL PLAN	
DRAWN BY:	GIMAS
PROJECT NO:	25-062-00
DATE:	07/23/2026
REVISED:	
SCALE:	1" = 10'
C1.1	
Project Phase	CONSTRUCTION DOCUMENTS
COPYRIGHT © 2025 BY LAVALLEEBRENSINGER PROFESSIONAL ASSOCIATION. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

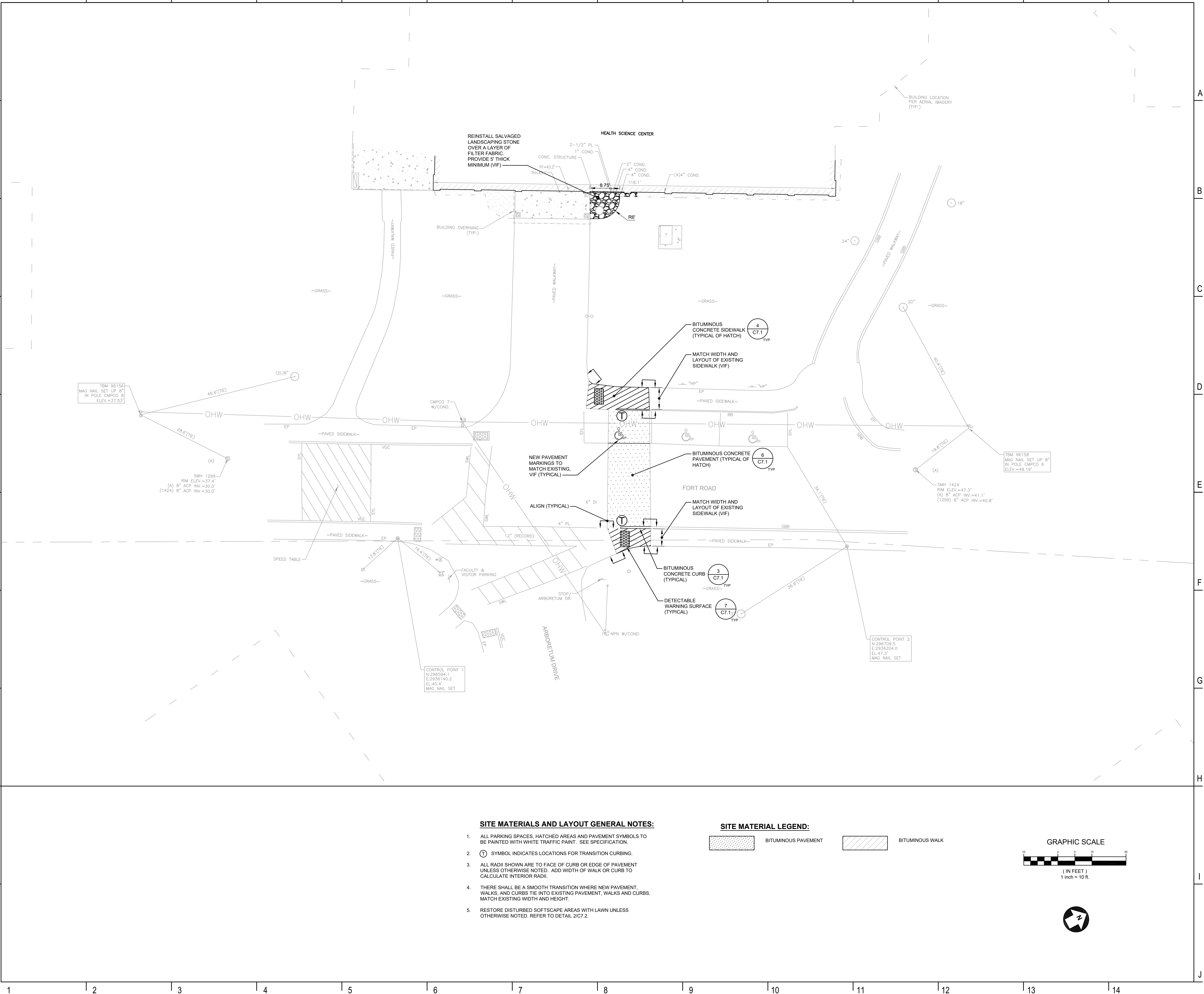
HEALTH SCIENCE
CENTER

BGS NUM: 3809

79 Fort Road, South Portland, Maine,
04106

NO.	DESCRIPTION	DATE
1	ADDENDUM 04	07/23/2026

CONTENT: SITE MATERIALS PLAN
DRAWN BY: GIMAS
PROJECT NO: 25-062-00
DATE: 07/23/2026
REVISED:
SCALE: 1" = 10'
C2.1
Project Phase CONSTRUCTION DOCUMENTS
COPYRIGHT © 2025 BY LAVALLEEBRENSINGER PROFESSIONAL ASSOCIATION. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.



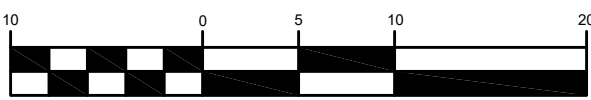
SITE MATERIALS AND LAYOUT GENERAL NOTES:

- ALL PARKING SPACES, HATCHED AREAS AND PAVEMENT SYMBOLS TO BE PAINTED WITH WHITE TRAFFIC PAINT. SEE SPECIFICATION.
- Ⓢ SYMBOL INDICATES LOCATIONS FOR TRANSITION CURBING.
- ALL RADIi SHOWN ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. ADD WIDTH OF WALK OR CURB TO CALCULATE INTERIOR RADIi.
- THERE SHALL BE A SMOOTH TRANSITION WHERE NEW PAVEMENT, WALKS, AND CURBS TIE INTO EXISTING PAVEMENT, WALKS AND CURBS. MATCH EXISTING WIDTH AND HEIGHT.
- RESTORE DISTURBED SOFTSCAPE AREAS WITH LAWN UNLESS OTHERWISE NOTED. REFER TO DETAIL 2/C7.2.

SITE MATERIAL LEGEND:

- BITUMINOUS PAVEMENT
- BITUMINOUS WALK

GRAPHIC SCALE



CONTENT:	
SITE UTILITY AND GRADING PLAN	
DRAWN BY:	GUWAS
PROJECT NO:	25-062-00
DATE:	07/23/2026
REVISED:	
SCALE:	1" = 10'
C3.1	
Project Phase	
CONSTRUCTION DOCUMENTS	
COPYRIGHT © 2025 BY LVAALLEEBRENNINGER PROFESSIONAL ARCHITECT. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

FOR ADDITIONAL INFORMATION, REFER TO PROJECT MANUAL.



SMCC

**HEALTH SCIENCE
CENTER**

BGS NUM: 3809

79 Fort Road, South Portland, Maine,
04106

NO.	DESCRIPTION	DATE
1	ADDENDUM 04	07/23/2026

GRAPHIC SCALES



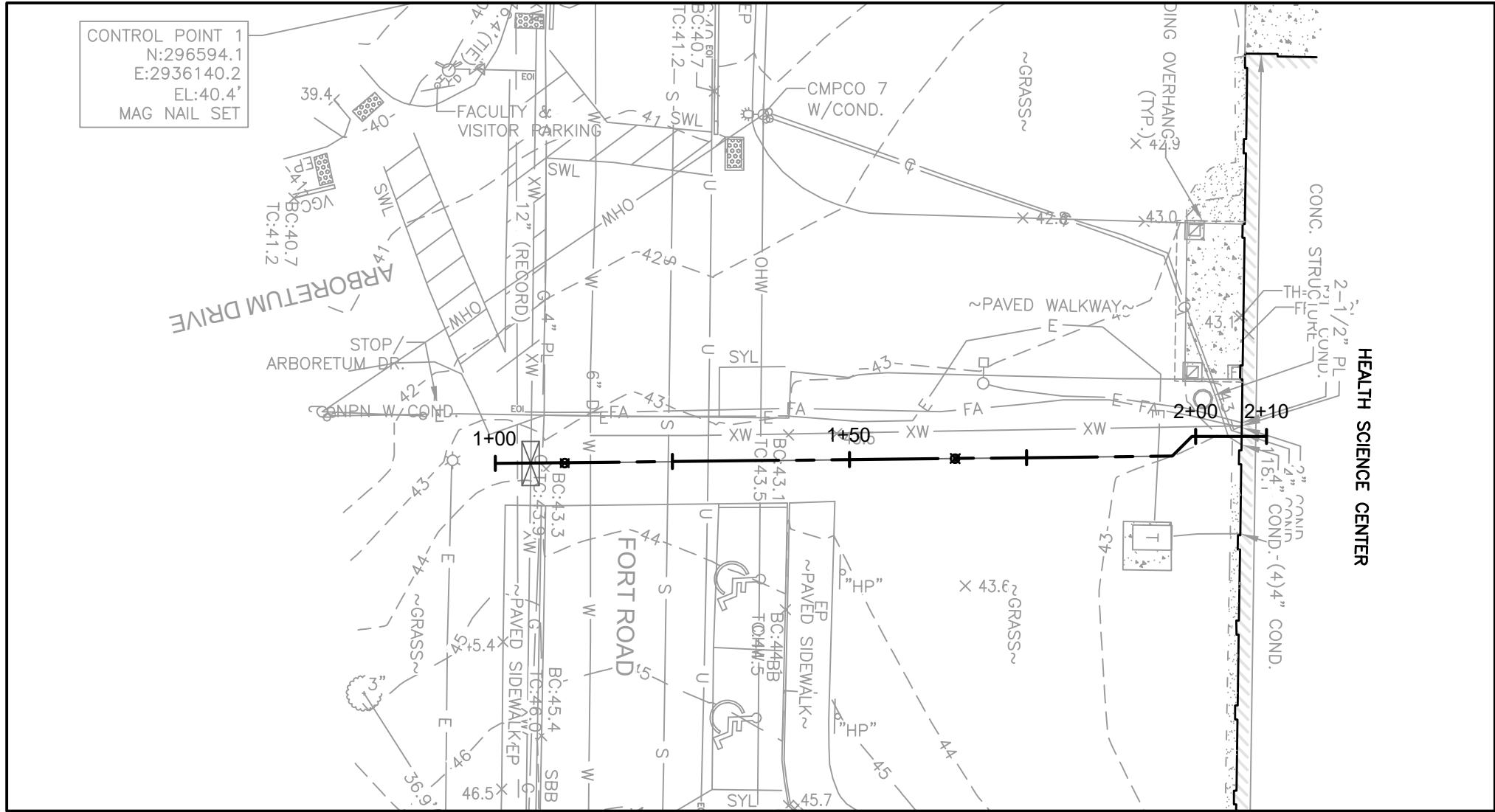
(IN FEET)
1 inch = 20 ft. (HORIZONTAL)



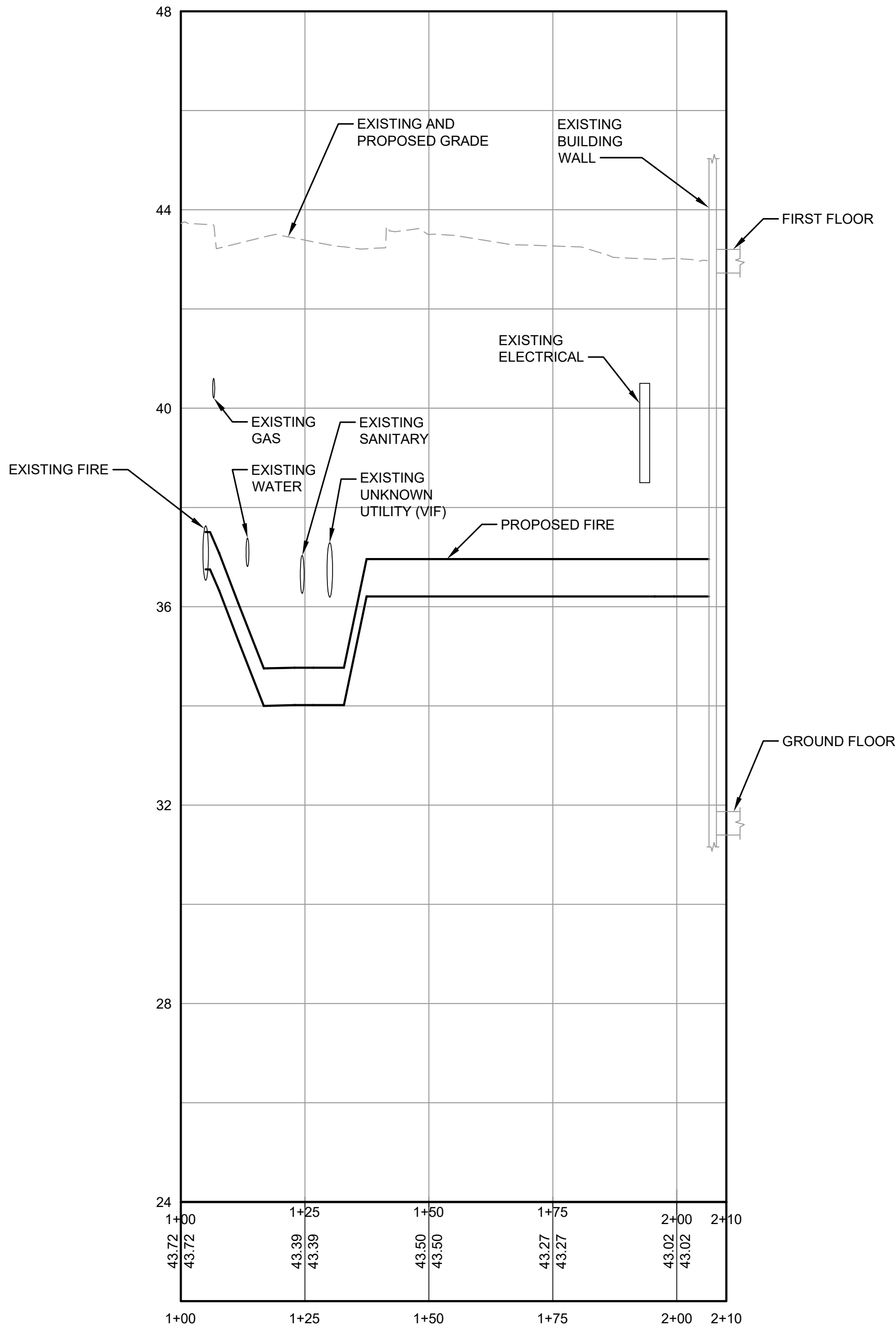
(IN FEET)
1 inch = 2 ft. (VERTICAL)

PLAN AND PROFILE GENERAL NOTES:

- INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE.
- LOCATIONS OF EXISTING UTILITIES SHOWN ON PROFILE DRAWINGS NOT RELATED TO STORM OR SANITARY I.E. "ELECTRICAL", "TELECOMMUNICATIONS", "GAS" ETC. ARE BASED ON ASSUMED TYPICAL COVER REQUIREMENTS AND HAVE NOT BEEN FIELD VERIFIED.
- LOCATIONS OF EXISTING STORM AND SANITARY SHOWN ON PROFILE DRAWINGS ARE BASED ON INVERTS PROVIDED BY THE SURVEY AND CALCULATED PIPE SLOPES TO DETERMINE INVERT ELEVATIONS AT CROSSINGS OF PROPOSED UTILITIES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO INSTALLATION OF NEW WORK. MEANS AND METHODS FOR VERIFICATION OF EXISTING UTILITIES TO BE DETERMINED BY THE CONTRACTOR AND COORDINATED WITH THEIR CONSTRUCTION ACTIVITIES. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES AT A MINIMUM OF THREE (3) BUSINESS DAYS IN ADVANCE OF SCHEDULED INSTALLATION OF NEW WORK. ANY NEW WORK THAT IS INSTALLED WITHOUT PRIOR VERIFICATION OF EXISTING UTILITIES THAT REQUIRES REMOVAL AND REINSTALLATION SHALL BE PERFORMED AT NO COST TO THE OWNER.



1 PLAN: PROPOSED FIRE PROTECTION (EXISTING MAIN TO BUILDING)
1"=20'



2 PROFILE: PROPOSED FIRE PROTECTION (EXISTING MAIN TO BUILDING)
H: 1"=20'; V: 1"=2'

FOR ADDITIONAL INFORMATION, REFER TO PROJECT MANUAL.

CONTENT:	
SITE UTILITY PLAN AND PROFILE	
DRAWN BY:	GIMAS
PROJECT NO:	25-062-00
DATE:	07/23/2026
REVISED:	
SCALE:	1" = 10'
C3.1	
Project Phase	
CONSTRUCTION DOCUMENTS	
COPYRIGHT © 2025 BY LAVALLEE/BRENSINGER PROFESSIONAL ASSOCIATION. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

7/23/26 11:27:44 AM Z:\BEP\Projects\61925\261-00324-00 - SMCC HEALTH SCIENCE CENTER\03_BIM\CAD\03_C3D\261-00324-00-detail-C26.dwg

SITE EROSION CONTROL CHECKLIST			
PROJECT:		BY:	
LOCATION:		DATE:	
AREA INSPECTED:			
MEASURED RAINFALL AMOUNT FOR STORM EVENT:			
	OVERALL CONDITION	NEED REPAIR	G=GOOD, F=FAIR, P=POOR, Y=YES, N=NO COMMENTS:
DEWATERING INFILTRATION BASINS	G F P	Y N	
EROSION CONTROL SOCK	G F P	Y N	
CONTINUOUS BERM	G F P	Y N	
DRAIN/INLET PROTECTION	G F P	Y N	
TREE PROTECTION	G F P	Y N	
TOPSOILING	G F P	Y N	
LAND GRADING	G F P	Y N	
SURFACE ROUGHENING	G F P	Y N	
DUST CONTROL	G F P	Y N	
TEMPORARY SEEDING	G F P	Y N	
PERMANENT SEEDING	G F P	Y N	
SODDING	G F P	Y N	
LANDSCAPE PLANING	G F P	Y N	
TEMPORARY SOIL PROTECTION	G F P	Y N	
MULCH FOR SEED	G F P	Y N	
LANDSCAPE MULCH	G F P	Y N	
TEMPORARY EROSION CONTROL BLANKET	G F P	Y N	
PERMANENT TURF REINFORCEMENT MAT	G F P	Y N	
STONE SLOPE PROTECTION	G F P	Y N	
RETAINING WALLS	G F P	Y N	
RIP RAP	G F P	Y N	
PERMANENT SLOPE DRAIN	G F P	Y N	
CHANNEL GRADE STABILIZATION STRUCTURE	G F P	Y N	
TEMPORARY LINED CHUTE	G F P	Y N	
TEMPORARY PIPE SLOPE DRAIN	G F P	Y N	
VEGETATED WATERWAY	G F P	Y N	
TEMPORARY LINED CHANNEL	G F P	Y N	
PERMANENT LINED WATERWAY	G F P	Y N	
TEMPORARY FILL BERM	G F P	Y N	
WATER BAR	G F P	Y N	
TEMPORARY DIVERSION	G F P	Y N	
PERMANENT DIVERSION	G F P	Y N	
SUBSURFACE DRAIN	G F P	Y N	
DETENTION BASIN	G F P	Y N	
LEVEL SPREADER	G F P	Y N	
OUTLET PROTECTION	G F P	Y N	
STONE CHECK DAM	G F P	Y N	
TEMPORARY SEDIMENT BASIN	G F P	Y N	
TEMPORARY SEDIMENT TRAP	G F P	Y N	
HAY BALE BARRIER	G F P	Y N	
GEOTEXTILE SILT FENCE	G F P	Y N	
VEGETATIVE FILTER	G F P	Y N	
CONSTRUCTION ENTRANCE	G F P	Y N	
PUMP INTAKE AND OUTLET PROTECTION	G F P	Y N	
PUMPING SETTLING BASIN	G F P	Y N	
PORTABLE SEDIMENT TANK	G F P	Y N	
DEWATERING OF EARTH MATERIALS	G F P	Y N	
ARE CONTROLLED RELEASES OF MUD OR MUDDY WATER FROM THE SITE EVIDENT?			YES NO
IF YES, WHAT CORRECTIVE ACTIONS ARE RECOMMENDED?			
ARE DEPOSITS OF SEDIMENT EVIDENT ON ADJACENT OFF-SITE STREETS OR PROPERTIES?			YES NO
IF YES, WHAT CORRECTIVE ACTIONS ARE RECOMMENDED?			
	OVERALL CONDITION	NEED REPAIR	G=GOOD, F=FAIR, P=POOR, Y=YES, N=NO COMMENTS:
STAGING REMOVAL OF VEGETATION	G F P	Y N	
NEW VEGETATION ESTABLISHMENT	G F P	Y N	
MULCH AND/OR BFM PROTECTION	G F P	Y N	
SOIL BINDER PROTECTION	G F P	Y N	
HILLSIDE REC'PS	G F P	Y N	
DRAINAGE CHANNEL ECB'S	G F P	Y N	
RIP RAP	G F P	Y N	
ADDITIONAL COMMENTS:			
INSPECTION COMPLETED ON:		BY:	
I CERTIFY THIS INSPECTION WAS COMPLETED BY MYSELF OF UNDER MY SUPERVISION:			
DATE:			

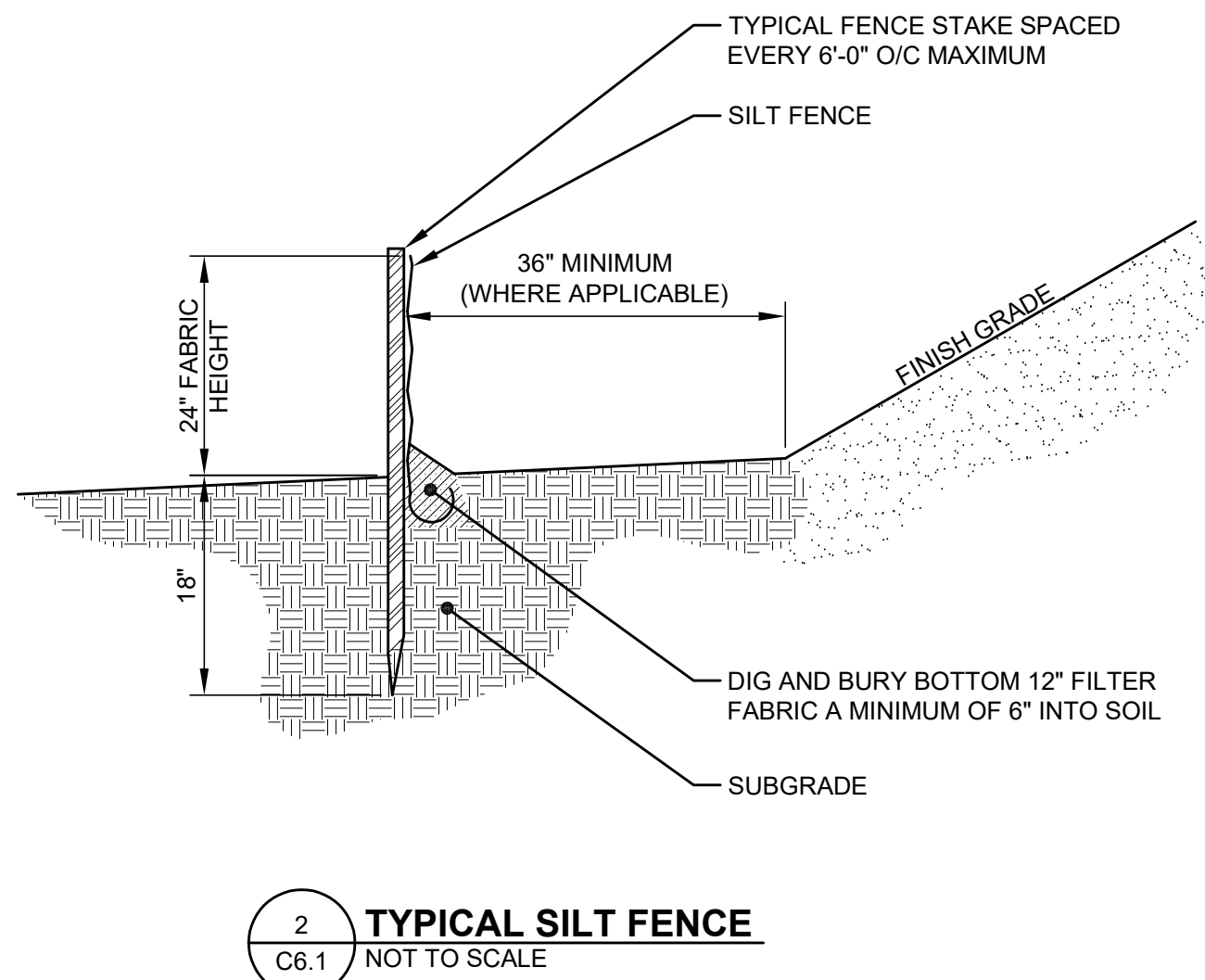
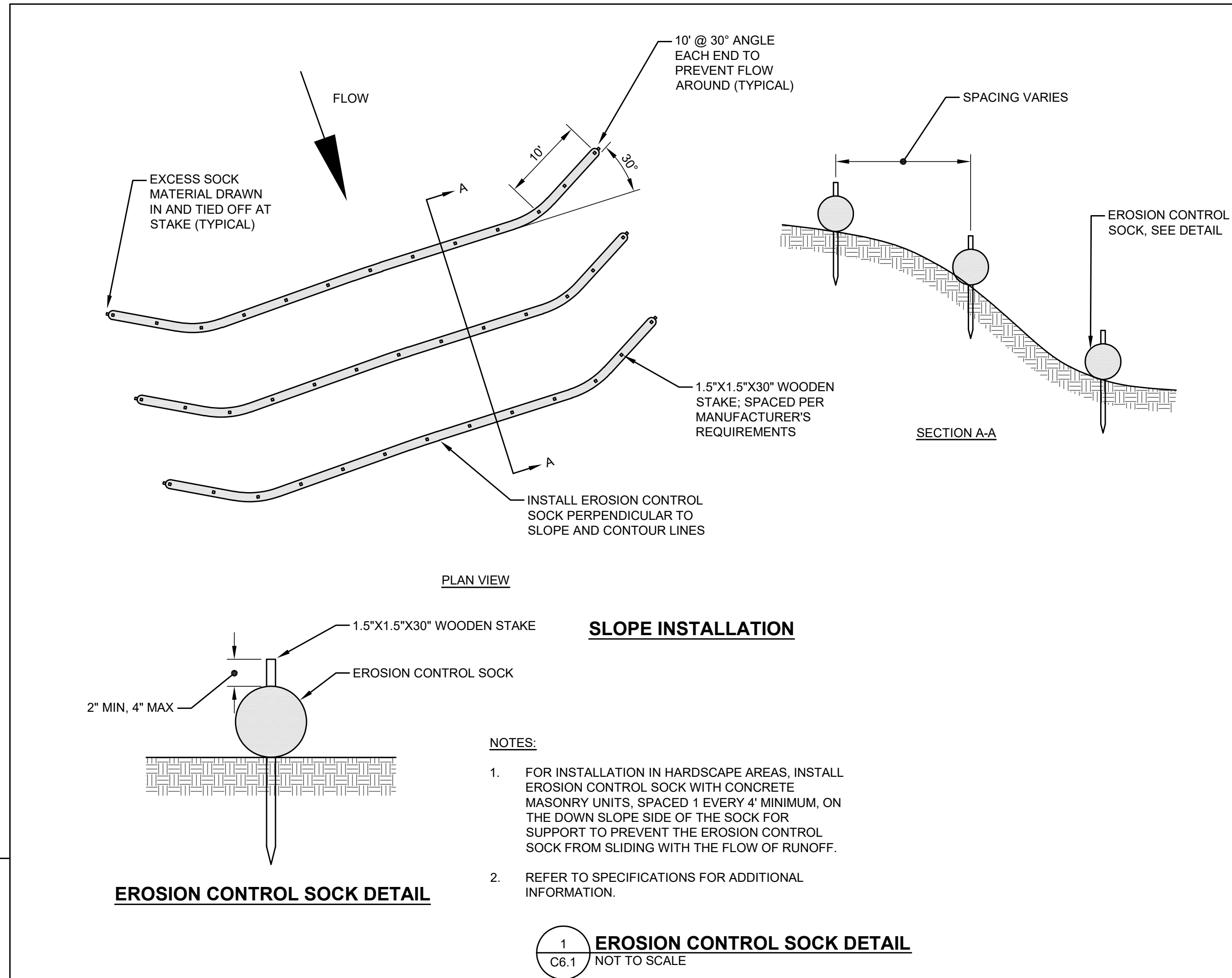
MAINTENANCE SCHEDULE FOR TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES		
TYPE	INSPECTION SCHEDULE	REPAIR SCHEDULE
SILT FENCE	MINIMUM ONCE PER WEEK AND AFTER STORM EVENTS OF 0.5 INCHES OR GREATER	REPLACE IMMEDIATELY AND REMOVE SEDIMENT WHEN DEPTH EQUALS 1/2 HEIGHT OF FENCE
HAY BALE BARRIER	MINIMUM ONCE PER WEEK AND AFTER STORM EVENTS OF 0.5 INCHES OR GREATER	REPLACE DAMAGED AND DETERIORATED BALES IMMEDIATELY; HAY BALES ARE TO BE REPLACED A MINIMUM OF ONCE EVERY 3 MONTHS
STABILIZED LAYDOWN AREA	MINIMUM ONCE PER WEEK AND AFTER STORM EVENTS OF 0.5 INCHES OR GREATER	REPAIR IMMEDIATELY; REMOVE ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO NEARBY PAVED SURFACES
EROSION CONTROL SOCK	MINIMUM ONCE PER WEEK AND AFTER STORM EVENTS OF 0.5 INCHES OR GREATER	REPLACE IMMEDIATELY AND REMOVE SEDIMENT WHEN DEPTH EQUALS 1/2 HEIGHT OF EROSION CONTROL SOCK OR EROSION CONTROL SOCK BECOMES FLATTENED OR DETERIORATED

SOIL EROSION AND SEDIMENT CONTROL NARRATIVE:

- APPLICATION/GENERAL PROCEDURE:
- A. SOIL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO ANY SITE DISTURBANCE, AND DEVELOPMENT WILL PROCEED ACCORDING TO A SPECIFIC CONSTRUCTION PHASING AS INDICATED ON THE CONTRACT DRAWINGS. THE OBJECTIVE IS TO MINIMIZE THE AMOUNT OF SEDIMENT-LADEN RUNOFF THROUGH IMPLEMENTATION OF A VARIETY OF CONVENTIONAL SOIL SEDIMENTATION AND EROSION CONTROL PRACTICES RECOMMENDED BY THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL. PROCEDURES AND APPLICATION TECHNIQUES SHALL CONFORM TO THE ABOVE MENTIONED GUIDELINES AND THE DETAILS SHOWN ON THE CONTRACT DRAWINGS.
- B. THE CONTRACTOR SHALL NAME ONE INDIVIDUAL AS AN EROSION CONTROL SUPERVISOR WHOSE PRIMARY RESPONSIBILITY WILL BE THE MAINTENANCE AND REPAIR OF ALL ON-SITE EROSION CONTROL MEASURES. THE EROSION CONTROL SUPERVISOR WILL KEEP A DAILY LOG OF THEIR ACTIVITIES AND COMPLETE A DAILY SOIL EROSION CHECKLIST (ESTABLISHED BY THE CONTRACTOR) SIMILAR TO THE DETAIL SHOWN ON THE CONTRACT DOCUMENTS. THE EROSION CONTROL SUPERVISOR SHALL ALSO MAINTAIN A SCHEDULE OF WEEKLY CONSTRUCTION ACTIVITIES. THE CHECKLIST AND LOG SHALL BE MADE AVAILABLE TO INSPECTORS UPON REQUEST.
- C. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH DAILY LOGS OF THE CONSTRUCTION PROCESS, UPDATED SCHEDULES, AND CONDITIONS OF ON-SITE SEDIMENTATION AND EROSION CONTROLS/WATER QUALITY. A SAMPLE LIST IS PROVIDED IN THE DETAILS.
- D. THE RESPONSIBILITY FOR PERFORMING PERIODIC CHECKS OF THE EROSION CONTROL MEASURES IN-PLACE AND TO COORDINATE CLEANING AND REPAIR OPERATIONS WILL BE ASSIGNED TO THE EROSION CONTROL SUPERVISOR.
- E. ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE CHECKED FOR THE ADEQUACY OF THE CONTROL SYSTEMS AS OUTLINED IN THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- F. REPAIRS TO SEDIMENTATION CONTROL SYSTEMS DIRECTED BY THE EROSION CONTROL SUPERVISOR WILL BE AS OUTLINED IN THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- G. REPLACEMENT MATERIALS FOR THE DEVICES UTILIZED MUST BE READILY AVAILABLE FOR REPAIRS.
- H. CLEANING OF SEDIMENTATION AND EROSION CONTROL DEVICES WILL BE PERFORMED AS DIRECTED BY THE EROSION CONTROL SUPERVISOR AND AS OUTLINED IN THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- I. PLACEMENT OF TEMPORARY SEDIMENTATION AND EROSION CONTROL DEVICES THAT ARE NOT SHOWN ON THE PLANS, BUT ARE REQUIRED DUE TO THE CONTRACTOR'S OPERATIONS, WILL BE PLACED AT THE DIRECTION OF THE EROSION CONTROL SUPERVISOR, ENGINEER AND LOCAL AUTHORITY HAVING JURISDICTION. PLACEMENT OF SUCH MEASURES SHALL FOLLOW THE LATEST REVISION OF THE LOCAL AND/OR STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- J. EARTHWORK CONSTRUCTION ACTIVITIES WILL BE SCHEDULED FOR PERIODS WHEN SOIL SATURATION IS LOW AND SOIL LOSS HAZARD IS AT MINIMUM RISK.
- K. SUSPEND EARTHWORK CONSTRUCTION ACTIVITIES FOR MAJOR STORM EVENTS AND IMPLEMENT ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES, AS NECESSARY.
- L. STAGE CONSTRUCTION ACTIVITIES SUCH THAT ONLY THOSE AREAS OF THE SITE SCHEDULED FOR IMMEDIATE DEVELOPMENT ARE DISTURBED AND ACTIVITIES SCHEDULED FOR LATER DEVELOPMENT ARE NOT STARTED PREMATURELY.
- M. THERE WILL BE NO LARGE CUTS OR FILLS LEFT AS "RAW" AREAS. SUB-GRADE WILL BE ACHIEVED AS SOON AS POSSIBLE AND AN ESTABLISHED PROCEDURE OF TEMPORARY SEEDING AND/OR COVER WITH EROSION PROTECTION (EROSION CONTROL BLANKETS FOR SLOPES AND MULCH OR EROSION CONTROL BLANKETS FOR FLAT AREAS), WILL BE FOLLOWED TO INSURE MINIMAL SOIL LOSS.
- N. ALL SURFACES DESIGNATED FOR PAVING WILL HAVE THE SUB-BASE, BASE AND BINDER INSTALLED AS SOON AS POSSIBLE. WHERE FEASIBLE THE STORM DRAINAGE SYSTEM WILL BE INSTALLED TO PROVIDE CONTROL OF SURFACE RUNOFF.
- O. DUST CONTROL AND OFF-SITE STREET DEBRIS CAUSED BY THE CONTRACTOR'S EARTHWORK OPERATIONS WILL BE PREVENTED, ALAYED, OR CLEANED UP IN ACCORDANCE WITH THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- P. CONTROL MEASURES AS INDICATED ON THE CONTRACT DOCUMENTS SHALL BE SUBJECT TO ADDITION AND/OR MODIFICATION AS REQUIRED TO MEET ACTUAL SITE AND WEATHER CONDITIONS AND ADHERE TO THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- Q. CONTRACTOR SHALL PROTECT ANY EXISTING AND NEW INLET STRUCTURES, DRAINAGE SWALES, PROPERTY, ETC., WHICH MAY INTERCEPT RUN-OFF DUE TO CONSTRUCTION ACTIVITIES BOTH INSIDE AND OUTSIDE OF THE WORK LIMITS.

EROSION AND SEDIMENTATION CONTROL CONSTRUCTION STAGES:

- STAGE I:
- A. IMMEDIATELY AFTER MOBILIZATION BUT PRIOR TO INITIATING ANY SOIL-DISTURBING ACTIVITIES THE CONTRACTOR SHALL MAKE A GENERAL SITE ASSESSMENT TO ESTABLISH CONSTRUCTION LIMITS. DESIGNATE CONSTRUCTION ENTRANCES AND INSTALL ALL SPECIFIED SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- STAGE II:
- A. CLEAR SITE AS REQUIRED ACCOMMODATING THE CONSTRUCTION. LEGALLY CUT AND CHIP BRUSH AND REMOVE STUMPS FROM THE SITE TO BE DISPOSED OF IN A PROPER MANNER. THE OWNER'S PERMISSION IS REQUIRED BEFORE CLEARING BEYOND TREE LINE OR WOODED AREA DEFINED ON THE PLANS.
- B. ADDRESS ALL STOCKPILE MATERIAL AS INDICATED IN THE EROSION CONTROL SPECIFICATION.
- C. EXCAVATE SITE TO SUB GRADE AND INSTALL ALL REQUIRED MEASURES TO STABILIZE THE SITE AND PREVENT SOIL EROSION AND CONTROL SOIL SEDIMENTATION. NO RAW CUTS OR FILL SHALL BE LEFT EXPOSED TO THE ELEMENTS. IF NO WORK IS ANTICIPATED WITHIN A TWO (2) WEEK PERIOD, OR IF SIGNIFICANT RAINFALL IS ANTICIPATED, COVER EXPOSED AREAS AS INDICATED IN THE APPLICATION/GENERAL PROCEDURE.
- STAGE III:
- A. SURVEY, STAKE, AND PLACE NEW IMPROVEMENTS IDENTIFIED WITHIN THE WORK AREA AND AS SHOWN ON THE CONTRACT DRAWINGS.
- B. MAINTAIN, CLEAN AND REPAIR EROSION CONTROL AND SEDIMENT PROTECTION MEASURES AS RECOMMENDED BY THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- STAGE IV:
- A. RESPREAD TOPSOIL TO DESIGNATED AREAS.
- B. INSTALL NEW PLANTING. BEGIN WITH THE SITE PERIMETER PLANTING IN BUFFER YARDS TO ACHIEVE EARLY STABILIZATION, AND THEN PLANT SITE INTERIOR AREAS AND FINALLY PLACE SEED.
- C. CLEAN UP SITE BUT LEAVE REMAINING EROSION CONTROL AND SEDIMENT PROTECTION MEASURES IN PLACE UNTIL SITE IS STABILIZED AS APPROVED BY THE ENGINEER.
- D. MAINTAIN, CLEAN AND REPAIR EROSION CONTROL AND SEDIMENT PROTECTION MEASURES AS RECOMMENDED BY THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.



1 C6.1 EROSION CONTROL SOCK DETAIL NOT TO SCALE

3 C6.1 TEMPORARY STOCKPILE DETAIL NOT TO SCALE

NO.	DESCRIPTION	DATE
1	ADDENDUM 04	07/23/2026

CONTENT: SOIL EROSION AND SEDIMENTATION CONTROL NARRATIVE	
DRAWN BY:	GIMAS
PROJECT NO:	25-062-00
DATE:	07/23/2026
REVISED:	
SCALE:	AS NOTED
C6.1	
Project Phase CONSTRUCTION DOCUMENTS	
COPYRIGHT © 2025 BY LAVALLEEBRENSINGER PROFESSIONAL ASSOCIATION. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

NO.	DESCRIPTION	DATE
1	ADDENDUM 04	07/23/2026

CONTENT: SITE DETAILS	
DRAWN BY:	GIMAS
PROJECT NO:	25-062-00
DATE:	07/23/2026
REVISED:	
SCALE:	AS NOTED
C7.1	
Project Phase CONSTRUCTION DOCUMENTS	
COPYRIGHT © 2025 BY LAVALLEEBRENSINGER PROFESSIONAL ASSOCIATION. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

FOR ADDITIONAL INFORMATION, REFER TO PROJECT MANUAL.

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

I

J

A

B

C

D

E

F

G

H

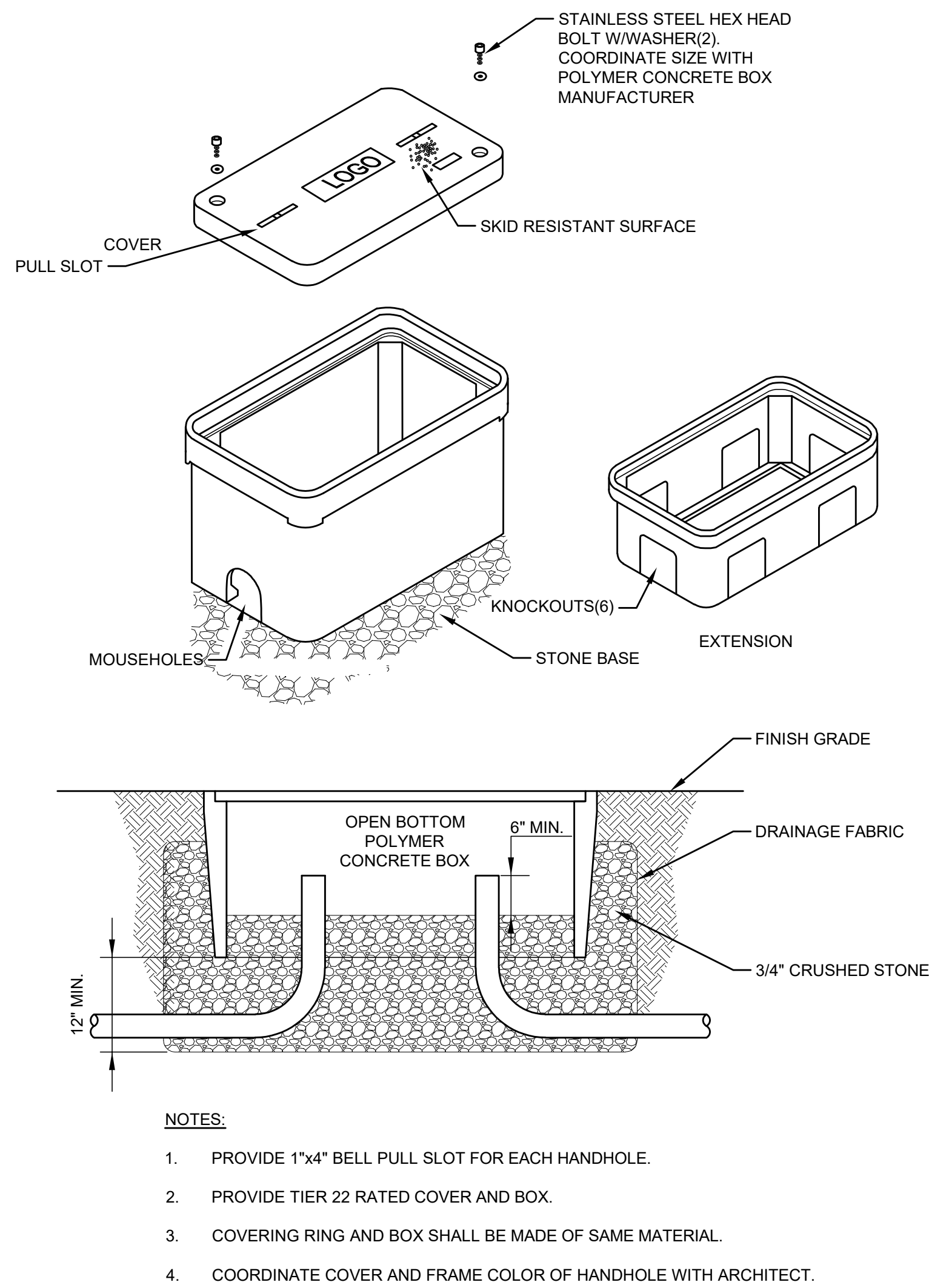
I

J

A

B

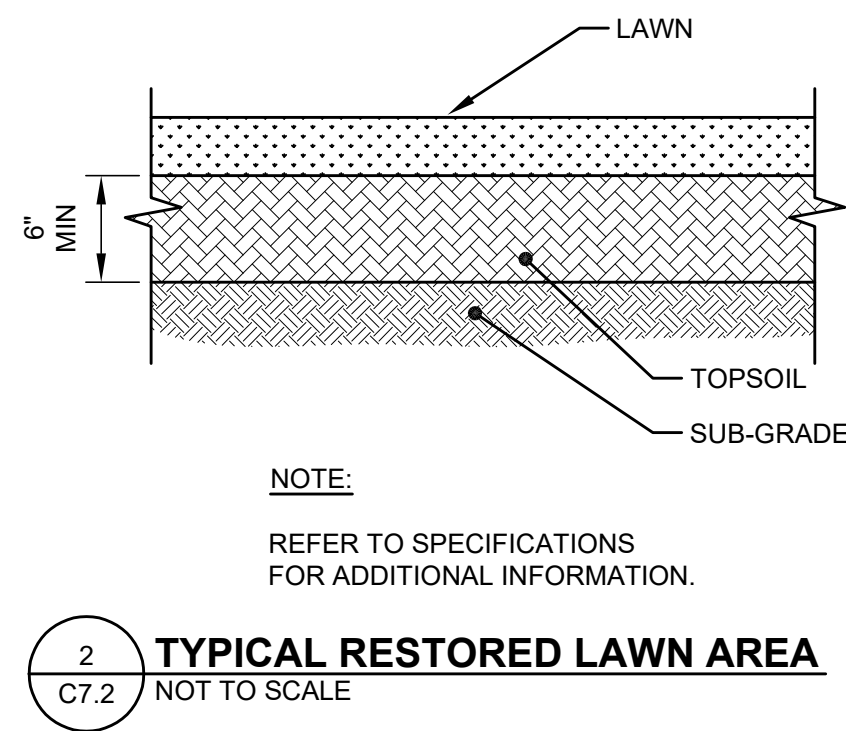
7/23/26 11:27:53 AM Z:\BEP\Projects\61125\261-100324-00 - SMCC HEALTH SCIENCE CENTER\03_BIM\CAD\03_C3D\261-100324-00-detail-C26.dwg



1
C7.2

POLYMER CONCRETE PULL BOX INSTALLATION DETAIL

NOT TO SCALE



**HEALTH SCIENCE
CENTER**

BGS NUM: 3809

79 Fort Road, South Portland, Maine,
04106

NO.	DESCRIPTION	DATE
1	ADDENDUM 04	07/23/2026

CONTENT:	SITE DETAILS
DRAWN BY:	GIMAS
PROJECT NO:	25-062-00
DATE:	07/23/2026
REVISED:	
SCALE:	AS NOTED

C7.2

ARCHITECT:

Lavallee Brensinger Architects

305 Commercial Street
Portland, ME 04101
207.558.7200
www.LBPA.com

STRUCTURAL ENGINEER:

Foley Buhl Roberts & Associates

500 N Commercial Street, Suite 403
Manchester, NH 03101
603.622.4578
www.fbra.com

MECHANICAL / ELECTRICAL / PLUMBING & FIRE / CIVIL PROTECT ENGINEER:

Salas O'Brien

160 Veranda Street
Portland, ME 04103
www.salasobrien.com



SMCC HEALTH SCIENCE CENTER

DRAWING LIST

SHEET# SHEET NAME

A0.00 COVER SHEET

CIVIL

C0.1 CIVIL ABBREVIATIONS, SYMBOLS LEGEND AND GENERAL NOTES
C1.1 SITE DEMOLITION, SOIL EROSION AND SEDIMENTATION CONTROL PLAN
C2.1 SITE MATERIALS PLAN
C3.1 SITE UTILITY AND GRADING PLAN
C6.1 SOIL EROSION AND SEDIMENTATION CONTROL NARRATIVE
C7.1 SITE DETAILS
C7.2 SITE DETAILS

STRUCTURAL

S0.1 GENERAL NOTES AND TYPICAL DETAILS
S1.3 PARTIAL ROOF FRAMING PLAN

ARCHITECTURAL

AD1.0 GROUND FLOOR PLAN - DEMO
AD1.1 FIRST FLOOR PLAN - DEMO
AD1.2 SECOND FLOOR PLAN -DEMO

A0.1 LEGENDS, SYMBOLS, NOTES, PARTITION TYPES
A0.2A CODE ANALYSIS TEXT, SYMBOLS, AND RATINGS
A0.2B CODE ANALYSIS TEXT, SYMBOLS, AND RATINGS
A0.3A DOOR / WINDOW SCHEDULE

A1.0 GROUND FLOOR PLAN
A1.1 FIRST FLOOR PLAN
A1.2 SECOND FLOOR PLAN
A1.3 ROOF PLAN

A4.2 STAIR PLANS, SECTIONS, AND DETAILS

A6.1 INTERIOR ELEVATION
A6.2 INTERIOR ELEVATION
A6.3 INTERIOR ELEVATION

A7.1 MILLWORK DETAILS

A8.0 GROUND FLOOR REFLECTED CEILING PLAN
A8.1 FIRST FLOOR REFLECTED CEILING PLAN
A8.2 SECOND FLOOR REFLECTED CEILING PLAN

INTERIOR DESIGN

AI0.1 GENERAL NOTES, LEGENDS, ROOM FINISH SCHEDULES
AI1.0 INTERIOR FINISH PLAN - GROUND FLOOR
AI1.1 INTERIOR FINISH PLAN - FIRST FLOOR

DRAWING LIST (CONT)

SHEET# SHEET NAME

AI1.2 INTERIOR FINISH PLAN - SECOND FLOOR

PLUMBING

P-000 PLUMBING AND HVAC NOTES, LEGEND AND ABBREVIATIONS
PD1.1 PLUMBING DEMOLITION PLAN - GROUND LEVEL
PD1.2 PLUMBING DEMOLITION PLAN - FIRST FLOOR
PD1.3 PLUMBING DEMOLITION PLAN - SECOND FLOOR

PL1.1 PLUMBING PLAN - GROUND LEVEL
PL1.2 PLUMBING PLAN - FIRST FLOOR
PL1.3 PLUMBING PLAN - SECOND FLOOR

MECHANICAL

MD1.0 MECHANICAL DEMOLITION PLAN - GROUND LEVEL
MD1.1 MECHANICAL DEMOLITION PLAN - FIRST FLOOR
MD1.2 MECHANICAL DEMOLITION PLAN - SECOND FLOOR
MD1.3 MECHANICAL DEMOLITION PLAN - ROOF PLAN

M1.0 MECHANICAL PLAN - GROUND LEVEL
M1.1 MECHANICAL PLAN - FIRST FLOOR
M1.2 MECHANICAL PLAN - SECOND FLOOR
M1.3 MECHANICAL ROOF PLAN

FIRE PROTECTION

FP1.1 FIRE PROTECTION - GROUND LEVEL
FP1.2 FIRE PROTECTION - FIRST FLOOR
FP1.3 FIRE PROTECTION - SECOND FLOOR

ELECTRICAL

ED1.0 ELECTRICAL DEMOLITION PLAN - GROUND FLOOR
ED1.1 ELECTRICAL DEMOLITION PLAN - FIRST FLOOR
ED1.2 ELECTRICAL DEMOLITION PLAN - SECOND FLOOR

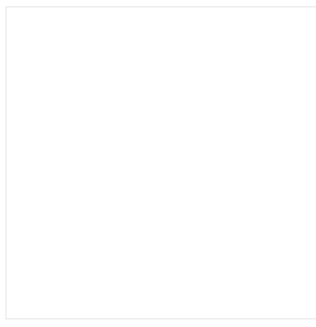
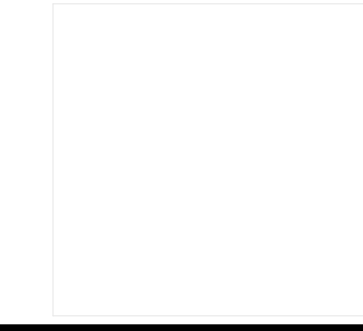
E0.0 ELECTRICAL LEGEND
E5.0 ELECTRICAL DETAILS
E6.0 ELECTRICAL ONE-LINE DIAGRAM & SCHEDULES

EL1.0 LIGHTING PLAN - GROUND FLOOR
EL1.1 LIGHTING PLAN - FIRST FLOOR
EL1.2 LIGHTING PLAN - SECOND FLOOR

EP-1.0 ELECTRICAL PLAN - GROUND FLOOR
EP-1.1 ELECTRICAL PLAN - FIRST FLOOR
EP-1.2 ELECTRICAL PLAN - SECOND FLOOR
EP-1.3 ELECTRICAL PLAN - ROOF

LAVALLEE
BRENSINGER
ARCHITECTS

Boston | Manchester | Portland
155 Dow Street, Suite 400, Manchester, NH 03101
603.622.5450
www.LBPA.com



SMCC

HEALTH SCIENCE
CENTER

BGS NUM: 3809

79 Ford Road, South Portland, Maine,
04106

NO.	DESCRIPTION	DATE
2	ADDENDUM 01	06/03/2026
4	ADDENDUM 04	07/23/2026



CONTENT: COVER SHEET	
DRAWN BY:	MOL
PROJECT NO:	25-062-00
DATE:	05/08/2026
REVISED:	
SCALE:	12" = 1'-0"
A0.00	
Project Phase	
CONSTRUCTION DOCUMENTS	
COPYRIGHT © 2026 BY LAVALLEE BRENSINGER PLLC. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

FOR A

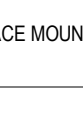
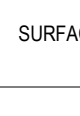
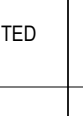
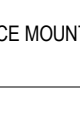
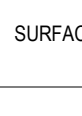
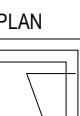
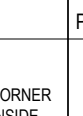
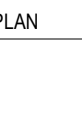
COPYRIGHT © 2026 BY LAVALLEE BRENSINGER PLLC.
ALL RIGHTS RESERVED.
NO REPRODUCTION WITHOUT PERMISSION.

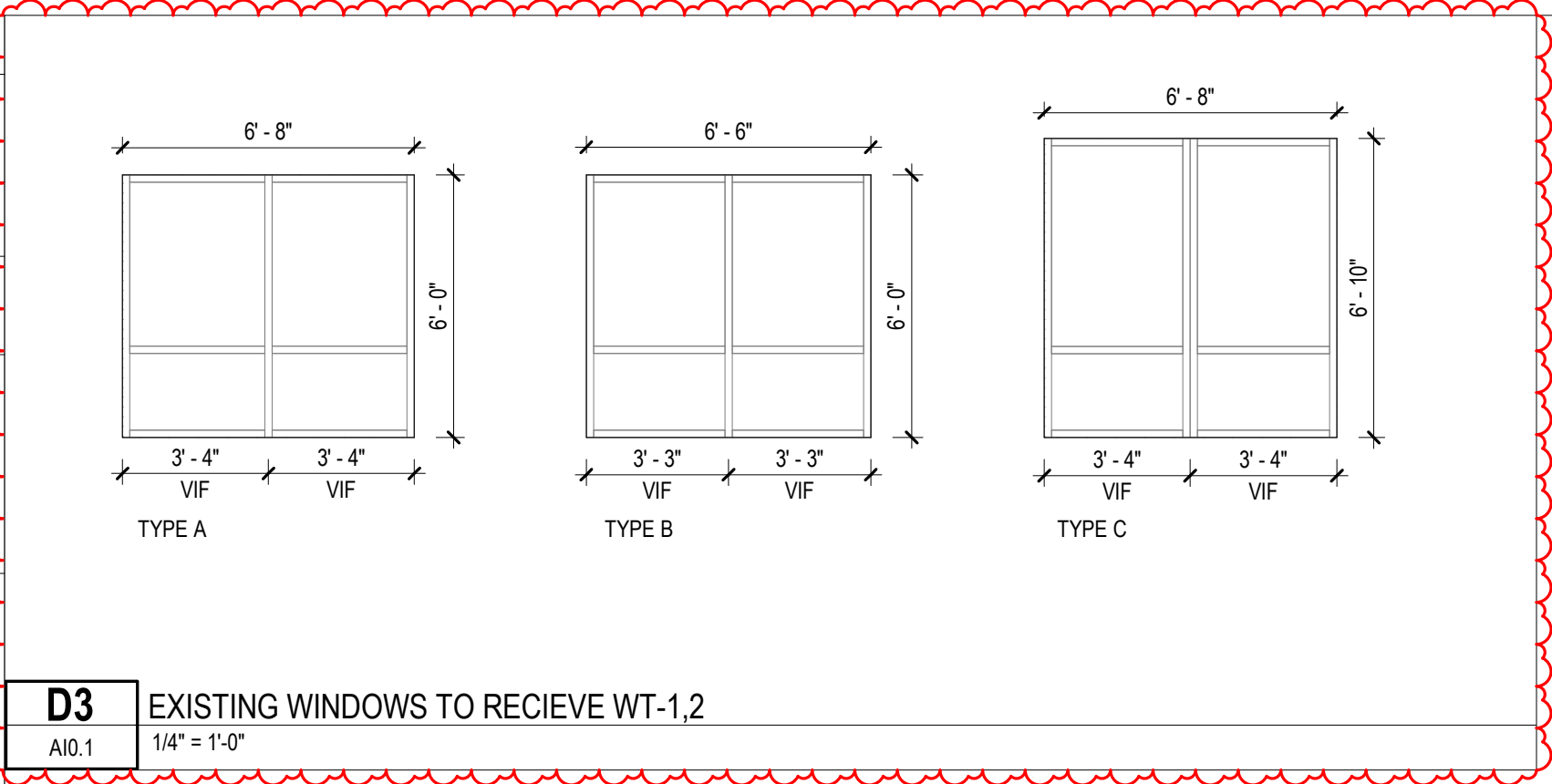
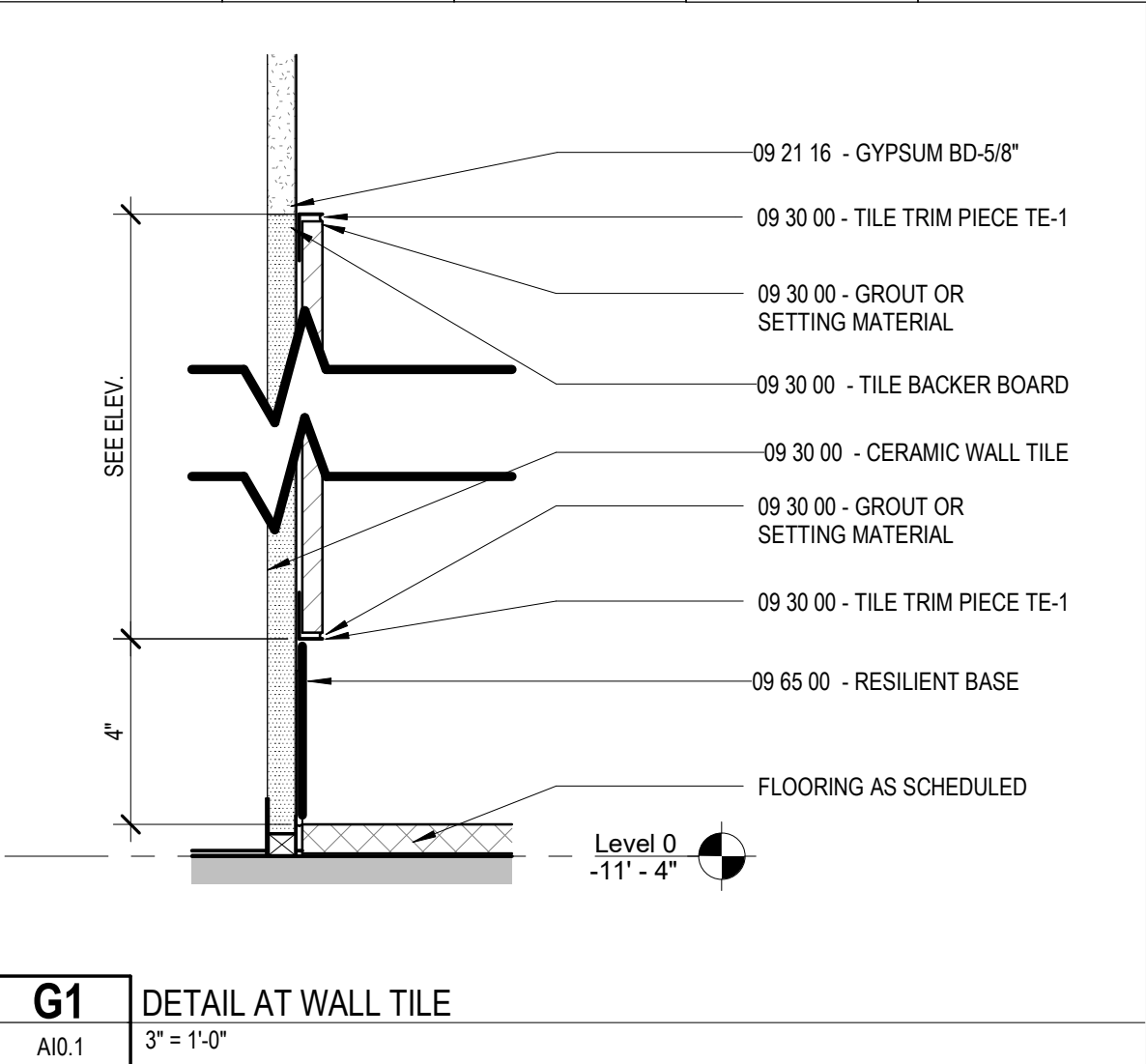


Autodesk Docs: 05/25/2025 05:00:00 SMCC-15 or Reno25-062-00, SHOC, 025-14

7/23/2026 2:35:02 PM

FINISH SCHEDULE									
ROOM #	ROOM NAME	FLOORING	WALL BASE	WALLS	WALL PROTECTION	COUNTERTOPS	CASEWORK / MILLWORK	TEXTILES	COMMENTS
BASEMENT									
G01	CORRIDOR	RF-1, RF-2	RB-1	PT-1, PT-2, WC-1	W1A, W1B	-	PL-1	-	
G01A	PATIENT RM SIM LAB (M/S)	RF-2	RB-1	PT-1, PT-2	W1A	-	-	CC-1	
G01B	CONTROL RM	FC-1	RB-1	PT-1, PT-2	-	-	-	-	
G01C	CONTROL RM	FC-1	RB-1	PT-1, PT-2	-	-	-	-	
G01D	PATIENT RM SIM LAB (M/S)	RF-2	RB-1	PT-1, PT-2	W1A	-	-	CC-1	
G01E	CONTROL RM	FC-1	RB-1	PT-1, PT-2	-	-	-	-	
G01F	PATIENT RM SIM LAB (ICU)	RF-2	RB-1	PT-1, PT-2	W1A	-	-	CC-1	
G01G	MOULAGE PREP/STOR/STAFF WK	RF-1	RB-1	PT-1	W3A	SS-1	PL-1	-	
G02	CORRIDOR	ETR, RF-3	ETR, RB-1	ETR, PT-1, PT-3	-	-	-	-	NEW PAINT AND WALL BASE AT AFFECTED WALLS ONLY
G03	DEBRIEF	RF-5	RB-1	PT-1, PT-2	-	-	-	-	
G05	DEBRIEF	RF-5	RB-1	PT-1, PT-2	-	-	-	-	
G13C	STORAGE	ETR	ETR, RB-1	ETR, PT-1	-	-	-	-	
G13D	HALLWAY	RF-4	RB-1	PT-1	-	-	-	-	
G13E	TOILET	TC-1	TC-2	PT-1, TC-2	-	-	-	-	
G15	MECHANICAL	ETR	ETR, RB-1	ETR, PT-1	-	-	-	-	
LEVEL 1									
125	IT	ETR, RF-4	RB-1	ETR, PT-1	-	-	-	-	NEW PAINT AT AFFECTED WALLS ONLY
LEVEL 2									
216	COMPUTER LAB	ETR, RF-4	ETR, RB-1	ETR, PT-1	-	-	-	-	NEW PAINT AND WALL BASE AT AFFECTED WALLS ONLY
221	RADIATION TECHNOLOGY SIMULATION LAB	ETR	ETR, RB-1	ETR, PT-1	-	-	-	-	NEW PAINT AND WALL BASE AT AFFECTED WALLS ONLY

				
10 26 01 CORNER GUARD - ANGLED	10 26 01 BUMPER RAIL H/L	10 26 01 CORNER GUARD	10 26 01 WALL PROTECTION PANEL	10 26 01 WALL PROTECTION PANEL
INDICATES WP COLOR. SEE FINISH LEGEND	INDICATES WP COLOR. SEE FINISH LEGEND	INDICATES WP COLOR. SEE FINISH LEGEND	INDICATES WP COLOR. SEE FINISH LEGEND	INDICATES WP COLOR. SEE FINISH LEGEND
				
PLAN	PLAN	PLAN	PLAN	PLAN
				
ELEVATION	ELEVATION	ELEVATION	ELEVATION	ELEVATION

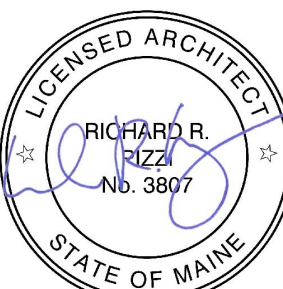


FINISH LEGEND		
09 65 00 RESILIENT FLOORING	09 91 23 INTERIOR PAINTING	09 65 00 WALL BASE (RESILIENT)
RESILIENT FLOORING GENERAL NOTES: 1. HATCH PATTERNS ARE ONLY SHOWN ON FLOOR FINISH PLANS WHEN MULTIPLE FLOORING TYPES ARE USED. ALL OTHER FLOORING INFORMATION WILL BE NOTED ON FINISH SCHEDULE. REFER TO FLOOR FINISH PLANS FOR FLOOR PATTERNS. 2. REFERENCE 09 65 00 RESILIENT FLOORING TRANSITIONS / STAIR NOSINGS AS NEEDED. 3. ALL FINISHED FLOORING SHALL EXTEND BENEATH CASEWORK, MILLWORK, AND PLUMBING FIXTURES U.N.O. 4. ALL SHEET FLOORING SEAMS SHALL BE WELDED WITH MATCHING WELD COLORS. 5. STAIRS: CALL OUT MATERIALS FOR TREAD, RISER, RAILING, LANDING, NOSING (IF APPLICABLE).	PAINT GENERAL NOTES: 1. SEE FINISH SCHEDULE FOR ALL GENERAL WALL PAINT & COATINGS. REFER TO WALL FINISH PLANS FOR ACCENT WALL LOCATIONS. 2. REFER TO SPECIFICATION FOR PAINT/COATING FINISHES U.N.O. BELOW. 3. HM DOOR FRAMES AND WINDOW FRAMES ARE TO BE PTD PT-4 U.N.O. ON DRAWINGS OR SCHEDULE. *** TRANSITIONS SHALL OCCUR ON THE INSIDES OF THE DOOR STOP. *** 4. ALL EXPOSED STEEL COMPONENTS ARE TO BE PAINTED. 5. CEILING PAINT: - ALL GWB CEILINGS AND SOFFITS SHALL BE PAINTED PT-0 UNLESS NOTED OTHERWISE ON THE REFLECTED CEILING PLAN.	MILLWORK GENERAL NOTES: 1. WINDOW SILLS TO REMAIN, SAND AND SEAL WITHIN SCOPE OF WORK AREA.
09 65 00 RESILIENT FLOORING	09 91 23 INTERIOR PAINTING	06 41 00 / 12 36 00 PLASTIC LAMINATE / SOLID SURFACE
RF-1 TYPE: RESILIENT SHEET MANUF: MANNINGTON SERIES: BIOSPEC MD WIDTH: 6'-0" COLOR: LUNAR ROCK	PT-0 TYPE: TYP. CEILING PAINT MANUF: SHERWIN WILLIAMS COLOR: CEILING WHITE	06 41 00 / 12 36 00 PLASTIC LAMINATE PL-1 TYPE: MANUF: PANOLAM SERIES: PIONITE SUGAR MAPLE II COLOR: VINYL EDGE BAND TO MATCH
RF-2 TYPE: RESILIENT SHEET MANUF: MANNINGTON SERIES: BIOSPEC MD WIDTH: 6'-0" COLOR: NIAGARA BLUE	PT-1 TYPE: GENERAL WALL PAINT MANUF: SHERWIN WILLIAMS COLOR: SHELL WHITE	12 36 00 LAB SURFACE SS-1 TYPE: MANUF: EPOXY SERIES: DURCON COLOR: GRAPHITE
RF-3 TYPE: VINYL COMPOSITION TILE MANUF: ARMSTRONG SERIES: IMPERIAL TEXTURE SIZE: 12" X 12" COLOR: GENTIAN BLUE	PT-2 TYPE: ACCENT PAINT MANUF: SHERWIN WILLIAMS COLOR: TAKE FIVE	12 24 00 WINDOW TREATMENT WT-1 TYPE: MANUF: ROLLER SHADES SERIES: DRAPER COLOR: TBD OPENNESS: 1% NOTE: WHERE INDICATED ON INTERIOR FINISH PLANS
RF-4 TYPE: VINYL COMPOSITION TILE MANUF: ARMSTRONG SERIES: IMPERIAL TEXTURE SIZE: 12" X 12" COLOR: 51836 IMPERIAL WHITE	PT-3 TYPE: PAINT MANUF: SHERWIN WILLIAMS COLOR: TBD, MATCH SMCC DARK BLUE	WT-2 TYPE: ROLLER SHADES - RM DARKENING MANUF: DRAPER SERIES: TBD COLOR: TBD OPENNESS: 0% NOTE: AT CONTROL ROOMS
RF-5 TYPE: LUXURY VINYL TILE MANUF: TARKETT SERIES: D LATTITUDE WOOD SIZE: 6" X 48" COLOR: ASH	PT-4 TYPE: TRIM PAINT MANUF: SHERWIN WILLIAMS COLOR: TRICORN BLACK	10 21 23 CUBICLE CURTAINS CC-1 TYPE: MANUF: CUBICLE CURTAIN SERIES: INPRO COLOR: EZE-SWAP, FABRIC SHIELD BY PANAZ TBD
09 30 00 TILE CERAMIC / PORCELAIN	09 72 00 WALL COVERING	MISCELLANEOUS & GENERAL NOTES 1. REFER TO RCP SHEET SET FOR ALL INFORMATION REGARDING CEILING TYPES AND TYPE LOCATIONS. 2. ALL ARCHITECTURE INTERIOR SHEET DIMENSIONS ARE TO FACE OF FINISH, UNO.
CERAMIC / PORCELAIN FLOORING GENERAL NOTES: 1. HATCH PATTERNS ARE ONLY SHOWN ON FLOOR FINISH PLANS WHEN MULTIPLE FLOORING TYPES ARE USED. ALL OTHER FLOORING INFORMATION WILL BE NOTED ON FINISH SCHEDULE. REFER TO FLOOR FINISH PLANS FOR FLOOR PATTERNS. 2. COORDINATE WITH 09 30 00 TILE EDGE/ FLOORING TRANSITION PRODUCTS. 3. STAIRS: CALL OUT MATERIALS FOR TREAD, RISER, RAILING, LANDING, NOSING (IF APPLICABLE).	WALL COVERING GENERAL NOTES: 1. REFER TO LEGEND AND WALL FINISH PLANS FOR WALL PROTECTION TYP/LOCATIONS. 2. WALL PROTECTION IS NOTED ON AI SCHEDULE FOR COLOR ONLY AND SHOULD BE COORDINATED WITH ELEVATIONS/ WALL FINISH PLANS PRIOR TO ORDERING. 3. SEE WALL FINISH PLANS FOR CORNER GUARD AND BUMPER RAIL LOCATIONS/ TYPES.	TBD TO BE DETERMINED PTM PATCH TO MATCH ETR EXISTING TO REMAIN SC SEALED CONCRETE (FLOORING)
09 30 00 TILE CERAMIC / PORCELAIN	10 26 00 WALL PROTECTION	
TC-1 TYPE: TILE PORCELAIN MANUF: CROSSVILLE SERIES: STONE FICTION SIZE: 12" X 24" COLOR: TRAVERTINE SILVER EXT INSTALL: 1/3 RUNNING BOND GROUT: TO BE SELECTED	WALL PROTECTION GENERAL NOTES: DESIGNATES COLOR (FIN. LEGEND) DESIGNATES HEIGHT (SEE AI SERIES PLANS) DESIGNATES TYPE	
TC-2 TYPE: CERAMIC TILE MANUF: DAL TILE SERIES: COLOR WHEEL CLASSIC SIZE: 6" X 6" COLOR: SEA BREEZE INSTALL: STACKED GROUT: TO BE SELECTED		
09 30 00 TILE EDGE/ FLOORING TRANSITION	10 26 00 WALL PROTECTION	
TE-1 TYPE: TILE EDGE MANUF: SCHLUTER PROFILE: JOLLY FINISH: STAINLESS STEEL NOTE: CONFIRM BABAA COMPLIANCE	W1A TYPE: WALL PROTECTION MANUF: INPRO SERIES: PALLADIUM THICKNESS: .060 COLOR: CADET BLUE	
TE-2 TYPE: TILE EDGE MANUF: SCHLUTER PROFILE: RENO-J FINISH: STAINLESS STEEL NOTE: CONFIRM BABAA COMPLIANCE	W1B TYPE: WALL PROTECTION MANUF: INPRO SERIES: PALLADIUM THICKNESS: .060 COLOR: CADET BLUE	
FT-1 TYPE: FLOORING TRANSITION MANUF: ROPPE PROFILE: EDGE PROTECTOR FINISH: TBD NOTE:	B1A TYPE: WALL BUMPER-HI MANUF: INPRO SERIES: 1600 WALL GUARD DETAIL: SEE ELEVATION FOR HEIGHT COLOR: FEATHER	
FT-2 TYPE: FLOORING TRANSITION MANUF: ROPPE PROFILE: ROLLING TRAFFIC TRANSITION FINISH: TBD NOTE:	B1B TYPE: WALL BUMPER-LO MANUF: INPRO SERIES: 1400 WALL GUARD DETAIL: SEE ELEVATION FOR HEIGHT COLOR: FEATHER	
09 68 13 FLOORING CARPET (TILE)	C1A TYPE: CORNER GUARD 90 MANUF: INPRO SERIES: 160 HIGH-IMPACT CORNER GUARD COLOR: FEATHER	
CARPET FLOORING GENERAL NOTES: 1. HATCH PATTERNS ARE ONLY SHOWN ON AI PLANS WHEN MULTIPLE FLOORING TYPES ARE USED. ALL OTHER FLOORING INFORMATION WILL BE NOTED ON FINISH SCHEDULE. REFER TO AI FLOOR PLAN DRAWINGS FOR FLOOR PATTERNS. 2. REFERENCE 09 65 00 RESILIENT FLOORING TRANSITIONS / STAIR NOSINGS AS NEEDED.	C1B TYPE: CORNER GUARD 90 MANUF: INPRO SERIES: 160 HIGH-IMPACT CORNER GUARD COLOR: CADET BLUE	
09 68 13 FLOORING CARPET (TILE)	A1B TYPE: CORNER GUARD 135 MANUF: INPRO SERIES: 130 HIGH-IMPACT CORNER GUARD COLOR: CADET BLUE	
FC-1 TYPE: CARPET TILE MANUF: INTERFACE SERIES: COME AND GO COLOR: OPEN ROAD, NAVY INSTALL: MONOLITHIC		

LAVALLEE
BRENSINGER
ARCHITECTS

Boston | Manchester | Portland

155 Dow Street, Suite 400, Manchester, NH 03101
603.622.5450
www.LBPA.com



SMCC

HEALTH SCIENCE
CENTER

BGS NUM: 3809

79 Ford Road, South Portland, Maine,
04106

NO.	DESCRIPTION	DATE
2	ADDENDUM 01	06/03/2026
4	ADDENDUM 04	07/23/2026

FOR ADDITIONAL INFORMATION, REFER TO PROJECT MANUAL.

CONTENT:
GENERAL NOTES, LEGENDS, ROOM FINISH
SCHEDULES

DRAWN BY: RJB

PROJECT NO: 25-062-00

DATE: 05/08/2026

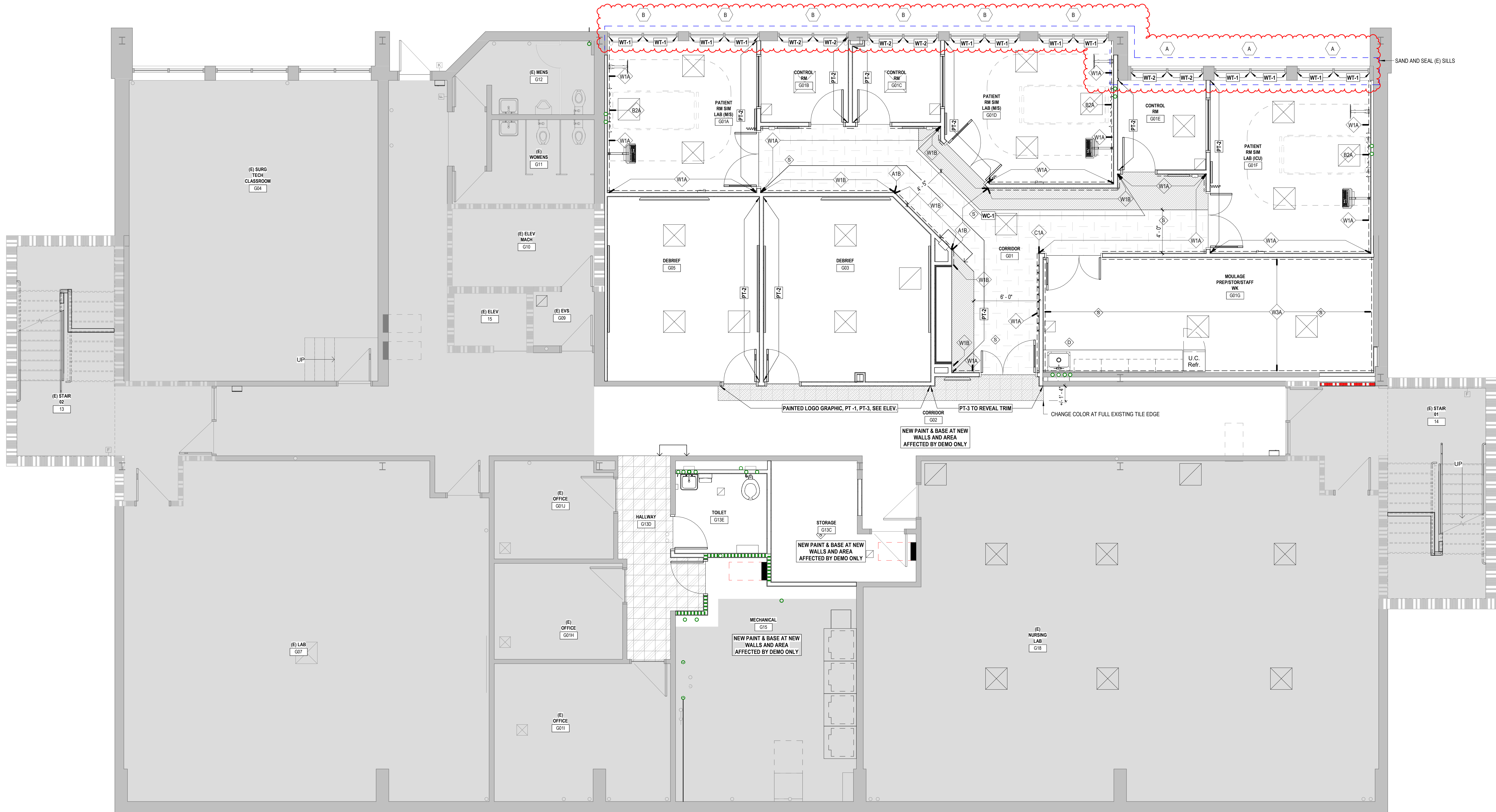
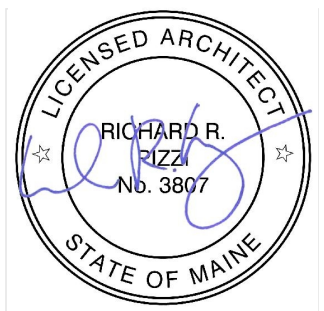
REVISED:

SCALE: As indicated

A10.1

Project Phase
CONSTRUCTION DOCUMENTS

COPYRIGHT © 2026 BY LAVALLEE BRENSINGER PLLC.
ALL RIGHTS RESERVED.
NO REPRODUCTION WITHOUT PERMISSION.



SMCC

HEALTH SCIENCE
CENTER

BGS NUM: 3809

79 Ford Road, South Portland, Maine,
04106

NO.	DESCRIPTION	DATE
4	ADDENDUM 04	07/23/2026

CONTENT:
INTERIOR FINISH PLAN - GROUND FLOOR

DRAWN BY: RUB

PROJECT NO: 25-062-00

DATE: 05/08/2026

REVISED:

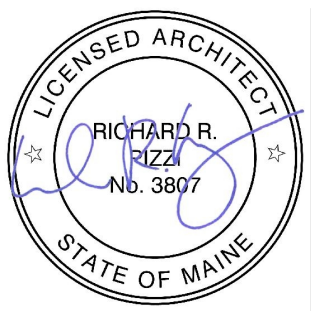
SCALE: As indicated

A11.0

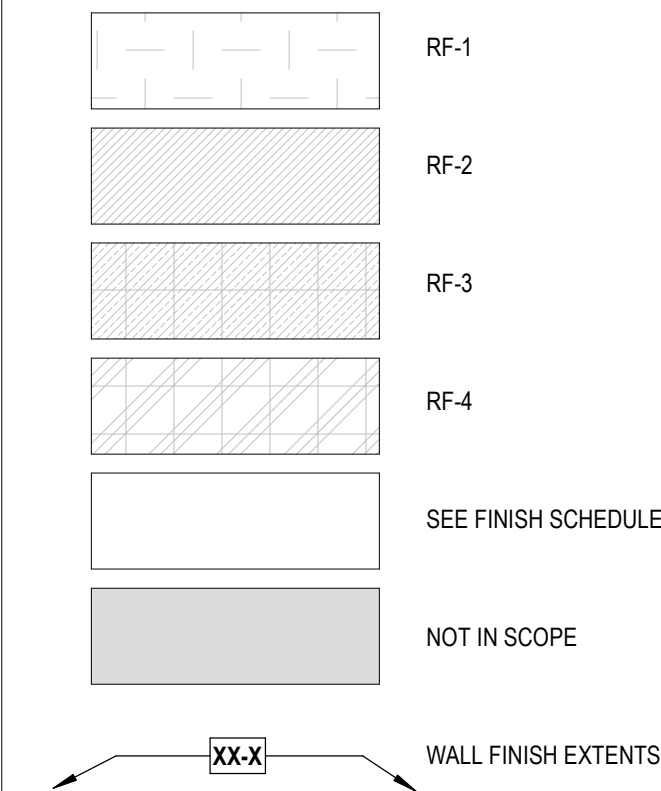
Project Phase

CONSTRUCTION DOCUMENTS

COPYRIGHT © 2026 BY LAVALLEE BRENSINGER PLLC.
ALL RIGHTS RESERVED.
NO REPRODUCTION WITHOUT PERMISSION.



FINISH PLAN KEY



FINISH PLAN GENERAL NOTES:

1. HATCH PATTERNS ARE ONLY SHOWN ON FLOOR FINISH PLANS WHERE MORE THAN ONE FLOORING OCCUR IN A SPACE, OR WHERE PATTERN DIRECTION CHANGES. ALL OTHER FLOORING IS INDICATED IN THE FINISH SCHEDULE.

WALL PROTECTION GENERAL NOTES:

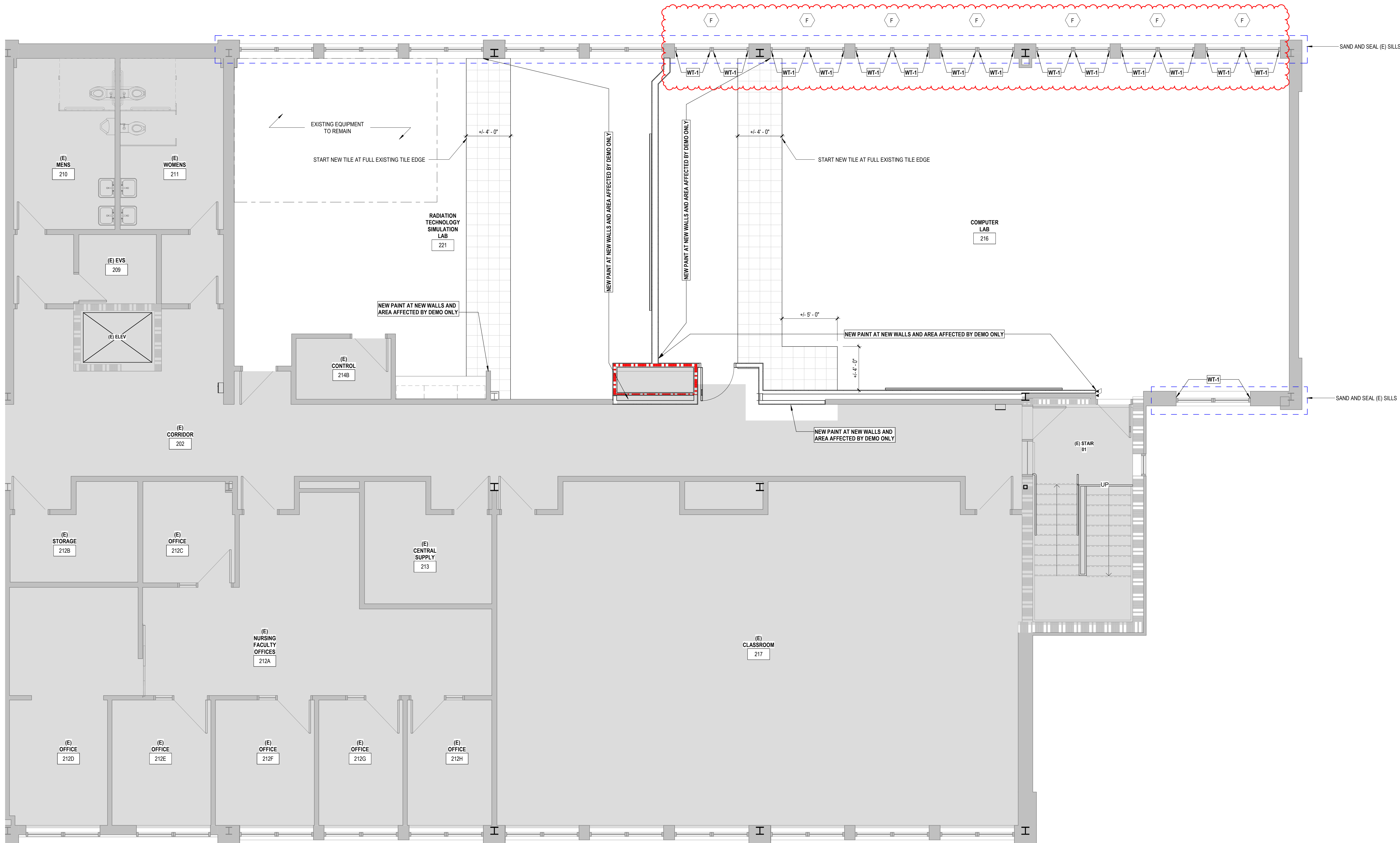
1. REFER TO FINISH LEGEND AND WALL FINISH PLANS FOR WALL PROTECTION TYPE/LOCATIONS.
2. WALL PROTECTION IS NOTED ON AI SCHEDULE FOR COLOR ONLY AND SHOULD BE COORDINATED WITH ELEVATIONS/ WALL FINISH PLANS PRIOR TO ORDERING.
3. SEE WALL FINISH PLANS FOR CORNER GUARD AND BUMPER RAIL LOCATIONS/ TYPES.

MATERIAL DESIGNATION:

- X # X
DESIGNATES COLOR (FIN. LEGEND)
DESIGNATES HEIGHT (SEE AI SERIES PLANS)
DESIGNATES TYPE

PAINT GENERAL NOTES:

1. SEE FINISH SCHEDULE FOR ALL GENERAL WALL PAINT and COATINGS. REFER TO WALL FINISH PLANS FOR ACCENT WALL LOCATIONS.
2. REFER TO SPECIFICATION FOR PAINT/COATING FINISHES U.N.O. BELOW.
3. HM DOOR FRAMES AND WINDOW FRAMES ARE TO BE PTD PT-4
4. CEILING PAINT:
 - ALL GWB CEILINGS AND SOFFITS SHALL BE PAINTED PT-0 UNLESS NOTED OTHERWISE ON THE REFLECTED CEILING PLAN.
 - REFER TO RCP FOR ALL NOTATIONS REGARDING ACCENT SOFFITS AND GWB CEILING PAINTS. ACCENT COLORS ARE NOTED WITHIN THE CEILING TAGS.
 - PAINTED SOFFITS ARE TO RECEIVE PAINT ON ALL HORIZONTAL AND VERTICAL SIDES OF THE SOFFIT.



SMCC

HEALTH SCIENCE
CENTER

BGS NUM: 3809

79 Ford Road, South Portland, Maine,
04106

NO.	DESCRIPTION	DATE
4	ADDENDUM 04	07/23/2026

CONTENT: INTERIOR FINISH PLAN - SECOND FLOOR	
DRAWN BY:	RJB
PROJECT NO:	25-062-00
DATE:	05/08/2026
REVISED:	
SCALE:	As indicated
A11.2	
Project Phase	
CONSTRUCTION DOCUMENTS	
COPYRIGHT © 2026 BY LAVALLEE BRENSINGER PLLC. ALL RIGHTS RESERVED. NO REPRODUCTION WITHOUT PERMISSION.	

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

	SMCC Health Science Center		
	BGS Number: 3809		
	Pre-Bid RFI Log		
Date Received	Questions	Responses	Response Date
5/21/2026	S1 detail S0.1 shows what looks to be clips at the end of the MC6x15.1? Are these welded/bolted? What size are they?	The clip angles are L3x3x5/16 and are to be fillet-welded (3 sides typ) to the connecting and supporting MC6 beams. - FBRA	5/26/2026
5/21/2026	S2 detail needs to be shown marked on the overall floor plan where this detail is to be included?	This detail is a Typical Detail to be applied: 1) at top chord bearing concentrated loading locations associated with Typical Detail S1 (locations are shown on plan), and 2) where any concentrated loads are imposed between panel points at the existing joist bottom chord for hung Architectural/MEP loads. - FBRA	5/26/2026
5/21/2026	On AD1.0 A0.3A H5 note what is this for?	INTERIOR ELEVATION TAG PLACED IN ERROR, NO DEMO INFORMATION IS CONVEYED WITH THIS TAG	5/26/2026
5/21/2026	A0.1 General Notes 9 what does it say?	"9. CONTRACTOR SHALL PROVIDE FULLY ENGINEERED STAMPED DRAWINGS FOR ALL NEW PARTITIONS WITH SPECIAL CONDITIONS AS CALLED FOR IN THE SPECIFICATIONS 09 21 16 SECTION 1.04 SUBMITTALS." Graphic to be updated in Addendum 01	5/26/2026
5/21/2026	Any new fire extinguishers?	1 NEW FIRE EXTINGUISHER AND FIRE EXTINGUISHER CABINET TO BE INSTALLED IN CORRIDOR G01. Graphic to be updated in Addendum 01	5/26/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

5/21/2026	A0.3A Door schedule door type noted as FG2 is it supposed to be FG?	Proceed with FG2. to be updated in Addendum 01	5/26/2026
5/21/2026	Detail C8 A4.2 - Spray applied fireproofing where, on what and how much? - Spray applied fireproofing bridged over the floor system is that what you are looking for?	SPRAY APPLIED FIREPROOFING IS TO BE APPLIED TO THE EXISTING STEEL JOIST FRAMING. REFER TO J1, G1 A0.2A FOR ADDITIONAL SCOPE CLARIFICATION	5/26/2026
5/21/2026	New railing systems to be finish painted?	YES, NEW RAILINGS, NEW GUARDRAILS, AND EXISTING RISERS / STRINGERS TO BE PAINTED TO MATCH EXISTING RISER / STRINGER BLUE.	5/26/2026
5/21/2026	Stringers to get repainted?	YES, NEW RAILINGS, NEW GUARDRAILS, AND EXISTING RISERS / STRINGERS TO BE PAINTED TO MATCH EXISTING RISER / STRINGER BLUE.	5/26/2026
5/21/2026	Detail J1 A4.2 shows spray fireproofing on existing bar joist. Is this for just the space the joist is framed and sheetrocked? Or the entire length of the joist?	REFER TO J1, G1 A0.2A FOR ADDITIONAL FIREPROOFING SCOPE CLARIFICATION	5/26/2026
5/21/2026	A6.3 B5, D1, F8, H5 – Shows 71-8 and 71-16 are these markerboards?	Yes, please see accessories legend on A0.1 for 71-8.	5/26/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

5/21/2026	A8.1 and A8.2 provide grid type and tile of existing.	The existing grid is similar to that which is specified. We are confirming the existing ceiling tile with the client. We will follow up with any updates from the client. -----UPDATE: 6/9/2026----- Client has confirmed, please use ACT-2 Armstrong Optima, where "Match Existing" is indicated.	5/26/2026, 6/9/2026
5/21/2026	FP1.1 notes new sprinkler pipe from street see civil? No civil plans in package? No details on coming through foundation and up into sprinkler room.	This will be provided in a forthcoming Addendum/Bulletin, Date to be determined.	5/26/2026
5/26/2026	Where the X-Ray transformer is physically located? The note on the one-line shows removal of the existing primary feed to that transformer and pulling in a new primary feed. I'm assuming it's in the control room 214B outside the radiation technology simulation lab on the second floor, but I don't see anything on the drawings that shows the location.	The X-Ray transformer is located on the ground floor in Mechanical Room G15. The transformer and disconnect are located plan south on the outside wall of the room. Patrick Cotter, Salas OBrien	5/28/2026
5/27/2026	Need specific roof composition information. Membrane (type, thickness, attachment method) Coverboard (yes/no, type, taper yes/no, thickness, attachment method) Insulations (type, total thickness, attachment method if different from Coverboard) Substrate board (yes/no, type, thickness) Vapor Barrier (yes/no, type, thickness) Deck (type, thickness)	The roof composition as indicated in drawings from a 2008 project indicates the following roofing system makeup: - 0.060 Fully Adhered Gray TPO Membrane - 1/2" OSB - Overlay Tapered Insulation Crickets As Shown (Attachment method unknown) - 7" Polyiso Rigid Insulation (Comprised of 3" layer over a 4" layer with joints offset minimum of 24". Attachment method is unknown) - Existing Sloping Metal Deck (The existing structural drawings indicate the roof deck to be 22 gage Type B roof deck) Whether or not there is a vapor barrier is unknown.	5/28/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

5/26/2026	E6.0 Demo note 9 says to pull back and reuse feeders from XFMR to pull box. New conditions note 2 says to pull in new feeder. Which is correct?	The intent is for the existing feeders to be removed and the existing conduits to be reused to pull the new 1200 amp secondary feeders. Patrick Cotter, Salas OBrien	5/28/2026
5/28/2026	Can you clarify if there will be a set aside parking/staging area available. If not, are there particular parking lots that our workers would be allowed to park in?	The College has indicated that workers can park in any non-permitted visitor spots on campus. The College will offer limited lay down and storage space in lot A. The College will a lot 4 spots in lot E for general contractor vehicles. Refer to attached marked up campus map.	5/28/2026
5/28/2026	The owner's rep did not want us to access the roof. Is it possible for the owner to get pictures of the existing rooftop units and the data tag? We need to see the weights and existing curb dimensions to allow us to plan for cranes etc.	Refer to the attached Image files including a part roof plan of HSC and data tags for the 2 existing units.	5/28/2026
5/28/2026	Can you verify that the Automatic Temperature Control System will be stand alone for this building and not integrated into a campus wide BMS system?	Design intent is for the bidding ATC vendor to provide an Open Non Proprietary BACnet system which when the system is commissioned, to provide the legacy Campus ATC vendor with a full BACnet Points Registry of the SMCC Healthcare Reno. This enables the legacy campus vendor to have full visibility of the system.	5/29/2026
5/26/2026	Demo plans say to leave panel tubs and replace existing panel interiors "one-for-one" for panels L1-L6 and H1-H4. There are no further details provided. Do you have as built drawings or panel schedules you could share for the existing panels including make/model numbers, # of circuits, voltage, MCB/Bus amperage, etc?	Additional information shall be provided in Addendum.	5/29/2026
5/26/2026	ED1.0 - 1.2 include notes to remove all lighting, lighting controls, and FA devices in ceiling for . No details provided on # of fixtures, occ sensors, switches etc. Do you have any more information on # and type of fixtures to be demo'd in each room?	No additional information shall be provided. The rooms noted shall have all the ceilings removed completely, this shall include any lightings, lighting controls and fire alarm devices that are part of the rooms ceiling. Patrick M. Cotter, Salas O'Brien.	5/29/2026

Project: 25-062-00 / BGS 3809**Date: 07/23/2026****Subject: BID RFI Responses – Batch 4 (Comprehensive)****Prepared by: Mario Lewis**

5/29/2026	Section 06 41 00 paragraph 2.04.B: Edge banding is spec'd as 3 mm PVC or ABS on door/drawer fronts and cabinet body edges. Confirm acceptability of PUR-applied 3 mm ABS or whether PVC is preferred for sustainability.	PVC is preferred.	5/29/2026
5/29/2026	Sheet AI0.1 Finish Legend and Section 12 36 00: Sheet AI0.1 references 'Solid Surface' as a countertop option. Section 12 36 00 specifies epoxy resin only. Confirm countertops are epoxy resin throughout with no solid surface, or issue a solid surface spec.	All surfaces are Epoxy Resin throughout.	5/29/2026
5/29/2026	Is there a preferred contractor for the low voltage data work?	Connectivity Point is being engaged by the Client to install all IT system components, cabling and terminations. The Contractor is responsible for installing the infrastructure for all IT services (Conduit and backboxes).	5/29/2026
5/29/2026	Is the data rack on the ground floor mechanical room the preferred location for all of the data lines to terminate?	Connectivity Point is being engaged by the Client to install all IT system components, cabling and terminations. The Contractor is responsible for installing the infrastructure for all IT services (Conduit and backboxes). The terminations for IT cabling will be in the new IT room on the first floor.	5/29/2026
5/29/2026	General note: Floor boxes in Debrief G05 and G03 will require slab cutting and trenching for conduit, this does not appear to be called out on the architectural.	As described in the question, the debrief rooms will require floor boxes that will need to be trenching to the desired locations. The trenching runs and extents are to be determined by the GC as part of their means and methods. Additional notation to this effect will be included in addendum 01.	5/29/2026

Project: 25-062-00 / BGS 3809**Date: 07/23/2026****Subject: BID RFI Responses – Batch 4 (Comprehensive)****Prepared by: Mario Lewis**

5/29/2026	Is there supposed to be a new ceiling in Toilet G13E?	Yes, the toilet room is to receive a new 2x2 ACT ceiling with a diffuser / return system, 2 new 2x2 light fixtures, and associated hardware. The ceiling height is to be 7'-10" aff and will be clarified in addendum 01. Refer to MEP dwgs for additional information.	5/29/2026
5/29/2026	The C5 Detail in Corridor G01 appears to want a 10" trim but the detail it refers to seems to be incorrect. Can you confirm intent?	Details C5/A8.0 and B1/A8.0 have been inadvertently swapped. This will be clarified in Addendum 01	5/29/2026
5/29/2026	The C5 Detail in Corridor G02 appears to want a 4" trim but (once again) the detail it refers to seems to be incorrect. Can you confirm intent?	Details C5/A8.0 and B1/A8.0 have been inadvertently swapped. This will be clarified in Addendum 01	5/29/2026

Project: 25-062-00 / BGS 3809**Date: 07/23/2026****Subject: BID RFI Responses – Batch 4 (Comprehensive)****Prepared by: Mario Lewis**

5/29/2026	Section 06 41 00 and 12 36 00: Both spec sections require BABAA compliance certification. Confirm which specific hardware items must carry BABAA certification (hinges, slides, locks, pulls, shelf pins). Confirm substitution path under Section 01 60 00 if the listed basis-of-design products do not have BABAA certification available.	Yes, all materials shall comply with BABAA requirements to the extent required by the BABAA guidelines.	6/4/2026
5/29/2026	Sheet AI0.1 Finish Legend and Spec TOC: Sheet AI0.1 references Section 06 20 00 Finish Carpentry, but no such section appears in the spec book. Confirm there is no Finish Carpentry scope. If there is, request the spec section.	There is no 06 20 00 Finish Carpentry scope. This has been clarified in Addendum 1.	6/4/2026
5/29/2026	Section 06 41 00 paragraph 2.05.E: Confirm 20 percent of cabinets to receive locks is a base bid carry, and that final lock count and locations will be set in shop drawing review with no scope adjustment to Windham above 20 percent.	No locks are required.	6/4/2026

Project: 25-062-00 / BGS 3809**Date: 07/23/2026****Subject: BID RFI Responses – Batch 4 (Comprehensive)****Prepared by: Mario Lewis**

5/29/2026	Sheets A6.1 and A6.2 Patient Sim Lab rooms: G01A, G01D, G01F show OFCI medical headwall and 'provide blocking' notes for monitors and laptop mounts. Confirm millwork scope at the headwall walls is limited to the wall PLAM panel shown on elevations and excludes any frame, shelving, accessory hanging at the headwall, or coordination with medical gas piping.	There are no PLAM panels in the Sim Lab rooms in the project. The headwall is equipment being provided by the Owner for installation by the Contractor.	6/4/2026
5/29/2026	Section 06 41 00 paragraph 1.09 mock-up: Confirm mock-up location and whether the mock-up will remain as part of installed work. Mock-up cost will be carried in base bid.	Full Mock-up will not be required. Only mock-up of cabinet construction details will be required. Joinery and edge protection (cubbies and drawer) will be key components to review.	6/4/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

5/29/2026	Is there a preferred contractor for the high voltage utility work? Would the owner like to keep the old transformer or have it hauled off. Is it known if there are any PCB's in the existing unit?	SMCC's campus electrical contractor is Electrical System of Maine. SMCC would like to have the transformer hauled off. It is unknown whether the existing transformer contains PCB's.	6/4/2026
5/29/2026	Is there a preferred distributor for the existing fire alarm system?	Encore Fire Systems is the existing fire alarm service vendor for the SMCC. SMCC does not have a preferred distributor for fire alarm systems.	6/4/2026
5/29/2026	There is a new sprinkler system is being added, but I don't see new fire alarm system connections being provided to this. Should these be added?	The new sprinkler system will require connection to the existing building fire alarm system. Exact number of connections to the fire alarm system shall be confirmed with the approved Fire Protection shop drawings as this is a delegated design. Revisions to drawings will be provided in Addendum 01.	6/4/2026
5/29/2026	Panel L4 is not on the floor plan. Panel L5A is not on the 1-line. Are these the same panel?	Existing Panel L4 resides in (E) CUSTODIAL ROOM 121. Panel tag has been updated and will be issued with Addendum 01. Online updates showing Panel L5A will be issued with Addendum 01	6/4/2026
5/29/2026	Will the contractor be responsible for the cost of the building permit?	The Owner will pay for the State Fire Marshal's and Local general construction permit through the Architects office. The Contractor will be responsible for cost of the electrical, plumbing and protection permits.	6/4/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

5/29/2026	Are any of the walls indicated to be removed CMU walls? If so, how thick, and are they structurally bearing?	The majority of walls that are labeled to be demolished on the ground floor and 2 nd floor are CMU walls to above ceiling. They vary in thickness between 6" to 8". This will be clarified on the demo plans and demo schedule in addendum 01	6/3/2026
5/29/2026	Please clarify the extent of security the Contractor is required to provide. See section 01 50 00 paragraph 1.10. Are we expected to provide 24 hour staffing or surveillance?	Contractor is not responsible for 24-hour security and surveillance. SMCC has general campus security. Contractor is responsible for securing materials and tools.	6/4/2026
5/29/2026	Will the Contractor be able to utilize existing power and water supplies in the building? Will the Contractor be responsible for all water and power usage fees?	GC can hook up to existing services that are within the building. They may not hook up to other buildings.	6/4/2026
5/29/2026	Referencing Section 01 50 00 3.04 paragraph G; Are these badges a part of an existing security system within the building, or is this a separate system the Contractor must come up with?	These badges are a separate system the Contractor must come up with.	6/4/2026
5/29/2026	Please confirm that all materials in the project must be BABAA compliant.	Yes, all materials shall comply with BABAA requirements to the extent required by the BABAA guidelines.	6/3/2026
6/1/2026	What is the extent of the Fire Alarm scope? No devices are shown on the plans. What is the brand of the system being tied into?	Fire Alarm devices are shown in renovated areas of the project. Existing Fire Alarm Control Panel has been identified on drawings and will be issued with Addendum 01	6/3/2026
6/1/2026	FP1.1, FP1.2, FP1.3 are not listed Drawing list on page A0.0. I wanted to confirm these are part of this bid and if there are any other drawings not listed?	This is confirmed. the fire protection drawings are part of the project scope. The Cover sheet schedule will be updated to reflect this.	6/4/2026
6/2/2026	What company designed the building's current controls system and is that being tied into or replaced entirely?	Maine Controls designed the buildings current controls system. Work associated with this project will be tied into that system.	6/4/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

6/2/2026	Confirm the GC owns the cost of all temporary equipment, electric, water, heat etc. Will the GC be allowed to hook up to the existing services for construction purposes ?	GC can hook up to existing services that are within the building. They may not hook up to other buildings.	6/4/2026
6/2/2026	Confirm the GC will be able to use the existing bathroom facilities during the construction phase	GC can utilize bathroom facilities but they need to be kept clean. This allowance will be revoked if facilities are not kept clean and at GC expense.	6/4/2026
6/2/2026	Confirm Builders Risk insurance is to be carried by the general contractor	Insurance is to be carried as stated in the bid requirements and by BGS policy.	6/4/2026
6/2/2026	Confirm OCP insurance is required to be carried by the general contractor	Insurance is to be carried as stated in the bid requirements and by BGS policy.	6/4/2026
6/2/2026	Will the General Contractor be required to provide snow plowing during the course of construction	Snow plowing is done by campus staff around the building and campus. They will do the general area but special plowing to move GC equipment or vehicles will be the responsibility of the GC	6/4/2026
6/2/2026	Are there any requirements for the contractor to provide for any clerk of the works.	The contractor will not be required to provide any clerk of the works services.	6/4/2026
6/2/2026	Will existing FF/E be moved by the owner prior to the start of construction, or will the GC need to assist in the process?	The existing FF/E will be moved around the building as needed by the GC by the owner.	6/4/2026
6/2/2026	There does not appear to be a specified wage rate for the fireproofing installer, please advise.	For any other specific trade on this project not listed in Section 00 73 46 Wage Determination Schedule, contact the Bureau of Labor Standards for further clarification.	6/4/2026
6/2/2026	Various areas call out for patching as needed, or only in disturbed areas. Can an allowance be provided to all bidders ? As this will be challenging to accurately quantify.	An allowance will not be provided. The Contractor shall cover the cost of patching within their respective bids.	6/4/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

6/2/2026	In previses question answers there is mentioning of a future addendum and potential for more drawings to be released, when is the intended date these will be released?	Addendum 1 is planned to be issued on 6/3/26.	6/4/2026
6/2/2026	All preexisting RFI questions that have been answered so far, have been distributed in individual emails, will there be a master addendum encompassing all questions and answers ?	We will issue a PDF of those responses issued to date.	6/3/2026
5/29/2026	Detail c1 on page EP1.0 shows lots of symbols that aren't on the floor plan. It appears some symbols have a bold outline. It seems, with the exception of the headwall unit connection, that the symbols on the floor plan match the elevation items with bold outline very well. Should we ignore the other items? For example, Light switch is indicated but no circuit or light is shown, what should these switches be connected to? AV/hdmi symbols are not on floor plan, what should be provided for these? I assume orange cover plates are to only being used to simulate an emergency receptacle.	Yes, the "orange" cover plates are to being utilizing to simulate an emergency receptacle. EP1.0 will be revised in Addendum #2 to clarify the headwall details and coordinate with the Architectural Headwall details more accurately.	6/10/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

6/2/2026	Confirm who will be paying for third party testing, we note that IBC 2021 Section 1704.2 requires special inspections to be performed by an approved agency retained by the Owner or Owner's agent, "other than contractor", in accordance with the independence requirements of IBC 2021 Section 1703.1.1. Given that these services typically are to be performed by the Owner's retained agency, and that the scope and frequency of required testing are not fully defined, please confirm whether the Owner will retain and pay for these services directly, or if the Contractor is to carry an allowance or other defined value for inclusion in the proposal.	Owner will be paying for the 3rd party testing.	6/10/2026
6/4/2026	Please confirm steel show on S1.3 for RTU-G, CU-1, RTU-2 is all existing.	G.C. to verify in field. - FBRA	6/8/2026
6/4/2026	Are there any security and or separation requirements for work that will be complete during the active school year?	The building will not have classes during construction, unless it exceeds the current forecasted completion date. No security or separation requirements.	6/8/2026
6/5/2026	Please confirm that the building will not be occupied during construction. I'm asking in relation to Continuity of Services as described in Specification 230500 1.10/E. Will these temporary utility connections be required?	The building will not be occupied during construction. I couldn't find the section to answer the utility portion.	6/8/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

7/2/2026	Section 05 51 00; 2.04 Accessories. Subsection C calls for Julius Blum fittings. Is the intent to fabricate all rails using components from this specified supplier?	Julius Blum fittings are listed as a basic of design. Substitute products may be submitted following the substation procedures indicated in the Project Manual.	7/2/2026
5/29/2026	Is BIM modeling required for coordination drawings, or are PDFs sufficient?	PDFs are acceptable form of coordination drawing submission.	7/15/2026
6/9/2026	Please provide the AIC ratings for the electrical panels being removed.	We were not able to obtain the AIC ratings of the existing panel being removed during the site survey.	7/14/2026
6/12/2026	What are the AIC ratings of the electrical panels getting replaced?	The panels being replaced shall be a minimum of 22kAIC rating and shall be finalized against the outcome of the fault study required to be provided with the power distribution equipment for review and approval.	7/14/2026
6/12/2026	Regarding the exterior dry fire sprinkler coverage indicated on the FP drawings; NFPA 13-2016 section 8.15.7.2 does not require sprinkler coverage below exterior ceilings and exterior projections for this particular application. Please confirm if it is acceptable to omit the exterior dry sprinkler coverage.	NFPA 13-2016 section 8.15.7.2 omits sprinkler coverage under exterior canopies, roofs, porte-cocheres, balconies, decks, and similar projections where the space above is not occupied and/or sprinkled. In our case at this building, the space above will be sprinkled and is occupied with classrooms. It shall not be acceptable	7/15/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

		to omit the dry sprinkler coverage for the areas in question.	
6/12/2026	If exterior dry sprinkler coverage is required, does the pipe have to be concealed above the exterior ceilings? If it is to be installed above the ceilings, please provide details and cut sheets on how that floor system and canopy ceiling is constructed. If piping is to be installed exposed, below the exterior ceilings, please specify required materials for pipe, fittings, and hangers. If they are concealed please provide details and cut sheets on how that floor system and canopy ceiling is constructed?	Exposed piping shall be acceptable. Specification shall be updated with materials if needed.	7/15/2026
6/12/2026	Mechanical Room g15 I believe has a different wall layout and entrance to it than shown?	See architectural plans.	7/15/2026
6/12/2026	Main entrance off Fort road looks to be non combustible does it need a sprinkler?	Sprinkler shall be allowed to be omitted in the entrance in question if the construction is confirmed to be of noncombustible, or limited-combustible materials.	7/15/2026

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

6/12/2026	Please confirm ambient temperatures above and below the ceiling within the Fort Rd entrance vestibule will be constantly maintained at a minimum 40°F to prevent wet sprinkler heads and pipe from freezing.	Drawings call for the area in question to be served by a dry sprinkler system.	7/15/2026
6/12/2026	If there are structural beams above ACT are we able to go through them with sprinkler lines? If we have to go under them creates a low point in the sprinkler runs. If we can go through them how is this cost to be covered if locations of structural beams are unknown? If there is a beam that runs across an entire classroom or room the ceiling maybe very close to the bottom of the beam.	Typical floor and roof framing is comprised of open web steel joists. Existing structural drawings are available from the Owner. - FBRA	7/14/2026
6/15/2026	Has consideration been given to treating the sprinkler scope as an allowance for bidding purposes? This would also allow pricing to move forward without the promised civil plans.	No. This is a fixed amount grant and we need to compare actual pricing for the selection.	
6/15/2026	Will the owner be moving all loose furniture items in all of the building as areas of work are spread out everywhere.	No, the owner will not be moving it all. Can assist at times for small portions but items will need to be moved/covered by the company.	

Project: 25-062-00 / BGS 3809

Date: 07/23/2026

Subject: BID RFI Responses – Batch 4 (Comprehensive)

Prepared by: Mario Lewis

6/15/2026	Could you please provide window sizes for ones that are getting window treatments?	Window sizes will need to be verified prior to ordering, Nominal overall sizes of windows to receive window treatments are as follows: Ground floor 6'-8" x 6'-0" with a center mull (count: 3), 6'-6"x6'-0" with a center mull (count: 6), Second Floor: 6'-8"x5'-4" with a center mull (count: 7)	7/15/2026
-----------	--	---	-----------