

TOWN OF ERVING

SELECT BOARD / WATER COMMISSIONERS

To be held at the Senior & Community Center
1 CARE DRIVE, ERVING, MASSACHUSETTS 01344

Jacob A. Smith, Chair
Scott Bastarache
James Loynd
Select Board

Bryan Smith
Town Administrator

Meeting Agenda

Monday, December 18, 2023

This meeting is open to the public.

Scheduled Business

<i>Time</i>	<i>Agenda Item</i>
6:00 PM	Call to Order
6:00 PM	Executive Session pursuant to Massachusetts General Law Chapter 30A, Section 21 (a) (3) and pursuant to Massachusetts General Laws Chapter 30A, Section 21 (a) (2)
7:00 PM	Joint Meeting with Finance Committee & Capital Planning Committee: Review & Discussion Regarding Senior Housing Development RFP and Submission, Discussion Regarding Request to Schedule a Special Town Meeting

Old Business

<i>Agenda Item</i>	<i>Section</i>
Review of Police Department Policy 4.28 Police Vehicles- 3rd Reading	1
Review of Proposed Personnel Policies & Procedures Manual Draft- 5 th Reading	2
Review of Bridge Street Reconstruction & Maple Avenue Paving Project Bid Documents	3
Review & Discussion Regarding Senior Housing Development RFP and Submission	4

New Business

<i>Agenda Item</i>	<i>Section</i>
Meeting Minutes: January 09, 2023, January 30, 2023 & March 27, 2023	5
Review & Approval of Calendar Year 2023 Alcoholic Beverage Licensing Annual Report	6
Review & Approval of Calendar Year 2024 Alcoholic Beverage Licensing Seasonal Certification Form	7
Review & Issuance of Calendar Year 2024 Alcoholic Beverage Licenses	8
Review & Issuance of Calendar Year 2024 Business Licenses	9
Discussion Regarding Request to Schedule a Special Town Meeting	10
Close Swamp Road Engineering Agreement with Weston & Sampson	11
Review of Flags, Banners, & Signs on Governmental Flagpoles, Buildings & Properties Policy Draft- 1 st Reading	12
Review of Engineering Services Proposal – Wastewater Asbestos Pipe Removal Project	13
Review of Professional Services Proposal- Asbestos Abatement Oversight- Historical Building & Fire Station	14

Other Business

Signing of the Treasury Warrant

Executive Session: pursuant to Massachusetts General Law Chapter 30A, Section 21 (a) (3) to discuss strategy with respect to collective bargaining ...if an open meeting may have a detrimental effect on the bargaining ... position of the public body and the chair so declares. (AFSCME 1725, Wastewater & Water Unit)

Executive Session: pursuant to Massachusetts General Laws Chapter 30A, Section 21 (a) (2) to conduct strategy sessions in preparation for negotiations with nonunion personnel ...and contract negotiations with non-union personnel regarding Town Administrator.

Anticipated Next Meeting Dates

Thursday, January 04, 2024

Note: These agenda items and estimated times are those reasonably anticipated by the Chair. Not all items listed may in fact be discussed and other items not listed may be brought up for discussion. Estimated agenda times may need to be changed on the night of the meeting for the sake of expediency. Section numbers correspond to agenda packets and are not an indication of the order of the agenda

Calendar Year 2024 License Renewals for Review & Consideration

Business Name	Address	License Type	Effective Date	Expiration Date
French King Bowling Center	55 French King Highway	Liquor License Restaurant/All Alcohol	01-Jan-24	31-Dec-24
Weatherheads	63 French King Highway	Liquor License - Retail Package Store	01-Jan-24	31-Dec-24
Flis Market	5 West Main Street	Liquor License - Retail Package Store	01-Jan-24	31-Dec-24
French King Motor Inn	129 French King Highway	Liquor License - Innkeeper	01-Jan-24	31-Dec-24

Business Name	Address	License Type	Effective Date	Expiration Date
French King Bowling Center	55 French King Highway	Automatic Amusement Devices	01-Jan-24	31-Dec-24

Business Name	Address	License Type	Effective Date	Expiration Date
Dunkin Donuts	63 French King Highway	Common Victualers	01-Jan-24	31-Dec-24
Flis Market	5 West Main Street	Common Victualers	01-Jan-24	31-Dec-24
Freight House	11 East Main Street	Common Victualers	01-Jan-24	31-Dec-24
French King Bowling Center	55 French King Highway	Common Victualers	01-Jan-24	31-Dec-24
French King Motor Inn	129 French King Highway	Common Victualers	01-Jan-24	31-Dec-24
French King Restaurant	127 French King Highway	Common Victualers	01-Jan-24	31-Dec-24

Business Name	Address	License Type	Effective Date	Expiration Date
Greenfield Automotive	38 French King Hwy	Auto Repair	01-Jan-24	31-Dec-24
Tim's RV, Inc.	15 East Main Street	Class I / Agent of Vehicle Manufacturer	01-Jan-24	31-Dec-24
Accurate Automotive	21 Lester Street	Class II / Auto Repair / Retail	01-Jan-24	31-Dec-24
Rose Ledge Companies	21 Poplar Mtn. Road	Class II / Auto Repair / Retail	01-Jan-24	31-Dec-24
Stoneville Auto	64 East Main Street	Class II / Auto Repair / Retail	01-Jan-24	31-Dec-24
Tim's RV, Inc.	15 East Main Street	Class II / Auto Repair / Retail	01-Jan-24	31-Dec-24
Erving Equipment	38 French King Hwy	Class II / Used Vehicle Retail	01-Jan-24	31-Dec-24
Rose Ledge Companies	21 Poplar Mtn. Road	Class III / Buy, Sell Vehicle Parts	01-Jan-24	31-Dec-24
Stoneville Auto	64 East Main Street	Class III / Buy, Sell Vehicle Parts	01-Jan-24	31-Dec-24

Note: These agenda items and estimated times are those reasonably anticipated by the Chair. Not all items listed may in fact be discussed and other items not listed may be brought up for discussion. Estimated agenda times may need to be changed on the night of the meeting for the sake of expediency. Section numbers correspond to agenda packets and are not an indication of the order of the agenda

Town of Erving

Select Board Public Meeting Participation Guidance

The Select Board welcomes residents to communicate questions, comments or concerns. Participants at Select Board meetings are notified that the meetings are both video and audio recorded, and comments provided will become part of the record. While offering public input, it is important that the Select Board is also allowed enough time to conduct their other business. The following guidelines have been established to make the best use of time at Select Board meetings.

1. To request time on the Select Board agenda, persons must contact the Town Administrator at (413) 422-2800, Ext.1102 or at SBRequests@erving-ma.gov by noon on the Tuesday before the meeting.
 - a. Requests will be submitted to the Chairperson for consideration and scheduling.
 - b. Supporting documentation related to the request must be provided to the Administrator's office by noon on the Thursday prior to the meeting. The Chairperson may remove requested agenda topics that are made without supporting documentation.
2. The Select Board encourages public participation as follows:
 - a. Town residents can bring comments before the Select Board that require discussion and are on the agenda, only after being recognized by the Chair. If your issue is not on the agenda, you may bring it up under "Future agenda items".
 - b. "Topics not anticipated" should be brought to the Chair for possible consideration prior to the meeting.
 - c. Please try to keep your comments short and to the point.
 - d. If it appears that the topic(s) being discussed will consume longer than the time allocated then, at the discretion of the Chair, the matter will be placed on an upcoming Select Board meeting agenda.
 - e. If you believe that your topic will require more time or desire to make a more formal presentation than is allowed under these guidelines, please contact the Town Administrator to ask to be put on a future agenda so that we can properly allocate enough time.
 - f. You are free to ask questions or to make your point for all to consider. However, engaging in active debate with Select Board or audience members will not be allowed.
 - g. All comments and questions must be directed to the Chair of the Select Board per MGL Chapter 30A, Section 20(g).
 - h. Participants are expected to speak from the presenter/guest table.
3. Employees and Board members who have business with the Select Board should be placed on the agenda beforehand (see Item # 1.).
4. Anyone wishing to contact the Select Board in writing may do so at:

Town of Erving, Attn: Select Board, 12 East Main Street, Erving, Massachusetts 01344

Alternatively, members of the public can complete a Select Board submission form at the meeting sign in table and office staff member will follow up.

The Select Board appreciates your cooperation in honoring these guidelines.

From Massachusetts Attorney General Official Website

What public participation in meetings must be allowed?

Under the Open Meeting Law, the public is permitted to attend meetings of public bodies but is excluded from an executive session that is called for a valid purpose listed in the law. Any member of the public also has a right to make an audio or video recording of an open session of a public meeting. A member of the public who wishes to record a meeting must first notify the Chair and must comply with reasonable requirements regarding audio or video equipment established by the chair so as not to interfere with the meeting. The Chair is required to inform other attendees of such recording at the beginning of the meeting.

While the public is permitted to attend an open meeting, an individual may not address the public body without permission of the Chair. An individual is not permitted to disrupt a meeting of a public body, and at the request of the Chair, all members of the public shall be silent. If after clear warning, a person continues to be disruptive, the Chair may order the person to leave the meeting, and if the person does not leave, the Chair may authorize a constable or other officer to remove the person.

POLICE VEHICLES

POLICY & PROCEDURE NO. 4.28	ISSUE DATE: 07/01/14
	EFFECTIVE DATE: 07/01/14
MASSACHUSETTS POLICE ACCREDITATION STANDARDS REFERENCED: 41.1.3; 41.3.1; 41.3.2; 41.3.3	REVISION DATE: _____

I. GENERAL CONSIDERATIONS AND GUIDELINES

Police department vehicles are purchased and maintained for the purpose of delivering police services to this municipality. This department is committed to maintaining agency vehicles to be safe, dependable and professional in appearance. Vehicles should be maintained with equipment and stocked with supplies so that employees may effectively carry out their job functions. Employees are required to upkeep the vehicles by cleaning and fueling them, stocking supplies, and reporting defects and damage in a timely manner.

The security of public safety vehicles and equipment is an important issue, in light of intelligence exposing terrorist tactics using marked government vehicles for access to areas that would otherwise be restricted, or as delivery platforms for explosive devices. Marked public safety vehicles are trusted vehicles.

When police vehicles are retired from service, it is important that all equipment and markings that are unique to policing are removed to ensure that the vehicle does not appear to be an in-service law enforcement vehicle. Such vehicles may be misused by criminals or terrorists.

Vehicle accidents account for about one third of police fatalities each year. The wearing of seatbelts by employees and passengers can significantly improve survivability and reduce the severity of injuries in a crash. Seatbelts help operators maintain control of their vehicles during emergency driving and after a crash and are a critical component in the vehicles' occupant safety system.

II. POLICY

It is the policy of this department that:

1. Department vehicles shall only be used for police purposes, as determined by the Chief of Police;
2. All agency vehicles shall be maintained in a clean, safe and dependable condition and,
3. Accidents involving agency vehicles shall be reported immediately to a supervisor, documented and investigated.

III. DEFINITIONS

- A. *Fleet Manager*: An employee designated by the Chief of Police who is responsible for coordinating the equipping, stocking, maintenance and replacement of department vehicles.
- B. *Patrol Vehicle*: A marked or unmarked four wheel motor vehicle ~~sedan or truck~~ intended for regular patrol duties by uniformed personnel.
- C. *Specialty Vehicle*: A motor vehicle intended for a specific purpose, such as a mobile command post, tactical team van, animal control, four wheel ATV, etc.
- D. *Unmarked Vehicle*: A four wheel motor vehicle without sedan or truck ~~without~~ the visible paint, markings, and equipment which would make it easily identifiable as a police vehicle.

IV. PROCEDURES

- A. *Fleet Manager*: shall be responsible for coordinating the equipping, stocking, maintaining and replacing of department vehicles. [41.1.3(c)]

B. Operation

1. AUTHORIZATION
 - a. Department vehicles may be operated only by employees authorized to do so by a supervisor.
 - b. Department vehicles may be issued to specific individuals by the authority of the Chief of Police.
2. LICENSING:
 - a. Persons operating department vehicles must possess a valid Massachusetts Operator's License.

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- b. An employee who's right to operate has been suspended or revoked must inform his/her supervisor immediately upon learning of such suspension or revocation.
 - c. The employee must advise any supervisory employee that [s]he is not licensed if directed or instructed to operate a motor vehicle by such employee.

3. USER RESPONSIBILITIES

- a. Prior to operating a department vehicle, normally at the beginning of an employee's tour of duty, employees must inspect the vehicle to ensure that fluid levels are adequate and the equipment is operating properly, and they must check for cleanliness, adequate supplies, and damage. The inspection shall be noted on the Department Vehicle Inspection Sheet.
 - 1) In the case of an emergency, a vehicle inspection may be postponed until the emergency has passed, at which time an inspection shall be conducted.
 - 2) Operators are responsible for adding fluids, such as motor oil, transmission fluid, coolant, windshield washer, and brake fluid.
 - 3) Operators shall identify and report defective equipment, such as head, directional and marker lights; auxiliary emergency lights; and radios.
 - 4) Body fenders, bumpers, glass and tires shall be viewed for obvious signs of damage.
 - 5) Tires shall be inspected for damage and proper inflation.
 - 6) Supplies carried by the vehicle shall be checked and replaced or replenished as necessary. [41.3.2]
 - 7) Other equipment found to be inoperative or defective, such as radar, Lojack receivers, gun racks, scanners, etc., shall be reported when discovered.
 - a) Defective or damaged vehicles shall be reported the shift supervisor, who will inspect the reported deficiency and cause same to be reported to the fleet manager.
 - b) The supervisor shall initiate an investigation of any unexplained damage.
 - c) In the event that department property is found bearing evidence of damage which has not been previously reported, it will be considered prima facie evidence that the last person using the property or vehicle is responsible for said damage until the officer comes forward and proves by a

preponderance of the evidence that [s]he was not responsible.

8) Vehicles used to transport detainees shall be inspected for contraband and weapons.

b. Operators shall ensure that vehicles are washed regularly.

c. Prior to returning the vehicle, the operator shall ensure that the vehicle is fueled and the interior clean.

4. EQUIPMENT AND SUPPLIES

a. Patrol Vehicles

1) All marked and unmarked patrol vehicles shall be equipped with emergency lights and a siren, and the necessary supplies and equipment. [41.3.1; 41.3.2]

2) Supplies for patrol vehicles are stored in the Vehicle Supply Locker located in the department garage. Vehicle operators may replenish supplies as used or identified during vehicle inspections. [41.3.2]

b. Unmarked Vehicles

1) All police department unmarked vehicles intended for use other than for normal patrol shall be equipped with the necessary supplies and equipment.

2) Investigators' vehicles may carry additional equipment at the discretion of the investigative function supervisor.

3) Administrative vehicles shall carry equipment specified under this section. Except as specified below, additional equipment may be carried at the discretion of the employee assigned to the vehicle's use.

c. Additional permanently mounted radios, firearms and racks, equipment vaults, Lojack receivers, auxiliary emergency lights, push bumpers, must be authorized by the Chief of Police prior to being installed.

d. No body or paint modifications may be made without prior approval of the Chief of Police.

5. PASSENGERS: No person shall be permitted to be an occupant or ride as a passenger in a department vehicle, except when necessary in the performance of a police function, unless authorized by the Chief of Police or supervisor.

6. SEAT BELTS [41.3.3]

a. The wearing of seat belts in department vehicles is mandatory at all times.

- b. Seatbelts are mandatory for all civilian passengers.
 - 1) Children traveling as passengers must use car seats appropriate for the child's age or weight.
 - 2) Children may be transported without a car seat only if car seats are not available.
 - 3) ***The seatbelt must never be bypassed by locking it behind the occupant or by the use of any bypass device.***

NOTE: To protect an occupant during a crash, the airbag control module may fire the seatbelt tensioners, which lock a seatbelt tightly in place around the wearer, fire the airbag, or both, depending upon the severity of the impact. If the seatbelt indicates that it is being worn, the airbag control module may make a decision to deploy only the seatbelt tensioner. If the seatbelt is not being worn, the occupant will not be protected.

7. PUSHING VEHICLES:

- a. Department vehicles equipped with push bars may be used to push disabled vehicles from traffic to the breakdown lane or shoulder of the road. Care must be used not to cause damage to either vehicle.

8. JUMP STARTING VEHICLES: Department vehicles may not be used to jump start vehicles other than department vehicles.

9. ROUTINE OPERATION

- a. Employees shall operate department vehicles carefully, obeying all statutes, rules, regulations, ordinances and bylaws relating to the operation and parking of vehicles. Employees shall exercise due care and judgment.¹
- b. In responding to an emergency, operators may drive in excess of applicable speed limits, provided that due caution is exercised under the circumstances for the safety of persons and property. Operators may drive through an intersection contrary to traffic signals and signs, provided that the vehicle is brought to a full stop and then proceeds with caution. See the department policy on ***Response to Calls***.²

c. When having to back up a department vehicle, Officers when practical will conduct a 360 degree walk around the vehicle. This is to ensure there are no hazards and it is safe to back up. While backing up officers will utilize their mirrors and back up camera. If a second officer is available, he/she will assist in backing up.

Specialty Vehicles [41.1.3]

10. The following specialty vehicles are available to members of this department:
 - a. Animal Control Vehicle

- 1) This vehicle is authorized for use by patrol personnel in an emergency but primarily by the Animal Control Officer. Operators must be licensed to operate a motor-vehicle.
 - 2) The vehicle may be used for animal control functions or other police functions in an emergency.
 - 3) The Animal Control Officer is responsible for stocking the vehicle with supplies and coordinating maintenance with the Fleet Manager.
- b. All Terrain Vehicles (ATV)
- 1) This vehicle is authorized for use by all department personnel as needed. Operators must be trained in its operation prior to use.
 - 2) The vehicle may be used for police operations off road and in light traffic in the case of an emergency, to plow the police facility parking area and walkways, as well as to tow light trailers (ATV trailer, Jet Ski, speed trailer). The vehicle should not be used on roads with high speed traffic or high traffic volumes. Operators must wear a protective helmet while operating at all times, except while towing short distances at low speeds.
 - 3) No special equipment is normally carried on or assigned to this vehicle.
- c. Additional equipment may be carried at the discretion of the supervisor of the function to which the vehicle is assigned.

C. Maintenance

1. REGULAR MAINTENANCE

- a. Regular scheduled maintenance, such as oil changes, state safety inspections, tire replacements, etc., shall be coordinated by the officer assigned to the vehicle.
- b. In the event that a tire is discovered to be flat or damaged, the tire should be changed by the person assigned to operate the vehicle.

2. MECHANICAL AND AUXILIARY EQUIPMENT PROBLEMS

- a. Mechanical and equipment problems shall be reported to the shift supervisor who will determine if the vehicle should be taken out of service. The supervisor shall cause the Chief of Police to be notified of the condition so that it may be resolved.
- b. If, in the discretion of the shift supervisor, a condition that makes the vehicle unsafe exists, the supervisor shall cause the vehicle to be taken out of service.

3. TOWING: If a police vehicle becomes disabled and needs to be towed:
 - a. If the vehicle is in the local area, the operator shall call communications who shall arrange for the vehicle to be towed.
 - b. If the vehicle is outside of the local area, the operator shall notify the shift supervisor. The state police or local police department in whose jurisdiction the disabled vehicle is located shall be called to arrange for the towing of the vehicle.

D. Accidents

1. GENERALLY
 - a. Officers who are involved in an accident with a department vehicle, or when a vehicle is disabled and has been damaged, shall not move the vehicle except in an emergency.
 - b. A supervisor shall immediately go to the scene and make an investigation and report all particulars to the Chief of Police forthwith.
 - c. The officer involved shall promptly submit a written report in accordance with department regulations.
2. OUTSIDE OF THE JURISDICTION
 - a. Officers who are involved in an accident with a department vehicle outside of the agency's jurisdiction shall immediately notify the shift supervisor.
 - b. The shift supervisor shall cause the State Police or police department of the jurisdiction to be notified.
 - c. The accident shall be investigated by the State Police or the police department of jurisdiction.
 - d. At the discretion of the shift supervisor or a superior officer, the shift supervisor may respond to take photographs and otherwise render assistance.

E. Disposal

1. When a police department vehicle is to be disposed of through auction, trade in, possession by an insurance company, or other means, the Fleet Manager shall cause all loose supplies and equipment to be removed from the vehicle.
2. The vehicle shall be stripped of all retro-fitted equipment that is unique to public safety vehicles, such as two-way radios, emergency lights, prisoner cages, radio racks, MDT mounts, push bars, sirens, etc.

¹ M.G.L. c 89, §7B.

¹ M.G.L. c 89, §7B.

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Mandatory Equipment – All Patrol Vehicles

- Mobile two-way radio
- Siren
- Emergency auxiliary lights
- First Aid Kit
- Fire Extinguisher
- Spare tire, jack, lug wrench (not required for motorcycle)
- Blanket
- Road flares, 30 minute with wire stand
- Personal Flotation Vest (water rescue)
- Flotation Throw Line or Life Ring (water rescue)
- Automatic Defibrillator

Optional Equipment

- Public Address System
- Rifle in locking rack
- Shotgun in locking rack
- Radio scanner
- Mobile Data Computer
- Oxygen kit
- Police line tape
- Portable Spike Strips

Mandatory Equipment – All Unmarked Vehicles

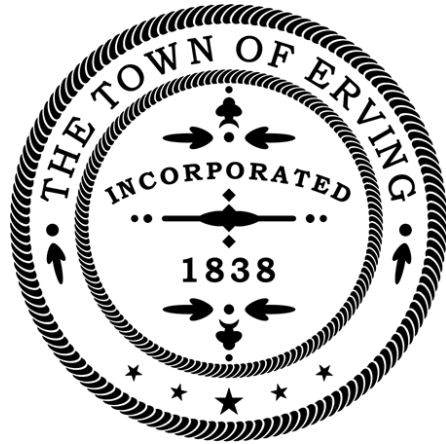
- Mobile two-way radio
- Siren
- Emergency auxiliary lights
- First Aid Kit
- Fire Extinguisher
- Spare tire, jack, lug wrench (not required for motorcycle)
- Blanket
- Road flares, 30 minute with wire stand
- Personal Flotation Vest (water rescue)
- Flotation Throw Line or Life Ring (water rescue)
- Automatic Defibrillator

Optional Equipment

- Public Address System
- Rifle in locking rack
- Shotgun in locking rack
- Radio scanner
- Mobile Data Computer
- Oxygen kit
- Police line tape
- Portable Spike Strips

Mandatory Equipment – Animal Control Vehicles

- Mobile two-way radio
- Siren
- Emergency auxiliary lights
- First Aid Kit
- Fire Extinguisher
- Spare tire, jack, lug wrench (not required for motorcycle)
- Blanket
- Road flares, 30 minute with wire stand
- Snappy Snare
- Heavy duty gloves



TOWN OF ERVING, MASSACHUSETTS

Personnel Policies & Procedures Manual

www.erving-ma.gov/personnel

Town of Erving | 12 East Main Street, Erving, Massachusetts 01344



TOWN OF ERVING

12 Main Street
Erving, Massachusetts 01344
Telephone: (413) 422-2800
Facsimile: (413) 422-2808
Email: administrator@erving-ma.gov

ADM-
Policy

Personnel Policies and Procedures Manual

Approved: _____ Date: _____
Select Board Chair, Jacob A. Smith

Issue Date / Effective Date

This manual of personnel policies and procedures is issued and effective on _____.

This policy supersedes the Town of Erving Personnel Policies manual last revised in November 2015.

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PERSONNEL POLICIES AND PROCEDURES
Town of Erving, Massachusetts

WELCOME

Congratulations and welcome as an employee of the Town of Erving! The Select Board of the Town of Erving is pleased to welcome you as a member of our team of dedicated employees that work for the betterment of our community. We hope that you will enjoy working with us in a spirit of cooperation that results in top service to our community.

These Manual details the Town's personnel policies. It is a compilation of guidelines, procedures, expectations, and benefits. We hope it will help you adjust to the routines that make the Town of Erving run smoothly.

If, after reviewing this Manual, you have any questions, please consult your Department Head or the Town Administrator's Office.

Purpose, Authority, and General Provisions

In accordance with the Town's Personnel Policies By-Law, Chapter 53, § 53-1, the Town has created this Employee Personnel Manual. This Employee Personnel Manual applies to all Town employees, except those appointed by the Erving School District, and for those Town employees who are either members of a bargaining unit subject to the terms of a collective bargaining agreement or non-bargaining unit employees who are parties to an individual employment agreement. It sets forth the terms and conditions of employment for those Town employees to which it applies.

These personnel policies establish an efficient system of personnel administration. They provide a broad view of employee guidelines, practices, and job expectations in conformance with federal and state statutes.

This document is not an expressed or implied contract between the Town of Erving, any employee, or any group of employees, and is for informational purposes only. It is not all inclusive and is intended to offer only general guidelines. The policies, benefits, and operating procedures contained in this Manual are not intended to create and are not to be construed to create any contract, agreement or legally binding obligation between the Town of Erving and its employees. Any highlights of benefits contained in this Manual are not intended to take the place of more detailed benefit plan documents. Descriptions in the plan documents will override the information in this document in the event the information presented in these Manual conflicts with the information in the plan documents. This Manual does not guarantee any specific level of benefits or continuation of any specific benefits. The Select Board reserves the right to change, suspend, or discontinue the provisions of these policies, procedures, benefits and guidelines at its sole discretion, with or without notice. The Select Board has the exclusive authority to make final determinations on issues resulting from a lack of clarity of these policies.

The Select Board has the authority to make all appointments and effect discharge from any position not under the jurisdiction of another Town Board or Commission (Appointing Authority). Certain other Town Officers have the right to make appointments, supervise, discipline and terminate personnel within their department. The Select Board may delegate authority detailed in this policy to Town staff, subject to the Select Board's final approval.

Unless otherwise provided for in a collective bargaining agreement or individual employment agreement, all individuals employed by the Town of Erving are employed "at will", and the relationship may be terminated by either party at any time, with or without cause, and with or without notice.

Only the Select Board or the authorized Board, or Commission can create an employment agreement. In such a case, a signed and written agreement is required.

~~This Manual is an explanation of benefits, policies, practices and procedures, only. Any highlights of benefits contained in this Manual are not intended to take the place of more detailed benefit plan documents. Descriptions in the plan documents will override the information in this Manual in the event the information presented in this Manual conflicts with the information in the plan documents. This Manual does not guarantee any specific level of benefits or continuation of any specific benefits.~~

Benefits Waiting Period

The first 30 days of employment with the Town of Erving will be the benefits waiting period for all benefits-eligible employees.

Applicability & ADMINISTRATION

These policies shall be applicable to all employees, whether exempt or non-exempt. In any instance where these policies conflict with federal or state laws, such laws shall be deemed to prevail.

The Town of Erving Select Board is charged with administering and maintaining the Bylaw and Personnel Policies as hereinafter provided and may establish, rescind, or amend such administrative procedures it considers necessary for the implementation of these rules. Such procedures and any amendments thereto shall become effective upon ~~a majority~~majority approval by the Select Board. All lawful and statutory rights of the Town Administrator, the Select Board and Department Heads not specifically covered herein shall ~~be, and~~be and are hereby reserved to them.

ARTICLE 1: HOURS OF WORK, BREAKS & OVERTIME

Work Schedule

The regular workday for Town of Erving employees will be set forth in the schedule posted by each employees' respective department. Each respective department's work schedule will be sent to the Select Board. Supervisors are required to record all absences, tardiness, and early departures and the specific reason(s). Absences, tardiness, and early departures for unsatisfactory or unapproved reasons may be grounds for disciplinary action up to and including termination.

Meal & Break Periods

All employees who work at least six (6) hours on a calendar day shall be granted regular thirty-(30-) minute meal periods each workday, which shall, whenever possible, be scheduled in the middle of the normal workday. Time allowed for meal periods shall be unpaid and shall not constitute a part of the paid workday. The Town encourages and requires employees to take their lunch break. During their meal break, employees shall be free of all duties and are free to leave the workplace.

While not encouraged, if an employee voluntarily chooses to work through their scheduled lunch break and maintain duties, the employee will remain paid. The employee can choose to take their scheduled lunch break, unpaid as described above.

The only exception to this policy, are meal periods for public safety & public works employees responding to emergencies and engaged in the performance of their duties. ~~Police~~ Similarly, ~~Patrol~~ Officers shall be paid and such ~~Police-Patrol~~ Officers shall remain on call during their meal break.

All employees' work schedules shall also provide for up to two (2) fifteen-minute paid breaks – one during each one-half shift of the normal workday.

Overtime

When operating requirements or other needs cannot be met during regular working hours, employees may be scheduled to work overtime hours. When possible, advance notification of the need for overtime will be provided to the Town Administrator by the Department Head or their designee. All overtime work must be pre-approved by the Department Head or their designee. Overtime compensation is paid to all non-exempt employees in accordance with federal and state wage and hour restrictions, and is based on 40 hours per week, actual hours worked. Time off for vacation time, sick or personal leave or any other leave of absence will not be considered hours worked for purposes of calculating overtime.

Commented [BS1]: Edits have been made to address the voluntary option for employees to work through lunch and make it clear that it can be retracted at anytime, and to clarify the exception for public safety and public works personnel engaged in response to an emergency and performing official duties.

Commented [BS2]: Open question about whether to include or exclude these leaves

Payroll and Timekeeping

The Town's workweek runs from 12:00 a.m. on Saturday through 11:59 p.m. on Friday. All timekeeping submissions for the preceding two weeks of the Town's bi-weekly payroll period must be submitted to the Treasurer's Office by 9:00 a.m. on Monday following the close of the second workweek of the bi-weekly payroll period.

Timekeeping Federal and state laws require the Town to keep an accurate record of time worked ~~in order to~~ calculate employee pay and benefits. Accurately recording time worked is the responsibility of every employee and supervisor. ~~With this in mind, all~~All employees must record and verify all time worked on a daily basis and submit bi-weekly time sheets or other methods of recording time worked, as may be determined by the Town in its sole discretion (through the Treasurer) from time to time, to their supervisor for approval. Employees may not work overtime hours or record another employee's time without prior approval from a department head.

Massachusetts and/or federal law require certain deductions from employee compensation, including any applicable federal or state income taxes and Medicare. All employee deductions for participation in benefits programs are made through payroll. Employees who have any questions about the amount or manner in which deductions are made from their paychecks should speak with the Payroll and Benefits Coordinator in the Treasurer's Office. The Town takes all reasonable steps to ensure that employees receive the correct amount of pay in each paycheck and that employees are paid promptly on the scheduled payday. If there is an error in the amount of pay, the employee must promptly bring the discrepancy to the attention of their supervisor and to the payroll coordinator so that corrections can be made as quickly as possible. This includes overpayment as well as underpayment.

Department Heads

When requested by the Select Board or any other applicable appointing authority to attend Board or Commission, and Town Meetings, Department Heads will schedule the meeting time into their regular weekly hours, whenever practicable.

Hazardous Weather Conditions

The Town of Erving may close work sites due to hazardous weather conditions as ~~recommen~~recommended by the Select Board. The Chair of the Select Board will make the determinations of closings. The Select Board chair will call the Town Administrator with the determination of whether or not Town Offices or work sites will close or remain open. In the event that Erving Town Offices and or work sites are closed by the order of the Chair of the Select Board due to inclement weather or emergency conditions, those non-exempt hourly employees scheduled to work that day who are unable to perform their job duties by working remotely will receive paid leave equal to the number of hours that they were actually and regularly scheduled to work that day, while exempt employees will be paid their regular salary. Essential personnel, such as but not limited to police, highway, and wastewater employees, must report to work during winter weather conditions unless and until otherwise specifically directed. Employees will be

notified using the Town's Smart 911 notification system and the Town will use the Town website and local media stations to notify the general public.

Employees who ~~are capable of performing~~ can perform the essential functions of their respective positions remotely will be required to do so in the event a work site or Town Office is closed. Details relating to remote work are contained in the Town's Remote Work Policy.

The Chair of the Erving Select Board shall determine closing/hazardous weather conditions if non-essential employees are required to report on a day-by-day basis.

Any staff person who is concerned with weather conditions when the office remains open may choose to use their own vacation or personal leave time, but first must advise their supervisor of their intention to use such leave as soon as possible and prior to the start of their scheduled shift. If a decision is made to close the office, the staff person is required to use vacation or personal leave time only up to the time of the closing at which time administrative leave may be used, but only up to employees' daily hours.

The Town of Erving takes an aggressive stand toward potential risks and losses inherent in the operation of the Town. If employees see a dangerous condition or safety hazard, they must immediately report it to their supervisor. Maintaining safe ~~work~~working conditions requires the cooperation of all employees. All employees using a vehicle for Town of Erving purposes shall wear a seat belt in accordance with state law. Attention to personal safety cannot be overemphasized. If an employee has suggestions regarding additional safety measures, the employee is encouraged to share them with their Department Head.

ARTICLE 2: EMPLOYEE BENEFITS

The Town of Erving offers certain benefits to eligible employees including health and life insurance. All benefits-eligible Town employees shall be eligible to enroll and participate in the Town's group health, dental, and life insurance plans as determined by the Town and as outlined in accordance with M.G.L. c. 32B. The Town may, in its sole discretion, change, suspend, or discontinue any or all benefits with or without notice.

Benefits currently offered by the Town of Erving to eligible employees in accordance with the terms of the respective benefits include the following:

- Health insurance;
- Dental insurance;
- Life insurance;
- Short Term Disability insurance;
- Long Term Disability insurance;
- Flexible Savings Accounts (FSA);
- Employee Assistance Program (EAP)

The contact information for all of the Town's benefit providers is maintained by the Treasurer's Office, which contact information may be amended from time to time, and is listed in Appendix C of this Policy. For more information about any of these benefits, see the Treasurer or Town Administrator.

Health & Dental Insurance

All benefits eligible employees are entitled to participate in the health insurance programs offered by the Town. Eligibility is in accordance with M.G.L. c. 32B and the Town's policies. Employees must comply with all applicable notice requirements regarding dependents and selection of benefits. The Town of Erving is a member of the Hampshire Group Insurance Trust for health insurance through Blue Cross & Blue Shield. Benefits eligible employees are eligible for coverage effective the date of hire and must enroll within thirty (30) days of the date of hire, otherwise employees must wait until the open enrollment period. Open enrollment is held from April to May annually with benefits years beginning with the fiscal year on July 1st. Benefits eligible employees who are interested should speak to the Treasurer's Office for information on the plans and information regarding enrollment.

When an employee voluntarily terminates their employment, they will continue their health & dental insurances until the end of the month in which they resigned, given that their premiums have been paid in full.

Basic Life Insurance

The Town of Erving will offer a basic life insurance policy for all eligible employees at the time of their initial employment. Employees may be able to adjust and add additional life insurance coverage throughout their employment with the Town after their initial hire. Employees interested in making these adjustments should speak with the Treasurer's Office to complete the necessary paperwork and payroll deductions.

When an employee voluntarily terminates their employment, they will continue their life insurances until the end of the month in which they resigned, given that their premiums have been paid in full.

Short- & Long-Term Disability Insurance

The Town of Erving offers short-term and long-term disability insurance options for benefits eligible employees. Interested benefits eligible employees can choose to enroll in these plans at any time after their hire date. Interested employees should speak to the Treasurer's Office for information on the plans and regarding enrollment.

Flexible Savings Accounts

The Town of Erving offers a Flexible Savings Account (FSA) option for benefits eligible employees. Interested eligible employees can choose to enroll in a pre-tax deducted account to be spent on eligible health related expenses. Interested benefits eligible employees should speak to the Treasurer's Office for information on the plan and regarding enrollment.

Employee Assistance Program

An employee who is experiencing difficulties in their personal life to the extent that job performance, workplace atmosphere or general well-being is affected, is encouraged to seek help through the Employee Assistance Program (EAP). The EAP is designed to help employees and their family members by providing crisis intervention, assessment, referral and short-term counseling services in order to help identify and resolve personal issues and stress, illness, alcohol or other drug abuse, legal issues, financial or marital difficulties, as well as any other distresses. The EAP program is confidential, and information cannot be released without the employee's permission except as required by law.

This service is currently provided through AllOne Health Employee Assistance Program (EAP) 24 hours/ 7 days per week. AllOne Health can be contacted by:

- Calling 1- (800) 451-1834
- Visiting the website: <https://myassistanceprogram.com/miaa-eap/>

As noted in the introductory section of this Manual, the Select Board reserves the right to change, suspend, or discontinue the provisions of this program, at its sole discretion, with or without notice.

ARTICLE 3: COMPENSATION PLAN

Administration

Each classified position shall be placed in a pay grade with those other positions that are sufficiently similar with respect to difficulty, responsibility, and character of work as to require the same amount of experience and training for satisfactory performance and pay within the established pay range. The Town's Classification and Compensation Plan does not apply to employees in positions that are part of a collective bargaining unit. A list of the positions in the Town's Classification and Compensation Plan is attached to this Manual in Appendix B.

Position Description

A position description, also known as a job description, is a written outline of responsibilities for each job in the classification plan. The position description will be the standard for classifying individual positions and for determining when reclassification may be warranted, as well as for assisting in any dispute over whether an employee is performing assigned duties of a higher pay grade. The statements contained in such position descriptions, which are to be provided to the Town's Personnel Board and/or the Select Board, in the event the Select Board is performing the functions of the Personnel Board, and/or by any Town Department Heads or any applicable Appointing Authority other than the Select Board, are descriptive and not restrictive, and are reviewed to note any significant changes that may have taken place during the preceding year.

Reclassification

Reclassification of positions will occur when the actual duties of a position merit transfer to another pay grade reflecting its duties, authority, and responsibility. All decisions regarding reclassification shall be made ~~in~~at the sole discretion of the Select Board, after reviewing recommendation(s) from the Department Head and Town Administrator.

Pay Plan

The pay plan consists of pay grades directly related to each classification level. Each pay grade shall have established minimum and maximum pay rates set forth in a step scale. No non-exempt employee shall receive pay at any rate other than that rate which is within the step scale established for the classification level of their position, unless approved by the Select Board. The Select Board shall have the authority to make and approve changes in employee compensation resulting from such personnel actions as reclassifications, promotions, demotions, and transfers or because of abolishment, modification, or establishment of classes within the approved budget. Employees currently receiving a wage rate over the maximum of the recommended wage range will not have their wage rate reduced as a result of any classification study. The employee will have their salary "red circled"; that is, they will not receive a wage or salary step increase until their current salary rate no longer exceeds the maximum salary rate of the pay grade for their classification level, unless otherwise approved by the Select Board upon the recommendation of the Department Head and the Town Administrator.

The Select Board may also increase employees' base wages on an annual basis, if the Select Board, in its sole discretion, votes to do so.

Not less than every five (5) years, the Town shall perform a market comparison that reviews position descriptions, benefits and compensation.

Starting Rates

Employees appointed to positions will ordinarily be compensated within the first three (3) steps of the applicable pay range for that position's respective grade. Subject to the approval of the Select Board, however, appointment at a wage rate above the first three (3) steps of the applicable pay range may be made based upon exceptional qualifications of the applicant or by a lack of qualified applicants available at the minimum rate.

Rate of Pay for Promotion

When a regular employee is promoted to a position classification in a higher pay grade, the employee shall be placed in the new salary schedule such that their salary in the promoted position is at a step on the scale that is the next highest monetary pay rate above the employee's rate of pay in their prior position. The Town, in its sole discretion, however, may place the promoted employee at a step up to ten percent (10%) higher than the employee's pay rate in the position from which the employee is promoted based on the employee's prior experience.

Rate of Pay for Transfer or Demotion

When a regular employee is transferred from a position in one class to a position in another class at the same pay rate, or is transferred with no change in class, the employee shall continue to be paid at the same rate. When a regular employee is demoted to a lower classification level, their salary shall be set at the same step in the lower grade.

Pay for Temporary Assignments Outside Classification

When an employee is temporarily assigned to perform the duties of a position in a class with a higher pay range for thirty (30) or more consecutive workdays, the employee shall be compensated at a rate at least equal to the minimum rate for the higher position for the duration of the temporary assignment.

An employee who is temporarily assigned to perform the duties of a position in a class with a higher pay range on an intermittent basis may, in the Town's sole discretion, prospectively be compensated at a rate at least equal to the minimum rate for the higher position while actually working in that higher position but only after being temporarily assigned and actually performing such duties for more than thirty (30) work days in the aggregate.

Longevity

Policy

1. Upon the completion of an employee's fifth (5th) year of continuous employment with the Town of Erving, a ~~full-time~~ employee shall receive an annual stipend of five hundred dollars (\$500.00), less taxes and withholdings. The stipend shall be paid no later than the second payroll following the employee's anniversary date.
2. Any employee departing the Town's employment before completing their first five years' anniversary date or any subsequent anniversary date will not be entitled to a prorated longevity payment for the partial fifth (5th) year of employment with the Town.
3. For the purposes of calculating their overtime and call back rates of pay, employees will have their base pay rate increased because of their longevity benefit.
4. Continuous employment shall include periods while on Workers Compensation for injury related to employment with the Town, and periods performing military service under orders, provided that no employment other than military service under orders is entered into during the period of interruption, and that the employee returns to Town service within thirty (30) days after honorable discharge from active military service, or immediately upon release from reserve duty. An employee who elected an unpaid leave of absence of more than twelve (12) weeks per fiscal year shall have their longevity payment adjusted by the number of calendar days spent on such unpaid leave.
5. At the anniversary date of each subsequent five (5) years of continuous employment a full-time employee shall receive an increase of an additional two hundred and fifty dollars (\$250.00), less taxes and withholdings, until the maximum stipend of One Thousand Two Hundred and Fifty dollars (\$1250.00), less taxes and withholdings, is reached. Stipends shall be paid no later than the second payroll following the employee's anniversary date and shall be considered as "regular compensation" for ~~purposes~~the purpose of retirement pursuant to MGL, Chapter 32.
- ~~6. Benefits eligible part-time employees shall receive a pro-rata longevity benefit in the proportion that their part-time service bears to full-time service. Their average bi-weekly hours for the entire length of their continuous employment will be used for calculating their longevity benefit. The calculation will be renewed at each anniversary using the latest data.~~

Scope

This policy applies to all Town of Erving full-time and benefits-eligible part-time employees. Elected Officials are excluded from this policy.

Longevity Chart¹

Anniversary Years	Amount
Upon completion of year 5 through year 9	\$500.00, less applicable taxes and withholdings
Upon completion of year 10 through year 14	\$750.00, less applicable taxes and withholdings
Upon completion of year 15 through year 19	\$1,000.00, less applicable taxes and withholdings
Upon completion of year 20 and subsequent years	\$1,250.00, less applicable taxes and withholdings

Call Back Pay

Any regular full-time hourly, non-exempt employee who is called back to a work more than two (2) hours after the employee leaves their normal quitting time will receive a minimum of four (4) hours call back pay at straight time or time and one-half for the actual hours worked, whichever is greater.

Callback pay is not intended to apply when such a full-time, hourly, non-exempt employee works extra hours that merge into their regular shift (i.e., either at the beginning or end of such regular shift) or to attend a posted meeting.

Moreover, a full-time, hourly, non-exempt employee is not entitled to call back pay if they are retained on duty at the completion of their regularly scheduled shift. In such cases, the respective employee shall be paid for the hours actually worked in accordance with the law.

In the event a full-time, hourly, non-exempt employee is either called-in pursuant to this Section or if such employee's regular work hours merge with extra hours or the employee is retained on duty at the completion of their regularly scheduled shift, if the extra work said employee performs results in the employee actually working more than 40 hours in the given workweek, the Town shall pay said employee at time and one-half the employee's regular rate of pay for all hours actually worked over 40 in the workweek.

Compensatory Time

Non-salaried, non-exempt, hourly employees may accrue compensatory time for hours actually worked in excess of their regular 40-hour workweek only upon mutual agreement of both the employee and the Appointing Authority or the employee's Department Head prior to any hours actually being worked. The calculation of compensatory time shall only include hours actually worked – not sick, vacation, Family Medical Leave time, Small Necessities Leave time, any other leave time or holiday leave hours – and such compensatory time shall be accrued at time and one-half (1.5) the employee's regular rate of pay and, when taken, used on an hourly basis.

¹ In order to be eligible for any of the Longevity stipend payments noted below, an employee must complete each requisite five- (5-) year interval.

Commented [BS3]: Chairman Smith wanted revisit this topic

Commented [BS4R3]: Suggested edits regarding the payout of accrued time and the concern about creating further overtime liabilities are provided in track changes

All work that would result in compensatory time being earned must have prior written approval and, where applicable, shall be charged to the project requiring the extra time.

Compensatory time must be used with thirty (30) days of it being earned, or it will be paid to the employee, unless a longer period of time is approved in writing by the supervisor and/or Appointing Authority. The use of accrued compensatory time by an employee must be approved by the employee's supervisor and cannot create an overtime liability for the Department regarding the employee's leave. Unused accrued compensatory time will be paid out to the employee with the final payroll of the fiscal year if not used within the fiscal year.

Salaried, exempt employees are not eligible for overtime pay or compensatory time off. There are infrequent occasions when a professional, administrative, or managerial employee may be asked to take on added responsibility that for some period of time will clearly and substantially increase the number of hours such an employee works per week. When it is not possible for the individual to delegate other responsibilities or otherwise accommodate these new responsibilities to their normal work week, the principle of fairness will allow that the individuals be given paid administrative time off to compensate for the additional hours worked as a result of the added responsibility within a reasonable period. Such paid administrative time does not accrue.

Deferred Compensation

As permitted by the Federal Revenue Act of 1978, a benefits-eligible employee may, as allowed by law, choose to have part of their pay withheld and invested in a savings plan, annuity, life insurance or any combination thereof. The entire amount invested is deducted prior to the withholding of both federal and state income taxes. The plan will be administered at no cost to the employee. For more information, please contact the Treasurer's Office.

Travel Reimbursement

It is the Town's policy that employees use Town-owned vehicles for official Town business whenever practical, before requesting permission to use their own personal vehicle for official use.

Mileage for work-related travel using personal vehicles will be reimbursed at a rate based on the United States Internal Revenue Service's (IRS) then-applicable published standard mileage rate. The Town will issue an updated travel request form reflecting the new IRS rate for January of each calendar year. Receipts for parking, tolls and itemization travel must be submitted before reimbursement will be authorized.

All travel reimbursement expenses must be submitted within 60 days or expenses will not be reimbursed; provided, however, that travel reimbursement requests from the preceding fiscal year must be submitted and processed before July 15th.

Meals, while on Town of Erving business, will be reimbursed on the basis of receipt with a limit of \$45 per day. Meal reimbursements may include non-alcoholic beverages. Tips may be reimbursed up to 20%, if the total is within the limits, and with proper receipts.

An employee may be reimbursed for their meal and the meal of others if the meal was for business purposes and was pre-approved by the Select Board or the employee's respective appointing authority.

Advance payments by the Town for hotel reservation deposits will only be made directly to the hotel by the Town. If an employee pays for or charges a deposit or the entire hotel charge, reimbursement will not be made until after the employee has completed the hotel stay and then only upon the employee's submission to the Town of a receipt from the hotel or credit card showing payment of the deposit or total charge.

Any other business travel-related expenses not expressly addressed in this policy must be pre-approved by the Select Board or the employee's respective appointing authority.

Payroll Deductions

All earnings and deductions are reflected on the payroll stub. The Select Board is required to withhold the following deductions from wages (M.G.L. Chapter 149, Section 150A):

- Federal Income Tax
- Massachusetts Income Tax
- Social Security
- Pension/Retirement
- Dues Check Off
- Medicare
- Wage Garnishments (upon IRS Notice or Court Order)
- Deferred Compensation
- Other optional employee deductions (group health, life, dental, disability, etc.)

ARTICLE 4: EMPLOYEE LEAVE POLICIES

Holidays

Holiday pay is based on the number of hours a non-exempt, hourly employee would have worked on the day on which the holiday is observed, up to a maximum of eight (8) hours. For salaried, exempt employees, holiday pay for the holidays that regular employees are entitled to, with pay, are:

New Year's Day	Fourth of July
Martin Luther King's Birthday	Labor Day
Presidents' Day	Indigenous Peoples' Day
Patriots' Day	Veterans' Day
Memorial Day	Thanksgiving Day
Juneteenth	Christmas Day

To be eligible for holiday pay, employees must work the day before and the day after the date on which the holiday is observed, unless they are authorized by the Town to be absent on either the day before and/or the day following the holiday.

An employee who is on leave without pay or absent for any part of their scheduled workday immediately preceding or immediately following a holiday shall not receive holiday pay for that holiday unless such absence is authorized by the employee's Department Head. If a holiday falls on a Saturday, the observed holiday and day off shall be the Friday immediately preceding the Saturday; if it falls on a Sunday, the observed holiday and day off shall be the Monday immediately following the Sunday. If the observed holiday falls on a day the benefits eligible employee is not scheduled to work, the holiday may be observed on the regularly scheduled shift that occurs immediately before or after the holiday. In such a case, the shift on which the holiday may be observed shall be subject to the approval of the employee's Department Head.

Essential employees required to work an unscheduled holiday will be paid at a time and one-half their base hourly rate of pay.

Vacation Leave

Vacation hours can be used only upon successful completion of a thirty- (30-) day benefits waiting period, which includes the probationary period. Vacation hours shall accrue from the employee's date of hire. Provided there has been no break in service greater than two (2) years, vacation accrues as follows:

Continuous Service	Vacation Time Accrued²
Date of Hire through completion of four (4) years	6.67 hours each month (eighty [80] work hours/year)
Beginning of year five (5) through completion of eight (8) years	10 hours each month (one hundred twenty [120] work hours/year)
Beginning of year nine (9) through completion of twenty (20) years	13.33 hours each month (one hundred sixty [160] work hours/year)
Beginning of twenty-one (21) + years	16.67 hours each month (two hundred [200] work hours/year)

A benefits-eligible, part-time employee who has successfully completed their benefits eligibility period shall accrue vacation leave on a pro rata basis in the same proportion that their part-time service bears to full-time service.

Vacation shall be credited for use as it is earned. The vacation year shall be on a fiscal year basis from July 1 to June 30.

Vacations shall be subject to the employee's Department Head in their sole discretion. Town employees will be allowed to carry eighty (80) hours of vacation time, plus their yearly vacation accrual, to the subsequent fiscal year.

Department Heads are responsible for making their employees aware of potential forfeiture of accrued vacation leave, on or about April 30th each year. A vacation day shall be based on the employee's regular workday. Thus, if an employee's regular workday is six (6) hours, when an employee takes a vacation day, the employee shall be paid for six (6) hours of vacation leave for that day. Employees shall provide at least two (2) weeks' notice of desired vacation time to the Department Head. Conflicts in scheduling will be resolved on the basis of seniority in continuous service and the operational needs of the Town. All employees will be required to take vacation time in hourly increments unless otherwise approved by Department Heads. Increments cannot be reduced to less than one (1) hour. Three (3) consecutive weeks of vacation may only be allowed if the Department Head/Select Board grants an exception in advance of the requested leave period.

Whenever the employment of any person subject to the provisions of this Policy is terminated during the year, the employee, or their estate (if the employee is deceased), shall be paid for the employee's accrued, unused vacation time.

² The vacation accrual rates set forth in this table are based on a full-time employee who actually works forty (40) hours per workweek. Benefits eligible part-time employees who have successfully completed their probationary period shall accrue vacation leave on a pro rata basis.

Sick Leave

Accrual

Sick leave hours can only be used after an eligible employee has actually worked for a period of the thirty (30) day waiting period from the commencement of their employment. Sick leave hours shall accrue on a pro rata basis from the employee's employment date. Benefits-eligible employees shall accrue sick leave at the rate of eight (8) hours each month for full-time employees (pro-rated for eligible part-time employees), not to exceed a total of ninety-six (96) hours per year. A benefits-eligible employee shall not accrue sick leave for any month in which the employee was on leave without pay or absent without pay for a total of more than one (1) day.

All sick days shall be equal to the number of hours an employee works during the employee's regular workday. For example, if an employee's regular workday is six (6) hours, when an employee takes a full sick day, the employee shall be paid for six (6) hours of sick leave for that day. Unused accrued sick leave may be accumulated only up to a total of one hundred fifty (150) days. Sick leave pay must be taken in one (1) or more full-hour increments.

Sick leave will not be advanced before it is accrued. When an employee's required time away from work continues beyond their accrued, unused sick time, the employee must use compensatory or other leave time if it is available. Otherwise, the employee's time off shall be unpaid.

Sick Leave Buy Back

Benefits-eligible employees with five (5) or more years of service who have accumulated more than four hundred (400) unused sick leave hours on June 30th of each year, may "sell back" a maximum of eighty (80) sick leave hours each year at fifty percent (50%) of their regular hourly wage. The employee must advise the designee of the Select Board of their decision to "sell back" up to eighty (80) sick leave hours on or before each July 10th and the request to "sell back" such accumulated, unused sick leave hours must be submitted to the Treasurer by July 31st of that year. To be eligible to "sell back" sick leave hours, however, an employee must retain a minimum of four hundred (400) accrued, unused sick leave hours after selling any sick leave hours back to the Town.

Retirement Buy Out

Benefits-eligible employees who have accrued four hundred (400) sick leave hours or more will be compensated upon retirement up to a maximum of four hundred (400) sick leave hours at twenty-five percent (25%) of their regular hourly wage as of the date of their retirement.

Sick Leave Usage

Sick leave shall be granted, at the discretion of the Department Head, to an employee only under the following conditions:

- (1) when an employee cannot perform their duties because the employee is incapacitated by personal illness or injury;

- (2) when the spouse, child or parent of either the employee or their spouse, or a relative living in the household of an employee, is seriously ill, the employee may utilize sick leave credits up to a maximum of one hundred twenty (120) sick leave hours per calendar year;
- (3) when, through exposure to contagious disease, the presence of the employee would jeopardize the health of others; and/or
- (4) when there is a need to keep a medical or dental appointment which cannot reasonably be scheduled outside of normal working hours.

With the exception of absences from work due to a positive COVID-19 result from a home testing kit, where an employee has been absent from work due to the employee's own illness or injury in excess of four (4) consecutive days, the employee will be required to produce a physician's certificate of their fitness to work, to be submitted to the Department Head and the Town Administrator.

Notification

Notification of absence due to illness must be made to the employee's Department Head at least one (1) hour prior to the beginning of the employee's regular scheduled start time on the day of absence.

Suspected Sick Leave Abuse

Where an employee's Department Head has reason to believe that sick leave is being abused, the Department Head may require satisfactory medical evidence from the employee. This request shall be in writing and shall cite specific reasons for the request. When medical evidence is requested, such a request shall be made as promptly as possible and in no case later than five (5) days from the date of the request. To the extent possible, the employee shall receive prior notice that the Department Head believes the employee is abusing sick leave and that the employee may be required to produce medical evidence for future use of sick leave.

"Satisfactory medical evidence" shall consist of a signed statement by a licensed Physician, Physician's Assistant, Nurse Practitioner, Chiropractor, or Dentist that the employee has personally examined the employee; a statement that the employee was unable to perform their duties due to the specific illness or injury on the days in question; and a prognosis for the employee's return to work.

In cases where the employee is absent due to a family or household illness or injury, "satisfactory medical evidence" shall consist of a signed statement by medical personnel (listed above) indicating that the person in question has been determined to be seriously ill and needing care on the days in question.

A medical statement provided pursuant to this section shall be on the letterhead of the attending medical professional and shall list an address and telephone number. Failure to provide "satisfactory medical evidence" within seven (7) days of its request may result, at the discretion of the Department Head, in denial of sick leave for the period of absence and discipline, up to

and including termination from employment if it is determined that the employee abused sick leave.

Termination of Employment

Upon termination of employment with the Town, all sick leave benefits accumulated or otherwise, shall cease.

Personal Days

All benefits-eligible employees, who have continuously worked for the Town and completed the thirty- (30-) day benefits waiting period, shall be credited, each July 1st, with twenty-four (24) paid personal leave hours to be taken in one- (1-) or more hour increments. During an employee's first year of employment, eight (8) hours of personal leave shall be credited to the employee after every four (4) months of continuous employment; provided, however, on July 1st of the year following the calendar year in which the employee was hired and all subsequent years, the employee shall be credited with twenty-four (24) paid personal leave hours.

Personal leave hours shall be credited on a pro rata basis based on a 40-hour work week and are paid based on the employee's regular work hours. Thus, if an employee's regular workday is six (6) hours, when an employee takes a personal day, the employee shall be paid for six (6) hours of personal leave for that day. Use of personal leave hours must be scheduled with the approval of the Department Head at least two (2) weeks prior to their expected use. Any paid Personal leave not taken by June 30th shall automatically be forfeited by the employee. Likewise, all unused Personal days shall be forfeited when employment terminates for any reason.

Bereavement Leave

In the event of death in the immediate family of a benefits-eligible employee, the employee shall be granted ~~three (3)~~ up to forty (40) consecutive ~~days'~~ hours of leave at time of death without loss of pay. For the purposes of bereavement leave, "immediate family" shall include an employee's parent, sibling, spouse, child, sibling-in-law, parent-in-law, grandparents, grandchildren, step-parent, step-child, step-sibling, step-grandparents.

Benefits-eligible employees shall also be granted one (1) day of bereavement leave for the death of extended family members such as an aunt, uncle, cousin, niece, or nephew.

A bereavement leave day shall be based on the employee's regular work hours and shall be granted and used on a pro rata basis. For a single day of bereavement leave, the benefit will reflect the employee's regular work hours for the day. Thus, if an employee's regular workday is six (6) hours, when an employee takes a bereavement leave day, the employee shall be paid for six (6) hours of bereavement leave for that day.

A department head may at their discretion approve an additional day as bereavement leave in extenuating circumstances (e.g., weather related travel delay).

Commented [B55]: Edits have been made to this section to reflect my understanding of the Board's recent discussion.

Bereavement leave shall in no way be related to regular vacation time or sick leave. The employee in question shall be responsible for notifying the Department Head of funeral arrangements. Benefits-eligible part-time employees will receive a bereavement benefit in the same proportion that their part-time service bears to full-time service.

Military Leave

General: An employee shall be entitled to leave of absence during the time of actual service in the Armed Forces of the Commonwealth or the United States, or during their annual tour of duty not exceeding ten (10) workdays (i.e., no more than eighty (80) work hours) as a member of a reserve component of the Armed Forces of the United States or the Commonwealth, and shall receive their regular compensation as an employee for the 10-workday (i.e., 80-work hour) period of the leave for training purposes.

Notification: Each employee is responsible for notifying their Department Head of the date they are leaving for military service and provide written proof from military or selective service officials to the Town Administrator indicating date of departure and length of service required.

Effect On and Use of Benefits:

- A. Sick and vacation leave will continue to accrue during the 10-workday (i.e., 80-work hour) period of military leave for training purposes.
- B. The period of any military leave shall be included in employee's time of continuous service.
- C. If military duty exceeds ten (10) workdays (i.e., 80 work hours), an employee may credit all or part of their vacation entitlement to the period of military leave.

Difference in Pay, if Any, During Active-Duty Deployment (Other Than for Training)

In the event an employee is on active duty (other than for training) for any of the following reasons (listed below) and the employee's military pay is less than the employee's regular compensation as a Town employee, the Town shall pay the difference between what the employee receives in military pay and the employee's regular compensation as an employee of the Town:

1. service performed in a uniformed service if the employee was ordered to, or retained on, active duty due to:
 - (i) involuntary active duty by a military retiree;
 - (ii) involuntary active duty in wartime;
 - (iii) retention on active duty while in captive status;
 - (iv) involuntary active duty during a national emergency for up to 24 months;
 - (v) involuntary active duty for an operational mission for up to 270 days;
 - (vi) involuntary retention on active duty of a critical person during time of crisis or other specific conditions;
 - (vii) voluntary or involuntary active duty by retired Coast Guard officer;

- (viii) voluntary or involuntary active duty by retired Coast Guard enlisted member;
 - (ix) involuntary retention of Coast Guard enlisted member on active duty; and
 - (x) involuntary active duty by Coast Guard Reserve member for natural or man-made disasters;
2. service under an order to, or to remain on, active duty (other than for training) because of a war or national emergency declared by the President or Congress, as determined by the Secretary of Labor;
 3. service performed under an order to active duty (other than for training) in support, as determined by the Secretary of Labor (or any person designated by the Secretary of Labor), of an operational mission for which personnel have been ordered to active duty as determined by a proper military authority;
 4. active duty in support, as determined by the Secretary concerned, of a "critical mission or requirement of the uniformed services" in times other than war or national emergency and when no involuntary call up is in effect; and
 5. federal service by members of the National Guard called into action to respond to an invasion or danger of invasion, rebellion or danger of rebellion, insurrection, or the inability of the President with regular forces to execute the laws of the United States.

Court Service (Jury Duty)

An employee who shall be required to serve on a jury on days the employee is scheduled to work, in accordance with Chapter 234A of the Massachusetts General Laws, shall be paid their base wages for the first three days from work, or a part thereof, of such juror service, at their base hourly rate of pay. For the fourth and subsequent days of such juror service, the employee shall be paid the difference between the amount received as juror compensation, less any juror travel allowance, and the employee's base wages.

Any employee required to serve on any federal jury on days the employee is scheduled to work shall be paid the difference between the amount paid for juror service, less any juror travel allowance, and the employee's base rate.

An employee seeking compensation in accordance with this section shall notify their Department Head after receipt of the notice of selection for jury duty and shall furnish a written statement to the Town showing dates of juror service, time served, and amount of juror compensation received.

Parental Leave

Introduction

In accordance with Massachusetts General Laws Chapter 149 Section 105D, full-time employees³ of the Town of Erving (the “Town”) who meet the eligibility requirements as provided below, will be entitled to Parental Leave for the birth, adoption of, or placement for foster care of a child with the intention of adoption.

Commented [BS6]: Does this clarify the intention?

Employee Eligibility

To be eligible for Parental Leave, employees must have been employed full-time by the Town for at least three (3) consecutive months.

Leave Entitlement

An eligible employee will be granted an unpaid leave of absence of up to eight (8) weeks for the birth of a child or placement of a child under the age of 18, (or under the age of 23 if the child is mentally or physically disabled) where the employee adopts or intends to adopt the child.

If two employees who work for the Town apply for such leave for the birth or adoption of the same child, each employee shall be entitled to eight (8) weeks of parental leave.

Family and Medical Leave (FMLA)

An eligible employee may take Parental Leave under this policy, even if the employee is not eligible for FMLA leave or has exhausted their entitlement to FMLA leave. If, however, an employee is also eligible for FMLA leave, leave taken under this policy will run concurrently with an employee’s Family and Medical Leave.

Use of Paid Leave

Although Parental Leave is unpaid, an employee may voluntarily elect to use paid leave (vacation, and personal leave, and paid sick leave in instances where the provisions of sick leave apply). Any such use of paid leave will be in accordance with the Town’s leave policies.⁴

Maintenance of Health Benefits

The Town will maintain group health insurance coverage for an employee while on Parental Leave whenever such insurance was provided before the leave was taken and on the same terms as if the employee had continued to work, as long as the employee is able to pay their required share of the cost on a monthly basis. The employee will be responsible for making arrangements with the Town to pay their share of health insurance premiums while on leave. Continued coverage is subject to timely premium payments.

Benefit Continuation

³ For purposes of this policy, an employee who is scheduled to work at least 40 hours per week is deemed to be a “full-time” employee.

⁴ In accordance with the Massachusetts Parental Leave Act, employees cannot be required to use accrued paid vacation leave, personal leave, or accrued sick leave with all or part of the employee’s parental leave, even if the employer requires employees who take leave for other types of reasons to use such paid leave benefits.

The use of Parental Leave will not affect the employee's rights to receive vacation time, sick leave, bonuses, advancement, seniority, length of service credit, benefits, plans or programs and other benefits for which the employee was eligible as of the date of the leave or any other advantages or rights of employment incidental to the employment position; provided, however that the period of time of any unpaid Parental Leave, is not included in the computation of further benefit accruals, rights and advantages.

Notice Requirements

Employees are required to provide at least two (2) weeks' notice to the employer of the employee's anticipated date of departure and the employee's intended day of return, provided, however, an employee may provide notice "as soon as practicable" if the delay in providing notice is "for reasons beyond the individual's control."

Job Restoration

Upon return from Parental Leave, every effort will be made to restore an employee to their original job. If that is not possible, to an equivalent job with equivalent pay and other employment terms and conditions, unless other employees of equal length of service, status and in similar positions have been laid off due to a legitimate reduction in work force. The employee on paternity leave shall, however, retain any preferential consideration for another position to which they may be entitled as of the date of their leave, to the extent that the Town has such a policy. An employee's use of Parental Leave will not result in the loss of an employment benefit that the employee earned or was entitled to before using Parental Leave.

Leave of absence beyond eight (8) weeks

If an employee on Parental Leave is not subject to FMLA the employee may request additional unpaid leave for parenting by petitioning the Appointing Authority. The employee shall be eligible for the rights under Section I above, unless the Appointing Authority notifies the employee in writing prior to the parental leave and again prior to the extension of that leave, that taking longer than eight (8) weeks of parental leave may result in a denial of reinstatement or loss of other rights and benefits.

Departmental Procedures

The Town Administrator may establish procedures to implement and carry out this policy, consistent with the policy.

Small Necessities Leave Act (SNLA) Policy

The Town of Erving will comply with the provisions of the Massachusetts Small Necessities Leave Act (SNLA), which permits eligible employees to take up to a total of 24 hours of unpaid leave within a rolling 12-month period.

The SNLA covers only employees who have been employed by the Town for one (1) year and have worked at least 1,250 hours during the previous 12 months. Leave under the SNLA is in addition to leave which may be available to an employee under the federal Family and Medical Leave Act of 1993.

The SNLA permits an employee leave for the following purposes:

- (1) To participate in school activities directly related to the educational advancement of a child, step-child or grandchild of the employee, such as a parent-teacher conference or interviewing for a new school;
- (2) To accompany a child, step-child or grandchild of the employee to routine medical or dental appointments, such as check-ups or vaccinations; and
- (3) To accompany a spouse, legal dependent or an elderly relative of the employee to routine medical or dental appointments or appointments for other professional services relating to the spouse's, legal dependent's or elder's care, such as interviewing at nursing or group homes.

The 24 hours may be taken within the 12-month calendar year period and the time may be taken on an intermittent (i.e. 2 hours to attend a parent-teacher conference) or reduced-time schedule.

An employee is required to provide their department with seven (7) days' notice of the need for the leave if the leave is foreseeable. If the necessity for the leave is not foreseeable, the employee is required to provide notice of the leave as soon as practicable.

The law provides for unpaid leave. An employee may elect to use any available accrued vacation, personal or sick leave benefits provided the use of such time is in accordance with the Town's leave policies.

Erving may require the employee to substitute any of the employee's paid vacation leave, personal leave or sick leave for the leave provided by the SNLA. A department head may require that written certification or documentation support a request for leave under the SNLA.

Training, Education and Conferences (Professional Development)

The Town of Erving endeavors to promote both individual and institutional training programs. Upon successful completion of the introductory period, employees may request to participate in work-related educational training. These requests must be approved by the employee's immediate supervisor prior to attendance at any such training sessions. The Town of Erving may reimburse reasonable costs of such training if fiscally feasible and prior written approval is received.

APPENDIX A- ADMINISTRATIVE POLICIES

The following administrative policies are also part of the Town’s administration of personnel benefits, leaves, and expectations. They are available upon request, by visiting www.erving-ma.gov/personnel. This Appendix may be amended from time to time by the Town Administrator to reflect changes that have been adopted.

Administrative Policies

Policy Number	Policy Name	Last Revision Date
ADM-001	Americans with Disabilities Act Non-Discrimination Notice & Grievance Policy	August 29, 2022
ADM-020	Criminal & Sexual Offender Records Information Policy	August 29, 2022
ADM-021	Health Insurance Portability & Accountability Act Policy	August 29, 2022
ADM-100	Workplace Violence Prevention Policy	November 28, 2022
ADM-101	Sexual Harassment Prevention Policy	July 18, 2022
ADM-102	Protected Class Harassment Prevention Policy	July 18, 2022
ADM-110	Drug & Alcohol-Free Workplace Policy	August 29, 2022
ADM-111	No-Smoking Policy	October 31, 2022
ADM-120	Fraud Prevention Policy	November 28, 2022
ADM-130	Whistleblower Protection Policy	November 28, 2022
ADM-150	Pregnant Workers Fairness Act Policy	November 28, 2022
ADM-160	Clothing Allowance Policy	December 05, 2022
ADM-180	Domestic Violence Leave Policy	November 28, 2022
ADM-181	Family and Medical Leave Policy	January 09, 2023
ADM-195	Remote Work Policy	February 27, 2023
ADM-201	Consolidated Omnibus Budget Reconciliation Act (COBRA) Policy	October 3, 2022
ADM-202	Retirement Plan Participation & Insurance Policy	August 29, 2022

APPENDIX B- PAY PLANS

To be inserted

APPENDIX C- BENEFIT PROVIDERS & CONTACTS

[This Appendix may be amended from time to time by the Treasurer to reflect the current information related to benefit providers.](#)

Health Insurance:

Blue Cross Blue Shield – 1(800)-486-1136
<https://www.bluecrossma.org/>

Hampshire County Group Trust – 1(413)-584-1300
<https://hcgut.org/>

Dental Insurance:

[Delta Dental- 1\(800\) 872-0500](#)
<https://www.deltadentalma.com>

Life Insurance, Optional Life Insurance, Long Term Disability Insurance:

Boston Mutual – 1(877)-624-2249 Customer Service
1(877)-212-2950 Claims Service
<https://www.bostonmutual.com/>

Other Optional Insurances:

Colonial Life – 1(800)-325-4368 Customer Service
1(800)-880-9325 Claims Service Fax
<https://www.coloniallife.com/>

Flexible Spending Account:

Ameriflex – 1(888)-868-3539
<https://myameriflex.com/>

Short Term Disability & Cancer Insurance:

American Heritage Life Insurance/Allstate –
1(800)-521-3535 Customer/Claims Service
<https://www.allstate.com/allstate-benefits/main.aspx>

Franklin Regional Retirement System

1(413)-774-4837
<https://frrsma.com/>

Massachusetts Teachers Retirement System:

1(617)-679-6877
<https://mtrs.state.ma.us/>

Nationwide Retirement (OBRA & Deferred Compensation):

1(877)-496-1630

<https://www.nrsforu.com/iApp/rsc/login.x>

403(b) (School Employees)

AIG Retirement Service (VALIC) 1(800)-448-2542

Equitable 1(800)-628-6673

<https://www.tsacg.com/individual/plan-sponsor/massachusetts/town-of-erving/>

ACKNOWLEDGEMENT OF RECEIPT AND UNDERSTANDING

I am in receipt of Erving's Personnel Policies and Procedures Manual. I received the Manual on _____(date). The enclosed policies were explained to me and I had an opportunity to review and read the policies.

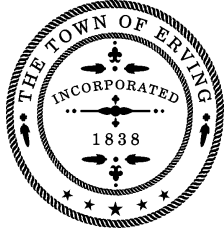
I understand it is my responsibility to be familiar with and adhere to the provisions of these policies.

EMPLOYEE PRINTED NAME

EMPLOYEE SIGNATURE

DATE

Note: A copy of this acknowledgement form will be placed in the employee's personnel file.



TOWN OF ERVING

SELECT BOARD

12 East Main Street
ERVING, MASSACHUSETTS 01344

Tel. 413-422-2800
Fax 413-422-2808
Email: administrator@erving-ma.gov

Jacob A. Smith, Chair
Scott Bastarache
James Loynd
Select Board

Bryan Smith
Town Administrator

December 15, 2023

To: Select Board
From: Bryan Smith, Town Administrator

RE: Bridge Street Wall Replacement and Maple Avenue Roadway Improvement Project

I am recommending the following dates for the final version of the bid documents for the Bridge Street Wall Replacement and Maple Avenue Roadway Improvement Project:

- Wednesday, January 3, 2024: Legal Advertisement, Central Register, Town Hall Posting, Town Website Posting
- Wednesday, January 3, 2024: Bid documents are publicly available and sent to list of potential vendors.
- Wednesday, January 17, 2024: 10:00 AM required site walk
- Thursday, January 18, 2024: snow date if site walk has to be rescheduled.
- Tuesday, January 23, 2024: questions due by 2:00 PM
- Thursday, February 8, 2024: Bid submission deadline and bid opening at Town Hall by 2:00 PM

These dates have been reviewed by our Project Manager from Weston & Sampson and should work if the Select Board approves.

Recommended Vote Language:

A motion to approve and release the bid documents for the Bridge Street Wall Replacement and Maple Avenue Roadway Improvement Project, as amended.

TOWN OF ERVING, MASSACHUSETTS

SELECT BOARD

JACOB A. SMITH, CHAIR

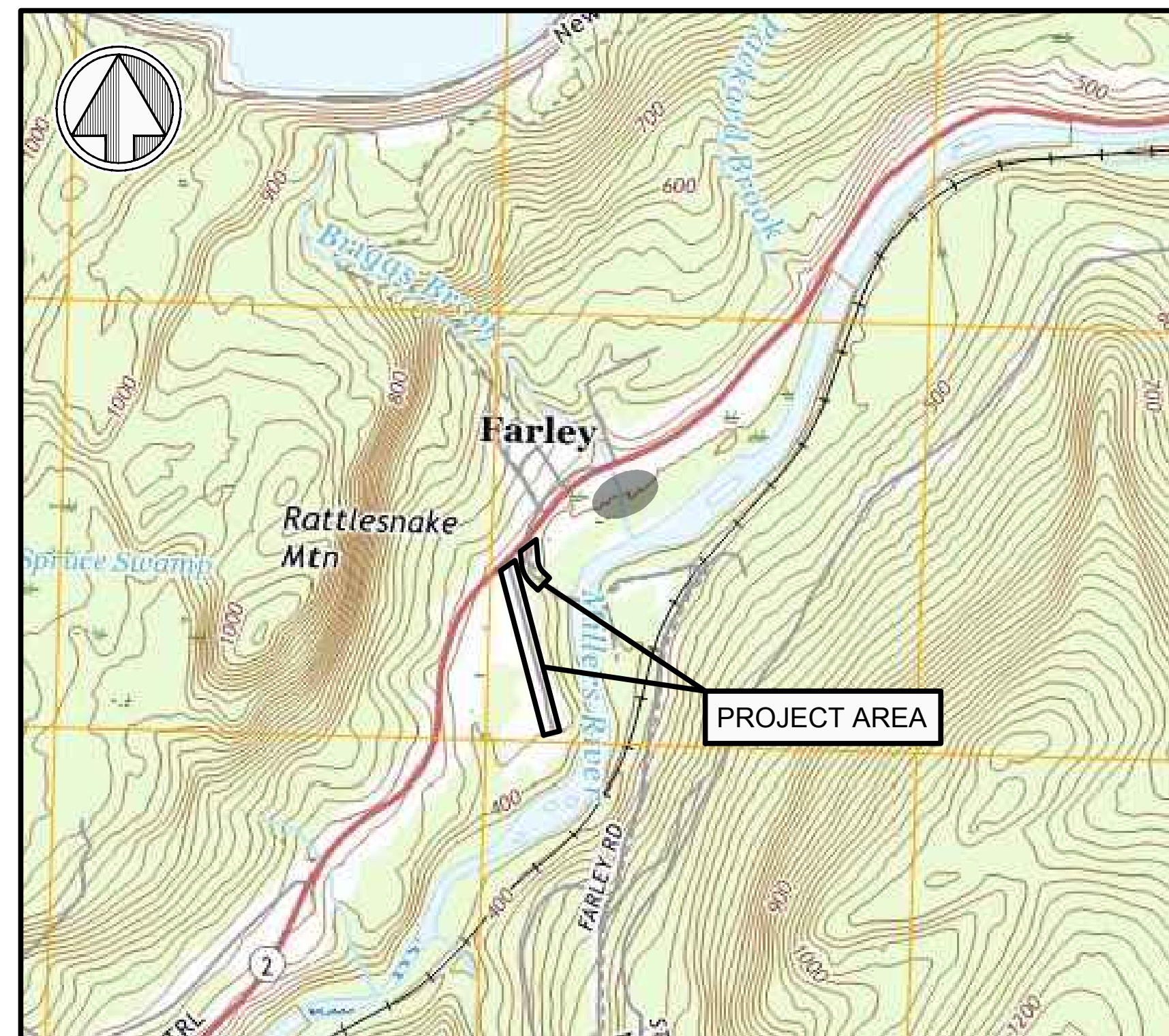
SCOTT BASTARACHE

JAMES LOYND

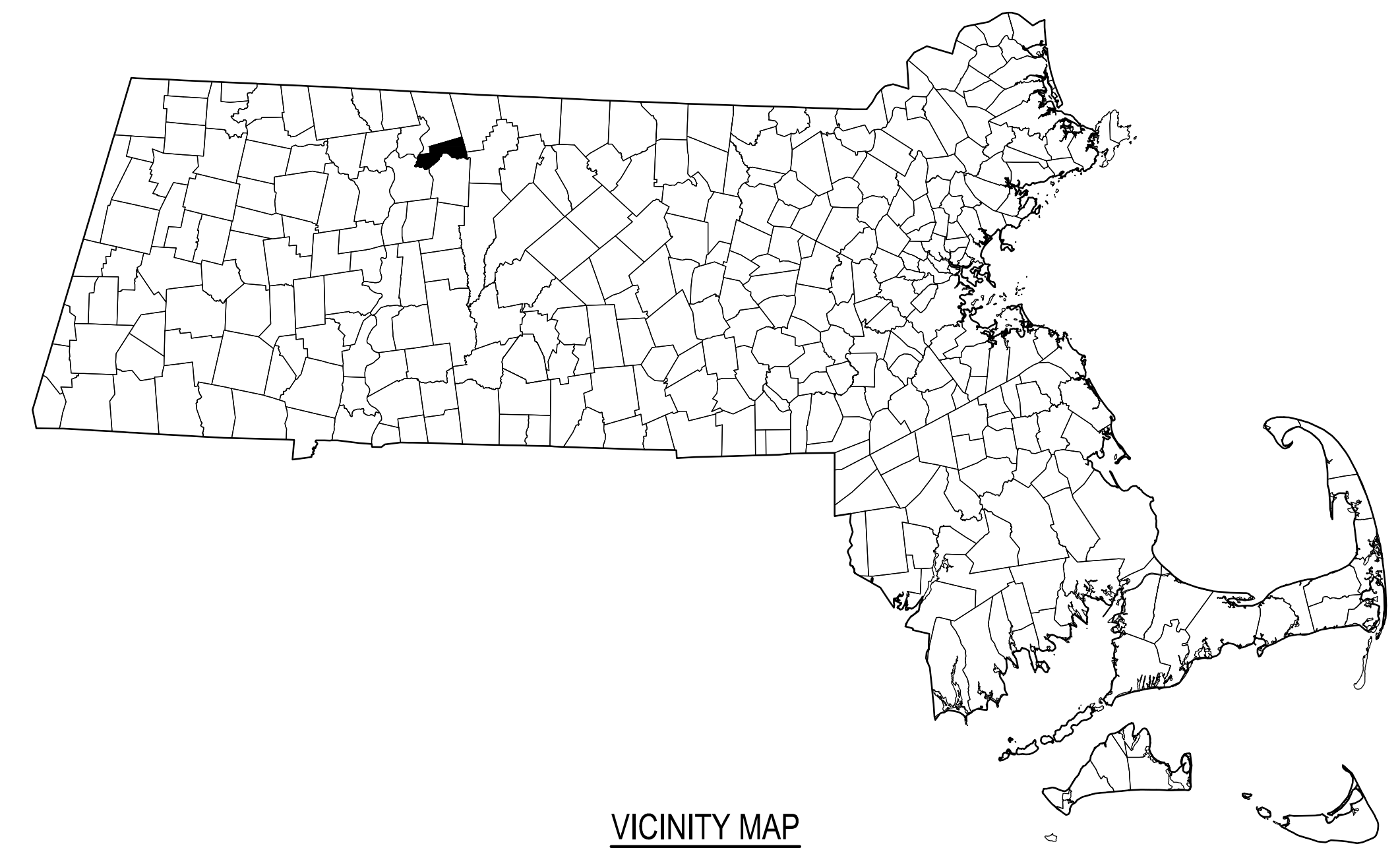
BRIDGE STREET WALL REPLACEMENT AND MAPLE AVENUE ROADWAY IMPROVEMENTS PROJECT



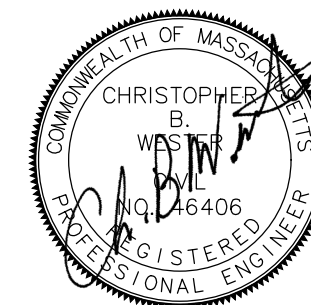
JANUARY 2024



LOCATION MAP
SCALE: 1"=1000'



VICINITY MAP
NOT TO SCALE



Weston & SampsonSM

Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103, Rocky Hill, Connecticut

LEGEND

DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER	---	—8" PVC—
FORCE MAIN	---	—6" FM DI—
WATER MAIN	---	—6" W DI—
ABANDONED WATER MAIN	---	---
STORM DRAIN	---	—18" D RCP—
GAS	---	—4" G—
ELECTRIC	---	—E—
TELEPHONE	---	—T—
HOUSE CONNECTION		6" HOUSE CONN (TYP)
GRINDER PUMP	⊙ GP	● GP
SANITARY SEWER MANHOLE	⊙	● SMH
STORM DRAIN MANHOLE	⊙	● DMH
ELECTRICAL MANHOLE	⊙	● EMH
TELEPHONE MANHOLE	⊙	● TMH
AIR RELEASE VALVE MANHOLE	⊙	● ARMH
FORCE MAIN CLEANOUT MANHOLE	⊙	● FMMH
CLEANOUT	⊙	● CO
CATCH BASIN	□	■ CB
CATCH BASIN (CURB INLET)	□	■
HYDRANT	⊕	⊕
TEMPORARY HYDRANT		⊕
GATE VALVE	⊕	⊕
CHECK VALVE	⊕	⊕
CURB STOP	⊕	⊕
BUTTERFLY VALVE	⊕	⊕
BALL VALVE	⊕	⊕
REDUCER	◁	◁
CAP OR PLUG	⊕	⊕
GAS GATE VALVE	⊕	⊕
UTILITY POLE	⊕	⊕
GUY POLE	⊕	⊕
LIGHT POST	⊕	⊕
EDGE OF PAVEMENT	---	---
EDGE OF UNPAVED ROAD	---	---
CURB	---	---
SIDEWALK	---	---
RAILROAD	---	---
STONE WALL	---	---
RETAINING WALL	RET WALL	RET WALL
FENCE	---	---
INDIVIDUAL DECIDUOUS TREE	⊙	⊙
INDIVIDUAL EVERGREEN TREE	⊙	⊙
TREE LINE	---	---
SURVEY MARKER	⊕	⊕
PROPERTY LINE	---	---
EASEMENT LINE	---	---
LIMIT OF WORK	---	---
LIMIT OF DEMOLITION	---	---
SPOT ELEVATIONS	x 100.2	x 101.5
CONTOUR LINES	---56---	---56---
DEPRESSION CONTOUR LINES	---	---
HOUSE NUMBER	#35	
FLOOR ELEVATION	FL=56.7	
SILL ELEVATION	S=56.7	
WETLAND	---	---
WETLAND FLAGS	*1	
RIP RAP	⊕	⊕
NATIVE STONE	⊕	⊕
BOLLARD	○ B	● B
SIGN	⊕	
BENCH MARK	⊕	
PERCOLATION TEST	PT-1	● PT-1
TEST PIT	⊕	
BORING	⊕B-1	
SANDBAG		---
SILT FENCE		---
CONSTRUCTION FENCE		---
STRAW BALES		---
ROCK OUTCROP	⊕	
DRAINAGE DITCH / SWALE	---	---

NOTE: ITEMS SHOWN IN THE LEGEND MAY NOT BE PRESENT IN THESE PLANS

ABBREVIATIONS

AC	ASBESTOS CEMENT PIPE
ACCMP	ASPHALT COATED CORRUGATED METAL PIPE
ARV	RELEASE VALVE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BIT	BITUMINOUS CONCRETE
BLDG	BUILDING
BM	BENCH MARK
BO	BLOW OFF
BV	BUTTERFLY VALVE
BW	BOTTOM OF WALL
C	CABLE TELEVISION
CB	CATCH BASIN
CC	CONCRETE CURB
CHIM	CHIMNEY
CI	CAST IRON
CL	CENTERLINE
CL	CEMENT LINED
CMPC	CORRUGATED METAL PIPE
CONC	CONCRETE
CU	CUBIC FEET
CU FT	CUBIC YARD
D	STORM DRAIN, DEPTH FROM RIM TO INVERT
DI	DROP INLET, DUCTILE IRON
DIA	DIAMETER
DMH	DRAIN MANHOLE
DWG	DRAWING
E	EAST, ELECTRIC
EA	EACH
EF	EACH FACE
EL	ELEVATION
EOP	EDGE OF PAVEMENT
EW	EACH WAY
EXIST	EXISTING
FF	FINISHED FLOOR
FL	FLOW LINE
FLG	FLANGE
FT	FEET, FOOT
G	NATURAL GAS
GALV	GALVANIZED
GC	GRANITE CURB
GR	GRANITE
GRAV	GRAVEL
HDPE	HIGH DENSITY POLYETHYLENE
HORIZ	HORIZONTAL
HP	HIGH PRESSURE
HYD	HYDRANT
INV	INVERT
ID	INSIDE DIAMETER
IP	IRON PIPE
LB	POUND
LF	LINEAR FEET
LS	LUMP SUM
MAX	MAXIMUM
MB	MAIL BOX
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
N	NORTH
NE	NORTH EAST
NW	NORTH WEST
NF	NOT FOUND
N/F	NOW OR FORMERLY
NO	NUMBER
N.T.S.	NOT TO SCALE
OD	OUTSIDE DIAMETER
PE	PLAIN END, POLYETHYLENE
PE	PEDESTRIAN
P	PROPERTY LINE
PL	PLATE
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT-OF-WAY
RQD	ROCK QUALITY
S	SEWER, SOUTH
SE	SOUTH EAST
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SMH	SANITARY SEWER MANHOLE
SPEC	SPECIFICATIONS
SQ FT	SQUARE FEET
SS	STAINLESS STEEL, SEWER SERVICE
STA	STATION
STL	STEEL
SW	SIDEWALK, SOUTH WEST
T	TELEPHONE, HYDROSTATIC THRUST
TBM	TEMPORARY BENCH MARK
TF	TOP OF FRAME
THK	THICK
TS	TOP OF STONE
TYP	TYPICAL
TW	TOP OF WALL
UP	UTILITY POLE
VC	VITRIFIED CLAY
VERT	VERTICAL
W	WATER, WEST
WT	WATERTIGHT

CONSTRUCTION NOTES

1. THE CONTRACTOR SHALL CALL "DIGSAFE" AT 1-888-344-7233 AT LEAST 72 HOURS, SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION.
2. LOCATIONS OF EXISTING PIPES, CONDUITS, UTILITIES, FOUNDATIONS AND OTHER UNDERGROUND OBJECTS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL HAVE NO CLAIM ON THAT ACCOUNT SHOULD THEY BE OTHER THAN SHOWN.
3. ALL PAVEMENT DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.
4. ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND LIMITS OF PROJECT SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER.
5. THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES, OR EQUIPMENT ON DRAINAGE STRUCTURES OR WITHIN 100 FEET OF WETLANDS.
6. TRENCHES MAY BE EXCAVATED WIDER THAN THE 'LIMIT OF EXCAVATION FOR EARTH EXCAVATION' ABOVE THE 'LINE OF NARROW TRENCH LIMIT.' ANY SUCH ADDITIONAL EXCAVATION SHALL BE AT THE CONTRACTORS EXPENSE AND SHALL NOT BE MEASURED FOR PAYMENT.
7. BELOW THE 'LINE OF NARROW TRENCH LIMIT' THE TRENCH SHOULD NOT BE EXCAVATED BEYOND THE TRENCH WIDTH 'W.' IF MATERIAL IS LOOSENEED OR REMOVED BEYOND THE ABOVE MENTIONED LIMITS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE CRUSHED STONE FOR THE FULL WIDTH OF THE TRENCH AT NO ADDITIONAL COST TO THE OWNER.
8. SHEETING TO BE LEFT IN PLACE SHALL BE USED WHERE SHOWN ON THE DRAWINGS OR WHERE REQUIRED BY THE ENGINEER. IT SHALL BE LEFT IN PLACE BELOW A LINE 12 INCHES ABOVE THE TOP OF THE PIPE/STRUCTURE UNLESS OTHERWISE REQUIRED BY THE ENGINEER.
9. TOPOGRAPHIC SURVEY, BUILDINGS, EDGE OF PAVEMENT, UTILITY POLES, TREES/TREE LINES, WETLAND FLAG LOCATIONS AND LOCATIONS OF ABOVE GROUND FEATURES FROM SURVEY PERFORMED BY WESTON & SAMPSON ENGINEERS, INC. IN JUNE 2022. PROPERTY LINES BASED ON ASSESSOR'S MAPPING.
10. HORIZONTAL DATUM BASED ON NAD83. VERTICAL DATUM BASE ON NAVD 1988.
11. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING AND PROPERLY DISPOSING EXCESS FILL, ROCK, TREES, PAVEMENT AND DEMOLITION DEBRIS RESULTING FROM CONSTRUCTION ACTIVITIES AT A PROPER DISPOSAL AREA.
12. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN EROSION AND SEDIMENT CONTROLS, AS SHOWN, AS REQUIRED IN THE ORDER OF CONDITIONS AND AS REQUIRED BY THE ENGINEER. SUCH CONTROLS SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN RESTORED.
13. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A SURVEYOR LICENSED IN THE COMMONWEALTH OF MASSACHUSETTS TO COMPLETE ALL LAYOUTS, SURVEYS, BENCHMARK TRANSFERS, ETC REQUIRED FOR CONSTRUCTION OF THE PROJECT AS SHOWN AND AS SPECIFIED.

GENERAL NOTES

1. NO ACCESS TO ADJACENT PROPERTIES IS PERMITTED WITHOUT PRIOR WRITTEN APPROVAL.
2. THE CONTRACTOR SHALL MAINTAIN SIDE SLOPES AND DRAINAGE SWALES DURING CONSTRUCTION TO PREVENT PONDING AND EROSION.
3. THE CONTRACTOR SHALL MAINTAIN EXCAVATION SLOPES DURING CONSTRUCTION IN ACCORDANCE WITH THE MINIMUM AND MAXIMUM SLOPES SPECIFIED IN THE CONTRACT OR STIPULATED BY ANY STATE OR FEDERAL AGENCY. ANY LATERAL SUPPORT SYSTEM USED IN THE FIELD SHALL BE INCIDENTAL TO THE APPROPRIATE WORK ITEM AND CONFORM TO THE SPECIFICATIONS.
4. ALL EARTHWORK SHALL BE PERFORMED IN THE DRY AS SPECIFIED IN THE SPECIFICATIONS.
5. ALL WORK ITEMS DETAILED IN THESE DRAWINGS SHALL BE COMPLETED IN ACCORDANCE WITH THE SPECIFICATIONS.
6. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH AS-BUILT DRAWINGS.

WETLANDS PROTECTION ACT (WPA) SPECIAL CONDITIONS

1. PROJECT IS SUBJECT TO THE REQUIREMENTS OF MASSDEP WPA FORM 5 -- ORDER OF CONDITIONS, MASSDEP FILE # 154-0080.
2. THE CONSERVATION COMMISSION SHALL BE NOTIFIED AFTER EROSION CONTROLS ARE IN PLACE AND PRIOR TO CONSTRUCTION FOR THEIR APPROVAL.
3. SEE SPECIFICATIONS SECTION 00890 PERMITS.

SHEET NO.	DRAWING NO.	TITLE
1	--	COVER
2	C-001	LEGEND, ABBREVIATIONS, NOTES AND DRAWING INDEX
3	C-100	SCHEDULE A PROPOSED CONDITIONS BRIDGE STREET STA 2+55 TO 6+00
5	C-101	SCHEDULE A PROPOSED CONDITIONS BRIDGE STREET STA 0+00 TO 2+65 AND SCHEDULE B POTW #3 PAVEMENT IMPROVEMENTS
6	C-102	SCHEDULE C MAPLE AVENUE STA 0+00 TO 11+75
7	C-500	BRIDGE STREET WALL SECTION, DRAINAGE PROFILE AND DETAILS
8	C-501	DETAILS
9	C-502	DETAILS
10	C-503	DETAILS
11	C-504	CONSTRUCTION ZONE SAFETY PLAN
12	C-505	DETOUR PLAN

DRAWING INDEX

SHEET NO.	DRAWING NO.	TITLE
1	--	COVER
2	C-001	LEGEND, ABBREVIATIONS, NOTES AND DRAWING INDEX
3	C-100	SCHEDULE A PROPOSED CONDITIONS BRIDGE STREET STA 2+55 TO 6+00
5	C-101	SCHEDULE A PROPOSED CONDITIONS BRIDGE STREET STA 0+00 TO 2+65 AND SCHEDULE B POTW #3 PAVEMENT IMPROVEMENTS
6	C-102	SCHEDULE C MAPLE AVENUE STA 0+00 TO 11+75
7	C-500	BRIDGE STREET WALL SECTION, DRAINAGE PROFILE AND DETAILS
8	C-501	DETAILS
9	C-502	DETAILS
10	C-503	DETAILS
11	C-504	CONSTRUCTION ZONE SAFETY PLAN
12	C-505	DETOUR PLAN

Project:
TOWN OF ERVING, MASSACHUSETTS

SELECT BOARD

BRIDGE STREET WALL
REPLACEMENT
AND MAPLE AVENUE ROADWAY
IMPROVEMENTS PROJECT



Weston & Sampson

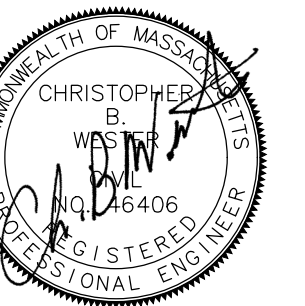
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Rocky Hill, CT 06067
860.513.1473 800.SAMPSON
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Revisions:

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Reviewed By: WGS

Approved By: CBW

W&S Project No.: ENG22-0635

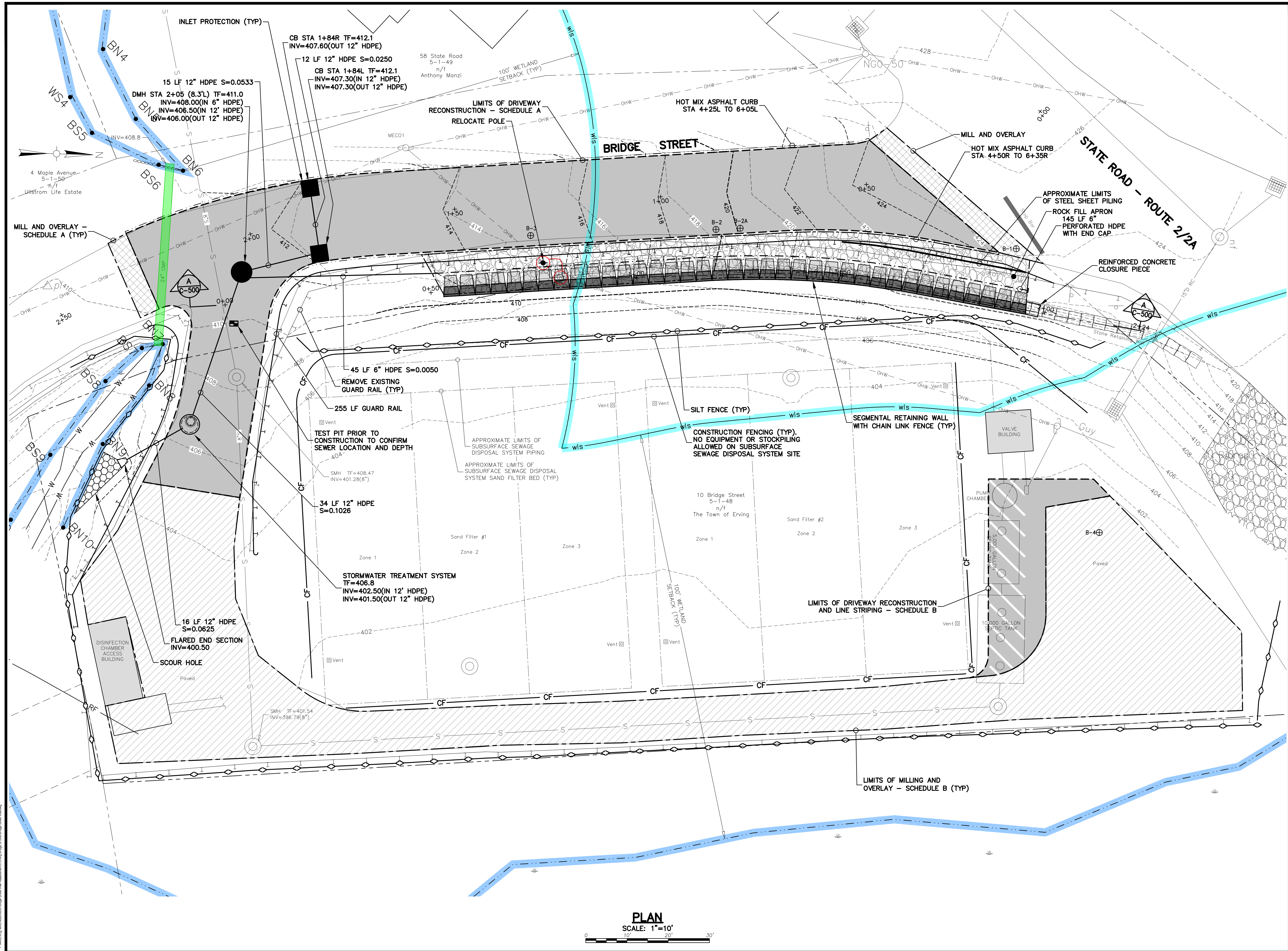
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Drawing Title:

LEGEND,
ABBREVIATIONS,
NOTES AND
DRAWING INDEX

Sheet Number:

C-001



PLAN

SCALE: 1"=10'



Consultants:

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No.	Date	Description



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Approved By: CBW

W&S Project No.: ENG22-0635

W&S File No.:

Drawing Title:
SCHEDULE A
PROPOSED CONDITIONS
BRIDGE STREET
STA 0+00 TO 2+65 AND
SCHEDULE B
POTW #3 PAVEMENT
IMPROVEMENTS

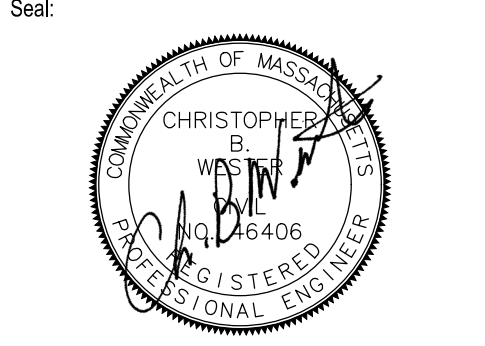
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Consultants:

Revisions:

No.	Date	Description



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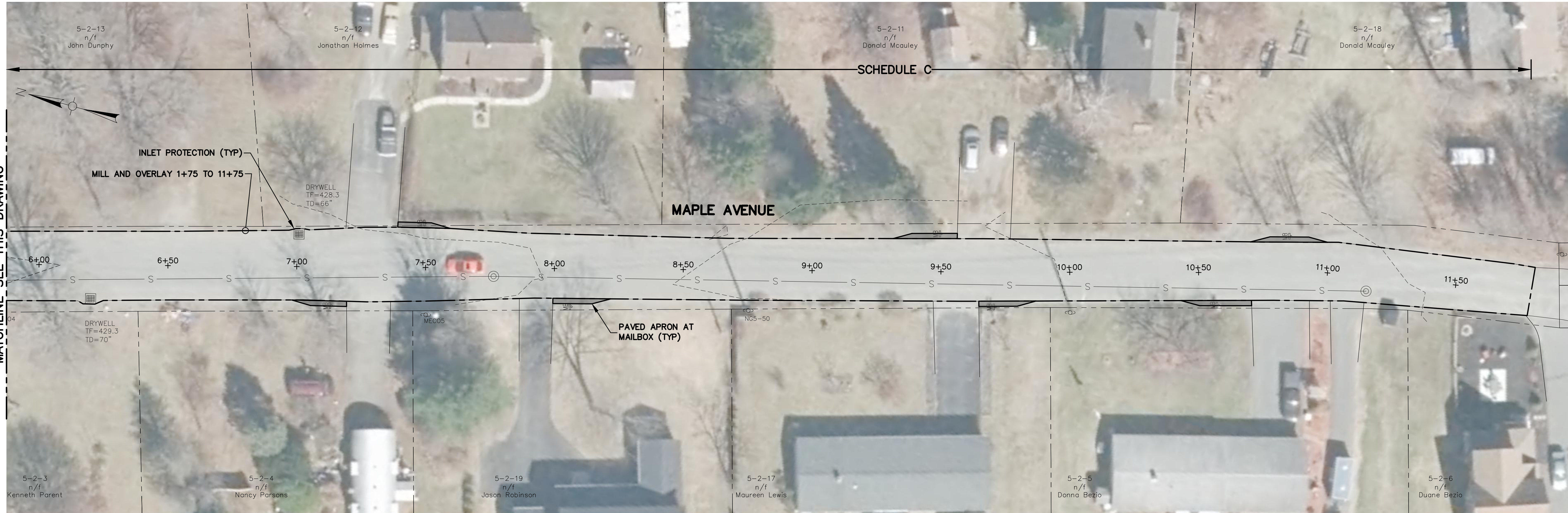
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Scale: 1"=20'
Date: JANUARY 2024
Drawn By:
Reviewed By: WGS
Approved By: CBW
W&S Project No.: ENG22-0635
W&S File No.:

Drawing Title:
**SCHEDULE C
MAPLE AVENUE
STA 0+00 TO 11+75**
Sheet Number:
C-101



PLAN
SCALE: 1"=20'
0 20' 40' 60'

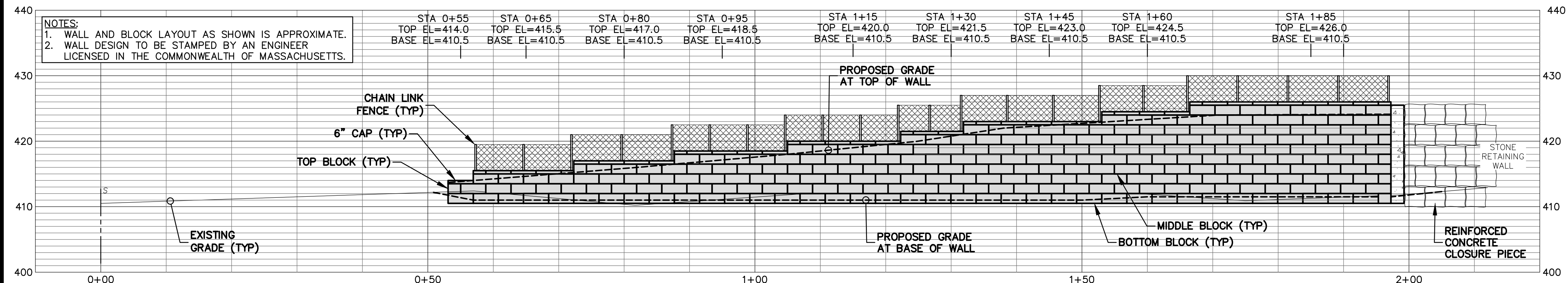


PLAN
SCALE: 1"=20'
0 20' 40' 60'

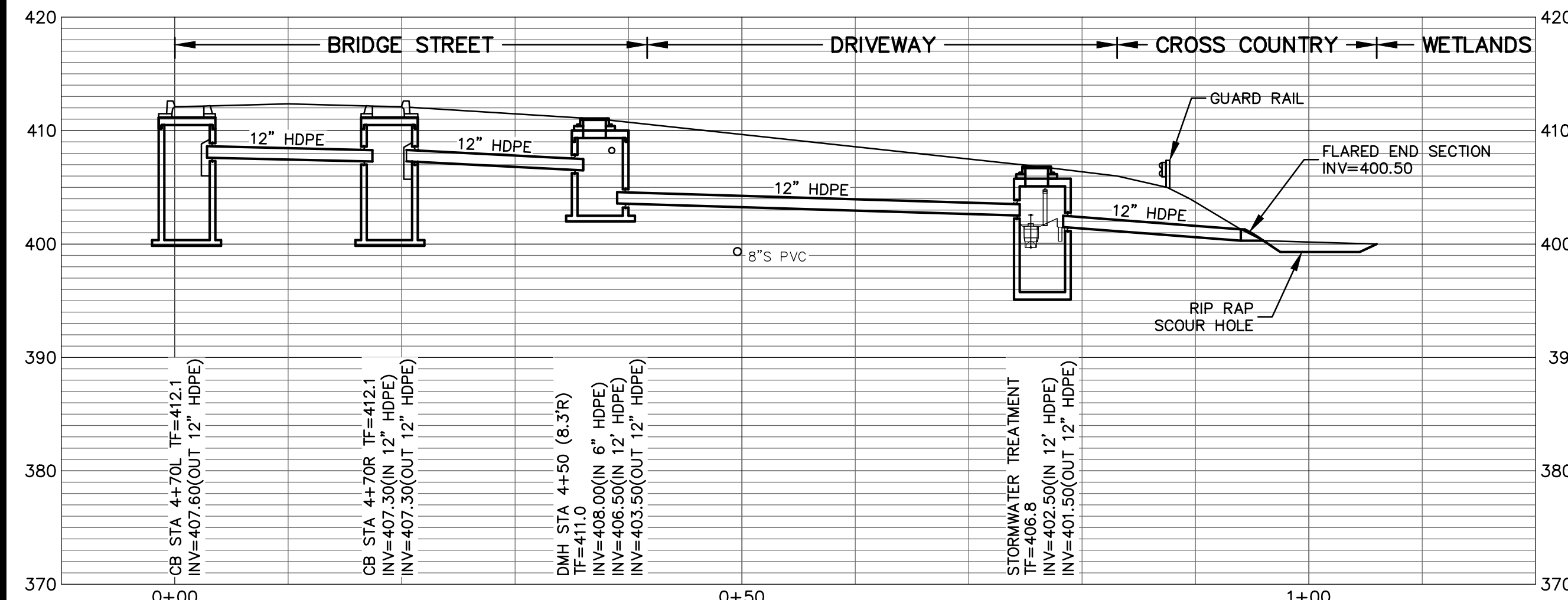
MATCHLINE SEE THIS DRAWING

MATCHLINE SEE THIS DRAWING

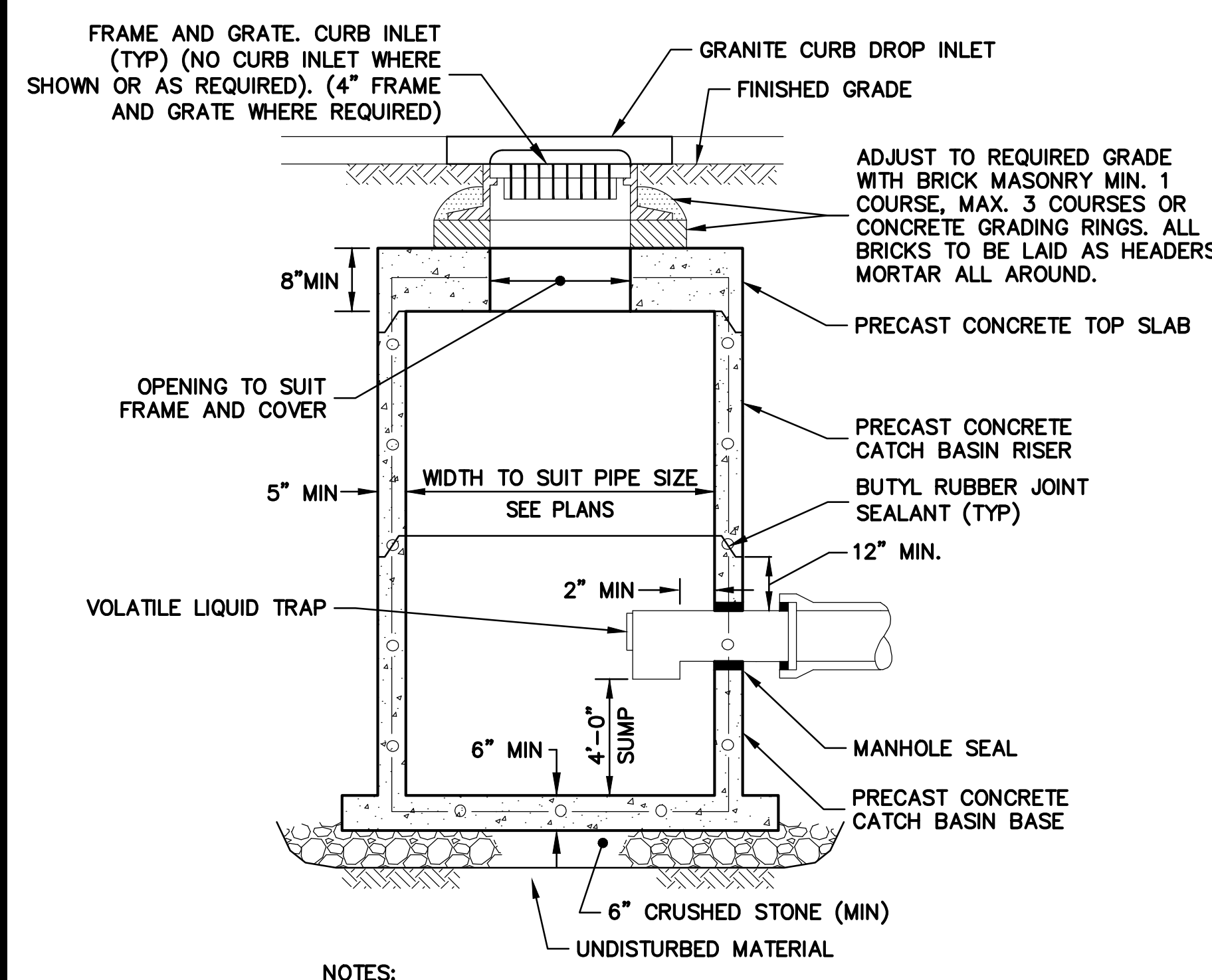
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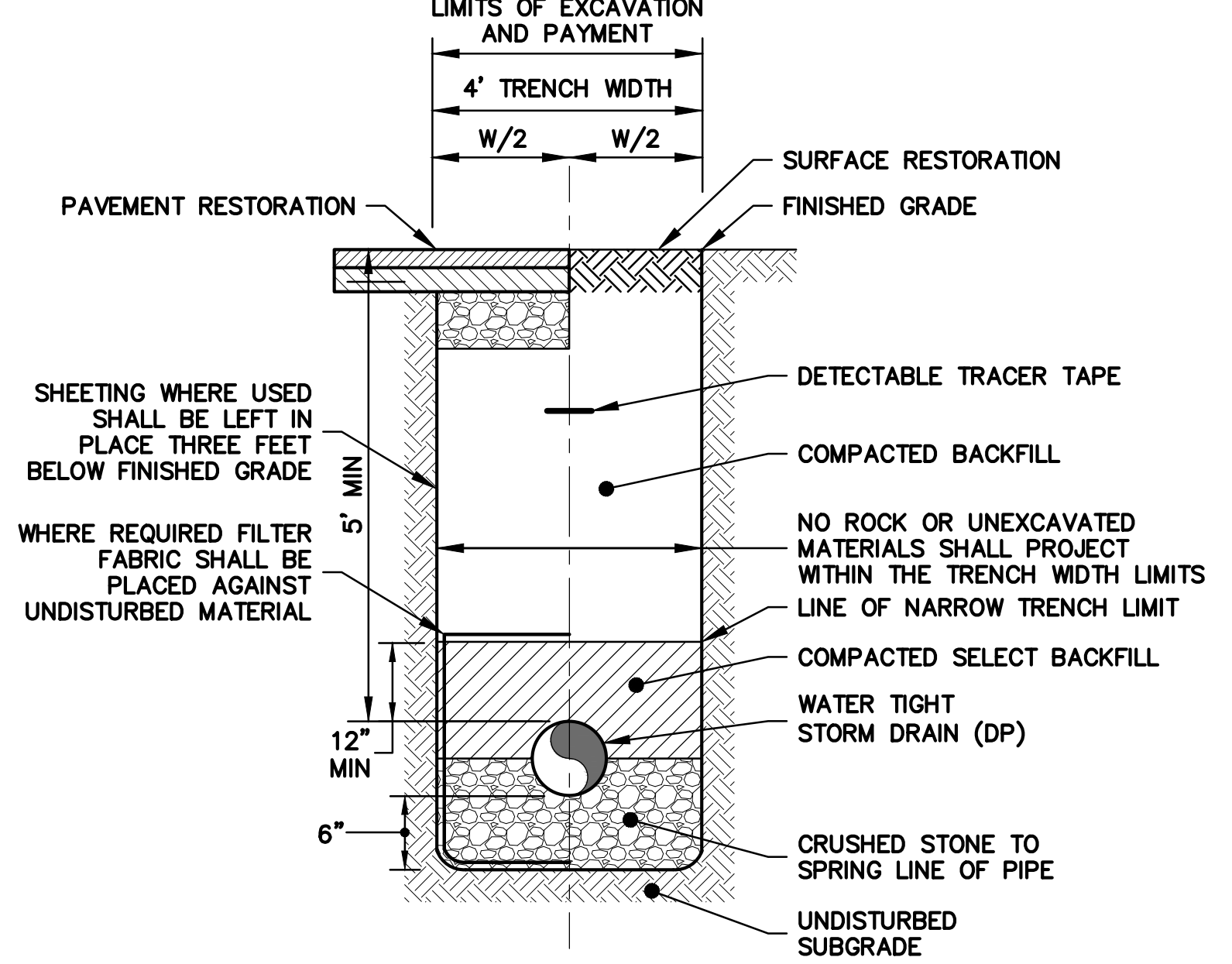
BRIDGE STREET WALL SECTION A
SCALE: 1"=10'



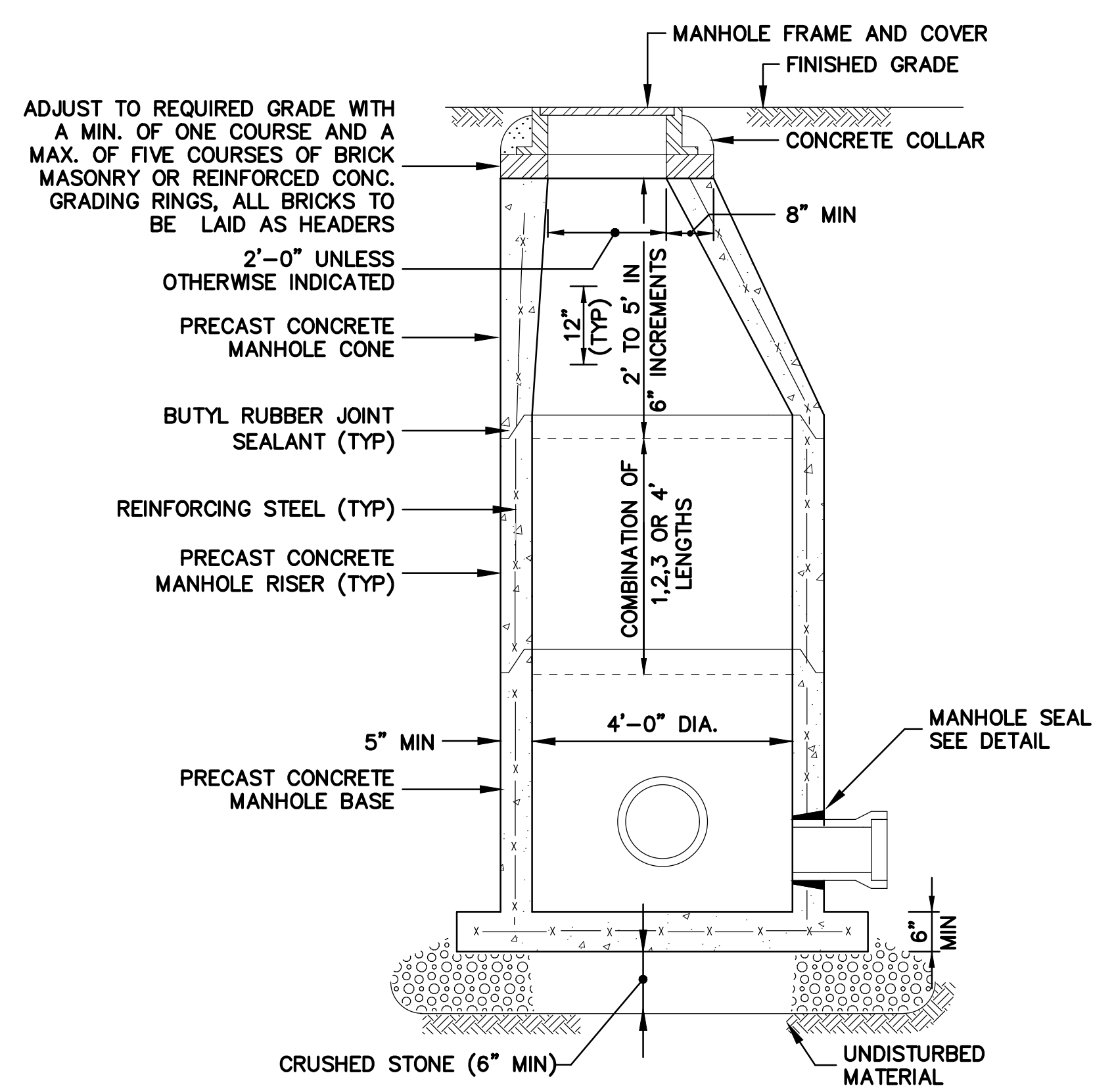
DRAINAGE PROFILE
SCALE: 1"=10'



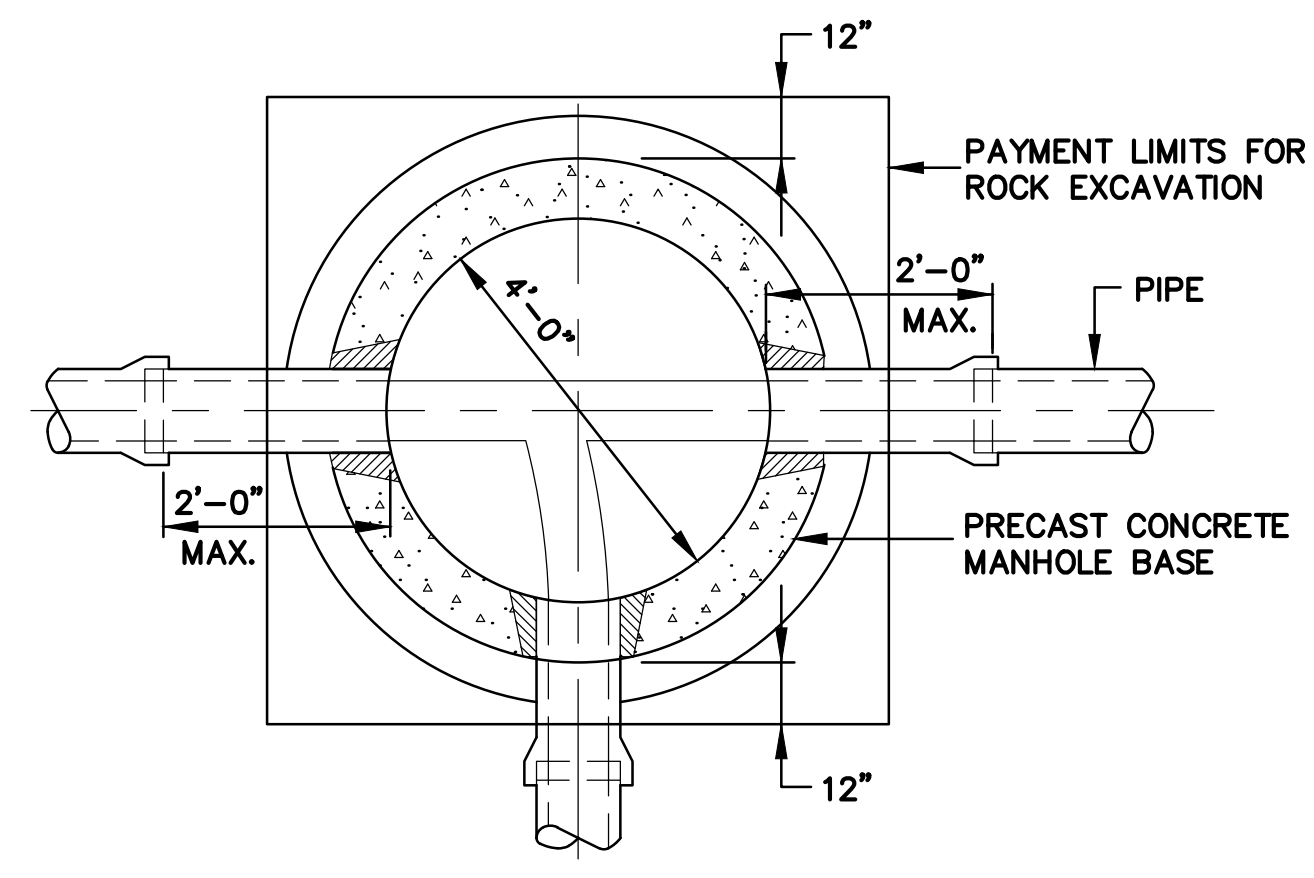
PRECAST CATCH BASIN DETAIL
N.T.S.



STORM DRAIN TRENCH DETAIL
N.T.S.



PRECAST CONCRETE DRAINAGE MANHOLE DETAIL
N.T.S.

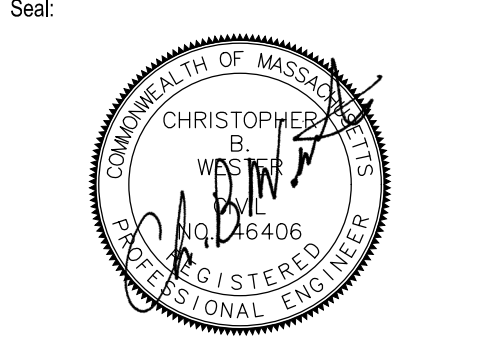


MANHOLE PLAN
N.T.S.

Consultants:

Revisions:

No.	Date	Description



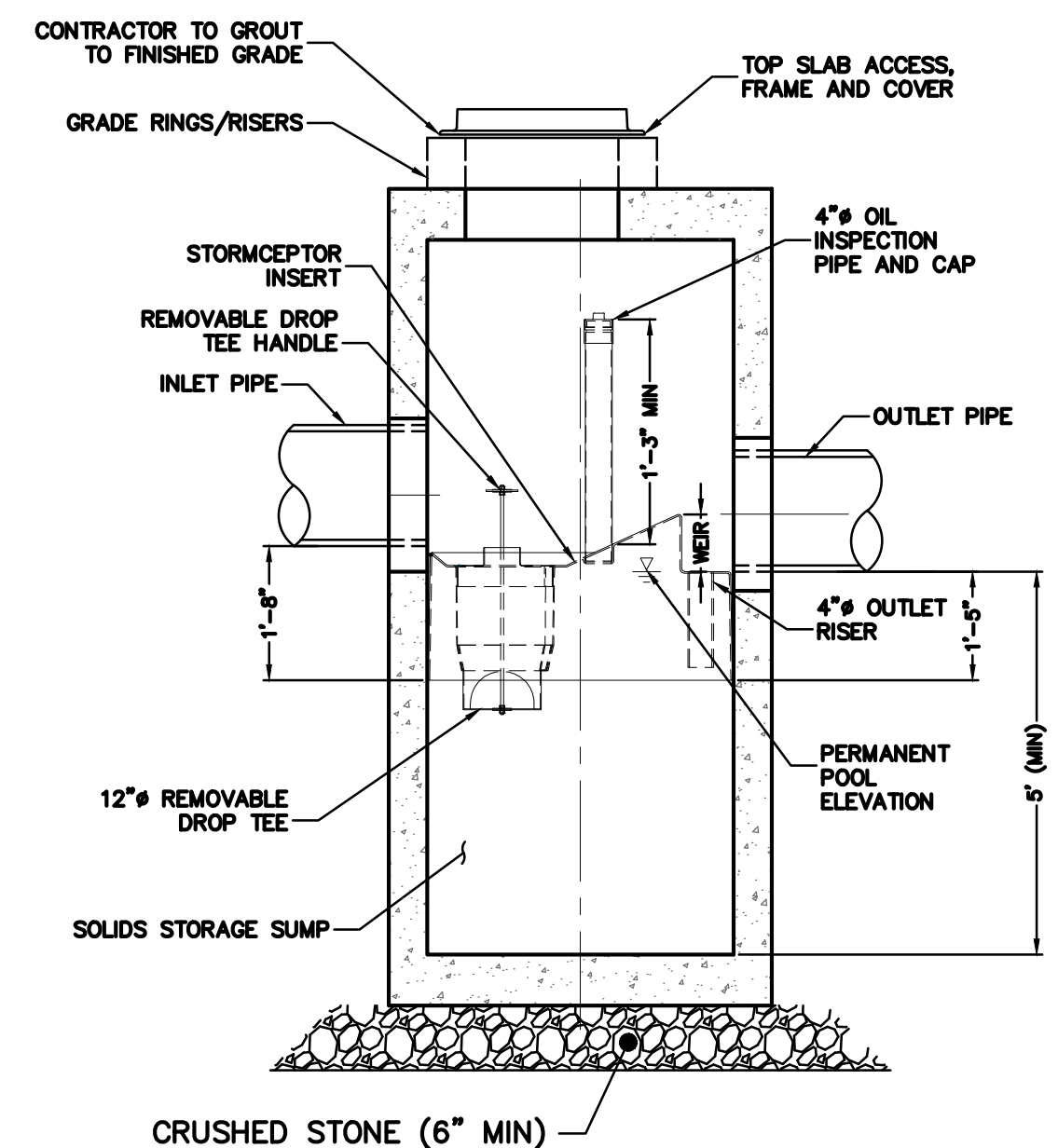
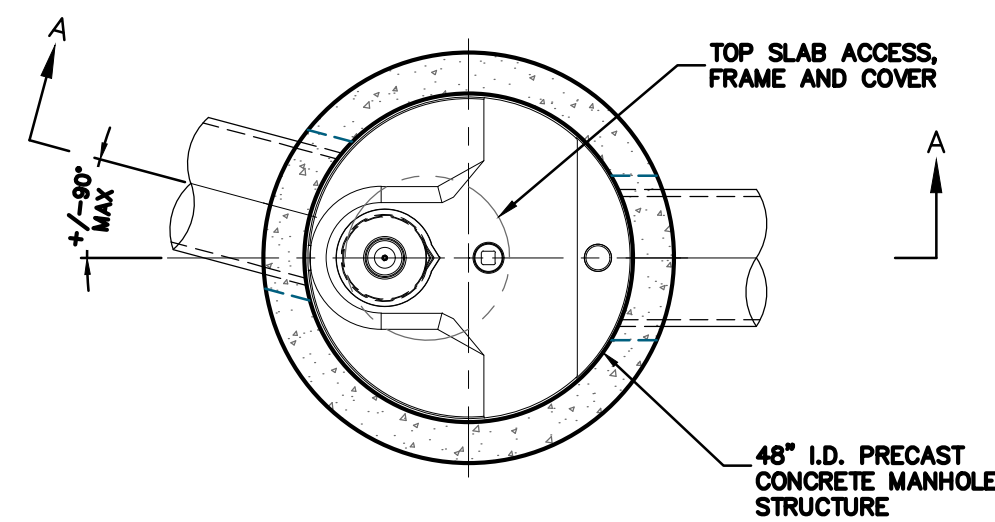
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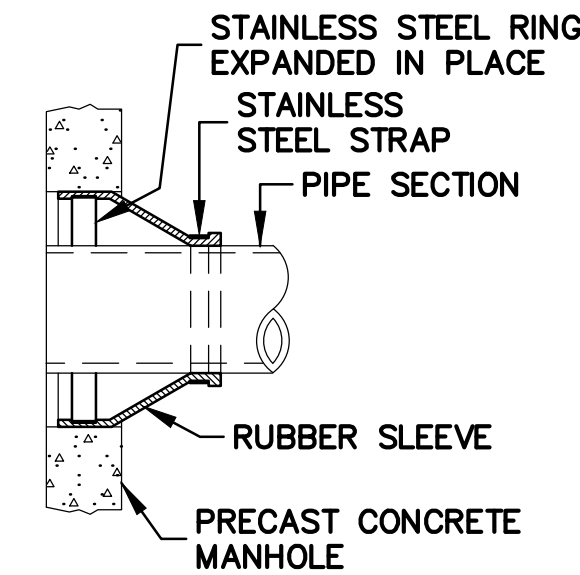
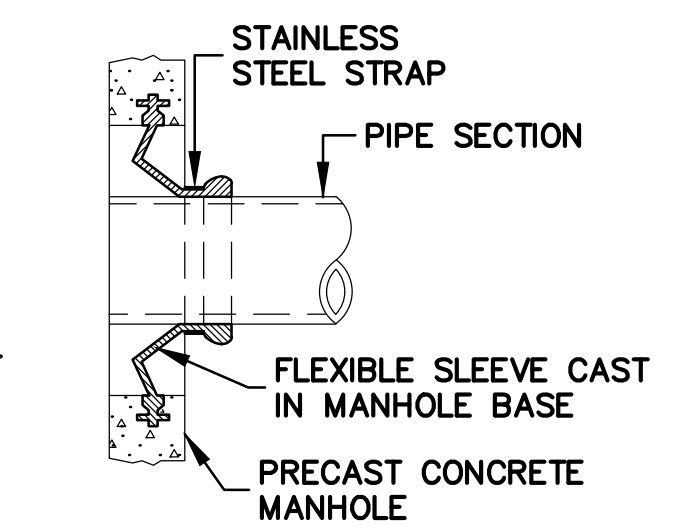
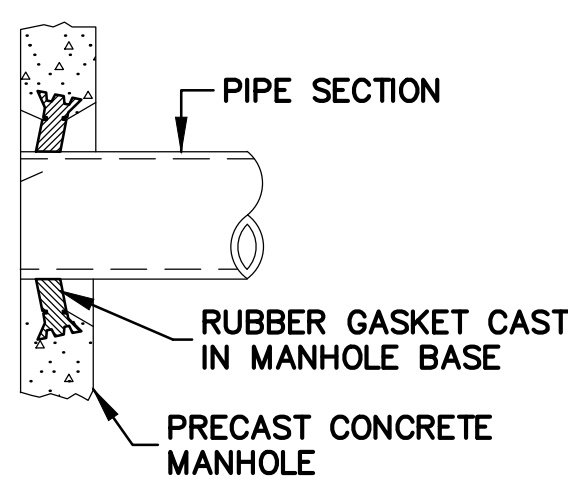
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BRIDGE STREET
WALL SECTION,
DRAINAGE PROFILE
AND DETAILS

Sheet Number:
C-500

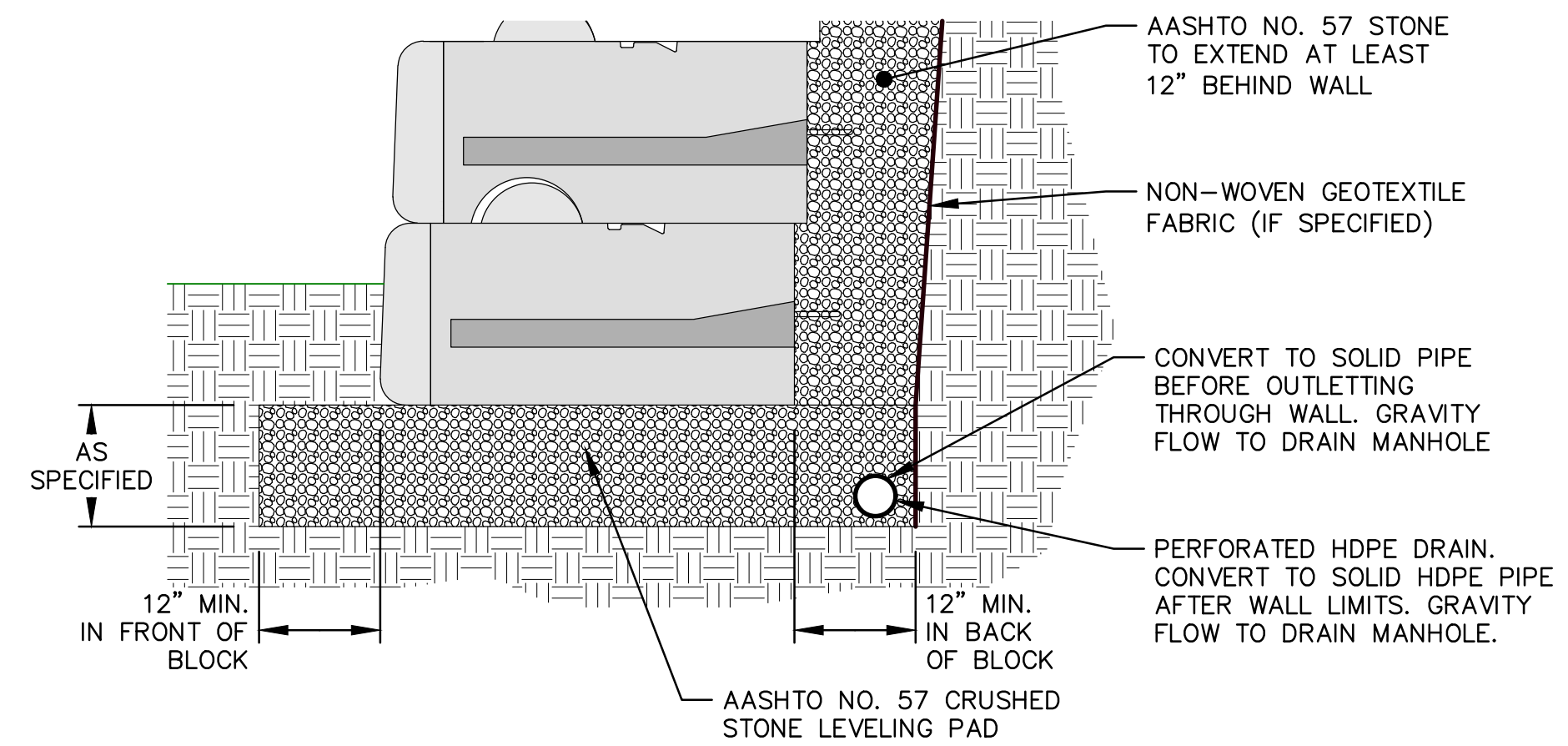


NOTES:
1. REFER TO PRECAST CONCRETE DRAINAGE MANHOLE DETAILS FOR ADDITIONAL INFORMATION.

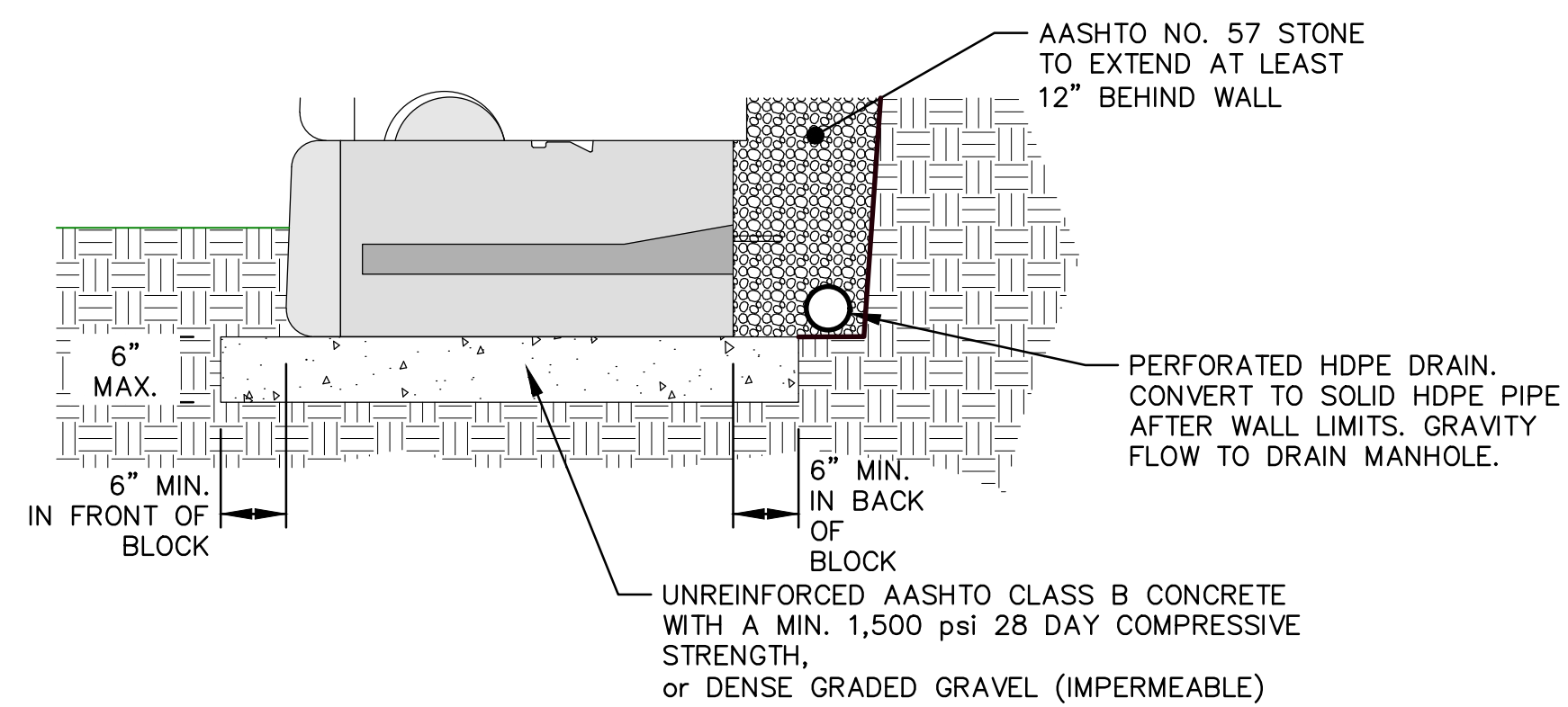
STORMWATER TREATMENT STRUCTURE
N.T.S.



MANHOLE SEAL DETAILS
N.T.S.

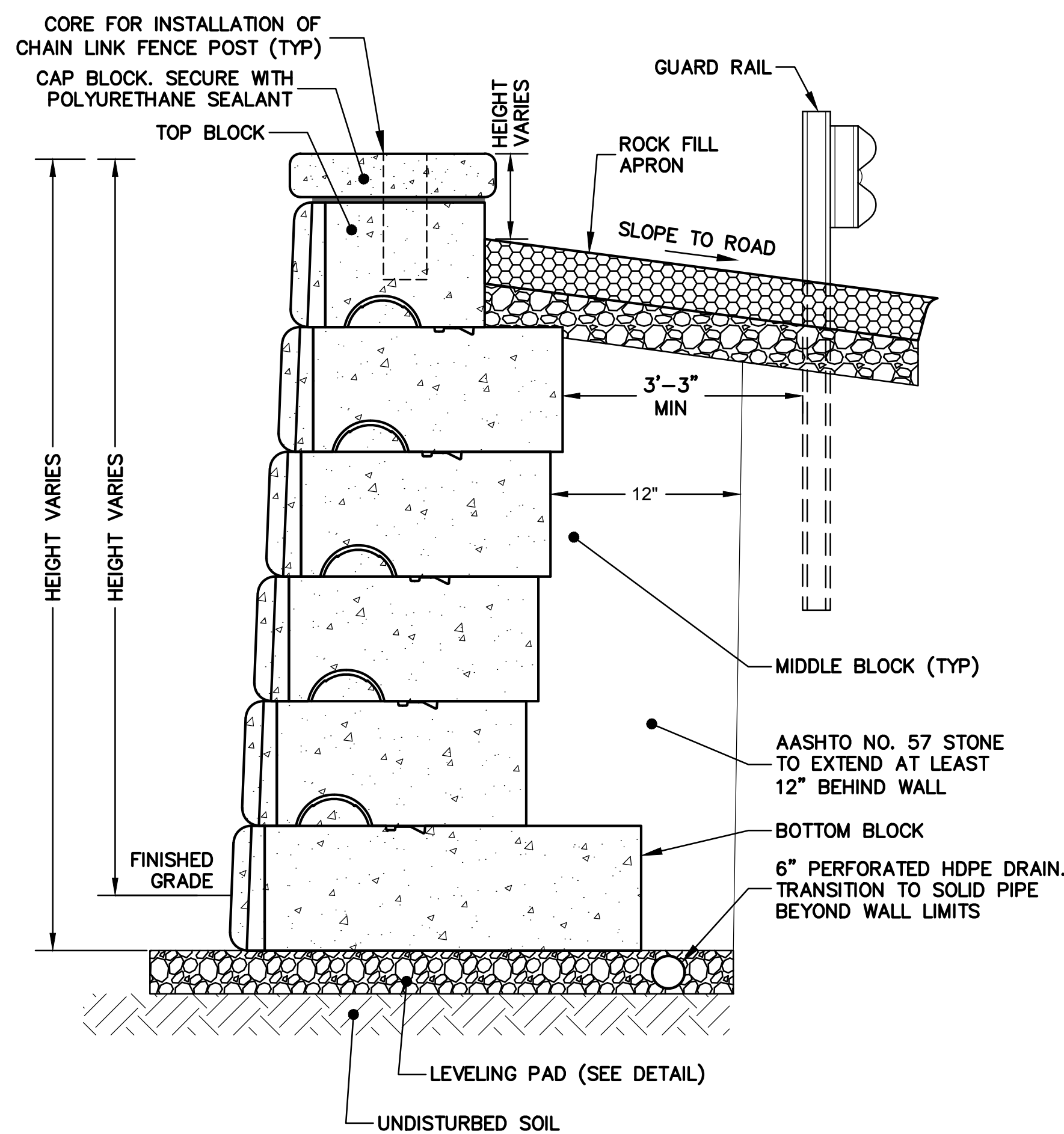


OPEN-GRADED CRUSHED STONE LEVELING PAD



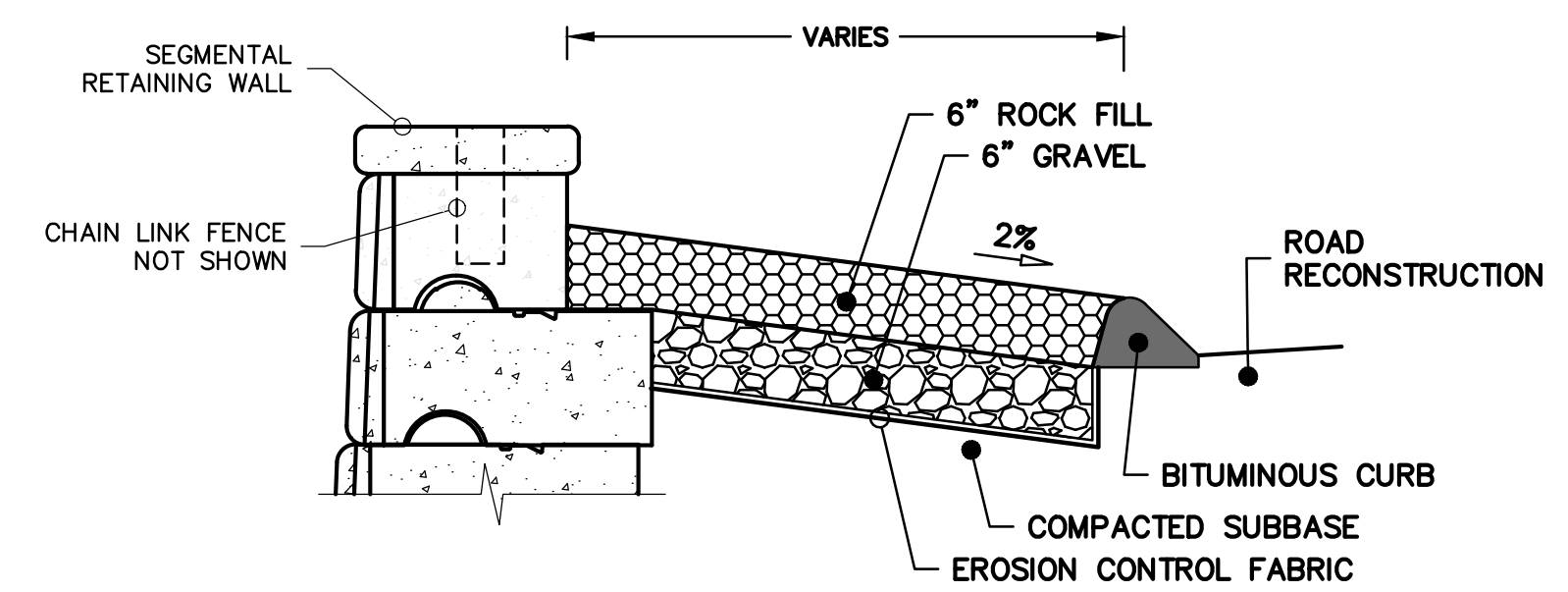
CONCRETE OR DENSE GRADED GRAVEL LEVELING PAD

SEGMENTAL BLOCK WALL LEVEL PAD DETAILS
N.T.S.



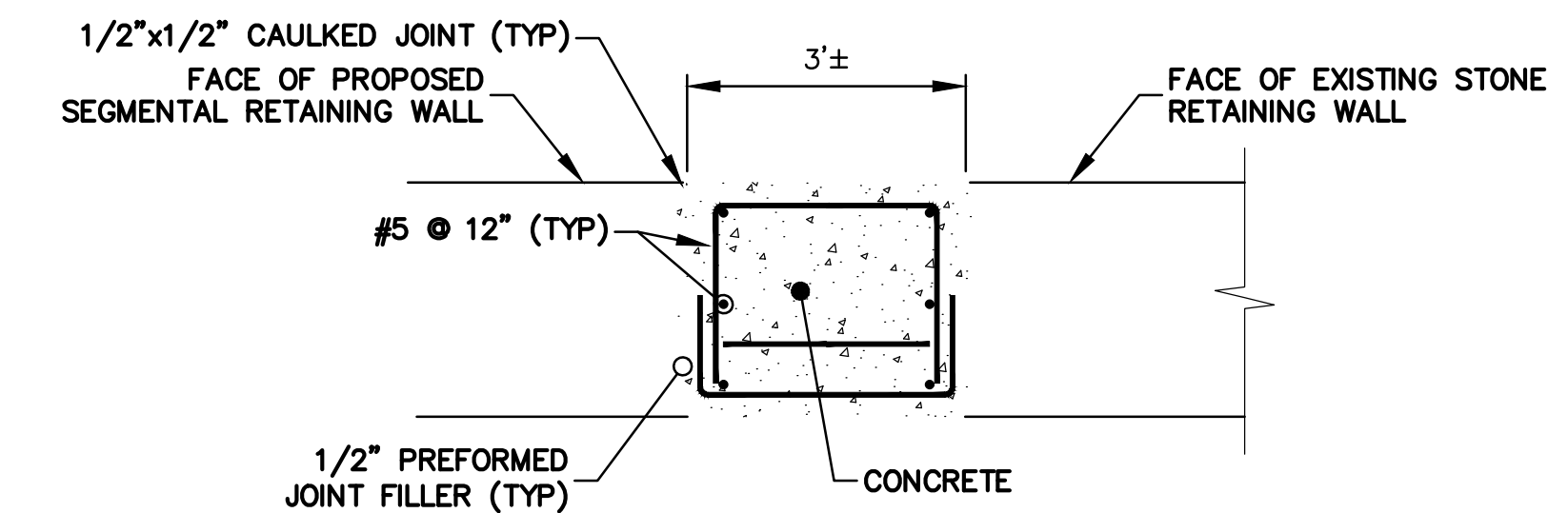
NOTES:
1. WALL TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
2. GEO-GRID/FABRIC IF REQUIRED SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
3. WALL DESIGN TO BE STAMPED BY AN ENGINEER LICENSED IN THE COMMONWEALTH OF MASSACHUSETTS.

SCHEDULE A
SEGMENTAL RETAINING WALL DETAIL AT BRIDGE STREET
N.T.S.

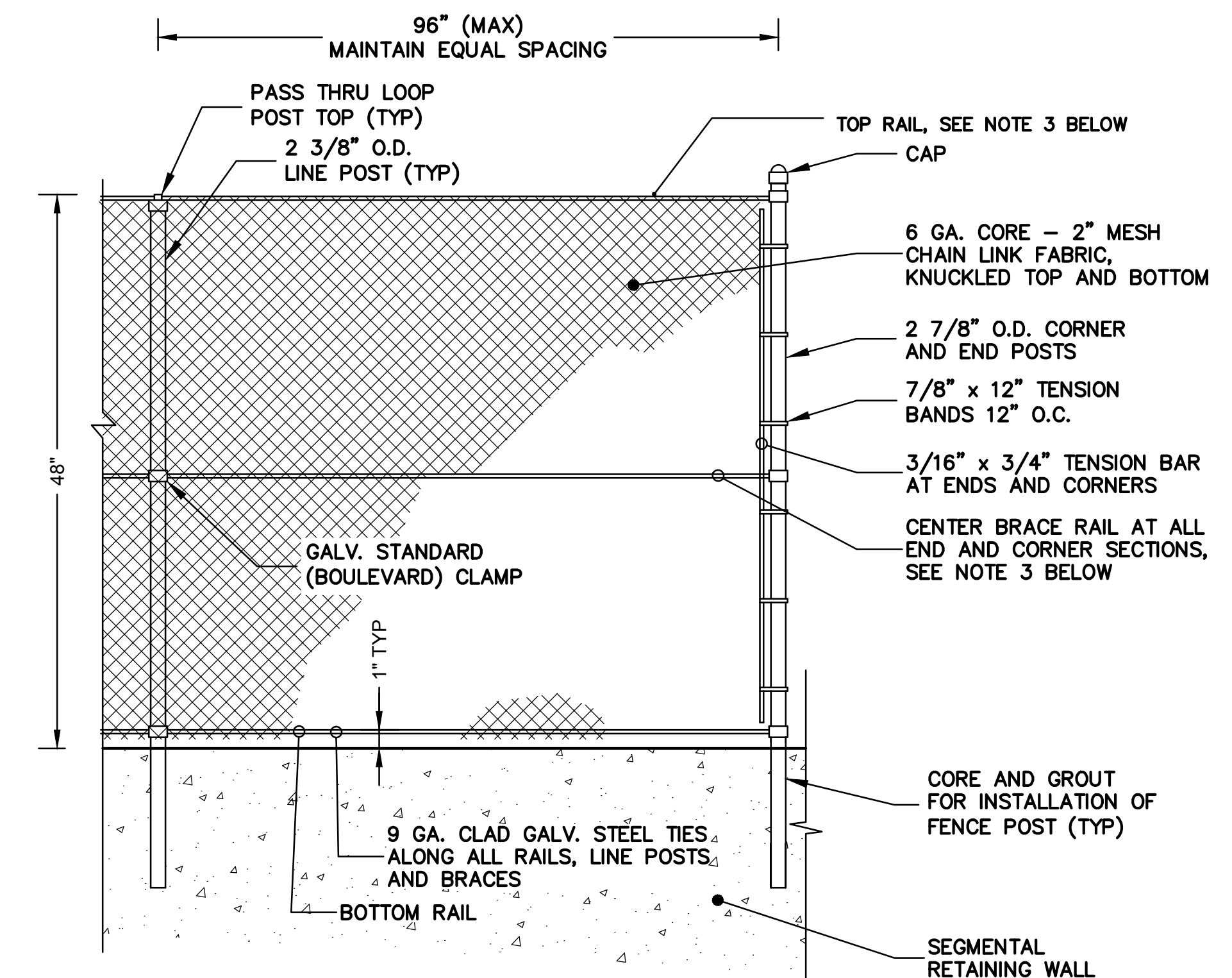


NOTES:
1. GUARD RAIL NOT SHOWN FOR CLARITY.

ROCK FILL APRON
N.T.S.



REINFORCED CONCRETE CLOSURE PIECE
N.T.S.



NOTES:
1. ALL FENCE PIPE SHALL BE SCH. 40, GALV. STEEL PIPE.
2. ALL LINE POSTS SHALL BE INSTALLED EQUALLY SPACED BETWEEN END AND CORNER POSTS.
3. ALL RAILS SHALL BE 1.66" O.D. PIPE.
4. INSTALL PER WALL MANUFACTURER'S REQUIREMENTS.

CHAIN LINK FENCE DETAIL
N.T.S.

Project:
TOWN OF ERVING, MASSACHUSETTS
SELECT BOARD
BRIDGE STREET WALL
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IMPROVEMENTS PROJECT

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Consultants:

Revisions:

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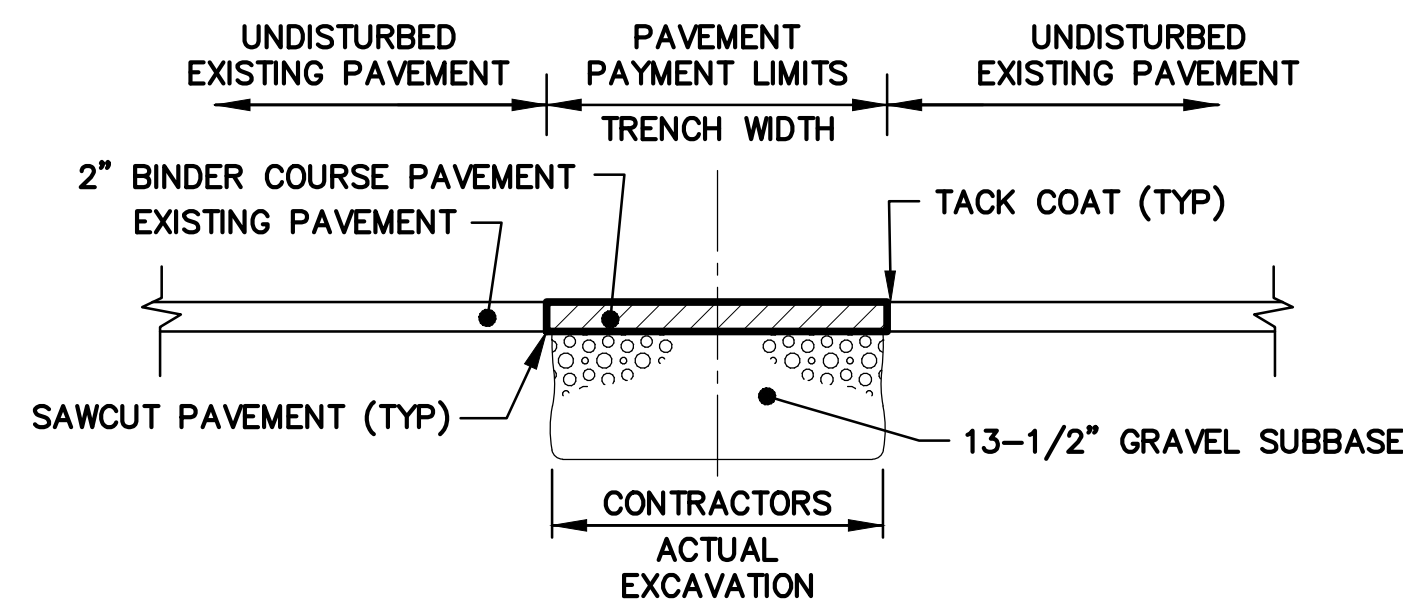
Seal:

COA:

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W&S Project No.: ENG22-0635
W&S File No.:

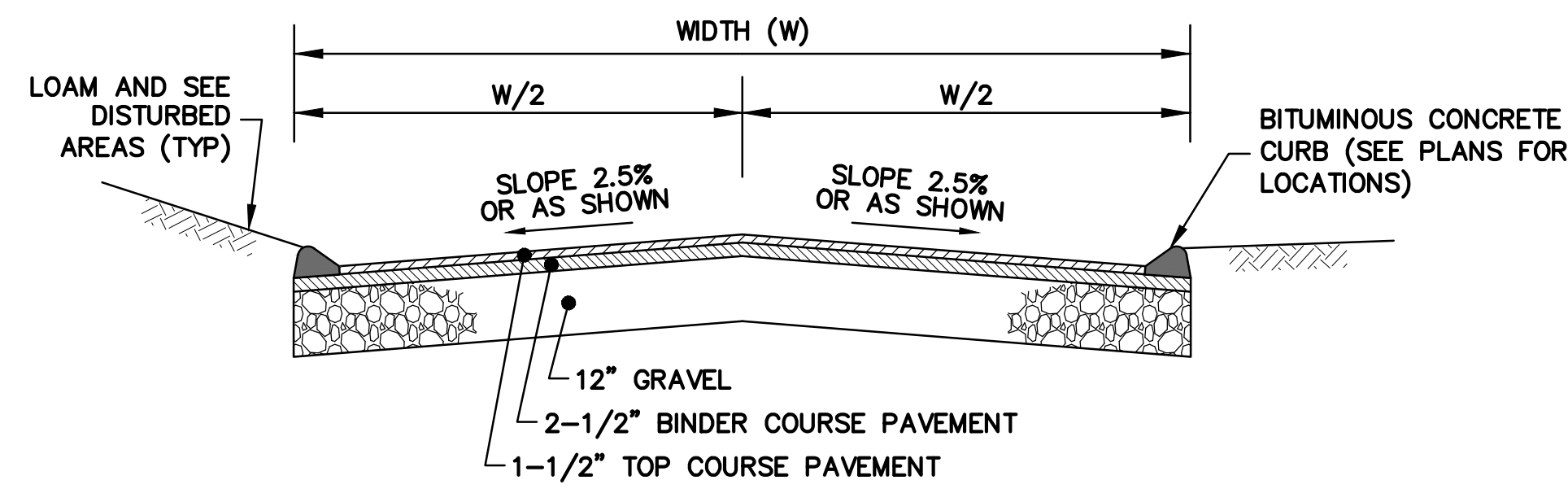
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DETAILS
Sheet Number:
C-501



NOTES:
1. CONTRACTOR REQUIRED TO MAINTAIN TRENCH SURFACE THROUGHOUT THE PROJECT

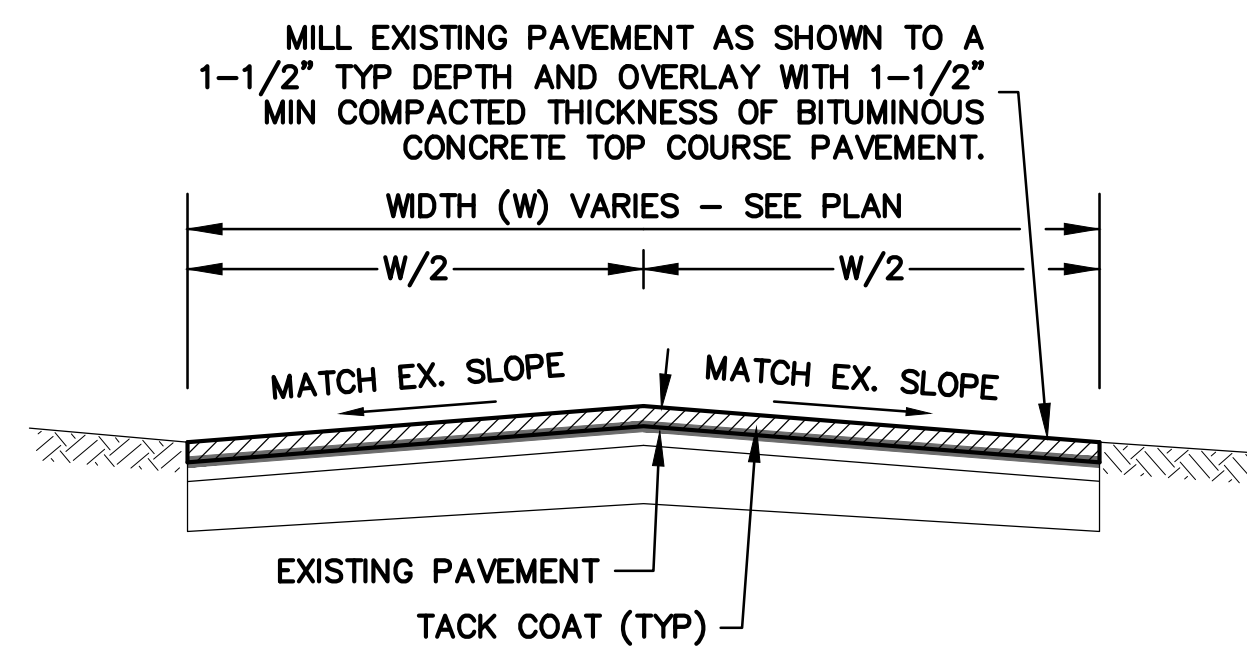
TEMPORARY TRENCH PAVEMENT REPLACEMENT DETAIL

N.T.S.



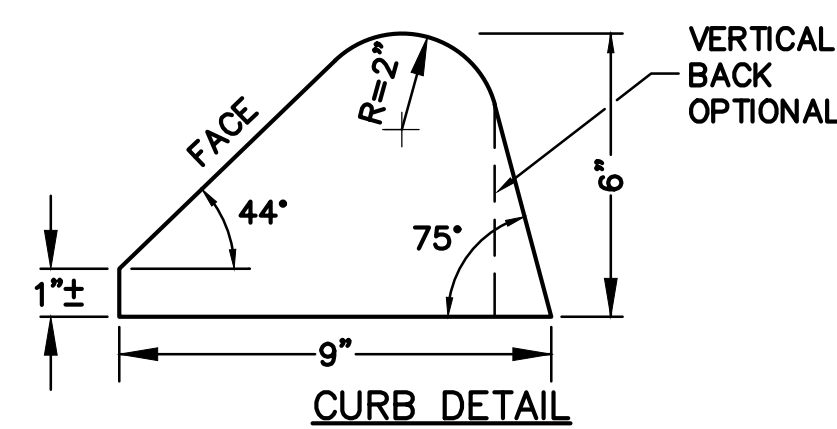
SCHEDULE A AND SCHEDULE B TYPICAL ROAD RECONSTRUCTION DETAIL

N.T.S.



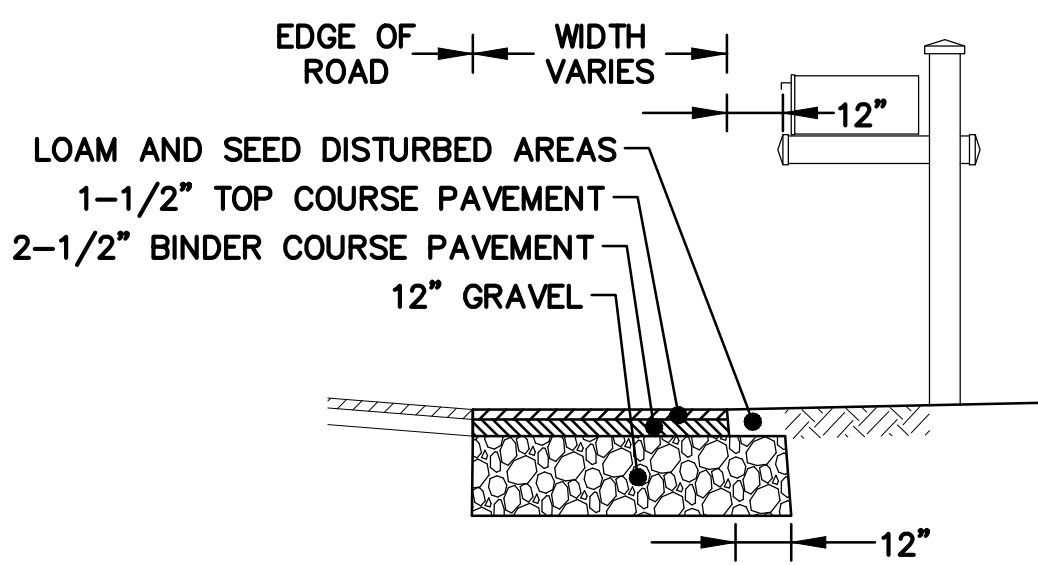
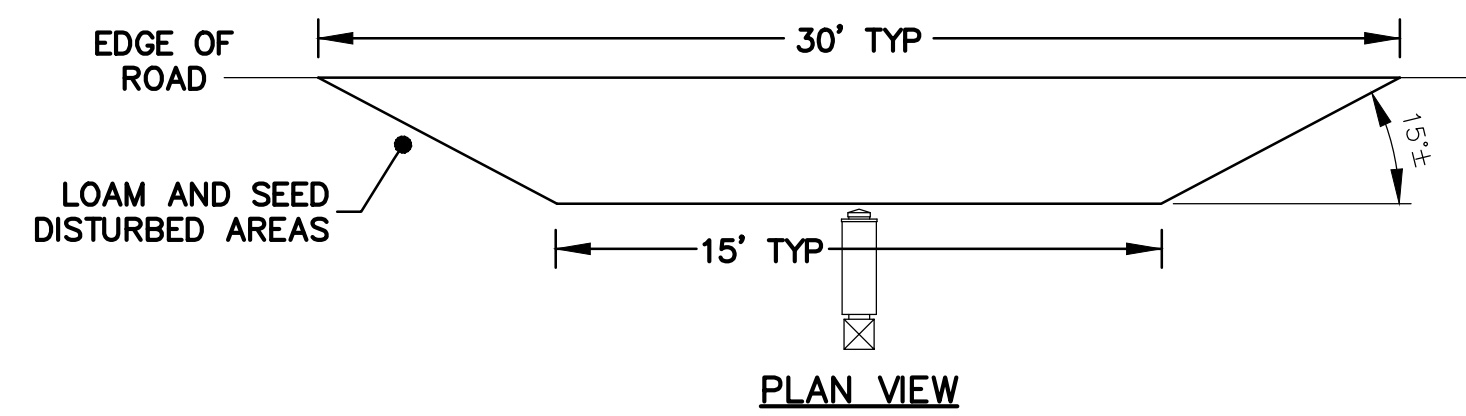
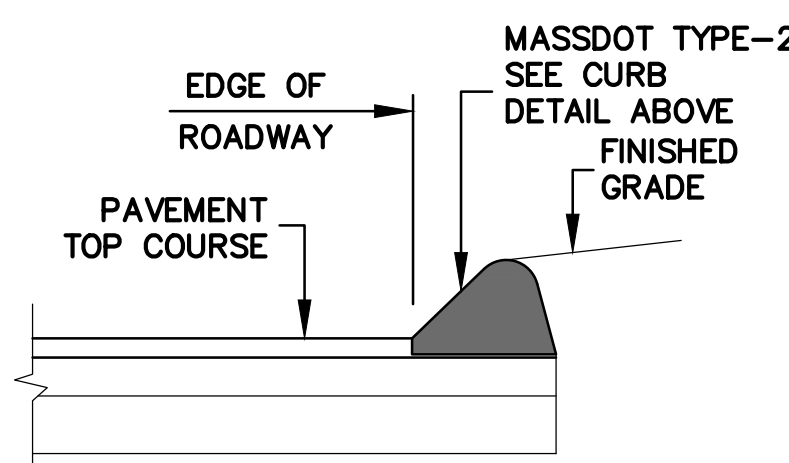
TYPICAL MILLING AND OVERLAY DETAIL

N.T.S.



HOT MIX ASPHALT CURB

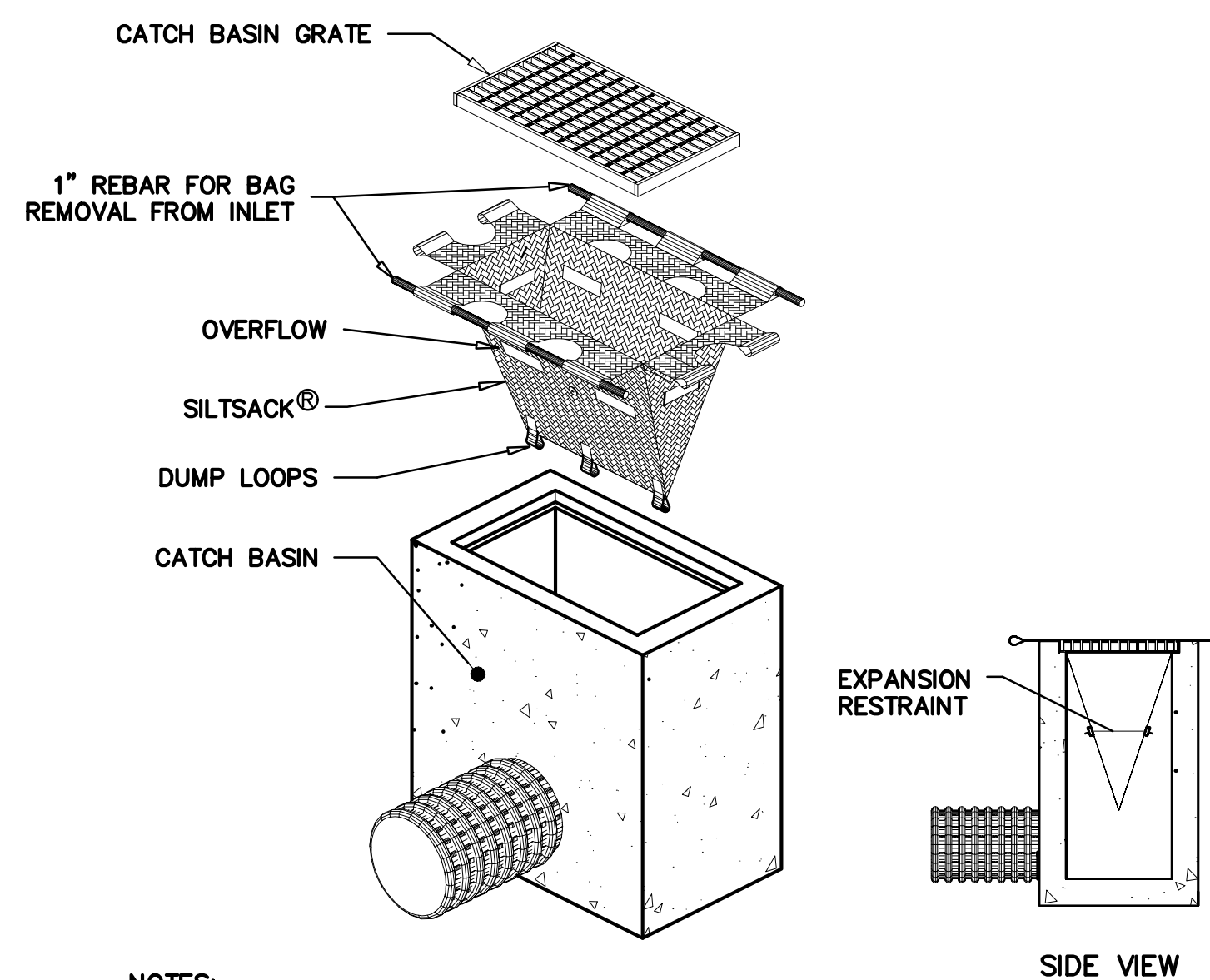
N.T.S.



NOTES:
1. SAWCUT AND SEAL JOINTS AT ADJACENT DRIVEWAYS

PAVED APRON AT MAILBOX DETAIL

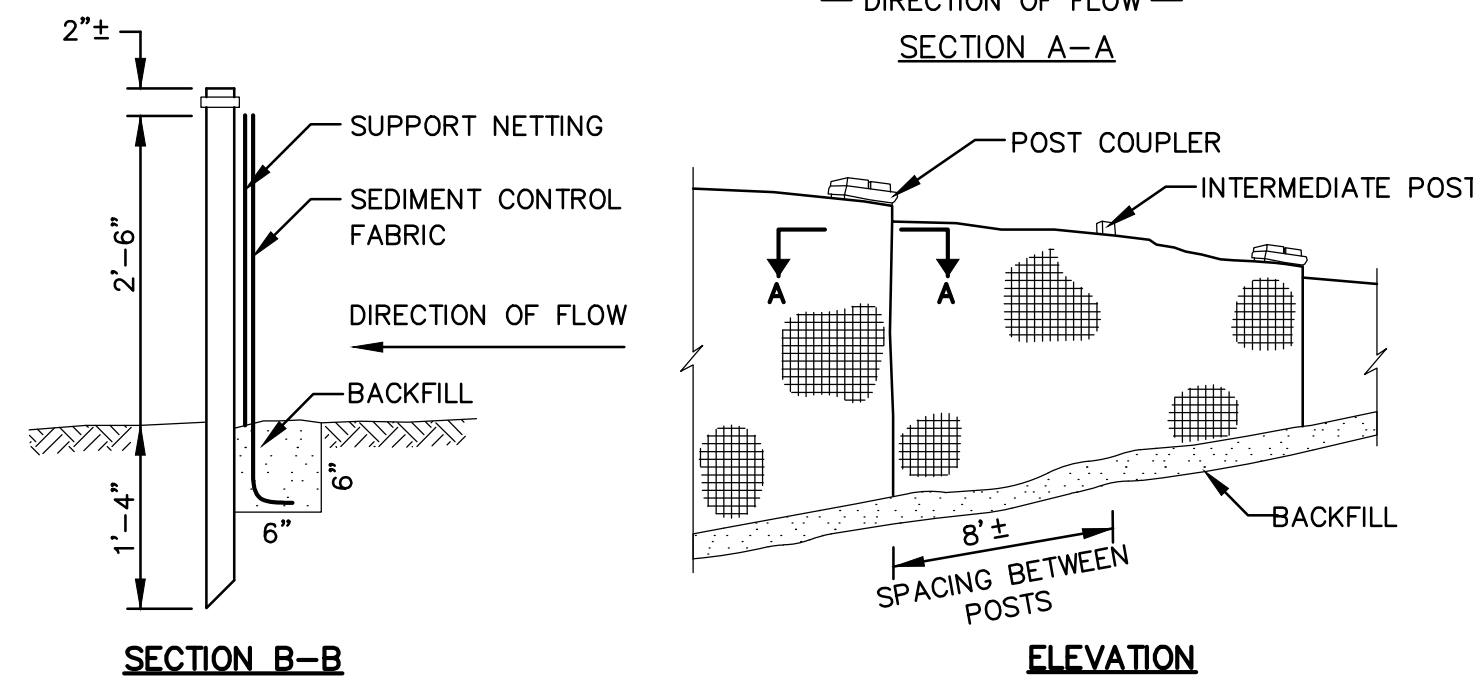
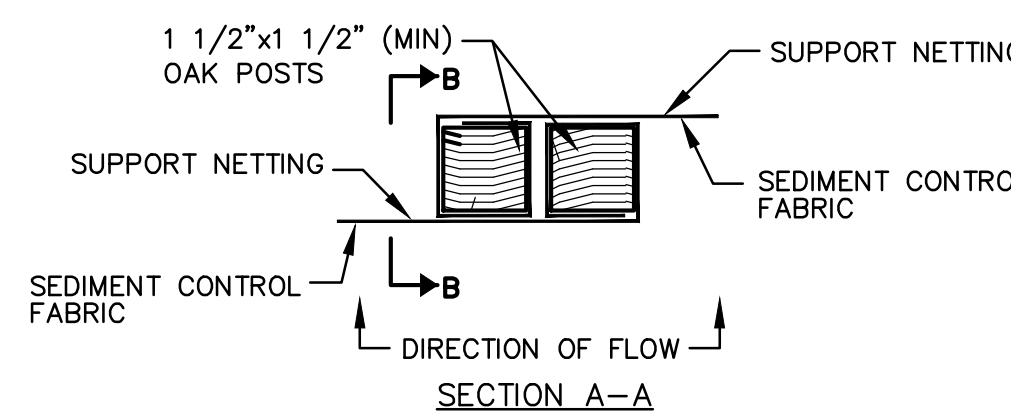
N.T.S.



NOTES:
1. PROVIDE HI-FLOW SILT SACK TYPE A FOR TYPE \"C-L\" CATCH BASIN TOPS AND TYPE B WITH CURB DEFLECTOR FOR TYPE \"C\" CATCH BASIN TOPS OR OTHER STRUCTURES WITH CURB INLET.

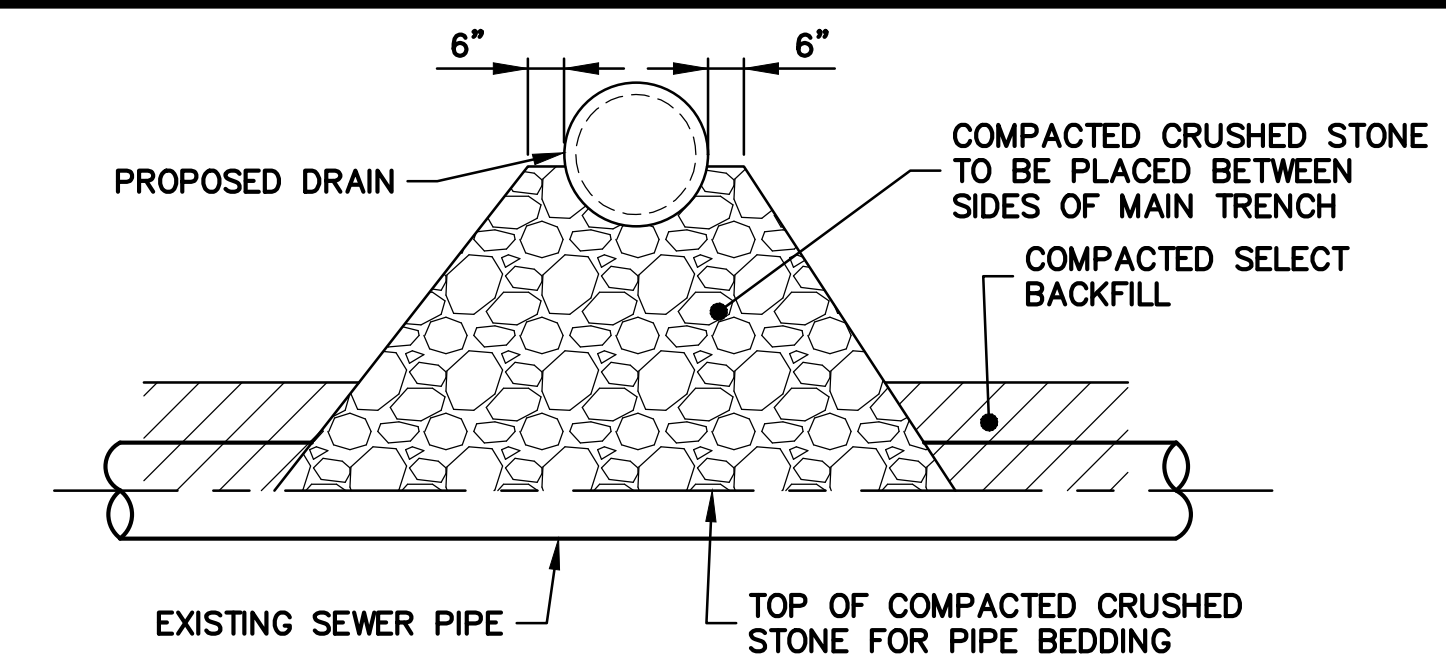
CATCH BASIN INLET PROTECTION

N.T.S.



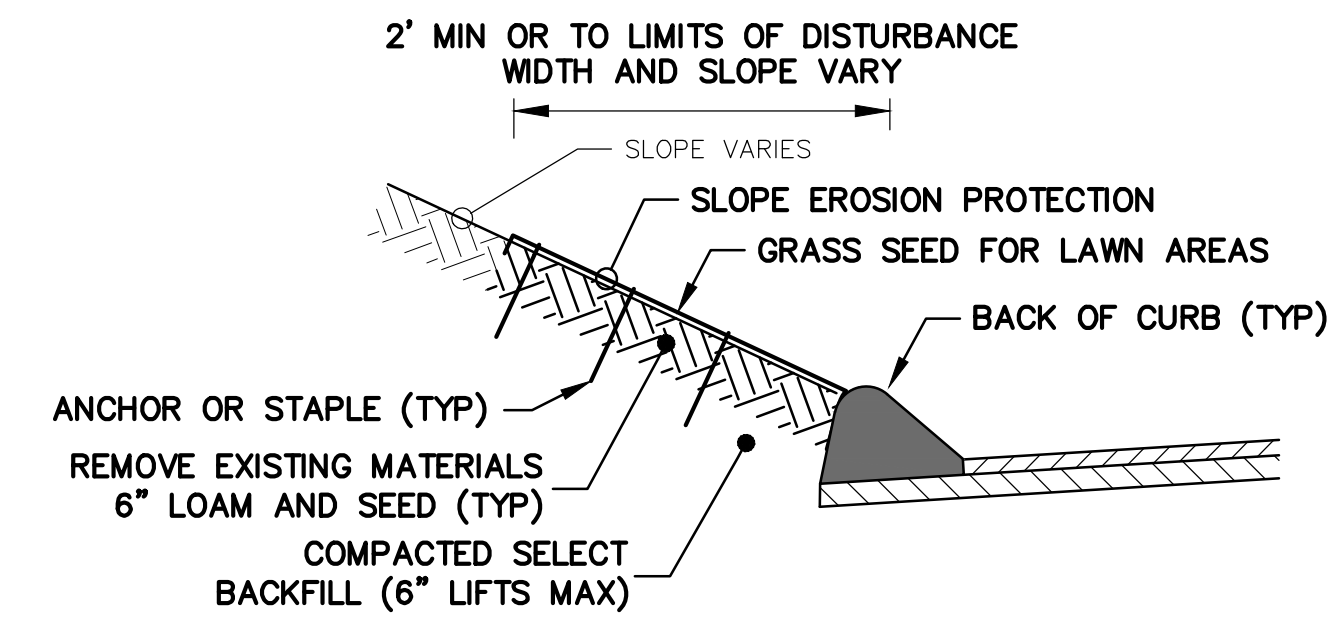
SILT FENCE DETAIL

N.T.S.



UTILITY CROSSING DETAIL

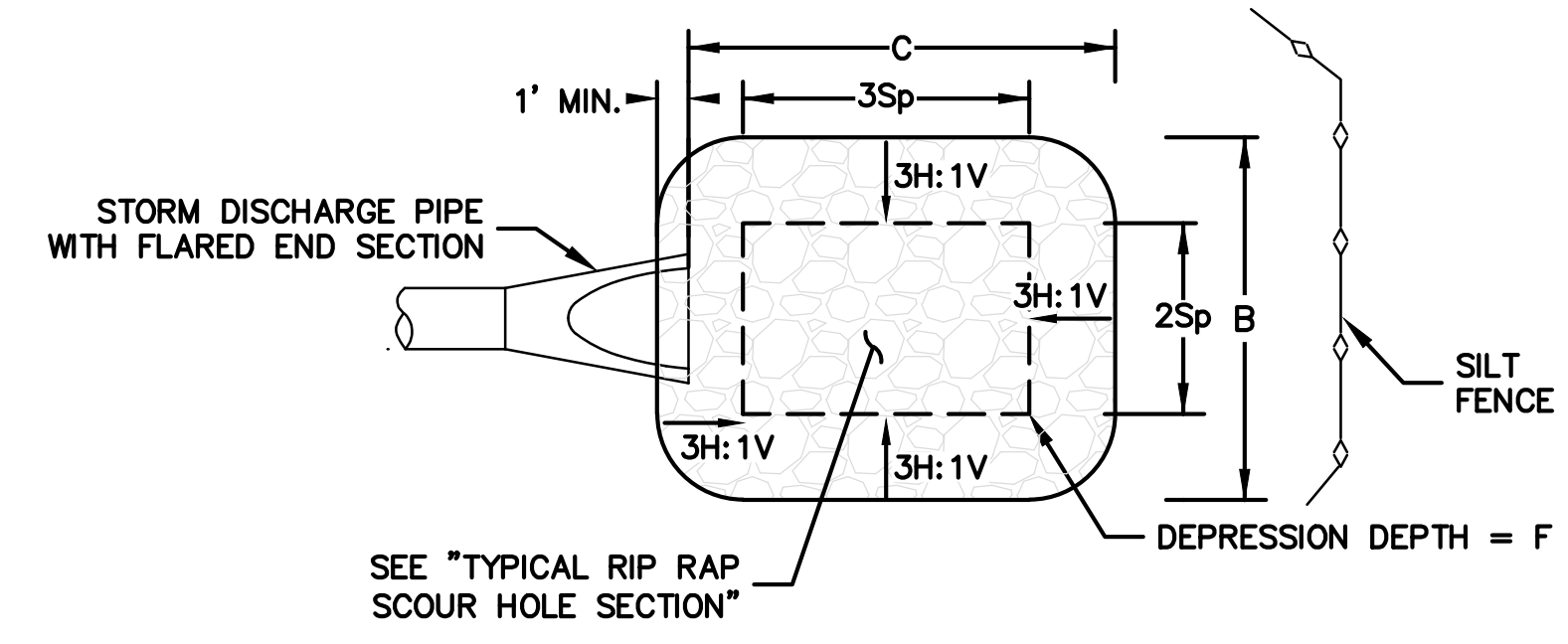
N.T.S.



NOTES:
1. INSTALL SLOPE EROSION PROTECTION PER MANUFACTURER'S SPECIFICATIONS.
2. REMOVE ALL TOPSOIL, VEGETATION AND OTHER LOOSE MATERIAL PRIOR TO PLACEMENT.

LOAM AND SEED DETAIL

N.T.S.

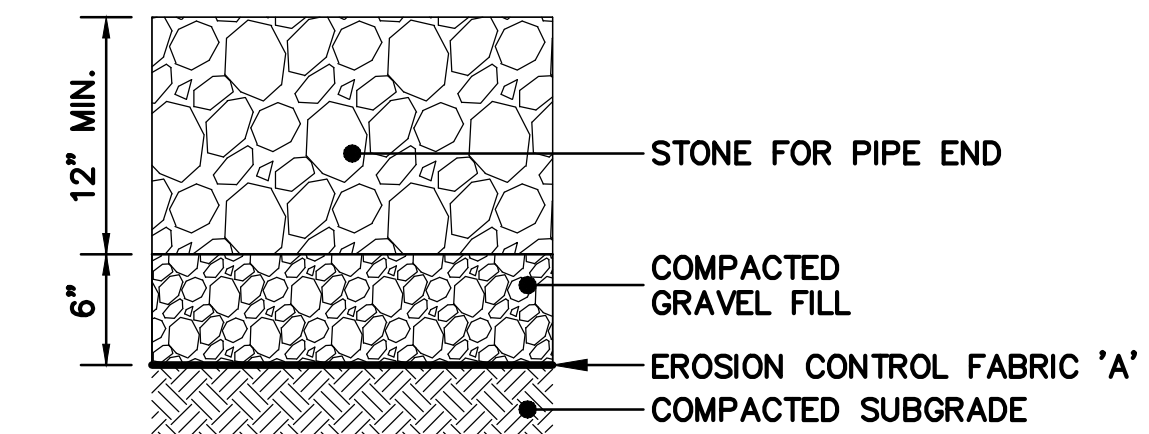


PIPE Sp	B	C	F
12"	5 FT	6 FT	0.5 FT

NOTES:
1. DISTURBANCES SHALL BE LIMITED TO THE EXTENT PRACTICAL. CARE SHALL BE TAKEN TO PROTECT ADJACENT WETLANDS.

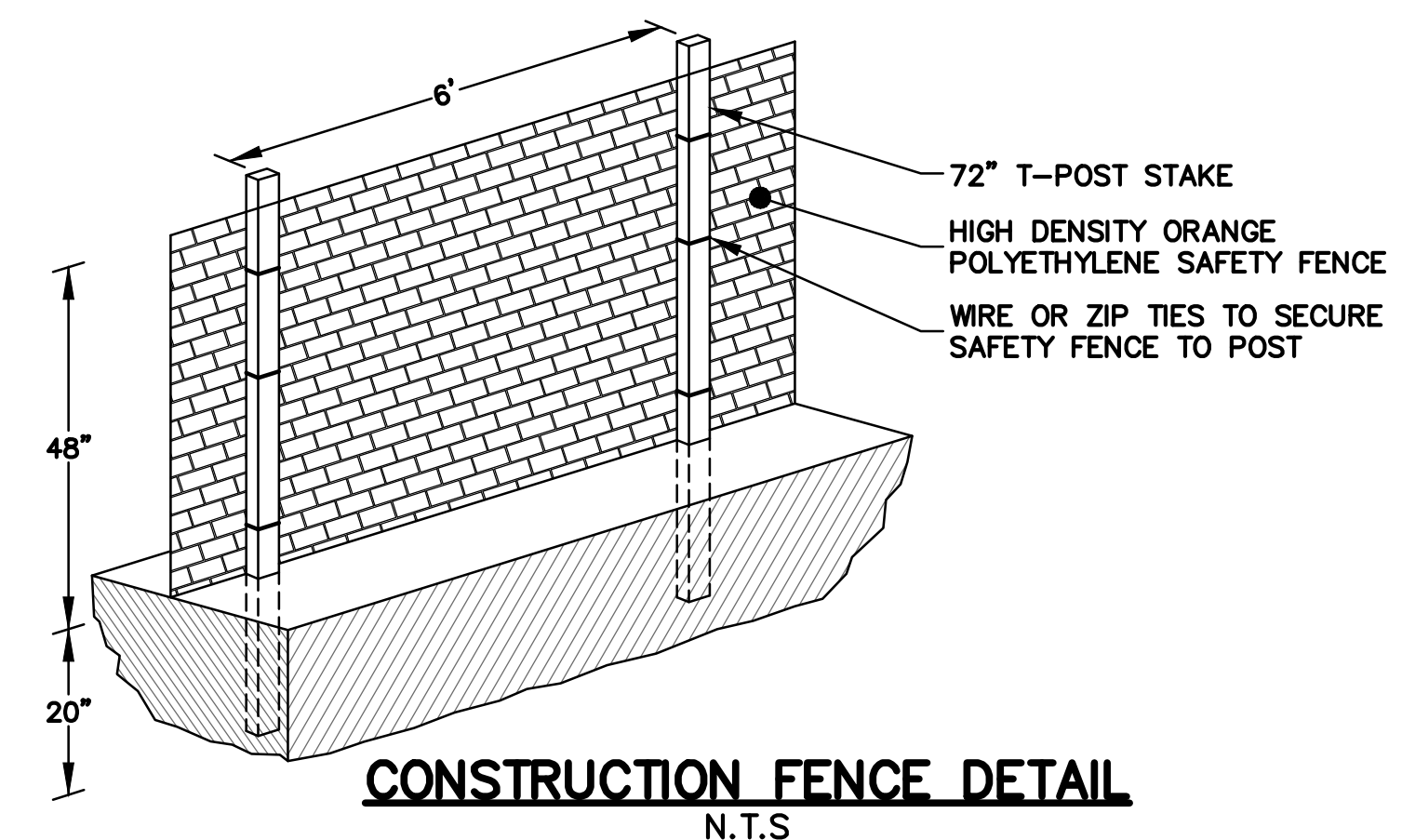
RIP RAP SCOUR HOLE DETAIL

N.T.S.



TYPICAL SCOUR HOLE RIP RAP SECTION

N.T.S.



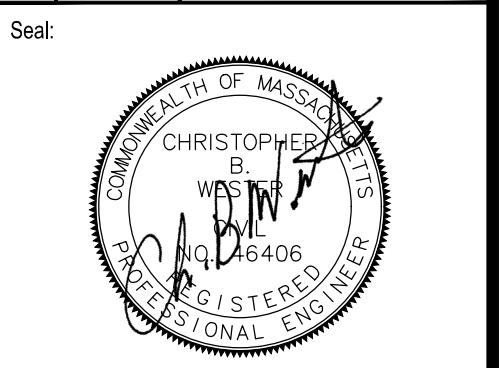
CONSTRUCTION FENCE DETAIL

N.T.S.

Consultants:

Revisions:

No.	Date	Description

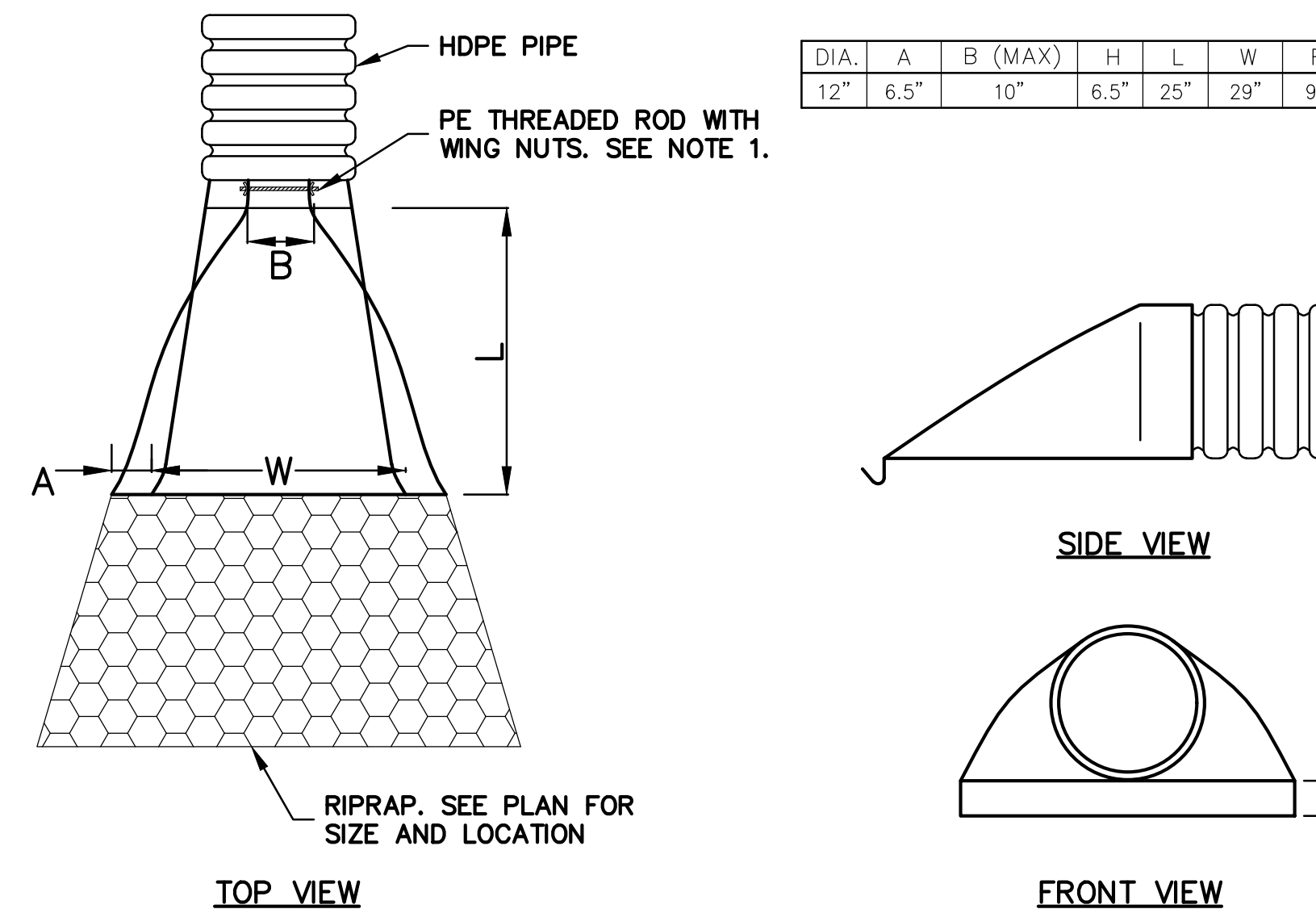
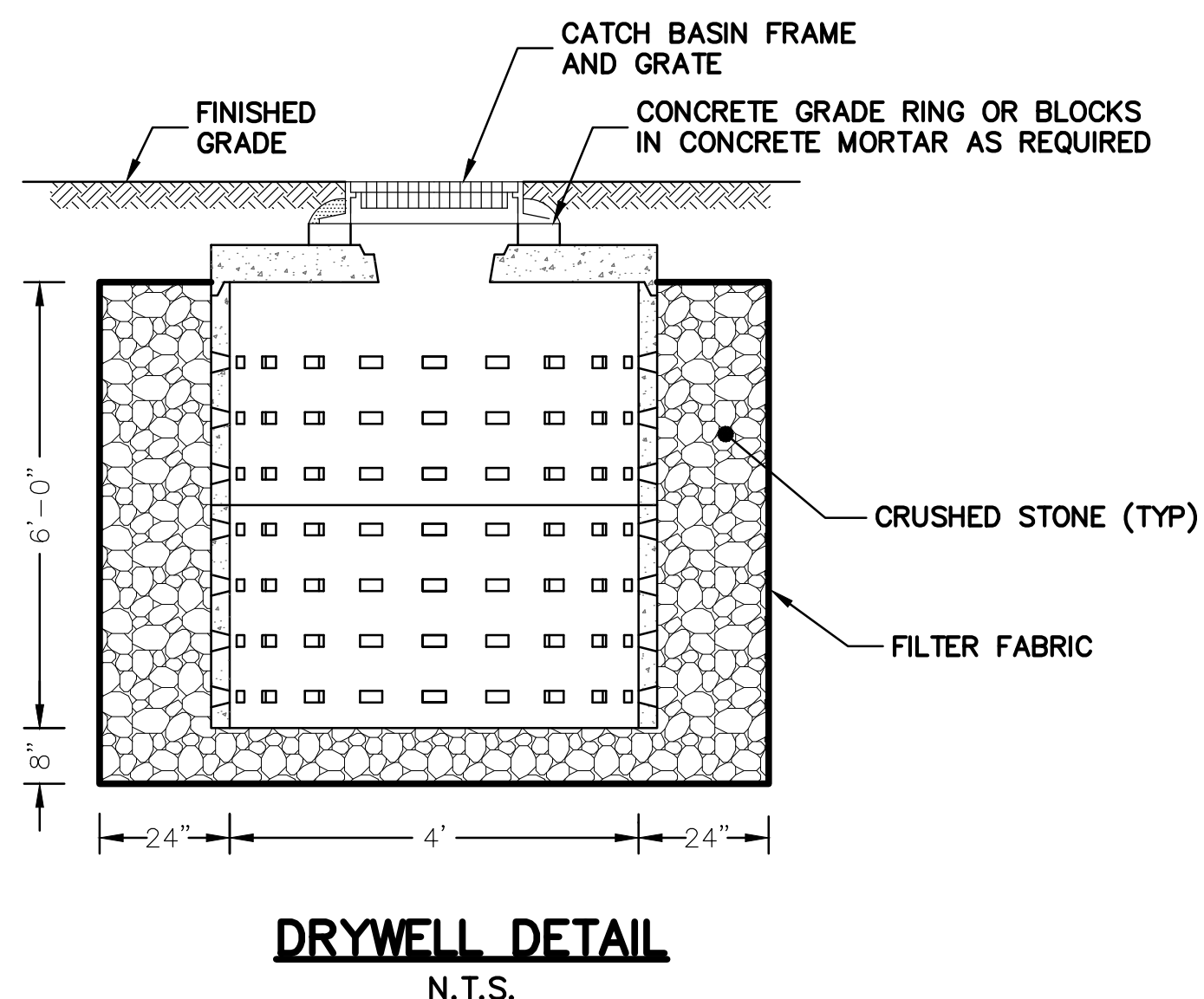


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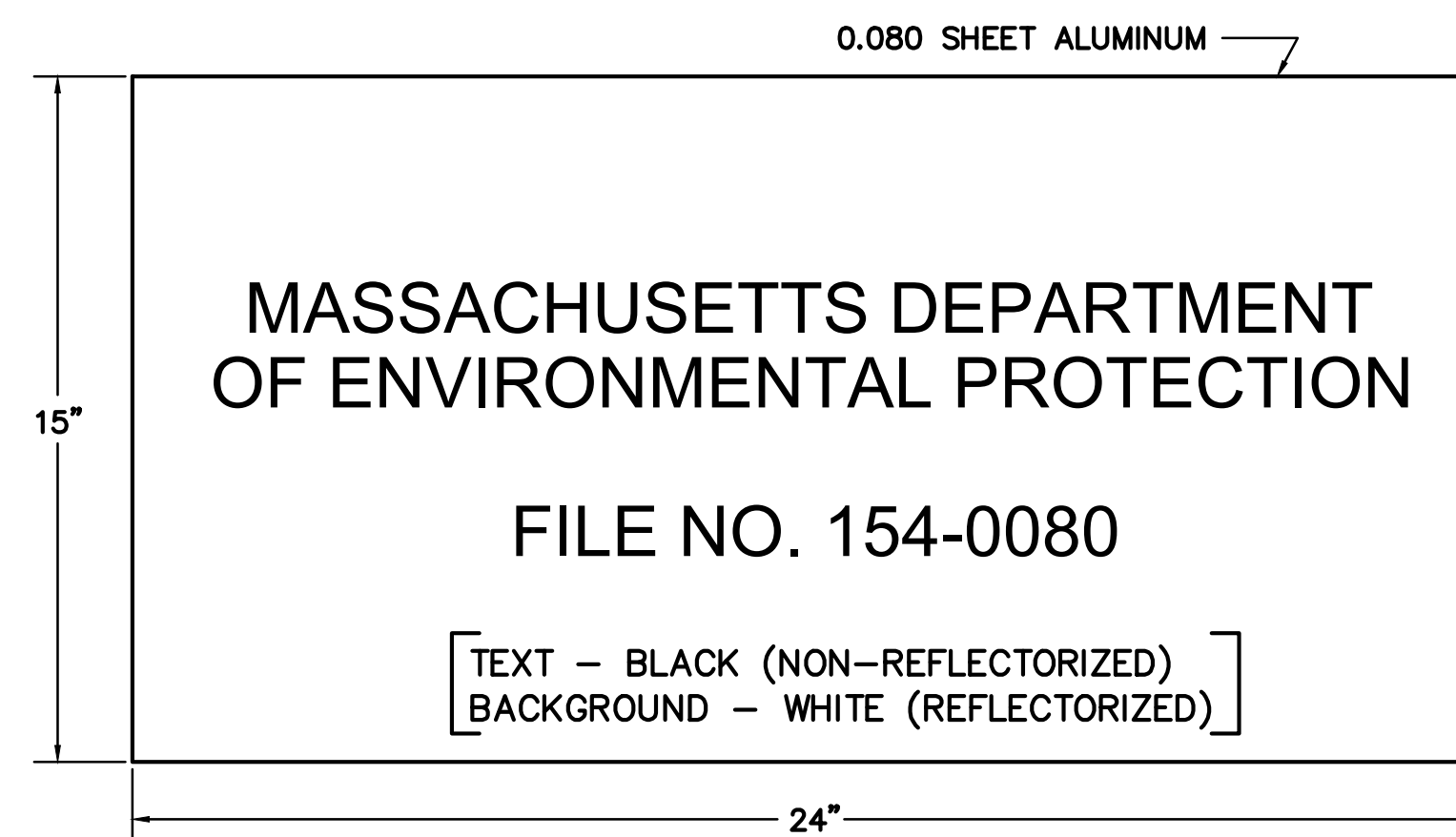
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Drawn By:
Reviewed By: WGS
Approved By: CBW
W&S Project No.: ENG22-0635
W&S File No.:

Drawing Title:
DETAILS
Sheet Number:
C-502

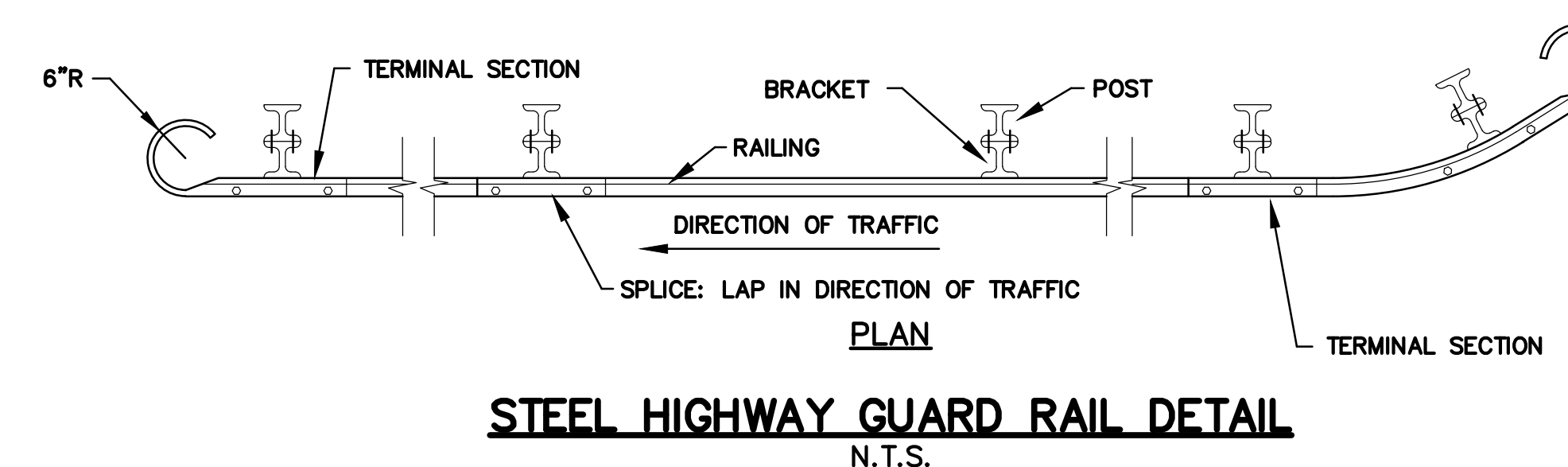
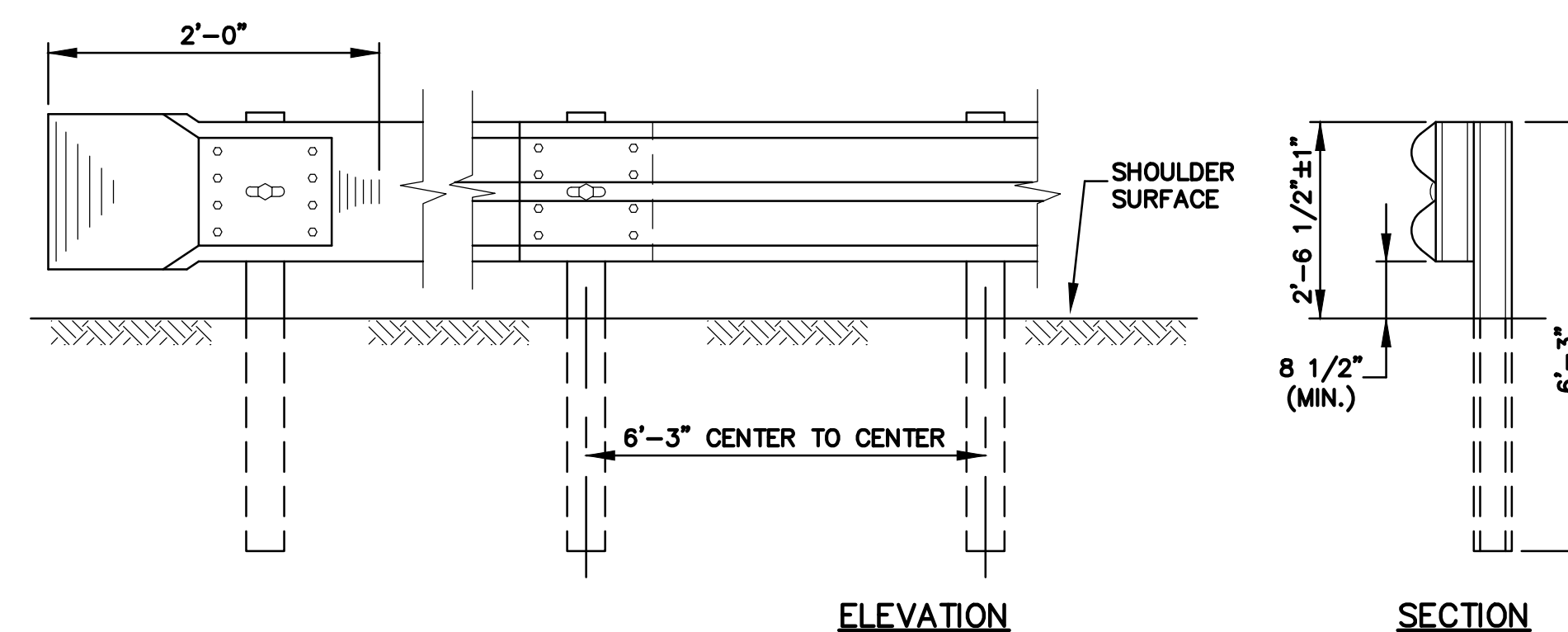


DIA.	A	B (MAX)	H	L	W	R
12"	6.5"	10"	6.5"	25"	29"	9"

HDPE FLARED END DETAIL
N.T.S.



- NOTES:**
1. THE LOCATION OF THE SIGN IS TO BE DETERMINED BY THE OWNER AND ENGINEER.
 2. SEE SPECIAL PROVISIONS FOR THE MANUFACTURE, MAINTENANCE, ERECTION AND REMOVAL RESPONSIBILITIES.
 3. USE SERIES "D" FOR LETTERING.



Project:
TOWN OF ERVING, MASSACHUSETTS
SELECT BOARD
BRIDGE STREET WALL REPLACEMENT AND MAPLE AVENUE ROADWAY IMPROVEMENTS PROJECT

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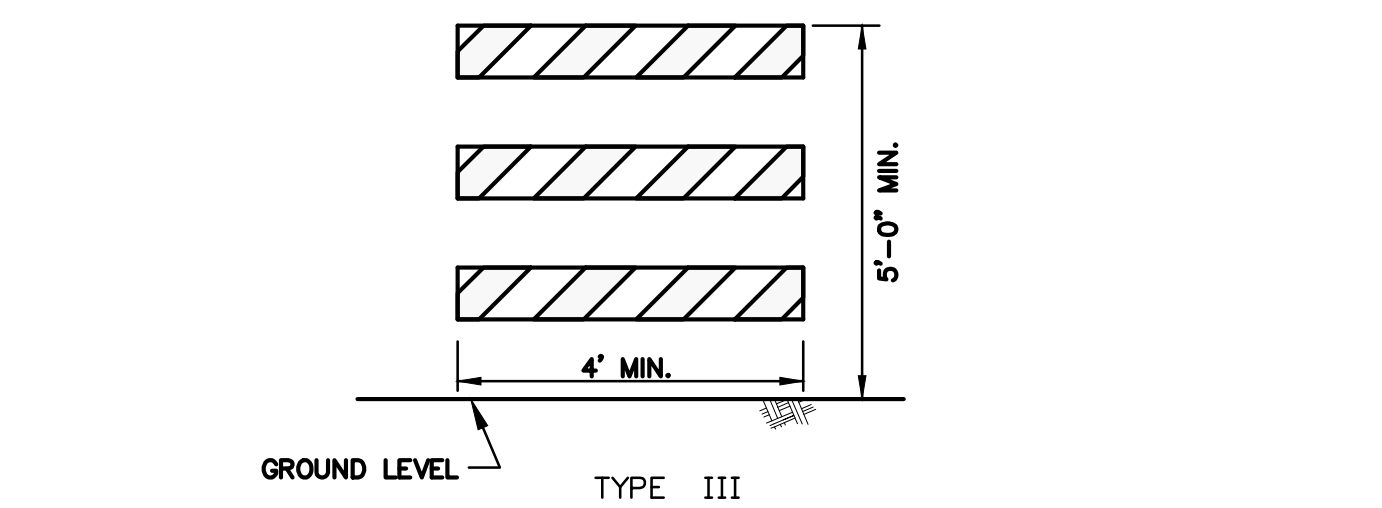
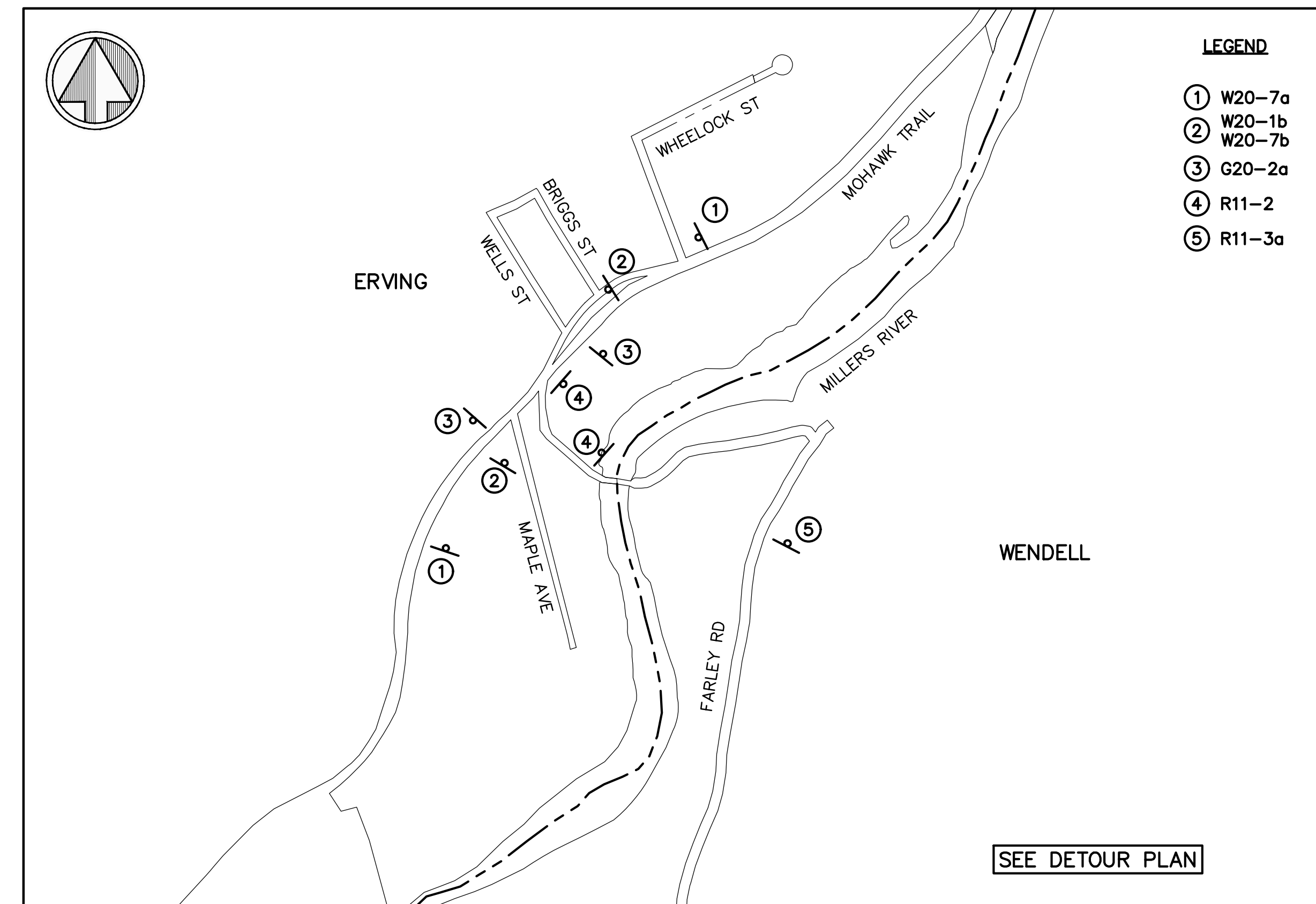
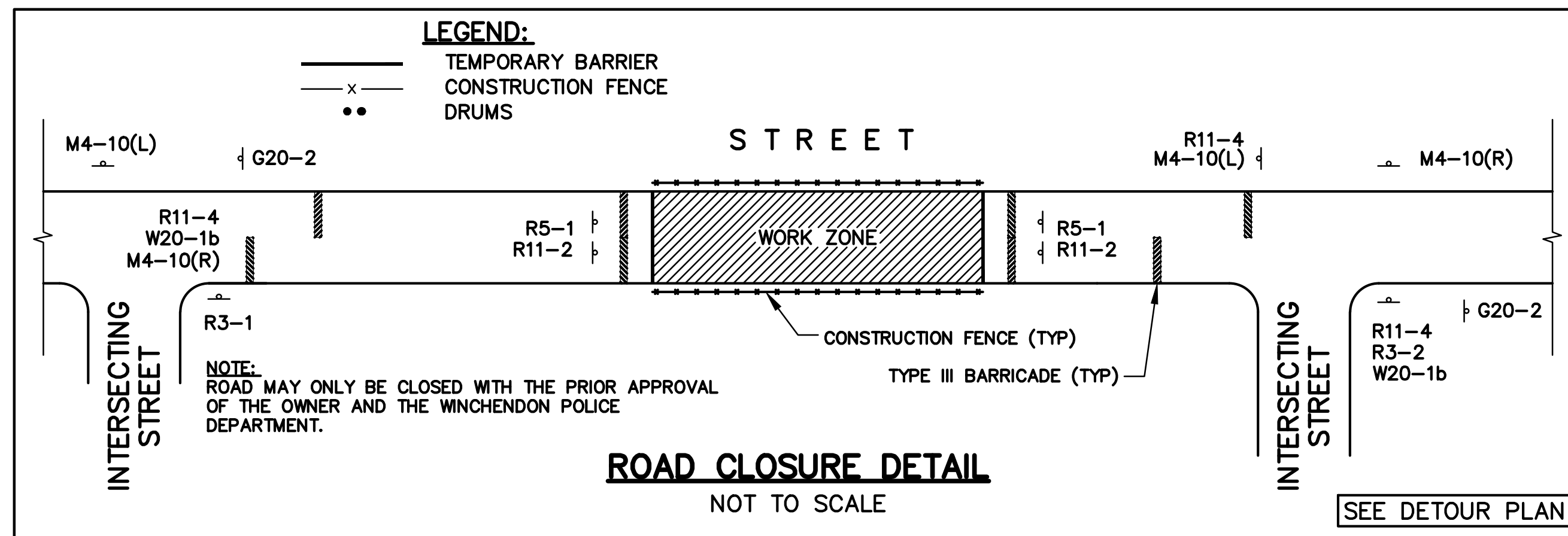
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DETAILS

Sheet Number:

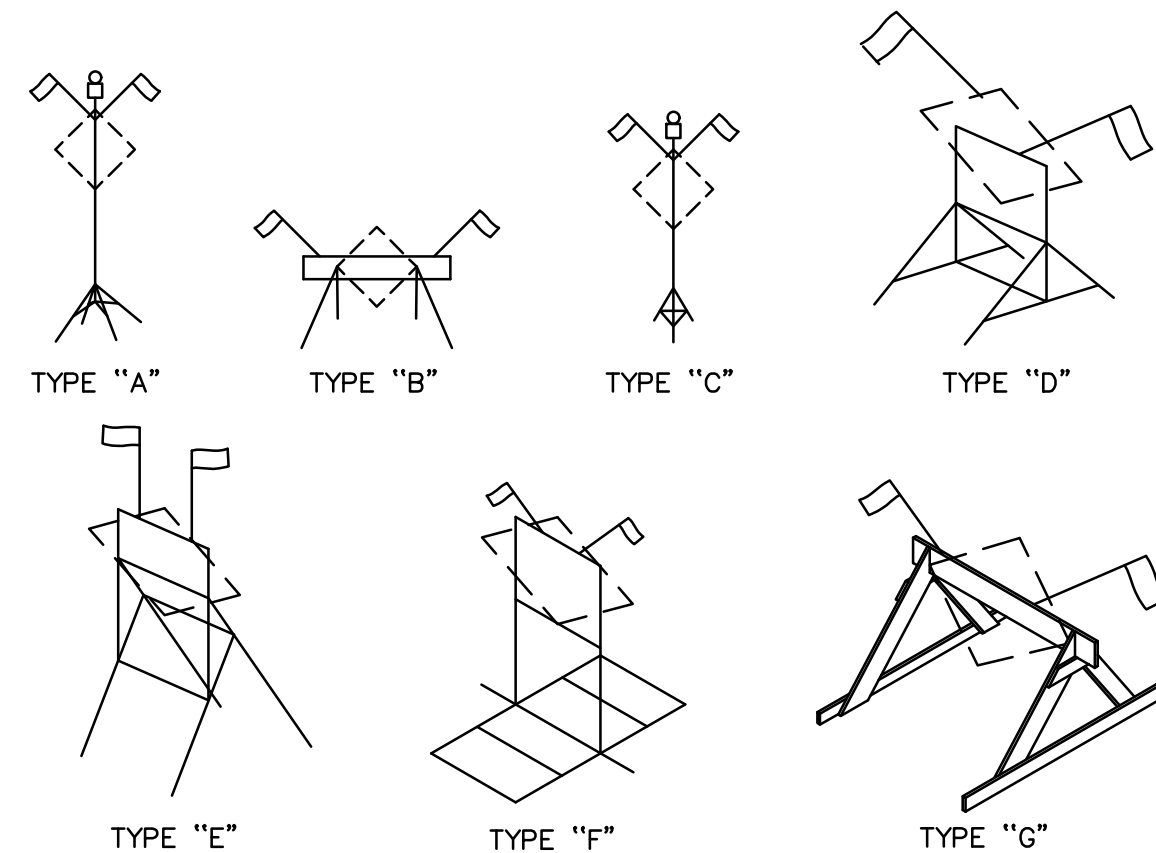
C-503



- ALUMINUM BARRICADE FACE PANELS SHALL BE MOUNTED ON 3" OR 4" P.V.C. BARRICADE SUPPORT.
- MARKINGS FOR BARRICADE FACE PANELS SHALL BE 8" TO 12" IN HEIGHT AND ALTERNATE ORANGE AND WHITE STRIPES SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS. 6" WIDE STRIPES AT A 45° ANGLE SHALL BE USED.
- THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE REFLECTIVE SHEETING - ENCAPSULATED LENS. BARRICADE FACE PANELS AS NOTED SHALL BE REFLECTORIZED ON BOTH SIDES. WHERE TRAFFIC PASSES ONLY IN ONE DIRECTION OF TRAVEL, ONLY THE SIDE FACING TRAFFIC SHALL BE REFLECTORIZED.
- ALUMINUM BARRICADE FACE PANELS SHALL HAVE ROUNDED CORNERS.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY BARRICADE FACE PANEL WHICH THE ENGINEER DEEMS HAZARDOUS, AND NOT IN THE BEST INTEREST OF THE MOTORING PUBLIC, OR NOT SUITABLE FOR PURPOSE INTENDED.

ALUMINUM BARRICADE FACE PANELS

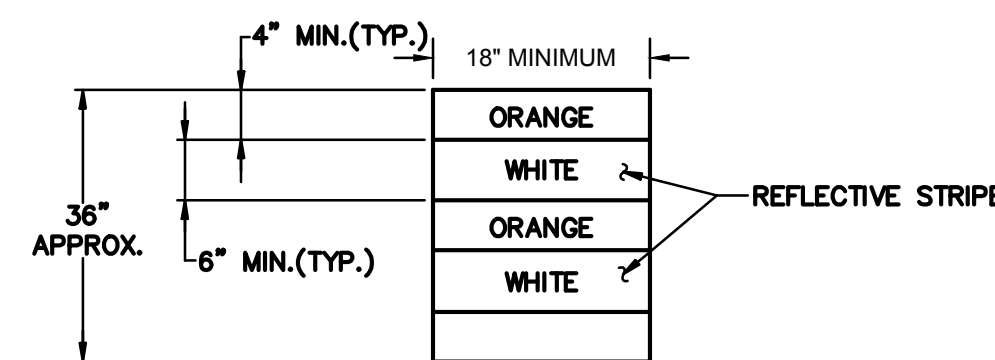
N.T.S.



- SIGN SUPPORTS SHALL BE CONSTRUCTED OF A SUITABLE MATERIAL. BREAKAWAY AND/OR COLLAPSIBLE FEATURES SHALL BE INCORPORATED IN THE SIGN SO THAT THE SUPPORT WILL NOT CONSTITUTE A HAZARD TO THE MOTORIST AND/OR WORKERS IN THE WORK AREA. SIGNS MUST MEET NCHRP 350 STANDARDS AND THE MUTCD.
- MOUNTING HEIGHT OF SIGN UTILIZING STRUCTURES DEPICTED ABOVE SHALL BE A MINIMUM OF 12", WITH A RECOMMENDED HEIGHT OF 18" ABOVE PAVEMENT.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY SUPPORT WHICH THE ENGINEER DEEMS A HAZARD, OR NOT IN THE BEST INTEREST OF THE MOTORING PUBLIC.
- FLAGS AND/OR BARRICADE WARNING LIGHTS SHALL BE USED AS SHOWN ON THE TRAFFIC CONTROL PLANS AND AS REQUIRED BY THE ENGINEER.

PORTABLE SIGN SUPPORTS

N.T.S.

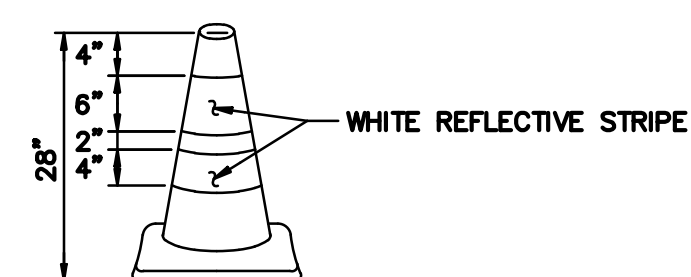


NOTES:

- TRAFFIC DRUM SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION M.U.T.C.D.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY DRUM DEEMED NOT SUITABLE FOR THE PURPOSE INTENDED.
- THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE FLEXIBLE ENCAPSULATED LENS REFLECTIVE SHEETING.
- REFLECTORIZED STRIPES SHOULD NOT BE PLACED OVER THE PROTRUDING CIRCUMFERENTIAL RIBS OF THE DRUM.
- THE SECTIONS OF DRUMS NOT COVERED WITH REFLECTORIZED STRIPES SHALL BE ORANGE.
- THE DESIGN OF THE DRUM WILL ALLOW FOR THE ATTACHMENT OF A BARRICADE WARNING LIGHT.

TRAFFIC DRUM

N.T.S.

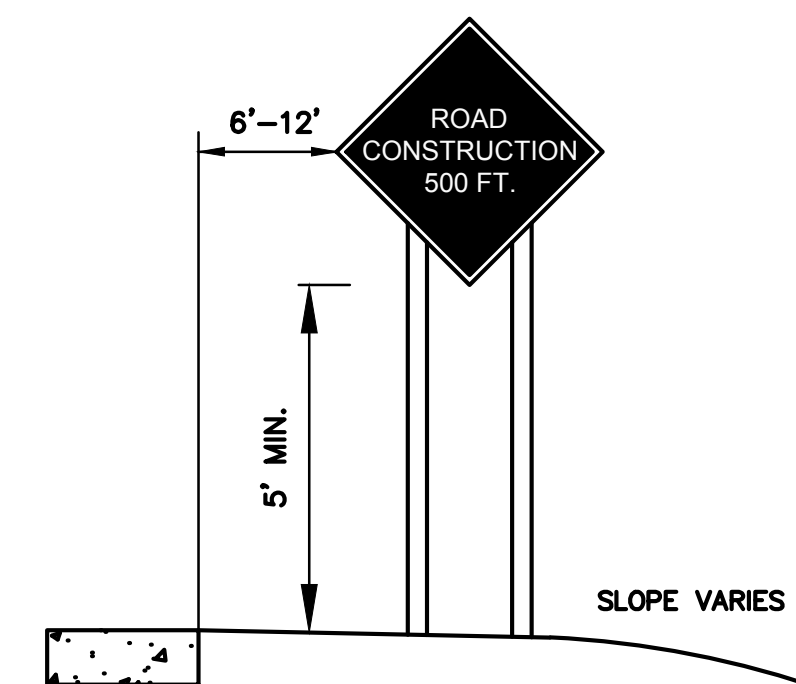


NOTES:

- TRAFFIC CONES SHALL BE DESIGNED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CHAPTER VI, SECTION 6C-3, CONE DESIGN.
- HEIGHT OF CONES SHALL BE 28"
- CONES SHALL BE PREDOMINANTLY FEDERAL ORANGE IN COLOR AND WITH RETROREFLECTIVE STRIPS.
- RUBBER CONES SHALL HAVE INTERIOR RIBS FOR RIGIDITY.
- PLASTIC CONES SHALL BE COLOR IMPREGNATED.
- CONES SHALL BE OF A THICKNESS NECESSARY TO WITHSTAND IMPACT WITHOUT DAMAGE TO EITHER CONE OR IMPACTING VEHICLE.
- THE ENGINEER RESERVES THE RIGHT TO REJECT ANY CONE THE ENGINEER DEEMS NOT SUITABLE FOR PURPOSE INTENDED.

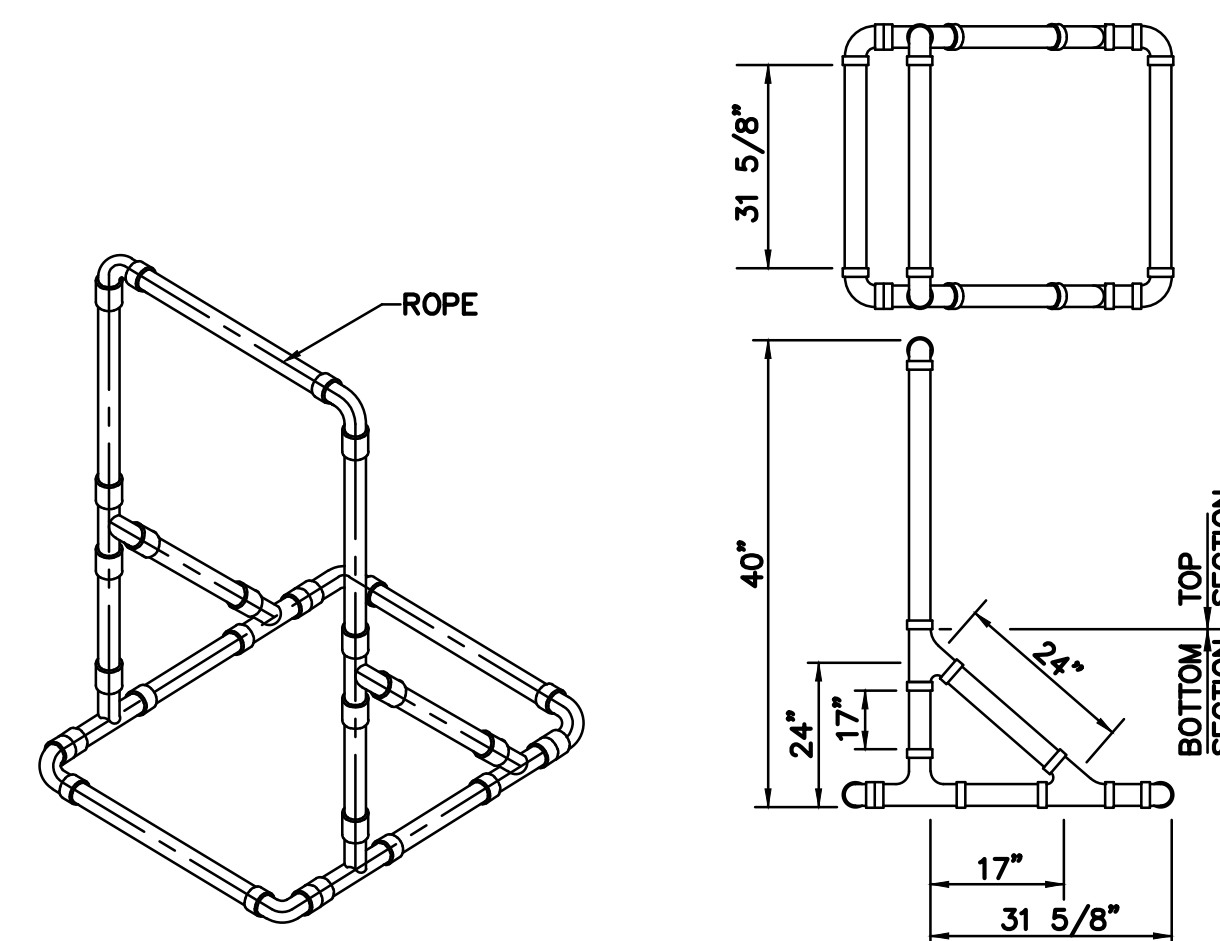
TRAFFIC CONES

N.T.S.



HEIGHT AND LATERAL LOCATIONS OF SIGNS

N.T.S.



NOTES:

- DIMENSIONS ARE APPROXIMATE.
- BOTTOM SECTION MAY BE FILLED WITH SAND FOR BALLAST.
- SUPPORT SHALL BE LOOSELY THREADED WITH ROPE, KNOTTED AS REQUIRED.

TYPICAL 3" OR 4" PLASTIC SIGN/BARRICADE SUPPORT

N.T.S.

TEMPORARY SIGNS

SIGN	WIDTH	HEIGHT
ROAD CONSTRUCTION 1000 FT.	W20-1a	48" 48"
ROAD CONSTRUCTION 500 FT.	W20-1b	48" 48"
ONE LANE ROAD 500 FT.	W20-4	48" 48"
END ROAD WORK	G20-2a	36" 18"
FLAGGER AHEAD	W20-7a	36" 36"
BE PREPARED TO STOP	W20-7b	36" 36"
ROAD CLOSED	R11-2	48" 30"
ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	R11-3a	60" 30"
ROAD CLOSED LOCAL TRAFFIC ONLY	R11-4	60" 30"
DETOUR	M4-10	48" 18"

(REFER TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION)

TRAFFIC CONTROL - GENERAL NOTES:

- DURING NON-WORKING HOURS, ALL TRENCHES ARE TO BE RESTORED AS SPECIFIED OR REQUIRED. ALL SIGNAGE SHALL BE REMOVED AND ALL ROADS OPENED TO NORMAL TRAFFIC FLOW.
- ALL TRAFFIC CONTROL TO MEET THE MUTCD (LATEST EDITION).
- CHANNELIZE TRAFFIC AS REQUIRED USING REFLECTORIZED DRUMS AND STEADY-BURN LIGHTS. RELOCATE DRUMS AS REQUIRED DURING CONSTRUCTION.
- PROVIDE POLICE PROTECTION OR MASSDOT CERTIFIED FLAGGERS TO DIRECT TRAFFIC AS REQUIRED.
- CONTRACTOR SHALL PROVIDE EMERGENCY VEHICLE ACCESS AT ALL TIMES.

Project:
 TOWN OF ERVING, MASSACHUSETTS
 SELECT BOARD
 BRIDGE STREET WALL
 REPLACEMENT
 AND MAPLE AVENUE ROADWAY
 IMPROVEMENTS PROJECT

Weston & Sampson
 Weston & Sampson Engineers, Inc.
 712 Brook Street, Suite 103
 Rocky Hill, CT 06067
 860.513.1473 800.SAMPSON
 www.westonandsampson.com

Consultants:

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Revisions:

No.	Date	Description

Seal:

COA:

Issued For:

SELECT BOARD MEETING
12-11-2023

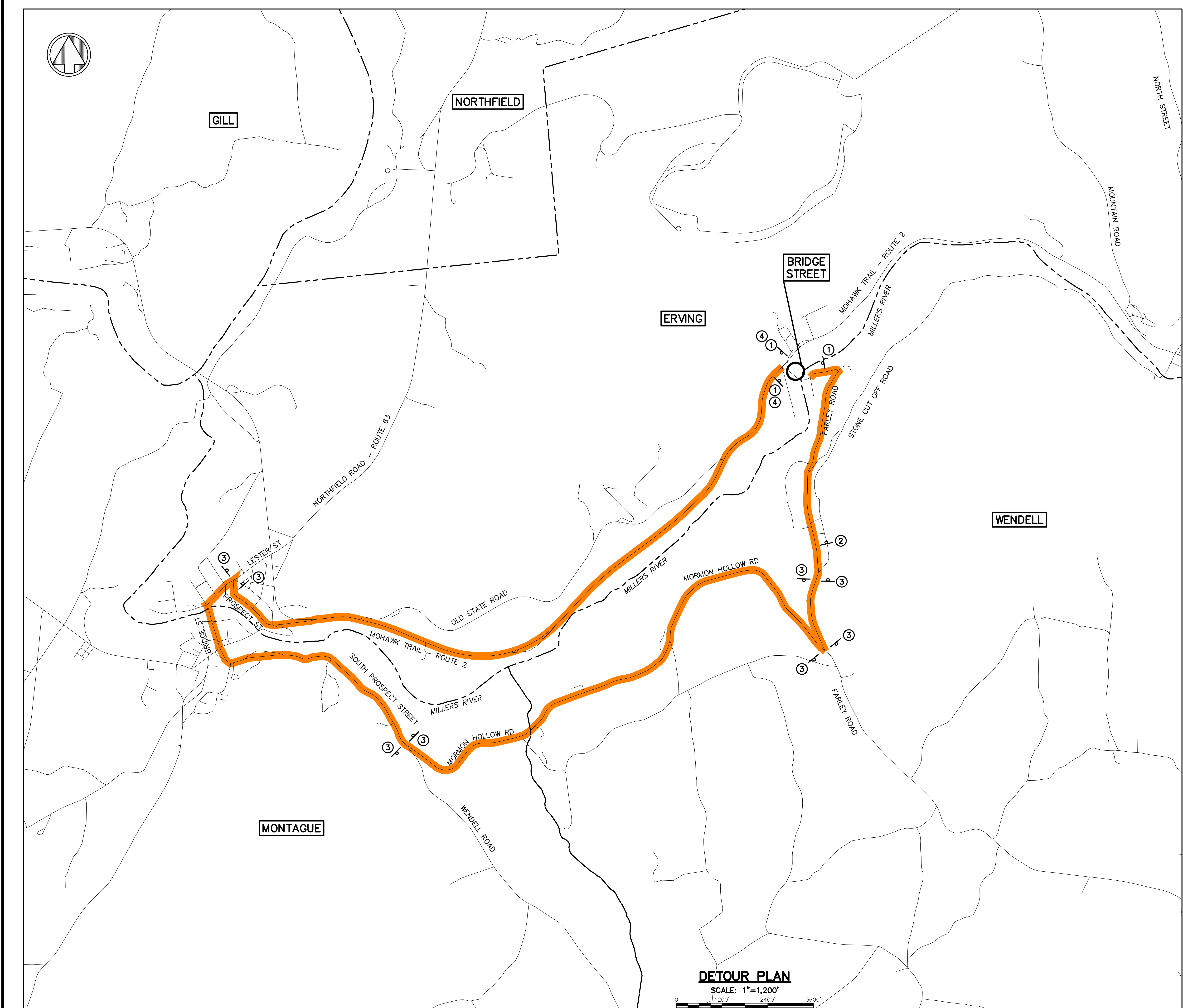
Scale: AS NOTED
 Date: JANUARY 2024
 Drawn By:
 Reviewed By: WGS
 Approved By: CBW
 W&S Project No.: ENG22-0635
 W&S File No.:

Drawing Title:

**CONSTRUCTION
 ZONE SAFETY PLAN**

Sheet Number:

C-504



DETOUR PLAN

SCALE: 1"=1,200'



DETOUR SIGNS

SIGN	WIDTH	HEIGHT
ROAD CLOSED	R11-2	48" 30"
ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY	R11-3a	60" 30"
ROAD CLOSED LOCAL TRAFFIC ONLY	R11-4	60" 30"
DETOUR	M4-10	48" 18"

- REFER TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
- SIGNAGE SHALL BE AS REQUIRED BY THE TOWN OF ERVING.

LEGEND

- ① R11-2 ROAD CLOSED
- ② R11-3a ROAD CLOSED XX MILES AHEAD
- ③ M4-10R (L) (R) DETOUR
- ④ "BRIDGE STREET"

Project:
TOWN OF ERVING, MASSACHUSETTS
SELECT BOARD

BRIDGE STREET WALL
REPLACEMENT
AND MAPLE AVENUE ROADWAY
IMPROVEMENTS PROJECT

Weston & Sampson
Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103
Rocky Hill, CT 06067
860.513.1473 800.SAMPSON
www.westonandsampson.com

Consultants:

No.	Date	Description

Revisions:

No.	Date	Description

Seal:

COA:

Issued For:
**SELECT BOARD MEETING
12-11-2023**

Scale: AS NOTED

Date: JANUARY 2024

Drawn By:

Reviewed By: WGS

Approved By: CBW

W&S Project No.: ENG22-0635
W&S File No.:

Drawing Title:
DETOUR PLAN

Sheet Number:
C-505

Planning: W&S/2023/0635/Bridge Street Wall Improvements/Erving/Erving Select Board Meeting
 CAD/Design: Sherrill King



westonandsampson.com

712 Brook Street, Suite 103
Rocky Hill, CT 06067
tel: 860-513-1473

CONTRACT
DOCUMENTS

January 2024

AWARDING AUTHORITY
TOWN OF

Erving

MASSACHUSETTS
12 Main Street
Erving, MA 01344

Bridge Street Wall
Replacement and Maple
Avenue Roadway
Improvement Project

For Review
12/10/2023 9:36:53 AM

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For Review
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For Review
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SECTION 00010

ADVERTISEMENT FOR BIDS

Town of Erving, Massachusetts

Sealed bids for construction of the Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project for the Town of Erving will be received at the office of the Town Administrator, Town Hall, 12 East Main Street, Erving, Massachusetts, 01344. until 10:00 a.m., prevailing time, on **MONTH DAY**, 2023, at which time said bids will be publicly opened and read aloud.

The Base Bid consists of four schedules of work. Schedule A scope of work includes construction of two catch basins, one drain manhole, one stormwater treatment system, 80 linear feet of 12" HDPE pipe, 840 square yards of milling and overlay, 550 square yards of roadway reconstruction, removal on an existing stone wall and installation of 1,550 square feet of segmental block retaining wall, surface restoration and associated work. Schedule B scope of work consists of 700 square yards of milling and overlay, 80 square yards of roadway reconstruction, surface restoration and associated work. Schedule C scope of work consists of **XXXX** square yards of milling and overlay, two precast concrete drywells, surface restoration and associated work. Schedule D scope of work includes construction of 830 square yards of roadway reconstruction, removal on an existing block wall and installation of 100 square feet of segmental block retaining wall, surface restoration and associated work.

The estimated project cost for the Base Bid is **\$XXX,000**.

Bid Security in the form of a bid bond, cash, certified check, treasurer's or cashier's check payable to the Owner, is required in the amount of five percent of the bid, in accordance with Section 00200, INSTRUCTIONS TO BIDDERS.

The Instructions to Bidders, Form of General Bid, Agreement, Plans, Specifications, Performance and Payment Bond, and other Contract Documents may be examined at the following locations during normal business hours:

Weston & Sampson Engineers, Inc., 712 Brook Street Suite 103, Rocky Hill, Connecticut 06067

Erving Town Hall, 12 East Main Street, Erving, Massachusetts 01344

Contract Documents may be viewed electronically at www.BidDocsOnline.com and hard copies requested at Nashoba Blue, Inc., 433 Main Street, Hudson, MA 01749 (978-568-1167). There is a refundable deposit of \$50.00 per set payable to BidDocs Online, Inc. Deposits may be electronically paid or must be a certified or cashier's check. Bidders requesting Contract Documents to be mailed to them shall include a separate check for \$40.00 per set for UPS Ground (or \$65.00 per set for UPS overnight), payable to the BidDocs Online, Inc., to cover mailing costs.

The award will be to the lowest, responsible, and eligible bidder. The selected contractor shall furnish a performance bond and a payment bond in an amount at least equal to one hundred percent (100%) of the contract price as stipulated in Section 00520, CONSTRUCTION CONTRACT, of these specifications.

All bids for these projects are subject to applicable bidding laws of Massachusetts, including General Laws Chapter 30, Section 39M as amended. Contracts for work under this Proposal will also obligate the Contractor and Subcontractors to comply with the applicable contractual provision and Federal, State and local provisions regarding insurances, labor, equal employment opportunity, anti-discrimination and affirmative action. Complete instructions for the filing of bids are included in the Instructions to Bidders.

Bidders on this project will be required to comply with all provisions of Executive Order No. 11246 (requirements for Affirmative Action and Equal Employment Opportunity), Massachusetts Wage Rates, Title VI of the Civil Rights Act of 1964, the Anti-Kickback Act, the Contract Work Hours Standards Act, Section 3, regulations promulgated under the Occupational Safety and Health Act of 1970, and other applicable laws.

By submission of a bid, the Bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 days, Saturdays, Sundays and legal holidays excluded after the opening of bids.

This project is subject to Title VI of Civil Rights Act of 1964, Section 3 of the Housing and Urban Development Act of 1968, and Equal Employment Opportunity.

The Owner reserves the right to waive any informalities in bids and to reject any or all bids, in whole or in part, if it is in the best interests of the Town.

TOWN OF ERVING, MASSACHUSETTS
12 East Main Street, Erving, MA 01344

Select Board

Jacob A. Smith, Chair
William A. Bembury
Scott Bastarache

Weston & Sampson Engineers, Inc.
Rocky Hill, Connecticut

SECTION 00200

INSTRUCTIONS TO BIDDERS

1. Receipt and Opening of Bids
2. Location and Work to be Done
3. Deposit on Documents
4. Preparation of Bid
5. Modification of Bids
6. Obligation of Bidder
7. Information not Guaranteed
8. Bid Security
9. Time for Completion
10. Addenda and Interpretations
11. Bid Opening Procedure
12. Comparison of Bids
13. Statutes Regulating Competitive Bidding
14. Right to Reject Bid
15. Ability and Experience of Bidder
16. Conditions of Work
17. Security for Faithful Performance
18. Power of Attorney
19. Laws and Regulations
20. Liquidated Damages for Failure to Enter into Contract
21. Indeterminate Items and Estimated Quantities
22. CONTRACTOR Records
23. Bidder Certification – OSHA Training
24. Prevailing Wage Rates
25. Guarantee
26. Price Adjustments

1. Receipt and Opening of Bids

The Town of Erving, Massachusetts, herein called the OWNER, acting by and through its Select Board will receive sealed Bids for the construction of the Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project.

Such bids addressed to the Town of Erving and endorsed "Bid for the Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project" will be received at the Erving Town Hall, 12 East Main Street, Erving, Massachusetts until **TIME a.m. on MONTH DAY 2, 2023** at which time and place said bids will be publicly opened and read aloud.

If the building at which bids are to be received is closed for any reason on the date and time that bids are due, receipt of bids by the Owner will be postponed until the next business day at the time originally stated for receipt of bids.

Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified will not be considered. By submission of a bid, the bidder agrees that this bid shall be good and may not be withdrawn for the number of days after the opening of bids, as stipulated in the FORM OF GENERAL BID.

2. Location and Work to be Done

The location, general characteristics, and principal details of the Work are indicated on a set of 10 drawings titled "Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project".

Additional drawings showing details in accordance with which the Work is to be done may be furnished by addendum from time to time during the bidding period by the ENGINEER, and shall then become a part of the Contract Documents.

The CONTRACTOR shall furnish all superintendence, labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to do all work required for the completion of each item of the Work and as herein specified.

The Work to be done and paid for under any item shall not be limited to the exact extent mentioned or described but shall include all incidental work necessary or customarily done for the completion of that item.

3. Deposit on Documents

A deposit, in the type and amount as specified in Section 00100, ADVERTISEMENT FOR BIDS, payable to BidDocs Online, Inc. will be required on each set of Contract Documents

taken. Such deposits will be refunded to all bidders and non-bidders upon the return of said documents in good condition within 30 days after the date of opening of general bids.

To ensure refund of the deposit, Contract Documents must be returned in accordance with BidDocs Online Inc. requirements and be accompanied by a letter of transmittal.

4. Preparation of Bid

Each bid must be submitted on the prescribed form in Section 00410. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, its address, and endorsed with the name of the project as specified in Receipt and Opening of Bids, above.

If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified in Receipt and Opening of Bids, above.

5. Modification of Bids

Any bidder may modify its bid by written communication at any time prior to the scheduled closing time for receipt of bids. Any telegraphic communication must be received by the OWNER prior to the closing time, and, provided further, for any telegraphic communication that modifies a bid the OWNER is satisfied that a written confirmation of the modification over the signature of the bidder was mailed prior to the closing time.

The modification communication shall not reveal the bid price but shall provide the addition or subtraction or other modification so that the final prices or terms will not be known by the OWNER until the sealed bid is opened. If written confirmation is not received within two days from the closing time, no consideration will be given to the facsimile transmission.

6. Obligation of Bidder

At the time of the opening of bids each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Contract Documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect of its bid.

7. Information not Guaranteed

All information given in the Contract Documents relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the OWNER. All such information is furnished only for the information and convenience of bidders and is not guaranteed.

It is agreed and understood that the OWNER does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures encountered during construction will be the same as those indicated in the Contract Documents.

It is further agreed and understood that no bidder or CONTRACTOR shall use or be entitled to use any of the information made available to it or obtained in any examination made by it in any manner as a basis of or grounds for any claim or demand against the OWNER or the ENGINEER, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other conditions, natural phenomena, existing pipes or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

8. Bid Security

Each bid must be accompanied by a certified check, a bid bond, cash, a treasurer's or cashier's check, payable to the OWNER, in the amount stated in Section 00100, ADVERTISEMENT FOR BIDS. Such deposits will be returned to all except the three lowest responsible and eligible bidders within five days, Saturdays, Sundays, and legal holidays excluded, after the opening of bids, and the remaining deposits will be returned promptly after the OWNER and the accepted bidder have executed the Contract, or if no notice of intent to award has been presented to any bidder within 30 days, Saturdays, Sundays and legal holidays excluded, after the date of the opening of bids, upon demand of the bidder at any time thereafter.

9. Time for Completion

The successful general bidder must agree to commence work on or before a date to be specified in the written "Notice to Proceed" from the OWNER and to fully complete the project within the time limit stated in Section 00410, FORM OF GENERAL BID.

10. Addenda and Interpretations

No interpretation of the meaning of the plans, specifications or other prebid documents will be made to any bidder orally, and if provided orally, shall not be relied upon by bidders unless confirmed in a written addendum. All information given to bidders other than by means of the plans, specifications, or by addenda, as described below, is given informally and shall not be used as the basis of a claim against the OWNER or the ENGINEER.

Every request for such interpretation should be sent via email to storiw@wseinc.com and to be given consideration must be received at least five working days prior to the date fixed for the opening of bids.

Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, when issued will be emailed to all prospective

bidders to email addresses furnished by them for such purposes. Bidders picking up sets of bid documents will be given all addenda issued to date and will be required to sign for all documents, acknowledging receipt. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under its bid as submitted. All addenda so issued shall become part of the Contract Documents.

Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, when issued, may be viewed and downloaded as a Portable Document File (PDF) at biddocsonline.com. A notification of addenda will be emailed to all prospective bidders to email addresses furnished by them for such purposes. Bidders picking up sets of bid documents will be given all addenda issued to date and will be required to sign for all documents, acknowledging receipt. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under its bid as submitted, and each bidder must confirm for itself that it has received all addenda. All addenda so issued shall become part of the Contract Documents.

11. Bid Opening Procedure

The following list of requirements shall be met by each filed bid.

Bids shall be filed at the place and before the time specified in Receipt and Opening of Bids, above.

The bid and all accompanying documents so required shall be signed by the Bidder or its authorized representative before submission.

All bidders shall include with their bids written acknowledgment of receipt of all addenda. Refer to acknowledgment form provided in Section 00410, FORM OF GENERAL BID.

12. Comparison of Bids

Bids will be compared on the basis of the quantities and unit and lump sum prices stated in the bid forms.

In the event that there is a discrepancy in Section 00410, FORM OF GENERAL BID between the lump sum or unit prices written in words and figures, the prices written in words will govern.

The OWNER agrees to examine and consider each FORM OF GENERAL BID submitted in accordance with the terms and conditions set forth herein and as set forth in Section 00410, FORM OF GENERAL BID.

13. Statutes Regulating Competitive Bidding

Any bid, which does not comply with the provisions of Massachusetts General Laws Chapter 30, Section 39M as amended, need not be accepted and the OWNER may reject

every such bid.

14. Right to Reject Bid

The OWNER may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids, should the OWNER deem it to be in the public interest to do so.

The OWNER may also reject bids which in its sole judgment are either incomplete, conditional, obscure or not responsive or which contain additions not called for, erasures not properly initialed, alterations, or similar irregularities, and may reject bids for any other reason permitted by law, or the OWNER may waive such omissions, conditions or irregularities.

15. Ability and Experience of Bidder

No award will be made to any bidder who cannot satisfy the OWNER that it has sufficient ability and experience in this class of work and sufficient capital and plant to enable it to prosecute and complete the work successfully within the time named. The OWNER's decision or judgment on these matters will be final, conclusive, and binding to the fullest extent permitted by law.

The OWNER may make such investigations as it deems necessary, and the bidder shall furnish to the OWNER, under oath if so required, all such information and data for this purpose as the OWNER may request.

16. Conditions of Work

Each bidder must inform itself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of its obligation to furnish all material and labor necessary to carry out the provisions of its contract. Insofar as possible the CONTRACTOR, in carrying out its work, must employ such methods or means as will not cause any interruption of or interference with the work of any other contractor.

17. Security for Faithful Performance

Simultaneously with its delivery of the executed Contract, the CONTRACTOR shall furnish a surety bond or bonds as security for faithful performance of this Contract and for the payment of all persons performing labor and materials under this Contract as specified in Section 00700, GENERAL CONDITIONS included herein, each in the amount of 100 percent of its bid. The surety on such bond or bonds shall be a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the OWNER. The bonds shall remain in force for one year after final acceptance of the work by the OWNER, unless the OWNER, in writing, releases the CONTRACTOR from the obligation sooner.

18. Power of Attorney

Attorneys-in-fact who sign Contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

19. Laws and Regulations

Applicable provisions of Massachusetts General Laws and Regulations and/or the United States Code and Code of Federal Regulations govern this Contract and any provision in violation of the foregoing shall be deemed null, void and of no effect. Where a conflict between Federal and State Laws and Regulations exists, the more stringent requirement shall apply.

The bidder's attention is directed to the fact that all applicable State laws, municipal ordinances or bylaws, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract the same as though herein written out in full.

Attention is directed to Section 00830 STATE REGULATIONS and to other applicable sections of this specification. In the event of any conflict between provisions of law or regulation quoted or paraphrased in the Contract Documents, the actual provisions of law or regulation shall control.

20. Liquidated Damages for Failure to Enter into Contract

The successful bidder, upon its failure or refusal to execute and deliver the Contract, Bonds and Certificates of Insurance required within 10 days after receipt of notice of the acceptance of the bid, shall, except as otherwise provided by applicable law, forfeit to the OWNER, as liquidated damages for such failure or refusal, the security deposited with its bid, provided that the amount forfeited shall not exceed the difference between its bid price and the bid price of the next lowest responsible and eligible bidder. In case of death, disability, bonafide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the bidder, its bid deposit will be returned.

21. Indeterminate Items and Estimated Quantities

The work to be done under this Contract has been divided into parts or items, if applicable, to enable each bidder to bid on different portions of the work in accordance with its estimate of their cost and so that the actual quantity of work executed under each item may be paid for at the price bid for that particular item, even though each bidder may have judged that such quantity may be greater or less than the estimated quantity stated in Section 00410, FORM OF GENERAL BID.

22. CONTRACTOR Records

The CONTRACTOR shall comply with the provisions of Massachusetts General Laws, Chapter 30, Section 39R, concerning CONTRACTOR records. This section has been reprinted in Section 00830, STATE REGULATIONS.

23. Bidder Certification – OSHA Training

All employees who work on Massachusetts public works construction sites, on projects estimated to cost more than \$10,000, must have no less than ten (10) hours of OSHA-approved safety and health training.

The Massachusetts Attorney General is authorized to restrain award of construction contracts to any contractor who is in violation of this requirement and to restrain the performance of these contracts by non-complying contractors.

Noncompliance with this law will disqualify contractors from bidding on public contracts.

24. Prevailing Wage Rates

Prevailing Wage Rates as determined by the Director of the Executive Office of Labor and Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H, as amended, apply to this project. It is the responsibility of the bidder, before bid opening, to request, if necessary, any additional information on Prevailing Wage Rates for those trades people who may be employed for the proposed work under this contract.

The Contractor is responsible for requesting up to date wage rates from the Owner prior to the one-year anniversary of the notice to proceed of this contract. The Owner shall obtain updated wage rates from the Director and provide them to the Contractor upon said request.

Applicable provisions of Massachusetts General Laws and Regulations and/or the United States Code and Code of Federal Regulations govern this Contract and any provision in violation of the foregoing shall be deemed null, void and of no effect. Where conflict between the Code of Federal Regulations and State Laws and Regulations exist, the more stringent requirement shall apply.

Federal Wage Rates as determined by the United States Department of Labor under the Davis-Bacon Act also apply to this project. See also specific contract provisions to be met in Section 00810.

25. Guarantee

The Contractor shall guarantee that the Work and Services to be performed under the Contract, and all workmanship, materials and equipment performed, furnished, used or installed in the construction of the same shall be free from defects and flaws, and shall be

performed and furnished in strict accordance with the Drawings, Specifications, and other contract documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the contract shall be fulfilled. This guarantee shall be for a period of one year from and after the date of completion and acceptance of the Work as stated in the final estimate. If part of the Work is accepted in accordance with that subsection of this AGREEMENT titled “Partial Acceptance”, the guarantee for that part of the Work shall be for a period of one year from the date fixed for such acceptance.

26. Price Adjustments

This Contract is subject to the provisions for material price adjustments in accordance with Chapter 30, Section 38A of the Massachusetts General Laws.

END OF SECTION

P:\MA\Erving, MA\ENG22-0635 Bridge Street Wall Replacement\4 Working Documents\4.2 Specifications\Div 0\00200 Instructions to Bidders.docx

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SECTION 00320

SUBSURFACE DATA

PART I - GENERAL

1.01 SCOPE:

- A. A subsurface exploration program consisting of borings has been performed, with reasonable care. The results of the exploration program, appended hereto and are a part of the Contract Documents, include the Geotechnical Report.

Samples of the materials encountered may be seen upon request during the bidding period only at the office of Weston & Sampson Engineers, Inc., 55 Walkers Brook Drive, Reading, MA 01867 . If Contractors deem the subsurface information insufficient, they may, after obtaining Owner's permission, carry out additional subsurface explorations, at no expense to the Owner.

- B. The attached geotechnical engineering report is provided for informational purposes only. The Contractor shall not rely on the interpretations, opinions, conclusions or recommendations included in the report, only the factual data relative to the specific times, locations, and depths/elevations referenced in the report. Specific project requirements are referenced only in the drawings and specifications.
- C. Subsurface information provided in the Contract Documents is limited by the methods used for obtaining and expressing such data, and is subject to various interpretations. The terms used to describe soils, rock, groundwater and such other conditions are subject to local usage and individual interpretation.
- D. Borings have been drilled substantially at the locations indicated on the drawings and advanced to the depths shown on the logs. Soil information presented in the boring logs, as to classification, gradation, properties, density and consistency, is based on visual observation of recovered samples. Groundwater levels reported on the boring logs are those measured in the field at the particular location and at the time measurements were made, and do not necessarily represent permanent groundwater elevations. Groundwater elevations may be affected by temperature, rainfall, tidal fluctuation, and other factors that may not have been present at the time the measurements were made. The Contractors should be aware that groundwater level fluctuations may affect methods of construction.
- E. Subsurface exploration, soil and rock data are for the general information of the Contractors. The Contractors are obligated to examine the site, review boring and test pit logs, all available information and records of explorations, investigations and other pertinent data for the site, and then based upon their own interpretations and investigations decide the character of material to be encountered and excavated, the suitability of the materials to be used for backfilling and such other purposes, the groundwater conditions, difficulties or obstacles likely to be encountered, and other conditions affecting the work. The subsurface data is accurate only at the particular locations and times the subsurface

explorations were made. No other warranty either expressed or implied by the Owner, Engineer or their agents is made as to the accuracy of the subsurface information and data shown on the drawings or presented in the Contract Documents.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

P:\MA\Erving, MA\ENG22-0635 Bridge Street Wall Replacement\4 Working Documents\4.2 Specifications\Div 0\00320 Subsurface Data.docx

For Review
12/10/2023 9:36:55 AM

Bridge Street Retaining Wall Reconstruction
Erving, Massachusetts
Weston & Sampson Project No. ENG22-0635

October 17, 2022

Town of Erving
c/o Mr. Bill Storti
Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103
Rocky Hill, CT 06067

RE: Geotechnical Engineering Report
Bridge Street Retaining Wall Reconstruction
Erving, Massachusetts

INTRODUCTION

Weston & Sampson Engineers, Inc. (Weston & Sampson) is pleased to present this geotechnical engineering report for the proposed reconstruction of an existing stone masonry retaining wall along Bridge Street in Erving, Massachusetts. The general project area is shown in **Figure 1 – Site Locus**. This geotechnical report describes the results of the subsurface explorations and provides geotechnical recommendations for design and construction of the proposed retaining wall reconstruction.

We have prepared this report for use by the Town of Erving and the design and construction teams for this project and this site only. For information on the use of this report, please refer to the **Limitations** section of this report and the document “Important Information about this Geotechnical Engineering Report” by the Geoprofessional Business Association, Inc. (GBA), included in **Attachment D**.

EXISTING CONDITIONS

The existing stone masonry wall is approximately 180 feet long, and retains grades along the east side of Bridge Street and along the south side of a portion of Route 2 (Mohawk Trail) in Erving, Massachusetts, as shown in **Figure 2 – Site Plan**. Retained soil heights are approximately 3.5 feet at the southern end of the wall and increase to approximately 16 feet at the northern end. The dimensions and type of foundations supporting the existing retaining wall are unknown.

A town-owned wastewater treatment facility is located east of the retaining wall along Bridge Street, and includes several below grade treatment filters and associated piping. We understand there are no existing underground utilities located behind the retaining wall along Bridge Street. A reinforced concrete stormwater discharge pipe penetrates through the northern portion of the wall from Route 2.

The existing retaining wall is in disrepair and the majority of the wall is no longer in a serviceable condition. We understand that stormwater runoff is currently directed to the east side of Bridge Street, where it is believed to collect behind the existing retaining wall causing depressions and minor surficial settlement to develop behind the top of wall. In addition, there is moderate transverse and longitudinal cracking of the roadway pavement.

Surface grades behind the retaining wall range from approximately Elevation (El.) 414 to El. 424 and generally increase from south to north along Bridge Street. Grades in front of the wall are relatively level and range from approximately El. 402 to El. 404 in the wastewater treatment fields and increase in grade to about El. 410 at the base of wall. Elevations described herein are in feet reference the North American Vertical Datum of 1988 (NAVD88).

PROPOSED CONDITIONS

An approximately 150-foot-long portion of existing retaining wall along Bridge Street will be removed and replaced. The limits of the retaining wall reconstruction are shown on **Figure 2** and in the preliminary design plans prepared by Weston & Sampson and included in **Attachment A**. The northern portion of the existing stone masonry wall will remain in place along Route 2. The height of the proposed new retaining wall will approximately match the existing wall and range from about 3.5 to 16 feet. A 4-foot-tall chain link fence will be installed along the top of the wall.

In addition to the retaining wall reconstruction, surficial drainage improvements (e.g., drainage swales, etc.) are anticipated as part of the proposed project. We assume the current roadway alignment and grades will be essentially maintained and installation of new subsurface utilities will not be completed as part of this project except for shallow subsurface drainage utilities.

We understand the existing wastewater treatment facility cannot be disturbed as part of proposed construction. Therefore, we understand that work can only take place from Bridge Street, and closure of the roadway will likely be required to construct the new retaining wall. We also understand that Route 2 will need remain open to traffic for the duration of construction.

SUBSURFACE CONDITIONS

Geologic Setting

Based on information available from the Massachusetts Bureau of Geographic Information (MassGIS), mapped surficial geology conditions at the site consist of sand and gravel extending to depths of up to about 50 feet. Bedrock at the site is mapped by the United States Geological Survey (USGS) as biotite gneiss of the Mount Mineral Formation.

Subsurface Explorations

Subsurface conditions at the site were explored by completing four geotechnical borings (B-1 through B-4) on August 17 and 18, 2022. Approximate exploration locations are shown in **Figure 2 – Site Plan**.

The borings were completed by Seaboard Drilling, Inc. of Chicopee, MA using a truck-mounted drill rig and hollow-stem auger drilling methods to depths ranging between approximately 36 to 41 feet. In boring B-2, shallow drilling refusal was encountered at a depth of about 6 feet and the boring was offset to location B-2A and redrilled to its planned termination depth. Standard penetration tests (SPTs) were conducted at 2 to 5-foot intervals in general accordance with ASTM D1586.

Weston & Sampson geotechnical engineering representatives observed the borings and prepared logs for each exploration. The boring logs and a Guide to Subsurface Exploration Logs are included in **Attachment B**. Subsurface conditions encountered in the explorations are described in the following sections .

Subsurface Conditions

Subsurface conditions encountered in the explorations were generally consistent with the mapped surficial geology with the exception of a clay layer that was encountered in B-3 and B-4 as described below. The subsurface conditions for each site are described in the following sections. The general Unified Soil Classification System (USCS) designation for each stratum is included in the descriptions below in parentheses.

Subsurface conditions described below have been interpreted based on a limited number of explorations that were observed by Weston & Sampson. Variations may occur and should be expected between locations. The strata boundaries shown in our boring logs are based on our interpretations and the actual transitions may be gradual. Refer to the exploration logs for detailed descriptions of the soil samples collected.

Surface Conditions – Each boring encountered 2 to 6 inches of asphalt concrete (AC) pavement at the ground surface.

Fill - Loose to medium dense undocumented fill was encountered below the AC pavement in all borings and extended to depths ranging from approximately 2 to 10 feet. The fill typically consisted of brown to orange-brown, fine to coarse sand with few to some gravel and few to some silt (SM, SP-SM, or SW-SM). Within the fill layer, auger grinding was observed within the fill in several borings possibly indicating the presence of cobbles and/or boulders. Boring B-2 terminated within the fill at a depth of 6 feet due to refusal on a possible boulder obstruction.

Sand - Loose to very dense native sand was encountered below the fill in all borings except B-2. The sand typically consisted of brown to gray, fine to coarse SAND with few to some silt and few to some gravel (SM or SW-SM). Auger grinding was observed within this stratum in borings B-1, B-3, and B-4, possibly indicating the presence of cobbles and/or boulders. Borings B-1 and B-2A each terminated within the sand at a depth of approximately 41 feet (corresponding to El. 383.5 and El. 379, respectively). The sand extended to approximate depths of 29 feet in boring B-3 and 13 feet in boring B-4 (corresponding to El. 395.5 and El. 389, respectively), and was underlain by clay as described below.

Clay – Stiff to hard clay with trace to little sand (CL) was encountered below the sand in borings B-3 and B-4. The clay extended to the bottom of the boring at a depth of 41 feet (El. 373.5) in B-3. The clay extended to a depth of 35 feet (El. 367) in B-4, and was underlain by a layer of well-graded sand with few silt (SW-SM) which extended to the bottom of the boring at a depth of 36 feet.

Groundwater – Groundwater was observed at the end of drilling in B-1 and B-4 at depths of approximately 33.5 and 16 feet (corresponding to approximately El. 386 and El. 391) respectively. In B-3, groundwater was encountered at a depth of approximately 24 feet (El. 389) based on wet soil samples obtained during drilling.

Groundwater levels should be expected to fluctuate with season, variations in precipitation, construction in the area, and other factors. Perched groundwater conditions could exist close to the ground surface or within the existing fill, especially during and after extended periods of wet weather.

Geotechnical Laboratory Testing

Select soil samples obtained during the explorations were submitted for geotechnical laboratory testing to determine particle size distributions (ASTM D6913) and Atterberg Limits (ASTM D4318). Laboratory testing was performed by Thielsch Engineering of Cranston, Rhode Island. The laboratory test results are incorporated into our boring logs, and included as **Attachment C**.

GEOTECHNICAL DESIGN RECOMMENDATIONS

General

Geotechnical considerations for the proposed retaining wall reconstruction include the presence of existing undocumented (non-engineered) fill, global stability of the proposed retaining wall, and need for temporary excavation support. Discussion of these considerations as well as geotechnical recommendations for design and construction of the proposed retaining wall are provided in the following sections.

Existing Fill

Existing (non-engineered) fill was observed in all borings to depths up to about 10 feet, and deeper fill depths should be expected adjacent to the existing stone masonry wall. Non-engineered fill is not suitable for foundation support of the proposed retaining wall due to the risk of differential settlement. Existing fill should be removed within the zone-of-influence (ZOI) below the wall. The ZOI is defined by planes extending horizontally away from the bottom edges of structures two feet laterally in all directions and then down and away at 1H:1V (horizontal:vertical) slopes to the intersection with suitable, native soils. The resulting excavation should be backfilled with compacted Structural Fill.

Retaining Wall Stability Assessment

Based on conversations with the design team, we understand a segmental retaining wall (SRW) is the preferred wall alternative for the site due to the generally low construction cost compared with a driven or drilled wall system. SRWs consist of pre-manufactured stacked masonry blocks placed on a leveling pad of crushed stone. Depending on proposed wall heights and site grading, SRWs may require geogrid reinforcement within the wall backfill. Reinforcement lengths vary but are typically about 80 percent of the wall height.

We performed preliminary global stability analyses to evaluate potential SRW configuration at the Site. Our analyses indicate that the base of the new SRW may need to be embedded a minimum of 4 feet below final grades and require the installation of geogrid reinforcement to meet minimum required factors of safety. Mass excavation will be required to construct the wall and install reinforced backfill. The existing soils behind the reinforced zone will need to be shored, benched, or sloped during construction in accordance with OSHA requirements.

Based on our assessment, we anticipate it is feasible to construct the SRW within an open cut along Bridge Street for wall heights up to about 12 feet. However, near the northern portion of the wall where wall heights exceed 12 feet, temporary excavation support would be required along Route 2 to allow for installation of the wall and geogrid reinforcement. In this area, we recommend an alternative retaining wall system such as drilled soldier pile and lagging be considered. Due to the presence of the Town wastewater treatment facility to the east of Bridge Street, construction access is expected to be limited.

Retaining Wall Design Recommendations

Design recommendations for SRWs are provided in this section. We should be contacted to provide recommendations for alternate wall types, such as drilled soldier pile and lagging walls, if selected for use at the Site.

SRWs supporting the roadway should be designed by a Civil Engineer, registered in the Commonwealth of Massachusetts, and hired by the contractor. The retaining wall should be designed to resist lateral pressures exerted by soil, water, temporary construction loads, seismic loading, and adjacent traffic as appropriate. Design of the retaining wall should include an assessment of settlement, bearing capacity, sliding, overturning, and internal stability in accordance with Section 11.6 of the AASHTO LRFD Bridge Design Specifications (AASHTO). Overall global stability should also be evaluated by the wall designer based on the subsurface soil and groundwater conditions provided herein for their proprietary wall system using minimum factors of safety as required by AASHTO. The overall stability analysis should account for a minimum of 2 feet of over excavation in front of the walls. Minimum recommended wall design requirements are provided in the following sections.

Wall Foundation

SRWs can be supported on a minimum 12-inch-thick leveling pad of compacted angular crushed stone overlying medium dense (or denser) native sand, or on Structural Fill placed above native

soils following removal of existing fill. The crushed stone leveling pad should extend at least 12 inches horizontally past the edges of the bottom blocks, or as recommended by the block manufacturer. The bottom of the crushed stone layer should be at least 2 feet below the lowest adjacent grade along the toe of the wall.

Lateral Pressures

The retaining walls should be designed to resist lateral pressures exerted by soil, water, seismic, temporary construction loads, and any additional surcharge loads including sloped backfill and adjacent traffic as appropriate.

The lateral earth pressures used for wall design should be in accordance with the latest edition of AASHTO Section 3.11.5.1 using active earth pressure coefficients based on a soil internal friction angle of 34 degrees, a total unit weight of soil of 125 pounds per cubic foot (pcf) for Structural Fill backfill compacted as described herein. An interface friction angle of 25 degrees can be used for soil against formed concrete. A buoyant unit weight of soil of 62.6 pcf can be assumed for soils below the water table. Additional lateral pressures due to vehicular traffic surcharge loads should be applied as required by AASHTO Table 3.11.6.4.2. Wall rotation associated with development of active pressures is expected to be approximately 1 percent of the expected wall height.

We recommend that passive pressures acting on the base of the wall be ignored due to the possibility of future removal of toe material. Driving forces acting on the wall can be resisted by friction along the base of the wall footing using a friction coefficient of 0.45 for blocks bearing on crushed stone placed over native sand at the site.

Soil Reinforcement

The minimum soil reinforcement length will be determined based on the results of internal and external stability analyses but, if required, should be at least 70 percent of the wall height at the elevation of the reinforcement as measured from the leveling pad.

In general, utilities, and foundations for the support of guardrails or sign structures should not be located within the zone of reinforcement for the retaining walls. Installation and/or maintenance of utilities would disrupt the wall reinforcement. In locations where it is unavoidable, the retaining wall designer should include means to accommodate the utility or structure (e.g., sleeves, design modifications, etc.).

Backfill and Drainage

All retaining walls should include drainage behind the wall unless designed to resist hydrostatic pressures. A retaining wall drain should consist of a minimum 12-inch wide (horizontal measure) zone of crushed, free-drainage gravel with less than five-percent fines (such as washed crushed stone) with the stone fully encased with a non-woven filter fabric. Weep holes are recommended to

assist with drainage of water from behind the wall. We recommend that weep holes be spaced approximately 10 feet on center.

Behind the drainage zone, retaining walls should be backfilled with clean, imported, granular soil with less than 10 percent fines. The SRW designer should provide specific backfill placement and compaction requirements as part of their submitted wall design. Retaining structures typically rotate and displace up to 1 percent of the wall height during development of active pressures behind the wall. We therefore recommend that construction of improvements adjacent to the top of walls be delayed until approximately two weeks after wall construction and backfill.

Stormwater runoff from Route 2 and Bridge Street should be collected and diverted away from the retaining wall areas to prevent erosion and to reduce the potential of elevated water pressures developing behind the wall.

Seismic Design

Seismic design for the proposed retaining wall should be in accordance with Section 11.6.5 of the AASHTO LRFD Bridge Design Specifications. Based on the data from the borings conducted at the site, the subsurface profile is representative of Site Class D. We recommend the following seismic design parameters for the site:

Parameter	Value
Peak ground acceleration, PGA	0.061g
Short-period spectral acceleration, S_s	0.135g
Long-period spectral acceleration, S_l	0.04g
Spectral acceleration coefficient, A_s	0.097g
Short period acceleration coefficient, S_{DS}	0.216g
1-sec period acceleration coefficient, S_{D1}	0.097g

Based on the soil and groundwater conditions encountered at and below foundation bearing elevations, we anticipate the existing subsurface soils are not susceptible to liquefaction.

CONSTRUCTION RECOMMENDATIONS

General Earthwork Considerations

Based on our understanding of proposed conditions, excavation will be required for subgrade preparation, and backfilling will be required for fill placement as retaining wall backfill. Excavations may encounter AC pavement, fill and native soils. Cobbles and boulders should be anticipated to be encountered in the existing fill and native soils.

Depending on the lateral extents of retaining wall reconstruction and the ability to close Bridge Street during construction, excavation support systems may be required and should be the

responsibility of the Contractor and designed by a Professional Engineer licensed in the Commonwealth of Massachusetts. All excavations should be made in accordance with applicable OSHA and local safety regulations.

Site Preparation

Prior to earthwork construction, the Site should be prepared by removing all AC pavement, vegetation, and utilities scheduled for removal or replacement from the proposed construction areas. Utilities, if any, to remain in place should be adequately supported during construction and care should be taken not to cause damage. Existing utilities within and adjacent to the site should be monitored by the Contractor for horizontal and vertical movement throughout construction using survey methods as required by the contract documents. Excavations required for site preparation should be sloped back flatter than 1.5H:1V to allow proper compaction of the interface between existing soil and new fill.

Excavation Considerations

Excavations up to about 20 feet below street grade will be required for site preparation, removal of the existing wall, and installation of the new SRW. Due to the proximity of Bridge Street and Route 2, excavations greater than about 4 feet are expected to either require complete road closures during construction or require temporary excavation support. All excavations should comply with applicable local, state, and federal safety regulations. Excavation safety is the responsibility of the Contractor who is in the best position to choose a system that fits the overall plan of operation. Excavation support systems, if necessary, should be designed by a Professional Engineer licensed in the Commonwealth of Massachusetts, hired by the contractor. Stockpiled (excavated) materials should be placed no closer than a distance equal to the depth of the excavation or 4 feet from the edge of an excavation, whichever is greater.

Groundwater and surface water should be controlled during construction and prevented from eroding slopes and disturbing excavation and subgrade materials. Groundwater was observed at approximately El. 386 to El. 391 in our explorations, which is below the anticipated maximum excavation depths for the project. Dewatering of some excavations may be necessary due to perched water, or surface water following precipitation events. We anticipate dewatering of excavations can be accomplished using sump pumps and drainage ditches. Local sump pumps should be surrounded by ¾-inch crushed stone wrapped in non-woven filter fabric to reduce migration of fines. Dewatering efforts must satisfy requirements of local, state and federal environmental and conservation authorities.

Subgrade Preparation and Protection

Once excavations have reached subgrade elevations for the wall, Weston & Sampson should be contacted to evaluate the exposed subgrade. Areas of unsuitable soils including existing fill and as determined by the geotechnical engineer should be removed and replaced with properly compacted Structural Fill (as defined below). Removal of unsuitable soils should extend within the

entire ZOI below the wall. Suitable granular subgrades should be compacted with at least 4 passes of a minimum 12-ton vibratory roller compactor prior to placement of the crushed stone leveling pad or wall backfill.

Soils with more than trace amounts of fines (i.e., silt and clay) are highly susceptible to softening and disturbance by construction activity during wet or freezing weather. Subgrade protection is the responsibility of the contractor and special precautions and protective measures appropriate for the weather and traffic conditions during construction should be used during earthwork and foundation construction to preserve the integrity of subgrades. A few inches of crushed stone can be placed and compacted at the base of footing excavations to protect subgrades from disturbance during construction and wet weather conditions. If wall construction occurs during freezing conditions, insulating blankets, heaters, or other suitable measures should be employed to prevent foundation subgrades from freezing until the foundations are backfilled sufficiently to prevent frost from reaching the footing subgrades.

Fill

Imported, well-graded sand and gravel fill with less than approximately 10 percent fines (such as MassDOT M1.03.0-type B Gravel Borrow or M2.01.7 Dense Graded Crushed Stone) or crushed stone (such as MassDOT M2.01.0) is recommended for use as Structural Fill. On-site materials meeting the gradation requirements for the aforementioned MassDOT materials and free of organics, contamination (including metals, VOCs, SVOCs, etc.), and other deleterious materials may be acceptable for use as Structural Fill if laboratory test results indicating the existing site soils meet the project specifications are obtained by the Contractor and approved by the geotechnical engineer.

Crushed stone should be used for drainage behind the retaining wall. Crushed stone may also be used as Structural Fill in wet areas below foundations if fully wrapped in a non-woven filter fabric (such as Mirafi 160N or equivalent). Crushed stone shall consist of uniformly blended, durable crushed rock or durable crushed gravel stone, free from ice and snow, sand, clay, loam, or other deleterious or organic material and meet the specification of MassDOT M2.01.1. Crushed stone should be placed and compacted until dense and well-keyed. Areas contaminated with fines or debris should be removed and replaced with clean stone.

LIMITATIONS

We have prepared this report for use by the Town of Erving and the design and construction teams for this project and site only. The information herein can be used for bidding or estimating purposes but should not be construed as a warranty of subsurface conditions. We have made observations only at the aforementioned locations and only to the stated depths. These observations do not reflect soil types, strata thicknesses, water levels or seepage that may exist between observations. For important information on the use of this report, please refer to **Attachment D** for the document titled "*Important Information about This Geotechnical-Engineering Report.*"

We should be retained to observe site preparation, subgrade preparation, and fill placement and compaction. Earthwork observation and quality control testing of fill and backfill densities is critical throughout construction. We should also be retained to review final design and specifications to see that our recommendations are suitably followed. If any changes are made to the anticipated locations, grading, configurations, or construction timing, our recommendations may not be applicable, and we should be consulted. We should also review Contractor prepared submittals for temporary excavation support, if required.

The preceding recommendations should be considered preliminary, as actual soil conditions may vary. For our recommendations to be final, we should be retained to observe actual subsurface conditions encountered. Our observations will allow us to interpret actual conditions and adapt our recommendations if needed.

Within the limitations of scope, schedule and budget, this geotechnical report has been completed in accordance with the generally accepted practices in this area at the time this report was prepared. No warranty, expressed or implied, is given.

It has been a pleasure assisting you with this project and we look forward to our continued involvement. Please call if you have any questions.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Stefanie Bridges

Stefanie Bridges, PE
Geotechnical Project Manager

Stephen Spink

Stephen Spink, PE
Geotechnical Team Leader

Attachments:

- Figures
- Attachment A – Preliminary Design Plans
- Attachment B – Boring Logs
- Attachment C – Geotechnical Laboratory Test Results
- Attachment D – Important Information about This Geotechnical-Engineering Report

STS:SJB

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FIGURES

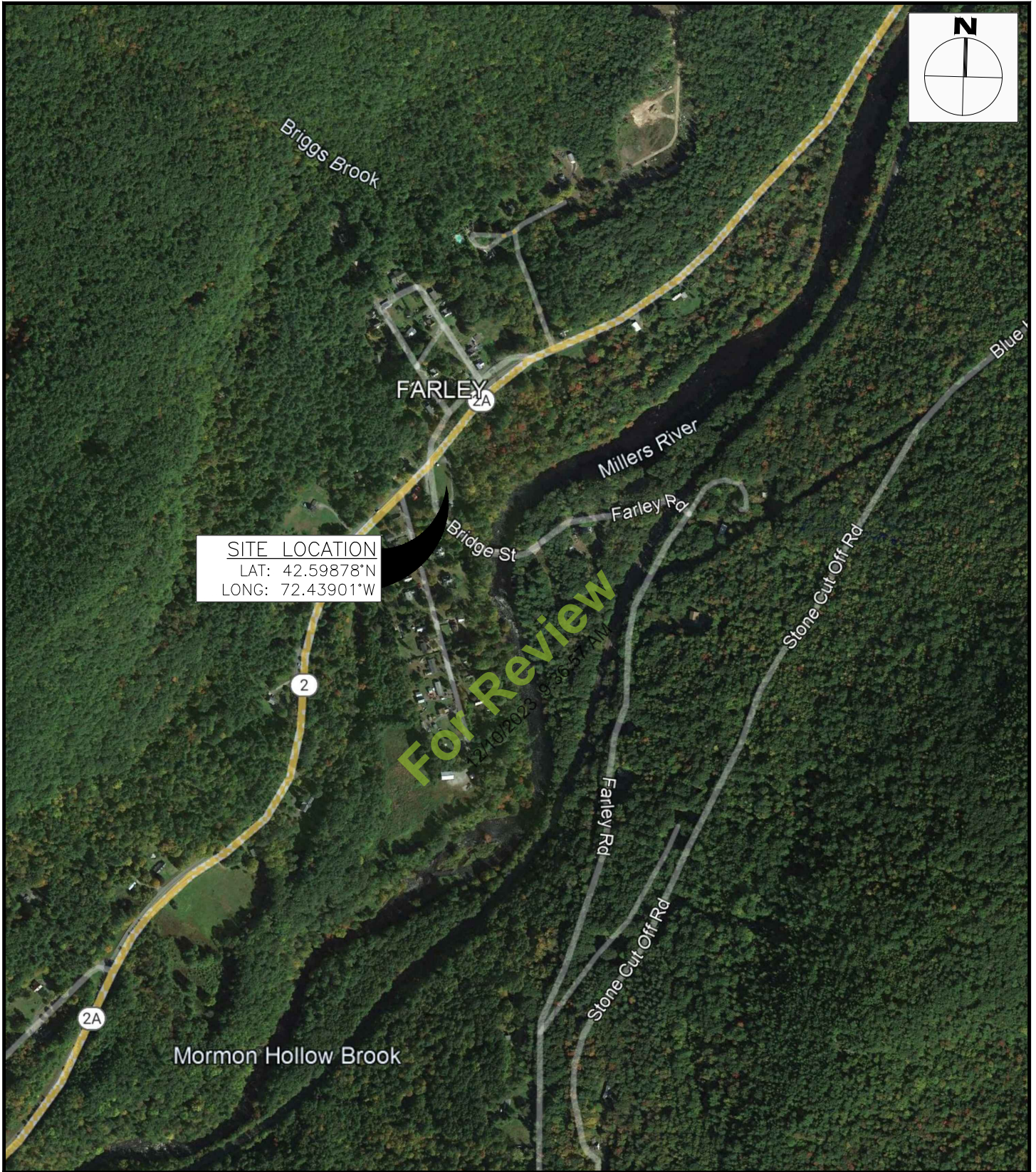
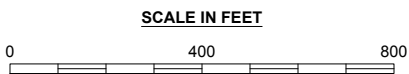
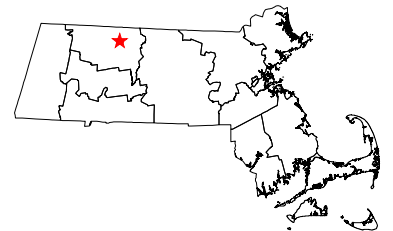
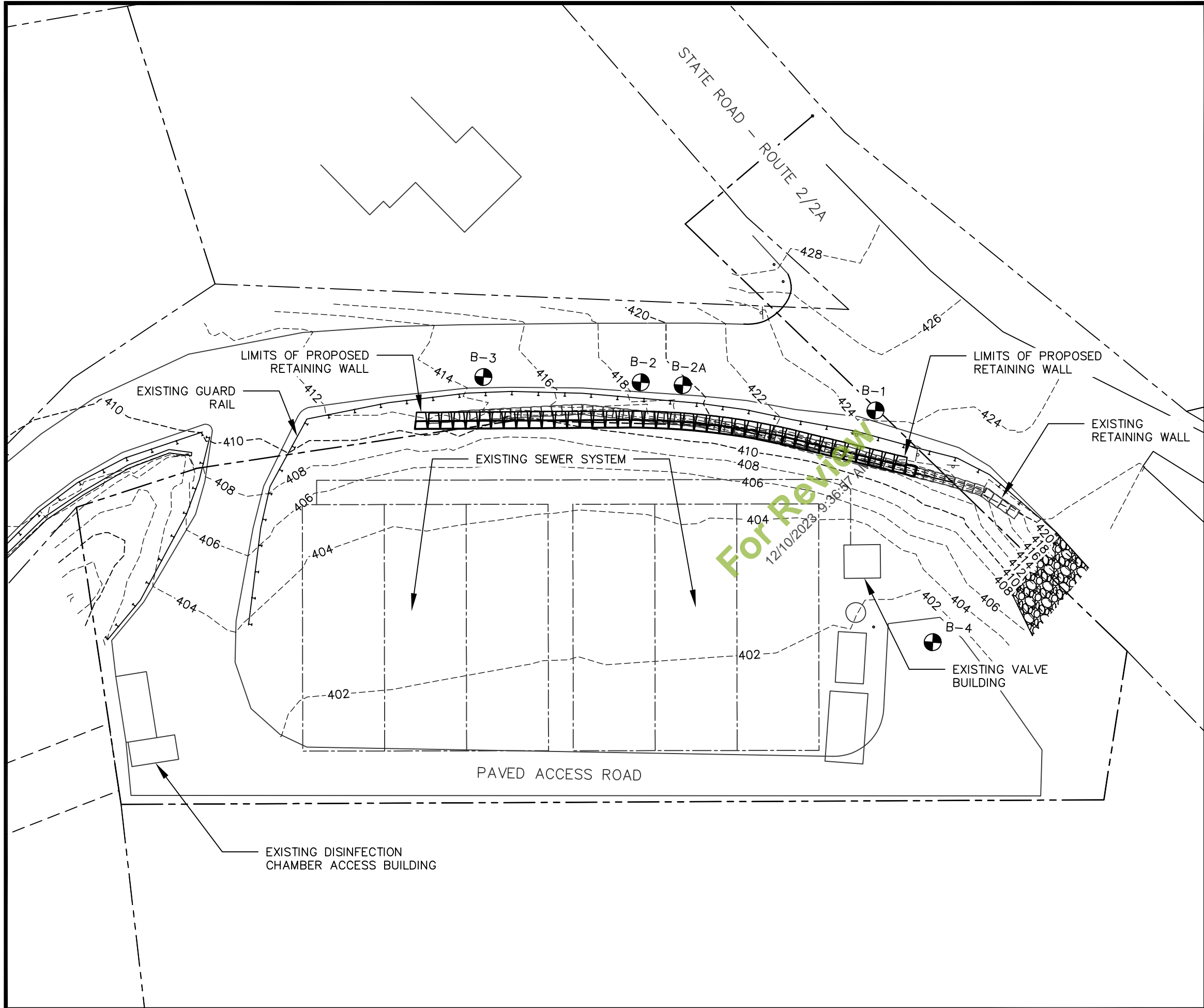


FIGURE 1
LOCUS MAP
BRIDGE STREET WALL REPLACEMENT
ERVING, MA
FRANKLIN COUNTY
 GOOGLE EARTH, EARTH POINT



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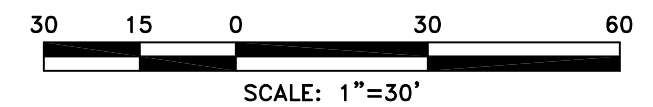
NOTES

1. THIS DRAWING, EXISTING GROUND SURFACE CONTOURS, AND SITE LAYOUT ARE BASED ON SITE PLAN "PROPOSED CONDITIONS BRIDGE STREET STA 4+05 TO 6+24" PREPARED BY WESTON & SAMPSON ON APRIL, 2021.
2. BORING LOCATIONS SHOWN ARE BASED ON FIELD MEASUREMENTS RELATIVE TO EXISTING SITE FEATURES. LOCATIONS ARE THEREFORE APPROXIMATE.
3. BORINGS WERE COMPLETED BY SEABOARD DRILLING INC. OF CHICOPEE, MASSACHUSETTS AND OBSERVED BY WESTON & SAMPSON ENGINEERS ON AUGUST 17 AND 18, 2022.

LEGEND

- B-# DESIGNATION AND APPROXIMATE LOCATION OF BORING
- 402 DESIGNATION OF EXISTING GROUND SURFACE CONTOURS

GRAPHIC SCALE



ORIENTATION		TITLE	
		SITE PLAN	
		PROJECT	
		BRIDGE STREET WALL REPLACEMENT	
		10 BRIDGE STREET ERVING, MA 01344	
		FIGURE	
		FIGURE 2	
DATE	8/2022		
DRWN BY	JGM		
CHKD BY	HDF		
PRJ. NO.	ENG22-0635		
REV. NO.	-		

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ATTACHMENT A

Select Preliminary Design Plans

TOWN OF ERVING, MASSACHUSETTS

SELECT BOARD

JACOB A. SMITH, CHAIR

WILLIAM A. BEMBURY

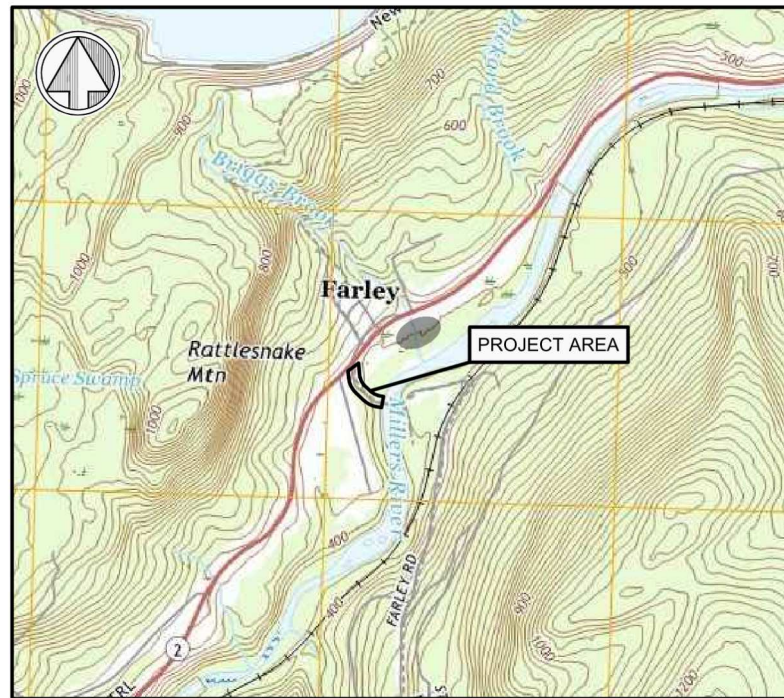
SCOTT BASTARACHE

BRIDGE STREET WALL REPLACEMENT PROJECT

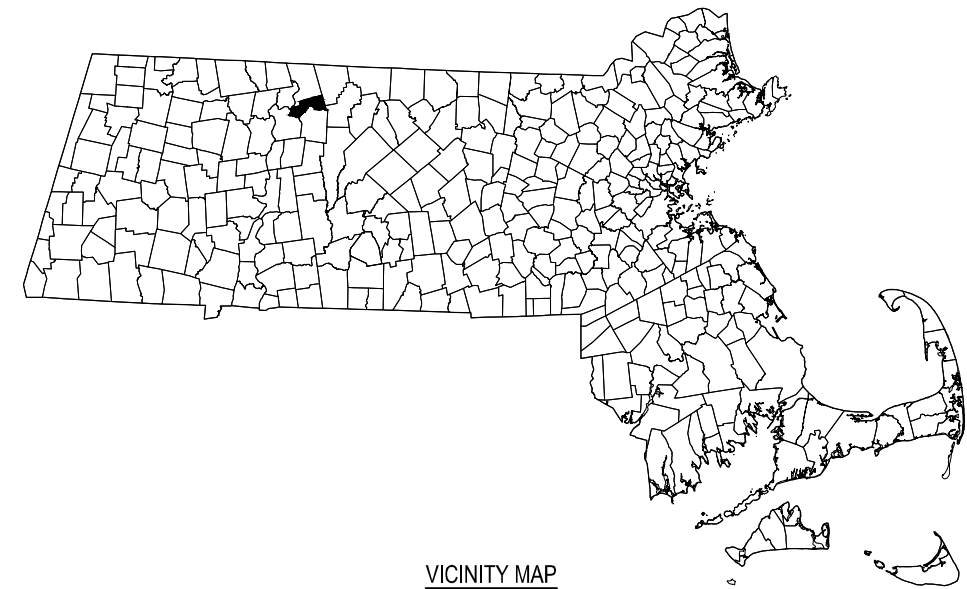


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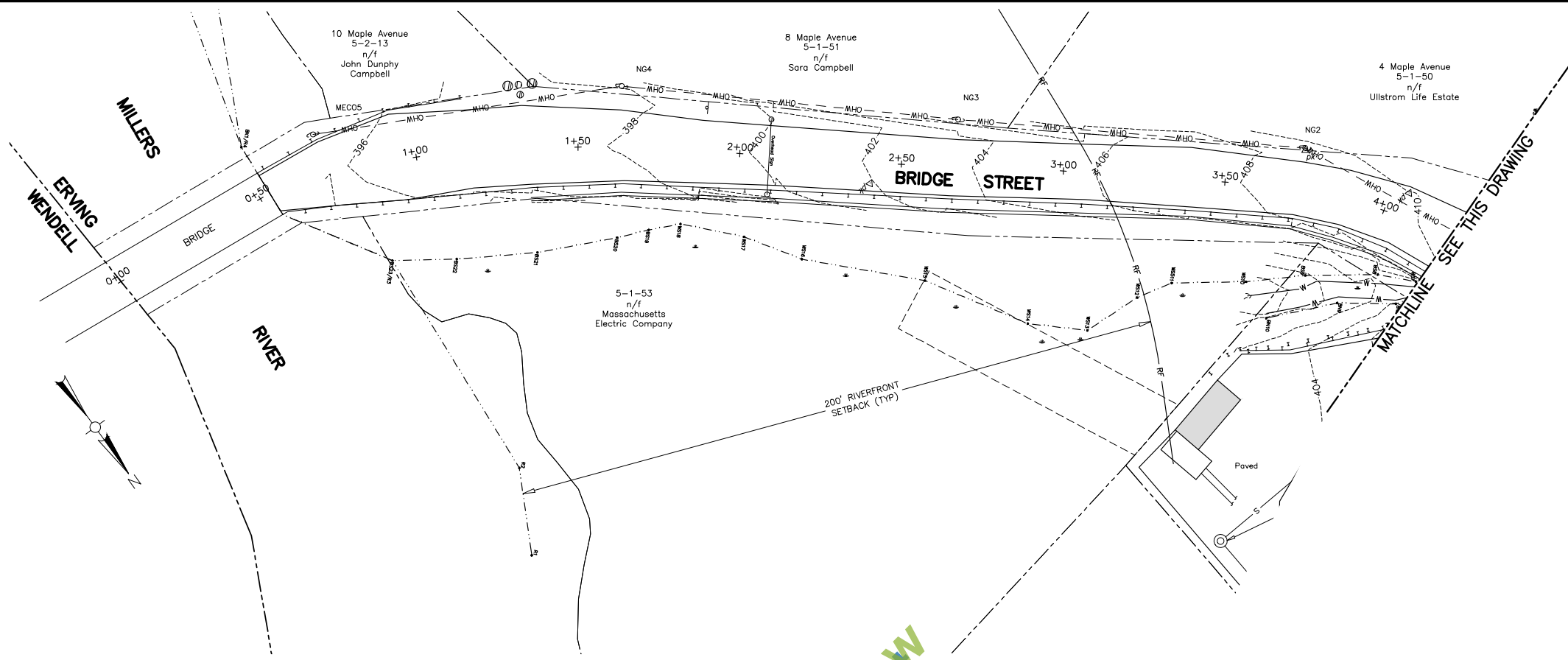
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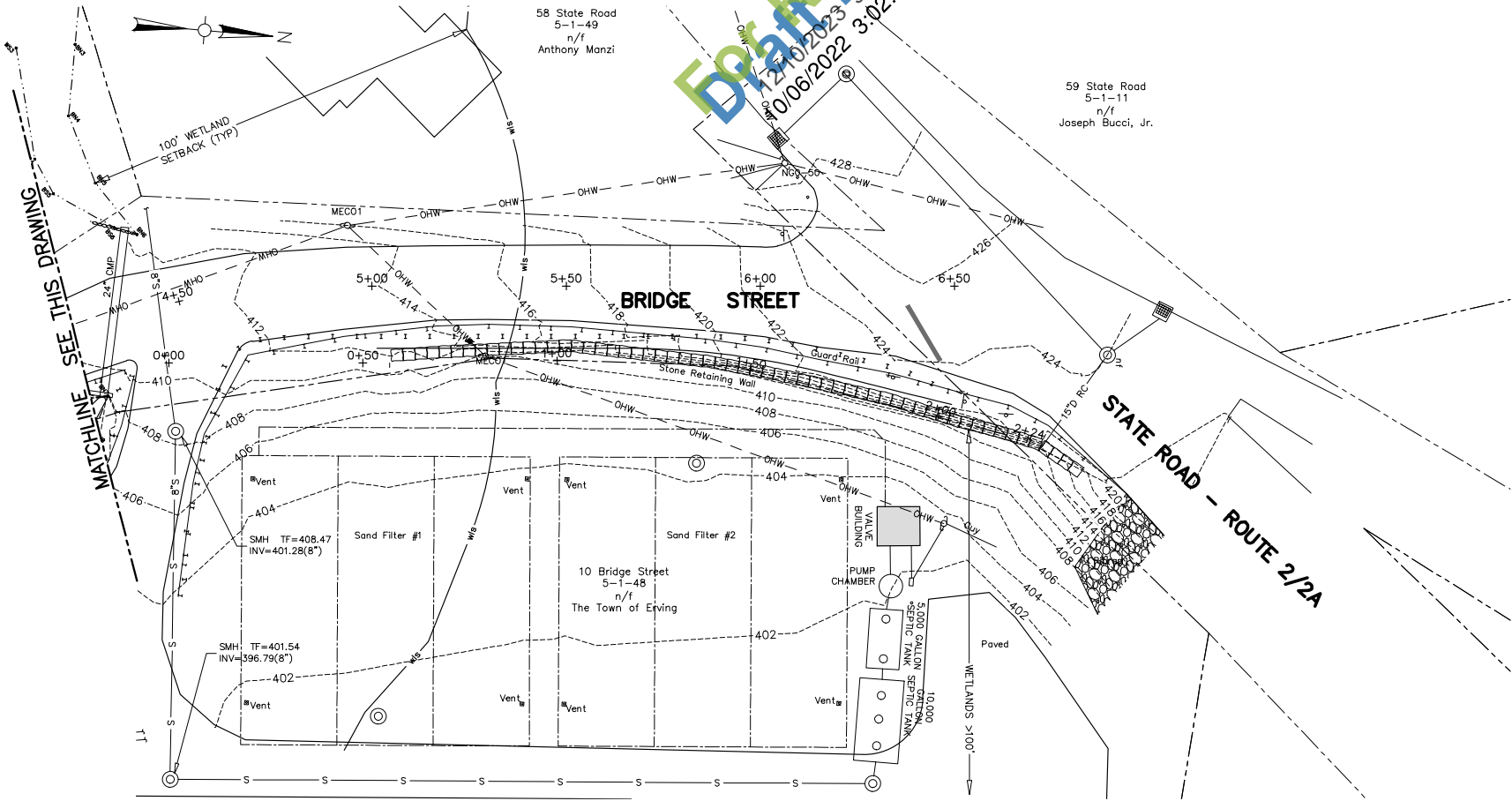
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NOT TO SCALE

Weston & SampsonSM

Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103, Rocky Hill, Connecticut



PLAN
SCALE: 1"=20'
0 20' 40'



PLAN
SCALE: 1"=20'
0 20' 40' 60'

© 2022 Weston & Sampson Engineers, Inc. All Rights Reserved. Project No. ENG22-0635. Drawing Title: EXISTING CONDITIONS BRIDGE STREET WALL REPLACEMENT PROJECT. Stationing: STA 0+00 TO 6+50.

Project:
TOWN OF ERVING,
MASSACHUSETTS

SELECT BOARD

BRIDGE STREET WALL
REPLACEMENT PROJECT



Weston & Sampson
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Rocky Hill, CT 06067
978.532.1900 800.SAMPSON
www.westonandsampson.com

Consultants:

Revisions:

No.	Date	Description

Seal:

COA:

Issued For:

Scale: 1"=20'

Date:

Drawn By:

Reviewed By: WGS

Approved By: CBW

W&S Project No.: ENG22-0635
W&S File No.:

Drawing Title:
**EXISTING CONDITIONS
BRIDGE STREET
STA 0+00 TO 6+50**

Sheet Number:
C-100

Consultants:

Revisions:

No.	Date	Description

Soil:

COA:

Issued For:

Scale: 1"=10'

Date:

Drawn By:

Reviewed By: WGS

Approved By: CBW

W&S Project No.: ENG22-0636

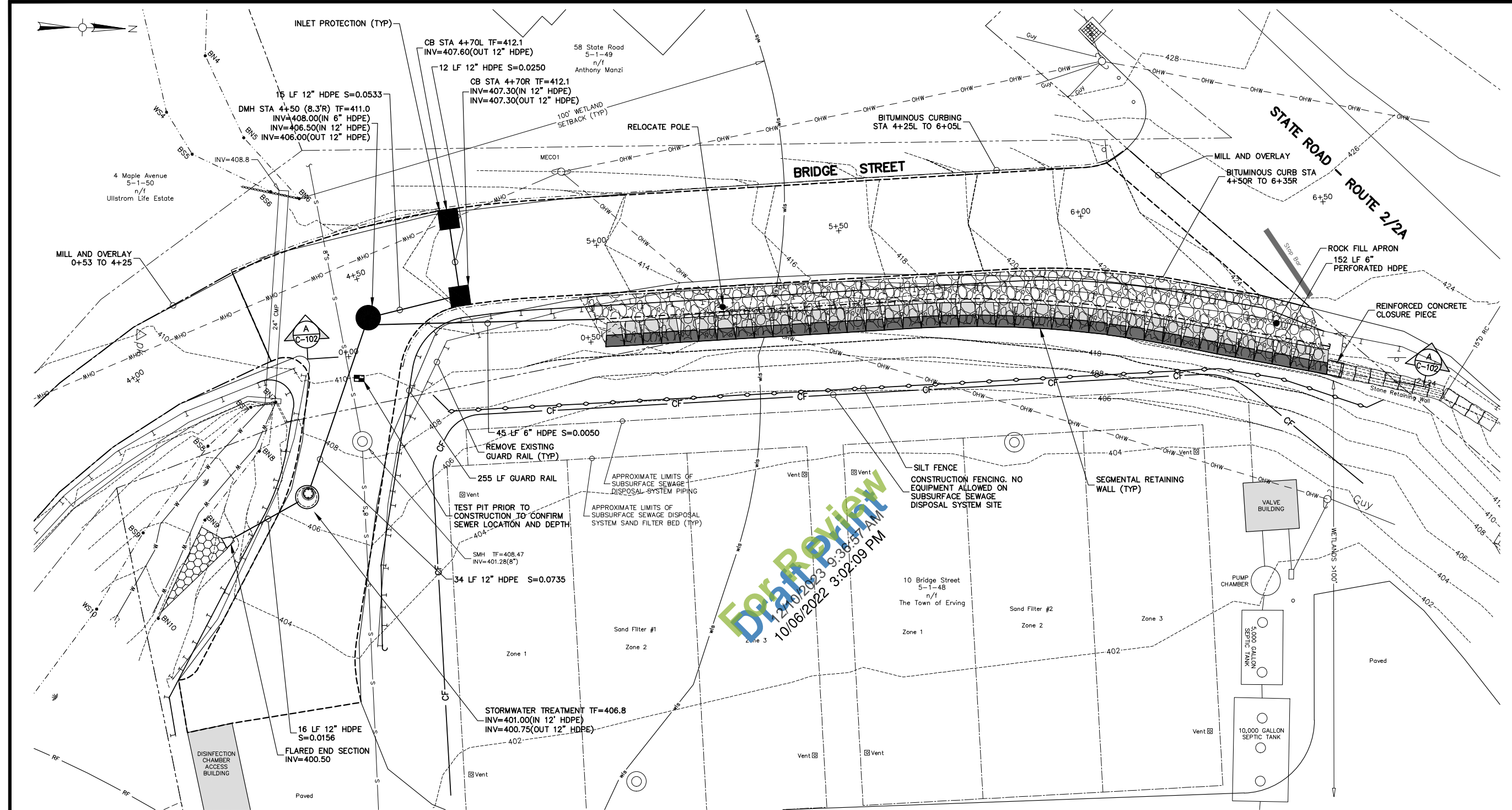
W&S File No.:

Drawing Title:

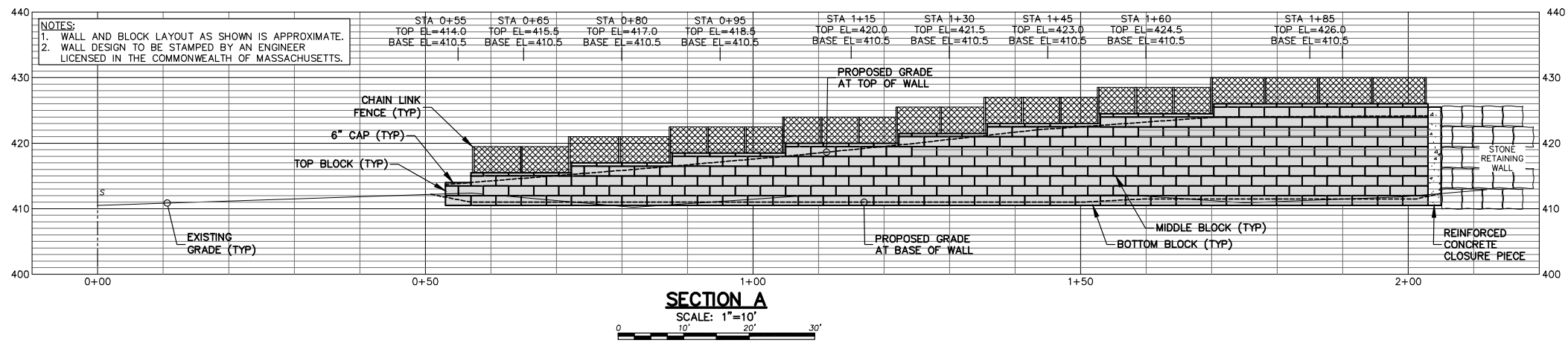
**PROPOSED
CONDITIONS
BRIDGE STREET
STA 4+05 TO 6+24**

Sheet Number:

C-102

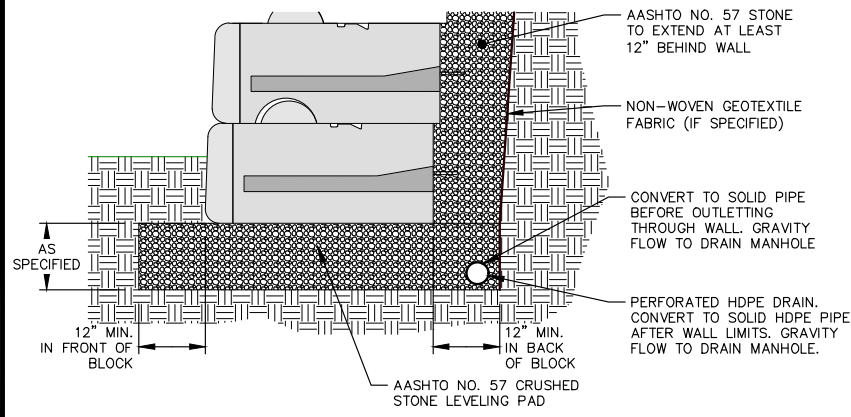


PLAN
SCALE: 1"=10'
0 10' 20' 30'

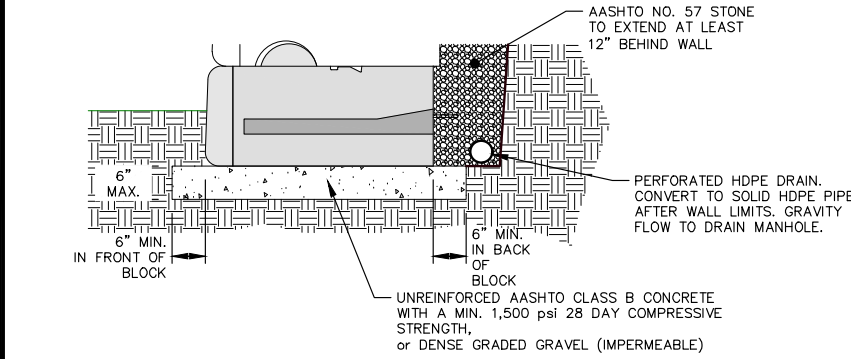


SECTION A
SCALE: 1"=10'
0 10' 20' 30'

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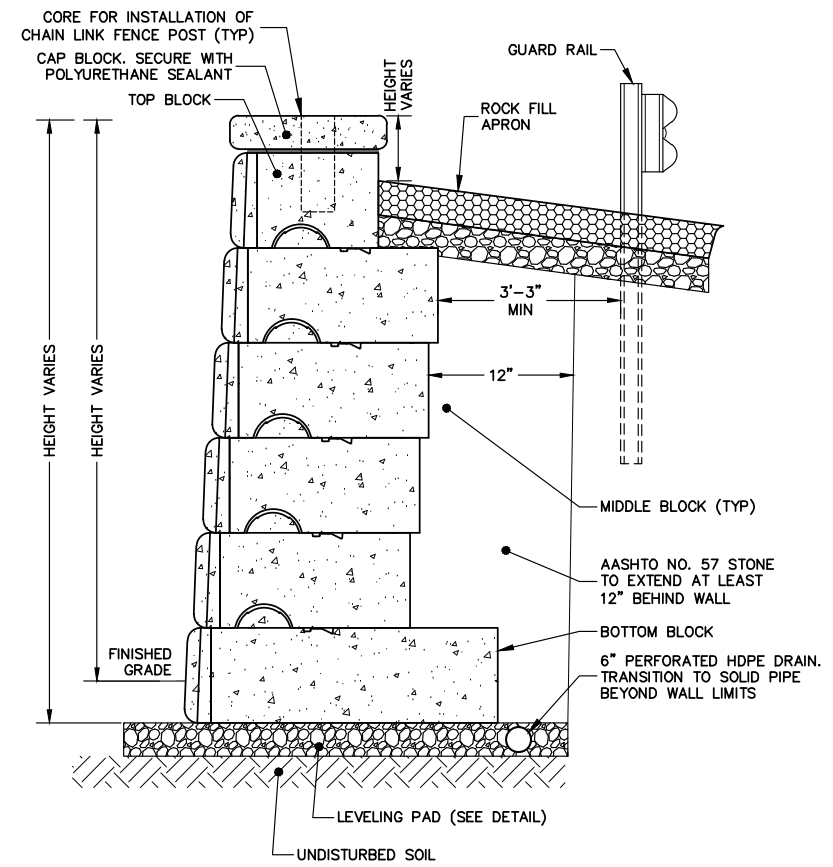


OPEN-GRADED CRUSHED STONE LEVELING PAD
N.T.S.



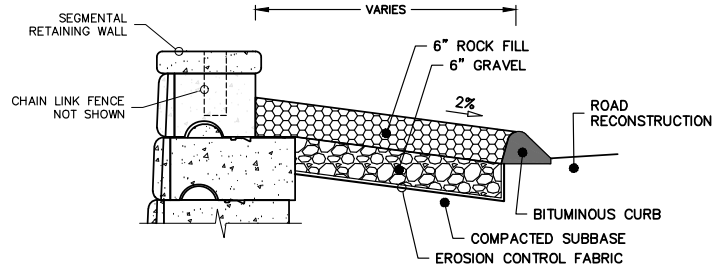
CONCRETE OR DENSE GRADED GRAVEL LEVELING PAD
N.T.S.

SEGMENTAL BLOCK WALL LEVEL PAD DETAILS
N.T.S.



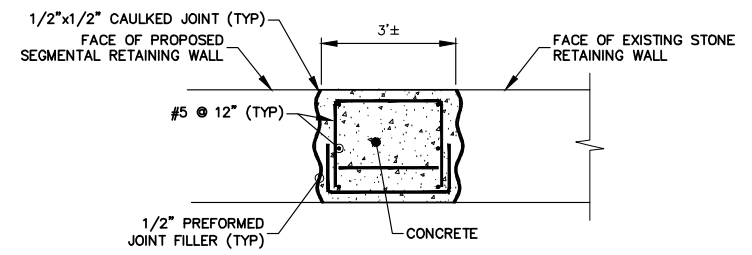
- NOTES:**
1. WALL TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
 2. GEO-GRID/FABRIC IF REQUIRED SHALL BE INSTALLED PER MANUFACTURER'S REQUIREMENTS.
 3. WALL DESIGN TO BE STAMPED BY AN ENGINEER LICENSED IN THE COMMONWEALTH OF MASSACHUSETTS.

SEGMENTAL RETAINING WALL DETAIL
N.T.S.

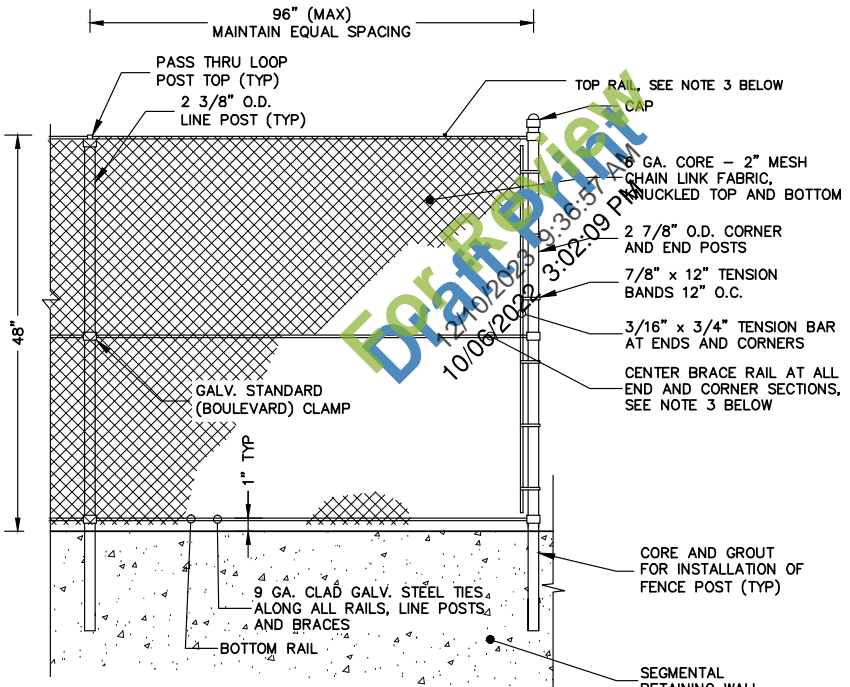


- NOTES:**
1. GUARD RAIL NOT SHOWN FOR CLARITY.

ROCK FILL APRON
N.T.S.

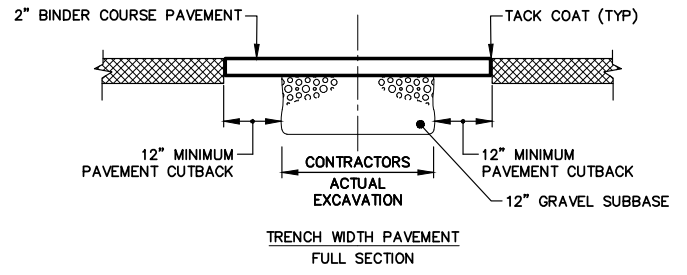


REINFORCED CONCRETE CLOSURE PIECE
N.T.S.



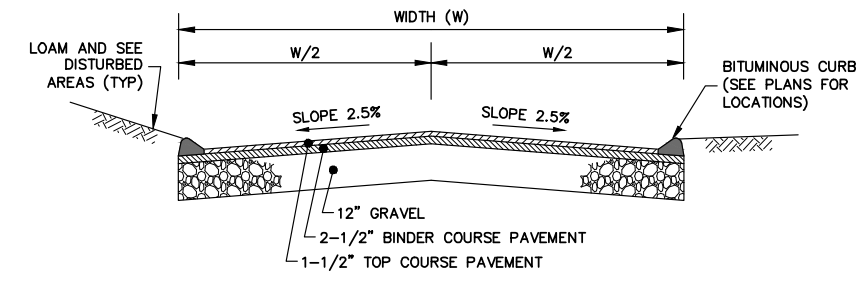
- NOTES:**
1. ALL FENCE PIPE SHALL BE SCH. 40, GALV. STEEL PIPE.
 2. ALL LINE POSTS SHALL BE INSTALLED EQUALLY SPACED BETWEEN END AND CORNER POSTS.
 3. ALL RAILS SHALL BE 1.66\"/>

CHAIN LINK FENCE DETAIL
N.T.S.

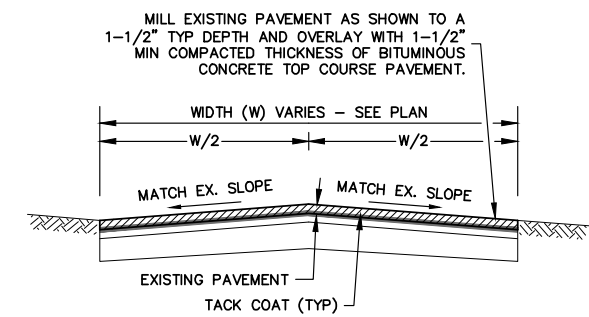


- NOTES:**
1. CONTRACTOR REQUIRED TO MAINTAIN TRENCH SURFACE THROUGHOUT THE PROJECT

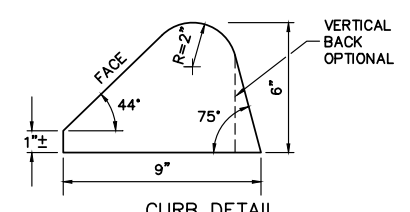
TEMPORARY TRENCH PAVEMENT REPLACEMENT DETAIL
N.T.S.



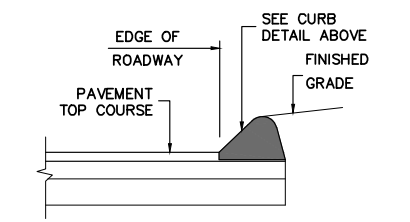
TYPICAL ROAD AND DRIVEWAY RECONSTRUCTION DETAIL
N.T.S.



TYPICAL MILLING AND OVERLAY DETAIL
N.T.S.



CURB DETAIL
CURB IS TYPE-2 PER MASSDOT CONSTRUCTION STANDARDS



BITUMINOUS CONCRETE CURB
N.T.S.

Project:
TOWN OF ERVING,
MASSACHUSETTS
SELECT BOARD
BRIDGE STREET WALL
REPLACEMENT PROJECT

Weston & Sampson
Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103
Rocky Hill, CT 06867
978.532.1900 800.SAMPSON
www.westonandsampson.com

Consultants:

Revisions:

No.	Date	Description

Scale: AS NOTED

Date:
Drawn By:
Reviewed By: WGS
Approved By: CBW

W&S Project No.: ENG22-0635
W&S File No.:

Drawing Title:
DETAILS

Sheet Number:
C-501

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ATTACHMENT B

Boring Logs

GUIDE TO SUBSURFACE EXPLORATION LOGS



INDEX SHEET 1 GENERAL INFORMATION

GENERAL NOTES AND USE OF LOGS

- 1.) Explorations were made by ordinary and conventional methods and with care adequate for Weston & Sampson's study and/or design purposes. The exploration logs are part of a specific report prepared by Weston & Sampson for the referenced project and client, and are an integral part of that report. Information and interpretations are subject to the explanations and limitations stated in the report. Weston & Sampson is not responsible for any interpretations, assumptions, projections, or interpolations made by others.
- 2.) Exploration logs represent general conditions observed at the point of exploration on the date(s) stated. Boundary lines separating soil and rock layers (strata) represent approximate boundaries only and are shown as solid lines where observed and dashed lines where inferred based on drilling action. Actual transitions may be gradual and changes may occur over time.
- 3.) Soil and rock descriptions are based on visual-manual examination of recovered samples, direct observation in test pits (when permissible), and laboratory testing (when conducted).
- 4.) Water level observations were made at the times and under the conditions stated. Fluctuations should be expected to vary with seasons and other factors. Use of fluids during drilling may affect water level observations. The absence of water level observations does not necessarily mean the exploration was dry or that subsurface water will not be encountered during construction.
- 5.) Standard split spoon samplers may not recover particles with any dimension larger than 1-3/8 inches. Reported gravel conditions or poor sample recovery may not reflect actual in-situ conditions.
- 6.) Sections of this guide provide a general overview of Weston & Sampson's practices and procedures for *identifying* and *describing* soil and rock. These procedures are predominantly based on ASTM D2488, *Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)*, the International Society of Rock Mechanics (ISRM) standards, and the *Engineering Geology Field Manual* published by the Bureau of Reclamation. Not all aspects of this guide relating to description and identification procedures of soil and rock may be applicable in all circumstances.

SAMPLER GRAPHICS

- Split Spoon (Standard)
2" OD, 1-3/8" ID
- Split Spoon (Oversize)
3" OD, 2-3/8" ID
- Shelby or Piston Tube
3" OD, 2-7/8" ID
- Double-Tube Rock Core Barrel
2" Core Diameter
- Direct Push with Acetate Liner
Various Liner Sizes
- Auger Sample
(from cuttings or hand auger)
- Grab Sample
(manual, from discrete point)
- Composite Sample
(multiple grab samples)

WELL GRAPHICS

- Cement concrete seal around casing or riser pipe
- Bentonite seal around casing or riser pipe
- Cement grout seal around casing or riser pipe
- Soil backfill around riser pipe or beneath screen
- Gravel backfill around screen or riser pipe
- Sand backfill around screen or riser pipe (filter sand)
- Solid-wall riser; Sch. 40 PVC, 1" ID unless noted otherwise
- Slotted screen; Sch. 40 PVC, 1" ID with machined slots

CAVING / SEEPAGE TERMS

The following caving and/or seepage terms may appear on a test pit log.

Caving Term	Criteria
Minor.....	less than 1 cubic ft.
Moderate.....	1 to 3 cubic ft.
Severe.....	greater than 3 cubic ft.
Seepage Term	Criteria
Slow.....	less than 1 gpm
Moderate.....	1 to 3 gpm
Fast.....	greater than 3 gpm

KEY TO WATER LEVELS

- Observed in exploration during advancement.
- Measured in exploration at completion, prior to backfilling or well installation.
- Measured in exploration after the stated stabilization period, prior to backfilling, or in well installation if noted.

DEFINITIONS OF COMMON TERMS

Sample Recovery Ratio - The length of material recovered in a drive or push type sampler over the length of sampler penetration, in inches (e.g. 18/24).

Standard Penetration Test (SPT) - An in-situ test where a standard split-spoon sampler is driven a distance of 12 or 18 inches (after an initial 6-inch seating interval) using a 140-lb. hammer falling 30 inches for each blow.

SPT Blows - The number of hammer blows required to drive a split-spoon sampler each consecutive 6-inch interval during a *Standard Penetration Test*. If no discernable advancement of a split spoon sampler is made after 50 consecutive hammer blows, 50/X indicates *sampler refusal* and is the number of blows required to drive the sampler X inches.

SPT N-Value (N) - The uncorrected blow count representation of a soil's penetration resistance over a 12-inch interval after an initial 6-in. seating interval, reported in blows per foot (bpf). The N-value is correlated to soil engineering properties.

Auger Refusal - No discernable advancement of the auger over a period of 5 minutes with full rig down pressure applied.

Casing Refusal (Driven) - Casing penetration of less than 6 inches after a minimum 50 blows of a drop hammer weighing 300 lbs. or a minimum 100 blows of a drop hammer weighing 140 lbs.

PID Measurement - A measurement (electronic reading) taken in the field using a photoionization detector (PID) to detect the presence of volatile organic compounds in a soil sample. Values are reported as benzene equivalent units in parts per million (ppm) unless noted otherwise.

Rock Quality Designation (RQD) - A qualitative index measure of the degree of jointing and fracture of a rock core taken from a borehole. The RQD is defined as the sum length of solid core pieces 4 inches or longer divided by the run (cored) length, expressed as a percentage. Higher RQD values may indicate fewer joints and fractures in the rock mass.

Fill (Made Ground) - A deposit of soil and/or artificial waste materials that has been placed or altered by human processes.

LABORATORY TESTS AND FIELD MEASUREMENTS

MC.....	Moisture Content	IC.....	1D Incremental Consolidation
OC.....	Organic Content	VS.....	Laboratory Vane Shear
PL.....	Plastic Limit	US.....	Unconfined Compression
LL.....	Liquid Limit	TC.....	Triaxial Compression
GC.....	Gravel Content	PP.....	Pocket (Hand) Penetrometer
SC.....	Sand Content	TV.....	Torvane (Hand Vane)
FC.....	Fines Content	PID.....	Photoionization Detector
DS.....	Direct Shear	FID.....	Flame Ionization Detector

BORING ADVANCEMENT METHODS

Hollow-Stem Auger Drilling - Utilizes continuous flight auger sections with hollow stems to advance the borehole. Drill rods and a plug are inserted into the auger stem to prevent the entrance of soil cuttings into the augers.

Rotary Wash Drilling - Utilizes downward pressure and rotary action applied to a non-coring bit while washing the cuttings to the surface using a circulating fluid injected down the drill rods. The borehole is supported with either steel casing or the drilling fluid. Where a casing is used, the borehole is advanced sequentially by driving the casing to the desired depth and then cleaning out the casing. The process of driving and cleaning the casing is commonly referred to as the 'drive-and-wash' technique.

Continuous Sampling - Includes a variety of methods and procedures during which the borehole is advanced via continuous recovery of soil samples. *Direct Push* sampling is a common method that uses static downward pressure combined with percussive energy to drive a steel mandrel into the ground at continuous intervals while recovering soil samples in disposable acetate liners.

Rock Coring - Utilizes downward pressure and rotary action applied to a core barrel equipped with a diamond-set or tungsten carbide coring bit. During conventional coring, the entire barrel is retrieved from the hole upon completion of a core run. Wireline coring allows for removal of the inner barrel assembly containing the actual core while the drill rods and outer barrel remain in the hole. Various types and sizes of core barrels and bits are used.

GUIDE TO SUBSURFACE EXPLORATION LOGS



INDEX SHEET 2 SOIL DESCRIPTION

SOIL CONSTITUENTS

Naturally occurring soils consist of one or more of the following matrix constituents defined in terms of particle size.

Constituent	U.S. Sieve Size	Observed Size (in.)
Gravel (Coarse)	3/4 in. - 3 in.	3/4 - 3
Gravel (Fine)	No. 4 - 3/4 in.	1/5 - 3/4
Sand (Coarse)	No. 10 - No. 40	1/16 - 1/5
Sand (Medium)	No. 40 - No. 10	1/64 - 1/16
Sand (Fine)	No. 200 - No. 40	1/300 - 1/64
Fines (Silt or Clay)	Smaller than No. 200	Less than 1/300

SOIL IDENTIFICATION

Soil identification refers to the grouping of soils with similar physical characteristics into a category defined by a **group name** and corresponding **group symbol** based on estimation of the matrix soil constituents to the nearest 5% and simple manual tests. Proportions of cobbles, boulders, and other non-matrix soil materials are not considered during this procedure but are included in the overall soil description if observed or thought to be present. Refer to the following descriptions and tables adapted from ASTM D2488.

Coarse-Grained Soil - Coarse-grained soils contain fewer than 50% fines and are identified based on the following table.

Primary Constituent	Fines Percent	Type of Fines and Gradation	Group Symbol	Group Name ⁽¹⁾
GRAVEL % gravel >	≤ 5%	well graded	GW	Well graded gravel
		poorly graded	GP	Poorly graded gravel
	10%	clayey well graded	GW-GC	Well graded gravel with clay fines
		silty well graded	GW-GM	Well graded gravel with silty fines
SAND % sand ≥	15% to 45%	clay fines	GC	Clayey gravel
		silt fines	GM	Silty gravel
	≤ 5%	well graded	SW	Well graded sand
		poorly graded	SP	Poorly graded sand
	10%	clayey well graded	SW-SC	Well graded sand with clay fines
		silty well graded	SW-SM	Well graded sand with silty fines
15% to 45%	clay fines	SC	Clayey sand	
	silt fines	SM	Silty sand	

⁽¹⁾ If soil is a gravel and contains 15% or more sand, add "with sand" to the group name. If soil is a sand and contains 15% of more gravel, add "with gravel" to the group name.

Inorganic Fine-Grained Soil - Fine-grained soils contain 50% or more fines and are identified based on the following table.

Plasticity Criteria	Dry Strength	Coarse Fraction S = Sand, G = Gravel	Group Symbol	Group Name ⁽¹⁾
Medium	Medium to high	< 15% S + G	CL	Lean clay
		≥ 30% % S ≥ % G	CL	Sandy lean clay
		S + G % S < % G	CL	Gravelly lean clay
Non-plastic	None to low	< 15% S + G	ML	Silt
		≥ 30% % S ≥ % G	ML	Sandy silt
		S + G % S < % G	ML	Gravelly silt
High	High to very high	< 15% S + G	CH	Fat clay
		≥ 30% % S ≥ % G	CH	Sandy fat clay
		S + G % S < % G	CH	Gravelly fat clay
Low to Medium	Low to medium	< 15% S + G	MH	Elastic silt
		≥ 30% % S ≥ % G	MH	Sandy elastic silt
		S + G % S < % G	MH	Gravelly elastic silt

⁽¹⁾ If soil contains 15% to 25% sand or gravel, add "with sand" or "with gravel" to the group name.

Organic Fine-Grained Soil - Fine-grained soils that contain enough organic particles to influence the soil properties are identified as Organic Soil and assigned the group symbol **OL** or **OH**.

Highly Organic Soil (Peat) - Soils composed primarily of plant remains in various stages of decomposition are identified as Peat and given the group symbol **PT**. Peat usually has an organic odor, a dark brown to black color, and a texture ranging from fibrous (original plant structure intact or mostly intact) to amorphous (plant structure decomposed to fine particles).

SOIL DESCRIPTION

Soils are described in the following general sequence. Deviations may occur in some instances.

Identification Components

(1) Group Name and Group Symbol

Description Components

- (2) Consistency (Fine-Grained) or Apparent Density (Coarse-Grained)
- (3) Color (*note, the term "to" may be used to indicate a gradational change*)
- (4) Soil Moisture
- (5) Matrix Soil Constituents (Gravel, Sand, Fines)
 - ↳ Proportion (*by weight*), particle size, plasticity of fines, angularity, etc.
- (6) Non-Matrix Soil Materials and Proportions (*by volume*)
- (7) Other Descriptive Information (Unusual Odor, Structure, Texture, etc.)
- (8) [Geologic Formation Name or Soil Survey Unit]

SPT N-VALUE CORRELATIONS

Consistency	SPT N-Value	Apparent Density	SPT N-Value
Very soft	0 - 2	Very loose	0 - 5
Soft	2 - 4	Loose	5 - 10
Medium stiff	4 - 8	Medium dense	10 - 30
Stiff	8 - 15	Dense	30 - 50
Very stiff	15 - 30	Very dense	> 50
Hard	> 30		

SOIL MOISTURE

Dry..... Apparent absence of moisture; dry to the touch.
Moist..... Damp but no visible water.
Wet..... Visible free water; saturated.

PROPORTIONS / PERCENTAGES

Proportions of gravel, sand, and fines (excluding cobbles, boulders, and other constituents) are stated in the following terms indicating a range of percentages by weight (to nearest 5%) of the minus 3-in. soil fraction and add up to 100%. Proportions of cobbles, boulders, and other non-matrix soil materials including artificial debris, roots, plant fibers, etc. are stated in the following terms indicating a range of percentages by volume (to the nearest 5%) of the total soil.

Mostly 50% - 100%	Numerous 40% - 50%
Some 30% - 45%	Common 25% - 35%
Little 15% - 25%	Occasional 10% - 20%
Few 5% - 10%	Trace Less than 5%
Trace Less than 5%	

PLASTICITY (FINES ONLY)

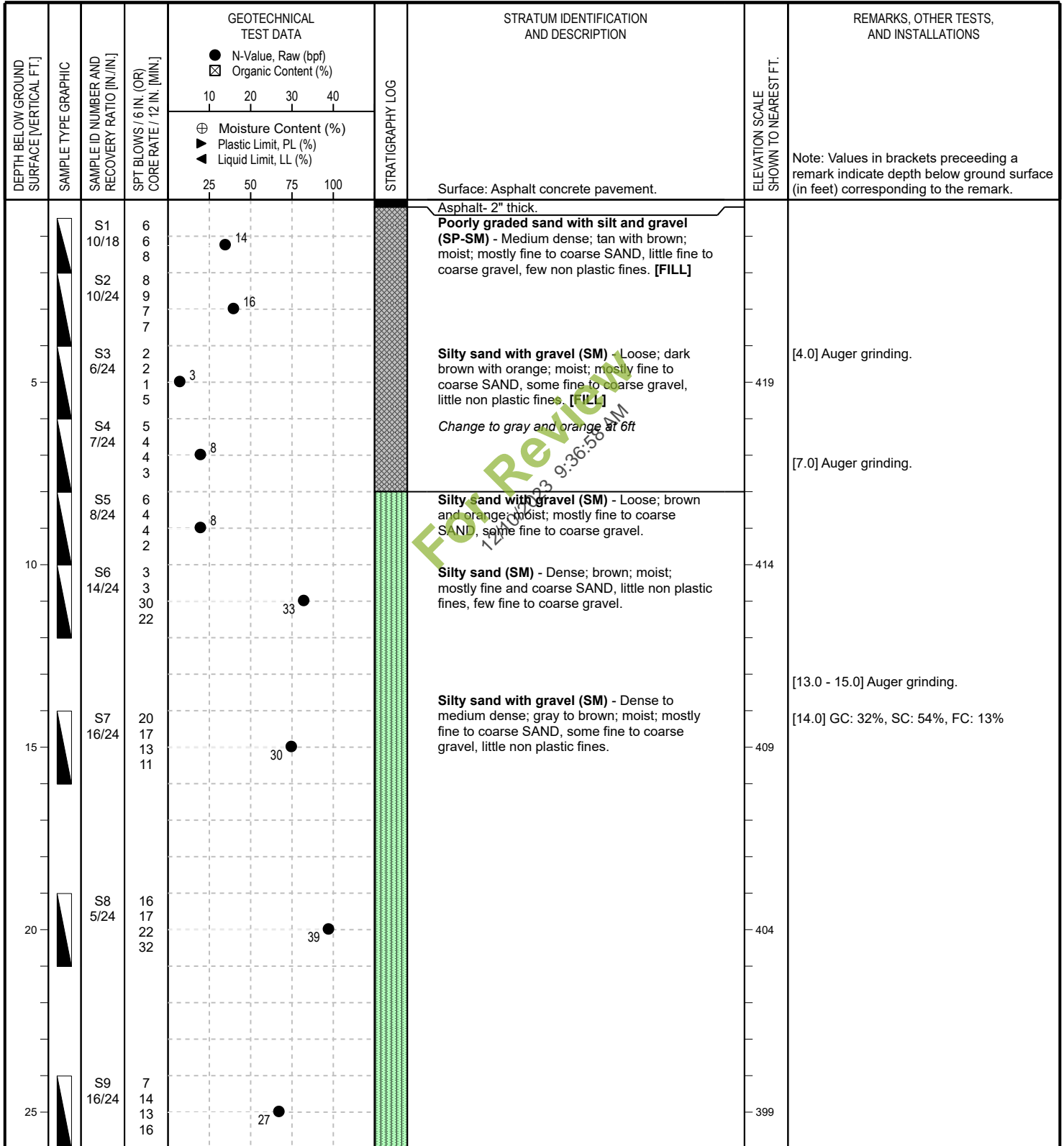
Non-plastic..... Dry specimen ball falls apart easily. Cannot be rolled into thread at any moisture content.
Low..... Dry specimen ball easily crushed with fingers. Can be rolled into 1/8-in. thread with some difficulty.
Medium..... Difficult to crush dry specimen ball with fingers. Easily rolled into 1/8-in. thread.
High..... Cannot crush dry specimen ball with fingers. Easily rolled and re-rolled into 1/8-in. thread.

COBBLES AND BOULDERS

Cobbles - Particles of rock that will pass a 12-in. square opening and be retained on a 3-in. sieve.
Boulders - Particles of rock that will not pass a 12-in. square opening.

Note: Where the percentage (by volume) of cobbles and/or boulders cannot be accurately or reliably estimated, the terms "with cobbles", "with boulders", or "with cobbles and boulders" may be used to indicate observed or inferred presence.

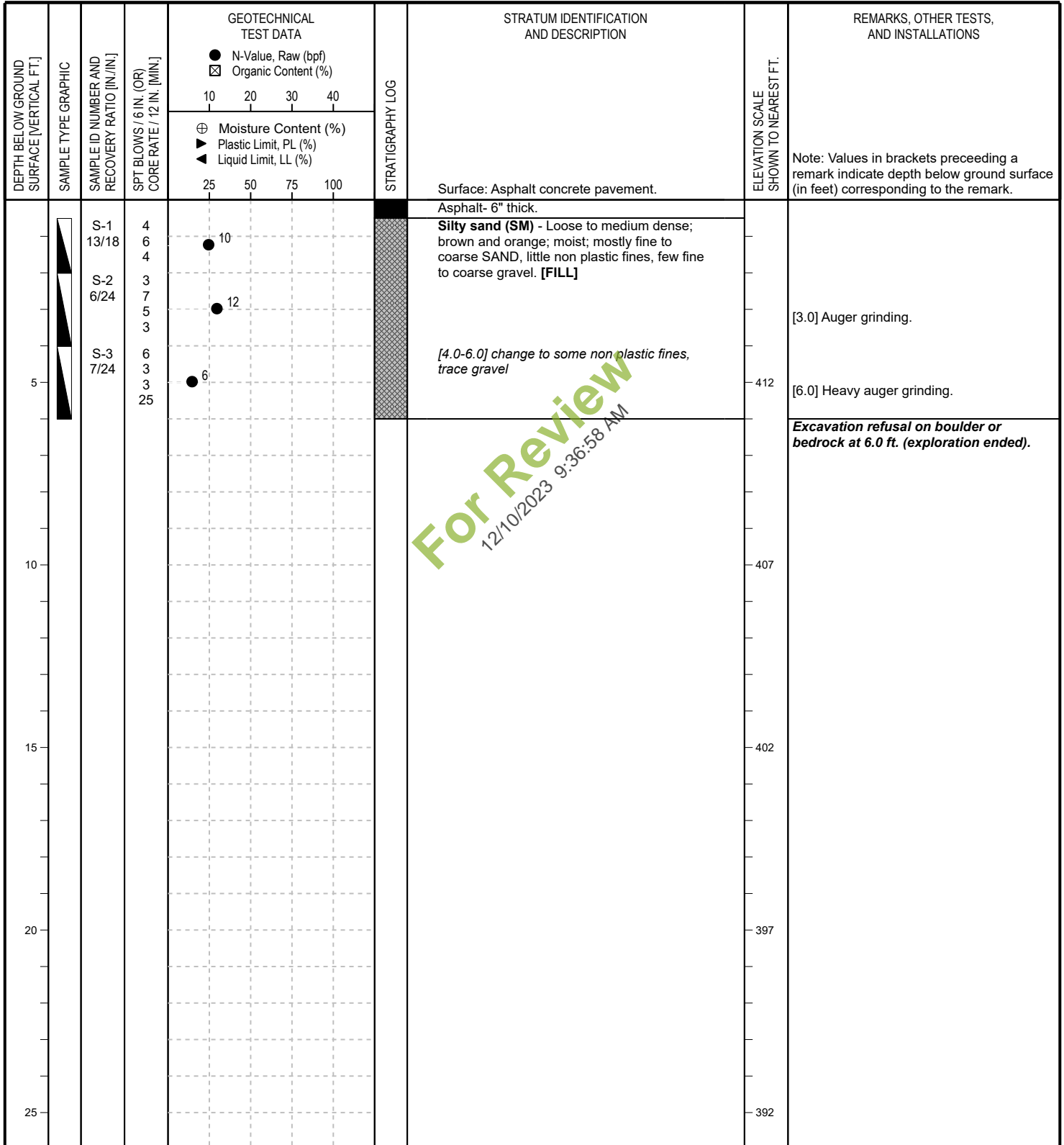
CONTRACTOR: Seaboard Drilling, Inc.	BORING LOCATION: See Site Exploration Map	DATE START: August 18, 2022
FOREMAN: Jeff Nitsch	ADVANCE METHOD: Hollow-Stem Auger Drilling	DATE FINISH: August 18, 2022
LOGGED BY: Geno Mirabella	AUGER DIAMETER: 3-1/4" ID (Stem), 6-5/8" OD (Flights)	GROUND EL: 424.0 ± (NAVD88)
CHECKED BY: Hector Flores	SUPPORT CASING: N/A	FINAL DEPTH: 41.0 ft.
EQUIPMENT: Mobile Drill B-53, Truck Mounted	CORING METHOD: N/A	GRID COORDS: N/A
SPT HAMMER: Automatic (140-lb.)	BACKFILL MATERIAL: Drill Cuttings and Asphalt Patch	GRID SYSTEM: NAD83 State Plane (MA)



DEPTH BELOW GROUND SURFACE [VERTICAL FT.]	SAMPLE TYPE GRAPHIC	SAMPLE ID NUMBER AND RECOVERY RATIO [IN./IN.]	SPT BLOWS / 6 IN. (OR) CORE RATE / 12 IN. [MIN.]	GEOTECHNICAL TEST DATA				STRATIGRAPHY LOG	STRATUM IDENTIFICATION AND DESCRIPTION	ELEVATION SCALE SHOWN TO NEAREST FT.	REMARKS, OTHER TESTS, AND INSTALLATIONS
				● N-Value, Raw (bpf)	☒ Organic Content (%)	⊕ Moisture Content (%)	▶ Plastic Limit, PL (%)				
30		S10 18/24	3 4 3 3	7				Silty sand with gravel (SM) - Dense to medium dense; gray to brown; moist; mostly fine to coarse SAND, some fine to coarse gravel, little non plastic fines.			
35		S11 15/24	8 13 40 25					Silty sand (SM) - Loose; brown; moist; mostly fine to coarse SAND, little non plastic fines, few fine to coarse gravel.	394		
38.9								Well graded sand with silt and gravel (SW-SM) - Very dense; dark brown with orange; moist; mostly fine to coarse SAND, some fine to coarse gravel, few non plastic fines.	389	[32.0] Exterior of split spoon is wet. [33.5] Water level measured on 08/18/22 (end of drilling).	
40		S12 3/9	55 50/3						384		
45									379		
50									374		
55									369	Exploration ended at 41.0 ft.	

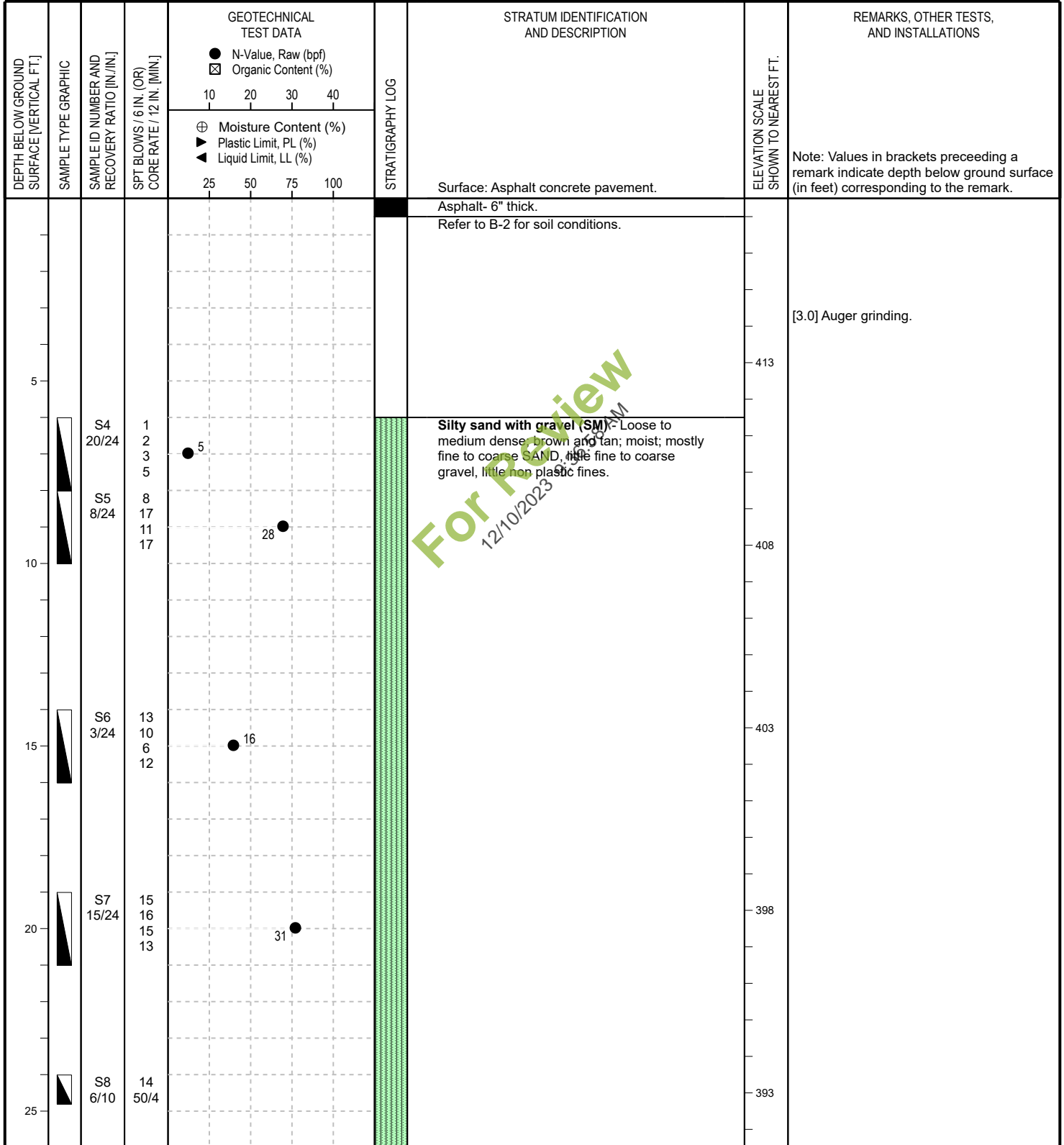
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CONTRACTOR: Seaboard Drilling, Inc.	BORING LOCATION: See Site Exploration Map	DATE START: August 17, 2022
FOREMAN: Jeff Nitsch	ADVANCE METHOD: Hollow-Stem Auger Drilling	DATE FINISH: August 17, 2022
LOGGED BY: Geno Mirabella	AUGER DIAMETER: 3-1/4" ID (Stem), 6-5/8" OD (Flights)	GROUND EL: 417.0 ± (NAVD88)
CHECKED BY: Hector Flores	SUPPORT CASING: N/A	FINAL DEPTH: 6.0 ft. (Refusal)
EQUIPMENT: Mobile Drill B-53, Truck Mounted	CORING METHOD: N/A	GRID COORDS: N/A
SPT HAMMER: Automatic (140-lb.)	BACKFILL MATERIAL: Drill Cuttings and Asphalt Patch	GRID SYSTEM: NAD83 State Plane (SC)



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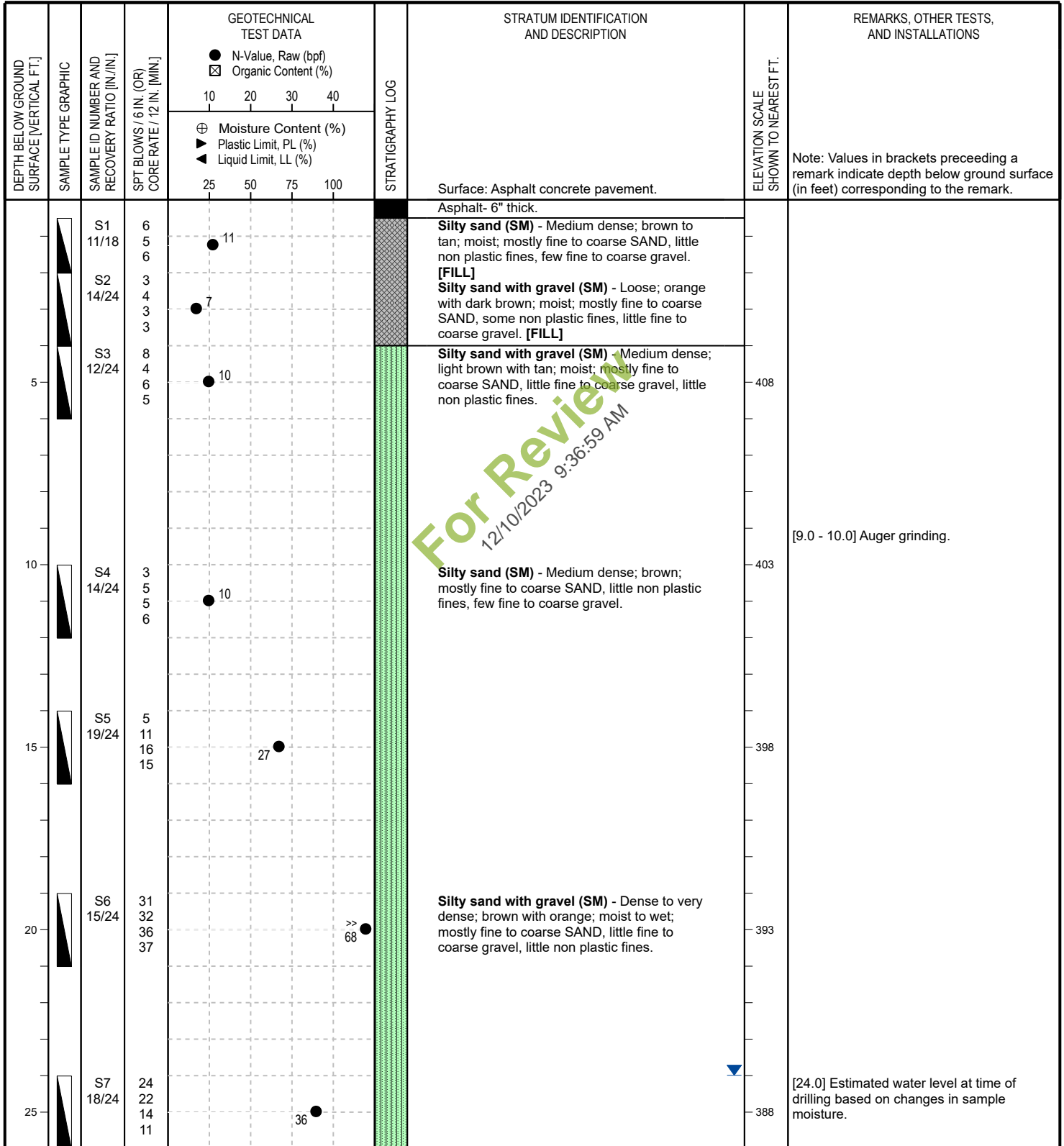
CONTRACTOR: Seaboard Drilling, Inc.	BORING LOCATION: See Site Exploration Map	DATE START: August 17, 2022
FOREMAN: Jeff Nitsch	ADVANCE METHOD: Hollow-Stem Auger Drilling	DATE FINISH: August 17, 2022
LOGGED BY: Geno Mirabella	AUGER DIAMETER: 3-1/4" ID (Stem), 6-5/8" OD (Flights)	GROUND EL: 417.5 ± (NAVD88)
CHECKED BY: Hector Flores	SUPPORT CASING: N/A	FINAL DEPTH: 41.0 ft.
EQUIPMENT: Mobile Drill B-53, Truck Mounted	CORING METHOD: N/A	GRID COORDS: N/A
SPT HAMMER: Automatic (140-lb.)	BACKFILL MATERIAL: Drill Cuttings and Asphalt Patch	GRID SYSTEM: NAD83 State Plane (MA)



DEPTH BELOW GROUND SURFACE [VERTICAL FT.]	SAMPLE TYPE GRAPHIC	SAMPLE ID NUMBER AND RECOVERY RATIO [IN./IN.]	SPT BLOWS / 6 IN. (OR) CORE RATE / 12 IN. [MIN.]	GEOTECHNICAL TEST DATA				STRATIGRAPHY LOG	STRATUM IDENTIFICATION AND DESCRIPTION	ELEVATION SCALE SHOWN TO NEAREST FT.	REMARKS, OTHER TESTS, AND INSTALLATIONS
				● N-Value, Raw (bpf)	☒ Organic Content (%)	⊕ Moisture Content (%)	▴ Plastic Limit, PL (%)				
30		S9 13/24	14 25 26 30					● >> 51	388	<p>Silty sand with gravel (SM) - Loose to medium dense; brown and tan; moist; mostly fine to coarse SAND, little fine to coarse gravel, little non plastic fines.</p> <p>Silty sand (SM) - Very dense; brown with orange; moist; mostly fine to coarse SAND, some non plastic fines, few fine to coarse gravel.</p>	
35		S10 21/24	19 28 31 34					● >> 59	383		
40		41 16/24	25 25 39 44					● >> 64	378		
45									373	<p>Exploration ended at 41.0 ft.</p>	
50									368		
55									363		

For Review
12/10/2023 9:36:58 AM

CONTRACTOR: Seaboard Drilling, Inc.	BORING LOCATION: See Site Exploration Map	DATE START: August 17, 2022
FOREMAN: Jeff Nitsch	ADVANCE METHOD: Hollow-Stem Auger Drilling	DATE FINISH: August 17, 2022
LOGGED BY: Geno Mirabella	AUGER DIAMETER: 3-1/4" ID (Stem), 6-5/8" OD (Flights)	GROUND EL: 413.0 ± (NAVD88)
CHECKED BY: Hector Flores	SUPPORT CASING: N/A	FINAL DEPTH: 41.0 ft.
EQUIPMENT: Mobile Drill B-53, Truck Mounted	CORING METHOD: N/A	GRID COORDS: N/A
SPT HAMMER: Automatic (140-lb.)	BACKFILL MATERIAL: Drill Cuttings and Asphalt Patch	GRID SYSTEM: NAD83 State Plane (MA)

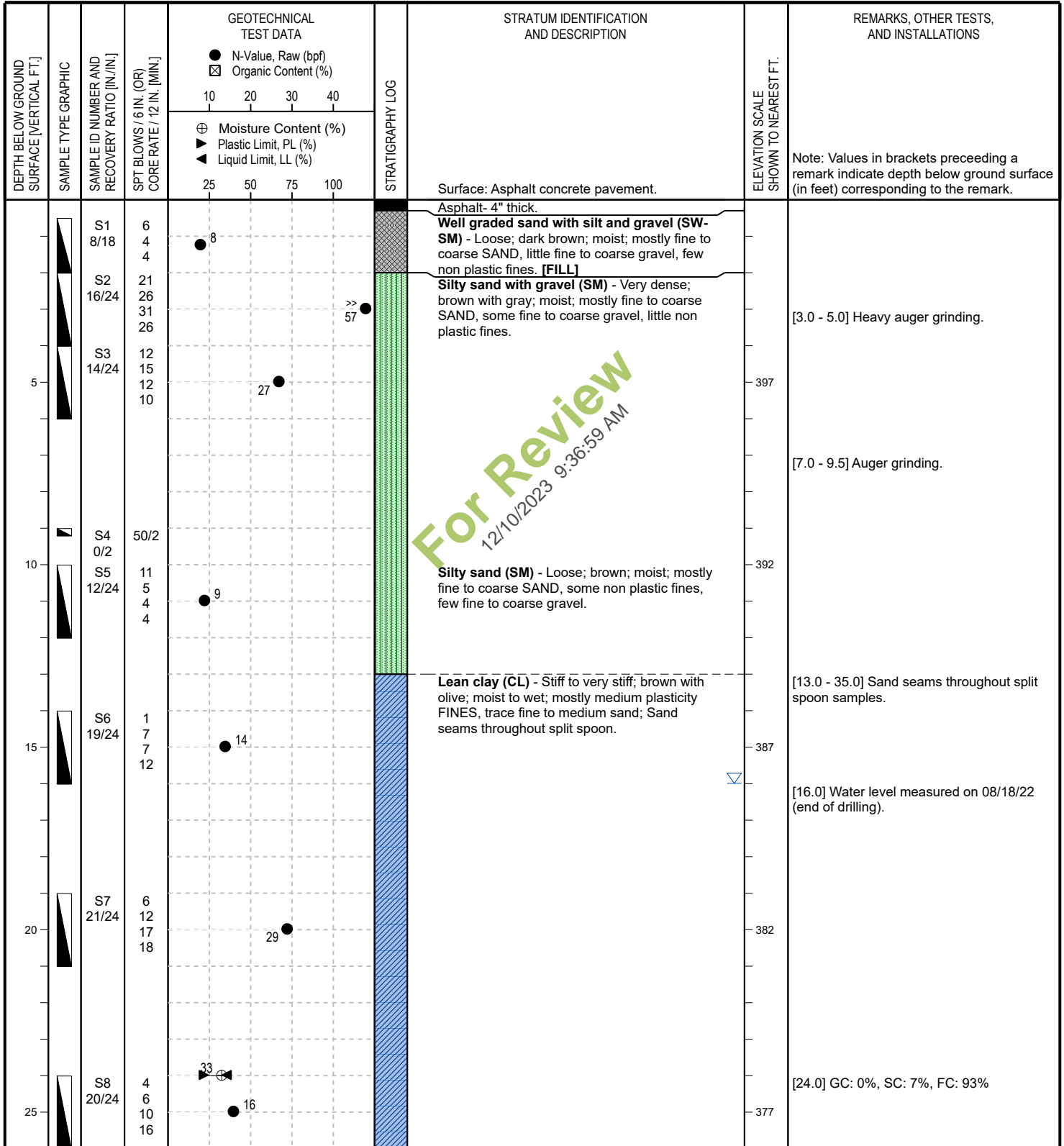


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DEPTH BELOW GROUND SURFACE [VERTICAL FT.]	SAMPLE TYPE GRAPHIC	SAMPLE ID NUMBER AND RECOVERY RATIO [IN./IN.]	SPT BLOWS / 6 IN. (OR) CORE RATE / 12 IN. [MIN.]	GEOTECHNICAL TEST DATA				STRATIGRAPHY LOG	STRATUM IDENTIFICATION AND DESCRIPTION	ELEVATION SCALE SHOWN TO NEAREST FT.	REMARKS, OTHER TESTS, AND INSTALLATIONS
				● N-Value, Raw (bpf)	☒ Organic Content (%)	⊕ Moisture Content (%)	▶ Plastic Limit, PL (%)				
30		S8 15/24	10 10 10 13	22					383	<p>Note: Values in brackets preceding a remark indicate depth below ground surface (in feet) corresponding to the remark.</p> <p>[29.0] GC: 2%, SC: 19%, FC: 79%</p>	
35		S9 20/24	8 9 15 21			24			378		
40		S10 22/24	7 14 19 18			33			373		
45									368	<p>Exploration ended at 41.0 ft.</p>	
50									363		
55									358		

For Review
12/10/2023 9:36:59 AM

CONTRACTOR: Seaboard Drilling, Inc.	BORING LOCATION: See Site Exploration Map	DATE START: August 18, 2022
FOREMAN: Jeff Nitsch	ADVANCE METHOD: Hollow-Stem Auger Drilling	DATE FINISH: August 18, 2022
LOGGED BY: Geno Mirabella	AUGER DIAMETER: 3-1/4" ID (Stem), 6-5/8" OD (Flights)	GROUND EL: 402.0 ± (NAVD88)
CHECKED BY: Hector Flores	SUPPORT CASING: N/A	FINAL DEPTH: 36.0 ft.
EQUIPMENT: Mobile Drill B-53, Truck Mounted	CORING METHOD: N/A	GRID COORDS: N/A
SPT HAMMER: Automatic (140-lb.)	BACKFILL MATERIAL: Drill Cuttings and Asphalt Patch	GRID SYSTEM: NAD83 State Plane (MA)



For Review
12/10/2023 9:36:59 AM

DEPTH BELOW GROUND SURFACE [VERTICAL FT.]	SAMPLE TYPE GRAPHIC	SAMPLE ID NUMBER AND RECOVERY RATIO [IN./IN.]	SPT BLOWS / 6 IN. (OR) CORE RATE / 12 IN. [MIN.]	GEOTECHNICAL TEST DATA				STRATIGRAPHY LOG	STRATUM IDENTIFICATION AND DESCRIPTION	ELEVATION SCALE SHOWN TO NEAREST FT.	REMARKS, OTHER TESTS, AND INSTALLATIONS
				● N-Value, Raw (bpf)	☒ Organic Content (%)	⊕ Moisture Content (%)	▶ Plastic Limit, PL (%)				
30		S9 18/24	10 13 14 15	27				Lean clay (CL) - Stiff to very stiff; brown with olive; moist to wet; mostly medium plasticity FINES, trace fine to medium sand; Sand seams throughout split spoon.	372	Note: Values in brackets preceding a remark indicate depth below ground surface (in feet) corresponding to the remark.	
35		S10 24/24	19 19 18 25	37			Well graded sand with silt (SW-SM) - Dense; orange with brown, wet mostly fine to coarse SAND, few non plastic fines.		367		
40									362	Exploration ended at 36.0 ft.	
45									357		
50									352		
55									347		

For Review
12/10/2023 9:36:53 AM

For Review
12/10/2023 9:36:59 AM

ATTACHMENT C

Geotechnical Laboratory Testing Results



195 Frances Avenue
 Cranston RI, 02910
 Phone: (401)-467-6454
 Fax: (401)-467-2398
thielsch.com
Let's Build a Solid Foundation

Client Information:
 Weston & Sampson
 Reading, MA
 PM: Hector Flores
 Assigned By: Hector Flores
 Collected By: G. Mirabella


Project Information:
Bridge Street Wall Replacement
Erving, MA
 W&S Project Number: ENG22-0635
 Summary Page: 1 of 1
 Report Date: 09.20.22

LABORATORY TESTING DATA SHEET, Report No.: 7422-J-153

Boring No.	Sample No.	Depth (ft)	Laboratory No.	Identification Tests								Proctor / CBR / Permeability Tests							Laboratory Log and Soil Description		
				As Rcvd Moisture Content %	LL %	PL %	Gravel %	Sand %	Fines %	Org. %	pH	Dry unit wt. (pcf)	Test Moisture Content %	γ_d MAX (pcf) / W_{opt} (%)	γ_d MAX (pcf) / W_{opt} (%) (Corr.)	Target Test Setup as % of Proctor	CBR @ 0.1"	CBR @ 0.2"		Permeability cm/sec	
				D2216	D4318		D6913			D2974	D4792			D1557							
B-1	S-7	14-16	22-S-3623				32.4	54.4	13.2												Gray f-m SAND, some f-c Gravel, little Silt
B-3	S-8	29-31	22-S-3624	22.2	32	22	1.5	19.4	79.1												Light Brown CLAY & SILT, little f-m Sand, trace fine Gravel
B-4	S-8	24-26	22-S-3624	32.7	36	22	0.0	6.9	93.1												Light Brown CLAY & SILT, trace f-m Sand
Samples received contained less than 200g ea for both Sieve & Atterberg Limits. Results may not be most representative of samples.																					

For Review
 12/10/2023 9:36:59 AM

Date Received: 09.12.22

Reviewed By: 

Date Reviewed: 09.21.22

This report only relates to items inspect and/or tested. No warranty, expressed or implied, is made.
 This report shall not be reproduced, except in full, without prior written approval from the Agency, as defined in ASTM E329.

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicative of apparently identical samples.

Particle Size Distribution Report

ASTM D6913



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	21.0	11.4	1.3	17.0	36.1	13.2	

Sieve Size or Diam. (mm.)	Finer (%)	Spec. * (%)	Out of Spec. (%)	Pct. of Fines
1"	100.0			
3/4"	79.0			
1/2"	73.9			
3/8"	69.4			
#4	67.6			
#10	66.3			
#20	58.4			
#40	49.3			
#60	38.3			
#100	24.7			
#200	13.2			

Material Description
Gray f-m SAND, some f-c Gravel, little Silt

PL= NP Atterberg Limits LL= NV PI= NP

Coefficients

D₉₀= 22.4928 D₈₅= 21.1436 D₆₀= 0.9774
D₅₀= 0.4422 D₃₀= 0.1847 D₁₅= 0.0842
D₁₀= C_u= C_c=

USCS= SM Classification AASHTO= A-1-b

Test Remarks

* (no specification provided)

Source of Sample: Boring Depth: 14-16'
Sample Number: B-1 / S-7

Sample Date: 09.16.22

Thielsch Engineering Inc.

Cranston, RI

Client: Weston & Sampson
Project: Bridge Street Wall Replacement
Erving, MA
Project No: ENG22-0635

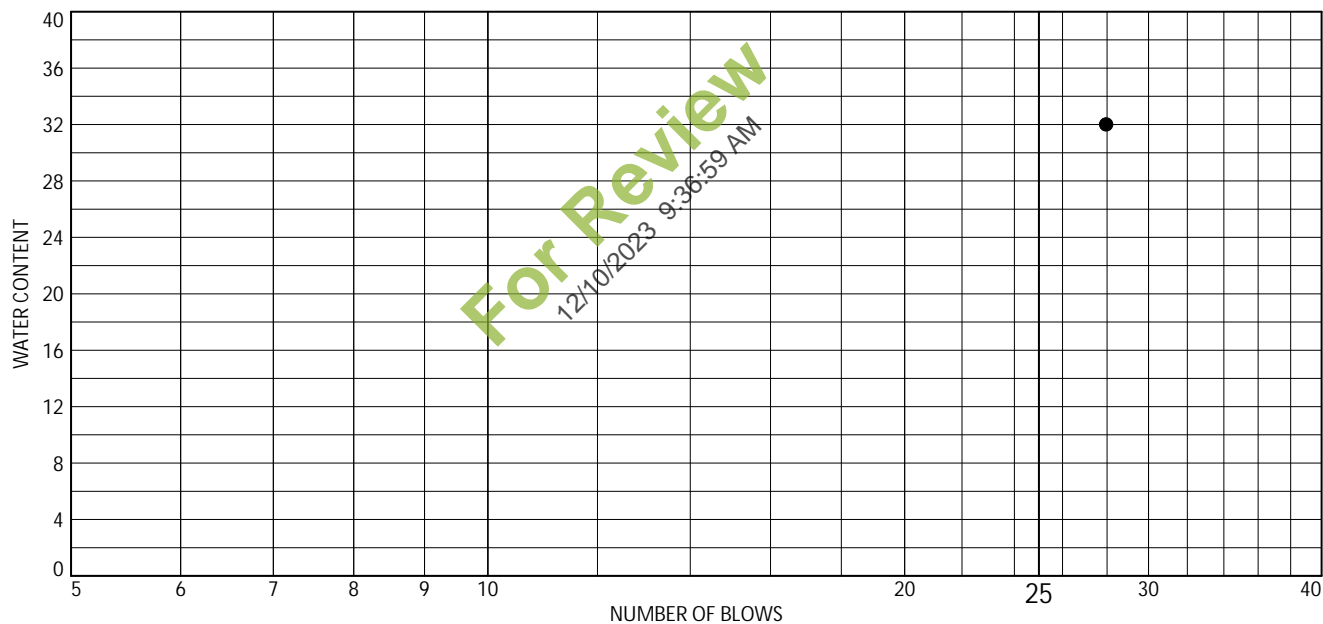
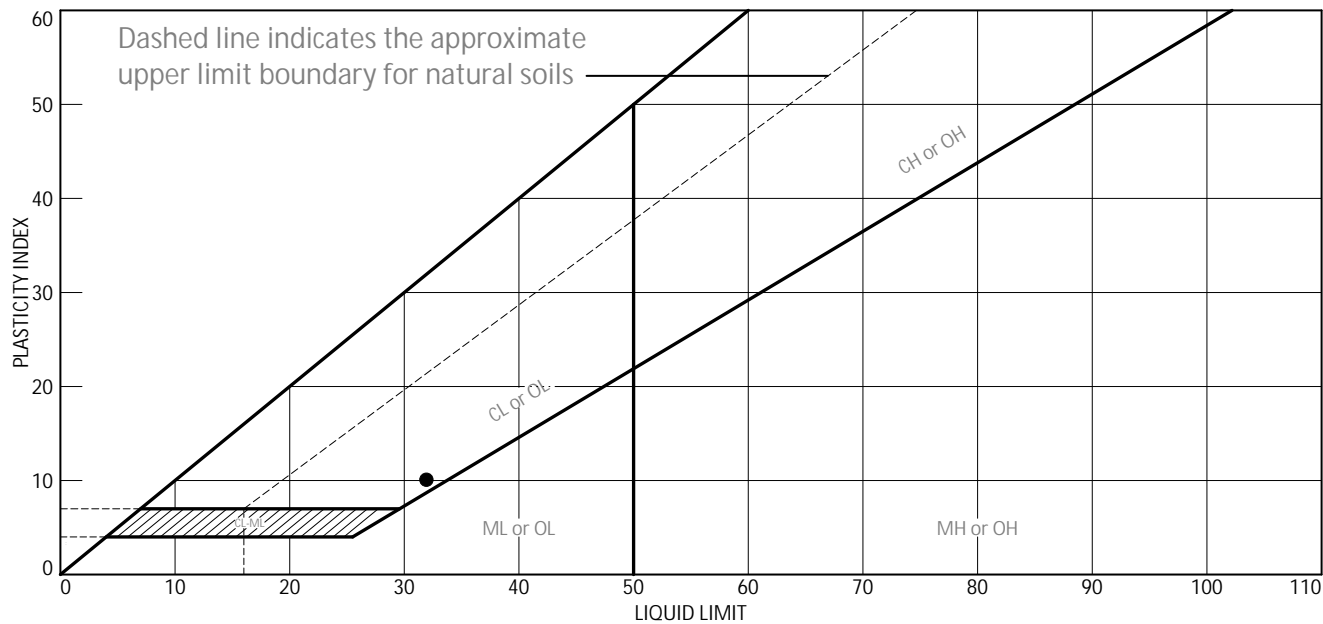
Figure 22-S-3622

Tested By: FR

Checked By:

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicative of apparently identical samples.

LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
● Light Brown CLAY & SILT, little f-m Sand, trace fine Gravel	32	22	10	89.7	79.1	CL

Project No. ENG22-0635 Client: Weston & Sampson
 Project: Bridge Street Wall Replacement
 Erving, MA
 Source of Sample: Boring Depth: 29-31'
 Sample Number: B-3 / S-8

Thielsch Engineering Inc.
 Cranston, RI

Remarks:
 ● Liquid Limit for Sample was calculated using ASTM D 4318 Single Point method.

Figure 22-L-3623

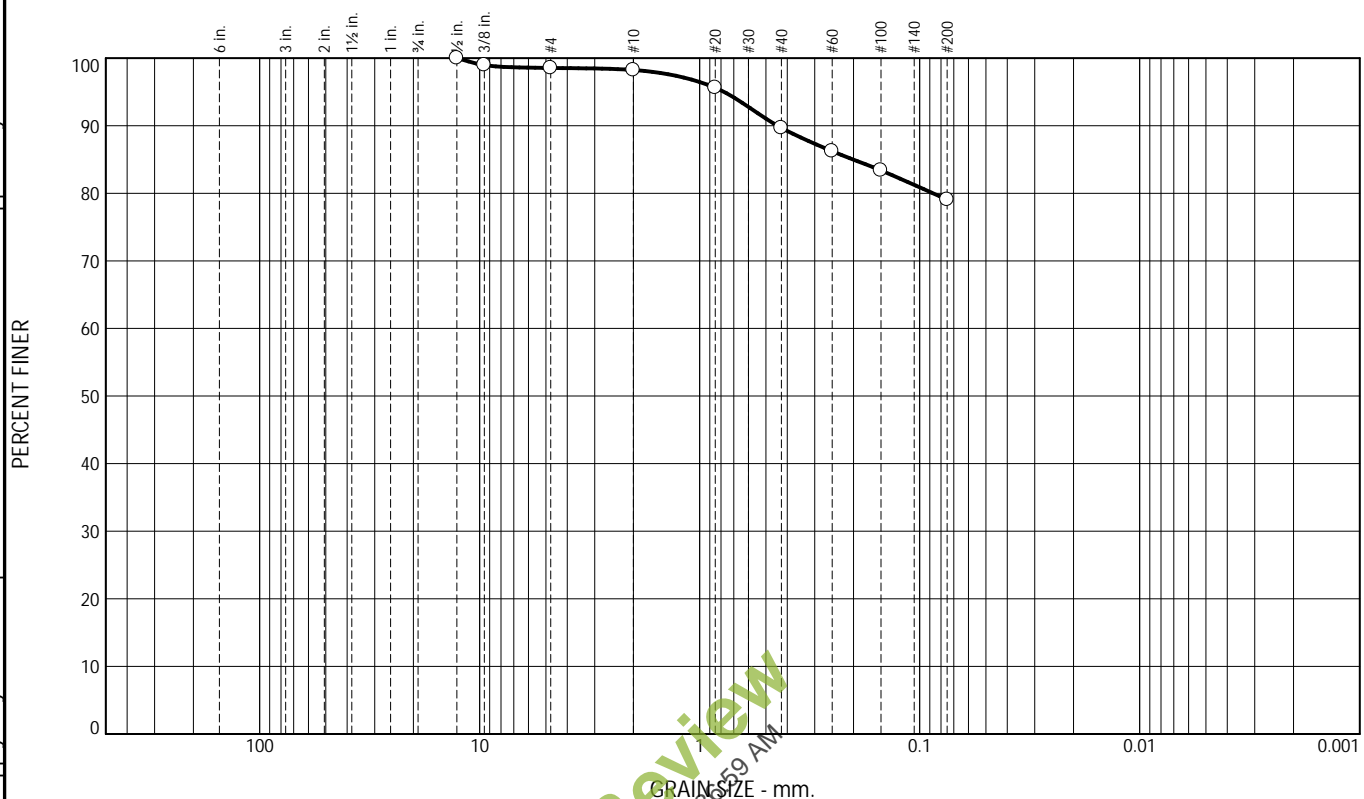
Tested By: SL _____

Checked By:

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicative of apparently identical samples.

Particle Size Distribution Report

ASTM D6913



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.5	0.3	8.5	10.6	79.1	

Test Results (ASTM D6913)				
Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1/2"	100.0			
3/8"	99.0			
#4	98.5			
#10	98.2			
#20	95.6			
#40	89.7			
#60	86.2			96.2
#100	83.4			93.0
#200	79.1			88.2

Material Description

Light Brown CLAY & SILT, little f-m Sand, trace fine Gravel

PL= 22	<u>Atterberg Limits</u>	PI= 10
	LL= 32	
	<u>Coefficients</u>	
D ₉₀ = 0.4436	D ₈₅ = 0.2011	D ₆₀ =
D ₅₀ =	D ₃₀ =	D ₁₅ =
D ₁₀ =	C _u =	C _c =
	<u>Classification</u>	
USCS= CL	AASHTO=	A-4(7)
	<u>Test Remarks</u>	

* (no specification provided)

Source of Sample: Boring Depth: 29-31'
 Sample Number: B-3 / S-8

Sample Date: 09.16.22

Thielsch Engineering Inc.

Cranston, RI

Client: Weston & Sampson
 Project: Bridge Street Wall Replacement
 Erving, MA
 Project No: ENG22-0635

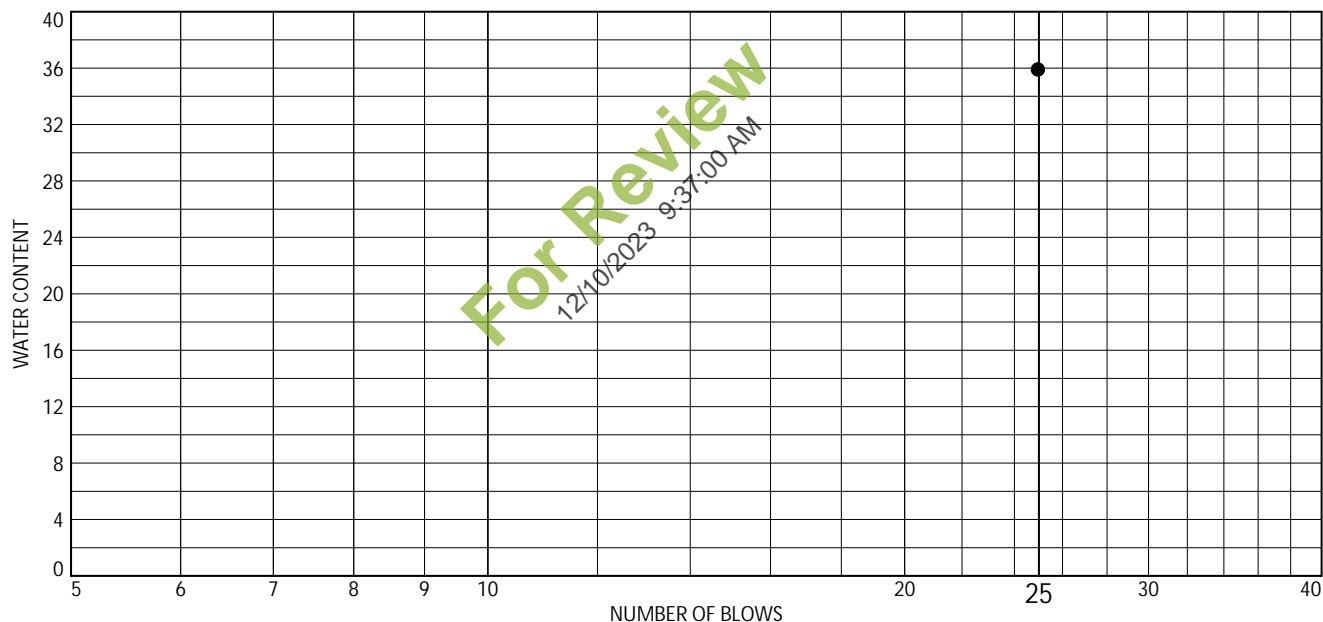
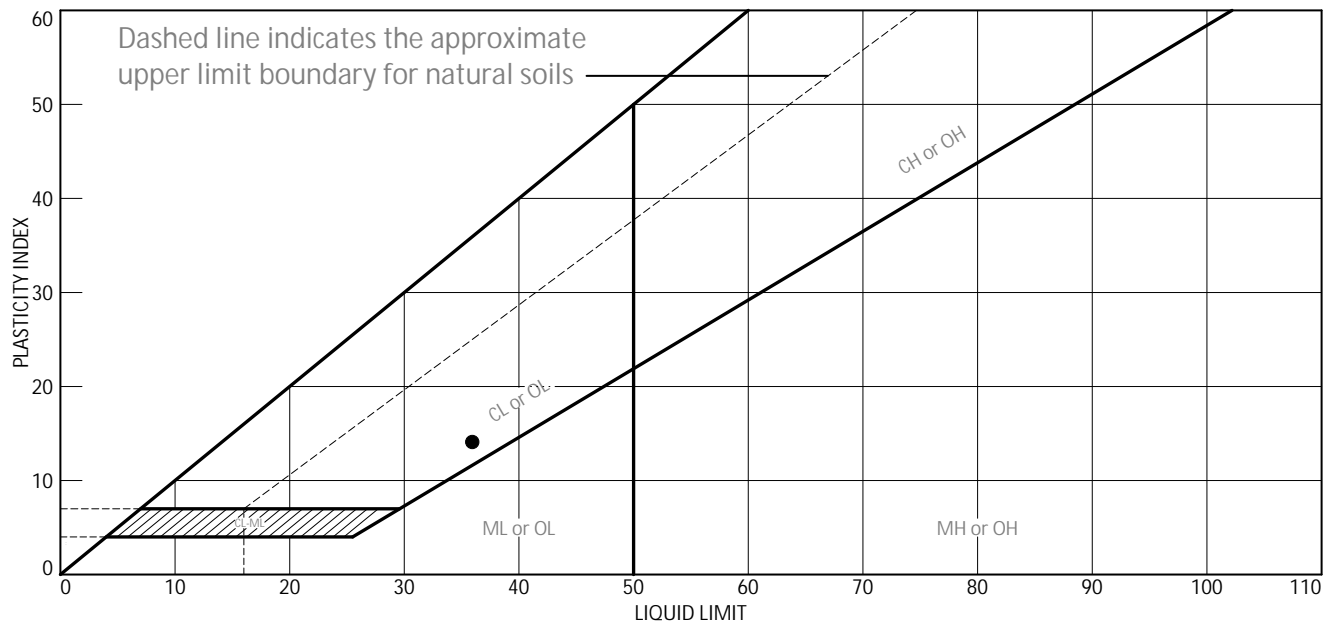
Figure 22-S-3623

Tested By: FR _____

Checked By: _____

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicative of apparently identical samples.

LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
● Light Brown CLAY & SILT, trace f-m Sand	36	22	14	97.4	93.1	CL

Project No. ENG22-0635 Client: Weston & Sampson
 Project: Bridge Street Wall Replacement
 Erving, MA
 Source of Sample: Boring Depth: 24-26'
 Sample Number: B-4 / S-8

Thielsch Engineering Inc.
 Cranston, RI

Remarks:
 ● Liquid Limit for Sample was calculated using ASTM D 4318 Single Point method.

Figure 22-L-3624

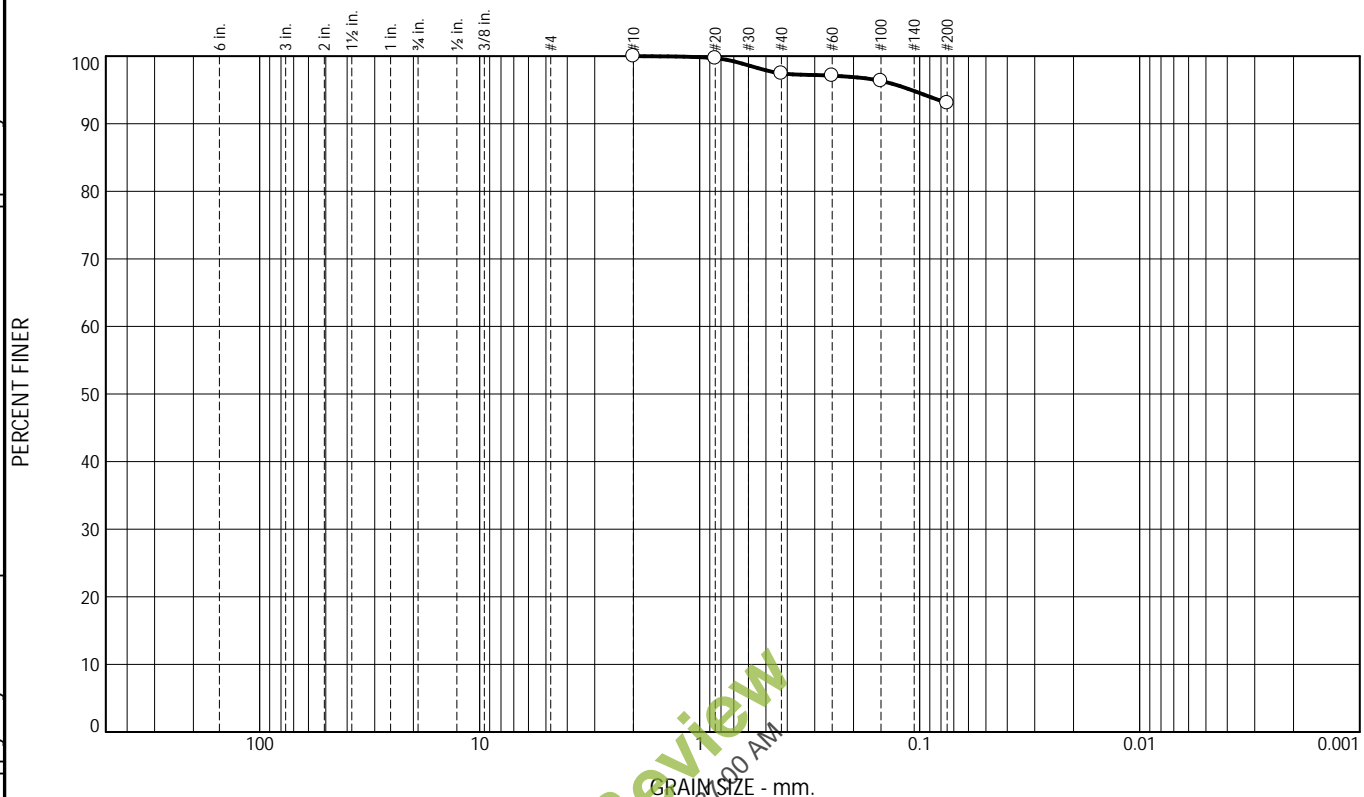
Tested By: SL _____

Checked By:

These results are for the exclusive use of the client for whom they were obtained. They apply only to the samples tested and are not indicative of apparently identical samples.

Particle Size Distribution Report

ASTM D6913



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.6	4.3	93.1	

Sieve Size or Diam. (mm.)	Finer (%)	Spec. * (%)	Out of Spec. (%)	Pct. of Fines
#10	100.0			
#20	99.7			
#40	97.4			
#60	97.1			99.6
#100	96.3			98.9
#200	93.1			95.5

* (no specification provided)

Material Description
Light Brown CLAY & SILT, trace f-m Sand

PL= 22 Atterberg Limits LL= 36 PI= 14

Coefficients

D₉₀= D₈₅= D₆₀=
D₅₀= D₃₀= D₁₅=
D₁₀= C_u= C_c=

USCS= CL Classification AASHTO= A-6(14)

Test Remarks

Source of Sample: Boring Depth: 24-26'
Sample Number: B-4 / S-8

Sample Date: 09.19.22

Thielsch Engineering Inc. Cranston, RI	Client: Weston & Sampson
	Project: Bridge Street Wall Replacement Erving, MA
Project No: ENG22-0635	Figure 22-S-3624

Tested By: FR

Checked By: 

For Review
12/10/2022 9:37:00 AM

ATTACHMENT D

“Important Information about This Geotechnical-Engineering Report,” by GBA, Inc.

Important Information about This

Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

The Geoprofessional Business Association (GBA) has prepared this advisory to help you – assumedly a client representative – interpret and apply this geotechnical-engineering report as effectively as possible. In that way, you can benefit from a lowered exposure to problems associated with subsurface conditions at project sites and development of them that, for decades, have been a principal cause of construction delays, cost overruns, claims, and disputes. If you have questions or want more information about any of the issues discussed herein, contact your GBA-member geotechnical engineer. Active engagement in GBA exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project.

Understand the Geotechnical-Engineering Services Provided for this Report

Geotechnical-engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical-engineering services is typically a geotechnical-engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical-engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

Geotechnical-Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical-engineering study conducted for a given civil engineer

will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client.

Likewise, geotechnical-engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical-engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. *If you are the least bit uncertain* about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

Read this Report in Full

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. *Read and refer to the report in full.*

You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. *The geotechnical engineer who prepared this report cannot accept*

responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

Most of the “Findings” Related in This Report Are Professional Opinions

Before construction begins, geotechnical engineers explore a site’s subsurface using various sampling and testing procedures. *Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed.* The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

This Report’s Recommendations Are Confirmation-Dependent

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations *only after observing actual subsurface conditions* exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. *The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.*

This Report Could Be Misinterpreted

Other design professionals’ misinterpretation of geotechnical-engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals’ plans and specifications; and
- be available whenever geotechnical-engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical-engineering report, along with any attachments or appendices, with your contract documents, *but be certain to note*

conspicuously that you’ve included the material for information purposes only. To avoid misunderstanding, you may also want to note that “informational purposes” means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, *only* from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and *be sure to allow enough time* to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

Read Responsibility Provisions Closely

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled “limitations,” many of these provisions indicate where geotechnical engineers’ responsibilities begin and end, to help others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Geoenvironmental Concerns Are Not Covered

The personnel, equipment, and techniques used to perform an environmental study – e.g., a “phase-one” or “phase-two” environmental site assessment – differ significantly from those used to perform a geotechnical-engineering study. For that reason, a geotechnical-engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated subsurface environmental problems have led to project failures.* If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

Obtain Professional Assistance to Deal with Moisture Infiltration and Mold

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer’s services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, *proper implementation of the geotechnical engineer’s recommendations will not of itself be sufficient to prevent moisture infiltration.* **Confront the risk of moisture infiltration** by including building-envelope or mold specialists on the design team. **Geotechnical engineers are not building-envelope or mold specialists.**



Telephone: 301/565-2733

e-mail: info@geoprofessional.org www.geoprofessional.org

SECTION 00410
FORM OF GENERAL BID

Proposal of _____ (hereinafter called "Bidder")*

a corporation, organized and existing under the laws of the State of _____

a joint venture

a limited liability company

a partnership

an individual doing business as _____

*Insert corporation, partnership, joint venture, limited liability company, or individual as applicable.

To the Town of Erving, Massachusetts (hereinafter called the Owner).

All:

The undersigned Bidder, in compliance with your invitation for bids for the construction of BRIDGE STREET WALL REPLACEMENT PROJECT AND MAPLE AVENUE ROADWAY IMPROVEMENTS PROJECT having examined the plans and specifications with related documents and the site of the proposed work and being familiar with all of the conditions surrounding the construction of the proposed project including the availability of materials and labor, hereby proposes to furnish all superintendence, labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to construct the project in accordance with the contract documents, as prepared by Weston & Sampson Engineers, Inc., within the time set forth therein and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the contract documents, of which this bid is a part.

The Bidder hereby agrees that if selected as the Contractor it will commence work under this contract on or before a date to be fixed in the written "Notice to Proceed" given by the Owner to the Contractor and to fully complete within 120 days as noted on the Notice to Proceed. The Bidder further agrees to pay as liquidated damages the sum of \$1,250 for each consecutive calendar day thereafter during which the work has not been fully completed, as

provided in the "Liquidated Damages" provisions of Section 00800 SUPPLEMENTARY CONDITIONS.

Bidder acknowledges receipt of the following addenda:

No. _____ Dated: _____

No. _____ Dated: _____

No. _____ Dated: _____

No. _____ Dated: _____

The Bidder acknowledges to have inspected the site and to have read and to be thoroughly familiar with the Contract Documents (including all addenda). The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect of its bid.

The Bidder agrees to perform the work described in the specifications and shown on the plans for the following lump sum or unit prices:

For Review
12/10/2023 9:37:00 AM

Item No.	Brief Description, Unit or Lump Sum Price (In Both Words and Figures)	Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project	
		Estimated Quantity, Unit	Total in Figures
SCHEDULE A BRIDGE STREET WALL REPLACEMENT			
1 DRAINAGE PIPE COMPLETE IN PLACE			
1a.	6-inch HDPE N-12 WT drain pipe, per linear foot		
		45 LF	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
1b.	12-inch HDPE N-12 WT drain pipe, per linear foot		
		80 LF	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
2 MANHOLES, CATCH BASINS, STORMWATER TREATMENT SYSTEMS AND APPURTENANCES			
2a.	Precast concrete drain manhole with frame and cover, per each		
		EA	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
2b.	Precast concrete catch basin with frame and grate, per each		
		2 EA	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
2c.	Stormwater treatment system, per each		
		1 EA	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
3 ROCK EXCAVATION AND DISPOSAL			
3a.	Rock excavation and disposal, per cubic yard		
		25 CY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		

*Indeterminate quantity assumed for bid comparison only

Item No.	Brief Description, Unit or Lump Sum Price (In Both Words and Figures)	Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project	
		Estimated Quantity, Unit	Total in Figures
4 MISCELLANEOUS EARTHWORK			
4a.	Changes in earthwork, per cubic yard		
		50 CY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
4b.	Unsuitable material, per cubic yard		
		50 CY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
4c.	Test pits, per cubic yard		
		30 CY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
4d.	Additional crushed stone, per cubic yard		
		50 CY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
5 SURFACE RESTORATION			
5a.	Loaming and seeding, per square yard		
		400 SY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
5b.	Modified rockfill apron, per square yard		
		180 SY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		

For Review
12/10/2023 9:37:01 AM

*Indeterminate quantity assumed for bid comparison only

Item No.	Brief Description, Unit or Lump Sum Price (In Both Words and Figures)	Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project	
		Estimated Quantity, Unit	Total in Figures
5c.	Rip rap scour hole, per square yard		
		10 SY	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
6 HOT MIX ASPHALT CURB			
6a.	Hot mix asphalt curb, per linear foot		
		370 LF	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
7 PAVEMENT REPLACEMENT			
7a.	Temporary trench pavement, per linear foot		
		80 LF	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
7b.	Milling, per square yard		
		40 SY	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
7c.	Roadway reconstruction, per square yard		
		560 SY	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
7d.	Binder course pavement, per ton		
		90 TON	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		

*Indeterminate quantity assumed for bid comparison only

Item No.	Brief Description, Unit or Lump Sum Price (In Both Words and Figures)	Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project	
		Estimated Quantity, Unit	Total in Figures
7e.	Top course pavement, per ton		
		60 TON	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
7f.	Additional pavement, per ton		
		20 TON	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
7g.	Pavement marking, per square foot		
		20 SF	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
8 SEGMENTAL BLOCK RETAINING WALLS AND STEEL SHEET PILING LEFT IN PLACE			
8a.	Segmental block retaining wall, per square foot		
		1,450 SF	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
8b.	Steel sheet piling left in place, per square foot		
		1,000 SF	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		
9 FENCES AND GUARD RAILS			
9a.	Chain link fence, per linear foot		
		140 LF	\$
	Unit price, Dollars and cents (words)		
	\$ Unit Price in Figures		

*Indeterminate quantity assumed for bid comparison only

Item No.	Brief Description, Unit or Lump Sum Price (In Both Words and Figures)	Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project	
		Estimated Quantity, Unit	Total in Figures
9b.	Steel highway guard rail, per linear foot		
		340 LF	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
9c.	Construction fence, per linear foot		
		280 LF	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
10	ENVIRONMENTAL PROTECTION		
10a.	Inlet protection, per each		
		2 EA	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
10b.	Silt fence, per linear foot		
		200 LF	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
10c.	Straw wattle, per linear foot		
		100 LF	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
11	UTILITY POLE RELOCATION		
11a.	Utility pole relocation, allowance		
	Fifteen Thousand Dollars and Zero Cents	1 LS	\$15,000.00
	Unit price, Dollars and cents (words) \$15,000.00 Unit Price in Figures		Fifteen Thousand Dollars and Zero Cents

*Indeterminate quantity assumed for bid comparison only

Item No.	Brief Description, Unit or Lump Sum Price (In Both Words and Figures)	Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project	
		Estimated Quantity, Unit	Total in Figures
12	TRAFFIC CONTROL		
12a.	Uniformed officers for traffic control, per hour		
	One Hundred dollars and zero cents <i>Unit price, Dollars and cents (words)</i>	320 HR	\$32,000.00
	\$100.00 <i>Unit Price in Figures</i>	Thirty Two Thousand Dollars and Zero Cents	
13	MOBILIZATION		
13a.	Mobilization (Schedule A, not more than 5% of the total of items 1a through 12a), lump sum		
	<i>Unit price, Dollars and cents (words)</i>	1 LS	\$
	\$ <i>Unit Price in Figures</i>		
SCHEDULE B POTW #3 PAVEMENT IMPROVEMENTS			
14	SURFACE RESTORATION		
14a.	Loaming and seeding, per square yard		
	<i>Unit price, Dollars and cents (words)</i>	200 SY	\$
	\$ <i>Unit Price in Figures</i>		
15	PAVEMENT REPLACEMENT		
15a.	Milling, per square yard		
	<i>Unit price, Dollars and cents (words)</i>	690 SY	\$
	\$ <i>Unit Price in Figures</i>		
15b.	Roadway reconstruction, per square yard		
	<i>Unit price, Dollars and cents (words)</i>	80 SY	\$
	\$ <i>Unit Price in Figures</i>		
15c.	Binder course pavement, per ton		
	<i>Unit price, Dollars and cents (words)</i>	15 TON	\$
	\$ <i>Unit Price in Figures</i>		

*Indeterminate quantity assumed for bid comparison only

Item No.	Brief Description, Unit or Lump Sum Price (In Both Words and Figures)	Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project	
		Estimated Quantity, Unit	Total in Figures
15d.	Top course pavement, per ton		
		70 TON	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
15e.	Additional pavement, per ton		
		20 TON	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
15f.	Pavement marking, per square foot		
		70 SF	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
16	ENVIRONMENTAL PROTECTION		
16a.	Silt fence, per linear foot		
		380 LF	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
17	MOBILIZATION		
17a.	Mobilization (Schedule B, not more than 5% of the total of items 14a through 16a), lump sum		
		1 LS	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		
SCHEDULE C MAPLE AVENUE ROADWAY IMPROVEMENTS			
18	REMOVE AND REPLACE DRYWELLS		
18a.	Remove and replace drywell, each		
		1 EA	\$
	Unit price, Dollars and cents (words) \$ Unit Price in Figures		

*Indeterminate quantity assumed for bid comparison only

Item No.	Brief Description, Unit or Lump Sum Price (In Both Words and Figures)	Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project	
		Estimated Quantity, Unit	Total in Figures
19	SURFACE RESTORATION		
19a.	Loaming and seeding, per square yard		
		600 SY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
20	PAVEMENT REPLACEMENT		
20a.	Milling, per square yard		
		3,580 SY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
20b.	Top course pavement, per ton		
		320 TON	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
20c.	Additional pavement, per ton		
		40 TON	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
20d.	Paved apron at mailbox, per square yard		
		60 SY	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
21	ENVIRONMENTAL PROTECTION		
21a.	Inlet protection, per each		
		5 EA	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		
21b.	Silt fence, per linear foot		
		120 LF	\$
	<i>Unit price, Dollars and cents (words)</i>		
	\$		
	<i>Unit Price in Figures</i>		

*Indeterminate quantity assumed for bid comparison only

Item No.	Brief Description, Unit or Lump Sum Price (In Both Words and Figures)	Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project	
		Estimated Quantity, Unit	Total in Figures
22	MOBILIZATION		
22a.	Mobilization (Schedule C, not more than 5% of the total of items 18a through 21b), lump sum		
		1 LS	\$
	Unit price, Dollars and cents (words)		
	\$		
	Unit Price in Figures		

The proposed contract price for Schedule A, Items 1a thru 13a, is:

Total Bid in Figures

Total Bid, Dollars and Cents (words)

The proposed contract price for Schedule B, Items 14a thru 17a, is:

Total Bid in Figures

Total Bid, Dollars and Cents (words)

The proposed contract price for Schedule C, Items 18a thru 22a, is:

Total Bid in Figures

Total Bid, Dollars and Cents (words)

The proposed contract price for the Base Bid, Schedule A plus Schedule B plus Schedule C, Items 1a thru 22a, is:

Total Bid in Figures

Total Bid, Dollars and Cents (words)

*Indeterminate quantity assumed for bid comparison only

All entries shall be made clearly in ink or typewritten. Amounts are to be shown in both words and figures. In case of discrepancy between the prices written in words and those written in figures, the amount shown in words shall govern. In the event there is a discrepancy between the unit prices and the total sum of all of the items (the computed contract price), the unit prices shall govern.

The above unit prices shall include all superintendence, labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to cover the finished work of the several kinds called for.

The Bidder understands that all bids for this project are subject to the applicable bidding laws of the Commonwealth of Massachusetts, including General Laws Chapter 30, Section 39M, as amended.

The contract will be awarded to the lowest responsible and eligible bidder.

The Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 30 days, Saturdays, Sundays and legal holidays excluded, after the opening of bids.

Within 10 days of receipt of the written notice of acceptance of this bid, the Bidder will execute the formal agreement attached in Section 00520 AGREEMENT and provide the requisite payment and performance bonds and certificates of insurance.

Bid security is attached in the sum of five percent (5%) of the total bid in accordance with the conditions of Section 00200 INSTRUCTIONS TO BIDDERS. The bid security may become the property of the Owner in the event the contract and bond are not executed within the time set forth above.

The selected Contractor shall furnish a performance bond and a payment bond in an amount at least equal to one hundred percent (100%) of the contract prices in accordance with

Section 00520 AGREEMENT, Section 00610 PERFORMANCE BOND, Section 00615 PAYMENT BOND, and as stipulated in Section 00700 GENERAL CONDITIONS of these specifications.

The undersigned offers the following information as evidence of its qualifications to perform the work as bid upon according to all the requirements of the plans and specifications.

1. Have been in business under present name for _____ years.
2. The names and addresses of all persons interested in the bid (if made by a partnership or corporation) as Principals, are as follows:

(Attach supplementary list if necessary)

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3. The Bidder shall state below what work of a similar character to that included in the proposed contract it has done, and give references that will enable the Owner to judge its experience, skill and business standing (add supplementary page if necessary).

	Completion Date	Project Name	Contract Amount	Design Engineer	Reference Name	Telephone No.
a.						
b.						
c.						
d.						
e.						
f.						

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Pursuant to M.G.L. CH. 62C, Sec 49A, the undersigned Bidder certifies under the penalties of perjury that it is in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

The undersigned Bidder hereby certifies it will comply with the specific affirmative action steps contained in the EEO/AA provisions of this Contract, including compliance with the Disadvantaged Business Enterprise provisions as required under these contract provisions. The contractor receiving the award of the contract shall incorporate the EEO/AA provisions of this contract into all subcontracts and purchase orders so that such provisions will be binding upon each subcontractor or vendor.

The undersigned Bidder hereby certifies that (1) it is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and 3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

The undersigned certifies under penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this paragraph the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity.

The undersigned Bidder hereby certifies, under pains and penalties of perjury, that the foregoing bid is based upon the payment to laborers to be employed on the project of wages in an amount no less than the applicable prevailing wage rates established for the project by the Massachusetts Department of Labor and Workforce Development. The undersigned bidder agrees to indemnify the awarding authority for, from and against any loss, expense, damages, actions or claims, including any expense incurred in connection with any delay or stoppage of

the project work arising out of or as a result of (1) the failure of the said bid to be based upon the payment of the said applicable prevailing wage rates or (2) the failure of the bidder, if selected as the Contractor, to pay laborers employed on the project the said applicable prevailing wage rates.

The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth of Massachusetts under the provisions of Section Twenty-Nine F of Chapter Twenty-Nine, Section 25C (10) of Chapter 152 (workers' compensation) or any other applicable debarment provisions of any other Chapter of the General Laws or any rule or regulations promulgated thereunder; and is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

Respectfully submitted:

Date _____

By _____
(Signature)

(Name - Typed or Printed)

(Title)

(SEAL - if bid is by a corporation)

(Business Name)

(Federal ID Number)

(Business Address)

(City and State)

(Telephone Number)

(Fax Number)

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SECTION 00520

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 2024, by and between the Town of Erving, Massachusetts, hereinafter called "OWNER," and _____, hereinafter called "CONTRACTOR."

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the project described as follows:

**BRIDGE STREET WALL REPLACEMENT AND MAPLE AVENUE
ROADWAY IMPROVEMENTS PROJECT**

hereinafter called the project, for the sum of _____ Dollars and _____ Cents (\$ _____) and all extra work in connection therewith, under the terms as stated in the Contract Documents; and at its own proper cost and expense to furnish superintendence, labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, bailing, shoring, removal, and all other things necessary to complete the said project in accordance with the conditions and prices stated in Section 00410, FORM OF GENERAL BID, Section 00700, GENERAL CONDITIONS, Section 00800, SUPPLEMENTARY CONDITIONS, Section 00830, STATE REGULATIONS, the plans, which include all maps, plates, drawings, blue prints, and the specifications and all other contract documents therefor as prepared by Weston & Sampson Engineers, Inc., including all bid documents.

The CONTRACTOR hereby agrees to commence work under this contract on or before a date to be fixed in the written Notice to Proceed given by the OWNER to the CONTRACTOR and to fully complete the project within 120 consecutive days of the start date fixed in the Notice to Proceed. The CONTRACTOR further agrees to pay as liquidated damages the sum of \$1,250 for each consecutive calendar day thereafter during which the work has not been fully completed, as provided in the Liquidated Damages provisions of Section 00800 SUPPLEMENTARY CONDITIONS.

The CONTRACTOR shall not discriminate against or exclude any person from participation herein on grounds of race, color, religious creed, national origin, sex, sexual orientation, ancestry, or age; and that it shall take affirmative actions to insure that applicants are employed, and that employees are treated during their employment, without regard to race, color, religious creed, national origin, sex, sexual orientation, ancestry, age, or handicapped status.

The CONTRACTOR shall not participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue Code of 1986, as amended, or engage in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws.

Applicable provisions of Massachusetts General Laws and Regulations and/or the United States Code and Code of Federal Regulations govern this Agreement and any provision in violation of the

foregoing shall be deemed null, void and of no effect. Where conflict between Federal and State Laws and Regulations exists, the more stringent requirement shall apply.

Subject to G.L. c.30, sec. 39K and/or sec. 39G and G.L. c.30, sec. 39F, as applicable, the OWNER agrees to pay the CONTRACTOR in current funds for the performance of the Agreement, subject to additions and deductions, as provided in Section 00700, GENERAL CONDITIONS, and to make payments on account thereof as provided in Section 00700, GENERAL CONDITIONS and Section 00800, SUPPLEMENTARY CONDITIONS

In accordance with the requirements of G.L. c.149, §27B, the Contractor shall submit, and shall require all of its subcontractors required to keep a record of hours and wages paid to laborers employed on the project to submit, to the awarding authority on a weekly basis, copies of such records. All such weekly submissions shall be accompanied by the following certification:

The undersigned contractor hereby certifies, under the pains and penalties of perjury, that the foregoing payroll records are true and accurate records of the wages paid to laborers employed on the project for the period stated and said wages are in an amount no less than the prevailing wage rates established for the project by the Massachusetts Department of Labor and Workforce Development. The undersigned contractor agrees, in addition to any other remedies available to the awarding authority, to indemnify the awarding authority for, from and against any loss, expense, damages, actions or claims, including any expense incurred in connection with any delay or stoppage of the project work, arising out of or as a result of (1) the contractor's failure to pay laborers employed on the project the said applicable prevailing wage rates; (2) the failure of the foregoing payroll records to accurately state the said applicable prevailing wage rates; or (3) the failure of the foregoing payroll records to accurately represent the wages actually paid to laborers employed on the project.

The Agreed upon DIRECT LABOR MARKUP (percentage) for Change Orders on this project shall be _____ percent.

IN WITNESS WHEREOF, the parties to these presents have executed this Agreement in six (6) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

AGREED:

_____, Massachusetts
(Owner)

By _____

(Name)

(Title)

(Contractor)

By _____

(Name)

(Title)

(Address)

(City and State)

Approved as to Form:

By _____
(Owner's Counsel)

(Name)

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In accordance with M.G.L. C.44, Section 31C, this is to certify that an appropriation in the amount of this Contract is available therefor and that the _____ has been authorized to execute the Contract and approve all requisitions and change orders.

By _____
(Owner's Accountant)

(Name)

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CERTIFICATE OF VOTE
(to be filed if Contractor is a Corporation)

I, _____, hereby certify that I am the duly qualified and acting Secretary of
(Secretary of Corporation)
_____ and I further certify that a meeting of the Directors of said company,
(Name of Corporation)
duly called and held on _____, at which all members were present and voting, the
(Date of Meeting)
following vote was unanimously passed:

VOTED: To authorize and empower

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Anyone acting singly, to execute Forms of General Bid, Contracts or Bonds on behalf of the Corporation.

I further certify that the above vote is still in effect and has not been changed or modified in any respect.

By: _____
(Secretary of Corporation)

A True Copy:

Attest: _____
(Notary Public)

My Commission Expires: _____
(Date)

Contractor's Certification (Continued)

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean natural person, business, partnership, corporation, committee, union, club or other organization, entity, or group of individuals.

Signature _____

Date _____

Print Name & Title

Company Name

CERTIFICATE OF TAX COMPLIANCE

Pursuant to Chapter 62C of the Massachusetts General Laws, Section 49A (b), I

_____, authorized signatory for _____

Name of individual

Name of contractor

do hereby certify under the pains and penalties of perjury that said contractor has complied with all laws of the Commonwealth of Massachusetts relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Signature

Date

LABOR HARMONY AND OSHA TRAINING REQUIREMENTS

The undersigned certifies under penalties of perjury that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed at the work and that all employees to be employed at the worksite and in the work will have completed an OSHA-approved construction safety and health course lasting at least ten (10) hours.

Signature _____

Date _____

Print Name & Title

Company Name

Subcontractor's Certification

Prior to the award of any subcontract, regardless of tier, the prospective subcontractor must execute and submit to the General Contractor the following certification, which will be deemed a part of the resulting subcontract:

SUBCONTRACTOR'S CERTIFICATION

Name of the Subcontractor

certifies that it:

1. Will not discriminate in their employment practices;
2. Intends to use the following listed construction trades in the work under the contract:

and

3. Will make good faith efforts to comply with the minority employee and women employee workforce participation ratio goals and specific affirmative action steps contained herein; and
4. Is in compliance with all applicable federal and state laws, rules, and regulations governing fair labor and employment practices; and
5. Will provide the provisions of the "Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program" to each and every subcontractor employed on the Project and will incorporate the terms of this Section into all subcontracts and work orders entered into on the Project.
6. Agrees to comply with all provisions contained herein.

Signature of authorized representative of Subcontractor

Date

Printed name of authorized representative of Subcontractor

END OF SECTION

SECTION 00610

PERFORMANCE BOND

KNOW EVERYONE BY THESE PRESENTS: That we _____
(Name of Contractor)
a _____ hereinafter called "Principal" and
(Corporation, Partnership, Joint Venture, LLC or Individual)
_____ of _____, State of _____
(Surety) (City)

hereinafter called the "Surety" and licensed by the State Division of Insurance to do business under the laws of the Commonwealth of Massachusetts, are held and firmly bound to the Town of Erving, Massachusetts, hereinafter called "Owner", in the penal sum of _____ Dollars and _____ Cents(\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal has entered into a certain contract with the Owner (the "Contract"), dated the _____ day of _____, 20____, which Contract is by reference made a part hereof, for the construction described as follows:

BRIDGE STREET WALL REPLACEMENT AND MAPLE AVENUE ROADWAY IMPROVEMENTS PROJECT

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of the Contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if it shall satisfy all claims and demands incurred under the Contract, and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise, this obligation shall remain in full force and effect.

PROVIDED, FURTHER, that the Surety's obligation under this Bond shall arise after (1) the Owner has declared the Principal in default of the Contract or any provision thereof, or (2) has declared that the Principal has failed, or is otherwise unable or unwilling, to execute the work consistent with, and in conformance to, the Contract (collectively referred to as a "Contractor Default"). The determination of a Contractor Default shall be made solely by the Owner. The Owner need not terminate the Contract to declare a Contractor Default or to invoke its rights under this Bond, and Contractor hereby agrees not to assert any claims against Surety under any indemnity or similar agreements on the grounds that Surety has interfered with the Contract by fulfilling its obligations hereunder in the absence of a termination of said Contract.

When the Surety's obligation under this Bond arises, the Surety, at its sole expense and at the consent and election of the Owner, shall promptly take one of following steps: (1) arrange for the Principal to perform and complete the work of the Contract; (2) arrange for a contractor other

than the Principal to perform and complete the work of the Contract; (3) reimburse the Owner, in a manner and at such time as the Owner shall reasonably decide, for all costs and expenses incurred by the Owner in performing and completing the work of the Contract. Surety will keep Owner reasonably informed of the progress, status and results of any investigation of any claim of the Owner.

If the Surety does not proceed as provided in this Bond with due diligence and all deliberate speed, the Surety shall be deemed to be in default of this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner.

After the Surety's obligation under this Bond arises, the Surety is obligated, to the limit of the amounts of this Bond, for (1) the correction of defective work and completion of the Contract; (2) additional design, professional services, and legal costs, including attorney's fees, resulting from the Contractor Default or from the default of the Surety under this Bond; (3) any additional work beyond the Contract made necessary by the Contractor Default or default of the Surety under this Bond; (4) indemnification obligations of the Principal, if any, as provided in the Contract; and (5) liquidated damages as provided in the Contract, or if no such damages are specified, actual damages and consequential damages resulting from the Contractor Default or any default of the Surety under this Bond.

Any proceeding, legal or equitable, under this Bond shall be instituted in any court of competent jurisdiction in the Commonwealth of Massachusetts.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

The Surety providing the Bond shall have a rating of A or better within Best's Key Rating Guide.

IN WITNESS WHEREOF, this instrument is executed in ____ () counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20__.

ATTEST:

_____	_____
Principal	Witness as to Principal Signature
By _____	_____
Signature	Name and Title
_____	_____
Name and Title	Address
_____	_____
Address	City and State

City and State	

(SEAL)

ATTEST:

_____	_____
Surety	Witness as to Surety Signature
By _____	_____
Attorney-in-Fact Signature	Name and Title
_____	_____
Name and Title	Address
_____	_____
Address	City and State

City and State	

(SEAL)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute Bond.

END OF SECTION

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SECTION 00615

PAYMENT BOND

KNOW EVERYONE BY THESE PRESENTS: That we _____
 _____ (Name of Contractor)
 a _____ hereinafter called "Principal" and
 (Corporation, Partnership, Joint Venture, Limited Liability Company, or Individual)
 _____ of _____, State of _____
 _____ (Surety) _____ (City) _____ (State)

hereinafter called "Surety" and licensed by the State Division of Insurance to do business under the laws of the Commonwealth of Massachusetts are held and firmly bound to the Town of Erving, Massachusetts, hereinafter called "Owner," in the penal sum of _____ Dollars and _____ Cents (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal has entered into a certain contract with the Owner (the "Contract"), dated the _____ day of _____, 20____, which Contract is by reference made a part hereof, for the construction described as follows:

**BRIDGE STREET WALL REPLACEMENT AND MAPLE AVENUE
 ROADWAY IMPROVEMENTS PROJECT**

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this Contract or to the work or to the specifications. The Surety Company providing the bond shall have a rating of A or better within the Best Key Rating Guide.

PROVIDED, FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in ____ () counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20__.

ATTEST:

_____	_____
Principal	Witness as to Principal Signature
By _____	_____
Signature	Name and Title
_____	_____
Name and Title	Address
_____	_____
Address	City and State

City and State	

(SEAL)

ATTEST:

_____	_____
Surety	Witness as to Surety Signature
By _____	_____
Attorney-in-Fact Signature	Name and Title
_____	_____
Name and Title	Address
_____	_____
Address	City and State

City and State	

(SEAL)

NOTE: Date of Bond must not be prior to date of Contract. If Contractor is a Partnership, all partners should execute Bond.

END OF SECTION

Section 00700

GENERAL CONDITIONS

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This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

- requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
1. does not conform to the Contract Documents;
 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 101.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
- a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

- Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 Contractor's Insurance

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 1. include at least the specific coverages required;
 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Completed Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

- A. *Shop Drawing and Sample Requirements*
 - 1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
 - 2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
1. Observations by Engineer;
 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. Use or occupancy of the Work or any part thereof by Owner;
 5. Any review and approval of a Shop Drawing or Sample submittal;
 6. The issuance of a notice of acceptability by Engineer;
 7. The end of the correction period established in Paragraph 15.08;
 8. Any inspection, test, or approval by others; or

9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

- 9.05 *Lands and Easements; Reports, Tests, and Drawings*
- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
 - B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
 - C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.
- 9.06 *Insurance*
- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.
- 9.07 *Change Orders*
- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.
- 9.08 *Inspections, Tests, and Approvals*
- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.
- 9.09 *Limitations on Owner's Responsibilities*
- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- 9.10 *Undisclosed Hazardous Environmental Condition*
- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.
- 9.11 *Evidence of Financial Arrangements*
- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).
- 9.12 *Safety Programs*
- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
 - B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontractors are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

- 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
- 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on, or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
- 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
- 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
- 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 6. Expenses incurred in preparing and advancing Claims.
- 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
- 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:* Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance:* Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

- attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
 - G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 2. agree with the other party to submit the dispute to another dispute resolution process; or
 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SECTION 00800

SUPPLEMENTARY CONDITIONS

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For Review
12/10/2023 9:37:14 AM

SUPPLEMENTARY CONDITIONS

AMENDMENTS TO GENERAL CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC C-700, 2018 edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1. DEFINITIONS AND TERMINOLOGY

Delete the words "The individual or entity named as such in the Agreement" in 1.01.A.22 of the General Conditions, "Engineer", and insert the following in their place:

"The individual or entity duly appointed by the Owner to undertake the duties and powers herein assigned to the Engineer, acting either directly or through duly appointed representatives."

ARTICLE 2. PRELIMINARY MATTERS

SC-2.02

Delete Paragraph 2.02.A in its entirety and insert the following new paragraph in its place:

"A. Owner shall furnish to Contractor two printed copies of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction."

SC-2.03

Delete paragraph 2.03 A.3 of the General Conditions and replace with the following:

3. a preliminary Schedule of Values for each Lump Sum item listed in the Bid, which includes quantities and prices of items which when added together equal the Lump Sum Bid Price and subdivides the Lump Sum Bid item into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

SC-2.05

Delete paragraph 2.05 A.3 of the General Conditions and replace with the following.

3. Contractor's Schedule of Values for Lump Sum Items will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Lump Sum Price to the component parts of the Work associated with the Lump Sum Item.

ARTICLE 3. CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

SC-3.01

Add the following sentence at the end of Paragraph 3.01A of the General Conditions:

"...by all. Each and every provision of law and clause required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion."

SC-3.03

Delete the last phrase of paragraph 3.03 A.3 of the General Conditions starting with "had", and substitute the following:

"knew or reasonably should have known thereof"

ARTICLE 4. COMMENCEMENT AND PROGRESS OF THE WORK

SC-4.01

Add a new paragraph immediately after paragraph 4.01A of the General Conditions which is to read as follows:

"B. Notwithstanding the time limitations provided in paragraph 4.01A, the OWNER may desire to commence the Contract Times later than the sixtieth day after the bid opening. The OWNER and CONTRACTOR, upon mutual agreement, may extend the commencement of the Contract Times to any date that they elect. OWNER must obtain CONTRACTOR's approval for extending the time beyond the dates/times stated in the Contract Documents."

SC-4.03

Add a new paragraph immediately after paragraph 4.03A of the General Conditions which is to read as follows:

"B. Engineer may check the lines, elevations and reference marks set by Contractor, and Contractor shall correct any errors disclosed by such check. Such a check shall not be considered as approval of Contractor's work and shall not relieve Contractor of the responsibility for construction of the entire Work in accordance with the Contract Documents. Contractor shall furnish personnel to assist Engineer in checking lines and grades."

SC-4.04

Add the following paragraph after paragraph 4.04B of the General Conditions:

"C. The Contractor's resident superintendent shall attend monthly progress meetings at the site of the work with the Engineer and others as appropriate to review schedule status and such other pertinent subjects as may be listed on the agenda by the Engineer."

SC-4.05

Delete Article 4.05A in its entirety and replace with the following:

"A. The Contractor hereby agrees that the Contractor shall have no claim for damages of any kind against the Owner or the Engineer on account of any delay in the commencement or performance of any of the work or any delay or suspension of any portion of the work, whether such delay is caused by the Owner, the Engineer, or otherwise except as provided for within the prevailing statutes. The Contractor acknowledges that the Contractor's sole remedy for any such delay and/or suspension will be an extension of time as provided in the Contract Documents. The Contractor will under no circumstances be eligible for additional compensation on account of any delay even if an extension of time is granted by the Owner.

Add the following to the paragraph that follows 4.05E:

" Accumulating the amount of time required to complete a series of additional work items or delays and adding this time to the original Contract Time will not be considered justification for an extension of time. To justify an extension of Contract Time, the Contractor must prove clearly and convincingly that the critical path for construction has been impacted by circumstances beyond the control of the Contractor and that the CPM schedule cannot be revised to eliminate the need for the requested time extension."

Add the following new paragraphs after paragraph 4.05G of the General Conditions:

"4.06 Liquidated Damages:

A. If the Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the Owner the amount specified in the Contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contract shall be in default after the time stipulated in the Contract for completing the work. Such damages may be retained from time to time by the Owner from progress payments or any amounts owing to the Contractor, or otherwise collected.

B. The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount

of damages which the Owner would sustain and said amount shall be retained from time to time by the Owner from current periodical estimates.

- C. It is further agreed that time is of the essence of each and every portion of this Contract and of the specifications wherein as definite and certain length of times if fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. Provided that the Contractor shall not be charged with liquidated damages of any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner; Provided, further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:
- 1) to any preference, priority or allocation order duly issued by the Government;
 - 2) to unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and
 - 3) to any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections C (1) and C (2) above;
- D. Provided, further, that the Contractor shall, within thirty (30) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the Contract, notify the Owner, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter."

ARTICLE 5. SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

SC-5.03

Delete the term "Supplementary Conditions" of paragraph 5.03A of the General Conditions and replace it with "Contract Documents".

Delete the term "Supplementary Conditions" of paragraph 5.03C line 2 of the General Conditions and replace it with "Contract Documents".

SC-5.05

Delete the following words from line 3 of paragraph 5.05 F.1 of the General Conditions:

"...or was not shown or indicated with reasonable accuracy"

SC-5.06

Delete the term “Supplementary Conditions” in paragraph 5.06A of the General Conditions and replace it with “Contract Documents”.

Add the following to the first sentence of paragraph 5.06C:

“or unless Contractor caused or contributed to such Hazardous Environmental Condition.”

ARTICLE 6. BONDS AND INSURANCE

NOTICE TO CONTRACTOR:

1. Proof of Insurance coverage shall be furnished to the Owner in accordance with the schedule for submittal of Bonds and Agreements.
2. Additionally, refer to Article 2. PRELIMINARY MATTERS, Paragraph SC-2.01 B of the General Conditions.

SC-6.01

Insert these sentences following SC-6.01.A of the General Conditions:

“The Surety Company providing the bonds shall have a rating of A or better within the Best Key Rating Guide and be licensed by the Massachusetts Division of Insurance. The CONTRACTOR shall pay the premiums for such Bonds.”

SC-6.02

“Delete paragraph 6.02D of the General Conditions in its entirety.”

Add the following paragraph to paragraph 6.02N:

“The Contractor shall immediately stop work on the Project and shall not resume work until the Contractor provides evidence, to the Owner and Engineer, in the form of an acceptable insurance certificate, of new insurance coverage that replaces all cancelled coverage that is required for the Project.”

SC-6.03

Add the following paragraphs to SC-6.03B of the General Conditions:

- “6. If the aggregate limits of liability indicated in Contractor's insurance provided in accordance with paragraph 6.03 are not sufficient to cover all claims for damages arising from its operations under this Contract and from any other work performed by it or if the commercial general liability insurance policy of insurance does not provide that the general aggregate limits apply on a per project and per location basis, Contractor shall have the policy amended

so that the aggregate limits of liability required by this Contract will be available to cover all claims for damages due to operations under this Contract.

7. Include by endorsement that the insurer shall waive all rights of subrogation in favor of the Owner, Engineer and any other party named in the written contract against whom the insurer must agree to waive rights of subrogation.”

Insert “railroad protective liability” in line 2 of paragraph 6.03C.

Insert “except employer’s liability” after the word “insureds” in line 1 of paragraph 6.03C.1.

Add the following paragraphs after 6.03C:

- “D. *Workers’ Compensation and Employer’s Liability:* Contractor shall purchase and maintain workers’ compensation and employer’s liability insurance, including, as applicable, United States Longshoreman and Harbor Workers’ Compensation Act, Jones Act, stop-gap employer’s liability coverage for monopolistic states, and foreign voluntary workers’ compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers’ Compensation and Related Policies	Policy limits of not less than:
Workers’ Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman’s)	Statutory
Foreign voluntary workers’ compensation (employer’s responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	N/A
Bodily injury by disease—aggregate	N/A
Employer’s Liability	
Each accident	\$100,000
Each employee	\$100,000
Policy limit	\$500,000
Stop-gap Liability Coverage***	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker’s compensation or commercial general liability policy with a minimum limit of:	\$

- E. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:

1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor’s employees,

2. damages insured by reasonably available personal injury liability coverage, and
3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

F. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
4. Underground, explosion, and collapse coverage.
5. Personal injury coverage.
6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10, CG 20 33 and CG 20 37 or insurer's endorsement offering similar coverage. If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
7. For design professional additional insureds, ISO Endorsement CG 20 32 or insurer's endorsement offering similar coverage.
8. Independent Contractors Coverage.

G. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:

1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).

2. Any exclusion for water intrusion or water damage.
3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
4. Any exclusion of coverage relating to earth subsidence or movement.
5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
6. Any limitation or exclusion based on the nature of Contractor's work.
7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

H. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$1,000,000

- I. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.
- J. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$5,000,000
General Aggregate	\$5,000,000

- K. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements:* Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limits equivalent to those

required in paragraph 6.03 after accounting for partial attribution of its limits to underlying policies, as allowed above.

- L. *Contractor's Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance must be maintained for no less than three years after final completion.

Contractor's Pollution Liability	Policy limits of not less than:
Each Occurrence/Claim	\$2,000,000
General Aggregate	\$2,000,000

- M. *Contractor's Professional Liability Insurance:* If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Contractor's Professional Liability	Policy limits of not less than:
Each Claim	\$1,000,000
Annual Aggregate	\$1,000,000

- N. *Railroad Protective Liability Insurance:* Prior to commencing any Work within 50 feet of railroad-owned and controlled property, Contractor shall (1) endorse its commercial general liability policy with ISO CG 24 17, removing the contractual liability exclusion for work within 50 feet of a railroad, (2) purchase and maintain railroad protective liability insurance meeting the following requirements, (3) furnish a copy of the endorsement to Owner, and (4) submit a copy of the railroad protective policy and other railroad-required documentation to the railroad, and notify Owner of such submittal.

Railroad Protective Liability Insurance	Policy limits of not less than:
Each Claim	N/A
Aggregate	N/A

- O. *Unmanned Aerial Vehicle Liability Insurance:* If Contractor uses unmanned aerial vehicles (UAV—commonly referred to as drones) at the Site or in support of any aspect of the Work, Contractor shall obtain UAV liability insurance in the amounts stated; name Owner, Engineer, and all individuals and entities identified in the Supplementary Conditions as additional insureds; and provide a certificate to Owner confirming Contractor's compliance with this requirement. Such insurance will provide coverage for property damage, bodily injury or death, and invasion of privacy.

Unmanned Aerial Vehicle Liability Insurance	Policy limits of not less than:
Each Claim	\$500,000
General Aggregate	\$1,000,000

P. *Other Required Insurance:* None

SC 6.04

Delete Article 6.04 of the General Conditions in its entirety.

SC-6.05

Amend the last sentence of paragraph 6.05A of the General Conditions by striking out the words "held by Owner or Contractor as trustee or fiduciary, or."

SC-6.07

Add the following paragraph 6.07 after paragraph 6.06 of the General Conditions:

“6.07 Owner’s Objections to Contractor’s Insurance Coverage

A. If Owner has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained by Contractor in accordance with this Article 6 on the basis of its not complying with the Contract Documents, Owner will notify Contractor in writing thereof within thirty days of the date of delivery of such certificates to Owner in accordance with paragraph 6.02D. Contractor will provide such additional information in respect of insurance provided by him as Owner may reasonably request.”

ARTICLE 7. CONTRACTOR'S RESPONSIBILITIES

SC-7.02

Delete paragraph 7.02B of the General Conditions in its entirety and replace with the following:

"B. At the site of the Work the Contractor shall employ a full-time construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Engineer and shall be one who will be continued in the capacity for the particular job involved unless the representative ceases to be on the Contractor's payroll. If at any time during the Work the representative is deemed by the Engineer to be no longer acceptable, the representative shall be promptly replaced by the

Contractor. All communications to the superintendent or foreman shall be as binding as if given to the Contractor."

SC-7.08

Delete the second sentence in paragraph 7.08A of the General Conditions.

SC-7.13

In line 3 of paragraph 7.13G of the General Conditions change "Supplementary Conditions" to "Contract Documents".

SC-7.16

In paragraph 7.16C.1 of the General Conditions, delete the word "timely" from the first line.

In paragraph 7.16E.1.b of the General Conditions, delete the word "timely" from the first line.

SC-7.18

Change the phrase "negligent act or omission" to "negligent or wrongful act or omission" in line 11 of paragraph 7.18A of the General Conditions.

Add the following to the end of paragraph 7.18A of the General Conditions:

"The Contractor hereby acknowledges its obligation under the foregoing paragraph to indemnify the Engineer and Owner against judgments suffered because of the Contractor's work and to assume the cost of defending the Engineer and Owner against claims as described in the foregoing paragraph."

ARTICLE 9. OWNER'S RESPONSIBILITIES

SC-9.02

Delete the phrase "provided Contractor makes no reasonable objection to the replacement engineer" in paragraph 9.02A of the General Conditions.

SC-9.06

Delete paragraph 9.06A of the General Conditions in its entirety.

SC-9.09

Insert the following after the first sentence of paragraph 9.09A of the General Conditions:

"However, the Owner shall have the right to direct the Contractor to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto."

ARTICLE 10. ENGINEER'S STATUS DURING CONSTRUCTION

SC-10.01

Add a new paragraph 10.01B after paragraph 10.01A of the General Conditions, which is to read as follows:

"B. Nothing contained in the Contract Documents shall be construed to create a contractual relationship of any kind (1) between the Engineer and Contractor, (2) between the Owner and a Subcontractor or Subcontractors, or (3) between any person or entities other than the Owner and Contractor. The Engineer shall, however, be entitled to performance and enforcement of obligations under the Contract Documents intended to facilitate performance of the Engineer's duties."

SC-10.02

Insert the following at the end of paragraph 10.02B of the General Conditions:

"However, the Engineer shall have the right to direct the Contractor to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto."

SC-10.03

Delete the last sentence of paragraph 10.03B.

SC-10.07

Insert the following after the first sentence of paragraph 10.07B of the General Conditions:

"However, the Engineer shall have the right to direct the Contractor to perform the Work according to any sequence schedule set forth in the Contract Documents or established pursuant thereto."

ARTICLE 13. COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

Delete Article 13 of the General Conditions in its entirety and replace with the following:

"A. The unit price of an item of Unit Price work shall be subject to reevaluation and adjustment under the following conditions:

- (1) If the total extended bid price [Estimated Quantity times the Bid Unit Price] of a particular item of Unit Price Work amounts to 5 percent or more of the Original Contract Price and the variation in the quantity of the particular item of Unit Price

Work performed by Contractor differs by more than 15 percent from the estimated quantity of such item indicated in the Agreement; and

- (2) If there is no corresponding adjustment with respect to any other item of work; and
- (3) If Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may make a claim for an adjustment in the Contract Price in accordance with Article 12 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed. If Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner shall be entitled to an adjustment in the unit price in an amount determined by the Engineer. Engineer shall not be liable in connection with any determination relating to adjustments which is rendered in good faith."

ARTICLE 14. TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

SC-14.03

Delete the word "Prompt" at the beginning of paragraph 14.03C of the General Conditions.

SC-14.07

Revise paragraph 14.07A of the General Conditions as follows:

- A. Delete the word "seven" and replace it with the word "ten" so that it reads "after ten days' written notice to Contractor."

ARTICLE 15. PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

SC-15.01

Delete paragraph 15.01B.4 of the General Conditions and insert the following in its place:

- "4. Retainage with respect to progress payments will be five percent or, if stipulated, the maximum allowed by law."

Delete the word "immediate" from line 2 of subparagraph 15.01E.2 of the General Conditions.

Delete subparagraph 15.01E.3 of the General Conditions in its entirety.

SC-15.02

Delete paragraph 15.02A in its entirety and insert the following in its place:

- "A. Contractor warrants and guarantees that title to all work, material and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner

no later than at the time of Application for Payment free and clear of all liens. Contractor shall provide written transfer of title and a certified paid invoice provided by the supplier."

SC-15.03

Delete the third sentence of paragraph 15.03C of the General conditions and replace it with the following:

"Owner shall review the preliminary certificate and make written objection to Engineer as to any provisions of the certificate or attached punch list."

In the same paragraph, delete the phrase "within 14 days after submission of the preliminary certificate to Owner" in the fourth sentence; delete the phrase "within said 14 days" in the fifth sentence.

SC-15.06

Delete from lines 5 and 6 of paragraph 15.06B of the General Conditions the phrase "within 10 days after receipt of the final Application for Payment," in the first sentence.

SC-15.08

Delete paragraph 15.08A of the General Conditions and insert the following in its place:

"A. If within one year after the date of Substantial Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions: (i) correct such defective work, or, if it has been rejected by Owner, remove it from the site and replace it with work that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other work or the work of others therefrom. If Contractor does not begin the repairs within ten (10) days of receipt of written notification and promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk, loss or damage, Owner may have the defective work corrected or the rejected work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor."

ARTICLE 16. SUSPENSION OF WORK AND TERMINATION

SC-16.02

Add a new paragraph immediately after paragraph 16.02 A.4 of the General Conditions which is to read as follows:

"5. If the Work to be done under this Contract shall be abandoned, or if this Contract or any part thereof shall be sublet, without the previous written consent of Owner, or if the contract or any claim thereunder shall be assigned by Contractor otherwise than as herein specified."

ARTICLE 18. MISCELLANEOUS

SC-18.08

Replace paragraph 18.08A with the following:

“A. The Contractor shall not assign the whole or any part of this Contract or any moneys due or to become due hereunder until thirty (30) days prior notice in writing has been given to the Owner of the intention to assign, which notice shall state the identity and address of the prospective assignee. No assignment shall be made without the Owner's prior written consent. Such consent shall not be unreasonably withheld. In case the Contractor assigns all or any part of the moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the Contractor shall be subject to prior claims of all persons, firms and corporations of services rendered or materials supplied for the performance of the work called for in this Contract.”

SC-18.11, 18.12, 18.13, 18.14

Add the following new paragraphs after paragraph 18.10 of the General Conditions:

“18.11 Liability

It is understood and agreed that members of the Owner or any agent or employees of the Owner signing this Agreement shall not be personally liable hereunder for any action incurred in connection with this Agreement.

18.12 State Statutes and Regulations

See Section 00830 of these Specifications for further modifications of the General Conditions due to state statutes and regulations.

18.13 Severability

If any provision of this Agreement shall be invalid or unenforceable to any extent or in any application, then the remainder of this Agreement and of such terms and conditions, except to such extent or in such application, shall not be affected thereby, and each and every term and condition of this Agreement shall be valid and enforced to the fullest extent and in the broadest application permitted by law.”

END OF SECTION

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For Review
12/10/2023 9:37:17 AM

SECTION 00830

STATE STATUTES AND REGULATIONS
COMMONWEALTH OF MASSACHUSETTS

A. REVISIONS TO GENERAL CONDITIONS

1. Definitions
2. Subsurface Conditions Found Different
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4. Substitutions and “Or Equals” – Contractor’s Expense
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14. Labor Classifications and Prevailing Wage Rates
15. Contractor’s Surety

B. OTHER REGULATORY REQUIREMENTS

1. Working Hours
2. Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program
3. DEP Community Sound Level Criteria
4. OSHA 10 Hour Certification Requirements

ATTACHMENT A – Prevailing Wage Rates

ATTACHMENT B

Excerpts from Chapter 149, Chapter 30 and Chapter 82 of the Massachusetts General Law

ATTACHMENT D

Change Orders

A. REVISIONS TO GENERAL CONDITIONS:

1. Definitions

The term "Awarding Authority," as used herein, shall be considered to be synonymous with the term "Owner," described in definition 1.01 A.30.

Delete definition 1.01 A.42 entitled "Substantial Completion" in the General Conditions in its entirety and insert the following in its place:

"Substantial Completion shall be interpreted in accordance with Massachusetts General Law (MGL) c. 30, §39G or 39K as appropriate."

2. Subsurface Conditions Found Different

Add the following sentence to the end of paragraph 5.04A of the General Conditions:

"...to do so. Adjustments resulting from subsurface or latent physical conditions will be in accordance with MGL c. 30, §39N."

3. Proprietary Specifications

Revise the third sentence of Paragraph 7.05A of the General Conditions to read as follows:

"Unless the specification indicates that a proprietary item is called for, other items of material or equipment or material or equipment of other suppliers may be submitted to Engineer for review under the circumstances described below, and in accordance with MGL c. 30, §39M."

4. Substitutions and "Or Equals" – Contractor's Expense

Insert the following at the beginning of Paragraphs 7.05B and 7.06E of the General Conditions:

"Except as required by and indicated in the specifications and contract documents pursuant to MGL. c. 149, §44F,".

5. Subcontracting

Add the following language at the end of paragraph 7.06J of the General Conditions:

", except as required otherwise by MGL c. 149, §44F, for Work governed by MGL c. 149, §44A through 44H."

6. Permits

Delete paragraph 7.09A of the General Conditions in its entirety and insert the following in its place:

"A. Unless otherwise provided for in Section 00890 PERMITS, the Awarding Authority shall be responsible for identifying and obtaining all federal, state, and local permits required by the nature and location of construction, including but not limited to railroad permits, building construction permits, and permits for street and highway cuts and openings. Contractor shall be responsible for obtaining all permits required of its equipment, work force, or particular operations (such as blasting) in the performance of the Work and not otherwise specified to be obtained by the Awarding Authority. These permit fees shall be paid by Contractor. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of bids, or, if there are no Bids, on the Effective Date of the Agreement."

7. Massachusetts Sales and Use Tax

Add the following paragraph after paragraph 7.10A of the General Conditions:

"B. The materials and supplies to be used by the Contractor in the Work of this Contract are exempt from the Sales and Use Tax of the Commonwealth of Massachusetts. The Awarding Authority tax exemption certificate number will be furnished to the Contractor."

8. Contractor Records

Add a new paragraph immediately after paragraph 7.11C of the General Conditions, which is to read as follows:

"D. The Contractor shall comply with all applicable provisions Chapter 30, Section 39R of the Massachusetts General Laws regarding, Contractor's records."

9. Engineer's Decisions on Requirements of Contract Documents and Acceptability of Work

Add the following language at the end of paragraph 10.06A of the General Conditions:

"The Engineer's interpretation will be made in accordance with the requirements of MGL c. 30, §39P."

10. Change of Contract Price

Delete paragraphs 11.07, 13.01, 13.02 and 13.03 of the General Conditions, having to do with Change of Contract Price. Changes in contract price will be governed by the section called "Change Orders," in Attachment D, Section 00830 and Article 13 in the Supplementary Conditions.

11. Payments

Add the following paragraph after Paragraph 15.01B.4 of the General Conditions:

"5. The Contractor shall submit Weekly Payroll Records Report and Statement of Compliance verifying compliance with the Minimum Prevailing Wage Law, MGL c. 149, §26-27H. These Statements of Compliance shall be submitted as a condition of payment for work performed during the period the reports apply."

Delete paragraph 15.01C.1 of the General Conditions in its entirety and insert the following in its place:

"1. Progress Payments will be made in accordance with MGL c. 30, §39G, or §39K, as applicable."

Delete paragraph 15.01D.1 of the General Conditions in its entirety and replace it with the following:

"1. Payment shall be made in accordance with MGL c. 30, §39G, or §39K, as applicable."

Add the following new paragraph following paragraph 15.01D.1 of the General Conditions:

"2. The Contractor shall make payments to Subcontractors in accordance with the requirements of MGL c. 30, §39F."

Delete paragraph 15.06B of the General Conditions in its entirety and insert the following in its place:

"Engineer's Review of Final Application and Recommendation of Payment: If, on the basis of the Engineer's observation of the Work during construction and final inspection and, upon the Engineer's review of the final Application for Payment and accompanying documentation, the Engineer is satisfied that the Work has been completed and that the Contractor's other obligations under the Contract Documents have been fulfilled, the Engineer will indicate in writing its recommendation of payment and present the Application to the Awarding Authority for payment. Thereupon the Engineer will give

written notice to the Awarding Authority and the Contractor that the Work is acceptable subject to the provisions of paragraph 15.07. Otherwise, the Engineer will return the Application to Contractor, indicating in writing the reasons for refusing to recommend final payment. In such case the Contractor shall make the necessary corrections and resubmit the Application. If the Application and accompanying documentation are appropriate as to form and substance, the Awarding Authority shall in accordance with the applicable provisions of the Massachusetts General Laws, make payment to the Contractor."

Delete paragraph 15.06E of the General Conditions in its entirety and replace it with the following:

"1. Payment shall be made in accordance with MGL c. 30, §39G, or §39K, as applicable."

12. Suspension of Work and Termination

Delete paragraph 16.01A of the General Conditions in its entirety and insert the following in its place:

"A. The Awarding Authority may order, at any time and without cause, the Contractor to suspend or delay the Work in accordance with MGL c. 30, §39O."

13. Special Requirements for Hazardous Wastes Contracts

Add the following at the end of the first sentence of Paragraph 18.14 of the General Conditions:

“, and to the “Rules and Regulations for the Prevention of Accidents in Construction Operations Chapter 454 CMR (Code of Massachusetts Regulations) 10.00 et seq.”

14. Labor Classifications and Prevailing Wage Rates

Add the following paragraphs under the heading "Prevailing Wage Rates" after paragraph 18.14 of the Supplementary Conditions:

"18.15 Prevailing Wage Rates

A. Prevailing Wage Rates as determined by the Director of the Executive Office of Labor and Workforce Development under the provisions of MGL c. 149, §26-27H apply to this project. A copy of the wage schedule is included in Attachment A of Section 00830. If, after the Notice of Award, it becomes necessary to employ any person in a trade or occupation not classified in the wage determinations, such person shall be paid at not less than such rates as shall be determined by the Director. Such approved minimum rate shall be retroactive to the time of the initial employment of such person in such trade or occupation. The Contractor shall notify the Awarding Authority of its intention to employ persons in trades or occupations

not classified in the wage determinations as soon as possible in order to allow sufficient time for the Awarding Authority to obtain approved rates for such trades or occupations.

- B. The schedule of wages referred to above are minimum rates only, and the Awarding Authority will not consider any claims for additional compensation made by Contractor because of payment by the Contractor of any wage rate in excess of the applicable rate contained in the Contract.
- C. The said schedule of wages shall continue to be the minimum rates to be paid during the life of this Agreement, except in the case of the duration of this Agreement exceeding one year, when the Contractor will be responsible for requesting and obtaining updated prevailing wage rates from the Owner before the one-year anniversary of the project's start date, and a legible copy of said schedule shall be kept posted in a conspicuous place at the site of the Work.
- D. Contractor and subcontractors shall submit a copy of weekly payroll records to the Awarding Authority and the Awarding Authority shall retain the records for a minimum of three years.”

15. Contractor's Surety

Add the following sentences at the end of paragraph 6.01A:

“The Surety Company providing the bonds shall have a rating of A or better within the Best Key Rating Guide and be licensed by the Massachusetts Division of Insurance. The Contractor shall pay the premiums for such Bonds.”

B. OTHER REGULATORY REQUIREMENTS:

1. Working Hours

No laborer, workman, mechanic, foreman, or inspector, working within the Commonwealth, in the employ of the Contractor, subcontractor, or other person doing or contracting to do the whole or a part of the work contemplated by this contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of emergency.

2. Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program.

The Contractor shall abide by the Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program, which is attached in its entirety on pages 00830 – ATT. C1.

3. DEP Community Sound Level Criteria

The Community Sound Level Criteria as established by the Commonwealth of Massachusetts' Department of Environmental Protection (DEP) must be conformed to prior to the Awarding Authority's acceptance of the structure. The following sound level criteria must be met at the construction site:

- A. The increase in the broadband noise level shall not be in excess of ten (10) dB(A) above ambient at the station boundary. The ambient level is defined as the A-weighted noise level that is exceeded ninety (90) percent of the time measured during the period in question.
- B. The primary noise source(s) shall not produce a puretone condition. Puretone is any given octave band center frequency that exceeds the two adjacent center frequencies by three (3) or more decibels.

4. OSHA 10 Hour Certification Requirements

All employees of the Contractor who work at the jobsite must have received OSHA 10 Hour safety training, and have proof, at the jobsite, of being certified by OSHA as having received the training. The Contractor must provide written proof (copy of OSHA card each employee is required to carry is preferred) of this certification for every employee with submission of the first certified payroll report for each employee.

END OF SECTION

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SECTION 00830.A
ATTACHMENT A
PREVAILING WAGE RATES

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ADD WAGE RATES

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SECTION 00830.B

ATTACHMENT B

Excerpts from Chapters 30, 82 and 149 of the Massachusetts General Laws

***NOTICE** - These are **NOT** the official versions of the Massachusetts General Laws (MGL). While reasonable efforts have been made to assure the accuracy of the excerpts provided, do not rely on this information without first checking an official edition of the MGL. If you are in need of legal advice or counsel, consult a lawyer. These excerpts include amendments to the General Laws passed before December 31, 2020. For laws enacted since that time, see the 2021 Session Laws.*

CERTAIN EXCERPTS FROM THE MASSACHUSETTS GENERAL LAWS ARE APPLICABLE TO CONSTRUCTION CONTRACTS. ATTENTION IS DIRECTED TO THE FOLLOWING SECTIONS OF CHAPTER 149 AS AMENDED.

Section 25. LODGING, BOARD AND TRADE OF PUBLIC EMPLOYEES; STATUTE PART OF EMPLOYMENT CONTRACT.

"Every employee in public work shall lodge, board, and trade where and with whom he elects; and no person or his agents or employees under contract with the commonwealth, a county, city or town, or with a department, board, commission or officer acting therefor, for the doing of public work shall directly or indirectly require, as a condition of employment therein, that the employee shall lodge, board or trade at a particular place or with a particular person. This section shall be made a part of the contract for such employment."

Section 26. PUBLIC WORKS; PREFERENCE TO VETERANS AND CITIZENS; WAGES.

"In the employment of mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works by the commonwealth, or by a county, town, authority or district, or by persons contracting or subcontracting for such works, preference shall first be given to citizens of the commonwealth who have been residents of the commonwealth for at least six months at the commencement of their employment who are veterans as defined in clause Forty-third of section 7 of chapter 4 and who are qualified to perform the work to which the employment relates and, within such preference, preference shall be given to service-disabled veterans; and secondly, to citizens of the commonwealth generally who have been residents of the commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States, and every contract for such work shall contain a provision to this effect..."

Section 34. PUBLIC CONTRACTS; STIPULATION AS TO HOURS AND DAYS OF WORK; VOID CONTRACTS.

"Every contract, except for the purchase of material or supplies, involving the employment of laborers, workmen, mechanics, foremen or inspectors, to which the commonwealth or any county or any town, subject to section thirty, is a party, shall contain a stipulation that no laborer, workman, mechanic, foreman or inspector working within the commonwealth, in the employ of the contractor, subcontractor or other person doing or contracting to do the whole or a part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of emergency, or, in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one day, except as aforesaid..."

Section 34A. CONTRACTS FOR PUBLIC WORKS; WORKERS' COMPENSATION INSURANCE; BREACH OF CONTRACT; ENFORCEMENT AND VIOLATION OF STATUTE.

"Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or other public works for the commonwealth or any political subdivision thereof shall contain stipulations requiring that the contractor shall, before commencing performance of such contract, provide by insurance for the payment of compensation and the furnishing of other benefits under chapter one hundred and fifty-two to all persons to be employed under the contract, and that the contractor shall continue such insurance in full force and effect during the term of the

contract. No officer or agent contracting in behalf of the commonwealth or any political subdivision thereof shall award such a contract until he has been furnished with sufficient proof of compliance with the aforesaid stipulations. Failure to provide and continue in force such insurance as aforesaid shall be deemed a material breach of the contract and shall operate as an immediate termination thereof. No cancellation of such insurance, whether by the insurer or by the insured, shall be valid unless written notice thereof is given by the party proposing cancellation to the other party and to the officer or agent who awarded the contract at least fifteen days prior to the intended effective date thereof, which date shall be expressed in said notice. Notice of cancellation sent by the party proposing cancellation by registered mail, postage prepaid, with a return receipt of the addressee requested, shall be a sufficient notice..."

Section 34B. CONTRACTS FOR PUBLIC WORKS; WAGES FOR RESERVE POLICE OFFICER.

"Every contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public works for the commonwealth or any political subdivision thereof shall contain stipulations requiring that the contractor shall pay to any reserve police officer employed by him in any city or town the prevailing rate of wage paid to regular police officers in such city or town."

Whenever general bids are invited for a contract subject to Section 44A, the following provision applies:

Section 44E. FILING OF BIDS; FORMS; MODULAR BUILDINGS. Second paragraph of subdivision (2), clause E.

"The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards made subject to section 44A."

For projects estimated to cost more than \$25,000, the following provision applies to sub-bidders:

Section 44F. PLANS AND SPECIFICATIONS; SUB-BIDS; FORM; CONTENTS. First paragraph of clause I of subdivision (2) of section 44F.

"The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards of subcontracts subject to section 44F."

Section 44G. ALLOWANCES; ALTERNATES; WEATHER PROTECTION DEVICES.

"(A) "Allowance" as used herein means a sum of money covering one or more items of labor or labor and materials which is designated in bid documents and which general bidders are required to use in computing their bids. The use of such allowances shall be prohibited in the award of any contract subject to the provisions of section forty-four A. Whenever the designer is unable to supply specifications for any item prior to the solicitation of bids, such item shall not be included in any contract subject to the provisions of section forty-four A. The awarding authority shall solicit bids for every such item separately pursuant to the provisions of section forty-four A after specifications for that item are prepared.

(B) Every alternate contained in the form for general bids shall be listed in a numerical sequence in order of priority. When the awarding authority decides to consider alternates in determining the lowest eligible and responsible bidder, the awarding authority shall consider the alternates in descending numerical sequence, such that no single alternate shall be considered unless every alternate preceding it on the list has been added to or subtracted from the base bid price.

(C) The use of options other than alternates in bid documents or bid forms subject to section forty-four A shall be prohibited under all circumstances.

(D) Every contract subject to section forty-four A shall include specifications for the installation of weather protection and shall require that the contractor shall install the same and that he shall furnish adequate heat in the area so protected during the months of November through March. Standards for such specifications shall be established by the commissioner or his designee.”

Section 44J. INVITATIONS TO BID; NOTICE; CONTENTS; VIOLATIONS; PENALTY.

"(1) No public agency or authority of the commonwealth or any political subdivision thereof shall award any contract for which competitive bids are required pursuant to section forty-four A of this chapter or section thirty-nine M of chapter thirty, or for which competitive proposals are required pursuant to subsection (4) of section forty-four E of this chapter or section eleven C of chapter twenty-five A, unless a notice inviting bids or proposals therefor shall have been posted no less than one week prior to the time specified in such notice for the receipt of said bids or proposals in a conspicuous place in or near the offices of the awarding authority, and shall have remained posted until the time so specified, and unless such notice shall also have been published at least once not less than two weeks prior to the time so specified in the central register published by the secretary of state pursuant to section twenty A of chapter nine and in a newspaper of general circulation in the locality of the proposed project, and on the COMMBUYS system administered by the operational services division. Said notice shall also be published at such other times and in such other newspapers or trade periodicals as the commissioner of capital asset management and maintenance may require, having regard to the locality of the work involved.

(2) Said notice shall specify the time and place where plans and specifications of the proposed work may be had; the time and place of submission of general bids; and the time and place for opening of the general bids. For contracts subject to the provisions of section forty-four A to H, inclusive, of this chapter, said notice shall also specify the time and place for submission of filed sub-bids, where required pursuant to section forty-four F; and the time and place for opening of said filed sub-bids.

Said notice shall also provide sufficient facts concerning the nature and scope of such project, the type and elements of construction, and such other information as will assist applicants in deciding to bid on such contract.

(3) No contract or preliminary plans and specifications shall be split or divided for the purpose of evading the provisions of this section.

(4) General bids and filed sub-bids for any contract subject to this section shall be in writing and shall be opened in public at the time and place specified in the posted or published notice, and after being so opened shall be open to public inspection.

(5) The provisions of this section shall not apply to any transaction between the commonwealth and any public service corporation.

(6) The provisions of this section may be waived in cases of extreme emergency involving the health and safety of the people and their property, upon the written approval of said commissioner. The written approval shall contain a description of the circumstances and the reasons for the commissioner's determination.

(7) Whoever violates any provision of this section shall be punished by a fine of not more than ten thousand dollars or by imprisonment in the state prison for not more than three years or in a jail or house of correction for not more than two and one-half years, or by both said fine and imprisonment; and in the event of final conviction, said person shall be incapable of holding any office of honor, trust or profit under the commonwealth or under any county, district of municipal agency.

Each and every person who shall cause or conspire to cause any contract or preliminary plans and specifications to be split or divided for the purpose of evading the provisions of this section shall forfeit and pay to the commonwealth, a political subdivision thereof or other awarding authority subject to this section, the sum of not more than five thousand dollars and, in addition, such person or persons shall pay, apportioned among them, double the amount of damages which the commonwealth or political subdivision thereof or other awarding authority may have sustained by reason of the doing of such act, together with the costs of the action.

(8) If an awarding authority rejects all general bids or does not receive any general bids, and advertises for a second opening of general bids with the original filed sub-bids as set forth in subsection (1) of section forty-four E the notice for receipt of such general bids may be published in the central register and elsewhere as required not less than one week prior to the time specified for such second opening of general bids.

(9) No request for proposals or invitation for bids issued under sections 38A ½ to 38O, inclusive, of chapter 7, section 11C of chapter 25A, section 39M of chapter 30, this section and sections 44A to 44H, inclusive, shall be advertised if the awarding authority's cost estimate is greater than 1 year old."

Attention is directed to the following sections of Chapter 30 of the General Laws of Massachusetts as amended to date.

Section 38A. PRICE ADJUSTMENT CLAUSE IN CONTRACTS FOR ROAD, BRIDGE, WATER AND SEWER PROJECTS AWARDED UNDER SEC. 39M

"Contracts for road and bridge projects awarded as a result of a proposal or invitation for bids under section 39M shall include a price adjustment clause for each of the following materials: fuel, both diesel and gasoline; asphalt; concrete; and steel. Contracts for water and sewer projects awarded as a result of a proposal or invitation for bids under said section 39M shall include a price adjustment clause for fuel, both diesel and gasoline; liquid asphalt; and portland cement contained in cast-in-place concrete. A base price for each material shall be set by the awarding authority or agency and shall be included in the bid documents at the time the project is advertised. The awarding authority or agency shall also identify in the bid documents the price index to be used for each material. The price adjustment clause shall provide for a contract adjustment to be made on a monthly basis when the monthly cost change exceeds plus or minus 5 per cent."

Section 39F. CONSTRUCTION CONTRACTS; ASSIGNMENT AND SUBROGATION; SUBCONTRACTOR DEFINED; ENFORCEMENT OF CLAIM FOR DIRECT PAYMENT; DEPOSIT; REDUCTION OF DISPUTED AMOUNTS.

"(1) Every contract awarded pursuant to sections forty-four A to L inclusive, of chapter one hundred and forty-nine shall contain the following subparagraphs (a) through (i) and every contract awarded pursuant to section thirty-nine M of chapter thirty shall contain the following subparagraphs (a) through (h) and in each case those subparagraphs shall be binding between the general contractor and each subcontractor.

(a) Forthwith after the general contractor receives payment on account of a periodic estimate, the general contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by that subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(b) Not later than the sixty-fifth day after each subcontractor substantially completes his work in accordance with the plans and specifications, the entire balance due under the subcontract less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor; and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (a) and (b), the awarding authority shall act upon the demand as provided in this section.

(d) If, within seventy days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount

due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the subcontractor may demand direct payment of that balance from the awarding authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The demand shall contain a detailed breakdown of the balance due under the subcontract and also a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the subcontractor has substantially completed the subcontract work. Within ten days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement delivered to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

(e) Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the general contractor in the sworn reply; provided, that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payments to the subcontractor forthwith after the removal of the basis for deductions from direct payments made as provided in parts (i) and (ii) of this subparagraph.

(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (e) in an interest-bearing joint account in the names of the general contractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the general contractor and the subcontractor or as determined by decree of a court of competent jurisdiction.

(g) All direct payments and all deductions from demands for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (f) shall be made out of amounts payable to the general contractor at the time of receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the general contractor and in the order of receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of such payment.

(h) The awarding authority shall deduct from payments to a general contractor amounts which, together with the deposits in interest-bearing accounts pursuant to subparagraph (f), are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

(i) If the subcontractor does not receive payment as provided in subparagraph (a) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (a), the subcontractor may demand direct payment by following the procedure in subparagraph (d) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor performed or furnished the labor and materials for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (e), (f), (g), and (h).

(2) Any assignment by a subcontractor of the rights under this section to a surety company furnishing a bond under the provisions of section twenty-nine of chapter one hundred forty-nine shall be invalid. The assignment and subrogation rights of the surety to amounts included in a demand for direct payment which are in the possession of the awarding authority or which are on deposit pursuant to subparagraph (f) of paragraph (1) shall be subordinate to the rights of all subcontractors who are entitled to be paid under this section and who have not been paid in full.

(3) "Subcontractor" as used in this section (i) for contracts awarded as provided in sections forty-four A to forty-four H, inclusive, of chapter one hundred forty-nine shall mean a person who files a sub-bid and receives a subcontract as a result of that filed sub-bid or who is approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, (ii) for contracts awarded as provided in paragraph (a) of section thirty-nine M of chapter thirty shall mean a person approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, and (iii) for contracts with the commonwealth not awarded as provided in forty-four A to forty-four H, inclusive, of chapter one hundred forty-nine shall also mean a person contracting with the general contractor to supply materials used or employed in a public works project for a price in excess of five thousand dollars.

(4) A general contractor or a subcontractor shall enforce a claim to any portion of the amount of a demand for direct payment deposited as provided in subparagraph (f) of paragraph 1 by a petition in equity in the superior court against the other and the bank shall not be a necessary party. A subcontractor shall enforce a claim for direct payment or a right to require a deposit as provided in subparagraph (f) of paragraph 1 by a petition in equity in the superior court against the awarding authority and the general contractor shall not be a necessary party. Upon motion of any party the court shall advance for speedy trial any petition filed as provided in this paragraph. Sections fifty-nine and fifty-nine B of chapter two hundred thirty-one shall apply to such petitions. The court shall enter an interlocutory decree upon which execution shall issue for any part of a claim found due pursuant to sections fifty-nine and fifty-nine B and, upon motion of any party, shall advance for speedy trial the petition to collect the remainder of the claim. Any party aggrieved by such interlocutory decree shall have the right to appeal therefrom as from a final decree. The court shall not consolidate for trial the petition of any subcontractor with the petition of one or more subcontractors or the same general contract unless the court finds that a substantial portion of the evidence of the same events during the course of construction (other than the fact that the claims sought to be consolidated arise under the same general contract) is applicable to the petitions sought to be consolidated and that such consolidation will prevent unnecessary duplication of evidence. A decree in any such proceeding shall not include interest on the disputed amount deposited in excess of the interest earned for the period of any such deposit. No person except a subcontractor filing a demand for direct payment for which no funds due the general contractor are available for direct payment shall have a right to file a petition in court of equity against the awarding authority claiming a demand for direct payment is premature and such subcontractor must file the petition before the awarding authority has made a direct payment to the subcontractor and has made a deposit of the disputed portion as provided in part (iii) of subparagraph (e) and in subparagraph (f) of paragraph (1).

(5) In any petition to collect any claim for which a subcontractor has filed a demand for direct payment the court shall, upon motion of the general contractor, reduce by the amount of any deposit of a disputed amount by the awarding authority as provided in part (iii) of subparagraph (e) and in subparagraph (f) of paragraph (1) any amount held under a trustee writ or pursuant to a restraining order or injunction."

Section 39G. COMPLETION OF PUBLIC WORKS; SEMI-FINAL AND FINAL ESTIMATES; PAYMENTS; EXTRA WORK; DISPUTED ITEMS.

"Upon substantial completion of the work required by a contract with the commonwealth, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways, including bridges and other highway structures, sewers and water mains, airports and other public works, the contractor shall present in writing to the awarding authority its certification that the work has been substantially completed. Within twenty-one days thereafter, the awarding authority shall present to the contractor either a written declaration that the work has been substantially completed or an itemized list of incomplete or unsatisfactory work items required by the contract sufficient to demonstrate that the work has not been substantially completed. The awarding authority may include with such list a notice setting forth a reasonable time, which shall not in any event be prior to the contract completion date, within which the contractor must achieve substantial completion of the work. In the event that the awarding authority fails to respond, by presentation of a written declaration or itemized list as aforesaid, to the

contractor's certification within the twenty-one-day period, the contractor's certification shall take effect as the awarding authority's declaration that the work has been substantially completed.

Within sixty-five days after the effective date of a declaration of substantial completion, the awarding authority shall prepare and forthwith send to the contractor for acceptance a substantial completion estimate for the quantity and price of the work done and all but one percent retainage, if held by the awarding authority, on that work, including the quantity, price and all but one percent retainage, if held by the awarding authority, for the undisputed part of each work item and extra work item in dispute but excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory work items and less the total periodic payments made to date for the work. The awarding authority also shall deduct from the substantial completion estimate an amount equal to the sum of all demands for direct payment filed by subcontractors and not yet paid to subcontractors or deposited in joint accounts pursuant to section thirty-nine F, but no contract subject to said section thirty-nine F shall contain any other provision authorizing the awarding authority to deduct any amount by virtue of claims asserted against the contract by subcontractors, material suppliers or others.

If the awarding authority fails to prepare and send to the contractor any substantial completion estimate required by this section on or before the date herein above set forth, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such substantial completion estimate at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston from such date to the date on which the awarding authority sends that substantial completion estimate to the contractor for acceptance or to the date of payment therefor, whichever occurs first. The awarding authority shall include the amount of such interest in the substantial completion estimate.

Within fifteen days after the effective date of the declaration of substantial completion, the awarding authority shall send to the contractor by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory work items, and, unless delayed by causes beyond his control, the contractor shall complete all such work items within forty-five days after the receipt of such list or before the then contract completion date, whichever is later. If the contractor fails to complete such work within such time, the awarding authority may, subsequent to seven days' written notice to the contractor by certified mail, return receipt requested, terminate the contract and complete the incomplete or unsatisfactory work items and charge the cost of same to the contractor.

Within thirty days after receipt by the awarding authority of a notice from the contractor stating that all of the work required by the contract has been completed, the awarding authority shall prepare and forthwith send to the contractor for acceptance a final estimate for the quantity and price of the work done and all retainage, if held by the awarding authority, on that work less all payments made to date, unless the awarding authority's inspection shows that work items required by the contract remain incomplete or unsatisfactory, or that documentation required by the contract has not been completed. If the awarding authority fails to prepare and send to the contractor the final estimate within thirty days after receipt of notice of completion, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such final estimate at the rate hereinabove provided from the thirtieth day after such completion until the date on which the awarding authority sends the final estimate to the contractor for acceptance or the date of payment therefor, whichever occurs first, provided that the awarding authority's inspection shows that no work items required by the contract remain incomplete or unsatisfactory. Interest shall not be paid hereunder on amounts for which interest is required to be paid in connection with the substantial completion estimate as hereinabove provided. The awarding authority shall include the amount of the interest required to be paid hereunder in the final estimate.

The awarding authority shall pay the amount due pursuant to any substantial completion or final estimate within thirty-five days after receipt of written acceptance for such estimate from the contractor and shall pay interest on the amount due pursuant to such estimate at the rate hereinabove provided from that thirty-fifth day to the date of payment. Within 15 days, 30 days in the case of the commonwealth, after receipt from the contractor, at the place designated by the awarding authority, if such place is so designated, of a periodic estimate requesting payment of the amount due for the preceding periodic estimate period, the awarding authority shall make a periodic payment to the contractor for the work performed during the preceding periodic estimate period and for the materials not incorporated in the work but delivered and suitably stored at the site, or at some location agreed upon in writing, to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances. The awarding authority shall include with each such payment interest on the amount due pursuant to such periodic estimate at

the rate herein above provided from the due date. In the case of periodic payments, the contracting authority may deduct from its payment a retention based on its estimate of the fair value of its claims against the contractor, a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and a retention to secure satisfactory performance of the contractual work not exceeding five per cent of the approved amount of any periodic payment, and the same right to retention shall apply to bonded subcontractors entitled to direct payment under section thirty-nine F of chapter thirty; provided, that a five per cent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

No periodic, substantial completion or final estimate or acceptance or payment thereof shall bar a contractor from reserving all rights to dispute the quantity and amount of, or the failure of the awarding authority to approve a quantity and amount of, all or part of any work item or extra work item.

Substantial completion, for the purposes of this section, shall mean either that the work required by the contract has been completed except for work having a contract price of less than one percent of the then adjusted total contract price, or substantially all of the work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract."

Section 39I. DEVIATIONS FROM PLANS AND SPECIFICATIONS.

"Every contractor having a contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or public works for the commonwealth, or of any political subdivision thereof, shall perform all the work required by such contract in conformity with the plans and specifications contained therein. No wilful and substantial deviation from said plans and specifications shall be made unless authorized in writing by the awarding authority or by the engineer or architect in charge of the work who is duly authorized by the awarding authority to approve such deviations. In order to avoid delays in the prosecution of the work required by such contract such deviation from the plans or specifications may be authorized by a written order of the awarding authority or such engineer or architect so authorized to approve such deviation. Within thirty days thereafter, such written order shall be confirmed by a certificate of the awarding authority stating: (1) if such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures or equipment were included in the first instance and the reasons for substitution or elimination, and, if the deviation is of any other nature, the reasons for such deviation, giving justification therefor; (2) that the specified deviation does not materially injure the project as a whole; (3) that either the work substituted for the work specified is of the same cost and quality, or that an equitable adjustment has been agreed upon between the contracting agency and the contractor and the amount in dollars of said adjustment; and (4) that the deviation is in the best interest of the contracting authority.

Such certificate shall be signed under the penalties of perjury and shall be a permanent part of the file record of the work contracted for.

Whoever violates any provision of this section wilfully and with intent to defraud shall be punished by a fine of not more than five thousand dollars or by imprisonment for not more than six months, or both."

Section 39J. PUBLIC CONSTRUCTION CONTRACTS; EFFECT OF DECISIONS OF CONTRACTING BODY OR ADMINISTRATIVE BOARD.

"Notwithstanding any contrary provision of any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or public works by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount of the contract is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, a decision, by the contracting body or by any administrative board, official or agency, or by any architect or engineer, on a dispute, whether of fact or of law, arising under said contract shall not be final or conclusive if such decision is made in bad faith, fraudulently, capriciously, or arbitrarily is unsupported by substantial evidence, or is based upon error of law."

Section 39K. PUBLIC BUILDING CONSTRUCTION CONTRACTS; PAYMENTS.

"Every contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, shall contain the following paragraph: Within fifteen days (30 days in the case of the commonwealth, including local housing authorities) after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances, but less (1) a retention based on its estimate of the fair value of its claims against the contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five percent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five-days after (a) the contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one percent of the original contract price, or (b) the contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the contract less (1) a retention based on its estimate of the fair value of its claims against the contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate of three percentage points above the rediscount rate then charged by the Federal Reserve Bank of Boston commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days (twenty-four days in the case of the commonwealth) after receipt of such a periodic estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

The awarding authority may make changes in any periodic estimate submitted by the contractor and the payment due on said periodic estimate shall be computed in accordance with the changes so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the awarding authority may, within seven days after receipt, return to the contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter. The provisions of section thirty-nine G shall not apply to any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building to which this section applies.

All periodic estimates shall be submitted to the awarding authority, or to its designee as set forth in writing to the contractor, and the date of receipt by the awarding authority or its designee shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed subtrade and each sub-subtrade listed in sub-bid form as required by specifications and a column listing the amount paid to each subcontractor and sub-subcontractor as of the date the periodic estimate is filed. The person making payment for the awarding authority shall add the daily interest provided for herein to each payment for each day beyond the due date based on the date of receipt marked on the estimate.

A certificate of the architect to the effect that the contractor has fully or substantially completed the work shall, subject to the provisions of section thirty-nine J, be conclusive for the purposes of this section.

Notwithstanding the provisions of this section, at any time after the value of the work remaining to be done is, in the estimation of the awarding authority, less than 1 per cent of the adjusted contract price, or the awarding authority has determined that the contractor has substantially completed the work and the awarding authority has taken possession for occupancy, the awarding authority may send to the general contractor by certified mail, return receipt requested, a complete and final list of all incomplete and unsatisfactory work items, including, for each item on the list, a good faith estimate of the fair and reasonable cost of completing such item. The general contractor shall then complete all such work items within 30 days of receipt of such list or before the contract completion date, whichever is later. If the general contractor fails to complete all incomplete and unsatisfactory work items within 45 days after receipt of such items furnished by the awarding authority or before the contract completion date, whichever is later, subsequent to an additional 14 days' written notice to the general contractor by certified mail, return receipt requested, the awarding authority may terminate the contract and complete the incomplete and unsatisfactory work items and charge the cost of same to the general contractor and such termination shall be without prejudice to any other rights or remedies the awarding authority may have under the contract. The awarding authority shall note any such termination in the evaluation form to be filed by the awarding authority pursuant to the provisions of section 44D of chapter 149."

Section 39L. PUBLIC CONSTRUCTION WORK BY FOREIGN CORPORATIONS; RESTRICTIONS AND REPORTS.

"The commonwealth and every county, city, town, district, board, commission or other public body which, as the awarding authority, request proposals, bids or sub-bids for any work in the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or other public works (1) shall not enter into a contract for the work with, and shall not approve as a subcontractor furnishing labor and materials for a part of the work, a foreign corporation which has not filed with such awarding authority a certificate of the state secretary stating that the corporation has complied with requirements of section 15.03 of subdivision A of Part 15 of chapter 156D and the date of compliance, and further has filed all annual reports required by section 16.22 of subdivision B of Part 16 of said chapter 156D, and (2) shall report to the state secretary and to the department of corporations and taxation any foreign corporation performing work under such contract or subcontract, and any person, other than a corporation, performing work under such contract or subcontract, and residing or having a principal place of business outside the commonwealth."

Section 39M. CONTRACTS FOR CONSTRUCTION AND MATERIALS; MANNER OF AWARDING.

"(b) Specifications for such contracts, and specifications for contracts awarded pursuant to the provisions of said sections forty-four A to forty-four L of said chapter one hundred and forty-nine, shall be written to provide for full competition for each item of material to be furnished under the contract; except, however, that said specifications may be otherwise written for sound reasons in the public interest stated in writing in the public records of the awarding authority or promptly given in writing by the awarding authority to anyone making a written request therefor, in either instance such writing to be prepared after reasonable investigation. Every such contract shall provide that an item equal to that named or described in the said specifications may be furnished; and an item shall be considered equal to the item so named or described if, in the opinion of the awarding authority: (1) it is at least equal in quality, durability, appearance, strength and design, (2) it will perform at least equally the function imposed by the general design for the public work being contracted for or the material being purchased, and (3) it conforms substantially, even with deviations, to the detailed requirements for the item in the said specifications. For each item of material the specifications shall provide for either a minimum of three named brands of material or a description of material which can be met by a minimum of three manufacturers or producers, and for the equal of any one of said named or described materials."

For projects estimated to cost more than \$10,000, the following provision, section 39M subsection c, applies:

"(c) The term "lowest responsible and eligible bidder" shall mean the bidder: (1) whose bid is the lowest of those bidders possessing the skill, ability and integrity necessary for the faithful performance of the work; (2) who shall certify, that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (3) who shall certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; (4) who, where the provisions of

section 8B of chapter 29 apply, shall have been determined to be qualified thereunder; and (5) who obtains within 10 days of the notification of contract award the security by bond required under section 29 of chapter 149; provided that for the purposes of this section the term "security by bond" shall mean the bond of a surety company qualified to do business under the laws of the commonwealth and satisfactory to the awarding authority; provided further, that if there is more than 1 surety company, the surety companies shall be jointly and severally liable."

Section 39N. CONSTRUCTION CONTRACTS; EQUITABLE ADJUSTMENT IN CONTRACT PRICE FOR DIFFERING SUBSURFACE OR LATENT PHYSICAL CONDITIONS.

"Every contract subject to section forty-four A of chapter one hundred and forty-nine or subject to section thirty-nine M of chapter thirty shall contain the following paragraph in its entirety and an awarding authority may adopt reasonable rules or regulations in conformity with that paragraph concerning the filing, investigation and settlement of such claims:

If, during the progress of the work, the contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly."

Section 39O. CONTRACTS FOR CONSTRUCTION AND MATERIALS; SUSPENSION, DELAY OR INTERRUPTION DUE TO ORDER OF AWARDING AUTHORITY; ADJUSTMENT IN CONTRACT PRICE; WRITTEN CLAIM.

"Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

(a) The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority; provided however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.

(b) The general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this contract and, except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act or failure to act involved in the claim."

Section 39P. CONTRACTS FOR CONSTRUCTION AND MATERIALS; AWARDING AUTHORITY'S DECISIONS ON INTERPRETATION OF SPECIFICATIONS, ETC.; TIME LIMIT; NOTICE.

"Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine which requires the awarding authority, any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within thirty days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty day period and the date by which the decision will be made."

Section 39Q. CONTRACTS FOR CAPITAL FACILITY CONSTRUCTION; CONTENTS; ANNUAL CLAIMS REPORT.

"(1) Every contract awarded by any state agency as defined by section thirty-nine A of chapter seven for the construction, reconstruction, alteration, remodeling, repair or demolition of any capital facility as defined by the aforesaid section thirty-nine A shall contain the following subparagraphs (a) through (d) in their entirety:

(a) Disputes regarding changes in and interpretations of the terms or scope of the contract and denials of or failures to act upon claims for payment for extra work or materials shall be resolved according to the following procedures, which shall constitute the exclusive method for resolving such disputes. Written notice of the matter in dispute shall be submitted promptly by the claimant to the chief executive official of the state agency which awarded the contract or his designee. No person or business entity having a contract with a state agency shall delay, suspend, or curtail performance under that contract as a result of any dispute subject to this section. Any disputed order, decision or action by the agency or its authorized representative shall be fully performed or complied with pending resolution of the dispute.

(b) Within thirty days of submission of the dispute to the chief executive official of the state agency or his designee, he shall issue a written decision stating the reasons therefor, and shall notify the parties of their right of appeal under this section. If the official or his designee is unable to issue a decision within thirty days, he shall notify the parties to the dispute in writing of the reasons why a decision cannot be issued within thirty days and of the date by which the decision shall issue. Failure to issue a decision within the thirty-day period or within the additional time period specified in such written notice shall be deemed to constitute a denial of the claim and shall authorize resort to the appeal procedure described below. The decision of the chief executive official or his designee shall be final and conclusive unless an appeal is taken as provided below.

(c) Within twenty-one calendar days of the receipt of a written decision or of the failure to issue a decision as stated in the preceding subparagraph, any aggrieved party may file a notice of claim for an adjudicatory hearing with the division of hearing officers or the aggrieved party may file an action directly in a court of competent jurisdiction and shall serve copies thereof upon all other parties in the form and manner prescribed by the rules governing the conduct of adjudicatory proceedings of the division of hearing officers. In the event an aggrieved party exercises his option to file an action directly in court as provided in the previous sentence, the twenty-one day period shall not apply to such filing and the period of filing such action shall be the same period otherwise applicable for filing a civil action in superior court. The appeal shall be referred to a hearing officer experienced in construction law and shall be prosecuted in accordance with the formal rules of procedure for the conduct of adjudicatory hearings of the division of hearing officers, except as provided below. The hearing officer shall issue a final decision as expeditiously as possible, but in no event more than one hundred and twenty calendar days after conclusion of the adjudicatory hearing, unless the decision is delayed by a request for extension of time for filing post-hearing briefs or other submissions assented to by all parties. Whenever, because an extension of time has been granted, the hearing officer is unable to issue a decision within one hundred and twenty days, he shall notify all parties of the reasons for the delay and the date when the decision will issue. Failure to issue a decision within the one hundred and twenty-day period or within the additional period specified in such written notice shall give the petitioner the right to pursue any legal remedies available to him without further delay.

(d) When the amount in dispute is less than ten thousand dollars, a contractor who is party to the dispute may elect to submit the appeal to a hearing officer experienced in construction law for expedited hearing in accordance with the informal rules of practice and procedure of the division of hearing officers. An expedited hearing under this subparagraph shall be available at the sole option of the contractor. The hearing officer shall issue a decision no later

than sixty days following the conclusion of any hearing conducted pursuant to this subparagraph. The hearing officer's decision shall be final and conclusive, and shall not be set aside except in cases of fraud.

(2) The commissioner of administration shall require the division of hearings officers to prepare annually a report concerning the construction contract claims submitted to the division during the preceding twelve months, in such form as the commissioner shall prescribe. The report shall contain, at a minimum, the following information: the number of claims submitted; the names of all parties to each such claim; a brief description of the claim; the date of submission and of disposition of the claim; its disposition, whether by settlement, withdrawal, default or written decision; and the number of claims currently pending. The original of the report shall be submitted to the commissioner of administration by January fifteenth, and a copy shall be filed with the state librarian and shall be a public document.”

Section 39R. KEEPING AND MAINTAINING OF BOOKS, RECORDS AND ACCOUNTS; STATEMENT OF MANAGEMENT ON INTERNAL ACCOUNTING CONTROL; FINANCIAL STATEMENTS; ENFORCEMENT.

“(a) The words defined herein shall have the meaning stated below whenever they appear in this section:

(1) "Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A to forty-four H, inclusive, of chapter one hundred and forty-nine, which is for an amount or estimated amount greater than one hundred thousand dollars.

(2) "Contract" means any contract awarded or executed pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A through forty-four H, inclusive, of chapter one hundred and forty-nine, which is for amount or estimated amount greater than one hundred thousand dollars.

(3) "Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.

(4) "Independent Certified Public Accountant" means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the awarding authority.

(5) "Audit," when used in regard to financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a *certified* opinion thereon, or, in the alternative, a qualified opinion or a declination to express an opinion for stated reasons.

(6) "Accountant's Report," when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he has made and sets forth his opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefor shall be stated. An accountant's report shall include as a part thereof a signed statement by the responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the contractor.

(7) "Management," when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the contractor.

(8) Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

(b) Subsection (a)(2) hereof notwithstanding, every agreement or contract awarded or executed pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven, or eleven C of chapter twenty-five A, and pursuant to section thirty-nine M of chapter thirty or to section forty-four A through H, inclusive, of chapter one hundred and forty-nine, shall provide that:

(1) The contractor shall make, and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the contractor, and

(2) until the expiration of six years after final payment, the office of inspector general, and the commissioner of capital asset management and maintenance shall have the right to examine any books, documents, papers or records of the contractor or of his subcontractors that directly pertain to, and involve transactions relating to, the contractor or his subcontractors, and

(3) if the agreement is a contract as defined herein, the contractor shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the awarding authority, including in his description the date of the change and reasons therefor, and shall accompany said description with a letter from the contractor's independent certified public accountant approving or otherwise commenting on the changes, and

(4) if the agreement is a contract as defined herein, the contractor has filed a statement of management on internal accounting controls as set forth in paragraph (c) below prior to the execution of the contract, and

(5) if the agreement is a contract as defined herein, the contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph (d) below.

(c) Every contractor awarded a contract shall file with the awarding authority a statement of management as to whether the system of internal accounting controls of the contractor and subsidiaries reasonably assures that:

(1) transactions are executed in accordance with management's general and specific authorization;

(2) transactions are recorded as necessary:

i. to permit preparation of financial statements in conformity with generally accepted accounting principles, and

ii. to maintain accountability for assets;

(3) access to assets is permitted only in accordance with management's general or specific authorization; and

(4) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

Every contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that he has examined the statement of management on internal accounting controls, and expressing an opinion as to:

(1) whether the representations of management in response to this paragraph, and paragraph (b) above are consistent with the result of management's evaluation of the system of internal accounting controls; and

(2) whether such representations of management are, in addition, reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statements.

(d) Every contractor awarded a contract by the commonwealth or by any political subdivision thereof shall annually file with the commissioner of capital asset management and maintenance during the term of the contract a financial statement

prepared by an independent certified public accountant on the basis of an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the awarding authority upon request.

(e) The office of inspector general, the commissioner for capital asset management and maintenance and any other awarding authority shall enforce the provisions of this section. The commissioner of capital asset management and maintenance may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of chapter thirty A such rules, regulations and guidelines as are necessary to effectuate the purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities. A contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to section forty-four C of chapter one hundred and forty-nine.

(f) Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in section seven of chapter four and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provisions of clause (2) of paragraph (b)."

Section 39S. CONTRACTS FOR CONSTRUCTION; REQUIREMENTS.

"(a) As used in this section the word "person" shall mean any natural person, joint venture, partnership corporation or other business or legal entity. Any person submitting a bid for, or signing a contract to work on, the construction, reconstruction, alteration, remodeling or repair of any public work by the commonwealth, or political subdivision thereof, or by any county, city, town, district, or housing authority, and estimated by the awarding authority to cost more than \$10,000, and any person submitting a bid for, or signing a contract to work on, the construction, reconstruction, installation, demolition, maintenance or repair of any building by a public agency, estimated to cost more than \$10,000, shall certify on the bid, or contract, under penalties of perjury, as follows:

(1) That he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed in the work; (2) that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration.

(b) Any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal.

(c) The attorney general, or his designee, shall have the power to enforce this section including the power to institute and prosecute proceedings in the superior court to restrain the award of contracts and the performance of contracts in all cases where, after investigation of the facts, he has made a finding that the award or performance has resulted in violation, directly or indirectly, of subsection (b), and he shall not be required to pay to the clerk of the court an entry fee in connection with the institution of the proceeding."

Section 40. DISCHARGE OR RELEASE OF BONDS.

"Bonds given to the commonwealth, any county, city, town or political subdivision to secure the performance of contracts for the construction or repair of public buildings or other public works may be discharged or released by the awarding authority, upon such terms as it deems expedient, after the expiration of one year from the time of completion, subject to section thirty-nine K, of the work contracted to be done; provided that no claim filed under said bond is pending, and provided further, that no such bonds shall be discharged or released prior to the expiration of all special guarantees provided for in the contract unless new bonds in substitution therefor specifically relating to the unexpired guarantees shall be taken."

ATTENTION IS DIRECTED TO THE FOLLOWING SECTIONS OF CHAPTER 82 (THE LAYING OUT, ALTERATION, RELOCATION AND DISCONTINUANCE OF PUBLIC WAYS, AND SPECIFIC REPAIRS THEREON) OF THE GENERAL LAWS OF MASSACHUSETTS AS AMENDED TO DATE.

Section 40. DEFINITIONS.

"The following words, as used in this section and sections 40A to 40E, inclusive, shall have the following meanings:

"**Company**", natural gas pipeline company, petroleum or petroleum products pipeline company, public utility company, cable television company, and municipal utility company or department that supply gas, electricity, telephone, communication or cable television services or private water companies within the city or town where such excavation is to be made.

"**Description of excavation location**", such description shall include the name of the city or town, street, way, or route number where appropriate, the name of the streets at the nearest intersection to the excavation, the number of the buildings closest to the excavation or any other description, including landmarks, utility pole numbers or other information which will accurately define the location of the excavation.

"**Emergency**", a condition in which the safety of the public is in imminent danger, such as a threat to life or health or where immediate correction is required to maintain or restore essential public utility service.

"**Excavation**", an operation for the purpose of movement or removal of earth, rock or the materials in the ground including, but not limited to, digging, blasting, augering, backfilling, test boring, drilling, pile driving, grading, plowing in, hammering, pulling in, jacking in, trenching, tunneling and demolition of structures.

"**Excavator**", any entity including, but not limited to, a person, partnership, joint venture, trust, corporation, association, public utility, company or state or local government body which performs excavation operations.

"**Premark**", to delineate the general scope of the excavation or boring on the paved surface of the ground using white paint, or stakes or other suitable white markings on nonpaved surfaces. No premarking shall be acceptable if such marks can reasonably interfere with traffic or pedestrian control or are misleading to the general public. Premarking shall not be required of any continuous excavation that is over 500 feet in length.

"**Safety zone**", a zone designated on the surface by the use of standard color-coded markings which contains the width of the facilities plus not more than 18 inches on each side.

"**Standard color-coded markings**", red - electric power lines, cables, conduit or light cables; yellow - gas, oil, street petroleum, or other gaseous materials; orange - communications cables or conduit, alarm or signal lines; blue - water, irrigation and slurry lines; green - sewer and drain lines; white - premark of proposed excavation.

"**System**", the underground plant damage prevention system as defined in section 76D of chapter 164."

Section 40A. EXCAVATIONS; NOTICE.

"No excavator installing a new facility or an addition to an existing facility or the relay or repair of an existing facility shall, except in an emergency, make an excavation, in any public or private way, any company right-of-way or easement or any public or privately owned land or way, unless at least 72 hours, exclusive of Saturdays, Sundays and legal holidays but not more than 30 days before the proposed excavation is to be made, such excavator has premarked not more than 500 feet of the proposed excavation and given an initial notice to the system. Such initial notice shall set forth a description of the excavation location in the manner as herein defined. In addition, such initial notice shall indicate whether any such excavation will involve blasting and, if so, the date and the location at which such blasting is to occur.

The notice requirements shall be waived in an emergency as defined herein; provided, however, that before such excavation begins or during a life-threatening emergency, notification shall be given to the system and the initial point of

boring or excavation shall be premarked. The excavator shall ensure that the underground facilities of the utilities in the area of such excavation shall not be damaged or jeopardized.

In no event shall any excavation by blasting take place unless notice thereof, either in the initial notice or a subsequent notice accurately specifying the date and location of such blasting shall have been given and received at least 72 hours in advance, except in the case of an unanticipated obstruction requiring blasting when such notice shall be not less than four hours prior to such blasting. If any such notice cannot be given as aforesaid because of an emergency requiring blasting, it shall be given as soon as may be practicable but before any explosives are discharged.”

Section 40B. DESIGNATION OF LOCATION OF UNDERGROUND FACILITIES.

“Within 72 hours, exclusive of Saturdays, Sundays and legal holidays, from the time the initial notice is received by the system or at such time as the company and the excavator agree, such company shall respond to the initial notice or subsequent notice by designating the location of the underground facilities within 15 feet in any direction of the premarking so that the existing facilities are to be found within a safety zone. Such safety zone shall be so designated by the use of standard color-coded markings. The providing of such designation by the company shall constitute prima facie evidence of an exercise of reasonable precaution by the company as required by this section; provided, however, that in the event that the excavator has given notice as aforesaid at a location at which because of the length of excavation the company cannot reasonably designate the entire location of its facilities within such 72 hour period, then such excavator shall identify for the company that portion of the excavation which is to be first made and the company shall designate the location of its facilities in such portion within 72 hours and shall designate the location of its facilities in the remaining portion of the location within a reasonable time thereafter. When an emergency notification has been given to the system, the company shall make every attempt to designate its facilities as promptly as possible.”

Section 40C. EXCAVATOR’S RESPONSIBILITY TO MAINTAIN DESIGNATION MARKINGS; DAMAGE CAUSED BY EXCAVATOR.

“After a company has designated the location of its facilities at the location in accordance with section 40B, the excavator shall be responsible for maintaining the designation markings at such locations, unless such excavator requests remarking at the location due to the obliteration, destruction or other removal of such markings. The company shall then remark such location within 24 hours following receipt of such request.

When excavating in close proximity to the underground facilities of any company when such facilities are to be exposed, non-mechanical means shall be employed, as necessary, to avoid damage in locating such facility and any further excavation shall be performed employing reasonable precautions to avoid damage to any underground facilities including, but not limited to, any substantial weakening of structural or lateral support of such facilities, penetration or destruction of any pipe, main, wire or conduit or the protective coating thereof, or damage to any pipe, main, wire or conduit.

If any damage to such pipe, main, wire or conduit or its protective coating occurs, the company shall be notified immediately by the excavator responsible for causing such damage.

The making of an excavation without providing the notice required by section 40A with respect to any proposed excavation which results in any damage to a pipe, main, wire or conduit, or its protective coating, shall be prima facie evidence in any legal or administrative proceeding that such damage was caused by the negligence of such person.”

Section 40D. LOCAL LAWS REQUIRING EXCAVATION PERMITS; PUBLIC WAYS.

“Nothing in this section shall affect or impair local ordinances or by-laws requiring a permit to be obtained before excavation in a public way or on private property; but notwithstanding any general or special law, ordinance or by-law to the contrary, to the extent that any permit issued under the provisions of the state building code or state fire code requires excavation by an excavator on a public way or on private property, the permit shall not be valid unless the excavator notifies the system as required pursuant to sections 40 and 40A, before the commencement of the excavation, and has complied with the permitting requirements of chapter 82A.”

Section 40E. VIOLATIONS OF SECS. 40A TO 40E; PUNISHMENT.

“Any person or company found by the department of telecommunications and energy, after a hearing, to have violated any provision of sections 40A to 40E, inclusive, shall be fined \$1000 for the first offense and not less than \$5,000 nor more than \$10,000 for any subsequent offense within 12 consecutive months as set forth by the rules of said department; provided, however, that nothing herein shall be construed to require forfeiture of any penal sum by a state or local government body for violation of section 40A or 40C; and provided, further, that nothing herein shall be construed to require the forfeiture of any penal sum by a residential property owner for the failure to premark for an excavation on such person's residential property.”

ATTENTION IS DIRECTED TO THE FOLLOWING SECTIONS OF CHAPTER 30 (AN ACT MOBILIZING ECONOMIC RECOVERY IN THE COMMONWEALTH) OF THE ACTS OF 2009.

Section 33.

“(a) Notwithstanding any general or special law to the contrary, the following requirements shall apply to any public works project funded by the American Recovery and Reinvestment Act of 2009 where the amount of construction costs under any contract awarded is likely to exceed \$1,000,000. For the purposes of this section, "public works" shall mean building or work the construction of which is carried on by authority of the commonwealth, or by a county, town, authority or district, or with funds of a federal agency or the commonwealth or a county, city, town, authority or district to serve the interest of the general public, regardless of whether title thereof is in the commonwealth or in a county, city, town, authority or district; provided, however, that for the purposes of this definition, "construction" shall have the meaning provided in section 27D of chapter 149 of the General Laws.

(b) For any public works project subject to subsection (a), the specifications set forth in any request for responses shall include a requirement that, on a per project basis, not less than 20 per cent of the total hours of employees receiving an hourly wage who are directly employed on the site of the project, employed by the contractor or a subcontractor and subject to the prevailing wage, shall be performed by apprentices in bona fide apprentice training programs as provided in sections 11H and 11I of chapter 23 of the General Laws which are approved by the division of apprentice training in the executive office of labor and workforce development.

(c) During the performance of a public works project subject to subsections (a) and (b), the contractor shall submit periodic reports to the awarding authority with records indicating the total hours worked by all journeymen and apprentices in positions subject to the apprentice requirement. In any instance in which the apprentice hours do not constitute 5 per cent of the total hours of employees subject to the apprentice requirement, the contractor shall submit a plan to the awarding authority describing how the contractor shall comply with the apprentice requirement.

(d) The attorney general shall have all the necessary powers to require compliance with the requirements of subsections (a), (b) and (c) therewith, including the power to institute and prosecute proceedings in the superior court to restrain the award of contracts and the performance of contracts. Prior to award of the contract, an awarding authority may petition the attorney general for approval to adjust the requirements set forth in said subsections (a), (b) and (c). The attorney general may adjust these requirements only if he determines that compliance with these requirements is not feasible or if application of the requirements would be preempted by federal law.

(e) An awarding authority serving a low-income population may require additional specifications that address the needs of its clients including, but not limited to, preferential hiring for residents of public housing authorities for available apprenticeship positions.

(f) Subject to appropriation, the division of apprentice training shall enhance its outreach efforts to underserved populations in order to increase and diversify the number of apprentices in the commonwealth.”

Section 39.

“Any entity located in the commonwealth that receives federal funds through the American Recovery and Reinvestment Act of 2009 shall provide information as directed by the secretary of administration and finance regarding the use of the funds. The required information shall include, but not be limited to, the reporting information required by the federal

government and any other information deemed necessary by the secretary to administer the American Recovery and Reinvestment Act of 2009 responsibly, efficiently and transparently. To the extent possible, the secretary shall work to streamline the reporting of this information, minimize duplication of data entry by recipients and ensure data consistency. The secretary may issue regulations to effectuate this reporting requirement.”

Section 40.

“Employers and hiring agents on all projects funded in whole or in part by the American Recovery and Reinvestment Act of 2009 shall post notices of available employment opportunities to the commonwealth’s job bank or the one-stop career centers closest to where the projects shall be located. The postings shall contain such information as directed by the secretary of labor and workforce development. The secretary may issue regulations to effectuate this job posting requirement.”

END OF SECTION

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SECTION 00830.D

ATTACHMENT D

CHANGE ORDERS

Policy:

This section supplements Article 11, Changes to the Contract, in the General Conditions and Supplementary Conditions.

All executed change orders submitted to the Engineer for review and processing must be prepared in accordance with the attached change order format (Appendix A) with the appropriate number of copies, calculation sheet(s) (Appendix B) and all other supporting documentation necessary for evaluation. Failure to comply with these instructions will result in delays in processing the change order.

In order to avoid possible delays with approval of change orders, at the beginning of the project and as circumstances warrant, the Contractor shall submit a list of construction equipment, identifying major pieces of equipment to be utilized on the project. The list shall include the Contractor's designation, if any, the manufacturer, model, year of manufacture, serial number, size and horsepower of equipment. The Contractor shall also provide for approval a proposed bluebook equipment rental rate development that separately lists for each piece of equipment the monthly rental rate, area adjustment factor, depreciation factor, estimated operating cost per hour and total hourly rate. In the event the Contractor fails or is unable to provide appropriate rate information the Engineer may develop equipment rental rates for use on change orders.

Payment of Change Orders:

Payment of all change orders shall be in accordance with the relevant provisions of Massachusetts General Laws, Chapter 30, Section 39G for non-building construction and Section 39K for building construction as amended from time to time.

Payment of change orders shall be made in accordance with one of the following three methods:

- A. Existing unit prices as set forth in the contract; or
 - B. Agreed upon lump sum or unit prices; or
 - C. Time and materials
- A. Payment for work for which there is a unit price in the contract:

Where the contract contains a unit price for work and the Engineer orders a change for work of the same kind as other work contained in the contract and is performed under similar physical conditions, the Contractor shall accept full and final payment at the contract unit price(s) for the acceptable quantities. Under certain circumstances, the unit

prices may be subject to revaluation and adjustment. See Article 13 in the Supplementary Conditions.

B. Payment for work or materials for which no price is contained in the contract:

If the Engineer directs, the Contractor shall submit promptly in writing to the Engineer an offer to do the required work on a lump sum or unit price basis, as specified by the Engineer. The stated price, either lump sum or unit price, shall be divided so as to show that it is the sum of:

1. The estimated cost of Labor, plus
2. Direct Labor Cost, plus
3. Material and Freight Costs, plus
4. Equipment Costs, plus
5. An amount not to exceed 20% of the sum of items 1 through 4 for overhead and profit, plus (if applicable),
6. In the case of work done by a subcontractor an amount not to exceed 7 ½%, for the general contractor of the sum of the cost (not including subcontractor's overhead and profit) of items 1 through 4 for his overhead and profit (less, if applicable),
7. Credits for work deleted from the contract, including actual costs of the deleted work plus the percentage of overhead, profit, bonds and insurance attributable to such credit amount.

C. Payment for work on a time and materials basis:

Unless an agreed lump sum and/or unit price is obtained as noted above and is so stated in the change price, the Contractor shall accept as full payment for which no agreement is contained in contract, an amount equal to:

1. The estimated cost of Labor, plus
2. The Direct Labor Costs, plus
3. Equipment Costs, plus
4. Material and Freight Costs, plus
5. An amount not to exceed 20% of the sum of items 1 through 4 for overhead and profit, plus, if applicable,
6. In the case of work done by a subcontractor an amount not to exceed 7 ½%, for the general contractor of the sum of the cost (not including subcontractor's overhead and profit) of items 1 through 4 for his overhead and profit (less, if applicable),
7. Credit for work deleted from the Contract, including actual costs of the deleted work plus the percentage of overhead, profit, bonds and insurance attributable to such credit amount.

Explanation of items 1 through 7 as outlined in "B" and "C" above:

1. Labor - Only those workers employed on the project who are doing the extra work, including the foreman in charge, are allowable. General foremen, superintendents, or other

supervisory personnel are considered to be included in the overhead markup as provided in items 5 and/or 6. Hourly labor rates in excess of those as listed in the contract wage rates require documentation. As a minimum, an explanation and the appropriate copy of the certified payroll are required.

2. Direct Labor Costs - These costs are limited to those which are required in the contract document. Coverage in excess of the contract provisions, secured by the contractor/subcontractor(s) at his option, are ineligible. The following list of typical direct labor charges is provided for your assistance and is in no way intended to be complete or all encompassing:

Workman's Compensation

Federal/State: Social Security Tax and Unemployment Tax;

Health, Welfare and Pension Benefits; (this cost is included in the wage rates appearing in the Attachment A Massachusetts Wage Rates.

Liability insurance:	Bodily injury; excess umbrella; property damage; public liability
Blasters insurance:	If applied to any required direct labor costs
Builders risk insurance:	If applied to any required direct labor costs
Experience modification insurance:	If applied to any required direct labor costs
Surcharges:	If applied to any required direct labor costs

Following award and prior to execution of a construction contract, the Contractor and filed subbidders (where applicable) shall submit for review by the Owner, documentation to establish the markup percentage(s).

The documented direct labor markup for this contract may be adjusted on an annual basis as measured from the date the contract is executed. The contract agreement will provide for the establishment of the Direct Labor Cost percentage.

3. Material and Freight - Only those materials required as a result of the change order and reasonable freight charges for delivery of same are allowable.
4. Equipment - Only the equipment required as a result of the change order is allowable. Equipment rental rates shall be governed by the current EquipmentWatch, division of Intertec Publishing [Formerly Nielson/Dataquest] Rental Rate Bluebook for Construction Equipment (the "Bluebook"). In determining the rental rate, the following shall apply:
 - a. For equipment already on the project - the monthly prorated rental rate by

the hourly use shall be applicable;

- b. For equipment not on the project the daily rate, the weekly rate, or monthly rate will prevail, whichever will prove to be most cost effective. Small tools and manual equipment are examples of costs not allowable under this item. These costs are considered to be included in the overhead markup as provided in items 5 and/or 6.

(1 Month (Normal Use) = 176 hours)

- 5.& 6. Overhead and Profit - All other costs not previously mentioned are considered to be included in this item, be it for the general contractor or subcontractor(s).
7. Credits - Work deleted, material and equipment removed from the contract, stored and/or returned shall be credited to the cost of the change order, less documented costs.

This change order will be prepared in such manner as to clearly separate Eligible and Ineligible Costs (as applicable to state-funded projects).

The Contractor shall furnish itemized statements of the cost of the work ordered and shall give the Engineer access to all accounts, bills and vouchers relating thereto; and unless the Contractor shall furnish such itemized statements, and access to all accounts, bills and vouchers, he shall not be entitled to payment for any items of extra work for which such information is sought by the Engineer.

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APPENDIX A

CHANGE ORDER
(Enter Project Name)
(Enter Location)

Sheet ___ of ___

Date _____

Project No. _____

Contract No. _____

Change Order No. _____

Contract Amount (As Bid) \$ _____

Amount of Previous Change Orders \$ _____

Net Change in Contract Price (this Change Order) \$ _____

Total Adjusted Contract Price (including this Change Order) \$ _____

This Change Order extends the time to complete the work by _____ calendar days.

The extended completion date is _____
_____.

This Change Order checked by: _____
Resident Representative Date

This Change Order is requested by: _____

This Change Order is recommended by:

Consultant Engineer P.E. # Date

The undersigned agree to the terms of the Change Order.

Contractor Date

Owner Date

Certification of Appropriation under M.G.L. c.44, s.31C: Adequate funding in an amount sufficient to cover the total cost of this change order is available.

By: _____
Certification Officer (Auditor, Accountant, Treasurer) Date

Do not write below this space: this space reserved for STATE AGENCY APPROVAL

CHANGE ORDER (continued)
(Enter Project Name)
(Enter Location)

Sheet ___ of ___

Date _____

Project No. _____

Contract No. _____

Change Order No. _____

Owner's Name: _____

Owner's Address: _____

Contractor's Name: _____

Contractor's Address: _____

Item 1:

Description of Change: _____

Reason for Change: _____

Backup Information: _____

Cost: \$ _____

Item 2

Description of Change: _____

Reason for Change: _____

Backup Information: _____

Cost: \$ _____

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Appendix B
Example Calculation Sheet

1. Labor

Foreman	10 hours @	\$10.00/hour	\$100.00
Engineer	10 hours @	8.80/hour	85.00
Operator	10 hours @	9.50/hour	95.00
Laborers	24 hours @	7.00/hour	<u>168.00</u>
			\$448.00

2. Direct Labor Cost (use the agreed upon Direct Labor Cost)

*(30)% of \$448.

*(used for example purposes only) \$ 134.00

3. Materials & Freight

150 l.f. of 12" pipe @ \$2.00/l.f.		\$ 300.00
15 v.f. precast SMH		1,700.00
Freight (slip# ___ enclosed)		<u>25.00</u>
		\$2,025.00

4. Equipment

1 Backhoe	10 hours @	\$80.00/hour	\$ 800.00
1 Truck-crane	10 hours @	100.00/hour	<u>1000.00</u>
			\$1800.00

TOTAL (items 1 through 4): \$4,407.00

5. (20%) markup for Overhead, Profit

(20%) of \$4,407 \$ 881.00

6. (7½ %) markup on subcontractor's cost for general contractor (if subcontractor is involved)

(7½ %) of \$4,407 \$ 331.00

7. Credits (deductibles) -\$323.00

TOTAL COST: \$5,296.00

Reminder: Provide support documentation as necessary i.e. vouchers, correspondence, calculation, photographs, reports.

END OF SECTION

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SECTION 00890

PERMITS

PART 1 – GENERAL

1.01 DESCRIPTION:

This Section provides specific information and defines specific requirements of the Contractor regarding the preparation and acquisition of permits required to perform the work of this project.

1.02 RELATED WORK:

- A. Section 01110, CONTROL OF WORK AND MATERIALS
- B. Section 01550, SIGNAGE (TRAFFIC CONTROL)
- C. Section 01562, DUST CONTROL
- D. Section 01570, ENVIRONMENTAL PROTECTION
- E. Section 02240, DEWATERING
- F. Section 02300, EARTHWORK

1.03 GENERAL REQUIREMENTS:

- A. The Owner has obtained or will obtain and pay for the permits listed below, which are required for this project. The Contractor shall assist in obtaining certain permits, as indicated. The Contractor shall obtain and pay for all other permits required, as defined under the Permits subsection of Section 00700, GENERAL CONDITIONS.

<u>Permits by Owner</u>	<u>Status</u>
Conservation Commission Order of Conditions (Ch. 131, s. 40)	Attached
Trench Permit (520 CMR 14.00)(eff. date 3/1/09)	*

*Contractor shall prepare permit application and obtain the permit after contract is awarded, bearing all expenses. Owner will pay for and/or waive the permit application fee, if applicable.

1.04 CONSERVATION COMMISSION ORDERS:

The Conservation Commission has under the authority of Massachusetts General Laws Chapter 131, Section 40, issued an Order of Conditions on the work under this contract. This Order is to become a part of the Contract Documents and the Contractor shall perform all work in strict conformance with said Order. A copy of this Order is attached to this section.

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

3.01 PERFORM WORK IN ACCORDANCE WITH REQUIREMENTS:

- A. The Contractor shall perform the work in accordance with the Contract Documents, including the attached permits/order of conditions, and any applicable municipal requirements.
- B. Prior to commencing any construction activities, the Contractor shall demonstrate to the Owner and the Engineer, through on-site inspection and submitting copies of permits or approvals, that it is in full compliance with the terms and conditions of all permits specified herein. The Contractor shall maintain full compliance with all permits throughout the performance of the work, and upon request, grant access to permitting authorities to inspect the site for the purpose of verifying such compliance.

END OF SECTION

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Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 WE 154-0080
 MassDEP File # _____
 eDEP Transaction # _____
 Erving
 City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
- | | |
|-----------|--|
| Franklin | N/A |
| a. County | b. Certificate Number (if registered land) |
| 1711 | 306 |
| c. Book | d. Page |
7. Dates: 8/22/23 10/10/2023 11/7/23
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
- Bridge Street Wall Replacement and Maple Avenue Roadway Improvements Project
 a. Plan Title
- | | |
|---|--------------------------|
| <u>Weston and Sampson Engineers, Inc.</u> | <u>Chris Wester</u> |
| b. Prepared By | c. Signed and Stamped by |
| <u>July 2023</u> | <u>1"=20'</u> |
| d. Final Revision Date | e. Scale |
| <u>Memorandum - Response to Comments</u> | <u>Sept. 6, 2023</u> |
| f. Additional Plan or Document Title | g. Date |

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- | | | |
|---|--|---|
| a. <input checked="" type="checkbox"/> Public Water Supply | b. <input type="checkbox"/> Land Containing Shellfish | c. <input checked="" type="checkbox"/> Prevention of Pollution |
| d. <input checked="" type="checkbox"/> Private Water Supply | e. <input checked="" type="checkbox"/> Fisheries | f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat |
| g. <input checked="" type="checkbox"/> Groundwater Supply | h. <input checked="" type="checkbox"/> Storm Damage Prevention | i. <input checked="" type="checkbox"/> Flood Control |

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



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B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
- 3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area, specified in 310 CMR 10.02(1)(a) 1 a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input checked="" type="checkbox"/> Bank	<u>0</u> a. linear feet	<u> </u> b. linear feet	<u> </u> c. linear feet	<u> </u> d. linear feet
5. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	<u>0</u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
	<u> </u> e. c/y dredged	<u> </u> f. c/y dredged		
7. <input type="checkbox"/> Bordering Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
Cubic Feet Flood Storage	<u> </u> e. cubic feet	<u> </u> f. cubic feet	<u> </u> g. cubic feet	<u> </u> h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet		
Cubic Feet Flood Storage	<u> </u> c. cubic feet	<u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
9. <input type="checkbox"/> Riverfront Area	<u> </u> a. total sq. feet	<u> </u> b. total sq. feet		
Sq ft within 100 ft	<u> </u> c. square feet	<u> </u> d. square feet	<u> </u> e. square feet	<u> </u> f. square feet
Sq ft between 100-200 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet

For Review
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B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. nourishment cu yd	<u> </u> d. nourishment cu yd
14. <input type="checkbox"/> Coastal Dunes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. nourishment cu yd	<u> </u> d. nourishment cu yd
15. <input type="checkbox"/> Coastal Banks	<u> </u> a. linear feet	<u> </u> b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	<u> </u> a. square feet	<u> </u> b. square feet		
17. <input type="checkbox"/> Salt Marshes	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	<u> </u> a. square feet	<u> </u> b. square feet		
	<u> </u> c. c/y dredged	<u> </u> d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	<u> </u> a. c/y dredged	<u> </u> b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	<u> </u> a. square feet	<u> </u> b. square feet		
22. <input type="checkbox"/> Riverfront Area	<u> </u> a. total sq. feet	<u> </u> b. total sq. feet		
Sq ft within 100 ft	<u> </u> c. square feet	<u> </u> d. square feet	<u> </u> e. square feet	<u> </u> f. square feet
Sq ft between 100-200 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet

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B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

24. Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on _____ unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



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C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
 "File Number WE 154-0080 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
- (1) is subject to the Massachusetts Stormwater Standards
- (2) is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
- ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
- iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;
- v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.
- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:
- i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and
 - ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

- 20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No
2. The _____ hereby finds (check one that applies):
 Conservation Commission
- a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw _____ 2. Citation _____

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

1. Municipal Ordinance or Bylaw _____ 2. Citation _____

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
 The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):



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E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form.
 This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

11/7/23

1. Date of Issuance

3

2. Number of Signers

Signatures:

Mark Blatchley

Carie Berg

Michele Turner

Mark Blatchley

Carie Berg

Michele Turner

by hand delivery on

11/8/23

Date

by certified mail, return receipt requested, on

Date

For Review
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F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

DEP File Number:

**Request for Departmental Action Fee
Transmittal Form**

Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Request Information

1. Location of Project

_____	_____
a. Street Address	b. City/Town, Zip
_____	_____
c. Check number	d. Fee amount

2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

_____	_____	_____
City/Town	State	Zip Code
_____	_____	_____
Phone Number	Fax Number (if applicable)	

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

_____	_____	_____
City/Town	State	Zip Code
_____	_____	_____
Phone Number	Fax Number (if applicable)	

4. DEP File Number:

B. Instructions

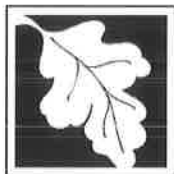
1. When the Departmental action request is for (check one):

- Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)
- Superseding Determination of Applicability – Fee: \$120
- Superseding Order of Resource Area Delineation – Fee: \$120

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



For Review
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G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Erving
 Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:
Erving
 Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Bridge St and Maple Ave WE 154-0080
 Project Location MassDEP File Number

Has been recorded at the Registry of Deeds of:

Franklin _____ _____
 County Book Page

for: Town of Erving
 Property Owner

and has been noted in the chain of title of the affected property in:

_____ _____
 Book Page

In accordance with the Order of Conditions issued on:

If recorded land, the instrument number identifying this transaction is:

If registered land, the document number identifying this transaction is:

Signature of Applicant

SECTION 01110

CONTROL OF WORK AND MATERIALS

PART 1 – GENERAL

Not Used.

PART 2 – PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 HAULING, HANDLING AND STORAGE OF MATERIALS:

- A. The Contractor shall, at its own expense, handle and haul all materials furnished by it and shall remove any of its surplus materials at the completion of the work.
- B. The Contractor shall provide suitable and adequate storage for equipment and materials furnished by it that are liable to injury and shall be responsible for any loss of or damage to any equipment or materials by theft, breakage, or otherwise.
- C. All excavated materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the work. Materials and equipment shall be kept neatly piled and compactly stored in such location as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.
- D. The Contractor shall be responsible for all damages to the work under construction during its progress and until final completion and acceptance even though partial payments have been made under the Contract.

3.02 EASEMENTS:

- A. As indicated on the drawings, the work is located in land owned and easements obtained by the Owner. The Contractor has no rights outside of the Town-owned land or easements unless they are obtained from the property owner.
- B. Contractor shall schedule work so that it will cause minimum inconvenience and nuisance to abutting property owners, over the shortest possible time.
- C. Easements shall be kept clean; no rubbish or discarded construction materials shall be allowed to accumulate. Storage of excess construction materials, including soil, ledge, equipment, or machinery on easements will not be allowed.

- D. Restoration of fences, shrubs, trees and grass shall be completed promptly following completion of the work in an easement, to minimize disruption and inconvenience to property owners.
- E. Unless approved by the Engineer, the use of easements for ease of access to and egress from other areas of the project will not be permitted.

3.03 OPEN EXCAVATIONS:

- A. All open excavations shall be adequately safeguarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The Contractor shall, at its own expense, provide suitable and safe means for completely covering all open excavations and for accommodating travel when work is not in progress.
- B. Bridges provided for access to private property during construction shall be removed when no longer required.
- C. The length of open trench will be controlled by the particular surrounding conditions but shall always be confined to the limits prescribed by the Engineer.
- D. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, then special construction procedures shall be taken, such as limiting the length of trench and prohibiting stocking excavated material in the street.
- E. All street excavations shall be completely closed at the end of each work day. Backfilling or use of steel plates of adequate strength to carry traffic shall be used.

3.04 MAINTENANCE OF TRAFFIC:

- A. Bridge Street shall be closed for the shortest period of time to install the segmental block retaining wall and reconstruct the road. All excavated materials and equipment shall be placed so that pedestrian traffic may be safely maintained at all times.
- B. Should the Chief of Police deem it necessary, uniformed officers will be assigned to direct traffic. The Contractor shall make all arrangements in obtaining uniformed officers required.
- C. The Contractor shall at its own expense, as directed by the Police Traffic Control/Safety Officer, provide and erect acceptable barricades, barrier fences, traffic signs, and all other traffic devices not specifically covered in a bid item, to protect the work from traffic, pedestrians, and animals. The Contractor shall provide sufficient temporary lighting such as lanterns/flashers (electric battery operated) or other approved illuminated traffic signs and devices to afford adequate protection to the traveling public, at no additional cost to the Owner. See Section 01552 CONSTRUCTION ZONE SAFETY PLAN.

- D. The Contractor shall furnish all construction signs that are deemed necessary by and in accordance with Part VI of the Manual on Uniform Traffic Control Devices as published by the U.S. Department of Transportation. In addition, the Contractor may be required to furnish up to 128 square feet of additional special construction warning signs. Size and exact wording of signs shall be determined by the Engineer during construction.
- E. The intent of policing is to ensure public safety by direction of traffic. Police officers are not to serve as watchmen to protect the Contractor's equipment and materials.
- F. Nothing contained herein shall be construed as relieving the Contractor of any of its responsibilities for protection of persons and property under the terms of the Contract.

3.05 CARE AND PROTECTION OF PROPERTY:

The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be promptly restored by the Contractor, at its expense, to a condition similar or equal to that existing before the damage was done, to the satisfaction of the Engineer.

3.06 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

- A. All existing buildings, utilities, pipes, poles, curbing, property line markers and other structures which the Engineer decides must be preserved in place without being temporarily or permanently relocated, shall be carefully supported and protected from damage by the contractor. Should such property be damaged, it shall be restored by the Contractor, at no additional cost to the Owner.
- B. The Contractor shall determine the location of all underground structures and utilities. Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by Contractor.
- C. When fences interfere with the Contractor's operations, they shall remove and (unless otherwise specified) promptly restore them in accordance with Section 01564 EXISTING FENCES.
- D. On paved surfaces the Contractor shall not use or operate tractors, bulldozers, or other power-operated equipment with treads or wheels which are shaped so as to cut or otherwise damage such surfaces.

- E. All property damaged by the Contractor's operations shall be restored to a condition at least equal to that in which it was found immediately before work was begun. Suitable materials and methods shall be used for such restoration.
- F. Restoration of existing property and structures shall be carried out as promptly as practicable and shall not be left until the end of the construction period.

3.07 MAINTENANCE OF FLOW:

- A. The Contractor shall at its own cost, provide for the flow of sewers and drains interrupted during the progress of the work, and shall immediately cart away and dispose of all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Engineer well in advance of the interruption of any flow.
- B. All existing drainage facilities including, but not limited to; brooks, streams, canals, channels, ditches, culverts, catch basins and drainage piping shall be adequately safeguarded so as not to impede drainage or to cause siltation of downstream areas in any manner whatsoever. If the Contractor damages or impairs any of the aforesaid drainage facilities, it shall repair the same within the same day.
- C. At the conclusion of the work, the Contractor shall remove all silt in drainage structures caused by its operations as described in Section 01740, CLEANING UP.

3.08 REJECTED MATERIALS AND DEFECTIVE WORK:

- A. Materials furnished by the Contractor and condemned by the Engineer as unsuitable or not in conformity with the specifications shall forthwith be removed from the work by the Contractor, and shall not be made use of elsewhere in the work.
- B. Any errors, defects or omissions in the execution of the work or in the materials furnished by the Contractor, even though they may have been passed or overlooked or have appeared after the completion of the work, discovered at any time before the final payment is made hereunder, shall be forthwith rectified and made good by and at the expense of the Contractor and in a manner satisfactory to the Engineer.
- C. The Contractor shall reimburse the Owner for any expense, losses or damages incurred in consequence of any defect, error, omission or act of the Contractor or its employees, as determined by the Engineer, occurring previous to the final payment.

3.09 SANITARY REGULATIONS:

Sanitary conveniences for the use of all persons employed on the work, properly screened from public observation, shall be provided in sufficient numbers in such manner and at such locations as may be approved. The contents shall be removed and disposed of in a satisfactory manner as the occasion requires. The Contractor shall rigorously prohibit the committing of nuisances within, on or about the work. Any employees found violating these provisions shall be discharged and not again employed

on the work without the written consent of the Engineer. The sanitary conveniences specified above shall be the obligation and responsibility of the Contractor.

3.10 SAFETY AND HEALTH REGULATIONS:

This project is subject to the Safety and Health regulations of the U.S. Department of Labor set forth in 29 CFR, Part 1926, and to the Massachusetts Department of Labor and Industries, Division of Industrial Safety "Rules and Regulations for the Prevention of Accidents in Construction Operations (454 CMR 10.0 et. seq.)." The Contractor shall be familiar with the requirements of these regulations.

3.11 SITE INVESTIGATION:

The Contractor acknowledges that it has satisfied itself as to the conditions existing at the site of the work, the type of equipment required to perform this work, the quality and quantity of the materials furnished insofar as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the drawings and specifications made a part of this contract. Any failure of the Contractor to acquaint itself with available information will not relieve it from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusion or interpretation made by the Contractor on the basis of the information made available by the Owner.

3.12 HAZARDOUS WASTE:

Should the Contractor, while performing work under this contract, uncover hazardous materials, as defined in Massachusetts Hazardous Waste Regulations 310 CMR 30.00, he shall immediately notify the Engineer. The Contractor is not, and has no authority to act as, a handler, generator, operator or disposer of hazardous or toxic substances found or identified at the site, and the Owner shall undertake all such functions.

END OF SECTION

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SECTION 01140

SPECIAL PROVISIONS

PART 1 - GENERAL

Not used

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.01 WATER FOR CONSTRUCTION PURPOSES:

- A. In locations where water is in sufficient supply, the Contractor may be allowed to use water without charge for jetting backfill and other construction purposes. The express approval of the Owner shall be obtained before water is used. Waste of water by the Contractor shall be sufficient cause for withdrawing the privilege of unrestricted use.
- B. If no water is available, the Contractor shall supply water at no additional cost to the Owner.

3.02 PIPE LOCATION:

Pipe shall be located substantially as indicated on drawings. The Owner reserves the right, acting through the Engineer, to make such modifications as may be deemed desirable to avoid interference with existing structures or for other reasons.

3.03 DIMENSIONS OF EXISTING STRUCTURES:

Where the dimensions and locations of existing structures are of critical importance in the installation or connections of new work, the Contractor shall verify such dimensions and locations in the field before the fabrication of any material or equipment that is dependent on the correctness of such information.

3.04 OCCUPYING PRIVATE PROPERTY:

The Contractor shall not enter upon nor occupy with men, equipment or materials any property outside of the public highways or Owner's easements, except with the written consent of the property owner or property owner's agent.

3.05 EXISTING UTILITY LOCATIONS – CONTRACTOR'S RESPONSIBILITY:

- A. The location of existing underground services and utilities shown on the drawings is based on available records. It is not warranted that all existing utilities and services are

shown, or that shown locations are correct. The Contractor shall be responsible for having the utility companies locate their respective utilities on the ground prior to excavating.

- B. To satisfy the requirements of Massachusetts law, Chapter 82, Section 40, the Contractor shall, at least 72 hours, exclusive of Saturdays, Sundays and holidays, prior to excavation in the proximity of telephone, gas, cable television and electric utilities, notify the utilities concerned by calling "DIG SAFE" at telephone number: 1-888-344-7233.
- C. The Contractor shall coordinate all work involving utilities and shall satisfy itself as to the existing conditions of the areas in which it is to perform its work. It shall conduct and arrange its work so as not to impede or interfere with the work of other contractors working in the same or adjacent areas.

3.06 COORDINATION OF WORK:

The General Contractor shall be responsible for coordinating its own work as well as that of any subcontractors. It shall be responsible for notification of the Engineer when each phase of work is expected to begin and the approximate completion date.

3.07 TIME FOR COMPLETION OF CONTRACT:

The time for completion of this contract is stipulated in the Form of/for General Bid. The Bidder shall base its bid on completing the proposed work by the completion date stipulated in Section 00410, FORM OF GENERAL BID/FORM FOR GENERAL BID.

3.08 MAINTENANCE OF TRENCH SURFACE:

After backfilling and compacting the trench, the Contractor shall be responsible for keeping the ground surface dry and passable at all times until the surface has been restored to original conditions.

3.09 WETLANDS PROTECTION SIGN:

A sign not less than two square feet in size shall be displayed at the site. The sign shall bear the words "Massachusetts Department of Environmental Protection, Wetland Division, File Number 154-0080."

3.10 COMPLIANCE WITH PERMITS:

- A. The Contractor shall perform all work in conformance with requirements of the Permits, which appear in Section 00890 – PERMITS.

3.11 CUTTING, FITTING AND PATCHING:

- A. The Contractor shall do all cutting, fitting, or patching of its work that may be required to make its several parts come together properly and fit it to receive or be received by

work of other Contractors, as shown upon or reasonably implied by the drawings and the specifications for the completed structure, including all existing work.

- B. The Contractor shall not endanger any work by cutting, digging, or otherwise and shall not cut or alter the work of any other Contractor, save with the consent of the Engineer.
- C. All holes or openings required to be made in new or existing work, particularly at pipe, conduit, or other penetrations not covered by escutcheons or plates shall be neatly patched. All such holes shall be made completely watertight as approved by the Engineer.
- D. Size and locations of holes required in steel, concrete, or other structural or finish materials for piping, wiring, ducts, etc., which have not been located and detailed on the drawings shall be approved by the Engineer prior to layout and cutting thereof. All holes shall be suitably reinforced as required by the Engineer.
- E. Workmanship and materials of patching and repair work shall match the adjacent similar work and shall conform to the applicable sections of the specification. Patches and joints with existing work shall provide, as applicable in each case, visual, structural, and waterproofing continuity.

3.12 CONTRACTOR'S REPRESENTATIVE:

The Contractor shall designate a representative who will be available to respond to emergency calls by the Owner at any time day and night and on weekends and holidays should such a situation arise.

3.13 VISUAL RECORDING:

Before beginning construction, the Contractor shall make a color DVD recording along the entire work length. One complete recording, for the entire project length, shall be furnished to the Engineer prior to the start of the work. The visual recording shall be identified by street name, as applicable, and station.

3.14 HOURS OF CONSTRUCTION ACTIVITY:

- A. The Contractor shall conduct all construction activity between 7:00 a.m. and 5:00 p.m., Monday through Friday. No construction work shall be allowed on Saturdays, Sundays or Holidays without written authorization from the Owner.
- B. The Owner will provide personnel for assistance in locating and operating valves at no cost to the Contractor during the Owner's normal working hours (Monday through Friday 7:00 a.m. to 3:00 p.m.). When this assistance is required by the Contractor outside of the Owner's normal working hours the cost will be incurred by the Contractor

at the prevailing overtime rate of pay for the personnel providing the assistance. The Owner will bill the Contractor directly.

3.15 CONSTRUCTION CREWS:

The Contractor shall not increase the number of construction crews assigned to the work without providing one-week advance notice to the Engineer.

3.16 MASSACHUSETTS DATA SECURITY REGULATIONS:

The Contractor is required to comply with data security regulations contained in 201 CMR 17.00 that have been established to safeguard personal information of Massachusetts residents contained in paper or electronic records. The Contractor shall not submit to the Engineer or Owner documents in paper or electronic form that contain personal information (person's name combined with one or more of the following – Social Security Number, driver's license number or state-issued identification card number, financial institution account number, or credit or debit card number). Any document submitted to the Engineer that violates this provision shall be returned to the Contractor and the Contractor shall remove personal information from the document prior to resubmitting it to the Engineer. The Contractor shall require each Subcontractor to also comply with the MA data security regulations insofar as they involve submittal of personal information to the Engineer and Owner.

END OF SECTION

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SECTION 01250

PRICE ADJUSTMENTS

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Price adjustments, as required by MGL Chapter 30, Section 38A, shall be implemented for this Project. Price adjustments, as enumerated in Part 3 of this specification, shall be made for the following items:

Water and Sewer Projects

- Diesel fuel and gasoline
- Liquid asphalt
- Portland cement contained in cast-in-place concrete

Road and Bridge Projects

- Diesel fuel and gasoline
- Asphalt
- Concrete
- Steel

- B. Price adjustments shall be made in accordance with the methodology adopted by the Massachusetts Department of Transportation in the following SPECIAL PROVISIONS documents, which are attached, but modified as contained herein:

1. Document 00811 Monthly Price Adjustment for Hot Mix Asphalt Mixtures, revised July 8, 2016
2. Document 00812 Monthly Price Adjustment for Diesel fuel and Gasoline, revised January 26, 2009
3. Document 00813 Price Adjustments for Structural Steel and Reinforcing Steel, dated October 11, 2018
4. Document 00814 Price Adjustments for Portland Cement concrete Mixes, dated January 12, 2009

- C. Base and Period Prices used to calculate price adjustments shall be as published by the Massachusetts Department of Transportation as presented in Documents 00811 through 00814.

1.02 CONTRACTOR CREDIT TO OWNER SHOULD PRICES DECREASE:

- A. Price adjustments will only be made if the variance between the base price and the period price is Five Percent (5%) or more.

- B. In the instance where the period price is below the base price by 5% or more, then the Contractor shall credit the Owner the adjustment.

PART 2 - PRODUCTS

Not used

PART 3 - EXECUTION

3.01 DIESEL FUEL AND GASOLINE:

- A. Price adjustments shall be determined based on documented quantities of diesel fuel and gasoline usage for site dedicated equipment. This methodology shall replace the price adjustment basis on fuel usage factors, as described within the Massachusetts Department of Transportation Document 00812.
- B. All site dedicated equipment shall be approved by the Engineer for the calculation of any qualifying price adjustment. Prior to the start of work the Contractor shall submit to the Engineer a list of all dedicated equipment for the project. The Contractor shall forward updated submittals, as necessary, throughout the duration of the contract. Only that equipment included within the current approved list shall be considered eligible for calculating a price adjustment under this Section 01250.
- C. The Contractor shall submit fuel delivery slips to the Engineer as a basis for calculating total diesel fuel and gasoline usage for site dedicated equipment. At a minimum, the delivery slips will include the name of the fuel delivery company, the date and location of fueling, the type of fuel, description of the fueled equipment and the quantity for each type of fuel delivered in gallons. Any slips not providing the minimum information shall not be included in the calculation of total diesel fuel and gasoline usage for price adjustment purposes.

3.02 LIQUID ASPHALT:

- A. The "Period Price Method" shall be used to determine price adjustments. For projects utilizing reclaimed asphalt include Reclaimed Asphalt Pavement (RAP) Factor (0.0 to <1.0) in calculation of the total price adjustment. Otherwise, use RAP Factor = 1.0.
- B. For bid items involving asphalt paving that are measured and paid on a linear foot basis, or some other basis besides tonnage, the number of tons shall be determined by the Engineer using compacted measure of thickness within the established payment limits.

- C. Asphalt paving not separately measured for payment but rather included as an incidental component of work under a related bid item shall not be considered for price adjustment.

3.03 STRUCTURAL AND REINFORCING STEEL:

- A. Steel price adjustments shall not be made for water and sewer projects.
- B. Period prices for steel are subject to change up to four (4) months after the date of original publication. Therefore, no price adjustment will be made until the index for the period is finalized.

3.04 PORTLAND CEMENT AND CONCRETE:

- A. The price adjustment applies to all projects contained herein in Section 1.01A.
- B. Field Concrete used in water and sewer projects, typically used for thrust blocks and concrete encasement, shall not be considered for price adjustment. Cast-in-place concrete used on these projects will be included in the price adjustment determination.

END OF SECTION

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ATTACHMENT FOR SECTION 01250 PRICE ADJUSTMENTS

MASSDOT DOCUMENTS 00811-00814

For Review
12/10/2023 9:37:26 AM

DOCUMENT 00811
SPECIAL PROVISIONS
MONTHLY PRICE ADJUSTMENT FOR HOT MIX ASPHALT (HMA) MIXTURES
ENGLISH AND METRIC UNITS
Revised: 07/08/2016

This provision applies to all projects using greater than 100 tons (91 megagrams) of hot mix asphalt (HMA) mixtures containing liquid asphalt cement as stipulated in the Notice to Contractors section of the bid documents.

Price Adjustments will be based on the variance in price, for the liquid asphalt component only, between the Base Price and the Period Price. They shall not include transportation or other charges. Price Adjustments will occur on a monthly basis.

Base Price

The Base Price of liquid asphalt on a project as listed in the Notice to Contractors section of the bid documents is a fixed price determined by the Department at the time of the bid using the same method as the determination of the Period Price detailed below. The Base Price shall be used in all bids.

Period Price

The Period Price is the price of liquid asphalt for each monthly period as determined by the Department using the average selling price per standard ton of PG64-28 paving grade (primary binder classification) asphalt, FOB manufacturer's terminal, as listed under the "East Coast Market - New England, Boston, Massachusetts area" section of the Poten & Partners, Inc. "Asphalt Weekly Monitor". This average selling price is listed in the issue having a publication date of the second Friday of the month and will be posted as the Period Price for that month. The Department will post this Period Price on its website at <http://www.mhd.state.ma.us/> within two (2) business days following its receipt of the relevant issue of the "Asphalt Weekly Monitor". Poten and Partners has granted the Department the right to publish this specific asphalt price information sourced from the Asphalt Weekly Monitor. This method of period price determination was formerly called the New Asphalt Period Price Method. Separate website postings using both the New Asphalt Period Price Method and the Old Asphalt Period Price Method were discontinued after June 2013.

Price Adjustment Determination, Calculation and Payment

The Contract Price of the HMA mixture will be paid under the respective item in the Contract. Price Adjustments, as herein provided, either upwards or downwards, will be made after the work has been performed using the monthly period price for the month during which the work was performed.

Price Adjustments will be paid only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

The Price Adjustment applies only to the actual virgin liquid asphalt content in the mixture placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M3.11.03.

Price Adjustments will be separate payment items. The pay item numbers are 999.401 for a positive price adjustment (a payment) and 999.402 for a negative price adjustment (a deduction). Price Adjustments will be calculated using the following equation:

$$\text{Price Adjustment} = \text{Tons of HMA Placed} \times \text{Liquid Asphalt Content \%} \times \text{RAP Factor} \times (\text{Period Price} - \text{Base Price})$$

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is a Department-approved extension of time.

***** END OF DOCUMENT *****

DOCUMENT 00812

SPECIAL PROVISIONS
MONTHLY PRICE ADJUSTMENT FOR DIESEL FUEL AND GASOLINE –
ENGLISH UNITS

Revised: 01/26/2009

This monthly fuel price adjustment is inserted in this contract because the national and worldwide energy situation has made the future cost of fuel unpredictable. This adjustment will provide for either additional compensation to the Contractor or repayment to the Commonwealth, depending on an increase or decrease in the average price of diesel fuel or gasoline.

This adjustment will be based on fuel usage factors for various items of work developed by the Highway Research Board in Circular 158, dated July 1974. These factors will be multiplied by the quantities of work done in each item during each monthly period and further multiplied by the variance in price from the Base Price to the Period Price.

The Base Price of Diesel Fuel and Gasoline will be the price as indicated in the Department's web site (www.mhd.state.ma.us) for the month in which the contract was bid, which includes State Tax.

The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month.

This adjustment will be effected only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No adjustment will be paid for work done beyond the extended completion date of any contract.

Any adjustment (increase or decrease) to estimated quantities made to each item at the time of final payment will have the fuel price adjustment figured at the average period price for the entire term of the project for the difference of quantity.

The fuel price adjustment will apply only to the following items of work at the fuel factors shown:

ITEMS COVERED	FUEL FACTORS	
	Diesel	Gasoline
Excavation: and Borrow Work: Items 120, 120.1, 121, 123, 124, 125, 127, 129.3, 140, 140.1, 141, 142, 143, 144., 150, 150.1, 151 and 151.1 (Both Factors used)	0.29 Gallons / CY	0.15 Gallons / CY
Surfacing Work: All Items containing Hot Mix Asphalt	2.90 Gallons / Ton	Does Not Apply

***** END OF DOCUMENT *****

DOCUMENT 00813

SPECIAL PROVISIONS

PRICE ADJUSTMENTS FOR STRUCTURAL STEEL AND REINFORCING STEEL

October 11, 2018

This special provision applies to all projects containing the use of structural steel and/or reinforcing steel as specified elsewhere in the Contract work. It applies to all structural steel and all reinforcing steel, as defined below, on the project. Compliance with this provision is mandatory, i.e., there are no "opt-in" or "opt-out" clauses. Price adjustments will be handled as described below and shall only apply to unfabricated reinforcing steel bars and unfabricated structural steel material, consisting of rolled shapes, plate steel, sheet piling, pipe piles, steel castings and steel forgings, and.

Price adjustments will be variances between Base Prices and Period Prices. Base Prices and Period Prices are defined below.

Price adjustments will only be made if the variances between Base Prices and Period Prices are 5% or more. A variance can result in the Period Price being either higher or lower than the Base Price. Once the 5% threshold has been achieved, the adjustment will apply to the full variance between the Base Price and the Period Price.

Price adjustments will be calculated by multiplying the number of pounds of unfabricated structural steel material or unfabricated reinforcing steel bars on a project by the index factor calculated as shown below under Example of a Period Price Calculation.

Price adjustments will *not* include guardrail panels or the costs of shop drawing preparation, handling, fabrication, coatings, transportation, storage, installation, profit, overhead, fuel costs, fuel surcharges, or other such charges not related to the cost of the unfabricated structural steel and unfabricated reinforcing steel.

The weight of steel subject to a price adjustment shall not exceed the final shipping weight of the fabricated part by more than 10%.

Base Prices and Period Prices are defined as follows:

Base Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are fixed prices determined by the Department and found in the table below. While it is the intention of the Department to make this table comprehensive, some of a project's unfabricated structural steel and/or unfabricated reinforcing steel may be inadvertently omitted. Should this occur, the Contractor shall bring the omission to the Department's attention so that a contract alteration may be processed that adds the missing steel to the table and its price adjustments to the Contract.

The Base Price Date is the month and year in which MassDOT opened bids for the project. This date is used to select the Base Price Index.

Period Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are variable prices that have been calculated using the Period Price Date and an index of steel prices to adjust the Base Price.

The Period Price Date is the date the steel was delivered to the fabricator as evidenced by an official bill of lading submitted to the Department containing a description of the shipped materials, weights of the shipped materials and the date of shipment. This date is used to select the Period Price Index.

The index used for the calculation of Period Prices is the U.S. Department of Labor Bureau of Labor Statistics Producer Price Index (PPI) Series ID WPU101702 (Not Seasonally Adjusted, Group: Metals and Metal Products, Item: Semi-finished Steel Mill Products.) As this index is subject to revision for a period of up to four (4) months after its original publication, no price adjustments will be made until the index for the period is finalized, i.e., the index is no longer suffixed with a "(P)".

Period Prices are determined as follows:

Period Price = Base Price X Index Factor

Index Factor = Period Price Index / Base Price Index

Example of a Period Price Calculation:

Calculate the Period Price for December 2009 using a Base Price from March 2009 of \$0.82/Pound for 1,000 Pounds of ASTM A709 (AASHTO M270) Grade A36 Structural Steel Plate.

The Period Price Date is December 2009. From the PPI website*, the Period Price Index = 218.0.

The Base Price Date is March 2009. From the PPI website*, the Base Price Index = 229.4.

Index Factor = Period Price Index / Base Price Index = 218.0 / 229.4 = 0.950

Period Price = Base Price X Index Factor = \$0.82/Pound X 0.950 = \$0.78/Pound

Since \$0.82 - \$0.78 = \$0.04 is less than 5% of \$0.82, no price adjustment is required.

If the \$0.04 difference shown above was greater than 5% of the Base Price, then the price adjustment would be 1,000 Pounds X \$0.04/Pound = \$40.00. Since the Period Price of \$0.78/Pound is less than the Base Price of \$0.82/Pound, indicating a drop in the price of steel between the bid and the delivery of material, a credit of \$40.00 would be owed to MassDOT. When the Period Price is higher than the Base Price, the price adjustment is owed to the Contractor.

* To access the PPI website and obtain a Base Price Index or a Period Price Index, go to <http://data.bls.gov/cgi-bin/srgate>

End of example.

The Contractor will be paid for unfabricated structural steel and unfabricated reinforcing steel under the respective contract pay items for all components constructed of either structural steel or reinforced Portland cement concrete under their respective Contract Pay Items.

Price adjustments, as herein provided for, will be paid separately as follows:

Structural Steel

Pay Item Number 999.449 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.457 for negative (-) pay adjustments (credits to MassDOT Highway Division)

Reinforcing Steel

Pay Item Number 999.466 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.467 for negative (-) pay adjustments (credits to MassDOT Highway Division)

No price adjustment will be made for price changes after the Contract Completion Date, unless the MassDOT Highway Division has approved an extension of Contract Time for the Contract.

BASE PRICES

The Department's table of Base Prices specified above is updated monthly. The current table is attached to this Document 00813 and included in each new contract.

For Review
12/10/2023 9:37:27 AM

DOCUMENT 00814

SPECIAL PROVISIONS
PRICE ADJUSTMENT FOR PORTLAND CEMENT CONCRETE MIXES

January 12, 2009

This provision applies to all projects using greater than 100 Cubic Yards (76 Cubic Meters) of Portland cement concrete containing Portland cement as stipulated in the Notice to Contractors section of the Bid Documents. This Price Adjustment will occur on a monthly basis.

The Price Adjustment will be based on the variance in price for the Portland cement component only from the Base Price to the Period Price. It shall not include transportation or other charges.

The Base Price of Portland cement on a project is a fixed price determined at the time of bid by the Department by using the same method as for the determination of the Period Price (see below) and found in the Notice to Contractors.

The Period Price of Portland cement will be determined by using the latest published price, in dollars per ton (U.S.), for Portland cement (Type I) quoted for Boston, U.S.A. in the Construction Economics section of *ENR Engineering News-Record* magazine or at the ENR website <http://www.enr.com> under Construction Economics. The Period Price will be posted on the MassHighway website the Wednesday immediately following the publishing of the monthly price in ENR, which is normally the first week of the month.

The Contract Price of the Portland cement concrete mix will be paid under the respective item in the Contract. The price adjustment, as herein provided, upwards or downwards, will be made after the work has been performed, using the monthly period price for the month during which the work was performed.

The price adjustment applies only to the actual Portland cement content in the mix placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M4.02.01. No adjustments will be made for any cement replacement materials such as fly ash or ground granulated blast furnace slag.

The Price Adjustment will be a separate payment item. It will be determined by multiplying the number of cubic yards of Portland cement concrete placed during each monthly period times the Portland cement content percentage times the variance in price between the Base Price and Period Price of Portland cement.

This Price Adjustment will be paid only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is a Department-approved extension of time.

*

END OF DOCUMENT

SECTION 01270

MEASUREMENT AND PAYMENT

PART 1 - DESCRIPTION

1.01 GENERAL:

- A. The following subsections describe the measurement of and payment for the work to be done under the items listed in Section 00410, FORM OF GENERAL BID.
- B. All work performed as described in these contract documents shall be paid for under one or more of the items listed in Section 00410, FORM OF GENERAL BID. All other activities required in connection with performance of the work, including all work required under Division 1, GENERAL REQUIREMENTS, whether described in the contract documents or mandated by applicable codes, permits and laws, will not be separately paid for unless specifically provided for in the FORM OF GENERAL BID, but will be considered incidental to performance of the overall project.
- C. Each unit or lump sum price stated in the Section 00410, FORM OF GENERAL BID shall constitute full compensation as herein specified for each item of work completed in accordance with the drawings and specifications including cleanup.
- D. The payment items listed herein and in Section 00410, FORM OF GENERAL BID are intended to provide full payment for the work shown on the drawings and specified herein. Any work called for or implied in the documents but not listed as a payment item shall be considered incidental to the overall project.
- E. Unless otherwise noted, each item specified or shown on the drawings shall be furnished and installed in accordance with the technical section whether a specific applicable payment item exists or not.
- F. Unless otherwise noted, all earthwork shall be included under any item requiring excavation. The prices for those items which involve excavation shall include compensation for disposal of surplus excavated material, and installation of all necessary sheeting and bracing.
- G. In all items involving excavation, the price shall be based on doing the entire excavation in earth. Where rock is excavated, the price therefor shall be in addition to the cost of excavating the earth, and no deduction shall be made in the amount for earth excavation.
- H. The price for all pipe items for drains and structures shall constitute full compensation for earth excavation, sheeting, dewatering, bedding, furnishing, laying, jointing, testing pipe, tracer tape (if required), backfilling, and cleaning up.

1.02 DRAINAGE PIPE COMPLETE IN PLACE:

- A. The length of drain to be paid for under the appropriate subdivisions of this item shall be measured by the linear foot along the completed drain, from centerline of manhole/catch basin to centerline of manhole/catch basin or end of drain to end of drain.
- B. The unit prices under the appropriate subdivisions of this item shall constitute full compensation for constructing the drains, complete in place, as indicated on the drawings and as specified, including furnishing and installing pipe and fittings, excavation, backfill, bedding, select material, clearing, grubbing, testing, removal and replacement of pavement, sidewalks, curbing, disposal of all excess materials, filter fabric, crushed stone, and all work incidental thereto and not specifically included for payment under other items.
- C. Connections to structures, including all couplings and fittings, shall not be measured separately for payment but shall be considered incidental to the project.
- D. Payment shall be made at the contract unit prices under the subdivisions of the item "Drainage Pipe Complete in Place."

1.03 MANHOLES, CATCH BASINS, STORMWATER TREATMENT SYSTEMS AND APPURTENANCES:

- A. Unless otherwise provided for, the work shall be measured per unit of completed work under the appropriate subdivisions of the item "Manholes, Catch Basins, Stormwater Treatment Systems and Appurtenances."
- B. Connections to existing structures shall not be measured separately for payment but shall be considered incidental to the project.
- C. Removal, disposal and backfilling of existing structures shall not be measured separately for payment but shall be considered incidental to the project.
- D. MANHOLES:
 - 1. Manholes shall be measured per manhole installed in place and shall be paid at the contract unit price under the appropriate subdivisions of the item "Precast Concrete Drain Manhole with Frame and Cover".
 - 2. The unit price for this item shall include the excavation, crushed stone bedding, foundation, filter fabric, and backfill; furnishing and installing base, gaskets, sealants, connections, walls, cones, and bricks and grout to grade and all incidental work necessary to complete the precast concrete manholes as shown on the drawings and as specified herein.
 - 3. The unit price for this item shall also include furnishing and installing the frame

and cover, and grouting the frame to the brick courses.

E. CATCH BASINS:

1. Catch basins shall be measured per catch basin removed and replaced or installed as shown on the drawings and shall be paid at the contract unit price for the items "Precast Concrete Catch Basin with Frame and Grate".
2. The unit price for this item shall include excavation, crushed stone bedding, and backfill; furnishing and installing sump, base, walls, risers, gaskets, sealants, connections and couplings; and all incidental work necessary to complete the precast concrete catch basin as shown on the drawings and as specified herein.
3. The unit price for this item shall also include furnishing and installing the frame and grate, and grouting the frame to the brick courses.

F. STORMWATER TREATMENT SYSTEMS:

1. Stormwater treatment system shall be measured per stormwater treatment system installed in place and shall be paid at the contract unit price under the item "Stormwater Treatment System".
2. The unit price for this item shall include excavation, crushed stone bedding, foundation, filter fabric, and backfill; furnishing and installing the stormwater treatment system, treatment components, structure components, gaskets, sealants, connections, walls, cones, frame and cover, bricks and grout, and all incidental work necessary to complete the stormwater treatment system as shown on the drawings and as specified herein.

1.04 ROCK EXCAVATION AND DISPOSAL:

- A. Rock excavated and disposed of off-site by the Contractor shall be measured by the cubic yard, within the payment limits as defined in the pipe trench details or as defined in Paragraph C below.
- B. Payment for this item includes rock excavation and disposal; furnishing and installing gravel borrow in its place, and providing all required documentation.
- C. Only boulders and concrete structures greater than one cubic yard shall be included for measurement and payment.
- D. Where rock is encountered, it shall be uncovered but not excavated until the Engineer has made measurements, unless, in the opinion of the Engineer, satisfactory measurements can be made in some other manner.
- E. The bidder shall include in the bid for items involving excavation, the cost of doing the

entire excavation as earth. The price for the Item "Rock Excavation and Disposal" is intended to cover the difference between the cost of rock excavation and the cost of earth excavation.

- F. For all manholes and structures, measurement shall be to one foot outside the widest dimension of the structure or shall be at the maximum connecting trench width, whichever is greater. No allowance for overbreakage will be made.
- G. The cost of pre-blast surveys, vibration air blast monitoring, blasting records and post-blast inspection shall be considered incidental to the cost of rock excavation and disposal and will not be separately paid.
- H. The cost of permits and inspection fees from the Fire Department shall not be paid separately, but shall be considered incidental to the project.
- I. When two or more pipes are installed parallel to one another and the trench payment limits overlap, rock excavation in the overlap section will only be paid once.

1.05 MISCELLANEOUS EARTHWORK:

- A. Unless designated otherwise, earthwork shall not be separately measured for payment, but shall be considered incidental to construction of the project.
- B. CHANGES IN EARTHWORK:
 - 1. Should it be necessary to lower the pipeline below the grade indicated on the drawings for any reason, the additional excavation and backfill shall be measured per cubic yard within payment limits under the item "Changes in Earthwork."
 - 2. Changes in earthwork shall be measured per cubic yard for work completed as ordered, under the "Changes in Earthwork" item.
 - 3. Changes in earthwork shall be paid at the contract unit price for work completed.
- C. UNSUITABLE MATERIAL:
 - 1. If, in the opinion of the Engineer, the material at, above, or below normal grade is unsuitable for use as backfill, it shall be removed and disposed of to such depths and widths within the limits of payment as ordered by the Engineer. Normal grade is defined as the elevation of the trench bottom, as shown on the drawings.
 - 2. The quantity of earth excavation and backfill of unsuitable material to be included for payment shall be the number of cubic yards of unsuitable material ordered to be removed and measured by the Engineer within the trench payment limit shown on the contract drawings, excluding quantities paid under other items.

3. Topsoil, paving materials, frozen material or ledge excavation above the normal grade of the trench excavation will not be considered for payment.
4. The unit price for this item shall constitute full compensation for excavation of unsuitable material, disposal of unsuitable material, excluding materials noted above, and furnishing, installing and compacting approved backfill materials as specified in Section 02300 of the Contract Documents.
5. Payment shall be made at the contract unit price of the item "Unsuitable Material."
6. The Contractor will not be reimbursed for excavation of unsuitable material above normal grade, which has not been ordered by the Engineer.

D. ADDITIONAL CRUSHED STONE:

Additional crushed stone shall be measured per cubic yard installed, as ordered by the Engineer, and shall be paid at the contract unit price under the item "Additional Crushed Stone."

1.06 SURFACE RESTORATION:

A. LOAMING AND SEEDING:

1. Loaming and seeding shall be paid at the contract price per square yard for the Item "Loaming and Seeding." This item shall include all materials, labor, and equipment required to loam and seed areas shown on the drawings and areas disturbed by the Contractor's operations.
2. The work of furnishing and installing a temporary cover crop shall not be separately measured for payment, but shall be considered incidental to the permanent seeding.

B. MODIFIED ROCKFILL APRON:

1. Modified rockfill apron shall be measured per square yard of modified rockfill furnished and installed as shown on the drawings and shall be paid at the contract unit price for the item "Modified Rockfill Apron".
2. The unit price for this item shall include clearing and grubbing, excavation, disposal of excess material, base material, modified rockfill, erosion control fabric and all incidental work necessary to complete the modified rockfill shoulder as shown on the drawings and as specified herein.

C. RIP RAP SCOUR HOLE:

1. Rip rap scour hole shall be measured per square yard of scour hole furnished and installed as shown on the drawings and shall be paid at the contract unit price for

the item "Rip Rap Scour Hole".

2. The unit price for this item shall include clearing and grubbing, excavation, gravel fill, erosion control fabric, flared end section, stone for pipe ends, silt fence and all incidental work necessary to complete the scour hole as shown on the drawings and as specified herein.

1.07 HOT MIX ASPHALT CURB:

- A. The installation of the hot mix asphalt curb shall be measured per linear foot of curb installed and shall be paid at the contract unit price under the item "Hot Mix Asphalt Curb." This item shall include installation of hot mix asphalt curb as indicated on the drawings and as specified within the contract documents. Payment for gravel sub-base and binder course pavement beneath the curbing shall be paid as part of "Binder Course Pavement" item.
- B. Removal and disposal of existing curbing shall not be separately measured for payment but shall be considered incidental project.

1.08 PAVEMENT REPLACEMENT:

- A. Bituminous pavement shall be measured per linear foot, square yard or ton of pavement completed, and shall be paid at the contract unit prices under the subdivisions of the item "Pavement Replacement" as further described below.
- B. Pavement measured per linear foot shall be measured based on a horizontal projection to grade of the centerline of the completed pipeline(s) trench.
- C. Pavement disturbed by the Contractor's operations outside payment limit as defined in the Contract Documents shall not be paid under these items, but shall be repaired to its original condition by the Contractor at no cost to the Owner.
- D. TEMPORARY TRENCH PAVEMENT:

Temporary trench pavement shall be measured per linear foot of pipe trench and shall include furnishing, preparation, and installation of compacted gravel borrow subbase and binder course pavement as shown on the drawings and as specified. The work of this item shall also include compaction testing as specified in Section 02300, EARTHWORK. Work under this item shall be paid at the contract unit price under the item "Temporary Trench Repair."

- E. MILLING:

Milling of pavement to meet the grading requirements of the drawings and specifications and disposal of any excess material shall be measured per square yard and shall be paid at the contract unit price under the item "Milling."

F. ROADWAY AND DRIVEWAY RECONSTRUCTION:

Roadway and driveway reconstruction shall be measured per square yard and shall include removal and disposal of existing bituminous pavement and excavation and disposal of existing material to allow for installation of the compacted gravel subbase, binder course pavement, and top course pavement. The work of this item shall also include furnishing, installing, and compacting the gravel subbase, regrading as shown on the drawings, fine grading and furnishing, installing, and grading the gravel subbase beneath the curbing. Work under this item shall be paid at the contract unit price under the item "Roadway and Driveway Reconstruction."

G. BINDER COURSE PAVEMENT:

Binder course pavement shall be measured per ton and shall include furnishing, preparation and installation of permanent binder course pavement, as shown on the drawings and as specified. Work under this item shall be paid at the contract unit price under the item "Binder Course Pavement."

H. TOP COURSE PAVEMENT:

Top course pavement shall be measured per ton and shall include furnishing, preparation and installation of trueing and leveling course, tack coat, keyways, joint sealant, pavement markings, and permanent top course pavement, as shown on the drawings and as specified. Work under this item shall be paid at the contract unit price under the item "Top Course Pavement."

I. ADDITIONAL PAVEMENT:

Additional Pavement ordered by the Engineer shall include either binder or top course pavements and shall be measured per ton and paid under the item "Additional Pavement".

J. PAVEMENT MARKINGS:

Pavement markings shall be measured per square foot and paid for under the item "Pavement Markings".

K. PAVED APRON AT MAILBOX:

Paved apron at mailbox shall be measured per square yard and shall include removal and disposal of existing material to allow for installation of the compacted gravel subbase, binder course pavement, and top course pavement. The work of this item shall also include furnishing, installing, and compacting the gravel subbase, regrading, fine grading, and furnishing and installing the binder course pavement, tack coat and top course pavement. Work under this item shall be paid at the contract unit price under the item "Paved Apron at Mailbox."

L. LOWERING, RAISING, AND ADJUSTING CASTINGS:

Lowering, raising, and adjusting castings shall not be separately measured for payment but shall be considered incidental to the project.

M. Disposal of existing asphalt materials to be removed shall not be separately measured for payment but shall be considered incidental to the project.

1.09 SEGMENTAL BLOCK RETAINING WALLS AND STEEL SHEET PILING LEFT IN PLACE:

A. SEGMENTAL BLOCK RETAINING WALLS:

1. This work shall be measured per square foot of exposed wall face on the downhill side of the wall and paid for under the Item "Segmental Block Retaining Wall" under the appropriate Schedule. The unit price shall include materials, equipment, tools, labor, and work incidental thereto; also all necessary excavation, refilling and disposal of the existing wall and surplus material.
2. The unit price includes furnishing all labor, materials, and equipment required to install the segmental block retaining wall system, including the underdrain behind the wall, base, geotextile or fabric as required, excavation and approved backfill behind the proposed wall where indicated on the Drawings. The segmental block retaining wall shall be installed in accordance with the manufacturer's recommendations.

B. STEEL SHEET PILING LEFT IN PLACE:

1. Unless designated otherwise, the work as specified in Section 02252 - SUPPORT OF EXCAVATION shall not be separately measured for payment, but shall be considered incidental to the pipeline or structure for which it is required.
2. The quantity of sheeting left in place to be paid for under this item shall be that sheeting indicated on the drawings or ordered by the Engineer to be left in place, and which is not included for payment under other items, and shall be measured per the square foot along vertical planes parallel to the segmental retaining wall.
3. The number of square feet of sheeting to be measured shall be ONLY that left in place, as specified above. No measurement shall be made for sheeting or bracing, which is left in place at the option of the Contractor or which is removed from the excavation, it being understood and agreed that compensation for all such sheeting and for the cost of furnishing, placing, cutting, and removal thereof is included in

the price to be paid for the items involving earth excavation for which the sheeting is used.

4. The unit prices for this item shall constitute full compensation for all sheeting, including bracing and other accessories left in place as specified.
5. No payment will be made under this item for trench boxes, sheeting or steel plates used at the Contractor's option in the course of the work.

1.10 FENCES AND GUARD RAILS:

- A. Unless otherwise provided for, the work shall be measured per unit of completed work under the appropriate subdivisions of the item "Fences and Guard Rails."

B. CHAIN LINK FENCE:

Installation of the proposed chain link fence, shall be measured per linear foot of fence completed and shall be paid at the contract unit price under the item "Chain Link Fence."

Payment for all work associated with the proposed fence installation and upgrades shall include, but shall not be limited to, furnishing the fence, coring, grout, mounting and installation of the chain link fence.

C. GUARD RAIL:

The installation of the steel highway guard rails shall be measured per linear foot installed and shall be paid at the contract unit price under the item "Steel Highway Guard Rail." This item shall include furnishing and installing of the guide rail as indicated on the drawings and as specified within the contract documents.

D. CONSTRUCTION FENCE:

Silt fence shall be measured per linear foot of construction fence installed and maintained and shall be paid at the contract unit price under the item "Construction Fence". This item shall include the removal and disposal of construction fence at the completion of the project and maintenance of the straw wattles throughout the duration of the project.

1.11 ENVIRONMENTAL PROTECTION:

A. INLET PROTECTION:

Inlet protection shall be measured per catch basin inlet protection installed and maintained and shall be paid at the contract unit price under the item "Inlet Protection". This item shall include the removal and disposal of inlet protection and maintenance of the inlet protection throughout the duration of the project.

B. SILT FENCE:

Silt fence shall be measured per linear foot of silt fence installed and maintained and shall be paid at the contract unit price under the item "Silt Fence". This item shall include the removal and disposal of silt fence at the completion of the project and maintenance of the straw wattles throughout the duration of the project.

C. STRAW WATTLES:

Straw wattles shall be measured per linear foot of straw wattle installed and maintained and shall be paid at the contract unit price under the item "Straw Wattle". This item shall include the removal and disposal of straw wattles at the completion of the project and maintenance of the straw wattles throughout the duration of the project.

D. WATER FOR DUST CONTROL:

Water for dust control shall not be separately measured for payment but shall be considered incidental to the project.

1.12 UTILITY POLE RELOCATION:

- A. The allowance under this item shall be utilized to reimburse the Contractor for all costs related to the temporary and permanent relocation of the utility pole and all associated utility work, components, labor, materials, and appurtenances. Work under this allowance item shall be negotiated between the Contractor, Owner, and each Utility Service Company based on actual field conditions and Utility Service Company requirements. Work under this item shall include reimbursement for each Utility Service Company's costs only with no Contractor markup. No separate payment shall be made for any Contractor direct costs, indirect costs, or overhead related to this item; such costs shall be considered incidental.
- B. Items acceptable for payment under this item include each Utility Service Company fee received in writing from the Utility Service Company on Utility Service Company letterhead and signed by an authorized representative of the Utility Service Company.
- C. Payment under this allowance shall constitute full compensation for furnishing all labor, materials, tools and equipment, incidentals, complete as negotiated between the Contractor, Owner and Utility Service Company.

1.13 UNIFORMED OFFICERS FOR TRAFFIC CONTROL:

- A. The services of uniformed officers shall be measured per hour worked and paid at the contract unit prices under the subdivisions of the item "Uniformed Officers for Traffic Control." The unit prices under this item include administration charges required by the police.

- B. The set prices for Uniformed Officers are based on the prevailing hourly wage rates. Payment will be made based on invoices submitted by the traffic authority to the Contractor. The Contractor shall forward copies of these invoices to the Engineer and include the cost in his Application for Payment. Actual payment to the traffic authority shall be made by the Contractor and the Contractor shall be reimbursed by the Owner through the payment estimate. If police wages change during the course of the Contract, the unit prices under this item will be changed accordingly.
- C. There is a four hour minimum for Uniformed Officers. Payment for time over 8 hours in one date shall be at 1-1/2 times the base pay. Contractor shall complete all work within normal working hours, without requiring overtime
- D. The Contractor shall provide one-hour notification of cancellation or as required by the Police Department.
- E. PUBLIC SAFETY AND TRAFFIC PROTECTION:
 - 1. The Contractor shall provide all road construction warning signs, traffic cones, barriers and other devices required to provide for the safe passage of traffic in construction areas, including provisions for alternating one-way traffic, and any additional signage required by the Owner. Suitable ingress and egress shall be provided at all times for all intersection roads and for all driveways.
 - 2. Unless otherwise indicated, the work of this section shall not be separately measured for payment, but shall be considered incidental to the project.

1.14 MOBILIZATION:

The lump sum for this item shall constitute full compensation to the Contractor for the general mobilization necessary to make the contract operational, exclusive of the cost of materials. The total for mobilization shall not exceed five percent (5%) of the total of all bid items excluding this item.

1.15 REMOVE AND REPLACE DRYWELL

- A. Drywells shall be measured per drywell removed and replaced as shown on the drawings and shall be paid at the contract unit price for the items "Remove and Replace Drywell".
- B. The unit price for this item shall include excavation, crushed stone bedding, and backfill; furnishing and installing the drywell, top slab, gaskets and all incidental work necessary to complete the precast concrete drywell as shown on the drawings and as specified herein.
- C. The unit price for this item shall also include furnishing and installing the frame and grate, and grouting the frame to the riser rings or block leveling courses.
- D. Removal, disposal and backfilling of existing structures shall not be measured separately

for payment but shall be considered incidental to the project.

1.16 SUPPORT OF EXCAVATION:

- A. Unless otherwise indicated, the work of this section shall not be separately measured for payment, but shall be considered incidental to the project.
- B. No payment shall be made under this item for trench boxes, sheeting or steel plates used at the Contractor's option in the course of the work.

1.17 HANDLING EXISTING FLOWS:

- A. Unless otherwise indicated, the work of this section shall not be separately measured for payment, but shall be considered incidental to the project.

1.18 COMPACTION TESTING:

- A. Compaction testing as specified in Section 02300, EARTHWORK, shall not be separately measured for payment but shall be considered incidental to the project.

1.19 TRACER TAPE:

- A. Unless otherwise indicated, the work of this section shall not be separately measured for payment, but shall be considered incidental to the project.

1.20 FIELD CONCRETE:

- A. Unless otherwise indicated, the work of this section shall not be separately measured for payment, but shall be considered incidental to the project.

1.21 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

- A. Unless otherwise indicated, protection or temporary removal and replacement of existing utilities and structures as described in Section 01110 shall not be separately measured for payment, but shall be considered incidental to the project.

1.22 PRICE ADJUSTMENTS MANDATED BY MGL CHAPTER 30, SECTION 38A

Price adjustments for certain payment items shall be as described in Specification Section 01250 PRICE ADJUSTMENTS. Payment shall be made at the unit prices included in Section 00410 or, if no such items are contained in Section 00410, by change order.

END OF SECTION

SECTION 01330

SUBMITTALS

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. The Contractor shall provide the Engineer with submittals as required by the contract documents.

1.02 RELATED WORK:

- A. Divisions 1 – 3 of these specifications that require submittals.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.01 GENERAL:

- A. As required by the General Conditions, Contractor shall submit a schedule of shop and working drawing submittals.
- B. The Contractor shall submit the shop and working drawing submittals either electronically or hard copy.

3.02 ELECTRONIC SUBMITTALS:

- A. In accordance with the accepted schedule, the Contractor shall submit promptly to the Engineer by email (stortiw@wseinc.com) one electronic copy in Portable Document Format (PDF) of shop or working drawings required as noted in the specifications, of equipment, structural details and materials fabricated especially for this Contract.
- B. Each electronic copy of the shop or working drawing shall be accompanied by the Engineer's standard shop drawing transmittal form, included as Exhibit 1 of this section (use only for electronic submittals), on which is a list of the drawings, descriptions and

- numbers and the names of the Owner, Project, Contractor and building, equipment or structure.
- C. The Contractor shall receive a shop drawing memorandum with the Engineer's approval or comments via email.

3.03 SHOP AND WORKING DRAWINGS:

- A. Shop and working drawings shall show the principal dimensions, weight, structural and operating features, space required, clearances, type and/or brand of finish of shop coat, grease fittings, etc., depending on the subject of the drawings. When it is customary to do so, when the dimensions are of particular importance, or when so specified, the drawings shall be certified by the manufacturer or fabricator as correct for this Contract.
- B. All shop and working drawings shall be submitted to the Engineer by and/or through the Contractor, who shall be responsible for obtaining shop and working drawings from its subcontractors and returning reviewed drawings to them. All shop and working drawings shall be prepared on standard size, 24-inch by 36-inch sheets, except those, which are made by changing existing standard shop or working drawings. All drawings shall be clearly marked with the names of the Owner, Project, Contractor and building, equipment or structure to which the drawing applies, and shall be suitably numbered. Each shipment of drawings shall be accompanied by the Engineer's (if applicable) standard shop drawing transmittal form on which is a list of the drawings, descriptions and numbers and the names mentioned above.
- C. Only drawings that have been prepared, checked and corrected by the fabricator should be submitted to the Contractor by its subcontractors and vendors. Prior to submitting drawings to the Engineer, the Contractor shall check thoroughly all such drawings to satisfy himself that the subject matter thereof conforms to the Contract Documents in all respects. Shop drawings shall be reviewed and marked with the date, checker's name and indication of the Contractor's approval, and only then shall be submitted to the Engineer. Shop drawings unsatisfactory to the Contractor shall be returned directly to their source for correction, without submittal to the Engineer. Shop drawings submitted to the Engineer without the Contractor's approval stamp and signature will be rejected. Any deviation from the Contract Documents indicated on the shop drawings must be identified on the drawings and in a separate submittal to the Engineer, as required in this section of the specifications and General Conditions.
- D. The Contractor shall be responsible for the prompt submittal and resubmittal, as necessary, of all shop and working drawings so that there will be no delay in the work due to the absence of such drawings.
- E. The Engineer will review the shop and working drawings as to their general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the

drawings during the review do not relieve the Contractor from compliance with requirements of the Contract Documents. The Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating its work with that of all other trades; and performing its work in a safe and satisfactory manner. The review of the shop drawings is general and shall not relieve the Contractor of the responsibility for details of design, dimensions, code compliance, etc., necessary for interfacing with other components, proper fitting and construction of the work required by the Contract and for achieving the specified performance. The Engineer will review submittals two times: once upon original submission and a second time if the Engineer requires a revision or corrections. The Contractor shall reimburse the Owner amounts charged to the Owner by the Engineer for performing any review of a submittal for the third time or greater.

- F. With few exceptions, shop drawings will be reviewed and returned to the Contractor within 30 days of submittal.
- G. No material or equipment shall be purchased or fabricated especially for this Contract nor shall the Contractor proceed with any portion of the work, the design and details of which are dependent upon the design and details of equipment or other features for which review is required, until the required shop and working drawings have been submitted and reviewed by the Engineer as to their general conformance and compliance with the project and its Contract Documents. All materials and work involved in the construction shall then be as represented by said drawings.
- H. Two copies of the shop and working drawings and/or catalog cuts will be returned to the Contractor. The Contractor shall furnish additional copies of such drawings or catalog cuts when it needs more than two copies or when so requested.

3.04 SAMPLES:

- A. Samples specified in individual Sections include, but are not necessarily limited to, physical examples of the work such as sections of manufactured or fabricated work, small cuts or containers of materials, complete units of repetitively-used products, color/texture/pattern swatches and range sets, specimens for coordination of visual

effect, graphic symbols, and units of work to be used by the Engineer or Owner for independent inspection and testing, as applicable to the work.

- B. The number of samples submitted shall be as specified. Submittal and processing of samples shall follow the procedures outlined for shop and working drawings unless the specifications call for a field submittal or mock-up.
- C. Acceptance of samples will be acknowledged via a copy of the transmittal noting status. When samples are not acceptable, prompt resubmittal will be required.

END OF SECTION

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For Review
12/10/2023 9:37:29 AM

EXHIBIT 1 TO SECTION 01330 SUBMITTALS

SHOP DRAWING TRANSMITTAL FORM

For Review
12/10/2023 9:37:29 AM

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For Review
12/10/2023 9:37:29 AM

Shop Drawing Transmittal



Instruction for Preparing Transmittal

No action will be taken on any item unless accompanied by this form.

TRANSMITTAL NOS. to be consecutive (1, 2, 3, etc.).

Each resubmittal of same item shall use same number with suffix letter (A, B, etc.).

SPEC. SECT. NO: Only one spec. section no. to each transmittal.

DESCRIPTION: Complete identification of document or group of documents.

SOURCE: Originator of document(s) being submitted.

DRAWING NO: Identification of document(s).
 CONTRACT DRAWING REFERENCE: Contract drawing number(s) showing details of document(s).

SPECIAL INSTRUCTIONS: Special cases and emergencies, changes in distribution and special handling requests, etc. should be entered here.

SIGNATURE OF CONTRACTOR: Signature of individual who reviews and approves material prior to submittal to engineer.

THIS SECTION TO BE COMPLETED BY CONTRACTOR

TRANSM. NO.	SPEC. SECT. NO.	DATE	CONTRACTORS JOB NO.	W&S JOB NO.
				ENG22-0635

PROJECT NAME & CONTRACT NO.	LOCATION
Bridge Street Wall Replacement	Erving, MA

Attention: Bill Storti (stortiw@wseinc.com)
 Weston & Sampson Engineers, Inc.
 712 Brook Street, Suite 103
 Rocky Hill, CT 06067

ITEM NO.	DESCRIPTION	SOURCE	DRAWING NO. CATALOG NO. BROCHURE, ETC	NO. OF COPIES	CONTRACT DRAWING REF.	ACTION CODE	REVIEWED BY
1							BY W&S
2							
3							
4							

THIS CERTIFIES THAT ALL ITEMS SUBMITTED HEREWITH HAVE BEEN CHECKED BY THE CONTRACTOR, ARE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, EXCEPT AS NOTED, AND ARE APPROVED BY THE CONTRACTOR FOR THIS PROJECT.

THIS SECTION TO BE COMPLETED BY W&S

ACTION CODE:	SIGNATURE & TITLE
1. FURNISH AS SUBMITTED	Weston & Sampson
2. FURNISH AS NOTED	
3. REVISE AND RESUBMIT	
4. REJECTED- SEE REMARKS	
5. ACKNOWLEDGEMENT	
6. SUBMITTAL NOT REQUIRED, RETURNED WITHOUT REVIEW	

- a. INSTALLATION SHALL PROCEED ONLY WHEN ACTION CODE IS 1 OR 2
- b. ACTION CODED 3 SHALL BE RESUBMITTED WITHIN TIME LIMIT SET IN CONTRACT
- c. REVIEW DOES NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY OF COMPLIANCE WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS

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For Review
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SECTION 01550

SIGNAGE (TRAFFIC CONTROL)

PART 1 - GENERAL

1.01 WORK INCLUDED:

This Section covers furnishing and installing traffic control signs and other devices.

1.02 SYSTEM DESCRIPTION:

The Contractor shall furnish and install all construction signs deemed necessary by and in accordance with the latest edition of Part VI of the Manual on Uniform Traffic Control Devices(MUTCD) as published by the U.S. Department of Transportation.

PART 2 - PRODUCTS

2.01 TRAFFIC WARNING AND REGULATING DEVICES:

Contractor shall provide warning signs, barricades and other devices in accordance with the specifications provided in the MUTCD. Size of signs, lettering, colors, method of support and other factors prescribed in the MUTCD shall be adhered to.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Contractor shall erect barricades, barrier fences, traffic signs, and other traffic control devices as required by the MUTCD, or as required by the Engineer, to protect the work area from traffic, pedestrians, and animals.
- B. Contractor shall relocate barricades, signs and other devices as necessary as the work progresses.
- C. Unless extended protection is required for specific areas, when the work has been completed, all temporary warning and regulatory devices used by the Contractor shall be removed so that traffic can move unimpeded through the area.

END OF SECTION

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SECTION 01552

CONSTRUCTION ZONE SAFETY PLAN

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This Section covers the provisions for complying with Commonwealth of Massachusetts requirements for construction zone safety plans on public works projects.

1.02 DESCRIPTION:

- A. The Contractor shall implement traffic safety and control measures through the construction zone through road closures and detours and mitigate impacts on traffic outside of the construction zone in accordance with these contract documents.

1.03 RELATED WORK:

- A. SECTION 01110, CONTROL OF WORK AND MATERIALS (MAINTENANCE OF TRAFFIC)
- B. SECTION 01550, SIGNAGE (TRAFFIC CONTROL)
- C. SECTION 01553, UNIFORMED OFFICERS FOR TEMPORARY TRAFFIC CONTROL

1.04 REFERENCES:

701 CMR 7.00 Use of Road Flaggers and Police Details on Public Works Projects

Massachusetts Department of Transportation Standard Specifications for Highways and Bridges – latest edition

PART 2 - PRODUCTS

- 2.01 Traffic control devices utilized by the Contractor shall meet the requirements of these contract documents and the latest Massachusetts Department of Transportation (MassDOT) Standard Specifications and Manual On Uniform Traffic Control Devices (MUTCD).

PART 3 - EXECUTION

3.01 OPERATION:

- A. Contractor shall be responsible for providing all temporary traffic control devices including barricades, barrier fences, signs, drums, cones, impact attenuators and other

traffic control devices in accordance with typical traffic management plans and details shown on the drawings or as required by the Engineer.

- B. The Contractor shall prepare temporary traffic management plans and details that deviates significantly from the typical plans shown on the drawings and submit to the Engineer for review and approval prior to start of the work.
- C. Contractor shall relocate barricades, signs and other devices as necessary as the work progresses as required by the Owner's Traffic Control Officer or the Engineer.
- D. Police details shall be utilized on this project as follows:

Location

The vicinity of Route 2 during paving operations

- D. If police details and/or road flaggers fail to show up for work at the construction zone at the usual time for start of work, or otherwise leave the jobsite before work is completed for the day, the provisions of the Alternative Plan will be followed by the Contractor.

3.02 ALTERNATIVE PLAN:

- A. In accordance with 701 CMR 7.06(6), whenever required police details do not arrive on time or fail to show up for work, the Alternative Plan will be implemented by the Contractor.
- B. The Alternative Plan for this project is as follows:
 - 1. Contact MassDOT District Area Construction Engineer, local police department and municipality to inform them the scheduled police detail has failed to show up at the project site and that road flaggers are being utilized.
 - 2. If construction zone is within a high-speed area (> 40mph) the Contractor cannot use road flaggers and must stop work until police details arrive. If construction zone is within a low-speed area (< 40mph) the Contractor can use road flaggers who have been trained and certified in temporary roadway flagging.
 - 3. Redeploy crew to work in areas not requiring temporary traffic control (if available).

END OF SECTION

SECTION 01553

UNIFORMED OFFICERS FOR TEMPORARY TRAFFIC CONTROL

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This Section covers the provisions for furnishing Uniformed Officers for Traffic Control and Maintenance of Traffic as described in Section 01110 CONTROL OF WORK AND MATERIALS.

1.02 DESCRIPTION:

- A. The Contractor shall coordinate with the local jurisdiction's Traffic Control Officer to determine the number of Officers deemed necessary to provide for public safety and to maintain a smooth flow of traffic through the construction area(s) affected.

1.03 RELATED WORK:

- A. SECTION 01110, CONTROL OF WORK AND MATERIALS (MAINTENANCE OF TRAFFIC)
- B. SECTION 01550, SIGNAGE (TRAFFIC CONTROL)
- C. SECTION 01552, CONSTRUCTION ZONE SAFETY PLAN

PART 2 - PRODUCTS

2.01 UNIFORMED OFFICERS:

- A. Contractor shall provide the Traffic Control Officer with a minimum of 24 hours notice indicating the time of day, street location and confirm number of officers required for traffic control.
- B. Contractor shall give the Traffic Control Officer a minimum of 2 hours prior cancellation notice should Contractor determine that due to weather or conditions beyond its control it would not need the scheduled officers.
- C. Contractor shall pay for officer(s) at the prevailing rate established by the local police department should officers not be needed and the Contractor fails to cancel the officers as noted in 2.01.B above.

- D. Where the Owner is paying directly for Traffic Officers and the Contractor cancels scheduled officers, the Contractor shall be responsible for payment of the wages for cancellations if not cancelled in accordance with 2.01.B and 2.01.C above.

PART 3 - EXECUTION

3.01 OPERATION:

- A. Contractor shall provide barricades, barrier fences, traffic signs, and other traffic control devices as required by the Owners Traffic Control Officer, or as required by the Engineer, to protect the work area from traffic, pedestrians, and animals.
- B. Contractor shall relocate barricades, signs and other devices as necessary as the work progresses as required by the Owners Traffic Control Officer or the Engineer.

END OF SECTION

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SECTION 01562

DUST CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION:

This section of the specification covers the control of dust via water, complete.

PART 2 - PRODUCTS

2.01 CALCIUM CHLORIDE:

- A. Calcium chloride shall not be used.

2.02 WATER:

- A. Water shall not be brackish and shall be free from oil, acid, and injurious alkali or vegetable matter.

PART 3 - EXECUTION

3.01 APPLICATION:

- A. Water may be sprinkler applied with equipment including a tank with gauge-equipped pressure pump and a nozzle-equipped spray bar.
- B. Water shall be dispersed through the nozzle under a minimum pressure of 20 pounds per square inch, gauge pressure.

END OF SECTION

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SECTION 01570

ENVIRONMENTAL PROTECTION

PART 1 – GENERAL

1.01 DESCRIPTION:

- A. The work covered by this section of the specifications consists of furnishing all labor, materials, tools and equipment and performing all work required for the prevention of environmental pollution during and as a result of construction operations under this contract.
- B. The requirements set forth in this section of the specifications apply to cross-country areas, river and stream crossings, and construction in and adjacent to wetlands, unless otherwise specifically stated.
- C. All work under this Contract shall be in accordance with the Conservation Commissions' Orders of Conditions as well as any conditional requirements applied, all of which are attached to Section 00890, PERMITS.
- D. Prior to commencement of work, the Contractor shall meet with representatives of the Engineer to develop mutual understandings relative to compliance of the environmental protection program.

1.02 RELATED WORK:

- A. Section 00890, PERMITS
- B. Section 01330, SUBMITTALS
- C. Section 01562, DUST CONTROL
- D. Section 02230, CLEARING AND GRUBBING
- E. Section 02240, DEWATERING
- F. Section 02252, SUPPORT OF EXCAVATION
- G. Section 02300, EARTHWORK

1.03 SUBMITTALS:

- A. The Contractor shall submit details and literature fully describing environmental protection methods to be employed in carrying out construction activities within 100 feet of wetlands or across areas designated as wetlands.

PART 2 - PRODUCTS

2.01 SILT FENCE:

- A. The silt fence shall consist of a 3-foot wide continuous length sediment control fabric, stitched to a mesh backing, and stapled to preweathered oak posts installed as shown on the drawings. The oak posts shall be 1-1/4-inches by 1-1/4-inches (Minimum Dimension) by 48-inches and shall be tapered. The bottom edge of the silt fence shall be buried as shown on the drawings.
- B. The silt fence shall be DOT Silt Fence PPDM3611, as manufactured by U.S. Silt & Site Supply/Getsco, Concord, NH, or approved equal.
- C. Silt fence properties:

Physical Properties	Test Method	Minimum Value
Grab Strength, lbs.	ASTM-D-4632	124
Grab Elongation, %	ASTM-D-4632	15
Mullen burst, psi	ASTM-D-3786	300
Puncture, lbs.	ASTM-D-4833	65
Trapezoidal Tear, lbs.	ASTM-D-4533	65
UV Resistance ² , % ³	ASTM-D-4355	80@500 hrs.
AOS, US Sieve No.	ASTM-D-4751	30
Flow Rate, gal/min/sq. ft.	ASTM-D-4491	10
Permittivity, (1/sec) gal/min/sq. ft.	ASTM-D-4491	0.05 sec ⁻¹

2.02 STRAW BALES:

- A. Straw bales shall consist of certified seed free stems of agricultural grain and cereal crops and shall be free of grasses and legumes. Standard bales shall be 14-inches high, 18- inches wide and 36- to 40-inches long tied with polypropylene twine and weigh within 5 percent of 7 lbs. per cubic ft.

2.03 STRAW WATTLES:

- A. Straw Wattles shall consist of a 100% biodegradable exterior jute or coir netting with 100% wheat straw interior filling as manufactured by GEI Works, Sebastian, Florida (Phone: 772-646-0597; website: www.erosionpollution.com), or approved equal.

2.04 CATCH BASIN PROTECTION:

- A. To trap sediment and to prevent sediment from clogging drainage systems, catch basin protection in the form of a siltation sack (Siltsack as manufactured by ACF Environmental, Inc. or approved equal) shall be provided as approved by the Engineer.

PART 3- EXECUTION

3.01 NOTIFICATION AND STOPPAGE OF WORK:

- A. The Engineer will notify the Contractor in writing of any non-compliance with the provisions of the Order of Conditions. The Contractor shall, after receipt of such notice, immediately take corrective action. Such notice, when delivered to the Contractor or its authorized representative at the site of the work, shall be deemed sufficient for the purpose. If the Contractor fails to act promptly, the Owner may order stoppage of all or part of the work through the Engineer until satisfactory corrective action has been taken. No claim for an extension of time or for excess costs or damage incurred by the Contractor as a result of time lost due to any stop work orders shall be made unless it was later determined that the Contractor was in compliance.

3.02 AREA OF CONSTRUCTION ACTIVITY:

- A. Insofar as possible, the Contractor shall confine its construction activities to those areas defined by the plans and specifications. All land resources within the project boundaries and outside the limits of permanent work performed under this contract shall be preserved in their present condition or be restored to a condition after completion of construction at least equal to that which existed prior to work under this contract.

3.03 PROTECTION OF WATER RESOURCES:

- A. The Contractor shall not pollute streams, lakes or reservoirs with fuels, oils, bitumens, calcium chloride, acids or other harmful materials. It is the Contractor's responsibility to comply with all applicable Federal, State, County and Municipal laws regarding pollution of rivers and streams.
- B. Special measures should be taken to insure against spillage of any pollutants into public waters.

3.04 CONSTRUCTION IN AREAS DESIGNATED AS WETLANDS ON THE DRAWINGS:

- A. Insofar as possible, the Contractor shall make every effort to minimize disturbance within areas designated as wetlands or within 100-feet of wetland resource areas. Total easement widths shall be limited to the widths shown.
- B. The Contractor shall perform its work in such a way that these areas are left in the condition existing prior to construction.
- C. Excavated materials shall not be permanently placed or temporarily stored in areas designated as wetlands. Temporary storage areas for excavated material shall be as required by the Engineer.

3.05 PROTECTING AND MINIMIZING EXPOSED AREAS:

- A. The Contractor shall limit the area of land which is exposed and free from vegetation during construction. In areas where the period of exposure will be greater than two (2) months, temporary vegetation, mulching or other protective measures shall be provided as specified.
- B. The Contractor shall take account of the conditions of the soil where temporary cover crop will be used to insure that materials used for temporary vegetation are adaptive to the sediment control. Materials to be used for temporary vegetation shall be approved by the Engineer.

3.06 LOCATION OF STORAGE AREAS:

- A. The location of the Contractor's storage areas for equipment and/or materials shall be upon cleared portions of the job site or areas to be cleared as a part of this project, and shall require written approval of the Engineer. Plans showing storage facilities for equipment and materials shall be submitted for approval of the Engineer.
- B. No excavated materials or materials used in backfill operations shall be deposited within a minimum distance of one hundred (100) feet of any watercourse or any drainage facility. Adequate measures for erosion and sediment control such as the placement of baled straw around the downstream perimeter of stockpiles shall be employed to protect any downstream areas from siltation.
- C. There shall be no storage of equipment or materials in areas designated as wetlands.
- D. The Engineer may designate a particular area or areas where the Contractor may store materials used in its operations.
- E. Storage areas in cross-country locations shall be restored to pre-construction conditions with the planting of native species of trees and shrubs.

3.07 PROTECTION OF LANDSCAPE:

- A. The Contractor shall not deface, injure, or destroy trees or shrubs nor remove or cut them without written authority from the Owner. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorages unless specifically authorized by the Engineer. Excavating machinery and cranes shall be of suitable type and be operated with care to prevent injury to trees which are not to be removed, particularly overhanging branches and limbs. The Contractor shall, in any event, be responsible for any damage resulting from such use.
- B. Branches, limbs, and roots shall not be cut except by permission of the Engineer. All cutting shall be smoothly and neatly done without splitting or crushing. When there is unavoidable injury to branches, limbs and trunks of trees, the injured portions shall be

neatly trimmed and covered with an application of grafting wax or tree healing paint as directed.

- C. Where, in the opinion of the Engineer, trees may possibly be defaced, bruised, injured, or otherwise damaged by the Contractor's equipment or by its blasting or other operations, the Engineer may require the Contractor to adequately protect such trees by placing boards, planks, poles or fencing around them. Any trees or landscape feature scarred or damaged by the Contractor's equipment or operations shall be restored as nearly as possible to its original condition at the expense of the Contractor. The Engineer will decide what method of restoration shall be used, and whether damaged trees shall be treated and healed or removed and disposed of under the provisions of Section 02230, CLEARING AND GRUBBING.
- D. Cultivated hedges, shrubs, and plants which could be injured by the Contractor's operations shall be protected by suitable means or shall be dug up, balled and temporarily replanted and maintained. After construction operations have been substantially completed, they shall be replanted in their original positions and cared for until growth is re-established. If cultivated hedges, shrubs, and plants are injured to such a degree as to affect their growth or diminish their beauty or usefulness, they shall be replaced by items of a kind and quality at least equal to that existing at the start of the work.

3.08 CLEARING AND GRUBBING:

- A. The Contractor shall clear and grub only on the Owner's land or the Owner's easements, and only the area required for construction operations, as approved by the Engineer. Removal of mature trees (4 inches or greater DBH) will not be allowed on temporary easements.
- B. The Contractor shall not remove trees in the Owner's temporary easements without permission of the Engineer.

3.09 DISCHARGE OF DEWATERING OPERATIONS:

- A. Any water that is pumped and discharged from the trench and/or excavation as part of the Contractor's water handling shall be filtered by an approved method prior to its discharge into a receiving water or drainage system.
- B. Under no circumstances shall the Contractor discharge water to the areas designated as wetlands. When constructing in a wetlands area, the Contractor shall discharge water from dewatering operations directly to the nearest drainage system, stream, or waterway after filtering by an approved method.
- C. The pumped water shall be filtered through filter fabric and baled straw, a vegetative filter strip or a vegetated channel to trap sediment occurring as a result of the construction operations. The vegetated channel shall be constructed such that the discharge flow rate shall not exceed a velocity of more than 1 foot per second.

Accumulated sediment shall be cleared from the channel periodically.

3.10 DUST CONTROL:

- A. During the progress of the work, the Contractor shall conduct its operations and maintain the area of its activities, including sweeping and sprinkling of streets as necessary, to minimize creation and dispersion of dust. If the Engineer decides it is necessary to use calcium chloride for more effective dust control, the Contractor shall furnish and spread the material, as directed. Calcium chloride shall be as specified under Section 01562, DUST CONTROL.
- B. Calcium Chloride shall not be used for dust control within a drainage basin or in the vicinity of any source of potable water.

3.11 SEPARATION AND REPLACEMENT OF TOPSOIL:

- A. Topsoil shall be carefully removed from cross-country areas where excavations are to be made, and separately stored to be used again as required. The topsoil shall be stored in an area acceptable to the Engineer and adequate measures shall be employed to prevent erosion of said material.

3.12 BALED STRAW:

- A. To trap sediment and to prevent sediment from clogging drainage systems, baled straw shall be used where shown on the drawings. Care shall be taken to keep the bales from breaking apart. The bales should be securely staked to prevent overturning, flotation, or displacement. All deposited sediment shall be removed periodically. Hay bales shall not be placed within a waterway during construction of the pipeline crossing.

3.13 ERECTION AND MAINTENANCE OF SILT FENCE:

- A. Where indicated on the drawings or where required by the Engineer, the Contractor shall erect and maintain a temporary silt fence. In areas designated as wetlands, the Contractor shall line the limits of the construction easement with a silt fence. The silt fence shall be used specifically to contain sediment from runoff water and to minimize environmental damage caused by construction.

3.14 SURFACE RESTORATION OF CROSS COUNTRY AREAS:

- A. Plantings detailed in Section 02921 shall be conducted when construction of the pipeline has been completed within the areas designated. A one-year guarantee of maintenance will be required on these plantings to ensure that they establish in the area.

3.15 CATCH BASIN PROTECTION:

- A. Catch basin protection shall be used for every catch basin, shown on the plans or as required by the Engineer, to trap sediment and prevent it from clogging drainage

systems and entering wetlands. Siltation sacks shall be securely installed under the catch basin grate. Care shall be taken to keep the siltation sacks from breaking apart or clogging. All deposited sediment shall be removed periodically and at times prior to predicted precipitation to allow free drainage flow. Prior to working in areas where catch basins are to be protected, each catch basin sump shall be cleaned of all debris and protected. The Contractor shall properly dispose of all debris at no additional cost to the Owner.

- B. All catch basin protection shall be removed by the Contractor after construction is complete.

3.16 STRAW WATTLES:

- A. The wattles will be placed in a shallow trench (2-3 inches deep) and staked in the ground using wooden stakes driven at 4-foot intervals. The wooden stakes will be placed at a minimum depth of 24-inches into the ground.
- B. The wattles shall be regularly inspected and before and after every forecasted major weather event. All deposited sediment shall be removed and not allowed to accumulate to the top of the wattles. Wattles damaged during construction shall be repaired or replaced as required by the Engineer at no additional cost to the Owner.
- C. The Contractor shall remove all wattles after construction is completed.

END OF SECTION

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SECTION 01740

CLEANING UP

PART 1 - GENERAL

1.01 DESCRIPTION:

The Contractor must employ at all times during the progress of its work adequate cleanup measures and safety precautions to prevent injuries to persons or damage to property. The Contractor shall immediately, upon request by the Engineer provide adequate material, equipment and labor to cleanup and make safe any and all areas deemed necessary by the Engineer.

1.02 RELATED WORK:

- A. Section 00700 GENERAL CONDITIONS
- B. Section 01110 CONTROL OF WORK AND MATERIALS
- C. Section 01140 SPECIAL PROVISIONS
- D. Section 01570 ENVIRONMENTAL PROTECTION

PART 2 - PRODUCTS

Not applicable

PART 3 - EXECUTION

3.01 DAILY CLEANUP:

- A. The Contractor shall clean up, at least daily, all refuse, rubbish, scrap and surplus material, debris and unneeded construction equipment resulting from the construction operations and sweep the area. The site of the work and the adjacent areas affected thereby shall at all times present a neat, orderly and workmanlike appearance.
- B. Upon written notification by the Engineer, the Contractor shall within 24 hours clean up those areas, which in the Engineer's opinion are in violation of this section and the above referenced sections of the specifications.
- C. If in the opinion of the Engineer, the referenced areas are not satisfactorily cleaned up, all other work on the project shall stop until the cleanup is satisfactory.

3.02 MATERIAL OR DEBRIS IN DRAINAGE FACILITIES:

- A. Where material or debris has washed or flowed into or has been placed in existing watercourses, ditches, gutters, drains, pipes, structures, such material or debris shall be entirely removed and satisfactorily disposed of during progress of the work, and the ditches, channels, drains, pipes, structures, and work shall, upon completion of the work, be left in a clean and neat condition.

3.03 REMOVAL OF TEMPORARY BUILDINGS, STRUCTURES AND EQUIPMENT:

- A. On or before completion of the work, the Contractor shall, unless otherwise specifically required or permitted in writing, tear down and remove all temporary buildings and structures it built; shall remove all temporary works, tools and machinery or other construction equipment it furnished; shall remove all rubbish from any grounds which it has occupied; shall remove silt fences and hay bales used for trapping sediment; and shall leave the roads and all parts of the property and adjacent property affected by its operations in a neat and satisfactory condition.

3.04 RESTORATION OF DAMAGED PROPERTY:

- A. The Contractor shall restore or replace, when and as required, any property damaged by its work, equipment or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end the Contractor shall do as required all necessary highway or driveway, walk and landscaping work. Materials, equipment, and methods for such restoration shall be as approved by the Engineer.

3.05 FINAL CLEANUP:

- A. Before acceptance by the Owner, the Contractor shall perform a final cleanup to bring the construction site to its original or specified condition. This cleanup shall include removing all trash and debris off of the premises. Before acceptance, the Engineer shall approve the condition of the site.

END OF SECTION

SECTION 01770

PROJECT CLOSEOUT

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This Section covers administrative and procedural requirements for closing out the project, including, but not limited to:
 - 1. Project as-built documents
 - 2. Final Cleaning
 - 3. Substantial Completion
 - 4. Closeout Procedures
 - 5. Final Completion
 - 6. Correction/Warranty Period
- B. Closeout checklist to be completed by the Engineer.

1.02 RELATED WORK:

- A. General Requirements in their entirety
- B. Section 01740, CLEANING UP
- C. Division 2 through Division 5.

1.03 AS-BUILT DOCUMENTS:

- A. Contractor shall maintain on site, separate from the documents used for construction, one set of the documents listed below, and as construction progresses, shall legibly record on these documents all changes made during construction.
 - 1. Contract Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other Modifications to the Contract.
 - 5. Reviewed shop drawings, product data, and samples.
 - 6. Written interpretations and clarifications.
 - 7. Field Orders.
 - 8. Field test reports properly verified.
- B. The completed set of as-built documents shall be submitted to the Engineer with the final Application for Payment.

1.04 FINAL CLEANING:

- A. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
1. Clean the site, including landscape development areas of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to smooth, even textured surfaces.
 2. Remove waste and surplus materials, rubbish, fencing equipment, temporary utilities and construction facilities from the site, unless otherwise required by the Engineer.
 3. Comply with requirements of Section 01740 CLEANING UP.

1.05 SUBSTANTIAL COMPLETION:

- A. Substantial Completion is officially defined in the General and Supplementary Conditions. The date of substantial completion will be certified by the Engineer. This date will not be certified until the following requirements have been satisfied by the Contractor:
1. All Contract requirements are coordinated into a fully operational system. All individual units of equipment and treatment are fully operative and performing at specified efficiencies. Where efficiencies are not specified, performance shall meet acceptable standards for the particular unit.
 2. All field tests have been satisfactorily completed and reports forwarded to the Engineer.
 3. All final training has been completed by the manufacturers' representatives.
 4. All spare parts and lubricants have been satisfactorily delivered to the Owner. Spare parts are for the exclusive use of the Owner when the facility has been turned over. Contractor is responsible for all maintenance and repair materials required until the facility is accepted by the Owner.

1.06 CLOSEOUT PROCEDURES:

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and is complete in accordance with Contract Documents and ready for Engineer's and Owner's inspection.
- B. Accompany Engineer and Owner on inspection to verify conformance with the Contract Documents. Prepare a punch list of work items that have been determined by inspection

to not conform to Contract Documents. Punch list items shall include work items that are missing, incomplete, damaged, incorrect items, or improperly installed or constructed. The Contractor shall correct the punch list deficiencies by re-work, modifications, or replacement, as appropriate, until the items conform to the Contract Documents. The initial punch list shall be produced by the Contractor, with copies to the Engineer and Owner. When the Contractor has reduced the number of deficient items to a reasonable level, the Engineer will develop a definitive punch list for the use of the Contractor.

- C. Provide submittals to Engineer that are required by governing or other authorities.
- D. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due. The Contractor shall submit the following documents with or prior to Final Application for Payment: Set of as-built documents, Contract Completion and Acceptance Certificate, Consent of Surety to Final Payment, Release and Waiver of Liens and Claims (SECTION 01770 ATT. A), Affidavit of Payment of Debts and Claims, and remaining releases, waivers, warranties/guarantees, and all other data required by the Contract Documents.

1.07 FINAL COMPLETION:

- A. Prior to final completion, the following tasks shall be completed:
 - 1. All items in the punch list shall be completed.
 - 2. All Contract closeout documentation shall be submitted to and accepted by the Engineer.

1.08 CORRECTION/WARRANTY PERIOD:

- A. During the correction period, the Contractor shall correct all deficiencies in equipment and materials.
- B. During the warranty period, the Contractor shall perform all corrective work on warranty deficiencies.
- C. Corrective work will be identified by the Engineer or Owner, as appropriate. The Contractor will be notified of the item(s) requiring corrective work.
- D. The Contractor shall begin work on all corrective work within ten days of being notified of the deficiency by the Engineer and shall then work continuously until the deficiency is corrected. Upon completion of the corrective work, the Contractor shall submit a letter report to the Engineer describing the deficiency and the corrective action that was taken.
- E. The Contractor shall coordinate all corrective work with the Engineer and/or the Owner.

1.09 COMPLETION CHECKLIST:

- A. The Project Completion Checklist, which follows, shall be completed as the project nears

completion. When the project has been fully completed, Final Payment can be approved.

PROJECT COMPLETION CHECKLIST

Owner _____ Job No.

Project

As part of the project closeout, all items listed below must be checked off as being complete or otherwise accounted for. The person verifying completion of the item shall list the completion date and their initials.

Project Closeout Checklist		
	Date Completion Verified	Verified by
AS-BUILT DOCUMENTS HANDED OVER		
1. Contract Drawings		
2. Specifications		
3. Addenda		
4. Change Orders/Contract Modifications		
5. Reviewed Shop Drawings, Product Data and Samples		
6. Written Interpretations/Clarifications		
7. Field Orders		
8. Field Test Reports		
EQUIPMENT CHECKOUT AND CERTIFICATIONS		
1. Construction Complete per Drawings/Specifications		
2. All Shop Drawings have Final Approval		
FINAL CLEANING		
1. All Construction Facilities Removed		
2. All Construction Debris Removed		
3. All Areas Swept/Cleared		
SUBSTANTIAL COMPLETION		
1. All Items Coordinated Into a Fully Operational System		

2. All Field Tests Completed and Reports Submitted		
CLOSEOUT PROCEDURES		
1. Written Certification Submitted that Work is Ready for Owner & Engineer Inspector		
2. Inspection by Owner, Engineer, Contractor completed		
3. Punch List of Nonconforming Items Prepared		
4. Documents Required by Governing or Other Authorities Submitted (List Them)		
5. Final Application for Payment Received		
6. Contract Completion and Acceptance Certificate Submittal		
7. Consent of Surety to Final Payment Submittal		
8. Release and Waiver of Liens and Claims Submitted		
9. Affidavit of Payment of Debts and Claims Submitted		
10. Warranties/Guarantees Submitted		
11. Other Required Releases and Waivers Submitted (List Them)		
12. Permits Submitted (List Them)		
13. Weekly Payrolls Submitted as Required by Law		
FINAL COMPLETION		
1. All Items in Punch List Completed		
2. All Other Required Documentation Submitted (List It)		
CORRECTION/WARRANTY PERIOD		
1. Correction Period Start Date: _____ End Date: _____		
2. Specific Warranties Provided		
<u>Item</u> <u>Warranty Duration</u>		

For Review
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Full name of persons signing their initials on this checklist:

END OF SECTION

Document 9

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SECTION 01770
PROJECT CLOSEOUT
ATTACHMENT A
RELEASE AND WAIVER OF LIEN

For Review
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GENERAL CONTRACTOR'S OR SUBCONTRACTOR'S

RELEASE AND WAIVER OF LIEN

For and in consideration of the receipt of \$ _____, in payment for labor and/or materials furnished, the undersigned does hereby waive, release and relinquish any and all claims, demands and rights of lien for all work, labor, materials, machinery or other goods, equipment or services done, performed or furnished for the construction located at the site hereinafter described, to wit:

Bridge Street Wall Replacement in Erving, MA for the Town of Erving.

The undersigned further warrants and represents that any and all valid labor and/or materials and equipment bills, now due and payable on the property herein above described in behalf of the undersigned, have been paid in full to date of this waiver.

\$ _____

Total Paid to Date This Contract

\$ _____

Balanced Owed After This Payment

\$ _____

Total Billed to Date This Contract

Contractor/Subcontractor

Witness Signature

By: _____

Witness Printed Name

Printed Name

Title: _____

Date

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SECTION 01770.B

CERTIFICATE OF SUBSTANTIAL COMPLETION

For Review
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CERTIFICATE OF SUBSTANTIAL COMPLETION

PROJECT: Bridge Street Wall Replacement Project

CONTRACTOR:

CONTRACT DATE:

TENTATIVE LIST OF ITEMS TO BE CORRECTED OR COMPLETED
See Attached Punch List

DEFINITION OF SUBSTANTIAL COMPLETION

The date of substantial completion of a project or specified part of a project is the date when construction is sufficiently completed, in accordance with the contract documents, so that the project or specified part of the project can be utilized for the purpose for which it was intended.

To: Town of Erving, Massachusetts

For Review
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Date of Substantial Completion:

The work under this contract has been inspected by authorized representatives of the Owner and Contractor and the project is hereby declared to be substantially completed on the above date.

A tentative list of items to be completed or corrected is appended hereto. The failure to include an item on it does not alter the responsibility of the Contractor to complete all work in accordance with the contract documents:

TOWN OF ERVING: _____

TITLE: _____

DATE: _____

ENGINEER: _____

TITLE: _____

DATE: _____

The Contractor accepts the above Certificate of Substantial Completion and agrees to complete and correct the items on the tentative list.

CONTRACTOR:

AUTHORIZED REPRESENTATIVE: _____

DATE: _____

EXCEPTIONS AS TO GUARANTEES AND WARRANTIES:

ATTACHMENTS:
Punch List Prepared by

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SECTION 01770.C

CERTIFICATE OF FINAL COMPLETION

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CERTIFICATE OF FINAL COMPLETION

PROJECT: Bridge Street Wall Replacement Project

CONTRACTOR:

CONTRACT DATE:

DATE OF FINAL COMPLETION:

FINAL CERTIFICATION OF CONTRACTOR

I hereby certify that the work as identified in the Final Payment Request dated, _____, for contract work for the Bridge Street Wall Replacement Project, represents full compensation for the actual value of work completed. All work completed conforms to the terms of the Agreement and authorized changes. The guarantee for all work completed, including that work which was completed subsequent to the date of substantial completion, expires one (1) year from the date of the substantial completion (see: Maintenance and Guarantee in the General Conditions - Article 15 of the Bid Documents.)

DATE: _____

CONTRACTOR: _____

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Signature

Title

FINAL ACCEPTANCE OF OWNER

I, as representative of the Owner, accept the above Final Certifications and authorize final payment in the amount of \$ _____.

DATE: _____

OWNER: Town of Erving, Massachusetts

Signature

Title

SECTION 02071

GEOTEXTILE FABRICS

PART 1 - GENERAL

1.01 WORK INCLUDED:

This Section covers furnishing of all labor, materials, and equipment necessary to install specified geotextile fabrics in locations shown on the drawings and as required by the Engineer.

1.02 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

Shop drawings or working drawings and material specifications shall be submitted to the Engineer for review for each type of geotextile fabric furnished. General installation practices and installation schedule shall be included.

PART 2 - PRODUCTS

2.01 EROSION CONTROL FABRIC "A":

- A. Erosion control fabric "A" shall be composed of continuous-filament fibers bonded together to form a sheet. The fabric shall be an average of 20 mils thick and possess the pore-size distribution of Tencate Mirafi 600X Fabric.
- B. Erosion Control fabric "A" shall be Tencate Mirafi 600X as manufactured by Tencate Geosynthetics, Pendergrass, GA; or approved equal.

2.02 EROSION CONTROL FABRIC "B":

- A. Erosion Control Fabric "B" shall be of the best quality proven design and construction and shall be entirely suitable in every respect for the intended service.
- B. Erosion Control fabric "B" shall be Tencate Miramesh as manufactured by Tencate Geosynthetics, Pendergrass, GA; Enkamat Soil Erosion Matting as manufactured by

Bonar, Asheville, N.C.; Tenax Radix Erosion Control Netting as manufactured by Tenax Corp., Baltimore, MD or approved equal.

2.03 FILTER/DRAINAGE FABRIC:

- A. The filter/drainage fabric shall be composed of continuous-filament fibers bonded together to form a sheet. The fabric shall be an average of 20 mils thick and possess the characteristics of Tencate Mirafi 140N.
- B. The filter/drainage fabric shall be Tencate Mirafi 140N as manufactured by Tencate Geosynthetics, Pendergrass, GA; Foss-65 by Foss Manufacturing Co., Hampton, NH; US 120NW, as manufactured by US Fabrics, Cincinnati, OH, or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. GENERAL:

Installation of geotextile fabrics shall be strictly in accordance with manufacturer's instructions and specific layout plans and details reviewed by the Engineer.

B. EROSION CONTROL FABRIC "A":

Erosion control fabric "A" shall be installed on detention basin slopes and at drainage swale ends prior to placement of riprap and at other locations as shown on the drawings or as required by the Engineer. The fabric in place shall cover the entire riprap area. Each width of fabric shall be overlapped by the subsequent width a minimum of two feet. The Contractor shall follow the manufacturer's installation recommendations to ensure proper completion of the fabric installation, including top toe-in and bottom toe wrap.

C. EROSION CONTROL FABRIC "B":

Erosion control fabric "B" shall be placed over the prepared surface in drainage swales and other locations as required by the Engineer. The fabric shall be unrolled, placed in the direction of water flow, overlapped, pinned down with wood stakes, and seeded. All installation work shall be in accordance with manufacturer's recommendations or as required by the Engineer.

D. FILTER/DRAINAGE FABRIC:

- 1. The filter/drainage fabric shall be installed in the final graded trench bottom prior to placement of the crushed stone bedding and at other locations shown on the drawings or designated by the Engineer. The drainage fabric in place shall cover the entire trench bottom and trench sides as shown on the drawings. Each width of drainage fabric shall be overlapped in accordance with manufacturer's

recommendations, but not less than 2 feet, to prevent intrusion of soil fines into the bedding.

2. On landfill projects, the filter/drainage fabric shall be installed over the drainage layer prior to loaming and seeding, per manufacturer's installation recommendations.

3.02 FINAL INSPECTION AND ACCEPTANCE:

- A. The Contractor shall, at its expense, have a manufacturer's representative inspect the work at completion of the installation. Any work found to be unsatisfactory shall be corrected at the Contractor's expense.
- B. The Engineer, at the Contractor's expense, reserves the right to have a manufacturer's representative inspect the installation process at any time during construction.

END OF SECTION

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SECTION 02230

CLEARING AND GRUBBING

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. The Contractor shall do all required clearing and grubbing as indicated on the drawings or herein specified in the area required for construction operations on the Owner's land or in the Owner's permanent or temporary easements and shall remove all debris resulting therefrom.
- B. Unless otherwise noted, all areas to be cleared shall also be grubbed.
- C. The Contractor shall not clear and grub outside of the area required for construction operations.

1.02 RELATED WORK:

Any trees and shrubs specifically designated by the Owner not to be cut, removed, destroyed, or trimmed shall be saved from harm and injury in accordance with Section 01570, ENVIRONMENTAL PROTECTION.

PART 2 - PRODUCTS: NOT APPLICABLE

PART 3 - EXECUTION

3.01 RIGHT TO WOOD AND LOGS:

The Owner shall have the right to cut and remove logs and other wood of value in advance of the Contractor's operations. All remaining logs and other wood to be removed in the course of clearing shall become the property of the Contractor.

3.02 CLEARING:

- A. Unless otherwise indicated, the Contractor shall cut or otherwise remove all trees, saplings, brush and vines, windfalls, logs and trees lying on the ground, dead trees and stubs more than 1-foot high above the ground surface (but not their stumps), trees which have been partially uprooted by natural or other causes (including their stumps), and other vegetable matter such as shags, sawdust, bark, refuse, and similar materials.
- B. The Contractor shall not remove mature trees (4-inches or greater DBH) in the Owner's temporary easements.
- C. Except where clearing is done by uprooting with machinery or where stumps are left longer to facilitate subsequent grubbing operations, trees, stumps, and stubs to be cleared

shall be cut as close to the ground as practicable but not more than 6-inches above the ground surface in the case of small trees, and 12-inches in the case of large trees. Saplings, brush and vines shall be cut close to the ground.

3.03 GRUBBING:

- A. Unless otherwise indicated, the Contractor shall completely remove all stumps and roots to a depth of 18-inches, or if the Contractor elects to grind the stumps, they shall be ground to a minimum depth of 6-inches.
- B. Any depression remaining from the removal of a stump and not filled in by backfilling shall be filled with gravel borrow and/or loam, whichever is appropriate to the proposed ground surface.

3.04 DISPOSAL:

All material collected in the course of the clearing and grubbing, which is not to remain, shall be disposed of in a satisfactory manner away from the site or as otherwise approved. Such disposal shall be carried on as promptly as possible and shall not be left until the final clean-up period.

END OF SECTION

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SECTION 02240

DEWATERING

PART 1 - GENERAL

1.01 WORK INCLUDED:

This section specifies designing, furnishing, installing, maintaining, operating and removing temporary dewatering systems as required to lower and control water levels and hydrostatic pressures during construction; disposing of pumped water; constructing, maintaining, observing and, except where indicated or required to remain in place, removing of equipment and instrumentation for control of the system.

1.02 RELATED WORK:

- A. Section 00890, PERMITS
- B. Section 01570, ENVIRONMENTAL PROTECTION
- C. Section 02252, SUPPORT OF EXCAVATION
- D. Section 02300, EARTHWORK

1.03 SYSTEM DESCRIPTION:

- A. Dewatering includes lowering the water table and intercepting seepage which would otherwise emerge from the slopes or bottom of the excavation; increasing the stability of excavated slopes; preventing loss of material from beneath the slopes or bottom of the excavation; reducing lateral loads on sheeting and bracing; improving the excavation and hauling characteristics of sandy soil; preventing rupture or heaving of the bottom of any excavation; and disposing of pumped water.

1.04 QUALITY ASSURANCE:

- A. The Contractor is responsible for the adequacy of the dewatering systems.
- B. The dewatering systems shall be capable of effectively reducing the hydrostatic pressure and lowering the groundwater levels to a minimum of 2 feet below excavation bottom, unless otherwise required by the Engineer, so that all excavation bottoms are firm and dry.
- C. The dewatering system shall be capable of maintaining a dry and stable subgrade until the structures, pipes and appurtenances to be built therein have been completed to the extent that they will not be floated or otherwise damaged.

- D. The dewatering system and excavation support (see Section 02252, SUPPORT OF EXCAVATION) shall be designed so that lowering of the groundwater level outside the excavation does not adversely affect adjacent structures, utilities or wells.

1.05 SUBMITTALS:

- A. In accordance with Section 01330, Contractor shall submit a plan indicating how it intends to control the discharge from any dewatering operations on the project, whether it is discharge of groundwater from excavations or stormwater runoff during the life of the project.

PART 2 - PRODUCTS: NOT APPLICABLE

PART 3 - EXECUTION

3.01 DEWATERING OPERATIONS:

- A. All water pumped or drained from the work shall be disposed of in a manner that will not result in undue interference with other work or damage to adjacent properties, pavements and other surfaces, buildings, structures and utilities. Suitable temporary pipes, flumes or channels shall be provided for water that may flow along or across the site of the work. All disposal of pumped water shall conform to the provisions of Section 01570 ENVIRONMENTAL PROTECTION and Section 00890 PERMITS.
- B. Dewatering facilities shall be located where they will not interfere with utilities and construction work to be done by others.
- C. Dewatering procedures to be used shall be as described below:
 1. Crushed stone shall encapsulate the suction end of the pump to aid in minimizing the amount of silt discharged.
 2. For dewatering operations with relatively minor flows, pump discharges shall be directed into straw bale sedimentation traps lined with filter fabric. Water is to be filtered through the straw bales and filter fabric prior to being allowed to seep out into its natural watercourse.
 3. For dewatering operations with larger flows, pump discharges shall be into a steel dewatering basin. Steel baffle plates shall be used to slow water velocities to increase the contact time and allow adequate settlement of sediment prior to discharge into waterways.
 4. Where indicated on the contract drawings or in conditions of excess silt suspended in the discharge water, silt control bags shall be utilized in catch basins.

- D. The Contractor shall be responsible for repair of any damage caused by its dewatering operations, at no cost to the Owner.

END OF SECTION

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SECTION 02252

SUPPORT OF EXCAVATION

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This section covers wood and steel sheeting or soldier piles and lagging with internal bracing for support of excavations. The requirements of this section shall also apply, as appropriate, to any methods of excavation support and underpinning which the Contractor elects to use to complete the work.
- B. The Contractor shall furnish and place timber or steel sheeting or soldier piles and lagging of the kinds and dimensions required, complying with these specifications, where required by regulation, indicated on the drawings or required by the Engineer.
- C. Vibration monitoring shall be provided during installation and extraction of sheeting whenever the braced excavation is adjacent to existing structures, in critical areas as noted in the contract documents, or as requested by the Engineer.
- D. Routine monitoring of the in-place excavation support system shall be provided.

1.02 RELATED WORK:

- A. Section 02240, DEWATERING
- B. Section 02300, EARTHWORK

1.03 QUALITY ASSURANCE:

- A. This project is subject to the Safety and Health regulations of the U.S. Department of Labor set forth in 29 CFR, Part 1926, and to the Massachusetts Department of Safety and Department of Labor, Division of Occupational Safety “Excavation & Trench Safety Regulation (520 CMR 14.00)” and “Rules and Regulations for the Prevention of Accidents in Construction Operations (454 CMR 10.0 et seq.)” Contractors shall be familiar with the requirements of these regulations.
- B. The Contractor is responsible for the adequacy of the excavation support system and shall retain the services of a Professional Engineer registered in the state where the project is located to design the required excavation support systems. The Contractor's Professional Engineer shall practice in a discipline applicable to excavation work, shall have experience in the design of excavation support systems and shall design in conformance with OSHA requirements. The Contractor's Professional Engineer shall provide sufficient on-site inspection and supervision to assure that the excavation support system

is installed and functions in accordance with its design. Criteria listed herein defining the responsibilities of the Contractor's Professional Engineer are minimum requirements.

1.04 REFERENCES:

The following standards form a part of this specification as referenced herein.

ASTM International (ASTM)

ASTM	A6	General Requirements for Rolled Steel Plates, Shapes, Sheet Piling, and Bars for Structural Use
ASTM	A328	Steel Sheet Piling

1.05 SUBMITTALS:

- A. At least three weeks before starting installation of the excavation support system, the Contractor shall submit the attached Certificate of Design completed and signed by the Contractor and the Professional Engineer, identifying the Contractor's Professional Engineer who will be responsible for design of the excavation support system, and in accordance with Section 01330, including, for record purposes only:
1. An overall time schedule for construction of the braced excavation system.
 2. A description of the anticipated sequence of construction.
 3.
 - a. Complete details of braced excavation methods, equipment and sizes and lengths of materials proposed to be used.
 - b. Details of vibration monitoring devices and reports.
 - c. Details of the means and methods that will be used in monitoring the integrity of the support system during its entire period of use to insure the safety of the excavation.
 - d. Complete computations for the design of the braced excavation system bearing the seal of the responsible Professional Engineer duly registered licensed to practice within a discipline applicable to excavation work, in the state where the project is located.
 - e. Any other pertinent data required for record purposes by the Engineer.
- B. Receipt of the information by the Engineer will not relieve the Contractor of the sole responsibility for the adequacy of the braced excavation system, and for assuring that there will be no resulting damage to adjacent pavement, utilities or structures, and for providing safe conditions within the sheeted areas.

- C. Further for the record, upon completion of the work of this section, the Contractor shall submit all records of survey, vibration monitoring and inspection of existing structures to the Owner's Engineer.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Timber sheeting shall be sound spruce, pine, or hemlock, and either tongue and grooved or splined. Timber sheeting shall not be less than nominal 2-inches thick.
- B. Where steel sheet piling is indicated on the drawings or installation is ordered by the Engineer or required by OSHA standards, the material shall be of such size and strength as required by the excavation support design prepared and submitted by the Contractor's Professional Engineer. Steel sheet piling may be new or used material but shall not contain splices, cutouts, patches, or other alterations which would impair its integrity or strength. Steel sheeting shall be an approved standard section, weighing not less than 22 pounds per square foot of wall and conforming to ASTM A6 and A328.
- C. Where soldier piles and lagging are used, the steel piles shall conform to ASTM A6, and the lagging shall meet the requirements for timber sheeting, as defined above.
- D. Timber and steel used for bracing shall be of such size and strength as required in the excavation support design prepared and submitted by the Contractor's Professional Engineer. Timber or steel used for bracing shall be new or undamaged used material, which does not contain splices, cutouts, patches, or other alterations, which would impair its integrity or strength.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Work shall not be started until all materials and equipment necessary for construction are either on the site of the work or satisfactorily available for immediate use as required.
- B. The sheeting/lagging shall be sufficiently tight to minimize any resulting lowering of the groundwater level outside the excavation, as required in Section 02240, DEWATERING.
- C. The sheeting/piling shall be driven by approved means to the design elevation. No ends or edges of sheeting/piling shall be left exposed in a manner, which could create a possible hazard to safety of the public or a hindrance to traffic of any kind.
- D. If boulders or very dense soils are encountered, making it impractical to drive a sheeting/piling section to the desired depth, the section shall be treated as directed by the Contractor's Engineer.

- E. Within seven days of completing the initial installation of the earth support system, the Contractor shall submit a certification from its Professional Engineer, stating that the excavation support system as installed is in general compliance with the design or approved modifications thereto.
- F. The sheeting/piling shall be left in place where indicated on the drawings or required by the Engineer in writing. At all other locations, the sheeting/piling may be left in place or salvaged at the option of the Contractor. Wood or steel sheeting/piling permanently left in place shall be cut off at a depth of not less than two feet below finish grade unless otherwise required.
- G. All cut-off material is the property of the Contractor and shall be promptly removed by it from the site.
- H. The satisfactory construction and maintenance of the excavation support system, complete in place, shall be the responsibility of the Contractor.
- I. The Contractor shall be responsible for promptly repairing all damage to adjacent structures caused by the installation, performance, or removal of the excavation support system.

For Review
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CERTIFICATE OF DESIGN

RE: Contract between
 OWNER: _____
 and (Name)
 CONTRACTOR: _____
 on (Name)
 CONTRACT: _____
 (Title)

 (Number) (Date)

The undersigned hereby certify that the engineer listed below:

1. Is licensed or registered to perform professional engineering work in the state of _____;
 (Location of Project)
2. Is qualified by education and training to design the _____
 specified in Section _____ of subject contract.
3. Has previously designed comparable excavation support systems;
4. Has prepared the design in full compliance with the requirements of subject contract, including all applicable laws, regulations, rules, and codes; and
5. Will inspect and supervise installation of the excavation support system and will monitor the in-place system to confirm that the system is installed and functions in accordance with the design.

CONTRACTOR

By: _____
 (Signature)

 (Name)

 (Title)

 (Date)

ENGINEER

By: _____
 (Signature)

 (Name)

 (Engineering Discipline)

 (Date)

END OF SECTION

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SECTION 02254

STEEL SHEET PILING

PART 1 - GENERAL

1.01 WORK INCLUDED:

1.02 QUALITY ASSURANCE:

- A. The Contractor shall furnish, drive to the depths required or approved, cut off and leave in place steel sheet piling where indicated on the drawings or required by the Engineer in writing.
- B. Sheet piling shall be of sufficient strength and be provided with adequate bracing. If, in the opinion of the Engineer, sufficient or proper supports have not been provided, it may order additional supports put in at the expense of the Contractor.
- C. The sheeting and bracing shall be designed to prevent any movement of earth that would diminish the width of the excavation or endanger adjacent structures. The Contractor shall submit design calculations, sketches and installation procedure for steel sheeting and bracing stamped by a Professional Engineer registered in the state where the project is located, to the Engineer prior to installation.

1.03 REFERENCES:

Steel sheet piling shall conform to Standard Specification for Steel Sheet Piling, ASTM A328.

PART 2 - PRODUCTS

2.01 MATERIALS:

Where steel sheet piling is indicated on the drawings or is ordered by the Engineer for installation, the material shall be of proper length, straightness, and otherwise acceptable to the Engineer.

PART 3 - EXECUTION

3.01 DRIVING AND CUTTING:

- A. The steel sheet piling shall be furnished in suitable lengths for the work required, and shall be driven by approved means to the required depths. If boulders are encountered making it impractical to drive a section to the desired depth, the section shall, as required, be cut off. The sections of steel piling shall be interlocked and every effort shall be made to avoid breaking the continuity of the lock during driving.

B. Steel sheet piling to be left in place shall be cut off three feet below ground surface.

END OF SECTION

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SECTION 02300

EARTHWORK

PART 1 - GENERAL

1.01 WORK INCLUDED:

The Contractor shall make excavations of normal depth in earth for trenches and structures, shall backfill and compact such excavations to the extent necessary, shall furnish the necessary material and construct embankments and fills, and shall make miscellaneous earth excavations and do miscellaneous grading.

1.02 RELATED WORK:

- A. Section 00890, PERMITS
- B. Section 01110, CONTROL OF WORK AND MATERIALS
- C. Section 01570, ENVIRONMENTAL PROTECTION
- D. Section 02071, GEOTEXTILE FABRICS
- E. Section 02230, CLEARING AND GRUBBING
- F. Section 02240, DEWATERING
- G. Section 02252, SUPPORT OF EXCAVATION
- H. Section 02324, ROCK EXCAVATION AND DISPOSAL
- J. Section 02920, LOAMING AND SEEDING

1.03 REFERENCES:

ASTM International (ASTM)

ASTM	C131	Test Method for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
ASTM	C330	Specification for Lightweight Aggregate for Structural Concrete.
ASTM	D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³) (2700 kN-m/m ³)

ASTM D6938 Test Methods for Density of Soil and Soil-aggregate in Place by Nuclear Methods (Shallow Depth).

ASTM D6913 Standard Test Method Particle Size Analysis of Soils

Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges.

Code of Massachusetts Regulations (CMR) 310.40.0032 Contaminated Media and Contaminated Debris

Code of Massachusetts Regulations (CMR) 520 CMR 14.00 Excavation & Trench Safety Regulation

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF GENERAL SPECIFICATIONS, SUBMIT THE FOLLOWING:

- A. Material Test Reports: From a qualified independent testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
1. Classification according to ASTM D 2487 and moisture content according to ASTM D 2216 of each on-site and borrow soil and/or fill material proposed for fill and backfill.
 2. Laboratory compaction curve according to ASTM D 1557 for each onsite and borrow soil and/or fill material proposed for fill and backfill.

1.05 PROTECTION OF EXISTING PROPERTY:

- A. The work shall be executed in such manner as to prevent any damage to facilities at the site and adjacent property and existing improvements, such as but not limited to streets, curbs, paving, service utility lines, structures, monuments, benchmarks, observation wells, and other public or private property. Protect existing improvements from damage caused by settlement, lateral movements, undermining, washout and other hazards created by earthwork operations.
- B. In case of any damage or injury caused in the performance of the work, the Contractor shall, at its 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 at least the condition that existed at the start of operations. The Contractor shall replace, at its own cost, existing benchmarks, observation wells, monuments, and other reference points, which are disturbed or destroyed.
- C. Buried drainage structures and pipes, observation wells and piezometers, including those which project less than eighteen inches (18") above grade, which are subject to damage from construction equipment shall be clearly marked to indicate the hazard. Markers shall indicate limits of danger areas, by means which will be clearly visible to operators of trucks and other construction equipment and shall be maintained at all times until completion of project.

1.06 DRAINAGE:

- A. The Contractor shall provide, at its own expense, adequate drainage facilities to complete all work items in an acceptable manner. Drainage shall be done in a manner so that runoff will not adversely affect construction procedures or cause excessive disturbance of underlying natural ground or abutting properties.

1.07 FROST PROTECTION AND SNOW REMOVAL:

- A. The Contractor shall, at its own expense, keep earthwork operations clear and free of accumulations of snow as required to carry out the work.
- B. The Contractor shall protect the subgrade beneath new structures and pipes from frost penetration when freezing temperatures are expected.

1.08 GEOTECHNICAL FIELD AND LABORATORY TESTING:

The Contractor shall retain the services of a geotechnical testing laboratory to conduct the laboratory analyses and field testing of soil materials required by this specification. Coordinate locations and types of field tests to be performed with the Engineer and cooperate in every way with the Engineer and testing laboratory during field testing and with collection of soil samples for laboratory testing.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. GRAVEL BORROW:

Gravel Borrow shall satisfy the requirements listed in MassDOT Specification Section M1.03.0, Type b.

B. CRUSHED STONE:

Crushed stone shall satisfy the requirements listed in MassDOT Specification Section M2.01.4 (3/4-inch crushed stone) unless otherwise required.

C. SAND BORROW:

Sand Borrow shall satisfy the requirements listed in MassDOT Specification Section M1.04.0.

D. PEASTONE:

Peastone shall be smooth, hard, naturally occurring, rounded stone meeting the following gradation requirements:

Passing 5/8 inch square sieve opening	-	100%
Passing No. 8 sieve opening	-	0%

E. BACKFILL MATERIALS:

1. Class B Backfill:

Class B backfill shall be granular, well graded friable soil; free of rubbish, ice, snow, tree stumps, roots, clay and organic matter; with 30 percent or less passing the No. 200 sieve; no stone greater than two-third (2/3) loose lift thickness, or six inches, whichever is smaller.

2. Select Backfill:

Select backfill shall be granular, well graded friable soil, free of rubbish, ice, snow, tree stumps, roots, clay and organic matter, and other deleterious or organic material; graded within the following limits:

<u>Sieve Size</u>	<u>Percent Finer by Weight</u>
3"	100
No. 10	30-95
No. 40	10-70
No. 200	0-10

F. PROCESSED GRAVEL:

1. Processed gravel shall satisfy the requirements listed in MassDOT Specification Section M1.03.1.
2. Processed gravel shall consist of inert material that is hard, durable stone and coarse sand, free from loam and clay, surface coatings and deleterious materials. The coarse aggregate shall have a percentage of wear, by the Los Angeles Abrasion Test, of not more than 50.
3. The gradation shall meet the following requirements:

<u>Sieve Designation</u>	<u>Percentage Passing</u>
3-in.	100
1 1/2-in.	70-100
3/4-in.	50-85
No. 4	30-60
No. 200	0-10

4. The approved source of bank-run gravel material shall be processed by mechanical means. The equipment for producing crushed gravel shall be of adequate size with sufficient adjustments to produce the desired materials. The processed material

shall be stockpiled in such a manner to minimize segregation of particle sizes. All processed gravel shall come from approved stockpiles.

PART 3 - EXECUTION

3.01 DISTURBANCE OF EXCAVATED AND FILLED AREAS DURING CONSTRUCTION:

- A. Contractor shall take the necessary steps to avoid disturbance of subgrade during excavation and filling operations, including restricting the use of certain types of construction equipment and their movement over sensitive or unstable materials, dewatering and other acceptable control measures.
- B. All excavated or filled areas disturbed during construction, all loose or saturated soil, and other areas that will not meet compaction requirements as specified herein shall be removed and replaced with a minimum 12-inch layer of compacted crushed stone wrapped all around in non-woven filter fabric. Costs of removal and replacement shall be borne by the Contractor.
- C. The Contractor shall place a minimum of 12-inch layer of special bedding materials and crushed stone wrapped in filter fabric over the natural underlying soil to stabilize areas which may become disturbed as a result of rain, surface water runoff or groundwater seepage pressures, all at no additional cost to the Owner. The Contractor also has the option of drying materials in-place and compacting to specified densities.

3.02 EXCAVATION:

A. GENERAL:

1. The Contractor shall perform all work of any nature and description required to accomplish the work as shown on the Drawings and as specified.
2. Excavations, unless otherwise required by the Engineer, shall be carried only to the depths and limits shown on the Drawings. If unauthorized excavation is carried out below required subgrade and/or beyond minimum lateral limits shown on Drawings, it shall be backfilled with gravel borrow and compacted at the Contractor's expense as specified below, except as otherwise indicated. Excavations shall be kept in dry and good conditions at all times, and all voids shall be filled to the satisfaction of the Engineer.
3. In all excavation areas, the Contractor shall strip the surficial topsoil layer and underlying subsoil layer separate from underlying soils. In paved areas, the Contractor shall first cut pavement as specified in paragraph 3.02 B.1 of this specification, strip pavement and pavement subbase separately from underlying soils. All excavated materials shall be stockpiled separately from each other within the limits of work.

4. The Contractor shall follow a construction procedure, which permits visual identification of stable natural ground. Where groundwater is encountered, the size of the open excavation shall be limited to that which can be handled by the Contractor's chosen method of dewatering, and which will allow visual observation of the bottom and backfill in the dry.
5. The Contractor shall excavate unsuitable materials to stable natural ground where encountered at proposed excavation subgrade, as required by the Engineer. Unsuitable material includes topsoil, loam, peat, other organic materials, snow, ice, and trash. Unless specified elsewhere or otherwise required by the Engineer, areas where unsuitable materials have been excavated to stable ground shall be backfilled with compacted special bedding materials or crushed stone wrapped all around in non-woven filter fabric.

B. TRENCHES:

1. Prior to excavation, trenches in pavement shall have the traveled way surface cut in a straight line by a concrete saw or equivalent method, to the full depth of pavement. Excavation shall only be between these cuts. Excavation support shall be provided as required to avoid undermining of pavement. Cutting operations shall not be done by ripping equipment.
2. The Contractor shall satisfy all dewatering requirements specified in Section 02240 DEWATERING, before performing trench excavations.
3. Trenches shall be excavated to such depths as will permit the pipe to be laid at the elevations, slopes, and depths of cover indicated on the Drawings. Trench widths shall be as shown on the Drawings or as specified.
4. Where pipe is to be laid in bedding material, the trench may be excavated by machinery to, or just below, the designated subgrade provided that the material remaining in the bottom of the trench is not disturbed.
5. If pipe is to be laid in embankments or other recently filled areas, the fill material shall first be placed to a height of at least 12-inches above the top of the pipe before excavation.
6. Pipe trenches shall be made as narrow as practicable and shall not be widened by scraping or loosening materials from the sides. Every effort shall be made to keep the sides of the trenches firm and undisturbed until backfilling has been completed.
7. If, in the opinion of the Engineer, the subgrade, during trench excavation, has been disturbed as a result of rain, surface water runoff or groundwater seepage pressures, the Contractor shall remove such disturbed subgrade to a minimum of 12 inches and replace with crushed stone wrapped in filter fabric. The cost of removal and replacement shall be borne by the Contractor.

8. The Contractor shall obtain a trench permit from the municipality where the trench is located prior to making any excavations of trenches (any subsurface excavation greater than three (3) feet in depth and fifteen (15) feet or less between soil walls as measured from the bottom).
9. All trenches required to be permitted must be attended, covered, barricaded, or backfilled. Covers must be road plates at least 3/4-inch thick or equivalent, barricades must be fences at least 6-feet high with no openings greater than 4-inches between vertical supports and all horizontal supports required to be located on the trench-side of the fencing.

C. BUILDING AND FOUNDATION EXCAVATION:

1. Excavations shall not be wider than required to set, brace, and remove forms for concrete, or perform other necessary work.
2. After the excavation has been made, and before forms are set for footings, mats, slabs, or other structures, and before reinforcing is placed, all loose or disturbed material shall be removed from the subgrade. The bearing surface shall then be compacted to meet the requirements of this specification.
3. If, in the opinion of the Engineer, the existing material at subgrade elevation is unsuitable for structural support, the Contractor shall excavate and dispose of the unsuitable material to the required width and depth as required by the Engineer. If, in the opinion of the Engineer, filter fabric is required; the Contractor shall place filter fabric, approved by the Engineer, as per manufacturer's recommendations. Crushed stone shall then be placed in lifts and compacted to required densities. Backfill shall be placed to the bottom of the proposed excavation.

D. EXCAVATION NEAR EXISTING STRUCTURES:

1. Attention is directed to the fact that there are pipes, manholes, drains, and other utilities in certain locations. An attempt has been made to locate all utilities on the drawings, but the completeness or accuracy of the given information is not guaranteed.
2. As the excavation approaches pipes, conduits, or other underground structures, digging by machinery shall be discontinued and excavation shall be done by means of hand tools, as required. Such manual excavation, when incidental to normal excavation, shall be included in the work to be done under items involving normal excavation.
3. Where determination of the exact location of a pipe or other underground structure is necessary for properly performing the work, the Contractor shall excavate test pits to determine the locations.

3.03 BACKFILL PLACEMENT AND COMPACTION:

A. GENERAL:

1. Prior to backfilling, the Contractor shall compact the exposed subgrade to a firm and unyielding condition with at least 4 passes of fully loaded, ten cubic yard dump truck over the subgrade or other acceptable compaction equipment subject to the approval of the Engineer.
2. After approval of subgrade by the Engineer, the Contractor shall backfill areas to required contours and elevations with specified materials.
3. The Contractor shall place and compact materials to the specified density in continuous horizontal layers, not to exceed nine (9) inches in uncompacted lifts. The degree of compaction shall be based on maximum dry density as determined by ASTM Test D1557, Method C. The minimum degree of compaction for fill placed shall be as follows:

<u>Location</u>	<u>Percent of Maximum Density</u>
Below pipe centerline	95
Above pipe centerline	92
Below pavement (upper 3 ft.)	95
Embankments	95
Below pipe in embankments	95
Adjacent to structures	92
Below structures	95

4. COMPACTION TESTING:

- a. The Contractor shall test backfill for conformance to the specifications. Compaction testing shall be performed by an inspection laboratory approved by the Owner and Engineer paid for by the Contractor.
- b. Prior to paving and at a minimum, the Contractor shall complete nuclear density test within the Project Area at locations and depths as required by the Engineer.
- c. If test results indicate work does not conform to specifications requirements, the Contractor shall remove or correct the defective Work by recompacting where appropriate or replacing as necessary and approved by the Engineer, to bring the work into compliance, at no additional cost to the Owner.
- d. All backfilled materials under walls shall be field tested for compliance with the requirements of this specification.

- e. No payment shall be made for any item until compaction testing has been approved and is in conformance with the contract documents.
 - f. In-place density tests shall be performed at a minimum according to the following:
 - a. A minimum of one test per lift for each 100 linear feet of trench.
 - b. One test per lift for each 2,000 square feet of road reconstruction area.
 - c. One test per lift for each 100 linear feet of roadway fills.
 - d. One test per lift for each 50 linear feet of backfill for retaining walls and as described in 00320 Subsurface Data
5. Where horizontal layers meet a rising slope, the Contractor shall key each layer by benching into the slope.
 6. If the material removed from the excavation is suitable for backfill with the exception that it contains stones larger than permitted, the Contractor has the option to remove the oversized stones and use the material for backfill or to provide replacement backfill at no additional cost to the Owner.
 7. The Contractor shall remove loam and topsoil, loose vegetation, stumps, large roots, etc., from areas upon which embankments will be built or areas where material will be placed for grading. The subgrade shall be shaped as indicated on the Drawings and shall be prepared by forking, furrowing, or plowing so that the first layer of the fill material placed on the subgrade will be well bonded to the subgrade.
 8. Where called for on the Drawings, Lightweight Fill shall be placed and compacted as recommended by the manufacturer. The exact number of passes shall be approved by the Engineer to insure stability of the layer. As soon as the compaction of each layer has been completed, the next layer shall then be placed. The Contractor shall take all necessary precautions during construction activities in operations on or adjacent to the Lightweight Fill to ensure that the material is not over-compacted. Construction equipment, other than for compaction, shall not operate on the exposed Lightweight Fill. The top surface of the Lightweight Fill lying directly below the gravel course shall be chinked by additional rolling of the Lightweight Fill to prevent infiltration of fines.

B. TRENCHES:

1. Bedding as detailed and specified shall be furnished and installed beneath the pipeline prior to placement of the pipeline. A minimum bedding thickness shall be maintained between the pipe and undisturbed material, as shown on the Drawings.
2. As soon as practicable after the pipes have been laid, backfilling shall be started.
3. Unless otherwise indicated on the Drawings, select backfill shall be placed by hand shovel in 6-inch thick lifts up to a minimum level of 12-inches above the top of pipe. This area of backfill is considered the zone around the pipe and shall be

thoroughly compacted before the remainder of the trench is backfilled. Compaction of each lift in the zone around the pipe shall be done by use of power-driven tampers weighing at least 20 pounds or by vibratory compactors. Care shall be taken that material close to the bank, as well as in all other portions of the trench, is thoroughly compacted to densities required.

4. Class B backfill shall be placed from the top of the select backfill to the specified material at grade (loam, pavement subbase, etc.). Fill compaction shall meet the density requirements of this specification.
5. If the materials above the trench bottom are unsuitable for backfill, the Contractor shall furnish and place backfill materials meeting the requirements for trench backfill, as shown on the drawings or specified herein.
6. Should the Engineer order crushed stone for utility support or for other purposes, the Contractor shall furnish and install the crushed stone as directed.
8. In shoulders of streets and road, the top 12-inch layer of trench backfill shall consist of processed gravel for sub-base, satisfying the requirements listed in MassDOT standard specification M1.03.1.

C. BACKFILLING UNDER BUILDINGS AND FOUNDATIONS:

1. Material to be used as structural fill under structures shall be special bedding material or gravel borrow, as shown on the Drawings or as required by the Engineer. Where gravel borrow fill is required to support proposed footings, walls, slabs, and other structures, the material shall be placed in a manner accepted by the Engineer. Compaction of each lift shall meet the density requirements of this specification.

D. BACKFILLING ADJACENT TO STRUCTURES:

1. The Contractor shall not place backfill against or on structures until they have attained sufficient strength to support the loads to which they will be subjected. Excavated material approved by the Engineer may be used in backfilling around structures. Backfill material shall be thoroughly compacted to meet the requirements of this specification.
2. Contractor shall use extra care when compacting adjacent to pipes and drainage structures. Backfill and compaction shall proceed along sides of drainage structures so that the difference in top of fill level on any side of the structure shall not exceed two feet (2') at any stage of construction.
3. Where backfill is to be placed on only one side of a structural wall, only hand-operated roller or plate compactors shall be used within a lateral distance of five feet (5') of the wall for walls less than fifteen feet (15') high and within ten feet (10') of the wall for walls more than fifteen feet (15') high.

3.04 DISPOSAL OF SURPLUS MATERIALS:

- A. Surplus excavated materials, which are acceptable to the Engineer, shall be used to backfill normal excavations in rock or to replace other materials unacceptable for use as backfill. Upon written approval of the Engineer, surplus excavated materials shall be neatly deposited and graded so as to make or widen fills, flatten side slopes, or fill depressions; or shall be neatly deposited for other purposes as indicated by the Owner, within its jurisdictional limits; all at no additional cost to the Owner.
- B. Surplus excavated material not needed as specified above shall be hauled away and disposed of by the Contractor at no additional cost to the Owner, at appropriate locations, and in accordance with arrangements made by it. Disposal of all rubble shall be in accordance with all applicable local, state and federal regulations.
- C. No excavated material shall be removed from the site of the work or disposed of by the Contractor unless approved by the Engineer.
- D. The Contractor shall comply with Massachusetts regulations (310 CMR 40.0032) that govern the removal and disposal of surplus excavated materials. Materials, including contaminated soils, having concentrations of oil or hazardous materials less than an otherwise Reportable Concentration and that are not a hazardous waste, may not be disposed of at locations where concentrations of oil and/or hazardous material at the receiving site are significantly lower than the levels of those oil and /or hazardous materials present in the soil being disposed or reused.

END OF SECTION

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SECTION 02324

ROCK EXCAVATION AND DISPOSAL

PART 1 - GENERAL

1.01 WORK INCLUDED:

The Contractor shall excavate rock, if encountered, to the lines and grades indicated on the drawings or as required, shall dispose of the excavated material, and shall furnish the required material as specified in Section 02300 EARTHWORK for backfill in place of the excavated rock.

1.02 RELATED WORK:

- A. Section 02252, SUPPORT OF EXCAVATION
- B. Section 02300, EARTHWORK
- C. Section 03302, FIELD CONCRETE

1.03 DEFINITIONS:

- A. The word "rock," wherever used as the name of the excavated material or material to be excavated, shall mean only boulders and pieces of concrete or masonry exceeding one cubic yard* in volume, or solid ledge rock which, in the opinion of the Engineer, requires for its removal, drilling and blasting, wedging, sledging, barring, or breaking up with a power-operated tool. No soft or disintegrated rock which can be removed by normal earth excavation methods, no loose, shaken, or previously blasted rock or broken stone in rock fillings or elsewhere, and no rock exterior to the maximum limits of measurement allowed, which may fall into the excavation, will be measured or allowed as "rock."
- B. The word "earth," wherever used as the name of an excavated material, or material to be excavated shall mean all kinds of material other than rock as above defined.

1.04 QUALITY ASSURANCE:

- A. The Contractor shall conform to all municipal ordinances and state and federal laws relating to the transportation, storage, handling, and use of explosives. In the event that any of the above mentioned laws, ordinances, or regulations require a licensed blaster to perform or supervise the work of blasting, said licensed blaster shall, at all times, have its license on the work site and shall permit examination thereof by the Engineer or other officials having jurisdiction.
- B. The Contractor shall procure all permits required for blasting.

1.05 SUBMITTALS:

- A. At least two weeks before beginning blasting operations, the Contractor shall submit to the Engineer for record the following data:
 - 1. Name of Contractor or Subcontractor responsible for blasting and monitoring operations and license number.
 - 2. Name, affiliation, and license number of the person or persons who will be directly responsible for designing each blast, supervising the loading of the shot, and firing it.
- B. Copies of all permits required for blasting.
- C. Results of pre-blast survey.
- D. When blasting is in progress, daily reports on blasting operations and blast monitoring results.

1.06 DELIVERY/STORAGE AND HANDLING:

Delivery, storage and handling of explosives shall conform to all federal, state and local regulations and permits.

PART 2 - PRODUCTS - NOT APPLICABLE

PART 3 - EXECUTION

3.01 PREPARATION/PRE-BLAST SURVEY

If required, the pre-blast survey shall be conducted in accordance with state regulations and/or local permit requirements.

3.02 EXCAVATION:

- A. The Contractor shall excavate rock to the lines and grades indicated on the drawings or as required by the Engineer. The excavated rock shall be removed and disposed of by the Contractor as specified for surplus excavated materials under Section 02300, EARTHWORK.
- B. Work damaged by blasting shall be repaired or replaced at the Contractor's expense.
- C. If rock is excavated beyond the limits of payment indicated on the drawings, specified, or authorized in writing by the Engineer, the excess excavation, whether resulting from overbreakage or other causes, shall be backfilled, by and at the expense of the Contractor, as specified below:

1. In pipe trenches, excess excavation shall be filled with the required material and compacted in the same manner as specified for the material in the zone around the pipe under Section 02300 EARTHWORK.
 2. In excavations for structures, excess excavation in the rock beneath foundations shall be filled with concrete which shall have a minimum 28-day compressive strength of 3000 psi. Other excess excavation shall be filled with Class B backfill compacted to a minimum of 92 percent density (ASTM D1557 Method C) as specified under Section 02300, EARTHWORK.
 3. If the rock below normal depth is shattered due to drilling or blasting operations of the Contractor, and the Engineer considers such shattered rock to be unfit for foundations, the shattered rock shall be removed and the excavation shall be backfilled with concrete as required, except that in pipe trenches crushed stone may be used for backfill, if approved. All such removal and backfilling shall be done by and at the expense of the Contractor.
- D. When required by the Engineer, the Contractor shall remove all dirt and loose rock from designated areas and shall clean the surface of the rock thoroughly to determine whether seams or other defects exist.
- E. When concrete is to be placed on rock, the rock shall be free of all vegetation, dirt, sand, clay, boulders, scale, excessively cracked rock, loose fragments, water, ice, snow, and other objectionable substances.
- 3.03 VIBRATION AND AIR BLAST MONITORING:
- A. The Contractor shall measure air blast and vibration levels of blasting operations to assure compliance with all applicable regulations and local permits.
- B. Records of each day's air blast and vibration measurements shall be submitted to the Engineer in writing no later than the start of the next day's work. Records shall include, as a minimum:
- Identification of instrument
 - Name of observer
 - Name of interpreter
 - Distance and direction of recording station from the area of detonation
 - Date and exact time of reading
 - Type of ground at recording station
 - Peak particle velocity for all components as well as resultant for all frequencies of vibrations
 - Duration of motion with a velocity in excess of one thousandth of an inch per second
 - A copy of the photographic record of seismograph readings
 - Peak air blast level.

3.04 BLASTING RECORDS:

The Contractor shall prepare and submit to the Engineer daily blast reports, including logs of each blast. Reports shall be submitted to the Engineer no later than the start of the next day's work. However, during each day of blasting, the Contractor shall review and shall provide access for the Engineer to review the data from that day's blasting. Reports after each blast shall include at least the following information for each blast:

- Date, time, and location of blast
- Permit number and expiration date
- Amount and type of explosives used by weight and number of cartridges
- Total number of delays used and number of holes used for each delay
- On a diagram of the blast pattern, indicate total number and depth of holes, maximum charge per delay, maximum charge per hole, and corresponding delay number
- An evaluation of the blast indicating areas of significant overbreak, unusual results, and any recommended adjustments for the next blast.

3.05 POST BLASTING INSPECTIONS:

The Contractor shall examine any properties, structures, and conditions where complaints of damage have been received or damage claims have been filed. Advance notice shall be given to all interested parties so that the parties may be present during the final examination. Records of the final examination shall be signed and distributed to the owner of the property, the head of the local fire department, and the Engineer.

END OF SECTION

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SECTION 02371

RIPRAP

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This Section covers riprap for slope protection, drainage swales and pipe ends, complete.
- B. Grading and compaction of earth slopes and other slope preparation for the riprap are included under other sections of the specification.

1.02 RELATED WORK:

- A. Section 02300, EARTHWORK.
- B. Section 02071, GEOTEXTILE FABRICS.

1.03 REFERENCES:

- A. The following standard forms a part of these specifications and indicates minimum standards required:

Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. SLOPE PROTECTION:

Stone for slope protection shall be angular and shall be in accordance with MassDOT Specification Section M2.02.2, Dumped Riprap.

- B. PIPE ENDS:

Stone for pipe ends shall be angular and shall be in accordance with MassDOT Specification Section M2.02.3, Stone for Pipe Ends.

C. MODIFIED ROCKFILL:

Stone for modified rock fill ends shall be angular and shall be in accordance with MassDOT Specification Section M2.02.4, Modified Rockfill.

D. GEOTEXTILE FABRIC:

Geotextile fabric shall be Erosion Control Fabric "A" as specified in Section 02071, GEOTEXTILE FABRICS.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Geotextile fabric shall be installed where shown on the drawings, prior to placing the riprap.
- B. Riprap for slope protection and pipe ends shall be placed on the prepared slope or area in a manner which will produce a reasonably well-graded mass of stone with the minimum practicable percentage of voids and a maximum void of 12-inches.
- C. Riprap shall be placed to its full course thickness in one operation and in such a manner as to avoid displacing the underlying material. Placing of riprap in layers or by dumping into chutes or by other similar methods likely to cause segregation will not be permitted.
- D. Riprap stones shall be placed and distributed such that there will be no large accumulation of either the larger or smaller stones in any given area.
- E. It is the intent of these specifications to produce compact riprap protection in which all required sizes of stone are placed in the proper proportions. Hand placing or rearranging of individual stones by mechanical equipment shall be utilized to the extent necessary to secure the desired results.

END OF SECTION

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SECTION 02518

TRACER TAPE

PART 1 - GENERAL

1.01 WORK INCLUDED:

This section covers the furnishing, handling and installation of tracer tape, as called for on the drawings.

1.02 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

- A. Manufacturer's literature on the materials, colors and printing specified herein, shall be submitted to the Engineer for review.
- B. Tape samples shall also be submitted to the Engineer for review.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

Tracer tape shall be by Reef Industries, Houston, TX; Empire Level, Mukwonago, WI; Pro-Line Safety Products Co., W. Chicago, IL; or approved equal.

2.02 TRACER TAPE:

- A. Tracer tape shall be at least 3-inches wide.
- B. Tracer tape for non-ferrous pipe or conduit shall be constructed of a metallic core bonded to plastic layers. The metallic tracer tape shall be a minimum 5-mil thick and must be locatable at a depth of 18-inches with ordinary pipe locaters.
- C. Tracer tape for ferrous pipe or conduit shall consist of multiple bonded plastic layers. The non-metallic tracer tape shall elongate at least 500% before breaking.
- D. The tape shall bear the wording: "BURIED DRAIN LINE BELOW" (with "DRAIN" replaced by "WATER", "SEWER", "ELECTRICAL", "GAS", "TELEPHONE", or "CHEMICAL" as appropriate), continuously repeated every 30-inches to identify the pipe.
- E. Tape colors shall be as follows, as recommended by the American Public Works Association (APWA):

Electric	Red
Gas & Oil	Yellow

Communications	Orange
Water	Blue
Sewer & Drain	Green
Chemical	Red (not APWA)

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Tracer tape shall be installed directly above the pipe or conduit it is to identify, approximately 12-inches below the proposed ground surface.
- B. The Contractor shall follow the manufacturer's recommendations for installation of the tape, as approved by the Engineer.

END OF SECTION

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SECTION 02625

CORRUGATED POLYETHYLENE [HDPE] DRAINAGE PIPE

PART 1 – GENERAL

1.01 WORK INCLUDED:

- A. This section includes furnishing all materials, labor and equipment and installing corrugated polyethylene [HDPE] drainage pipe and fittings as shown on the drawings and as specified herein.

1.02 RELATED WORK:

- A. Section 02300 – EARTHWORK
- B. Section 02252 – SUPPORT OF EXCAVATION

1.03 REFERENCES:

- A. The following standards form a part of this specification, as referenced:

ASTM International (ASTM)

ASTM D2321	Standard for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications
ASTM F405	Standard Specification for Corrugated Polyethylene Pipe and Fittings
ASTM F667	Standard Specification for Large Diameter Corrugated Polyethylene Pipe and fittings

American Association Of State Highway and Transportation Officials

AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe
AASHTO MP6	Standard Specification for Corrugated Polyethylene Pipe 42” and 48” Diameter

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

- A. Manufacturer’s literature on the materials of this Section.
- B. Manufacturer’s certification that the product was manufactured, tested, and supplied in accordance with this specification.

1.05 DELIVERY, STORAGE AND HANDLING:

- A. Pipe shall be packaged to withstand shipment without damage and handled carefully on the jobsite. Pipe shall be stored so that it is not exposed to sunlight.

PART 2 – PRODUCTS

2.01 MATERIALS:

- A. This Section applies to corrugated polyethylene pipe with an integrally formed smooth interior.
- B. The nominal size for the pipe and fittings is based on the nominal inside diameter of the pipe.
- C. The pipe and fittings shall be free of foreign inclusions and visible defects. Fittings may be either molded or fabricated. Fittings supplied by manufacturers other than the supplier of the pipe shall not be permitted without the approval of the Engineer. The ends of the pipe shall be cut squarely and cleanly so as not to adversely affect joining.

2.02 MANUFACTURERS:

- A. Pipe and fittings shall be manufactured by Iplex, Inc.; Plexco, Division of Chevron Chemical Co.; J-M Pipe Co.; Advanced Drainage Systems, Inc. (ADS) or approved equal.

PART 3 – EXECUTION

3.01 INSTALLATION:

- A. Pipe interiors, fitting interiors, and joint surfaces shall be thoroughly cleaned before installation. Pipes and fittings shall be maintained clean.
- B. Pipes shall be installed in the locations and to the required lines and grades shown on the drawings and provided in these Specifications, using an approved method of control.
- C. Excavations shall be maintained free of water during the progress of the Work. No pipes shall be laid in water, nor shall there be any joints made up in water.
- D. If any defective pipe is discovered after being placed, removal and replacement with sound pipe will be required at no additional cost to the Owner.

END OF SECTION

P:\MA\Erving, MA\ENG22-0635 Bridge Street Wall Replacement\4 Working Documents\4.2 Specifications\Div 2\02625 Corrugated Polyethylene [HDPE] Drainage Pipe.docx

SECTION 02631

PRECAST CONCRETE MANHOLES AND CATCH BASINS

PART 1 - GENERAL

1.01 WORK INCLUDED:

This Section covers all precast manholes and catch basins complete, including, but not limited to, bases, walls, cones, mortar, inverts, frames and covers.

1.02 RELATED WORK:

- A. Section 02300, EARTHWORK
- B. Section 02745, PAVING
- C. Section 03302, FIELD CONCRETE

1.03 SYSTEM DESCRIPTION:

- A. Precast sections shall conform in shape, size, dimensions, materials, and other respects to the details indicated on the drawings or as required by the Engineer.
- B. All manholes and catch basins shall have concrete bases. Concrete bases shall be precast unless otherwise specified.
- C. Catch basins shall have a 4-foot deep sump unless otherwise specified.
- D. Riser and cone sections shall be precast concrete.

1.04 REFERENCES:

- A. The following standards form a part of this specification as referenced:

ASTM International (ASTM)

ASTM A48	Gray Iron Castings
ASTM C32	Sewer and Manhole Brick
ASTM C144	Aggregate for Masonry Mortar
ASTM C207	Hydrated Lime for Masonry Purposes
ASTM C478	Precast Reinforced Concrete Manhole Sections

ASTM C923 Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures and Pipes

ASTM C1244 Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M198 Joints for Circular Concrete Sewer and Culvert Pipe Using Flexible Watertight Gaskets

Occupational Safety and Health Administration

OSHA 29 CFR 1910.27 Fall Prevention Protection

1.05 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

- A. Manufacturer's literature of the materials of this section.
- B. Test reports as required by the Engineer.

PART 2 - PRODUCTS

2.01 PRECAST CONCRETE SECTIONS:

- A. All precast concrete sections shall conform to ASTM C478 with the following exceptions and additional requirements:
 - 1. The wall thickness of precast sections shall be as designated on the drawings, meeting the following minimum requirements:

<u>Section Diameter (Inches)</u>	<u>Minimum Wall Thickness (Inches)</u>
48	5
60	6
72	7
84	8

- 2. Type II cement shall be used except as otherwise approved.
- 3. Sections shall be steam cured and shall not be shipped until at least five days after having been cast.
- 4. Minimum compressive strength of concrete shall be 4000 psi at 28 days.

5. No more than two lift holes may be cast or drilled in each section.
 6. The date of manufacture and the name or trademark of the manufacturer shall be clearly marked on the inside of each precast section.
 7. Acceptance of the sections will be on the basis of material tests and inspection of the completed product.
 8. Circumferential steel reinforcement in walls and bases shall be a minimum of 0.12 sq. in./lin. ft. for 4-foot diameter sections and 0.15 sq. in./lin. ft. for 5- and 6-foot diameter sections. Reinforcing shall extend into tongue and groove.
- B. Conical reducing sections shall have a wall thickness not less than 5-inches at the bottom and wall thickness of 8-inches at the top. Conical sections shall taper from a minimum of 48-inches diameter to 24 or 30-inches diameter at the top, as shown on the drawings.
 - C. Except where insufficient depth of cover dictates the use of a shorter base, bases shall be a minimum of 4 feet in height.
 - D. Slab top sections and flat riser sections (Grade Rings) shall conform to the contract drawings, with particular attention focused upon the reinforcing steel and be designed to meet or exceed an HS-20 Loading requirement.
 - E. The tops of the bases shall be suitably shaped by means of accurate ring forms to receive the riser sections.
 - F. Precast sections shall be manufactured to contain wall openings of the minimum size to receive the ends of the pipes, such openings being accurately set to conform with line and grade of the sewer or drain. Subsequent cutting or tampering in the field, for the purpose of creating new openings or altering existing openings, will not be permitted except as required by the Engineer.
 - G. "Drop-over" manholes shall be placed where indicated on the drawings. The Contractor shall accurately measure the diameter of the existing outlet pipe and inform the manufacturer of its size, so that the "Drop-over" type opening can be cut into the precast manhole base. The bottom shall be cast in place by the Contractor in accordance with Section 03302, FIELD CONCRETE. The invert channel shall be formed of brick and mortar, as specified in this specifications section. The sub-base shall be a compacted, level foundation of crushed stone, at least 6-inches thick, as specified in Section 02300 EARTHWORK, but shall vary to the depth necessary to reach sound undisturbed earth.
 - H. The exterior surfaces of all precast manhole bases, walls, and cones shall be given a minimum of one shop coat of bituminous dampproofing.
 - I. The Engineer reserves the right to reject any unsatisfactory precast section and the rejected unit shall be tagged and removed from the job site immediately.

- J. The Engineer may also require the testing of concrete sections as outlined under Physical Requirements in ASTM C478 with the Contractor bearing all testing costs.

2.02 BRICK MATERIALS:

- A. Brick shall be sound, hard, and uniformly burned brick, regular and uniform in shape and size, of compact texture, and satisfactory to the Engineer. Bricks shall comply with ASTM C32, for Grade SS, hard brick, except that the mean of five tests for absorption shall not exceed 8 percent by weight.
- B. Rejected brick shall be immediately removed from the work and brick satisfactory to the Engineer substituted.
- C. Mortar shall be composed of Portland cement, hydrated lime, and sand in which the volume of sand shall not exceed three times the sum of the volumes of cement and lime. The proportions of cement and lime shall be as required by the Engineer and may vary from 1:1/4 for dense hard-burned brick to 1:3/4 for softer brick. In general, mortar for Grade SS Brick shall be mixed in the volume proportions of 1:1/2:4-1/2; Portland cement to hydrated lime to sand.
- D. Cement shall be Type II Portland cement as specified for concrete masonry.
- E. Hydrated lime shall be Type S conforming to ASTM C207.
- F. The sand shall comply with ASTM C144 specifications for "Fine Aggregate," except that all of the sand shall pass a No. 8 sieve.

2.03 FRAMES, GRATES, COVERS AND STEPS:

- A. Castings shall be of good quality, strong, tough, even-grained cast iron, smooth, free from scale, lumps, blisters, sandholes, and defects of every nature which would render them unfit for the service for which they are intended. Contact surfaces of covers and frame seats shall be machined to prevent rocking of covers.
- B. All castings shall be thoroughly cleaned and may be subject to a careful hammer inspection at the Engineer's discretion.
- C. Castings shall be ASTM A48 Class 30B or better.
- D. The surface of the manhole covers shall have a diamond pattern with the cast words "DRAIN".
- E. Manhole frames with 26-inch covers for 24-inch openings shall be 475 pounds minimum by EJ No. 2110 (formerly LK110A); Neenah Foundry Co. R1720; Quality Water Products, Style 40; or approved equal.
- F. Catch basin frames and 23-7/8-inch square grates with 2-inch square openings shall be

8-inches in height minimum. They shall be Neenah Foundry Co. No. R3588-A; Quality Water Products No. 45-600; EJ 5548Z 5520M; or approved equal.

- G. Catch basin frames set against curbing shall have three flanges only.

2.04 MANHOLE ACCESSORIES:

- A. Gasket materials shall be top grade (100% solids, vulcanized) butyl rubber and shall meet or exceed AASHTO M-198.
- B. Couplings at the manhole-pipe interface shall be made with a rubber seal system (with or without stainless steel straps) meeting the requirements of ASTM C923 and recommended for this type of connection.
- C. Stubs installed as specified and indicated on the drawings shall be short pieces of the same class pipe as that entering the manhole and shall have either stoppers or end caps as shown on the drawings. Stoppers or end caps shall be especially designed for that application.

PART 3 - EXECUTION

3.01 INSTALLATION:

A. PRECAST CONCRETE SECTIONS:

1. Precast concrete bases shall be supported on a compacted level foundation of crushed stone, as specified in Section 02300 EARTHWORK, at least 6-inches thick, but shall vary to the depth necessary to reach sound undisturbed earth.
2. Precast reinforced concrete sections shall be set vertical and with sections in true alignment.
3. Butyl rubber joint sealant shall be installed between each concrete section. Catch basin sections do not require joint sealant, unless indicated on the drawings.
4. All holes in sections used for handling the sections shall be thoroughly plugged with mortar. Mortar shall be one part cement to 1-1/2 parts sand, mixed slightly damp to the touch (just short of "balling"), hammered into the holes until it is dense and an excess of paste appears on the surface, and then finished smooth and flush with the adjoining surfaces.

B. BRICK WORK:

1. Bricks shall be moistened by suitable means, as required, until they are neither so dry as to absorb water from the mortar nor so wet as to be slippery when laid.
2. Each brick shall be laid as a header in a full bed and joint of mortar without requiring subsequent grouting, flushing or filling, and shall be thoroughly bonded as directed.

C. CASTINGS:

1. Cast iron frames, grates and covers shall be as specified. The frames and covers shall be set by the Contractor to conform accurately to the grade of the finished pavement, existing ground surface, or as indicated on the drawings. Frames shall be adjusted to meet the street surface.
2. Cast iron manhole frames and covers not located in paved areas shall be set 6-inches above finished grade, at a height as required by the Engineer, or as indicated on the drawings. The top of the cone shall be built up with a minimum of 1 course and a maximum of 5 courses of brick and mortar used as headers for adjustment to final grade.
3. Frames shall be set concentric with the top of the concrete section and in a full bed of mortar so that the space between the top of the concrete section or brick headers and the bottom flange of the frame shall be completely filled and made watertight. A thick ring of mortar extending to the outer edge of the concrete shall be placed all around the bottom flange. The mortar shall be smoothly finished to be flush with the top of the flange and have a slight slope to shed water away from the frame.
4. Covers and/or grates shall be left in place in the frames, for safety reasons, except while work is being performed.

D. ACCESSORIES:

1. Accessories shall be installed in accordance with manufacturer's instructions.
2. Stubs shall be set accurately to the dimensions indicated on the drawings. Stubs shall be sealed with suitable watertight plugs.

3.02 CLEANING:

All new manholes shall be thoroughly cleaned of all silt, debris and foreign matter of any kind, prior to final inspection.

END OF SECTION

SECTION 02635

STORMWATER TREATMENT SYSTEM

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. The Contractor shall furnish all labor, materials, equipment and incidentals required and install all precast concrete storm-water treatment systems and appurtenances in accordance with the Drawings and these specifications.

1.02 RELATED WORK:

- A. Section 02300, EARTHWORK
- B. Section 02745, PAVING
- C. Section 03302, FIELD CONCRETE

1.03 QUALITY CONTROL INSPECTION:

- A. The quality of materials, the process of manufacture, and the finished sections shall be subject to inspection by the Engineer. Such inspection may be made at the place of manufacture, or on the work site after delivery, or at both places, and the sections shall be subject to rejection at any time if material conditions fail to meet any of the specification requirements, even though sample sections may have been accepted as satisfactory at the place of manufacture. Sections rejected after delivery to the site shall be marked for identification and shall be removed from the site at once. All sections which have been damaged beyond repair during delivery will be rejected and, if already installed, shall be repaired to the Engineer's acceptance level, if permitted, or removed and replaced, entirely at the Contractor's expense.
- B. All sections shall be inspected for general appearance, dimensions, soundness, etc. The surface shall be dense, close textured and free of blisters, cracks, roughness and exposure of reinforcement.
- C. Imperfections may be repaired, subject to the acceptance of the Engineer, after demonstration by the manufacturer that strong and permanent repairs result. Repairs shall be carefully inspected before final acceptance. Cement mortar used for repairs shall have a minimum compressive strength of 4,000 psi when tested in accordance with ASTM C-109. Epoxy mortar may be utilized for repairs.

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330
SUBMITTALS, SUBMIT THE FOLLOWING:

A. Shop Drawings

Structural design calculations and shop drawings, which shall be certified by a Professional Engineer retained by the system manufacturer or Contractor and licensed in the state where the system is to be installed.

B. Affidavit on Patent Infringement

The Contractor shall submit to the Engineer, prior to installation of the stormwater treatment system, an affidavit regarding patent infringement rights stating that any suit or claim against the Owner due to alleged infringement rights shall be defended by the Contractor who will bear all the costs, expenses and attorney's fees incurred thereof.

C. Performance Documentation

The following documentation must be submitted by the Contractor and approved by the Engineer prior to the manufacture and delivery of any materials.

1. Laboratory Data

The stormwater treatment system supplier shall provide documentation of Total Suspended Solids (TSS) removal efficiency from laboratory testing conducted on the supplier's full-scale system. The documentation shall include:

- a. TSS removal efficiency versus operating rate for the full operating range of the stormwater treatment system for a uniform 50-micron particle size.
- b. TSS removal calculations for each system specified herein. The calculations must demonstrate that the system(s) is capable of achieving a net annual TSS removal efficiency as required by local regulations and as based upon a uniform 50-micron particle size and the best available rainfall data for the project site location.

2. Field Test Data

The stormwater treatment system supplier shall provide documentation of TSS removal efficiency from field testing conducted on an installed system. The documentation shall be in accordance with the following:

- a. The testing and documentation shall have been conducted by an independent third party.
- b. The testing and documentation shall include at least 10 storms.
- c. The testing and documentation must show TSS removal results that meet or exceed the performance requirements for the system(s) specified herein.

3. Manufacturing Experience

The stormwater treatment supplier shall provide evidence of at least 5 years of successful product design and use. The supplier shall provide an installation list of projects, model sizes installed and installation dates where the same type systems as specified herein have been designed and produced by the supplier.

D. Operation and Maintenance Manuals

Furnish four copies of the operation and maintenance manuals for the stormwater treatment systems.

PART 2 - PRODUCTS

2.01 MATERIALS AND DESIGN:

- A. Concrete for precast storm-water treatment systems shall conform to ASTM C857 and C858 and meet the following additional requirements:
1. The wall thickness shall not be less than 6-inches (152 mm) or as shown on the dimensional drawings. In all cases the top slab and wall thickness shall be no less than the minimum thickness necessary to sustain HS20-44 loading requirements as determined by a Licensed Professional Engineer.
 2. Sections shall have tongue and groove or ship-lap joints with a butyl mastic sealant conforming to ASTM C990.
 3. Cement shall be Type II Portland cement conforming to ASTM C150.
 4. All sections shall be cured by an approved method. Sections shall not be shipped until the concrete has attained a compressive strength of 4,000 psi (28 MPa) or until 5 days after fabrication and/or repair, whichever is the longer.
 5. Pipe openings shall be sized to accept pipes of the specified size(s) and material(s), and shall be sealed by the Contractor with a rubber seal system meeting the requirements of ASTM C923.
- B. Internal aluminum plate components shall be ¼-inch (6 mm) thick aluminum alloy 5052-H32 in accordance with ASTM B209.
- C. Internal aluminum angle components shall be ¼-inch (6 mm) thick aluminum alloy 6063 in accordance with ASTM B308.
- D. Brick or masonry used to build the manhole frame to grade shall conform to ASTM C32 or ASTM C139 and shall be installed in conformance with all local requirements.
- E. Casting for manhole frames and covers shall be in accordance with ASTM A48, CLASS 30B and AASHTO M105.

- F. A bitumen sealant in conformance with ASTM C990 shall be utilized in affixing the aluminum swirl chamber to the concrete vault.

2.02 PERFORMANCE:

- A. Unless otherwise indicated, all equipment used shall provide the results listed in the schedule below. Proposed equipment shall be submitted in writing to the Engineer, along with sufficient data supported by certified tests that the system can meet the end results shown in the table and this specification section:

Table 2.02

Location	Stormwater treatment system make and model (1)	Design Treatment Capacity (cfs) (2)	Sediment Storage (yd ³) (2)
Schedule A POTW #3	Stormceptor STC	1.58	.33

(1) Systems shall be make and model as noted or approved equal.

(2) The systems shall be capable of providing above flow capacities and sediment storage volumes.

- B. Each stormwater treatment system shall include a circular aluminum “swirl chamber” (or “grit chamber”) with a tangential inlet to induce a swirling flow pattern that will accumulate and store settle-able solids in a manner and a location that will prevent re-suspension of previously captured particulates.
- C. Each stormwater treatment system shall be of a hydraulic design that includes flow controls designed and certified by a professional engineer using accepted principles of fluid mechanics that raise the water surface inside the tank to a pre-determined level in order to prevent the re-entrainment of trapped floating contaminants.
- D. Each stormwater treatment system shall be capable of removing 80% of the net annual Total Suspended Solids (TSS) load based on a uniform 50-micron particle size. Annual TSS removal efficiency models shall be based on documented removal efficiency performance from full scale laboratory tests. Annual TSS removal efficiency models shall only be considered valid if they are corroborated by independent third party field testing. Said field testing shall include influent and effluent composite samples from a minimum of ten storms at one location. Individual stormwater treatment systems shall have the Design Treatment Capacity listed in Table 2.02, and shall not resuspend trapped sediments or reentrain floating contaminants at flow rates up to and including the specified Design Treatment Capacity.
- E. Individual stormwater treatment systems shall have usable sediment storage capacity of not less than the corresponding volume listed in Table 2.02. The systems shall be designed such that the pump-out volume is less than ½ of the total system volume. The systems shall be designed to not allow surcharge of the upstream piping network during dry weather conditions.

- F. A feature shall be incorporated into the design of the stormwater treatment system to prevent the introduction of trapped oil and floatable contaminants to the downstream piping during routine maintenance and to ensure that no oil escapes the system during the ensuing rain event. Direct access shall be provided to the sediment and floatable contaminant storage chambers to facilitate maintenance. There shall be no appurtenances or restrictions within these chambers.
- G. The stormwater treatment system manufacturer shall furnish documentation which supports all product performance claims and features, storage capacities and maintenance requirements.
- H. Stormwater treatment systems shall be completely housed within one structure.

2.03 MANUFACTURER:

- A. Each stormwater treatment system shall be of a type that has been installed and used successfully for a minimum of 5 years. The manufacturer of said system shall have been regularly engaged in the engineering design and production of systems for the physical treatment of stormwater runoff during the aforementioned period.
- B. Each stormwater treatment system shall be a Stormceptor system as manufactured by Contech Engineered Solutions, 9100 Centre Pointe Drive, West Chester, OH 45069, or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Each stormwater treatment system shall be constructed according to the sizes shown on the Drawings and as specified herein. Install at elevations and locations shown on the Drawings or as otherwise required by the Engineer.
- B. Place the precast base unit on a granular subbase of minimum thickness of six inches after compaction. The granular subbase shall be checked for level prior to setting and the precast base section shall be checked for level after it is set. If the slope across the base exceeds 0.5% the base section shall be removed and the granular subbase material re-leveled.
- C. The contractor shall exercise care in the storage and handling of the system components prior to and during installation. Any repair or replacement costs associated with events occurring after delivery is accepted and unloading has commenced shall be borne by the contractor.
- D. The system shall be installed in accordance with the manufacturer's recommendations and related sections of the contract documents. The manufacturer shall provide the contractor installation instructions and offer on-site guidance during the important stages of the installation as identified by the manufacturer at no additional expense. A minimum of 72 hours' notice shall be provided to the manufacturer prior to their

performance of the services included under this subsection.

- E. The contractor shall fill all voids associated with lifting provisions provided by the manufacturer. These voids shall be filled with non-shrinking grout providing a finished surface consistent with adjacent surfaces. The contractor shall trim all protruding lifting provisions flush with the adjacent concrete surface in a manner, which leaves no sharp points or edges.
- F. The contractor shall removal all loose material and pooling water from the system prior to the transfer of operational responsibility to the Owner.
- G. Holes made in the concrete sections for handling or other purposes shall be plugged with a nonshrink grout or by using grout in combination with concrete plugs.
- H. Where holes must be cut in the precast sections to accommodate pipes, do all cutting before setting the sections in place to prevent any subsequent jarring which may loosen the mortar joints. The Contractor shall make all pipe connections.

END OF SECTION

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SECTION 02745

PAVING

PART 1 - GENERAL

1.01 WORK INCLUDED:

The Contractor shall furnish all labor, materials and equipment and shall replace the pavements as indicated on the drawings and as herein specified.

Due to the significant variations in asphalt prices this contract includes a price adjustment as described in Section 01270 Measurement and Payment.

1.02 RELATED WORK:

- A. Section 01562, DUST CONTROL
- B. Section 02300, EARTHWORK
- C. Section 02631, PRECAST CONCRETE MANHOLES AND CATCH BASINS

1.03 SYSTEM DESCRIPTION:

- A. GENERAL

The types of pavement systems to be utilized on this project are as follows:

- TYPE 1. TEMPORARY TRENCH PAVEMENT
- TYPE 2. MILLING
- TYPE 3. ROAD RECONSTRUCTION
- TYPE 4. OVERLAY

PAVEMENT SCHEDULE

- B. TYPE 1. TEMPORARY TRENCH PAVEMENT

Areas shall be paved with temporary top course pavement, 2-inches thick, as soon as practicable after installation of individual pipeline segments. Temporary pavement shall be maintained a minimum until road reconstruction is started.

- C. TYPE 2. MILLING

In areas designated to be milled and overlaid, the entire roadway width is to be cold planed to remove 1-1/2-inches of the existing pavement. Cold planing shall be performed

only with the approval of the Engineer.

D. TYPE 3. ROADWAY RECONSTRUCTION

In areas designated to be reconstructed, the existing pavement shall be removed and disposed of. Areas shall be excavated to a depth required to install compacted gravel subbase, binder course pavement, and top course pavement. Areas shall be fine-graded as shown on the drawings prior to installation of the bituminous pavement. No pavement shall be placed until compaction testing of the gravel subbase and as required by the Engineer, as specified in Section 02300, EARTHWORK, has been performed and approved. Final pavement shall not be installed prior to approval of the fine grading.

E. TYPE 4. OVERLAY

Areas designated for overlay shall be overlaid with a permanent curb-to-curb top course pavement, 1-1/2-inches thick. Curb-to-curb pavement shall be performed only with the approval of the Engineer.

1.04 REFERENCES:

The following standards form a part of these specifications and indicate the minimum standards required:

American Society for Testing and Materials (ASTM)

ASTM D1557 Test for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 Pound Rammer and 18-Inch Drop

Massachusetts Department of Transportation (MassDOT)
Standard Specifications for Highways and Bridges

MassDOT 401 Gravel Sub-Base
MassDOT 460 Hot Mix Asphalt Pavement for Local Streets
MassDOT 476 Cement Concrete Pavement
MassDOT 860 Reflectorized Pavement Markings

Federal Specifications

SS-S-1401 Sealants, Joint, Non-Jet-Fuel-Resistant, Hot Applied, for Portland Cement and Asphalt Concrete Pavement

AASHTO Standard Specifications for Materials and Methods of Sampling and Testing

1.05 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

Complete job mix formula shall be submitted to the Engineer at least two weeks before any of the work of this section is to begin.

PART 2 - PRODUCTS

2.01 GRAVEL SUBBASE:

- A. Gravel subbase shall consist of inert material that is hard durable stone and coarse sand, free from loam and clay, surface coatings and deleterious materials.
- B. Gradation requirements for gravel subbase shall be as specified in Section 02300, EARTHWORK for Gravel Borrow.

2.02 HOT MIX ASPHALT PAVEMENT:

- A. Pavements shall consist of hot mix asphalt. Mix design shall be in accordance with MassDOT M3.11.4.
- B. Hot mix asphalt pavement for local streets and parking lots shall be comprised of one of the SUPERPAVE mixture types listed in MassDOT Subsection 460.
- C. The joint sealant shall be a hot poured rubberized emulsified asphalt sealant meeting the requirements of FS SS-S-1401.
- D. The tack coat shall be an asphalt emulsion, RS-1 if required, conforming to MassDOT Section M3.03.0.
- E. Submit proposed job mix formula for each hot mix asphalt mixture type.

2.03 SEAL COAT:

- A. Seal coats shall be within the composition limits for protective seal coat emulsion in accordance with MassDOT M3.03.3.
- B. Silica sand when blended with seal coat emulsion shall be No. 30 silica sand.

2.04 PAVEMENT MARKINGS:

- A. Pavement markings shall conform to the requirements of MassDOT 860.
- B. The mixture of the marking material shall be within the composition limits for reflectorized pavement markings as described in the MassDOT Specifications as follows:
 - 1. Fast drying traffic paint - M7.01.10/11.

2. Fast drying white and yellow water-borne traffic paints - M7.01.23/24.
- C. Application of the glass beads to be used as reflector material on the striping shall conform to Sections 860.62 and M7.01.07 of the MassDOT Specifications.

PART 3 - EXECUTION

3.01 GENERAL:

Paving courses required for the project shall be as shown on the drawings and as specified herein. Pavement thicknesses specified are measured in compacted inches. If a pavement course thickness exceeds 2-1/2 compacted inches, the course shall be installed in multiple lifts with each lift not exceeding 2-1/2 compacted inches in thickness.

3.02 GRAVEL SUBBASE:

- A. The gravel subbase to be placed under pavement shall consist of 12-inches of gravel evenly spread and thoroughly compacted.
- B. The gravel shall be spread in layers not more than 4-inches thick, compacted measure. All layers shall be compacted to not less than 95 percent of the maximum dry density of the material as determined by ASTM D1557 Method C at optimum moisture content.

3.03 TEMPORARY PAVEMENT:

- A. Where specified and required by the Engineer and after placement of the gravel subbase, the Contractor shall place temporary pavement above the trench, between the edges of the existing pavement. It shall consist of hot mix asphalt, 2-inches thick, in accordance with MassDOT 460.
- B. The temporary pavement shall be repaired as necessary to maintain the surface of the pavement until replaced by permanent pavement. When so required by the Engineer, the Contractor shall remove the temporary pavement and install or regrade the subbase for installation of permanent pavement.

3.04 PERMANENT PAVEMENT:

- A. The hot mix asphalt paving mixture, equipment, methods of mixing and placing, and the precautions to be observed as to weather, condition of base, etc., shall be in accordance with MassDOT 460.
- B. BINDER COURSE PAVEMENT:
 1. Immediately prior to installing the base and/or binder course, the trimmed edges shall be made stable and unyielding, free of loose or broken pieces and all edges shall be thoroughly broomed clean. Contact surfaces of trench sides, curbsings,

manholes, catch basins, or other appurtenant structures in the pavement shall be painted thoroughly with a uniform coating of asphalt emulsion (tack coat), just before any mixture is placed against them.

2. The binder course shall be repaired as necessary to maintain the surface of the pavement until placement of the permanent overlay. If required, the Contractor shall place a leveling course before placing the permanent overlay.

C. TOP COURSE PAVEMENT (PERMANENT OVERLAY):

1. Top course or surface treatment shall be placed over the trench or full width as shown on the drawings or as specified.
2. Prior to placement of the top course or surface treatment, the entire surface over which the top course or surface treatment is to be placed shall be broom cleaned and tack coated.
3. Top course or surface treatment pavement placed over trenches may be feathered to meet existing paved surfaces, if approved by the Engineer.
4. Prior to placing full width top course or surface treatment pavements, keyways shall be cut in all intersecting streets.

3.05 COLD PLANING (MILLING)

- A. The Contractor shall remove bituminous concrete pavement by use of an approved "cold planer" equipment to a depth sufficient to apply an overlay of bituminous concrete pavement to depth indicated on the Drawings. Existing pavement shall be removed to a depth of 1-1/2-inches.
- B. The equipment shall be capable of accurately and automatically establishing profile grades along each edge of the machine by referencing from the existing pavement by means of a ski or matching shoe from an independent grade control and shall have an automatic system for controlling cross slope at a given rate.
- C. The machine shall be equipped with an integral loading means to immediately remove material being cut from the surface of the roadway and discharge cuttings into a truck, all in one operation. All planing machinery shall be equipped with dust-control devices to prevent any dust produced in the cutting operation from escaping into the air.
- D. The bituminous surfaces being planed and profiled shall be removed to a depth, width, grade and cross section required by the Engineer. Loose material resulting from the operation shall be the property of the Owner unless otherwise required by the Engineer.
- E. The planed surface shall provide a smooth riding surface free from severe gouges, continuous grooves, ridges, oil film and other imperfections of workmanship and shall have a uniform surface appearance exclusive of broken or cracked underlying pavement.

- F. All existing pavement around castings shall be removed with hand cold planing equipment or by the use of hand tools if necessary. Any castings damaged or disturbed shall be removed and replaced as required by the Engineer, at the Contractor's expense.

3.06 ROADWAY RECONSTRUCTION

A. FINE GRADING

- 1. The reconstructed material shall be shaped and graded to the lines and elevations as required by the Engineer. The entire roadway surface shall be graded as required to provide for a 2-1/2-inch thick binder course and 1-1/2-inch thick top course curb to curb pavement while leaving a 6-inch curb reveal and a crown at the centerline of the road with a 2.5%± slope to the curbs. All intersections with side streets, driveways and sidewalks shall be graded so as to provide a smooth transition to the finished paved surface. All excess material shall be removed and disposed of at the Contractor's expense in accordance with state regulations. If the Owner so directs, the Contractor shall deliver the excess material to a local point, at no additional cost. The surface shall be compacted to a dense consolidated mass by rolling with a roller weighing not less than ten (10) tons. The finished surface shall be tested for smoothness and accuracy of grade and if any portions are found to lack the required grade these areas shall be pulverized and recompact and otherwise manipulated as the Engineer may require until the required smoothness and accuracy are obtained. The finished surface shall be such that it will not vary more than one quarter (1/4) of an inch from a ten (10) foot straight edge applied to the surface, parallel to or at right angles to the center line.

3.07 PAVEMENT PLACEMENT:

- A. Unless otherwise permitted by the Engineer for particular conditions, only machine methods of placing the pavement shall be used in conformance with MassDOT Subsection 460.48. The equipment for spreading and finishing shall be mechanical, self-powered pavers, capable of spreading and finishing the mixture true to line, grade, width and crown. The mixtures shall be placed and compacted only at such times as to permit proper inspection and checking by the Engineer.
- B. After the paving mixtures have been properly spread, initial and intermediate compaction shall be obtained by the use of steel wheel rollers.
- C. Final rolling of the top course or surface treatment pavement shall be performed by a steel wheel roller at a mix temperature and time sufficient to allow for final smoothing of the surface and thorough compaction.
- D. Immediately after placement of top course or surface treatment pavement, all joints between the existing and new top course or surface treatment pavements shall be sealed with hot poured rubberized asphalt joint sealant.

- E. Where there is no backing for the edges of the curb-to-curb pavement, the Contractor shall provide a gravel transition. The gravel transition shall be installed immediately after the pavement is placed, shall be feathered and extend a minimum of 18-inches, and shall be compacted using the same equipment as for pavement compaction. The gravel shall be uniformly graded material with a maximum size of 3/8- to 1/2-inch.
- F. When required by the Engineer, the Contractor shall furnish and install additional paving to provide satisfactory transition for driveways and walkways impacted by a new curb-to-curb pavement installation. The transition installation will be considered incidental to the curb-to-curb pavement installation.

3.08 ADDITIONAL PAVING:

- A. If the Engineer determines that the existing bituminous concrete pavement on local streets is thicker than the permanent pavement specified herein, the Contractor may be required to install hot mix asphalt to obtain the depth of the existing pavement.
- B. If for the installation of full width paving, the Engineer determines that the existing road surface requires additional leveling pavement, then the Contractor shall install additional hot mix asphalt to bring the section to proper line and cross section. Additional paving required to restore the proper line and cross section of binder course installed by the Contractor which has become rough and uneven shall be furnished and installed at the expense of the Contractor.

3.09 RAISING AND ADJUSTING CASTINGS:

- A. In areas of permanent top course paving, existing municipally-owned catch basin and manhole castings and valve boxes shall be raised to the proper grade where required by the Engineer.
- B. Castings owned by private utilities shall be raised by their own forces. The Contractor shall be responsible for coordinating this work.
- C. The method of adjusting these castings shall be as follows: Cut around catch basin or manhole castings a minimum of 8-inches from casting. Excavate and if required rebuild up to 12-inches of masonry below the bottom of the casting. Backfill with suitable material and compact to bottom of casting. Place high, early strength cement or bituminous concrete collar, as directed, to approximately 1½-inches below the raised casting grade. Masonry work shall conform to Section 02631, PRECAST MANHOLES AND CATCH BASINS.
- D. In some areas, raising of castings may not be required. Where required by the Engineer, castings not to be raised shall have at least 12-inches of bituminous concrete pavement chipped and removed around the casting. New bituminous concrete pavement shall be placed and compacted around such castings to approximately 1-1/2-inches below the top of the casting. The overlay course shall then be sloped down to the level of the casting.

- E. The method of raising valve boxes shall be as follows: Cut around valve box a minimum of 8-inches from valve box. Excavate as required and raise the valve box. Pour high early strength cement or bituminous concrete collar, as directed, to approximately 1-1/2-inches below the top of the valve box.
- F. Castings which need to be raised or adjusted to complete permanent curb to curb paving shall be done immediately prior to paving.

3.10 PAVEMENT MARKINGS:

- A. The Contractor shall replace all pavement markings removed or covered-over in carrying out the work, and as required by the Engineer, no sooner than 48 hours after completion of permanent pavement. The markings shall be 4-inches wide, white or yellow, single or double lines as required.
- B. When required by the Engineer, the Contractor shall provide temporary markings at no additional cost to the Owner.

3.11 PAVEMENT REPAIR:

- A. If required in the contract or if permanent pavement becomes rough or uneven, permanent pavement patches and trenches shall be repaired and brought to grade utilizing "infrared" paving methods following completion of the construction.
- B. The Contractor performing the work shall use care to avoid overheating the pavement being repaired.
- C. Pavement repair shall extend a minimum of 6-inches beyond all edges of the pavement patch to assure adequate bonding at the pavement joints.

END OF SECTION

SECTION 02771

CURBING

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This section covers furnishing and installation of hot mix asphalt curb, where required, as shown on the Drawings and herein specified.
- B. This section also covers replacement of curbing removed during construction.

1.02 RELATED WORK:

- A. Required earthwork is specified under Section 02300 EARTHWORK.
- B. Section 02745, PAVING.

1.03 REFERENCES:

The following standards form a part of these specifications, as referenced:

Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

Shop drawings, showing dimensions of typical curb sections.

PART 2 - PRODUCTS

2.03 HOT MIX ASPHALT CURB

Curb shall conform to Subsection M3.11.6 of the latest edition of the MassDOT Standard Specifications for Highways and Bridges.

PART 3 - EXECUTION

3.03 HOT MIX ASPHALT CURB:

- A. Replacement of hot mix asphalt curbs shall be in accordance with Section 500 of the latest edition of the MassDOT Standard Specification for Highways and Bridges and all amendments thereto. The curbing shall have a 6-inch reveal unless otherwise required by the Engineer.

- B. Unless modified herein, installation shall conform to Section 501.64 of the MassDOT Standard Specifications for Highways and Bridges.
- C. When indicated on the plans, or as directed, drainage openings shall be made through the curb at the elevations and of the size required.

END OF SECTION

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SECTION 02820
CHAIN LINK FENCE

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. The Contractor shall provide all labor, materials and appurtenances necessary for the installation of a complete chain link fence systems and shall meet or exceed the standards of the Chain Link Fence Manufacturer's Institute, New York, NY except as otherwise indicated on the Drawings and as herein specified.
- B. The manufacturer shall supply a chain link fence system of the height, fabric type, fabric gauge, framework strength, color and coating specifications contained herein.

1.02 RELATED WORK:

- A. Section 01330, SUBMITTALS
- B. Section 03302, FIELD CONCRETE

1.03 REFERENCES:

- A. The following standards form a part of this specification as referenced.

ASTM International (ASTM)

ASTM	A53	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless
ASTM	A121	Zinc-Coated (Galvanized) Steel Barbed Wire
ASTM	A392	Zinc Coated Steel Chain Link Fence Fabric
ASTM	A123	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM	A153	Zinc Coating (Hot-Dip) on Iron and Steel Hardware
ASTM	F567	Installation of Chain Link Fence
ASTM	F626	Fence Fittings
ASTM	F668	Specification for Poly Vinyl Chloride (PVC) - Coated Steel Chain-Link Fence Fabric.

ASTM F1043 Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework.

Federal Specifications (FS)

FS RR-F-191 Fencing Wire and Post, Metal (and Gates, Chain-Link Fabric, and Accessories)

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

- A. Manufacturer's literature of the materials specified herein.
- B. Shop drawings of the fence and the proposed color.

1.05 WARRANTY:

- A. Prior to installation, the fence contractor shall provide the fence manufacturer's notarized certification that all components are fully warranted by the manufacturer for 15 years against rust and corrosion.

PART 2 - PRODUCTS

2.01 STEEL FRAMEWORK (GENERAL)

- A. All posts, gate frames, braces and horizontal rails shall be Type I round post, hot dipped galvanized with a minimum average coating of 1.8 oz/ft², meeting ASTM F 1083 for Standard Weight Galvanized Pipe and shall be of the sizes and weights given below or other approved equivalent sections of steel having a minimum tensile strength of 50,000 pounds per square inch and a minimum yield strength of 25,000 pounds per square inch.
- B. Minimum cross-section dimensions for line posts of specified shape shall be either 2-3/8-inch (2.375-inch) outside diameter steel pipe weighing not less than 3.65 pounds per linear foot or 2.25 by 1.95 by 9/64-inch steel H section weighing not less than 4.10 pounds per linear foot.
- C. Minimum cross-section dimensions for end, corner, and pull posts of specified shape shall be: 2-7/8-in. (2.875-in.) outside diameter steel pipe weighing not less than 5.79 pounds per linear foot; 2-1/2 by 2-1/2-inch square tubes weighing not less than 5.70 pounds per linear foot; or 3-1/2 by 3-1/2-inch rolled-formed sections weighing not less than 8.14 pounds per linear foot.
- D. All tubular and pipe posts shall be capped to prevent precipitation from entering the post, unless a barbed wire extension arm assembly acts as a cap.

- E. Posts, other fence framework, accessories, fittings, and miscellaneous items shall be galvanized. Framework color coating shall match fabric. Galvanized finish shall have not less than the following weight of zinc per square foot:
 - 1. Pipe: 1.8 oz, complying with ASTM A53.
 - 2. H-sections and square tubing: 2.0 oz, complying with ASTM A123.
 - 3. Hardware and accessories: Comply with Table I of ASTM A153.
- F. For top railings and top, middle and bottom braces between terminal posts and adjacent lines posts, the minimum cross-section dimensions for the specified shall be 1-5/8-inch outside diameter steel pipe weighing not less than 2.26 pounds per linear foot.
- G. Diagonal truss braces between terminal and adjacent line posts and for gauge framework shall not be less than either 3/8-inch diameter steel rod or double No. 9 AWG steel wire stranded together.
- H. Fittings shall be galvanized press steel, malleable or cast steel as specified in ASTM F626 and Federal Specification RR-F-191.
- I. Where posts do not have provisions for weaving fence fabric to posts, tension or stretcher bars for attaching fabric to terminal posts such as end, corner, gauge and pull posts, shall be flat bar with nominal dimensions no less than 3/16 by 3/4-inch for use with fence fabric having mesh larger than 1-inch, of a length equal to full height of the fence fabric, and used with bar bands, bolts and nuts. Bar bands shall be no thinner than No. 11 gauge coated sheet steel. Bolt diameters shall be not less than 3/8-inch for use with bar bands.
- J. Ties for fastening fence fabric to line posts and rails shall be not less than No. 9 AWG steel wire with the same coating as the fence fabric or other approved bands.

2.02 CHAIN LINK FENCE FABRIC:

- A. Fabric shall be galvanized steel core wire and be manufactured in accordance with Federal Specifications RR-F-191 and ASTM F668.
- B. Wire size: The finished wire size shall be 6 gauge.
- C. Height and Mesh Size: The fabric height shall be four feet high with a mesh size of 2-inches.
- D. Selvage: Top edge of the fabric shall be knuckled, and bottom edge of the fabric shall be twisted.
- E. The tension wires shall either be No. 7 gauge steel-core wire. Also, a 7-strand galvanized steel 1/2-inch guy wire may be supplied.

PART 3 - EXECUTION

3.01 ERECTION:

- A. The fence and gates shall be erected by skilled mechanics in accordance with the recommendations of the manufacturer and these specifications. These specifications shall take precedence over the recommendations of the manufacturer if any discrepancy exists between them.
- B. Maximum post spacing shall be eight feet. Post spacing shall be uniform and posts shall be plumb. All posts shall be set into or mounted to the segmental retaining wall.
- C. Terminal posts such as end, corner, gate and pull posts shall be braced to the adjacent post(s) with horizontal rail braces used as compression members and diagonal truss braces with truss tighteners for tension members, with the lower ends at the terminal post in each panel of fence framework as indicated in detail on drawings.
- D. The top railing shall pass through intermediate or line post tops, form a continuous brace with all splices made by approved couplings, and shall be fastened to terminal posts.
- E. Fabric shall be stretched taut, with the bottom edge following the finished grade, and shall be a continuous mesh between terminal posts. Each span of fabric shall be attached independently at terminal posts. Where terminal posts do not have provisions for weaving fabric to posts, stretcher bars shall be placed through the end weave of the fabric and secured to the post with bar bands spaced not more than 15-inches apart on the post.
- F. Fabric shall be attached with ties to line posts at intervals of not more than 14-inches (and to the top railing and braces at intervals not exceeding 24-inches).
- G. The bottom tension wire shall be interlaced in the weave of the fabric, pulled taut and fastened to terminal posts.

END OF SECTION

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SECTION 02831

SEGMENTAL RETAINING WALL SYSTEM

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. Work shall consist of designing, furnishing all materials, labor, equipment, and installation of the segmental retaining wall system in accordance with these specifications and to the lines, grades, and dimensions shown on the plans.

1.02 RELATED WORK:

- A. Section 01330, SUBMITTALS
- B. Section 02300, EARTHWORK

1.03 REFERENCE STANDARDS:

- A. The Massachusetts Department of Transportation Standard Specifications for Highways and Bridges Construction.
- B. Segmental Retaining Wall Units
 - 1. ASTM C 1372 - Standard Specification for Segmental Retaining Wall Units
 - 2. ASTM C 140 - Standard Test Methods of Sampling and Testing Concrete Masonry Units
- C. Geosynthetic Reinforcement
 - 1. ASTM D 4595 - Tensile Properties of Geotextiles by the Wide-Width Strip Method
 - 2. ASTM D 5262 - Test Method for Evaluating the Unconfined Creep Behavior of Geosynthetics
 - 3. GRI:GG1 - Single Rib Geogrid Tensile Strength
 - 4. GRI:GG5 - Geogrid Pullout
- D. Soils
 - 1. ASTM D 698 - Moisture Density Relationship for Soils, Standard Method
 - 2. ASTM D 422 - Gradation of Soils
 - 3. ASTM D 424 - Atterberg Limits of Soil

- E. Drainage Pipe
 - 1. ASTM D 3034 - Specification for Polyvinyl Chloride (PVC) Plastic Pipe
 - 2. ASTM D 1248 - Specification for Corrugated Plastic Pipe
- F. Engineering Design
 - 1. “NCMA Design Manual for Segmental Retaining Walls”, Latest Edition
- G. Where specifications and reference documents conflict, the Engineer shall make the final determination of applicable document.

1.04 DESIGN CRITERIA:

- A. The following soil parameters shall be assumed for the final design unless otherwise shown on the plans or specified by the Engineer:

	Unit Weight (pcf)	Internal Friction Angle, degrees	Cohesion
Reinforced Fill	120	30	0
Retained Soil	120	30	0
Foundation Soil	120	30	0

- B. Precast sections shall be designed to withstand earth loads due to soil plus live loads due to vehicular traffic (HS-20 loading). Design and construction of each section shall meet the requirements of ACI 318 and the AASHTO Load Factor.
- C. Should the actual soil conditions observed during construction differ from those assumed for the design, design shall be reviewed by the manufacturer’s Wall Design Engineer at the Engineer's direction.
- D. The design for the final retaining wall plans shall be prepared and sealed by the manufacturer’s Wall Design Engineer, who shall be a professional Civil Engineer licensed in the Commonwealth of Massachusetts. The design analysis shall consider the external stability against sliding and overturning, internal stability, facial stability of the reinforced soil mass, and external global stability and shall be in accordance with acceptable engineering practice and these specifications. The internal and external stability analysis shall be performed in accordance with the “NCMA Design Manual for Segmental Retaining Walls”, using the recommended minimum factors of safety in this manual.

- E. The design of the geosynthetic reinforcement shall take into consideration the effects from obstructions.
- F. Minimum embedment: the minimum wall embedment shall be the greater of 0.5 feet or the following:

Level Slope in Front	H'/20
3H:1V Slope in Front	H'/10
2H:1V Slope in Front	H'/10

where H' is the exposed height of the wall.

- G. While vertical spacing between geosynthetic reinforcement layers may vary, it shall not exceed 2.0 feet maximum in the wall design.
- H. The geosynthetic reinforcement placement in the wall design shall have 100 percent continuous coverage parallel to the wall face. Gapping between horizontally adjacent layers of geosynthetic (partial coverage) will not be allowed.

1.05 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

- A. Material Submittals: Manufacturers' literature and certifications two weeks prior to start of work stating that the SRW units and geosynthetic reinforcement meet the requirements of Section 2 of this specification.
- B. Design Submittal: Detailed design calculations and final retaining wall plans at least two weeks prior to the beginning of wall construction. All calculations and drawings shall be prepared and sealed by the manufacturer's Wall Design Engineer, who shall be a professional Civil Engineer licensed in the Commonwealth of Massachusetts.

1.06 DELIVERY AND STORAGE:

- A. Contractor shall check materials upon delivery to assure that specified type and grade of materials have been received and proper color and texture of SRW units have been received.
- B. Contractor shall store and handle materials in accordance with manufacturer's recommendations and in a manner to prevent deterioration or damage due to moisture, temperature changes, contaminants, corrosion, breaking, chipping or other causes.

- C. Contractor shall protect materials from damage. Damaged materials shall not be incorporated into the retaining wall.

PART 2 - PRODUCTS

2.01 CONCRETE SEGMENTAL RETAINING WALL (SRW) UNITS:

- A. SRW units shall be Redi-Rock Wall System as manufactured by Redi-Rock International, Shea Wall System units as manufactured by E.F. Shea/New England Concrete Products, Inc., VERSA-LOK Brute Retaining Wall Units, or an approved equal..
- B. SRW units shall provide a minimum weight of 110 psf of wall face area.
- C. If connectors are used by the SRW supplier to interconnect the SRW units, they shall meet the requirements of the manufacturer.
- D. SRW units shall be sound and free of cracks or other defects that would interfere with the proper placing of the unit or significantly impair the strength or permanence of the structure. Cracking or excessive chipping may be grounds for rejection. Units showing cracks longer than 1/2-inch shall not be used within the wall. Units showing chips visible at a distance of 30 feet from the wall shall not be used within the wall.
- E. Concrete used to manufacture SRW units shall have a minimum 28 days compressive strength of 4,000 psi and a maximum moisture absorption rate, by weight, of 8% as determined in accordance with ASTM C1372. Compressive strength test specimens shall conform to the saw-cut coupon provisions of ASTM C140.
- F. SRW units' molded dimensions shall not differ more than + 1/8-inch from that specified, in accordance with ASTM C1372.

2.02 GEOSYNTHETIC REINFORCEMENT:

- A. Geosynthetic reinforcement shall consist of geogrids or geotextiles manufactured as a soil reinforcement element. The type, strength, and placement location of the reinforcing geosynthetic shall be determined by the Engineer providing the wall design and as shown on the approved segmental retaining wall plans.
- B. Detailed test data shall be submitted to the Engineer for approval and shall include the following:
 - 1. Tensile strength in accordance with ASTM D 4595 or GRI GG-1.

2. Creep in accordance with ASTM D 5262.
3. Site damage and durability in accordance with GRI GG-4.
4. Pullout in accordance with GRI GG-5 or GRI GT-6
5. Connection test data in accordance with NCMA SRWU-1.

2.03 LEVELING PAD:

- A. Material for the leveling pad shall consist of crushed stone meeting the requirements of Section M2.01.3 or M2.01.4 of the Massachusetts Department of Transportation Standard Specifications for Highways and Bridges Construction and shall be a minimum of 6-inches in depth unless otherwise shown on the Contract Drawings. The leveling pad must extend a minimum of 6-inches from both the front and back faces of the block unless otherwise shown on the Contract Drawings. Lean concrete with a strength of 200-300 psi and three inches thick maximum may also be used as a leveling pad material with approval by the Engineer.

2.04 DRAINAGE AGGREGATE:

- A. Drainage aggregate shall be crushed stone meeting the requirements of Section M2.01.4 of the Massachusetts Department of Transportation Standard Specifications for Highways and Bridges Construction.

2.05 DRAINAGE PIPE:

- A. The drainage collection pipe shall be perforated corrugated HDPE pipe. The drainage pipe may be wrapped with a geotextile to function as a filter.
- B. Drainage pipe shall be manufactured in accordance with ASTM D 3034 and/or ASTM D 1248.

2.06 REINFORCED BACKFILL:

- A. The reinforced backfill shall be free of debris. Unless otherwise noted on the approved segmental retaining wall plans prepared by the manufacturer's Wall Design Engineer, the reinforced material shall consist of Type B Gravel Borrow in accordance with Section M1.03.0 of the Massachusetts Department of Transportation Standard Specifications for Highways and Bridges Construction.

2.07 GEOTEXTILE FABRIC:

- A. Geotextile fabric shall meet the requirements of Type II in accordance with Section M9.50.0 of the Massachusetts Department of Transportation Standard Specifications for Highways and Bridges Construction.

PART 3 - EXECUTION

3.01 INSPECTION:

- A. Contractor's field construction supervisor shall have demonstrated experience and be qualified to direct all work at the site.

3.02 EXCAVATION:

- A. Contractor shall excavate to the lines and grades shown on the plans. Contractor shall take precautions to minimize over-excavation. Over-excavation shall be filled with compacted backfill material as required by the Engineer, at the Contractor's expense.
- B. Contractor shall verify location of existing structures and utilities prior to excavation. Contractor shall ensure all surrounding structures are protected from the effects of wall excavation. Excavation support, if required, is the responsibility of the Contractor.

3.03 FOUNDATION PREPARATION:

- A. Following the excavation, the foundation soil shall be examined by the Engineer to assure actual foundation soil strength meets or exceeds the assumed design bearing strength. Soils not meeting the required strength shall be removed and replaced with material, as required by the Engineer.
- B. Foundation soil shall be proof rolled and compacted to 95% standard Proctor density and inspected by the Engineer prior to placement of leveling pad materials.

3.04 LEVELING PAD CONSTRUCTION:

- A. Leveling pad shall be placed as shown on the final, approved P.E. sealed retaining wall drawings. The leveling pad shall have a minimum thickness of 6-inches. The leveling pad should extend laterally at least a distance of 6-inches from the toe and heel of the lower most SRW unit unless shown otherwise on the Contract Drawings.

3.05 SRW UNIT INSTALLATION:

- A. All SRW units shall be installed at the proper elevation and orientation as shown on the final, approved P.E. sealed wall drawings or as required by the manufacturer's Wall Design Engineer. The SRW units and geosynthetic reinforcement shall be installed in accordance with the manufacturer's recommendations.
- B. First course of SRW units shall be placed on the leveling pad with the aesthetic surface facing out. The units shall be leveled side-to-side, front-to-rear and with adjacent units, and aligned to ensure intimate contact with the leveling pad.
- C. Prior to placement of next course, the level and alignment of the units shall be checked and corrected, where needed.
- D. Layout of curves and corners shall be installed in accordance with the wall plan details or in general accordance with SRW manufacturer's installation guidelines. Walls meeting at corners shall be interlocked by overlapping successive courses.
- E. Broken, chipped, stained or otherwise damaged units shall not be placed in the wall unless they are repaired and the repair method and results are approved by the Engineer.

3.06 GEOSYNTHETIC REINFORCEMENT PLACEMENT:

- A. All geosynthetic reinforcement shall be installed at the proper elevation and orientation as shown on the final, approved P.E. sealed retaining wall drawings, or as required by the manufacturer's Wall Design Engineer.
- B. At the elevations shown on the final plans, (after the units, drainage material, and backfill have been placed to this elevation) the geosynthetic reinforcement shall be laid horizontally on compacted infill.
- C. Geosynthetic reinforcement layers shall be one continuous piece for their entire embedment length. Overlapping of the geosynthetic in the design strength direction (perpendicular to the wall face) shall not be permitted. Along the length of the wall, horizontally adjacent sections of geosynthetic reinforcement shall be butted in a manner to assure 100 percent coverage parallel to the wall face.
- D. Tracked construction equipment shall not be operated directly on the geosynthetic reinforcement. A minimum of 6-inches of backfill is required prior to operation of tracked vehicles over the geosynthetic. Turning should be kept to a minimum.

Rubber-tired equipment may pass over the geosynthetic reinforcement at slow speeds (less than 5 mph).

- E. The geosynthetic reinforcement should be installed under tension. The nominal tension shall be applied to the reinforcement and secured in place with staples, stakes or by hand tensioning until reinforcement is covered by six inches of fill.

3.07 DRAINAGE MATERIALS:

- A. Drainage aggregate shall be installed to the line, grades, and sections shown on the final P.E. sealed retaining wall drawings. Drainage aggregate shall be placed to the minimum thickness shown on the Contract Drawings between and behind units.
- B. Drainage collection pipes shall be installed to maintain gravity flow of water outside the reinforced soil zone. The drainage collection pipe shall daylight at an elevation lower than the lowest point of the pipe within the aggregate drain.
- C. The main collection drain pipe, just behind the block facing, shall be a minimum of 3-inches in diameter. The secondary collection drain pipes should be sloped a minimum of 2% to provide gravity flow into the main collection drain pipe. Drainage laterals shall be spaced at a maximum 50 feet spacing along the wall.

3.08 BACKFILL PLACEMENT:

- A. The reinforced backfill shall be placed as shown in the final, approved wall drawings in the maximum compacted lift thickness of 10-inches and shall be compacted to a minimum of 95% of standard Proctor density (ASTM D 698) at a moisture content within 2% of optimum. The backfill shall be placed and spread in such a manner as to eliminate wrinkles or movement of the geosynthetic reinforcement and the SRW units.
- B. Only hand-operated compaction equipment shall be allowed within 3 feet of the back of the wall units. Compaction within the 3 feet behind the wall units shall be achieved by at least three (3) passes of a lightweight mechanical tamper, plate, or roller.
- C. At the end of each day's operation, the Contractor shall slope the last level of backfill away from the wall facing and reinforced backfill to direct water runoff away from the wall face.
- D. At completion of wall construction, backfill shall be placed level with final top of wall elevation. If final grading, paving, landscaping, and/or storm drainage

installation adjacent to the wall is not placed immediately after wall completion, temporary grading and drainage shall be provided to ensure water runoff is not directed at the wall nor allowed to collect or pond behind the wall until final construction adjacent to the wall is completed.

3.09 CONSTRUCTION ADJACENT TO COMPLETED WALL:

- A. The Contractor is responsible for ensuring that construction adjacent to the wall does not disturb the wall or place temporary construction loads on the wall that exceed design loads, including loads such as water pressure, temporary grades, or equipment loading. Care should be taken by the Contractor to ensure water runoff is directed away from the wall structure until final grading and surface drainage collection systems are completed.

END OF SECTION

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12/10/2023 9:37:44 AM

SECTION 02844

STEEL HIGHWAY GUARD RAILS

PART 1 - GENERAL

1.01 WORK INCLUDED:

This Section covers the work of the construction of guard rail in accordance with these specifications and in close conformity with the lines and grades shown on the drawings or established by the Engineer.

The construction of the guard rail shall include the assembly and erection of all components parts and materials complete at the locations shown on the drawings or as required by the Engineer.

1.02 RELATED WORK:

Section 02300, EARTHWORK

1.03 REFERENCES:

- A. The latest editions of the following standards form a part of this specification, as referenced:

ASTM International (ASTM)

ASTM A307 Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60,000 PSI Tensile Strength

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO-M111 Standard Specifications for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products

AASHTO-M180 Standard Specifications for Corrugated Sheet Steel Beams for Highway Guardrail

AASHTO-M183 Standard Specifications for Structural Steel

AASHTO-M232 Standard Specifications for Zinc Coating (Hot-Dip) on Iron and Steel Hardware

Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges

MassDOT Construction Standard Details

Standard 400.1.0 – 400.5.1 Highway Guard Rail

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330
SUBMITTALS, SUBMIT THE FOLLOWING:

Manufacturer's literature and shop drawings of the materials of this section.

PART 2 - PRODUCTS

2.01 GENERAL REQUIREMENTS:

Steel highway guard rails shall conform in size, dimensions, materials and other respects to the details indicated on the drawings or as required by the Engineer.

2.02 STEEL GUARD RAILS:

- A. All metal work shall be fabricated in the shop. No punching, cutting or welding shall be done in the field. Fabrication shall include all operations such as shearing, cutting, punching, forming, drilling, milling, bending, welding and riveting. Components of bolted assemblies shall be galvanized separately before assembly.
- B. The materials for this work shall conform to the following requirements:
1. Steel posts and channel members for anchor posts shall be fabricated from new structural steel sections conforming to the dimensions and design shown on the drawings. All posts, including end anchor post, and anchor posts for use at drives, shall be steel "H" sections. Structural steel shall conform to the requirements of AASHTO-M183, except that copper bearing steel will not be required. Galvanizing shall meet the requirements of AASHTO-M111.
 2. The steel rail element and terminal sections shall conform to AASHTO-M180, Class A, (base metal thickness - 0.105), Type 2. Each end of the steel rail for every stretch of guard shall be fitted with a terminal section as shown on the plans. The terminal section shall have the same splice detail as the rail.
 3. All bolts, nuts and washers used in assembling and erecting the rails shall conform to the requirements of ASTM-A307 and shall be of the size shown on the plans. Galvanizing shall be by the hot-dip process to conform to the requirements of AASHTO-M232. The projecting heads of all bolts shall be rounded and shallow so that no projection will obstruct a vehicle sliding along the rail.

PART 3 - EXECUTION

3.01 GENERAL:

All works shall be in close conformity with the lines and grades shown on the drawings or as required by the Engineer.

3.02 STEEL POSTS:

- A. Posts shall be set plumb, in hand or mechanically dug holes (or driven), then backfilled with acceptable material placed in layers and thoroughly compacted. If driven, the posts shall be provided with suitable driving caps and equipment which will prevent battering and damaging of the posts. Guard posts to be set in areas of proposed bituminous concrete surfacing shall be installed prior to laying the surrounding finished surface unless otherwise permitted by the Engineer.
- B. The rail shall be erected so as to form a smooth continuous rail conforming to the required line and grade. The rail element shall be spliced by lapping in the direction of the traffic or by other approved methods. The holes in the rail element near the post shall be slotted to facilitate erection and to permit expansion. The rails shall make full contact at each splice.
- C. All bolts, except where otherwise required at expansion joints, shall be drawn tight. Bolts through expansion joints shall be drawn up to a snug fit but shall still permit the rail elements to slide past one another longitudinally.
- D. End Section treatments shall be as shown on the contract drawings.

END OF SECTION

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SECTION 02920

LOAMING AND SEEDING

PART 1 - GENERAL

1.01 WORK INCLUDED:

This section covers all labor, materials, and equipment necessary to do all loaming, seeding and related work as indicated on the drawings and as herein specified. All lawns disturbed by the Contractor's operations shall be repaired as herein specified.

1.02 QUALITY ASSURANCE:

- A. For a particular source of loam, the Engineer may require the Contractor to send approximately 10 pounds of loam to an approved testing laboratory and have the following tests conducted:

1. Organic concentration
2. pH
3. Nitrogen concentration
4. Phosphorous concentration
5. Potash concentration

- B. These tests shall be at the Contractor's expense. Test results, with soil conditioning and fertilizing recommendations, shall be forwarded to the Engineer.

1.03 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

- A. Information detailing the seed mixes, fertilizers, mulch material, slope protection material (if required) and origin of loam.
- B. Test results.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. LOAM:

1. Loam shall be a natural, fertile, friable soil, typical of productive soils in the vicinity, obtained from naturally well-drained areas, neither excessively acid nor alkaline, and containing no substances harmful to grass growth. Loam shall not be delivered to the site in frozen or muddy condition and shall be reasonably free of

stumps, roots, heavy or stiff clay, stones larger than 1-inch in diameter, lumps, coarse sand, noxious weeds, sticks, brush or other litter.

2. The loam shall contain not less than 4 percent nor more than 20 percent organic matter as determined by the loss of weight by ignition of oven-dried samples. Test samples shall be oven-dried to a constant weight at a temperature of 230 degrees F.

B. LIME:

Lime shall be standard commercial ground limestone containing at least 50 percent total oxides (calcium oxide and magnesium oxide), and 50 percent of the material must pass through a No. 100 mesh sieve with 98 percent passing a No. 2 mesh sieve.

C. FERTILIZER:

Fertilizer shall be commercial fertilizer, 10-10-10 fertilizer mixture containing at least 40 percent of organic nitrogen. It shall be delivered to the site in the original sealed containers, each showing the manufacturer's guaranteed analysis. Fertilizer shall be stored so that when used it will be dry and free flowing. No fertilizer shall be used which has not been marketed in accordance with State and Federal Laws, relating to fertilizers.

D. MULCH:

1. Materials to be used in mulching shall conform to the following requirements:
2. Straw Mulch - Straw Mulch shall consist of stalks or stems of grain after threshing.
3. Wood Fibre Mulch - Wood Fibre Mulch shall consist of wood fibre produced from clean, whole uncooked wood, formed into resilient bundles having a high degree of internal friction and shall be dry when delivered to the project.

E. SEED:

1. Seed shall be of an approved mixture, the previous year's crop, clean, high in germinating value, a perennial variety, and low in weed seed. Seed shall be

obtained from a reliable seed company and shall be accompanied by certificates relative to mixture purity and germinating value.

2. Grass seed for lawn areas shall conform to the following requirements:

	Proportion by Weight	Germination Purity	Purity Minimum
Chewing's Fescue	30%	70%	97%
Kentucky 31 Fescue	30%	90%	98%
Kentucky Blue Grass	20%	80%	85%
Domestic Rye Grass	20%	90%	98%

Grass seed for cross-country areas, slopes and other areas not normally mowed shall conform to the following requirements:

	Proportion by Weight	Germination Minimum	Purity Minimum
Creeping Red Fescue	50%	85%	95%
Kentucky 31	30%	85%	95%
Domestic Rye	10%	90%	98%
Red Top	5%	85%	92%
Ladino Clover	5%	85%	96%

F. TEMPORARY COVER CROP:

1. Temporary cover crop shall conform to the following requirements:

	% Weight	Germination Minimum
Winter Rye	80 min.	85%
Red Fescue (creeping)	4 min.	80%
Perennial Rye Grass	3 min.	90%
Red Clover	3 min.	90%
Other Crop Grass	0.5 max.	
Noxious Weed Seed	0.5 max.	
Inert Matter	1.0 max.	

G. SLOPE EROSION PROTECTION:

1. Erosion control blanket shall be 100% degradable plastic mesh with 100% degradable straw or straw/coconut fill. Fill shall be held together by degradable fastening. Weight shall be 0.50 lb/sq. yd. Erosion control blankets shall be applied parallel to direction of water flow. The erosion control blankets shall be by North

American Green, Evansville, IN or approved equal. For slopes 2:1 or greater, Model SC150 shall be used. For slopes less than 2:1, Model S150 shall be used.

2. Six-inch wire staples shall be placed according to manufacturers recommendations to anchor the mesh material. Staples shall be designed to decompose.

PART 3 - EXECUTION

3.01 SURFACE PREPARATION:

- A. After approval of rough grading, loam shall be placed on areas affected by the Contractor's operations. Loam shall be at least 6-inches compacted thickness.
- B. Lime shall be applied to bring the pH to 6.5 or, without a soil test, at the rate of 2-3 tons of lime per acre.
- C. Fertilizer shall be applied according to the soil test, or without a soil test, at the rate of 1000 pounds per acre.
- D. Loam shall be worked a minimum of 3-inches deep, thoroughly incorporating the lime and fertilizer into the soil. The loam shall then be raked until the surface is finely pulverized and smooth and compacted with rollers, weighing not over 100 pounds per linear foot of tread, to an even surface conforming to the prescribed lines and grades. Minimum depth shall be 6-inches after completion.

3.02 SEEDING:

- A. Seeding shall be done when weather conditions are approved as suitable, in the periods between April 1 and May 30 or August 15 to October 1, unless otherwise approved.
- B. If there is a delay in seeding, during which weeds grow or soil is washed out, the Contractor shall remove the weeds or replace the soil before sowing the seed, without

additional compensation. Immediately before seeding is begun, the soil shall be lightly raked.

- C. Seed shall be sown at the approved rate, on a calm day by machine.
- D. One half the seed shall be sown in one direction and the other half at right angles. Seed shall be raked lightly into the soil to a depth of 1/4-inch and rolled with a roller weighing not more than 100 pounds per linear foot of tread.
- E. The surface shall be kept moist by a fine spray until the grass shows uniform germination over the entire area. Wherever poor germination occurs in areas larger than 3 sq. ft., the Contractor shall reseed, roll, and water as necessary to obtain proper germination.
- F. The Contractor shall water, weed, cut and otherwise maintain and protect seeded areas as necessary to produce a dense, healthy growth of perennial lawn grass.
- G. If there is insufficient time in the planting season to complete the fertilizing and seeding, permanent seeding may be left until the following planting season, at the option of the Contractor or as required by the Engineer. In that event, a temporary cover crop shall be sown. This cover crop shall be cut and watered as necessary until the beginning of the following planting season, at which time it shall be plowed or harrowed into the soil, the area shall be fertilized and the permanent seed crop shall be sown as specified.

3.03 PLACING MULCH:

- A. Straw Mulch shall be loosely spread to a uniform depth over all areas designated on the plans, at the rate of 4-1/2 tons per acre, or as otherwise required.
- B. Straw Mulch may be applied by mechanical apparatus, if in the judgment of the Engineer the apparatus spreads the mulch uniformly and forms a suitable mat to control slope erosion. The apparatus shall be capable of spreading at least 80 percent of the hay or straw in lengths of 6-inches or more, otherwise it shall be spread by hand without additional compensation.
- C. Wood Fibre Mulch shall be uniformly spread over certain selected seeded areas at the minimum rate of 1,400 pounds per acre unless otherwise required. It shall be placed by spraying from an approved spraying machine having pressure sufficient to cover the entire area in one operation.

3.04 SEEDING AND MULCHING BY SPRAY MACHINE:

- A. The application of lime, fertilizer, grass seed and mulch may be accomplished in one operation by the use of an approved spraying machine. The materials shall be mixed with water in the machine and kept in an agitated state in order that the materials may be uniformly suspended in the water. The spraying equipment shall be so designed that

when the solution is sprayed over an area, the resulting deposits of lime, fertilizer, grass seed and mulch shall be equal to the specified quantities.

- B. A certified statement shall be furnished, prior to start of work, to the Engineer by the Contractor as to the number of pounds of limestone, fertilizer, grass seed and mulch per 100 gallons of water.
- C. This statement should also specify the number of square yards of seeding that can be covered with the solution specified above. If the results of the spray operation are unsatisfactory, the Contractor will be required to abandon this method and to apply the lime, fertilizer, grass seed and mulch by other methods.

3.05 INSPECTION AND ACCEPTANCE:

At the beginning of the planting season following that in which the permanent grass crop is sown, the seeded areas will be inspected. Any section not showing dense, vigorous growth at that time shall be promptly reseeded by the Contractor at its own expense. The seeded areas shall be watered, weeded, cut and otherwise maintained by the Contractor until the end of that planting season, when they will be accepted if the sections show dense, vigorous growth.

END OF SECTION

SECTION 03302
FIELD CONCRETE

PART 1 - GENERAL

1.01 WORK INCLUDED:

- A. This Section covers concrete and all related items necessary to place and finish the concrete work.
- B. Concrete thrust, and anchor blocks, to be provided at all water main bends, tees, plugs and wyes and at other locations required by the Engineer shall be installed in accordance with the details shown on the drawings and as specified in this section.
- C. Concrete encasement for piping with shallow cover and for encasement of telephone, and electrical duct bank when specified shall be installed in accordance with the details shown on the drawings and as specified in this section.

1.02 RELATED WORK:

- A. Section 02300, EARTHWORK

1.03 REFERENCES:

- A. The following standards form a part of this specification:

American Concrete Institute (ACI)

- ACI 304 Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete.
- ACI 305 Recommended Practice for Hot Weather Concreting
- ACI 306 Recommended Practice for Cold Weather Concreting
- ACI SP-66 ACI Detailing Manual
- ACI 318 Building Code Requirements for Reinforced Concrete

ASTM International (ASTM)

- ASTM A615 Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
- ASTM C33 Concrete Aggregates

ASTM C94	Ready-Mixed Concrete
ASTM C143	Test for Slump of Portland Cement Concrete
ASTM C150	Portland Cement
ASTM C260	Air Entraining Admixtures for Concrete
ASTM C494	Chemical Admixtures for Concrete

1.04 SUBMITTALS: IN ACCORDANCE WITH REQUIREMENTS OF SECTION 01330 SUBMITTALS, SUBMIT THE FOLLOWING:

Statement of materials constituting the design of mixes for each size aggregate as required by ASTM C94 shall be submitted to the Engineer within one week following award of the Contract.

PART 2 - PRODUCTS

2.01 CONCRETE:

- A. All concrete, reinforced or non-reinforced shall have a 28 day compressive strength of 3000 psi unless otherwise noted on the design drawings. A minimum of 5.5 sacks of cement per cubic yard and a maximum water cement ratio of 6.9 gallons per sack shall be used.
- B. Concrete shall conform to ASTM C94. The Contractor shall be responsible for the design of the concrete mixtures. Slump shall be a maximum of 4-inches and a minimum of 2-inches, determined in accordance with ASTM C143.
- C. Admixtures shall be as specified in subsection 2.05. No additional admixtures shall be used unless approved by the Engineer.
- D. No additional water, except for the amount indicated by the design mix shall be added to the concrete without the prior permission of the Engineer.

2.02 CEMENT:

The cement shall be an approved brand of American manufactured Portland Cement, Type II conforming to the applicable requirements of ASTM C150.

2.03 AGGREGATES

- A. Except as otherwise noted, aggregate shall conform to the requirements of ASTM C33.
- B. Maximum size aggregate shall be 3/4-inch.

2.04 ADMIXTURES:

- A. All concrete (unless otherwise directed) shall contain an air entraining agent. Air entrained concrete shall have air content by volume of 4 to 8 percent for 3/4-inch aggregate.
- B. Air entraining agent shall be in accordance with ASTM C260 and shall be Darex AEA, as manufactured by W.R. Grace & Company; Placewel (air entraining Type), as manufactured by Johns Manville; Sika AER as manufactured by Sika Chemical Company; or an approved equal product.
- C. Water reducing agent shall be WRDA, as manufactured by W.R. Grace & Company; Placewel (non-air entraining Type), as manufactured by Johns Manville; Sika Plastiment as manufactured by Sika Chemical Company; or an approved equal product.
- D. Water reducing agent-retarder shall be "Daratard," as manufactured by W.R. Grace & Company; Sika Plastiment as manufactured by Sika Chemical Company; or an approved equal product.

2.05 WATER:

- A. Water for concrete shall be potable, free of deleterious amounts of oil, acid, alkali, organic matter and other deleterious substances.

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Before placing concrete, forms and the space to be occupied by the concrete shall be thoroughly cleaned, and reinforcing steel and embedded metal shall be free from dirt, oil, mill scale, loose rust, paint or the material which would tend to reduce the bond.
- B. Earth, concrete, masonry, or other water permeable material against which concrete is to be placed shall be thoroughly saturated with water immediately before concrete is placed.
- C. No concrete shall be placed until the consolidation of the ground and the arrangement and details of forms and reinforcing have been inspected and approved by the Engineer.

3.02 FILL CONCRETE:

- A. Fill concrete shall be placed in those locations as indicated on the design drawings. Fill concrete shall consist of materials as previously specified, with a minimum 28-day compressive strength of 3000 psi.
- B. Before fill concrete is placed, the following procedures shall be used to prepare surfaces; all dirt, scum and laitance shall be removed by chipping and washing. The clean, roughened base surface shall be saturated with water, but shall have no free water on the

surface. A coat of 1:2 cement-sand grout, approximately 1/8-inch thick, shall be well scrubbed into the thoroughly dampened concrete base. The concrete fill shall be placed immediately, before grout has dried or set.

- C. Fill concrete shall be brought to lines and grades as shown on the design drawings.

3.03 CONCRETE PLACING DURING COLD WEATHER:

- A. Concrete shall not be placed on frozen ground, and no frozen material or material containing ice shall be used. Materials for concrete shall be heated when temperature is below 40°F, or is expected to fall to below 40°F, within 73 hours, and the concrete after placing shall be protected by covering, heat, or both.
- B. All details of Contractor's handling and protecting of concrete during freezing weather shall be subject to the approval of the Engineer. All procedures shall be in accordance with provisions of ACI 306.

3.04 CONCRETE PLACING DURING HOT WEATHER:

- A. Concrete just placed shall be protected from the direct rays of the sun and the forms and reinforcement just prior to placing, shall be sprinkled with cold water. The Contractor shall make every effort to minimize delays, which will result in excessive mixing of the concrete after arrival on the job.
- B. During periods of excessively hot weather (90°F or above), ingredients in the concrete shall be cooled insofar as possible and cold mixing water shall be used to maintain the temperature of the concrete at permissible levels all in accordance with the provisions of ACI 305. Any concrete with a temperature above 90°F, when ready for placement, will not be acceptable, and will be rejected.

3.05 FIELD QUALITY CONTROL:

- A. Concrete inspection and testing shall be performed by the Engineer or by an inspection laboratory, designated by the Engineer, engaged and paid for by the Owner. Testing equipment shall be supplied by the laboratory, and the preparation of samples and all testing shall be performed by the laboratory personnel. Full assistance and cooperation, concrete for samples, and such auxiliary personnel and equipment as needed shall be provided by the Contractor.
- B. At least 4 standard compression test cylinders shall be made and tested and 1 slump test from each day's placement of concrete. A minimum of four compression test cylinders shall be made and tested for each 100 cubic yards of each type and design strength of concrete placed. One cylinder shall be tested at 7 days, and two at 28 days. The fourth cylinder from each set shall be kept until the 28 day test report on the second and third cylinders in the same set has been received. If the average compressive strength of the two 28 day cylinders do not achieve the required level, the Engineer may elect to test the fourth cylinder immediately or test it after 56 days. If job experience indicates additional

cylinder tests or other tests are required for proper control or determination of concrete quality, such tests shall be made.

- C. The Engineer shall have the right to reject concrete represented by low strength tests. Rejected concrete shall be promptly removed and replaced with concrete conforming to the specification. The decision of the Engineer as to whether substandard concrete is to be accepted or rejected shall be final.

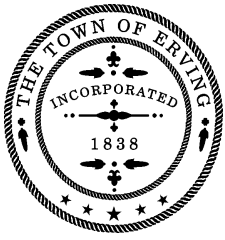
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TOWN OF ERVING

Department of Community Planning

12 East Main Street
ERVING, MASSACHUSETTS 01344

413-422-1105 | mariah.kurtz@erving-ma.gov

December 12, 2023

To: Select Board
From: Mariah Kurtz, Town Planner and Bryan Smith, Town Administrator

Care Drive Senior Housing

On December 12, 2023 Town Counsel reviewed the Care Drive Senior Housing procurement documents and advised us that she did not have legal concerns about the Town moving forward with the proposal from Rural Development Inc. If the Select Board chooses to move forward with their proposal, the next several steps will be as follows:

1. The Select Board votes to award the procurement to Rural Development Inc and authorize a member of the Select Board and/or Senior Housing Committee to work with Rural Development Inc to negotiate the requested changes from the Senior Housing Committee and draft a land development agreement.
2. Hire a surveyor to amend the Care Drive road layout and propose new property lines
3. File an Approval Not Required with the Planning Board
4. Prepare two town meeting votes
 - a. One vote to approve the disposition of a parcel of land via 99 year land lease **with** age restriction
 - b. One vote to approve the disposition of a parcel of land via 99 year land lease **without** age restriction

Suggested vote language:

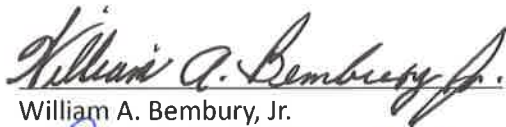
A motion to award the Care Drive Senior Housing Development procurement to Rural Development, Inc., of Turners Falls, MA 01376, having submitted a highly advantageous proposal, and to authorize Selectman _____ to work with the Senior Housing Committee and Town Counsel to prepare the necessary agreements for land development, with final land disposition conditional upon authorization being granted at Town Meeting.

Town of Erving
Senior Housing Committee

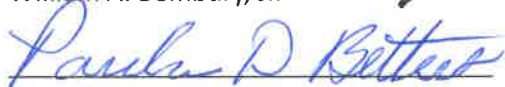
The Town of Erving, Senior Housing Committee, having released Request for Proposals # 20230726A, and having received and reviewed the Care Drive Housing Proposal submitted by Rural Development Inc., of 241 Millers Falls Road, Turners Falls, Massachusetts 01376, and the completed Attachment A, Comparative Evaluation Criteria, the Senior Housing Committee selects the developer Rural Development Inc. as its Project Developer for Senior Housing, contingent on Town Counsel and Select Board approval.

~~November 7, 2023~~ NOVEMBER 20, 2023 MK

Signed By:



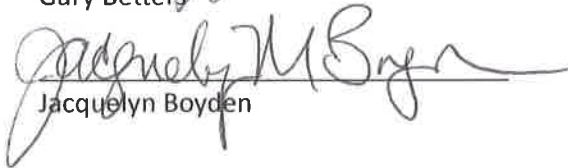
William A. Bembury, Jr.



Paula Betters



Gary Betters



Jacquelyn Boyden

Moonlight Davis

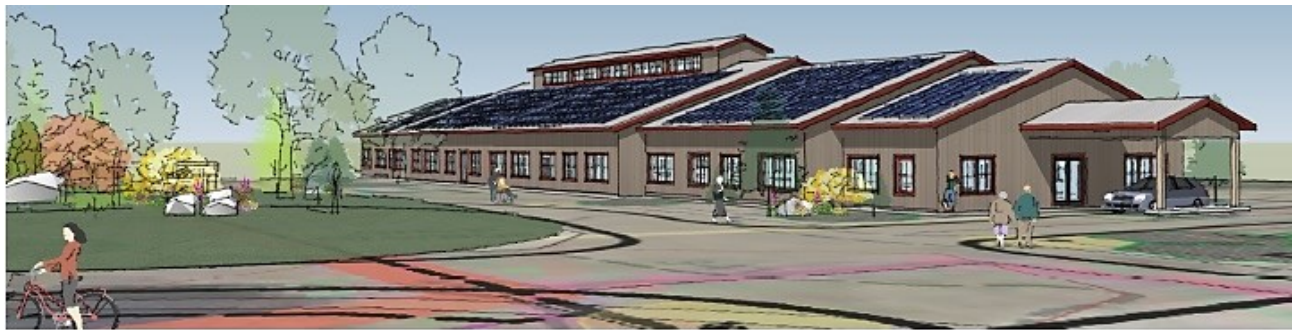
Leslie Brown



Jean Galbraith



Erving Care Drive Housing



Proposal from Rural Development, Inc.

Town of Erving RFP #20230726A

October 25, 2023

A. The Developer and Development Team

The developer for the project is Rural Development, Inc. (RDI), a non-profit corporation based in Turners Falls, MA. RDI was launched by Franklin County Regional Housing and Redevelopment Authority (HRA) in 1991 to address those housing needs that HRA could not adequately or efficiently address as a public housing authority.

RDI actively uses housing development and historic restoration as critical components of creating and maintaining vital communities. Since 1991, RDI has developed 141 units of rental housing, as well as a 16-bed sober congregate facility. RDI has also developed 114 homes for low- and moderate-income ownership. RDI has provided development consultation to numerous other historic and mixed-use projects in Franklin County, including Sanderson Place, a 33-unit senior project completed in 2023 in Sunderland.

RDI's mission is to advance the rights of all people in Franklin County and the North Quabbin region to occupy environmentally responsible, energy efficient, affordable housing and to improve economic independence. Further, RDI strives to promote environmental awareness, and to operate in a manner that is respectful of the rural character of our region. We actively involve local housing coalitions, planning boards, town officials and zoning boards in our work.

Contact Information

Proposer / Authorized Representative:

Gina Govoni, Executive Director

Rural Development, Inc.

241 Millers Falls Road

Turners Falls, MA 01376

ggovoni@fcrhra.org

413-863-9781 x134

Lead Project Manager / Contact for Correspondence

Alyssa Larose, Housing Development Director

Rural Development, Inc.

241 Millers Falls Road

Turners Falls, MA 01376

alarose@fcrhra.org

413-863-9781 x131

Development Team Members

Developer/Proposer

Gina Govoni, RDI's Executive Director since July 2019, brings over twenty years of progressive leadership experience managing and positioning community development programs for growth and expansion, including leadership roles with the Massachusetts Housing Partnership (MHP) and Way Finders in Springfield. Under Gina's leadership, RDI successfully submitted a one-stop funding application with DHCD (now EOHLC) for Sanderson Place, a 33-unit senior housing development in Sunderland. Gina will provide general oversight for the Care Drive project, including executing contracts and authorizing work of other development team members.

Alyssa Larose is RDI's Housing Development Director. She has been in the role since December 2021, helping to oversee the completion of Sanderson Place, developing a pipeline of new projects, and acting as a development consultant for CSO's Wells Street development in Greenfield, MA, a 36-unit Permanent Supportive Housing and shelter project. Alyssa will serve as Project Manager for the Care Drive housing development, undertaking the day-to-day tasks necessary to complete the project. This includes coordinating all development team members and other consulting professionals; completing applications for permits including the Comprehensive Permit; prepare applications for funding; coordinate legal and regulatory requirements; and track and manage the project budget.

Jen Hale is RDI's Housing Development Rehabilitation Coordinator. She has been in the role since April of 2023, helping to develop the Rural Homes Program and create conceptual site designs for potential RDI development projects. A graduate of the Conway School of Landscape Design, Jen worked in the landscape and architectural design fields for 20 years with Walter Cudnohufsky Associates, Kraus-Fitch Architects, Fitch Architecture and Community Design, and Jablonski DeVriese Architects. Jen will assist with project management especially around coordination and review of site and building design.

Development Consultant

Christine Rogers will provide development consultant services with respect to financing and the use of the LIHTC program, including budget development and review, assistance with funding proposals and closing on funding sources, and coordination of syndication and sale of the LIHTCs. Christine brings over twenty years of finance and community development experience, working with and for nonprofit agencies on mixed-use, mixed-income and mixed-finance projects. She has successfully overseen all aspects of predevelopment, deal structuring, closing, construction, lease-up and project closeout in the Boston area and beyond. Christine will serve as the financial consultant and lead closer for the Care Drive project and will work with funders and stakeholders to meet deadlines and deliver high quality affordable housing.

Property Manager

Pam Parmakian, Director of Property Management at HRA, will coordinate with other HRA staff to market the property, screen and select tenants (including conducting a lottery), lease up units, recertify tenants' incomes annually, coordinate provision of utilities, collect rents and pay project operating expenses, enforce leases, and comply with regulations and funder reporting requirements. Under Pam's leadership, Sanderson Place in Sunderland was completely leased and occupied within 6 weeks of receiving the temporary certificate of occupancy.

Mike Terounzo, Modernization and Maintenance Coordinator at HRA, will coordinate with HRA maintenance staff, and outside contractors as needed, to maintain and repair the buildings and grounds.

Architect

The architects for this project will be Tom Chalmers, AIA, and Patrick Kitzmiller of Austin Design Cooperative, located in Brattleboro VT and Greenfield MA. The team at Austin Design Cooperative has been working in Massachusetts and New England since 1993. Previously operating as Austin Design, Inc., the employees formed a worker-owned cooperative in 2022 and bought the company from its retiring former owner Bill Austin. The bulk of the team remains intact and continues to offer the same high level of expertise and years of experience with residential design, including multiple affordable and senior housing developments (three for RDI). Staff resumes, firm qualifications, and project examples are in the appendix.

Energy Design Consultant

The Center for Ecotechnology (CET), a non-profit organization based in Dalton, Northampton, and Springfield, MA, will provide energy design services for the project, including energy modelling, consultation on HVAC and building envelope design, assistance with applying for utility rebates, and complying with the energy code and applicable green building certification requirements. CET has extensive experience assisting multifamily projects throughout the Northeast with energy code compliance and advanced certifications. They are familiar with a wide variety of approaches for designing and constructing high performance buildings and are uniquely qualified to provide support to this project. CET provides support to architects, contractors, and developers throughout the design and construction process to ensure that buildings achieve their performance and certification goals. CET's proposal and staff qualifications are included in the appendix.

Civil Engineer / Landscape Architect

Berkshire Design Group (BDG) is a multi-purpose firm having site design, civil engineering, and landscape architectural services in house. BDG has worked on hundreds of sites including numerous multi-family and affordable housing developments. BDG has the advantage of having worked with the Town of Erving on the Senior Housing Master Plan preliminary site feasibility study for the Care Drive

site. The lead staff members for this Project will be Rachel Loeffler, RLA, ASLA, Christopher Chamberland, P.E., and Timothy Armstrong, PLS, principals at BDG. Resumes and firm qualifications are in the appendix.

General Contractor

A general contractor (GC) has not been identified at this stage. RDI will undertake a competitive selection process to choose a GC in order to obtain the best construction price. We intend to solicit prices only from GCs who have a proven track record in affordable housing construction and who have the scale of operation and financial soundness to undertake this Project.

Pre-Development Lender

We intend to work with CEDAC to provide predevelopment loan funds for this Project. CEDAC is a quasi-public state-wide lender established to provide loans for affordable housing development. CEDAC has financed over 45,000 units of affordable housing in Massachusetts. RDI has a strong working relationship with CEDAC and has already secured \$15,000 in preliminary feasibility funding for Care Drive to proceed with due diligence activities if chosen by the Town as developer for the site. See funding documentation in the appendix.

Description and Status of Proposer

The Proposer (RDI) is a non-profit corporation whose service area is Franklin County and the North Quabbin region. An IRS Letter of Determination is included in the appendix. RDI is governed by a volunteer Board of Directors, composed of eight members who bring expertise from the fields of real estate development, homelessness advocacy, community services, regional planning, the legal field and property management. Two board members are appointed by the Franklin County Regional Housing and Redevelopment Authority (HRA). Board members and their affiliations are listed below:

Linda Dunlavy, *President, serving since 2001*

Linda Dunlavy is the Executive Director of the Franklin Regional Council of Governments (FRCOG). Over her 30-plus year career, Linda has worked with many regional partners to improve the conditions of Franklin County and western MA. In addition to being chair of the board of RDI, Linda is the gubernatorial appointment to the Board of the Massachusetts Broadband Institute and Massachusetts Rural Policy Advisory Commission, which she chairs.

Clare Higgins, *Treasurer, serving since 2011*

Clare is the Executive Director at Community Action Pioneer Valley — the federally designated anti-poverty agency serving more than 30,000 of our neighbors in Franklin, Hampshire, Western Hampden, and North Quabbin regions. Clare worked as an early childhood educator and is perhaps most widely recognized for her lengthy political career after having served three terms on the Northampton City

Council and six terms as Mayor of the City of Northampton from January of 2000 to September of 2011. Clare is also a trustee of Greenfield Community College.

Regina Curtis, *Secretary, serving since 2000*

Regina retired in 2021 from her position as Executive Director of Institutional Advancement at Greenfield Community College, having served for 16 years. Prior to joining the college, she worked in the Massachusetts General Court, serving on the legislative staff of State Representative Stephen Kulik (D-Worthington) as District Coordinator for six years, a position she accepted after twenty years working in the fields of municipal government and human services. She is a proud alum of Greenfield Community College, Mass College of Liberal Arts and Fitchburg State University. Regina has also supported her community through decades of involvement in several community activities, including serving on the Boards of LifePath and Greenfield Savings Bank.

Leslie Brown, *serving since 2014*

Leslie is a life-long resident of Franklin County, growing up in Conway and living in Erving for the past 43 years. Her career has focused on finance. Ms. Brown has worked at both the Greenfield Housing Authority and at HRA, in addition to finance roles at local private schools. Leslie was invited to become a Commissioner for HRA in 2010 and currently serves as the Treasurer. She is an active member and the moderator of the First Congregational Church of Montague and is the warden for the Town of Erving elections and recently became a member of the Erving Cultural Council. Her greatest joy is spending time with her young grandsons.

Levi Roman, *serving since 2017*

Levi is currently the Senior Principal at Citizens Disability, LLC., headquartered in Waltham, Massachusetts, which helps people to secure social security disability benefits nationwide. He also maintains a private practice in Shelburne Falls, Massachusetts, focusing on social security disability benefits and appeals. Previously, Attorney Roman was an Associate at the Northampton based firm Green Miles Lipton, LLP.

Bill Breitbart, *serving since 2019*

Bill has worked in the field of nonprofit affordable housing for over 40 years. He began his career as a staff attorney at Western Massachusetts Legal Services, specializing in public benefits and housing issues. He served as Executive Director of HAP, Inc. (now Way Finders), then became a founding partner of MBL Housing and Development, which provides consulting services to organizations that are engaged in the development of affordable and supportive housing projects. In 2004, he joined the Community Economic Development Assistance Corporation (CEDAC) as Director of Housing for Central and Western Massachusetts. Since his retirement from CEDAC, he has served as an advisor to a number of housing and community development organizations.

Faith Williams, serving since 2021

Faith has worked in the field of affordable housing for over 30 years. Prior to her retirement, she oversaw 811 units of affordable housing in 23 properties owned and/or managed by Way Finders. Beyond a commitment to maintaining properties that support residents' well-being, Faith oversees Resident Services and collaborated with the Real Estate Development Division to ensure the overall success of properties in their development pipeline. She currently acts as Chair of HRA's Board of Commissioners and serves as member of the Planning Board for the Town of Shelburne.

Shaundell Diaz, serving since 2022

Shaundell Diaz is a Latina and a Person with Lived Experience who works as the Coordinated Entry Specialist for the Three County Continuum of Care/Community Action Pioneer Valley. She serves as a co-chair for the Communities that Care Coalition's *Racial Justice Workgroup*, co-founder of the Hampden County Resource Network, a consultant for the National Coalition for the Homeless and serves as a Board Member for Craig's Doors.

Real Estate Development Committee

In 2022, the RDI Board formed a Real Estate Development Committee to help refine and guide our development pipeline. This group includes an RDI Board member as well as a retired former assistant director of HRA, an affordable housing development consultant, and a real estate development professional from another non-profit housing developer serving a neighboring region:

- Joanie Bernstein, retired
- Bill Breitbart, RDI Director, retired
- Peter Graham, Valley Housing Consultants, LLC
- Peter Serafino, Home City Development, Inc.

Entity to enter into land lease / borrower and guarantor of debt

RDI is the entity that will enter into the Land Lease to the property. RDI will be the borrower and guarantor of any debt throughout the development process. RDI expects to establish a single purpose entity to own the Project (likely a LLC) and to transfer ownership to this entity once the Project is fully funded. This legal arrangement is a typical requirement of public funders, to protect an individual housing development from liabilities associated with a larger organization and provides the necessary structure to leverage federal and state low-income house tax credit investment.

Identification of all principals, partners, co-venturers or sub-developers

If, as planned, the development utilizes the LIHTC program, the LLC that is formed will include investors as limited partners. RDI will continue as the general partner and will be responsible for operation of the development and for compliance with affordable housing restrictions.

Identification of the Property Manager

RDI (or the single purpose entity) will enter into a management agreement with the Franklin County Regional Housing and Redevelopment Authority (HRA) to manage the property. HRA currently manages RDI’s private rental properties, listed below:

- 33 units for elders at Sanderson Place in Sunderland
- 2 units for elders at the Smikes House in Whately
- 48 units at the Crocker Building and Cutlery Block buildings in Turners Falls
- 26 single-room occupancy units for individuals in recovery from substance abuse at the Moltenbrey Building in Turners Falls
- 18 units at the Ashfield House in Ashfield
- 8 double-occupancy units for men in recovery from substance abuse at the Orange Recovery House in Orange
- 6 units at Prospect and Grove Apartments in Orange
- 2 fully accessible units at the Wisdom Way Solar Village in Greenfield
- 10 studio units at Orange Teen House in Orange for at-risk youths

Development Team Qualifications and Experience

Resumes for team members and firm qualifications are included in the appendix.

RDI has over 25 years of experience in affordable housing development. During its history, RDI has developed 9 affordable rental housing projects in Franklin County containing a total of 151 units. Four sample projects are highlighted below:

<i>Crocker Bank Building and Cutlery Apartments</i>	
<i>Location</i>	Montague
<i>Type and Description</i>	Affordable rental housing and mixed-use development. The Crocker Bank Building, an anchor property in the Turners Falls National Register Historic District, was gutted in a tragic fire with loss of life in 1997. Faced with the unacceptable prospect of having to tear the building down, the Town of Montague approached RDI and Historic Massachusetts, Inc. for assistance. HMI obtained a Historic Preservation Project grant to stabilize the building and held it until RDI was able to put together the financing package. In order to make the numbers work, RDI combined reconstruction of the Crocker building with the restoration of a nearby block of attached brick row houses once used for housing by the employees of the Russell Cutlery factory – the <i>Cutlery Block Apartments</i> . Built in the mid-1800s and long neglected by a series of absentee owners, more than half the apartments were uninhabitable and drug activity was a major problem.

<i>Scope</i>	RDI conducted all pre-development and development work and continues to be the owner / general partner.
<i>Start Date</i>	2000 (construction)
<i>Projected Completion Date</i>	2001
<i>Actual Completion Date</i>	2001
<i>Total Development Cost</i>	\$10,900,000
<i>Sources of Financing</i>	Loans and grants from the Massachusetts Equity Fund, Property and Casualty Initiative, Massachusetts Housing Investment Corporation, Massachusetts Historic Preservation Project Funds, Massachusetts Housing Partnership, the Community Economic Development Corporation, the Housing Stabilization Fund Program, Historic Massachusetts Inc., Western MA Electric Company, Berkshire Gas Company, the Town of Montague, RDI and other sources. The gap in financing was covered by equity generated through the syndication of low-income housing tax credits from the Department of Housing & Community Development and historic tax credits.
<i>Total # of Units & BRs</i>	48 total units; one- and two-bedroom apartments
<i>Other</i>	Following restoration, the project was selected by the Massachusetts Historic Commission for a 2002 Historic Preservation award and was recognized by the Boston Globe as the first historic buildings in Massachusetts renovated to meet Energy Star standards. Both buildings are listed on the National Register of Historic Buildings. Rents in the project are discounted to be affordable to tenants whose income is at or below 60% of the area median income for Franklin County.

<i>Ashfield House</i>	
<i>Location</i>	Main Street, Ashfield
<i>Type and Description</i>	Renovation of historic multi-family rental property. Renovations included primarily life safety, structural, environmental and cosmetic improvements
<i>Scope</i>	RDI conducted all pre-development and development work and continues to own this property.
<i>Start Date</i>	Purchased 2004; construction start Feb. 1, 2006
<i>Projected Completion Date</i>	February 2007
<i>Actual Completion Date</i>	February 2007
<i>Total Development Cost</i>	\$1,700,000
<i>Sources of Financing</i>	CEDAC, Affordable Housing Trust Fund, DHCD's Housing Stabilization Fund and the Greenfield Cooperative Bank
<i>Total # of Units & BRs</i>	18 units; 8 one-bedroom, 6 two-bedroom, and 4 three-bedroom units
<i>Other</i>	Austin Design was the architect for this project. Ashfield House was refinanced in 2013 and several upgrades were done at that time including a new heating system.

<i>Wisdom Way Solar Village</i>	
<i>Location</i>	Greenfield
<i>Type and Description</i>	New construction homeownership development of near Zero Net Energy condominium units. Work included site and infrastructure development; new construction; landscaping. This project included installation of solar PV panels and air source heat pumps.
<i>Scope</i>	RDI conducted all pre-development and development work and was responsible for unit sales to eligible homebuyers following lottery. RDI retains ownership of two units rented to persons with disabilities.
<i>Start Date</i>	Construction began January 29, 2008 after a year and a half of pre-development
<i>Projected Completion Date</i>	December 1, 2009
<i>Actual Completion Date</i>	First homeowner moved in December 2008; construction was complete September 2010
<i>Total Development Cost</i>	\$5,800,000
<i>Sources of Financing</i>	Grants: US Dept of Energy, BankNorth, Enterprise Green Communities, HOME, Affordable Housing Trust, Community Based Housing, HUD Project Based Vouchers, Mass Technology Collaborative, Home Depot Foundation, WMECO, Energy Star, Zero Net Energy Challenge, Greenfield CDBG funds. Proceeds from home sales. Loans: Permanent financing from Greenfield Cooperative Bank
<i>Total # of Units; BR Size</i>	20 units: 18 homeownership units and 2 fully-accessible units (both two-bedroom) managed by HRA. Of the 18 homeownership units, 6 are two-bedroom units, 9 are three-bedroom units, and 3 are four-bedroom units.
<i>Other</i>	This is a mixed-income, mixed-ability development. RDI received funding from the Massachusetts Community Based Housing Program to build two homes within the village that are fully accessible for people in wheelchairs. These two homes are rented to people with physical disabilities. All twenty homes are visit-able by people in wheelchairs. These near Zero Net units have a Home Energy Rating Scale (HERS) of between 7-18. Austin Design was the architect for this project.

<i>Sanderson Place</i>	
<i>Location</i>	Sunderland
<i>Type and Description</i>	<p>The project includes historic preservation and renovation of the “Village House,” the original home on the site, into three one-bedroom apartments, and construction of a new, energy efficient 30-unit elevator building in the rear of the property, containing three two-bedroom units and 27 one-bedroom apartments. Three apartments are fully accessible, two are sensory adapted, and all apartments are designed to be visitable by persons using wheelchairs and have fully accessible bathrooms.</p> <p>The Town purchased the site in 2014 with Community Preservation Act funds from the former owner who wanted the site to become senior housing. In 2017, RDI’s proposal was chosen by the Town. RDI worked with the Town as a project sponsor, with the support of Valley CDC as lead project manager. Sanderson Place was funded in its first rental round in June 2020.</p>
<i>Scope</i>	RDI, with support from Valley CDC, conducted all pre-development and development work. HRA was responsible for leasing the units following a lottery. RDI owns the property, which is managed by HRA.
<i>Start Date</i>	March 2021
<i>Projected Completion Date</i>	September 2022
<i>Actual Completion Date</i>	January 2023 – fully leased by March 15, 2023. Delay in completion due to COVID supply chain issues.
<i>Total Development Cost</i>	\$14,000,000
<i>Sources of Financing</i>	CEDAC predevelopment funding, State and Federal LIHTC equity, Federal Home Loan Bank of Boston, Sunderland CPA, HLC Affordable Housing Trust, MHP Housing Stabilization Fund, CEDAC Housing Innovations Fund, and permanent financing through Greenfield Savings Bank.
<i>Total # of Units; BR Size</i>	33 units; 30 one-bedroom, and 3 two-bedroom units.
<i>Other</i>	<p>Sanderson Place is a mixed-income, senior (age 62+) development. Apartments are affordable at 60%, 50% and 30% of Area Median Income for Franklin County. Fourteen apartments are subsidized with Section 8 or Massachusetts Rental Voucher Program project-based vouchers. LifePath provides on-site, voluntary services for residents. The units have efficient all-electric heating, cooling, and ventilation. Solar PV provides on-site renewable energy generation.</p> <p>Austin Design was the architect for this project. Christine Rogers served as development consultant, Berkshire Design Group was the civil engineer and landscape designer, and CET provided energy design and HERS rating services.</p>

Relevance to Erving Care Drive Housing

RDI's most recent development, Sanderson Place in Sunderland, has many similarities to the Care Drive project. Both were initiated by the Town and involve disposition of Town-owned land. Working closely with Town boards and committees and maintaining consistent communication throughout the project is important in both cases.

Sanderson Place required extensive site work due to high groundwater and a constrained site. Care Drive will require tree clearing, new roads and driveways, fill, etc. Building and energy codes have changed since Sanderson Place was permitted, however, the focus on energy efficiency, renewable energy, and resiliency will only be improved upon with Care Drive.

The target market for Sanderson Place is similar to the proposed senior housing at Care Drive, and both Sunderland and Erving offer wonderful community amenities to attract new residents. Providing resident services was important in Sunderland, as it will be in Erving.

Sanderson Place was permitted through a Comprehensive Permit process, which is the proposed permitting path for Care Drive. The funding sources and application process will be similar for both projects, as will the ongoing compliance once in operation.

Overall, the Developer and Development Team have extensive relevant experience with regard to the proposed Project in the following ways:

- ✓ Experience developing over 100 affordable housing units in rural Franklin County towns.
- ✓ Experience developing affordable housing at a scale similar to the proposed Project, including rural senior housing.
- ✓ Experience with new construction including site design and landscaping.
- ✓ Experience securing 40B Comprehensive Permits.
- ✓ Repeated success raising financing for affordable housing from numerous public and private sources, including all of the sources proposed for this Project.
- ✓ Experience developing new construction units at an extremely high level of energy efficiency.
- ✓ Experience developing affordable housing for special populations, such as supportive senior housing and housing for persons with disabilities.
- ✓ Experience in collaborating with service providers, as is proposed for this Project.
- ✓ Successful track-record of collaboration between RDI as developer and HRA as property manager.
- ✓ Successful track-record for Development Team members, including Austin Design, BDG, and CET, working together on numerous projects.

Development team organization / communication with the Town

RDI, through its housing development staff, will serve as primary project manager and will be the main point of contact for the Town. We expect to work closely with the Senior Housing Committee, Town Administrator and Selectboard, Town Planner, and other departments, boards, and commissions at various stages of the project, particularly the Building Commissioner (FCCIP), Conservation Commission, Board of Health, Zoning Board of Appeals, Highway, Fire, and Police Departments. RDI can provide regular updates to the Town on progress as desired.

Legal or administrative actions

There are no legal or administrative actions past, pending or threatened that could relate to the conduct of the proposer, its principals, or any affiliates.

Local, State, and Federal Taxes

Please see Certification in the appendix to confirm that no local, state, or federal taxes are due and outstanding for any member of the Development Team.

References

Three references for RDI are provided below. References for other Development Team members are readily available upon request.

Town of Sunderland

Contact: Geoff Kravitz

Title: Town Administrator

Phone: 413-665-1441 ext. 9

Email: townadmin@townofsunderland.us

Community Economic Development Assistance Corporation (CEDAC)

Contact: Lionel Romain

Title: Director of Housing for Central and Western Massachusetts

Phone: 413-530-0188

Email: lromain@cedac.org

Greenfield Savings Bank

Contact: Andrew J. (A.J.) Bresciano

Title: First Vice President, Commercial Loan Officer

Phone: 413-775-8153

Email: abresciano@greenfieldsavings.com

B. Development Concept

Information provided in this proposal is preliminary and represents the Developer’s best effort to define Project details. Elements of the proposed Project are subject to change throughout the predevelopment phase. Building and site plans are conceptual and sure to undergo some modifications before being finalized. The Town will have an additional opportunity to evaluate and provide input into the Project as part of the 40B Comprehensive Permit approval process. At that point in time, Project elements will be nearer to their final form.

RDI’s proposed development concept supports a mix of affordable, senior and multi-generational workforce housing. We focused on an efficient site layout and building design to minimize impacts and costs, locating the bulk of the development closest to the Library and Senior Center. The proposal will require subdividing the current Senior Center parcel to create a new lot on the north side of Care Drive Extension. This compact development footprint was chosen to minimize the project infrastructure costs and to preserve as much existing green and forested land as possible.

Current road construction costs are estimated at \$1,000 per linear foot or more. The 550 feet Care Drive Extension layout surveyed for the site would likely cost over half a million dollars to construct, not including the cost to extend water and sewer infrastructure. The proposed concept allows for a much shorter Care Drive Extension into a cul de sac circle with a 60-foot turning radius for emergency vehicles. The center island can be used for stormwater infiltration and snow storage.

Additionally, clustering the housing on the site leaves more wooded open space that can be used for public walking trails (to be developed by the Town). An informal trail network already exists to the rear of the site, and our concept shows options for formalizing this trail along with connections to the Library and Senior Center, School, Route 2 commercial area, and the new housing.

Altogether, 26 units are proposed. The proposed unit and affordability mix is shown below:

Unit Type	# of Units	2023 Max Income limits for Erving by Household Size					
		1	2	3	4	5	6
Age-Restricted (62+) Units							
1 BR 30% AMI	8	\$20,940	\$23,910				
1 BR 50% AMI	4	\$34,900	\$39,850				
1 BR 60% AMI	6	\$41,880	\$47,820				
<i>Total</i>	<i>18</i>						
Multi-Generational Family Units							
2 BR 50% AMI	4	\$34,900	\$39,850	\$44,850	\$49,800		
2 BR 60% AMI	2	\$41,880	\$47,820	\$53,820	\$59,760		
3 BR 50% AMI	2		\$39,850	\$44,850	\$49,800	\$53,800	\$57,800
<i>Total</i>	<i>8</i>						

Note: Income limits are set annually by HUD.

Age-Restricted Housing

RDI proposes 18 units of age-restricted (62+) senior housing behind the current Senior Center. All units are 1-bedroom, serving households earning up to 60% AMI. Based on RDI and HRA's experience with other senior housing properties, the largest demand by far is for 1-bedroom apartments. Seniors also strongly prefer first-floor apartments, for accessibility and egress reasons.

The proposed new senior housing building will include the following features:

- Single-story, slab on grade, all-electric energy efficient construction
- Two (2) fully accessible units, with the remaining units adaptable. All bathrooms to be fully accessible with roll-in/walk-in showers. All units will be visitable by a person in a wheelchair.
- All units will be designed to let seniors "age in place." Kitchens will have removable base cabinets allowing for easy accessibility modifications. Bathrooms will be fully blocked allowing for the addition of grab bars. All units will be wired for future sight and sound alarms, should the resident need this accommodation as they age.
- In-unit washer and dryer
- A covered entryway portico, and accessible walkways connecting to the Senior Center
- Community space for residents includes:
 - Welcoming entryway with mailboxes, property management office, and lounge
 - Multi-function room with dining tables and kitchenette with counter space for use by residents and service providers for community or private family events
 - Wide, naturally lit central corridor or "street" for lounging and socializing
 - Screened-in porch for outside relaxing and socializing
 - Outdoor patio
 - Raised garden beds
- 20 parking spaces – 2 ADA, 2 electric vehicle charging stations
- Low Impact Development stormwater management to filter, clean, and infiltrate stormwater runoff from the building and parking areas. Use of low-maintenance, pollinator-friendly native plants for landscaping
- Outdoor storage shed with individual storage spaces for resident use
- Outdoor covered bicycle parking
- Pedestrian-oriented, downward directed outdoor lighting
- Rooftop solar PV

Multi-Generational Workforce Housing

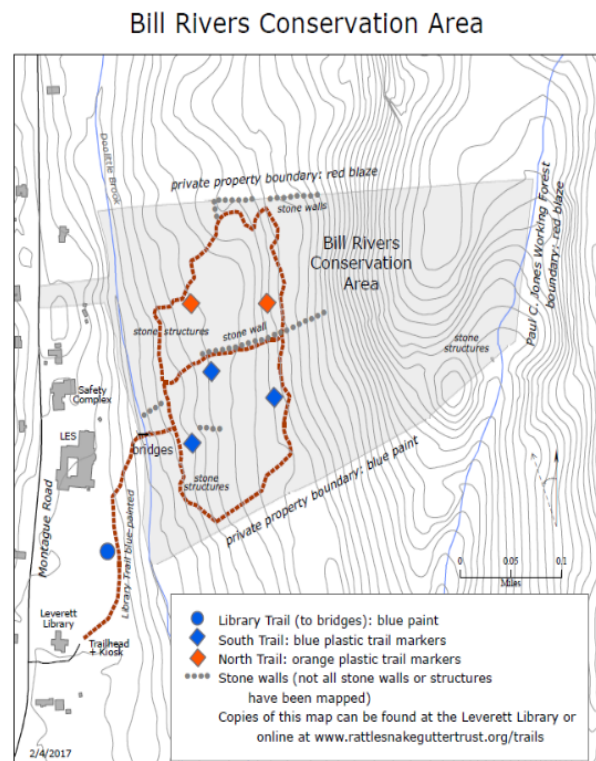
Across from the senior housing, we propose locating two buildings with townhouse style 2 and 3-bedroom units on the parcel behind the library. These units offer options for a variety of households including senior households needing more than one-bedroom, multi-generational households, and families. These buildings include the following features:

- Slab on grade, all-electric, energy efficient construction
- Six (6) 2-bedroom units – one fully accessible on single floor; two (2) 3-bedroom units, each with a bedroom and full bath with walk in shower on 1st floor
- 17 parking spaces – 1 ADA, 2 EV charging spaces
- In-unit washer and dryer
- Outdoor covered bicycle parking
- Outdoor play space in view of all units
- Accessible walkways and sidewalks connecting to Care Drive
- Pedestrian-oriented, downward directed outdoor lighting
- Low Impact Development stormwater management to filter, clean, and infiltrate stormwater runoff from the building and parking areas. Use of low-maintenance, pollinator-friendly native plants for landscaping
- Dual use property management office / small consult room
- Rooftop solar PV
- Community garden space
- Storage shed for maintenance equipment

Improvements for Public Enjoyment:

The proposal includes the addition of a FRTA bus stop on Care Drive Extension, with easy access to the housing, Library, and Senior Center. RDI will work with the Town and the FRTA on the design and final location of the bus stop. The cost of a bus shelter and signage is not included in the development budget and is assumed to be covered by FRTA or through grants. RDI will assist with applying for funding to support the bus shelter and has identified potential funding sources in the Project Financing section.

Our proposal envisions a public trail system that will benefit all Erving residents. Existing and new trails could be integrated and improved. The Elementary School, Library, Senior Center, Recreation Commission, and Conservation Commission could partner on creating and maintaining the trail network and offer recreational and educational programming. The towns of Leverett and Northfield have active Trail Committees that could provide a model for Erving. RDI, through the proposed housing development, can include trail access locations as identified on the site



The Town of Leverett has a trail network on Town-owned land behind their library and elementary school.

plan. The full development of the trail network is not included in this proposal, however, several possible funding sources for trail development are identified in the Project Financing section.

Choice of Multi-Generational and Senior Housing

RDI considered a number of factors in creating the proposed development concept, including housing needs in the town and region, specific site conditions, market demand and financial feasibility and competitiveness. Below outlines in detail these considerations and our findings.

Erving’s Housing Needs

Erving residents have access to many resources and assets. Erving has invested heavily in community resources – the Senior Center, Library, updated parks and playgrounds, and Elementary School – all contribute to the high quality of life in town.

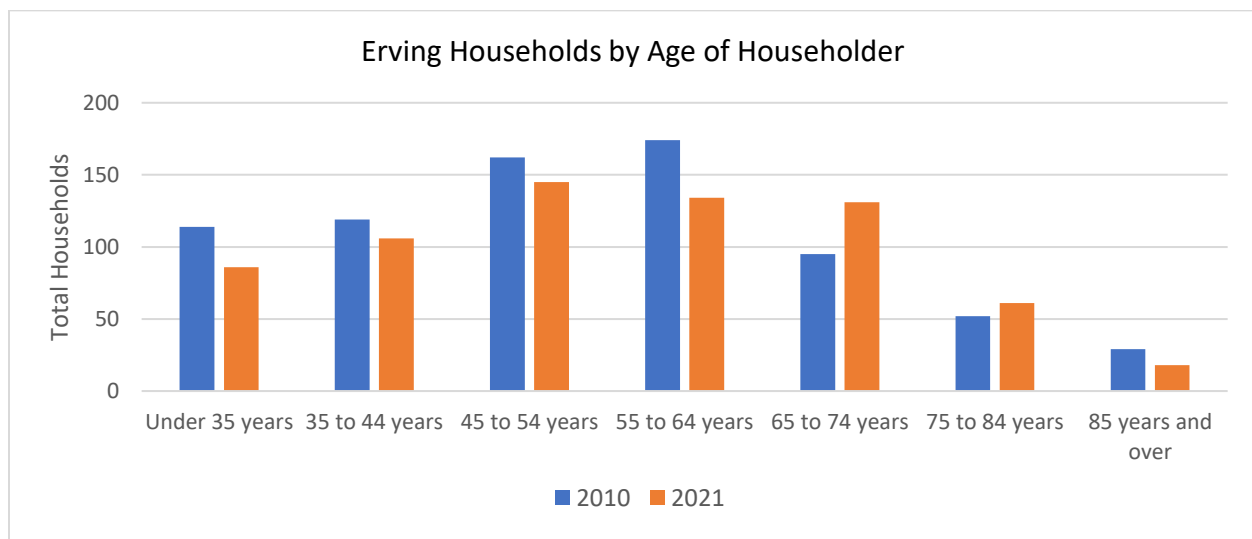
Like most communities in Franklin County, Erving’s population declined in the past decade. An updated look at demographic and market data for Erving revealed several key trends in town that impact housing.

Aging and Declining Population

Erving’s total population declined by 135 people, or 7.5%, in the past decade. However, the number of people aged 65 to 84 increased by 74, a 35% change since 2010. All other age groups either remained stable or declined in number. These trends are similar across the county.

Loss of Workforce Age Households

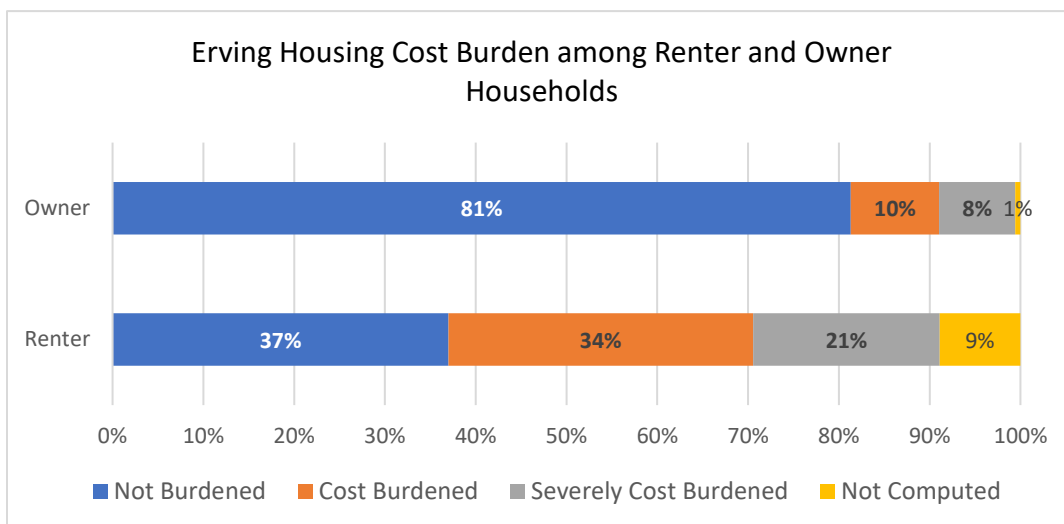
Consistent with overall population trends, in the past ten years, Erving experienced a decline in all households with a householder under the age of 65. These households make up the core of the workforce, which is important for a town when trying to maintain and attract employees and employers.



Source: U.S. Census Bureau, 2010 Decennial Census, American Community Survey 5-Year Estimates, 2017-2021

Affordability Gaps for New Homebuyers and Current Renters

Erving historically has been an affordable place to buy a home, with the lowest residential tax rates in the county. Homebuyers wishing to purchase their first home in Erving now find it more difficult. A lack of supply across the region has pushed prices to unattainable levels for many people earning average wages. The 2023 median single family home sale price in Erving, through August, is \$303,250, which would require an income of roughly \$100,253 to afford. Median household income in Erving as of 2021 is \$66,319, a gap of almost \$35,000.



Source: U.S. Census Bureau, American Community Survey 5-Year Estimates, 2017-2021

While existing homeowners in Erving are generally not burdened by their housing costs (paying more than 30% of their income on housing), over half of existing renters in Erving are cost-burdened, with over 20% severely burdened, paying more than 50% of their income on rent and utilities. Increasing the supply of quality, affordable rental housing will help reduce housing cost burden for existing households, thereby freeing up income for other essential needs, and will help attract new households who can contribute to the community and workforce.

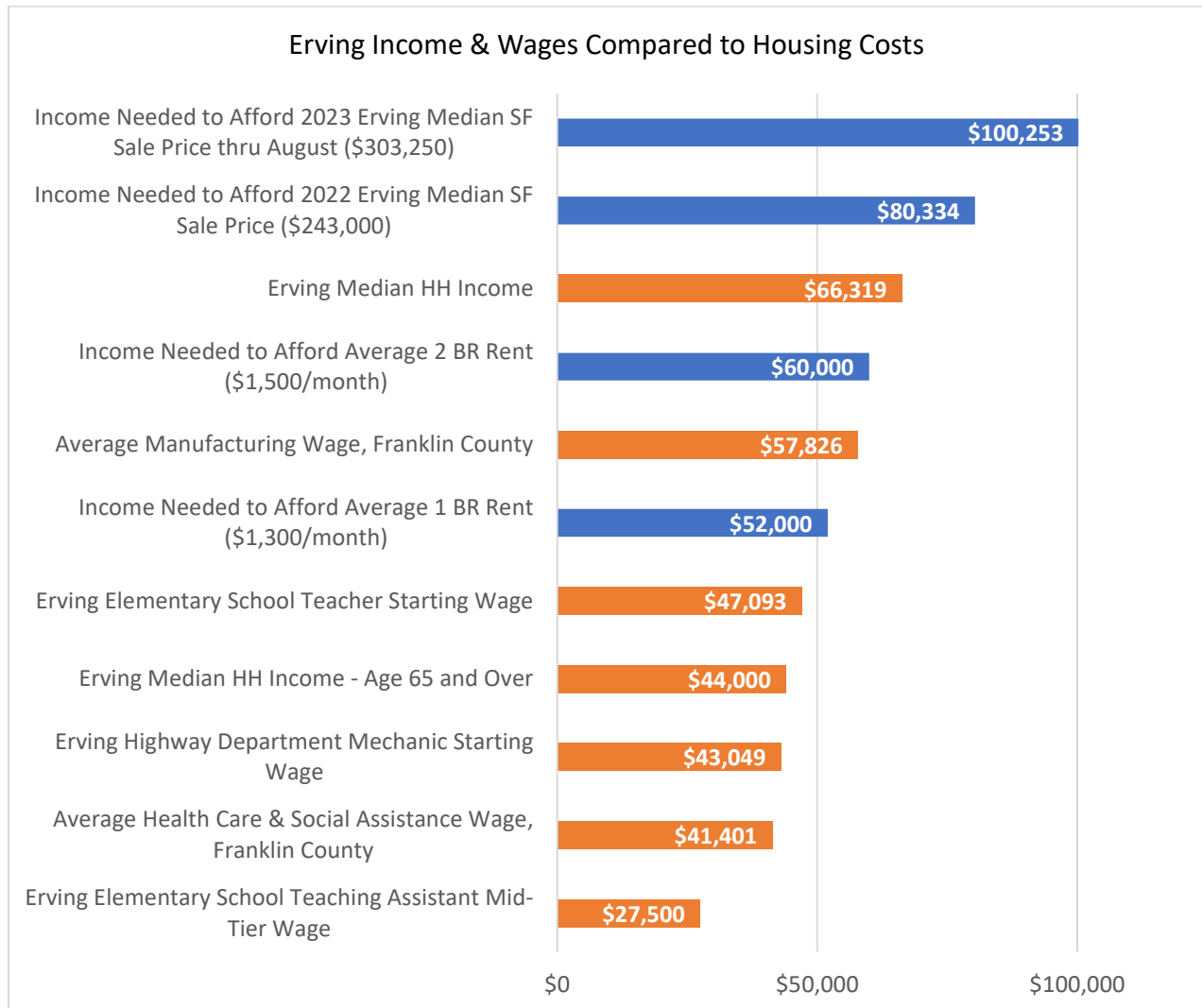
Need for More Options for Renters and Smaller Households

Seventy-six percent (76%) of Erving’s housing stock are single family homes, and 79% of Erving’s housing is owner-occupied. Over half (53%) of homes in Erving have 3 or more bedrooms, catering to larger households. However, the average household size is getting smaller – currently 2.26 people per household in Franklin County, and 2.49 people per household in Erving. Erving is in need of more rental housing, especially with fewer than 3 bedrooms, to serve households at a variety of ages, including seniors needing to downsize and smaller families.

Erving does not have any rental units that are restricted as affordable, meeting the State’s definition to be listed on EOHL’s (formerly known as DHCD) Subsidized Housing Inventory. The State prioritizes

funding developments that include family housing in communities that have not met the statutory affordable housing minimums under M.G.L. Ch. 40b.¹

A review of nearby apartments revealed median 1-bedroom rents at around \$1,300, and 2-bedroom rents at around \$1,500 (including utilities or a utility allowance). These prices are not affordable for any household earning less than \$52,000 for a one-bedroom, and less than \$60,000 for a 2-bedroom. Workers earning starting wages in many jobs, and those earning average wages in jobs like health care and social assistance, will find it hard to afford housing in Erving.

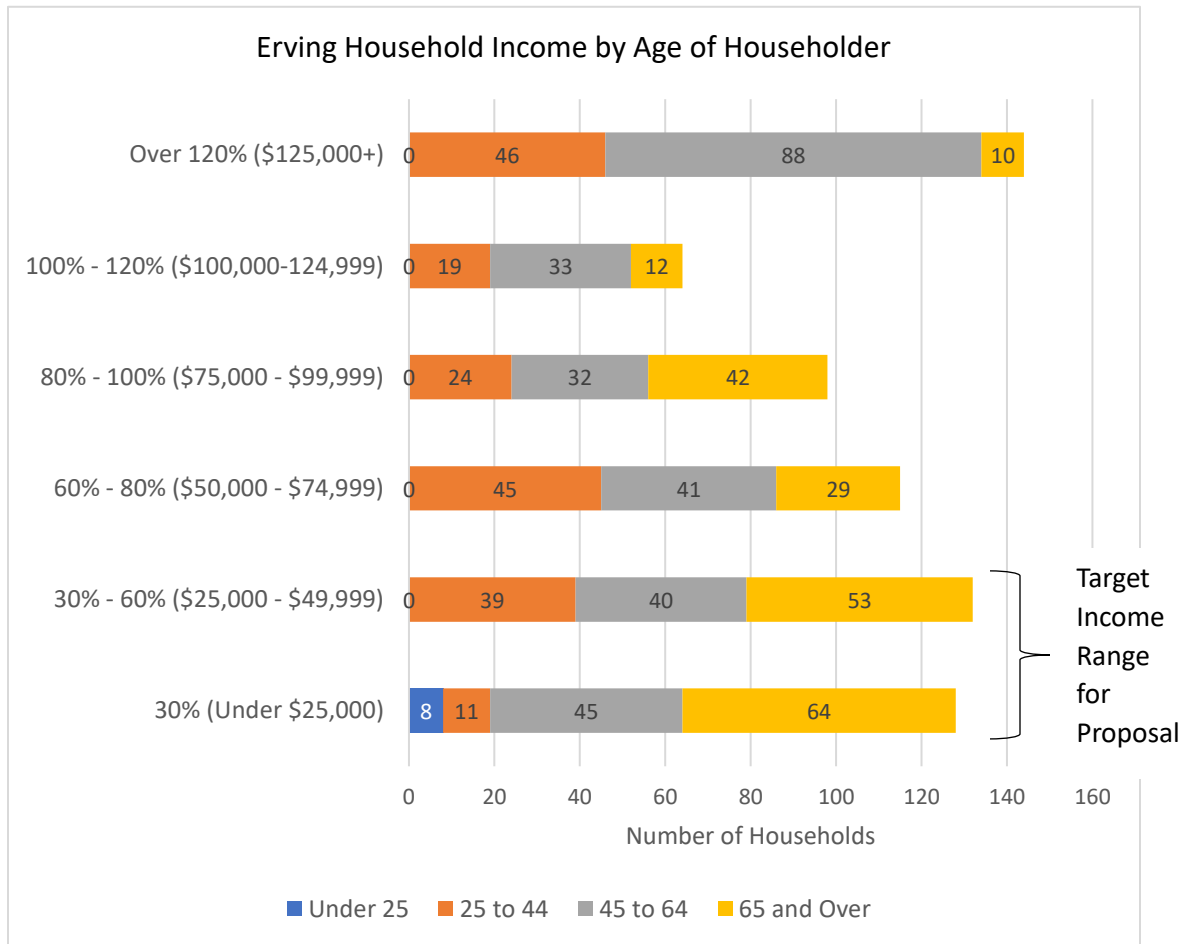


Source: MA Association of Realtors, U.S. Census Bureau, American Community Survey 5-year Estimates 2017-2021, MA Department of Economic Research 2022 Employment and Wages, FRCOG FY2023 Municipal Wage and Salary Survey, Erving School Committee and Erving Education Association 2021-2024 Wage Schedule, Erving School Committee and Erving Teachers’ Association 2022-2025 Wage Schedule.

¹ **“Family or senior housing production in communities in which the affordable housing stock, as defined by the state Subsidized Housing Inventory (SHI), is lower than 12%.** Sponsors who seek to build affordable senior housing in these communities should note that DHCD will evaluate each community’s prior support for affordable family housing.” *Low-Income Housing Tax Credit Program 2023-2024 Qualified Allocation Plan (As Amended)*, page 10. <https://www.mass.gov/doc/2023-2024-gap-0/download>

Senior households (with a householder aged 65 or over) have lower incomes than non-senior households in town, but many senior households (86%) own their homes. Affordable rental opportunities for seniors who are looking to move out of their single-family homes are limited. Erving has a need for senior rental housing at rents affordable for a range of income levels, but in particular, lower income seniors.

Approximately 38% of Erving households earn annual incomes below \$50,000, including many non-senior households who could also benefit from affordable housing opportunities.



Source: U.S. Census Bureau, American Community Survey 5-year Estimates 2017-2021

Benefits of Multi-Generational Communities

There are many benefits of multi-generational communities that accommodate households at various stages of their lives. As already noted, the demographic trend of population decline coupled with an increasing senior population in our region is unsustainable. As seniors leave the workforce, new workers are needed to fill those jobs, including in the health care and social assistance sector, which seniors rely on more as they age. Younger families are also needed to support the local and regional economy in other ways, including supporting the tax base and sustaining vibrant public schools.

At a neighborhood level, seniors and families living in multi-generational environments benefit. According to the AARP:

“Multigenerational housing refers to people of different generations, whether related or not, living together. This can be in the same house or in close proximity in the same residential building or neighborhood. Ideally, multigenerational living situations provide opportunities for interaction and engagement across generations rather than simply proximity. When multigenerational living is intentional, it is associated with better health outcomes, decreased loneliness among older adults, and better educational outcomes among children. It is also associated with lower poverty levels and can lead to cost savings on items like rent and childcare.”²

The Site and Amenities

In 1996, Town Meeting voted to approve the purchase of land abutting the existing Erving Elementary School property “for the purpose of industrial or commercial development, future school expansion, aquifer protection, open space, or other municipal purposes [...]” A parcel was added in 2014 for the purpose of building the new Erving Public Library. Altogether the Town owns 43.4 acres, including the school parcel, on the east side of the railroad tracks, according to the *Senior Housing Master Plan Project Report* prepared for the Town by Berkshire Design Group. The site is on Route 63 with easy access to Route 2 less than a half mile away.

The undeveloped areas of the Town-owned parcels are wooded, with a mix of northern hardwood and pine. An informal trail runs north-south along the rear of the woods, parallel to the railroad tracks behind the school. The Elementary School also has a trail network behind the school used for nature classroom activities.

The 7-acre parcel offered in the RFP for housing includes a relatively level area immediately behind the library, with steep slopes and streams to the west and south. This limits the developable area on the parcel to roughly 3 acres. The parcel is part of the groundwater protection overlay district for one of Erving’s public water supply wells, acting as groundwater recharge for the village of Erving and Millers Falls drinking water aquifer.



An informal trail runs along the rear of the wooded parcel. Photo by RDI staff during a June 2023 site visit.

² <https://policybook.aarp.org/policy-book/housing/other-housing-topics/multigenerational-living>

With the addition of the Senior Center in 2011, and the Library in 2020, the site offers an array of public amenities within walking distance of one another and the village of Erving. RDI staff visited the Senior Center in August and saw firsthand the impressive services offered to seniors. Senior Center Director Paula Betters provided a tour of the kitchen, large function room, lounge, consult room, exercise room, and small function room. She explained that staff are available to help seniors connect to various services and resources, and a weekly nurse is on site for private consults. FRTA van service provides on demand transportation to neighboring communities for seniors. Regular programming and monthly meals are well attended, not just by Erving seniors, but many from surrounding communities as well.

Across Care Drive, the impressive new Library offers programming for all ages, and a variety of community spaces including one large and two small meeting rooms, a children's room, and a makerspace. Next door, the Elementary School serves grades pre-k through 6, and hosts community programs such as the Summer Parks Program and recreation basketball. Consistent with regional demographic trends, over the past two decades, enrollment at the school decreased. In the 2000s, enrollment averaged 174; in the 2010s enrollment averaged 144. Enrollment dipped to 113 during the height of COVID. Since then, average enrollment has been 131 students, for an overall decrease of 24% since the 2000s.

Additional public investment in the area includes sidewalk improvements along Route 63, connecting the Library and Senior Center to the Elementary School and village of Erving. Within a half-mile walk is the recently renovated Park Street playground, and Veteran's Memorial Field, which is also slated for improvements. FRTA offers fixed-route service from Erving to Orange, Turners Falls, and Greenfield, with an opportunity to extend the route north for a stop at Care Drive. Public water and sewer has been extended to Care Drive to serve the new uses at the site. RDI understands a new sewer pump station will be needed to support additional development at Care Drive Extension.

Market and Financial Feasibility

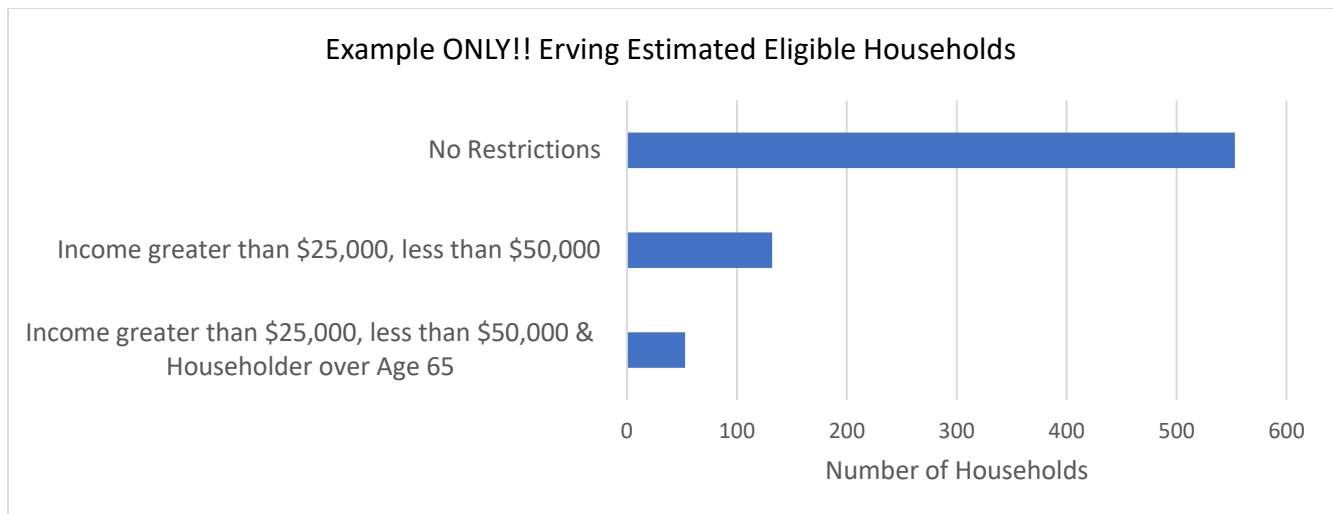
Housing Market

According to the UMass Donahue Institute's 2022 Springfield and Pioneer Valley Housing Phase II report, Franklin County has a current deficit of over 1,700 housing units affordable to low and extremely low-income households. A 2023 draft housing study for Franklin County, prepared for the FRCOG, shows a gap of over 900 units in the eastern section of the county, including Erving, for households earning less than \$50,000 in annual income. The largest need is for households earning less than \$30,000 a year. Multi-family rental housing is identified as the most needed type of new housing in the region. An estimated 165 units of new housing construction are in the development pipeline in nearby towns, including 20 1-bedroom affordable senior housing units in Athol.

Income or age restrictions, while targeting housing to populations most needing it, also limit the potential pool of applicants. Affordable housing supported by public and private funding requires a restriction that ensures the units are rented or sold to an income-eligible household at an affordable price. Income-restricted units that do not come with additional subsidy from a project-based voucher (which allows a tenant to pay only 30% of their income towards rent) must be priced to allow for a “window of affordability” to ensure new households moving in are not severely cost-burdened.

Age restrictions further limit the potential applicant pool for new housing. The Executive Office of Housing and Livable Communities prioritizes affordable senior housing developments with an age restriction of 62 and older for the primary householder. Below is an example of how the market becomes restricted with targeting:

Example Apartment Rent = \$1,050
Min. Income Needed = \$25,000



This assumes the available apartment suits the needs of all households (size, location, accessibility, etc.) and that all households are seeking housing, which of course is not the case. So, the actual numbers of possible eligible households likely to apply for the apartment would be much smaller.

While senior affordable housing is clearly needed in Erving and the region, the scale must be appropriate to both the site and the market. We can look to other small, rural communities in our region to help gauge the appropriate scale for affordable senior housing in Erving. The chart below compares the number of senior housing units in nearby rural communities, the overall population of these communities, and the per capita number of affordable senior housing units. These examples include public senior housing and private affordable senior housing.

Town	2020 Population	# Affordable Senior Housing Units	Units per capita
Bernardston	2,102	20	0.010
Northfield	2,866	20	0.007
Gill	1,551	14	0.009
Hatfield	3,352	47	0.014
Shelburne	1,893	46	0.024
Sunderland	3,663	33	0.009
Erving	1,665	18 (proposed)	0.011

We expect the age-restricted housing in our proposal will be attractive to existing Erving seniors, particularly cost-burdened renters and homeowners needing improved accessibility. We also expect to attract new senior residents from surrounding towns who are already connected to the services at the Senior Center. There are currently 84 senior households on the waitlists for RDI's other private affordable housing properties in Franklin County, and 62 seniors on the Section 8 Housing Choice Mobile Voucher Program waitlist in Erving and surrounding towns (see chart below). There is likely some overlap between these two waitlists.

Current Section 8 Waitlist by # of Bedrooms Needed and Householder Age				
Town	1 BR	2+ BR	# Age 62+ Households	# Non-Senior Households
Erving	14	14	2	26
Gill	8	5	3	10
Montague	92	75	36	131
<i>Millers Falls</i>	7	1	2	6
Northfield	10	6	5	11
Orange	66	80	14	132
Warwick	2	2	1	3
Wendell	5	3	1	7
Total	197	185	62	320

The eight townhouse units will serve a wider market, including families, seniors needing more than one bedroom, and multi-generational households. There are currently 127 non-senior households on RDI property waitlists in the county, in addition to the senior households noted above. Currently 320 non-senior households are on the Section 8 Housing Choice Mobile Voucher Program waitlist in Erving and surrounding towns, including 26 living in Erving (like the senior waitlists, there is likely some overlap between the non-senior waitlists). As the data shows, there is a need for more affordable housing options for seniors and workforce-age households.

Financial Feasibility

RDI, with our Real Estate Development Committee and consultants, reviewed several financial scenarios for the Care Drive site.

30 Unit Age-Restricted Senior Elevator Building:

This building would be like Sanderson Place with two or three stories. RDI did not propose this concept due to costs, operating budget and market concerns, and competitiveness for funding.

- Construction and operating costs are much higher than when Sanderson Place was bid. Multi-family construction costs in our region are over \$400 per sq. ft., based on recent bids for similar projects, not including site work. The State's requirement for two elevators for multi-story affordable senior housing adds to construction and long-term operating costs (elevators can cost \$4,000 - \$5,000 each for annual inspections and maintenance).
- The revenue generated by senior-only housing does not support much permanent debt and requires higher contributions from reserves to keep cashflow from going negative before the 15-year refinance period for LIHTC properties. RDI does not feel the market for 30 income and age-restricted units in Erving is strong enough to support this level of risk.
- It is unclear how competitive a senior only development will be without significant local funding commitment. State affordable housing funding sources are limited and extremely competitive; although an age-restricted senior housing development is eligible to apply for funding, the State is not prioritizing senior housing. And while larger or wealthier communities can contribute several hundred thousand dollars or more towards projects, Erving is not in that position.

18 Unit Age-Restricted Senior Single-Story Building:

We also looked at a smaller scale, less costly age-restricted senior scenario. RDI did not propose this scenario due to costs, lack of funding, and an unviable operating budget.

- While construction and operating costs would be lower due to simpler construction and no need for elevators, the gap in development sources for this scale of project is very large. Low Income Housing Tax Credits are not competitive at this scale, and there are simply no other funding sources that can make up such a large gap.
- While RDI feels more confident in leasing 18 units of income and age-restricted housing at Care Drive, income from this scenario does not support any permanent debt and insufficient cashflow.

26 Unit Mixed – 18 Unit Age-Restricted Senior Single-Story Building, 8 Family Townhouse Units:

This is the unit mix RDI is proposing for Care Drive. It seeks to balance cost, marketability, competitiveness, and the goals of the Town and Senior Housing Committee.

- The 18-unit, single story senior building will meet the goals of the Senior Housing Committee, providing quality, affordable, accessible housing on site with the Senior Center.
- Adding an additional 8 units of affordable, family housing for a variety of household types will increase income for the property, supporting permanent debt and the long-term operating budget.
- A mix of affordable senior and family housing will serve a wider market and will be more attractive to funders and LIHTC investors.

Below is a synopsis of rough sources and uses and funding gap for each scenario. The Project Financing section goes into more detail on the 26-unit scenario being proposed.

	30-Unit Senior	18-Unit Senior	26-Unit Mixed
Total Sources	\$15,169,110	\$3,600,000	\$15,235,623
Total Uses	\$16,181,349	\$10,515,567	\$15,683,812
ESTIMATED GAP (Local Contribution)	-\$1,012,239	-\$6,915,567	-\$448,188

Fiscal Impact

Erving, like many rural communities, is facing demographic and economic forces resulting in diminished tax revenue and increasing costs. Well-planned new housing development, especially when tying into existing services, adds to a town's tax base with minimal impact on costs to community services. Housing at Care Drive will leverage other public investments and is closely tied to existing community resources. RDI's proposal would invest millions of dollars into the site and infrastructure, generating short term jobs for construction, and supporting long-term resident services, property management, and maintenance jobs. The new housing will generate property taxes, or a payment in lieu of taxes, over the life of the development.

Senior housing at Care Drive has been the goal of the Erving Senior Housing Committee for many years. Locating senior housing on site with the Senior Center will create efficiencies in service and healthcare provision for the growing senior population.

The inclusion of multi-generational housing, while not a specific goal of the Senior Housing Committee, provides fiscal benefits to the Town as well. The housing will support the workforce and can help sustain enrollment at Erving Elementary School.

The challenges of rural school districts with declining enrollment were recently highlighted in a 2022 report by the MA Commission on the Fiscal Health of Rural School Districts.³ School budgets make up a significant portion of a community's overall budget, especially in rural towns. However, the State's

³ <https://malegislature.gov/Commissions/Detail/510/Documents>

methodology for calculating funding levels for schools is based on enrollment. Unfortunately, as enrollment declines, costs do not. This leaves towns with declining school enrollment having to cut resources and fill budget gaps left by inadequate State funding:

“The fundamental challenge for rural school districts is that when student enrollment declines by 15- 21% the costs of operating these schools do not decline at the same rate. Usually, the loss of students is spread out across multiple grades, so the situation does not often allow for the reduction of teaching positions proportional to the number of students lost across a school. The result is often the reduction or elimination of related arts or elective programs, enrichment programs, and extracurricular activities. In addition, over time, under-resourced town governments have been forced to choose between funding schools and reducing or eliminating other essential services. As cuts and reductions deepen, students and families often leave the district and a cycle with continued declining funding ensues.”

– *A Sustainable Future for Rural Schools*. Commission on the Fiscal Health of Rural School Districts, July 2022. Page 13.

While school costs have been used as an argument against new housing development for decades, Franklin County communities are in a position where new, affordable, quality housing for families is needed to help attract and retain students in our schools and house our workforce. Erving and other communities have an opportunity to take proactive steps towards addressing these trends.

Development Objectives

This section outlines the ways in which the proposed Project responds to the Town’s stated development objectives:

Affordability

All 26 proposed units will be affordable and eligible for listing on the State’s Subsidized Housing Inventory. The proposed mix of affordability is responsive to the demographic and market data which show a high level of need for senior and workforce housing units at 60% of the Area Median Income (AMI) and below within Erving and surrounding towns. This proposal reaches a deeper level of affordability, with 8 units for very low-income senior households at or below 30% AMI (supported by project-based Section 8 rental subsidies so that residents only pay 30% of their gross income for rent); 4 units for senior households at or below 50% AMI (supported by project-based MRVP rental subsidies); and 6 units for senior households at or below 60% AMI.

Similarly, the workforce housing units will serve a mix of income levels, with 6 units proposed to be supported by project-based MRVP rental subsidies for households earning up to 50% AMI, and 2 units affordable for households earning at or below 60% AMI.

All utilities (heat, hot water, and electricity) are projected to be included in rent. This will make units more affordable for occupying households, as well as simplifying finances for residents.

Unit Types

The proposal provides housing for low-moderate income seniors in an accessible building specifically designed for seniors. All 1-bedroom apartments will be visitable for a person in a wheelchair, and all unit bathrooms will be fully accessible. Two apartments will be fully accessible. All units will be adaptable, with removable base cabinets under the kitchen sink, cooktop and a portion of the workspaces to provide knee space for residents using wheelchairs. The single-story design is preferred by seniors who will not have to rely on an elevator to exit the building.

The inclusion of age-friendly workforce housing allows for multi-generational households and supports seniors at different stages of their lives. Three of the units are specifically designed to be attractive to senior households: one 2-bedroom unit will be fully accessible, located on a single story; and the two 3-bedroom units are designed with a bedroom and full bathroom with walk-in shower on the first floor. These units may be attractive to grandparents raising their grandchildren, families and adults caring for a senior household member, and seniors who may need an extra bedroom for a live-in aid, for example.

Building Design and Aesthetics

The buildings are designed to fit into the rural character of Erving. The senior building has barn-like features and RDI proposes materials and colors that fit into the natural landscape. The townhouse units are farmhouse style with porches and varying roof heights, similar to many farmhouses in New England that were added onto over the generations.

Project Amenities

In-unit laundry is provided in the senior building in all units. Additionally, the senior building includes a property management office that can also be used for consultations with service providers, and a multi-function room with kitchenette for community or private resident events. The building design centers around a wide inner corridor, or “street” providing ample interior social space for residents in all weather. This space will have natural lighting and various seating options for lounging, dining, or socializing. A screened porch at the back of the building will give residents an outdoor space looking out over the woods for relaxing or socializing. This space allows residents to be outside without worrying about mosquitos and insect-borne disease. An exterior patio with raised garden beds is also proposed, with accessible walkways connecting the building to parking and sidewalks. Extra tenant storage space is in a shed easily accessible from the parking area.

In-unit laundry is provided in the townhouse units. These units feature larger closets for storage. The property management office can also be used as a small consultation office for residents and service providers. These units have easy access to parking and walk-out access to the yard. A play area is visible from all units and is located safely away from the road and parking areas. Covered outdoor bicycle parking is proposed for the senior building and the townhouses.

Energy Efficiency

The State strongly prioritizes funding projects that incorporate green, sustainable, and climate resilient features. The Care Drive housing proposal will meet the Stretch Energy Code for new multi-family residential construction and will seek deeper energy efficiency through other green building paths, such as Enterprise Green Communities, LEED, and/or Passive House. The Center for EcoTechnology (CET), as our energy consultants, will help the design team consider these options and ensure the project meets the chosen energy goals. The initial feasibility grant awarded to RDI from CEDAC will in part be used to explore which green building path fits best with this project, if chosen as developer by the Town.

The buildings will be designed for rooftop solar PV. RDI will explore the potential for including battery energy storage along with the solar PV to increase resiliency and efficacy of the system. The site design utilizes low impact development techniques to reduce environmental impacts, including clustering development on the site and reducing the amount of pavement, infiltrating stormwater with green infrastructure, and using an array of non-invasive, pollinator friendly plants and trees.

Site and Circulation

The proposal extends Care Drive far enough into the site to create adequate frontage and emergency vehicle access with a tear-drop shaped cul-de-sac. The option for the Town to extend Care Drive to the rear of the property as a future development phase is maintained. The proposal will tie into existing water, sewer, electric, and telecommunications infrastructure on Care Drive. The cost for extending and constructing Care Drive Extension and associated infrastructure is included in the project budget. It is RDI's expectation that the Town of Erving will accept Care Drive Extension as a public roadway and maintain it as such. The cost for the pump station, however, is not included in the project budget. RDI will work with the Town to identify funding sources for the new pump station and assist with applications. MassWorks, a competitive State infrastructure funding source through the Community One Stop for Growth application, prioritizes projects that support new development.

Sidewalks will be extended along Care Drive Extension on both sides and will connect to accessible walkways to the new senior and townhouse buildings. It is RDI's expectation that the Care Drive Extension sidewalks will be part of the public right of way, and not maintained by RDI property management. The proposal includes potential public trail access from several areas. RDI will work with the Town to identify and design a primary public access point to the forested area from Care Drive Extension. The public trail network itself is not included in the project budget. Potential funding sources for trail development and maintenance are included in the Project Finance section.

A future FRTA bus stop with shelter and bike racks is proposed on Care Drive in front of the Erving Library. This location maximizes access to all uses on site, is highly visible, and located on public property, which is preferred by the FRTA. RDI, the Town, and the FRTA will coordinate on the final

location and design of a bus stop. Funding for a bus shelter, bus signage, and bicycle racks are not included in the project budget. RDI will support the FRTA and Town with necessary funding applications for these improvements.

The site plan provides a generous forest buffer between the library and the new townhouse units. On the north side of Care Drive Extension, connectivity between the new senior housing building and the Senior Center are prioritized. A clear line of site is maintained between the main entrance to both buildings. A landscaped buffer with trees and a rain garden is located between the Senior Center parking lot and the senior housing parking lot to break up the pavement and for stormwater management.

Preliminary Site Design Narrative

Preliminary site design is guided by cost, Low Impact Development principles, and the need for a cohesive campus plan centered on the Library and Senior Center, with soft edges and buffers and space for walking trails. Construction is focused away from the steep hillsides which surround the buildable area, most of which are within 100' wetland boundaries, and preserves the plateau of flat forested ground that is primarily surrounded by steep drop offs and presents a unique opportunity for forested public trails.

This parcel is home to a healthy native upland forest of Eastern White Pine, several Oak and Maple species, and Hemlock, with an understory consisting of large stands of Mountain Laurel and striped maple, as well as viburnums, wood fern, prince's pine, and Pennsylvania sedge. There is a remarkable absence of invasive species occurring on the site, with a few mature invasive honeysuckle shrubs on the woodland edge. RDI proposes to reduce site development costs and preserve the character of significant parts of the site by focusing new development activity on the areas closest to the existing Library and Senior Center. This presents a unique opportunity for preserving a beautiful natural place that can be accessible to the community and enjoyed by everyone, becoming an integral part of the neighborhood campus.

Prior to obtaining a site survey and finalizing the site plan, an arborist or forest biologist will be employed to identify and flag significant trees and plant communities on the site. The surveyor will then locate and identify significant trees and shrubs as well as other features such as trails and edges of significant changes in slope or tree cover on the survey plan. The final site plan will accurately locate trails, special views, significant trees, and large stands of Mountain Laurel, in order to minimize impact to the site as a whole while preserving native plant diversity and highlighting special natural features as much as possible. This will set the stage for the town to create an accessible public trail system through the beautiful natural areas on the campus which could connect to adjacent town-owned properties in the future.

RDI will work with the site contractor prior to start of site work to identify and enclose the Designated Area of Work as well as portions of woodland to be preserved within the Designated Area of Work boundary. Our contract with the companies and contractors working on site will include penalties associated with the destruction of trees and topsoil outside of the Designated Area of Work and within protected areas within the area of work, as well as a process for proposing and approving limited exceptions as needed during construction.

Physical Plan, Architectural Character, Green Design Elements

Physical Plan

The site plan is centered around the traffic circle at the end of Care Drive, a one-way paved road running in a 120' diameter circle (or teardrop) in a counterclockwise direction. In the middle of the circle is an open "common" wildflower meadow, with a depression at the low end for stormwater retention and infiltration. This area could have a park-like feel with trees and a bench on the uphill side to enjoy during the warmer months but would also be used for stormwater management and a large section would remain open and stable enough for snow storage as needed. While RDI will develop the Care Drive circle as part of the development of the site, our intention would be for the Town to accept it as a public way once completed.

The first exit on the right from Care Drive will take you to the senior housing parking lot, where a rain garden bioretention swale with native plantings provides a soft visual buffer and stormwater storage between the senior housing and the Senior Center parking lot. A covered entrance to the Senior Housing allows visitors and residents to be dropped off under cover. Parking is to the side of the building, with accessible pathways leading to the main entrance. A shed with cubbies for resident storage is planned adjacent to the parking area, for easy access from vehicles. The northeast side of the building offers views of the woods and a potential trail connection to the future trail network.

The southwest side of the Senior Housing building offers lawn and gardens, with a patio and paths skirted by stormwater infiltration trenches with native shrub plantings giving privacy to the units. A utility pullout for the shared dumpster enclosure and garden sheds, as well as an access drive circling around to the rear of the building (for maintenance and emergency vehicles) defines the edge of the lawn.

The workforce housing parking lot is tucked in behind the buildings on the southwest side of the Care Drive circle, providing easy access to each unit. The buildings resemble rambling farmhouses with porches and varying roof lines. Each unit has a plainly visible front door with a small front porch, and a view toward the parking area from the kitchen. A well-marked one-story section of the building closest to the roadway houses an office for the property manager, and for use by residents to meet with service providers.

On the south side of the workforce housing buildings, all units look out into a common backyard and play area, have a semi-private space near their back door, and have a view into the woodland buffer between the housing and the Town library. An access drive circles through the woodland buffer to connect to the back end of the workforce housing parking lot for emergency vehicle access. RDI envisions the entry to the access drive at Care Drive as a possible trailhead and public access to future woodland trails in the undisturbed forest beyond. A small parking area with one regular and one accessible parking space is located just off the circle for access to the public trails. If the parking area is occupied, would-be hikers can park in the senior center or library parking lots close by.

RDI proposes using Low Impact Development stormwater systems and practices such as bioretention areas, infiltration trenches, rain gardens, cisterns and rain barrels, and tree and shrub planting. Our schematic plan shows a number of these features in concept; the final design will be the result of more specific site analysis and stormwater calculations.

Architectural Character

The 62+ age restricted 18-unit building is a large single story barn style structure with a social core in the form of a wide sunlit, indoor “street” in the middle of the building. An area near each unit’s front door provides a bench and a front porch-like feel, and a window over the sink from each unit’s kitchen looks out to the central corridor. These semi-private/semi-public elements give residents the ability to control the level to which they are inviting their neighbors to be social; closed curtains mean you are not interested in interacting; open curtains invite a smile and a wave. The corridor is narrower at each end of the building so that residents can choose to live in the midst of the social scene in the middle, or in a more private unit at the North or South end of the building. The whole length of the corridor will have bright high ceilings and natural light from above, from either windows or commercially sized tubular skylights.

As noted, the townhouse style buildings resemble typical New England farmhouses, often added onto over generations to create multiple sections and roof lines. Similar to the senior building, the townhouses are designed to provide transition from private space with semi-private/ semi-public stoops leading out onto the common lawn area.

Green Design Elements

RDI proposes incorporating many green building elements into the Care Drive housing, including:

Green Building Certification: Early in the design process, the development team will work to determine the best green building approach for the project and will model various construction methods including panelized and modular construction. In addition to meeting requirements for Mass Saves incentives for new construction, the project will meet ENERGY STAR Multifamily New Construction certification program requirements. If feasible, deeper energy conservation will be sought through Passive House or

LEED certification. Specific elements of these certification programs that the project will meet or exceed include:

Building Energy Performance: Achieve a HERS index rating of 45 or less for individual units.

Electrification of Heating, Cooling, and Hot Water: Efficient electric HVAC and hot water systems will be designed for the building, utilizing no on-site fossil fuels.

Water-Conserving Fixtures: Water-conserving fixtures in all units and any common facilities will meet current EPA WaterSense criteria.

Energy Star Appliances: Energy Star labeled appliances will be installed (refrigerators, dishwashers, clothes washers, clothes dryers).

Lighting: High-efficacy lighting (LED or fluorescent), controls, sensors, and other characteristics for all permanently installed lighting fixtures in project dwelling units, common spaces and exterior will be installed.

Use of Recycled, Non-Toxic, and Low-Embodied Carbon Materials: Use of interior paints and primers with No- VOC levels; use of FSC Certified wood; recycled and/or low embodied carbon insulation; etc.

On-Site Clean Energy Systems: In addition to a focus on energy conservation, the project will include roof-top solar PV to generate on-site electricity. The development team will also pursue the possibility of including on-site battery storage to pair with the solar PV for use as back-up power in the case of a grid outage.

Construction Staging Plan

Leading up to the start of construction, the Project Manager will meet with representatives of the Senior Center, Library, and Elementary School to review the schedule and anticipated daily construction hours, identify any concerns, and establish lines of communication if concerns arise during construction. The Project Manager will coordinate with the GC to work around any key Town events on or near the site that may be impacted by construction activities.

The Project Manager will serve as the main contact for Town staff to communicate issues during the construction period. The Project Manager will address concerns with the GC and project team to resolve issues in a timely manner. RDI's recent experience at Sanderson Place, constructed in a residential neighborhood on a busy street, required close coordination with abutters as well as the town, as they rebuilt Main Street during the construction of Sanderson Place.

A dedicated and qualified Clerk of the Works will be hired for the Care Drive housing project. The Clerk's scope includes pre-construction, construction, and post-construction services. During construction, the Clerk will monitor progress and conduct weekly on-site observation and spot checks on quality of work. The Project Architect will make at least weekly visits to the site. The project team will hold weekly construction meetings on-site which will be open to Town officials to attend.

Project Financing

Development Sources and Uses

A Budget Summary Sheet and a detailed Development Budget is provided below that gives a financial overview of the Project.



Erving Care Drive Housing

10/18/2023

Development Budget Summary

Sources of Funds

Tax Credit Equity	\$10,385,623
EOHLC State Funds	\$3,400,000
FHLB AHP	\$850,000
Permanent Debt	\$600,000
Local Contribution / Grants	\$448,188

TOTAL SOURCES **\$15,683,812**

Uses of Funds

Acquisition	\$0
Construction	\$11,859,669
General Development	\$2,184,705
Developer Overhead	\$719,719
Developer Fee	\$719,719
Capitalized Reserves	\$200,000

TOTAL USES **\$15,683,812**

TDC / Unit	\$603,224
EOHLC Subsidy / Unit	\$130,769



Erving Care Drive Housing

10/20/2023

Development Budget Detail

		Total Budget	
Sources of Funds			
Equity (LIHTC Federal)		\$8,765,623.35	
Equity (LIHTC State)		\$1,620,000	
HIF		\$1,000,000	
EOHLC Gap		\$400,000	
AHTF		\$1,000,000	
HSF		\$1,000,000	
FHLB		\$850,000	
Other:	Local	\$448,188	Could include the \$149,000 towards sewer main extension
Permanent Debt		\$600,000	
Total Sources		\$15,683,811.62	
Uses of Funds			
Acquisition			
Hard Costs			
	Direct Construction		
	Dwelling Units	\$10,682,250.00	Includes solar PV and onsite site work
	Site Costs	\$350,000.00	Includes public road extension; sewer pump station excluded
	Total Construction	\$11,032,250	
	Construction Contingency	\$827,418.75	
	Total Hard Costs	\$11,859,668.75	
Soft Costs			
	Construction Loan Interest	\$335,000.00	
	Architectural & Engineering	\$750,000.00	
	Survey & Permits	\$15,000.00	
	Clerk of the Works	\$75,000.00	
	Environmental Engineer	\$30,000.00	
	Legal: Owner	\$150,000.00	
	Legal: Investor & Lender	\$180,000.00	
	Title and Recording	\$20,000.00	
	Accounting & Cost Certific	\$60,000.00	
	Marketing & Rent Up	\$10,000.00	
	Insurance	\$75,000.00	
	Appraisal	\$25,000.00	
	Inspection Engineer	\$30,000.00	
	Fees to: EOHLC tax credit	\$23,760.00	
	Constr loan	\$87,000.00	
	Development Consultant	\$150,000.00	
	FFE	\$50,000.00	
	Soft Cost Contingency	\$118,945.45	
	Total Soft Costs	\$2,184,705.45	
Other Development Costs			
	Developer's Overhead	\$ 719,718.71	
	Developers Fee	\$ 719,718.71	
	Capitalized Operating Reserves	\$200,000.00	
Total Uses of Funds		\$15,683,811.62	
TDC/Unit		\$603,224	
Total EOHLC subsidy		\$3,400,000	
Net EOHLC / Affordable Unit		\$130,769	

Development Budget Assumptions

At this stage, construction cost estimates are based upon a square foot construction cost. If selected by the Town, an early task for the Development Team will be to advance plans sufficiently to obtain an accurate professional cost estimate for the Project.

Federal LIHTC revenue is assumed at a rate of \$.89 per \$1 credit. State LIHTC revenue is assumed at a rate of \$.81 per \$1 credit. We are maximizing the State credit ask at \$400,000 (maximum for projects under 40 units), and the Federal credit ask at \$960,000, which is the project's estimated eligible basis cap. LIHTC allocation will be applied for through EOHLIC's 2025 winter One Stop funding competition. Final equity contribution to the project will be dependent on investor interest in the project and sale rate for credits. Once the tax credits have been awarded by EOHLIC, a competitive RFP will be issued to solicit the highest yield and investor match for the project. RDI successfully obtained State and Federal LIHTC allocations for Sanderson Place. Massachusetts Housing Investment Corporation (MHIC) is the tax credit investor for that project.

State subsidy contribution of \$3,400,000, or \$130,769 per unit is assumed. These funds will be applied for through EOHLIC's 2025 winter One Stop funding competition. RDI successfully secured \$3.6M in State subsidies for Sanderson Place.

Federal Home Loan Bank of Boston (FHLB) direct subsidy of \$850,000 is assumed. This is the maximum amount currently available to affordable rental housing projects through FHLB's Affordable Housing Program. To be competitive, projects must target at least 50% of units to households earning 50% AMI or below, meet green building standards, and other criteria. Applications are accepted during an annual funding round, typically due in July, with awards announced in December. If RDI is chosen as developer, an application will be submitted in the 2024 funding round. RDI secured an FHLB direct subsidy of \$500,000 for Sanderson Place.

We are assuming a local contribution to fill the budget gap of \$448,188. These funds could be sourced from the Town, donations, grants, or a combination. The EOHLIC application process looks at local support as one of the funding criteria and this would increase the project's overall competitiveness. The Rural and Small-Town Development Fund, a grant available through the Community One Stop for Growth application, can be used to directly subsidize the development. Maximum grant awards are capped at \$500,000. Other potential grants are identified below. Some of these sources can go directly to supporting the housing development budget, while others may be used towards public improvements to support the project, such as the sewer pump station. RDI will work with the Town Administrator and Town Planner on identifying grants and preparing applications.

Grant Program	Eligible Uses	Grant Amount	Application Timeframe
Rural and Small-Town Development Fund https://www.mass.gov/how-to/rural-and-small-town-development-fund	Provide further subsidies to an affordable housing project to directly create affordable housing units or increase the number of affordable units in a new housing project. Public infrastructure improvements. <u>Potential Uses for Erving:</u> Direct subsidy to fill development gap Sewer pump station and sewer expansion	\$50,000-\$500,000	Community One Stop for Growth – Applications due in June
MassWorks Infrastructure Program https://www.mass.gov/info-details/massworks-infrastructure-program	Improvements to land and/or infrastructure that is currently publicly owned. Program investments will be targeted to projects that require infrastructure improvements or expansion to support and/or facilitate new growth or address road safety issues. <u>Potential Uses for Erving:</u> Sewer pump station and sewer expansion	No limit, but very competitive	Community One Stop for Growth – Applications due in June
Municipal Vulnerability Preparedness (MVP) Action Grant https://www.mass.gov/info-details/mvp-action-grant	Planning, assessments, capacity building, design, permitting, construction/ on the ground implementation Wide range of projects, focus on nature-based solutions, climate resiliency. Can include green infrastructure, solar installation, etc. <u>Potential Uses for Erving:</u> Direct subsidy to project to support solar PV, battery energy storage, green stormwater infrastructure, or other green building / resiliency features.	Average grant size \$450k	Spring
Complete Streets Funding Program https://gis.massdot.state.ma.us/completestreets	MassDOT program to support multi-modal transportation network. Can fund construction of sidewalks, crossings, transit bus stops, street lighting, bicycle parking, stormwater management, and street trees. <u>Potential Uses for Erving:</u> New bus shelter, bike racks, signage	\$500,000	Rolling

Grant Program	Eligible Uses	Grant Amount	Application Timeframe
MassTrails Grant https://www.mass.gov/guides/masstrails-grants	<p>Provides matching grants to communities, public entities and non-profit organizations to plan, design, create, and maintain a diverse network of trails, trail systems, and trails experiences.</p> <p>Eligible grant activities include project development, design, engineering, permitting, construction, and maintenance of recreational trails, shared use pathways, and the amenities that support trails.</p> <p><u>Potential Uses for Erving:</u> Design and construction of public trail network</p>	Generally up to \$60,000 for local projects	February 2024

Operating Budget

A 15-Year operating budget is provided. At year 15 it is projected the project will be refinanced and re-syndicated.



Erving Care Drive Housing

20-Oct-23

Operating Income	YEAR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
		2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
	Inflation Factor															
Gross Residential Rent	2%	389,592	397,384	405,332	413,438	421,707	430,141	438,744	447,519	456,469	465,599	474,910	484,409	494,097	503,979	514,058
- Residential Vacancy	5%	<u>19,480</u>	<u>19,869</u>	<u>20,267</u>	<u>20,672</u>	<u>21,085</u>	<u>21,507</u>	<u>21,937</u>	<u>22,376</u>	<u>22,823</u>	<u>23,280</u>	<u>23,746</u>	<u>24,220</u>	<u>24,705</u>	<u>25,199</u>	<u>25,703</u>
= Residential Income		370,112	377,515	385,065	392,766	400,622	408,634	416,807	425,143	433,646	442,319	451,165	460,188	469,392	478,780	488,355
= Effective Gross Income		370,112	377,515	385,065	392,766	400,622	408,634	416,807	425,143	433,646	442,319	451,165	460,188	469,392	478,780	488,355
Operating Expenses	3%															
Management Fees		22,207	22,873	23,559	24,266	24,994	25,744	26,516	27,312	28,131	28,975	29,844	30,740	31,662	32,612	33,590
Resident Services		36,675	37,775	38,909	40,076	41,278	42,516	43,792	45,106	46,459	47,853	49,288	50,767	52,290	53,858	55,474
Legal/Administrative		61,640	63,489	65,394	67,356	69,376	71,458	73,601	75,809	78,084	80,426	82,839	85,324	87,884	90,520	93,236
Utilities and Trash		28,600	29,458	30,342	31,252	32,190	33,155	34,150	35,174	36,230	37,317	38,436	39,589	40,777	42,000	43,260
Maintenance/Repairs and Grounds		63,520	65,426	67,388	69,410	71,492	73,637	75,846	78,122	80,465	82,879	85,366	87,927	90,564	93,281	96,080
Real Estate Property Tax		26,000	26,780	27,583	28,411	29,263	30,141	31,045	31,977	32,936	33,924	34,942	35,990	37,070	38,182	39,327
Insurance		44,200	45,526	46,892	48,299	49,747	51,240	52,777	54,360	55,991	57,671	59,401	61,183	63,019	64,909	66,856
= Total Operating Expenses		282,842	291,327	300,067	309,069	318,341	327,891	337,728	347,860	358,296	369,045	380,116	391,519	403,265	415,363	427,824
- Transfer to Reserves	\$250/unit	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500
= Net Operating Income		80,770	79,687	78,498	77,197	75,780	74,243	72,579	70,783	68,850	66,774	64,549	62,169	59,627	56,917	54,032
- Debt Service (p+i) bank		53,681	53,681	53,681	53,681	53,681	53,681	53,681	53,681	53,681	53,681	53,681	53,681	53,681	53,681	53,681
= Net Cash Flow		27,089	26,006	24,817	23,516	22,099	20,561	18,897	17,102	15,169	13,093	10,868	8,488	5,946	3,236	350
Debt Coverage Ratio-Bank Loan	DCR ≥ 1.15	1.50	1.48	1.46	1.44	1.41	1.38	1.35	1.32	1.28	1.24	1.20	1.16	1.11	1.06	1.01

Operating Budget Assumptions

The operating budget is based on actual operating costs for affordable senior housing currently managed by HRA in Franklin County. This includes funding for resident services.

Eight HUD Section 8 Project Based Vouchers are proposed to subsidize units for senior households earning up to 30% AMI. RDI will apply for available Section 8 vouchers through a housing agency. After an Environmental Review and Subsidy Layering Review by HUD and/or EOHLIC, RDI will enter into a contract with the awarding agency for payment of rent and utilities based on HUD Fair Market Rents and Franklin County payment standards. Tenants will pay up to 30% of their income towards rent, while the subsidy will cover the remaining amount.

Ten Massachusetts Rental Voucher Program (MRVP) project-based vouchers are proposed to subsidize senior and workforce households earning up to 50% AMI. RDI will apply for the MRVP vouchers through EOHLIC's 2025 winter One Stop funding round. If awarded, RDI will enter into a contract with the administering agency for rent and utility payments based on HUD Fair Market Rents for Franklin County. Tenants will pay up to 30% of their income towards rent, while the subsidy will cover the remaining amount.

RDI successfully secured eight Section 8 and six MRVP project-based vouchers for Sanderson Place. The State has indicated more MRVP vouchers will be made available in upcoming funding rounds.

A permanent loan of \$600,000 at 6.5% interest for a 20-year term is assumed. RDI obtained a comparably sized loan for Sanderson Place through Greenfield Savings Bank, who also served as construction lender. It is anticipated that a comparable construction to permanent loan structure would be used in Erving.

The budget includes trending levels recommended by EOHLIC (rents at 2% per annum and expenses at 3% per annum). Due to this adverse trending, by year 12, cash flow is minimal and will require contributions from the operating reserve to support debt service and maintain a debt service coverage of 1.15 (typical requirement for lenders).

Unit Square Footage, Income Target, and Proposed Rents

Unit Type	Proposed Qty.	Approx. Square Feet	Income Target	Proposed Rent
Senior 1 BR	8	600	30% AMI	\$1,218 (Sec 8 PBV) *
Senior 1 BR	4	600	50% AMI	\$1,107 (MRVP PBV) *
Senior 1 BR	6	600	60% AMI	\$1,065 **
Workforce 2 BR	4	800 - 1,000	50% AMI	\$1,454 (MRVP PBV) *
Workforce 2 BR	2	1,000	60% AMI	\$1,278 **
Workforce 3 BR	2	1,200	50% AMI	\$1,766 (MRVP PBV) *

* FY2024 HUD Fair Market Rents, updated annually. Section 8 Housing Choice Payment Standards in Franklin County are 110% of FMR.

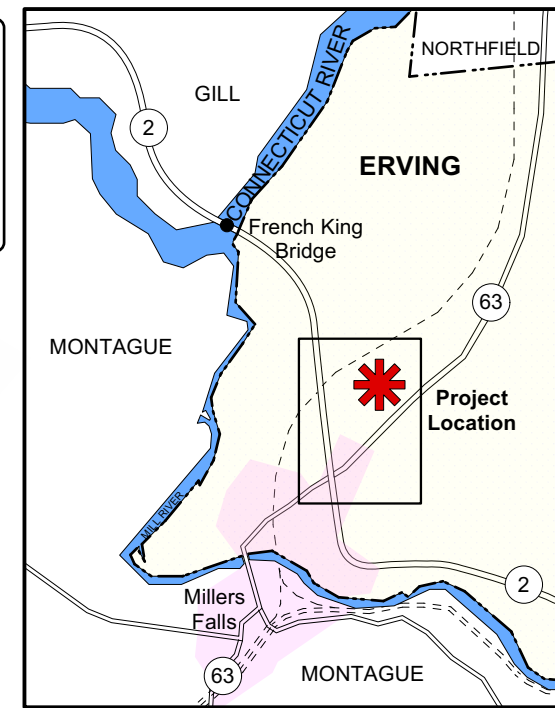
**Based on 2023 HUD Multifamily Tax Subsidy Projects (MTSP) Income Limits, updated annually.

C. Conceptual Design Drawings

POTENTIAL TRAIL SYSTEM BY OTHERS, CONNECTING TOWN PROPOERTIES

TOWN-OWNED PROPERTY (YELLOW/PATTERN)

ABANDON FULL LENGTH OF CARE DRIVE TO REDUCE DAMAGE TO NATURAL FEATURES OF SITE



2 Location Key
Scale: not to scale



Prepared by:
Rural Development, Inc
 241 Millers Falls Road,
 Turners Falls, MA 01376
 (413)863-9781
 Executive Director:
Gina Govoni
 Project Manager:
Alyssa Larose
 Project Coordinator:
Jen Hale

Architects:
Tom Chalmers, AIA
Patrick Kitzmiller
 Austin Design Cooperative
 Brattleboro, VT

Development Consultant:
Christine Rogers

Care Drive Housing
 Town of Erving, MA

Date: October, 2023

Title Page

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Rte 2 WEST: TO TURNERS FALLS, GREENFIELD, AND INTERSTATE-91 CORRIDOR

63 NORTH: TO RIVERVIEW PICNIC AREA, NORTHFIELD, & NEW HAMPSHIRE

ROUTE 2

ROUTE 63

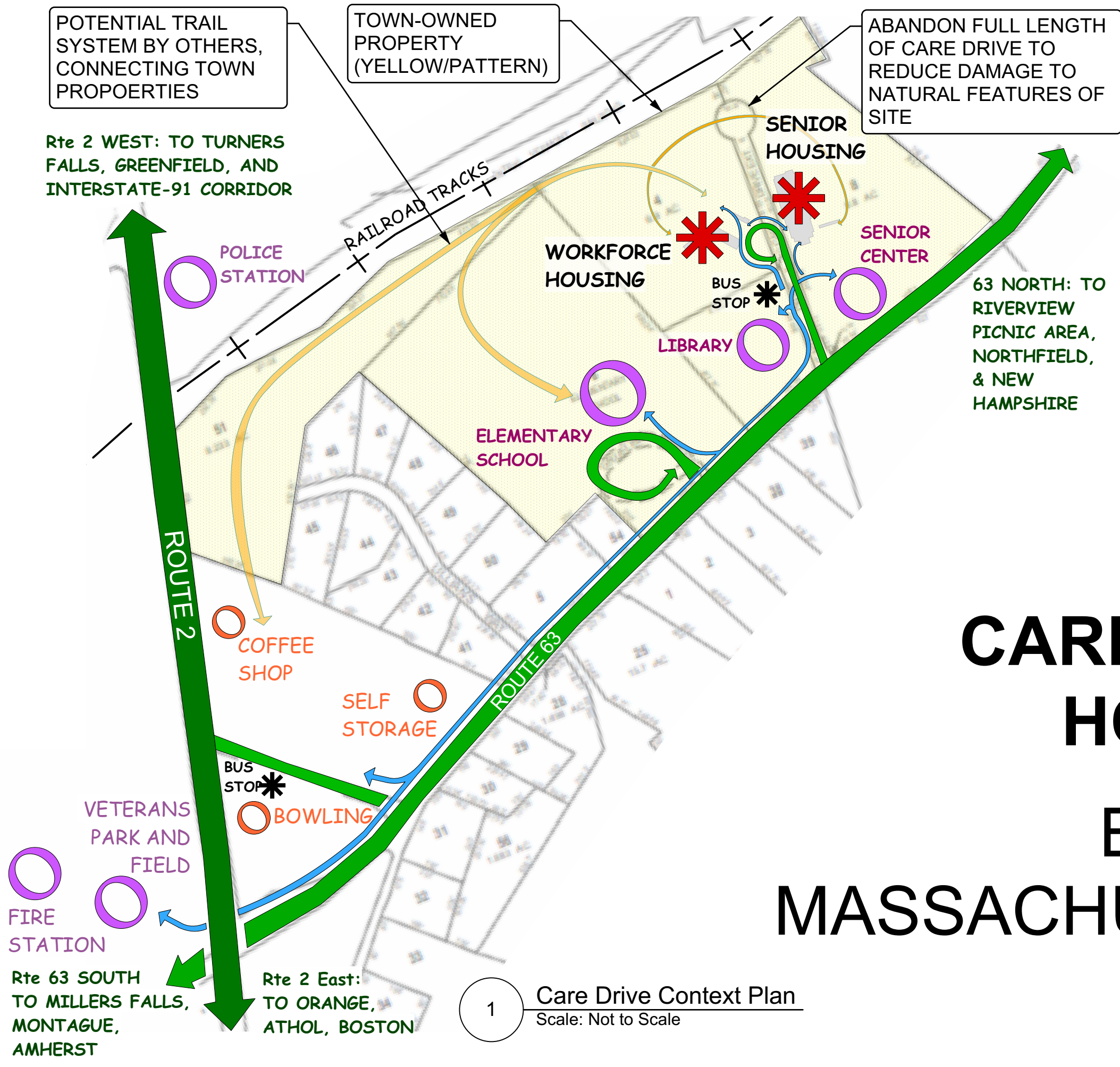
Rte 63 SOUTH TO MILLERS FALLS, MONTAGUE, AMHERST

Rte 2 East: TO ORANGE, ATHOL, BOSTON

1 Care Drive Context Plan
Scale: Not to Scale

CARE DRIVE HOUSING

ERVING, MASSACHUSETTS



Prepared by:

Rural Development, Inc
241 Millers Falls Road,
Turners Falls, MA 01376

(413)863-9781

Executive Director:
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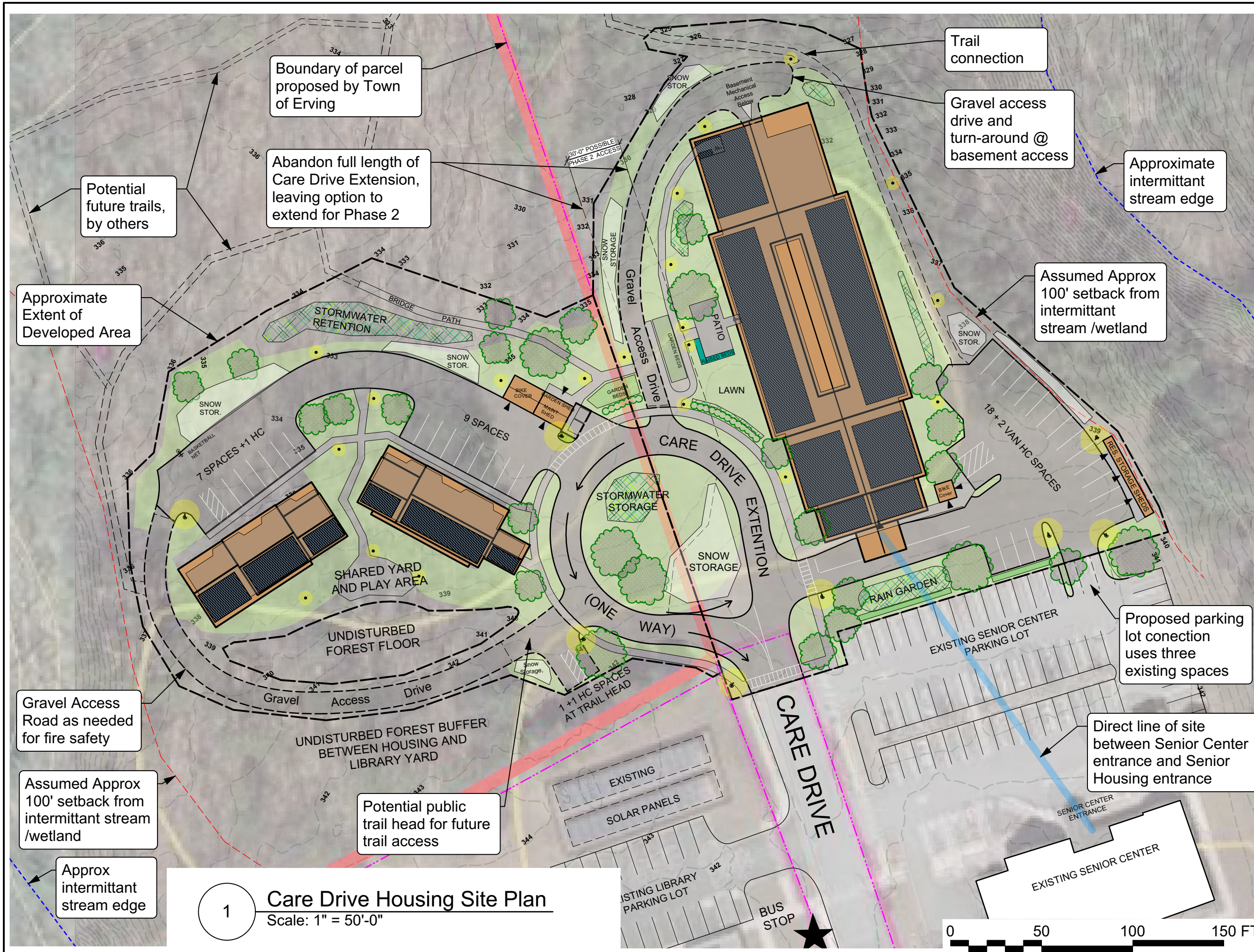
Care Drive Housing Town of Erving, MA

Date: October, 2023

Site Plan

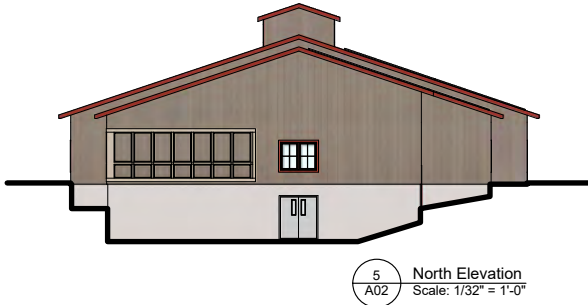


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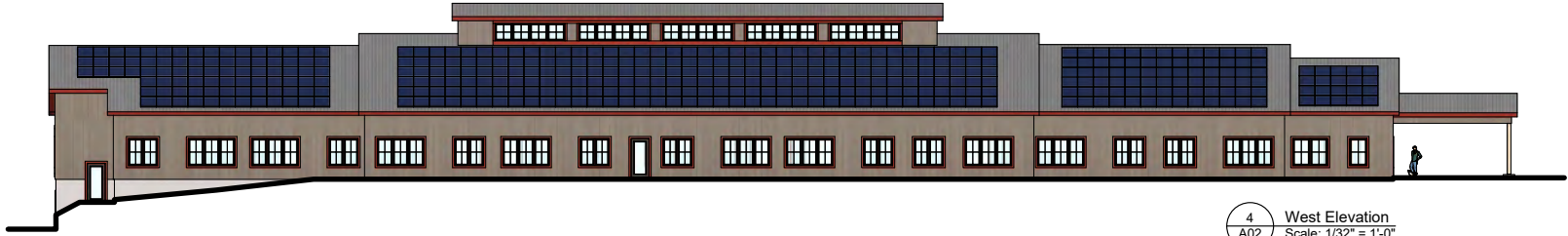


1 Care Drive Housing Site Plan
Scale: 1" = 50'-0"

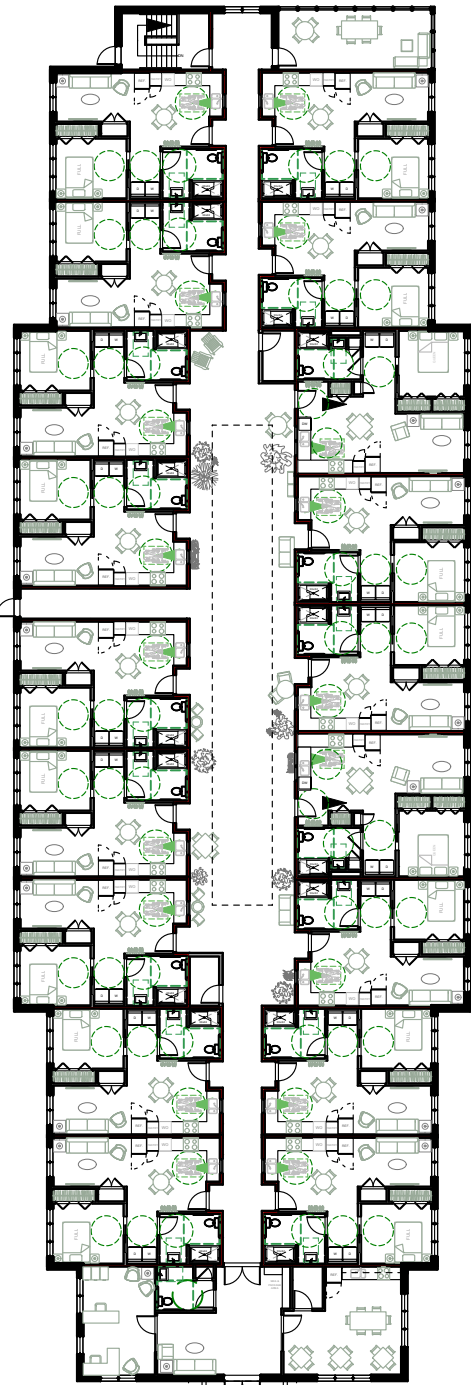




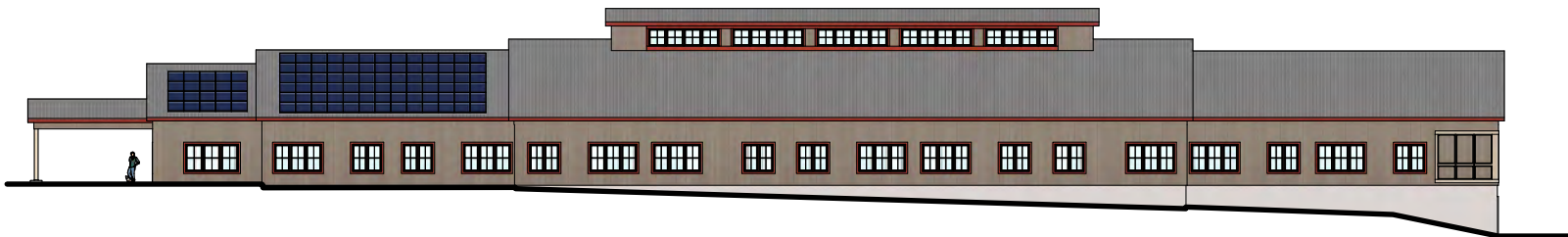
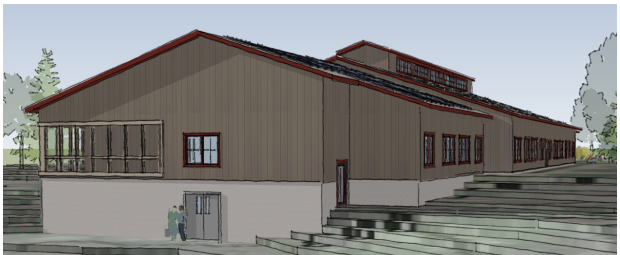
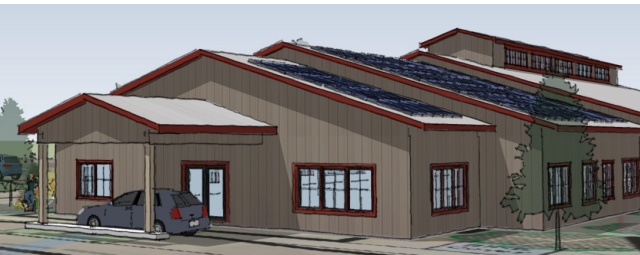
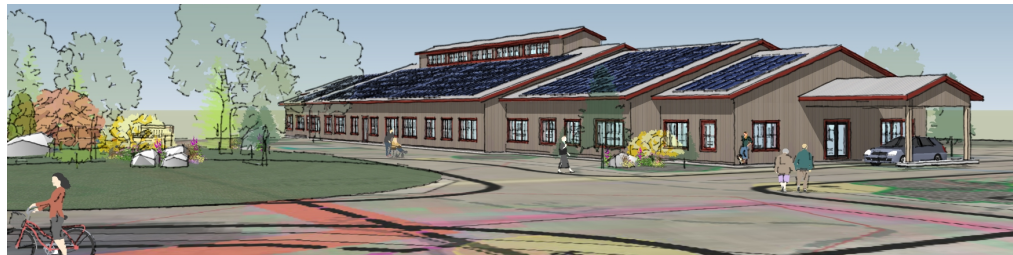
5 North Elevation
Scale: 1/32" = 1'-0"



4 West Elevation
Scale: 1/32" = 1'-0"



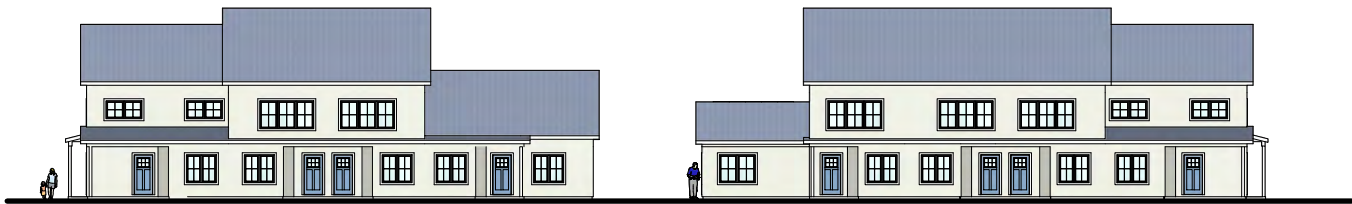
1 Senior Bldg 1st Floor Plan
Scale: 1/32" = 1'-0"



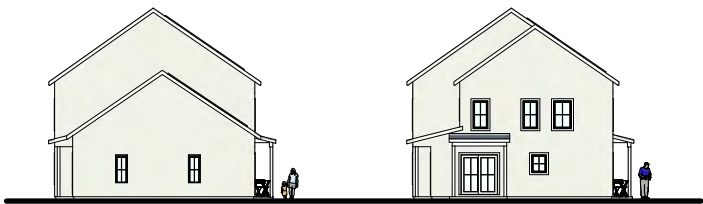
3 East Elevation
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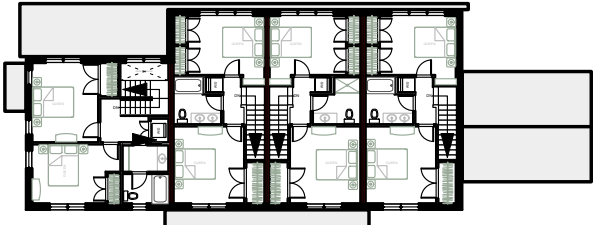
2 South Elevation
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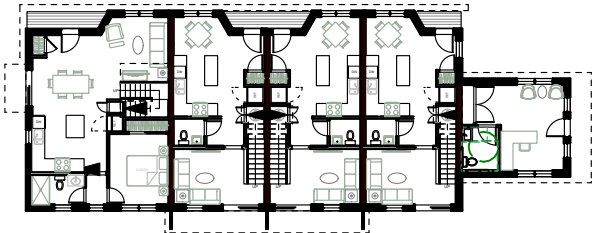
8 Worker Housing North Elevation
Scale: 1/32" = 1'-0"



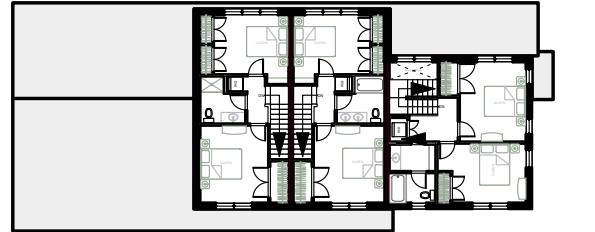
7 Worker Housing West Elevation
Scale: 1/32" = 1'-0"



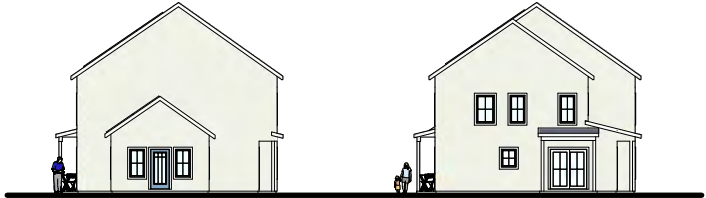
4 Bldg 02 2nd Floor Plan
Scale: 1/32" = 1'-0"



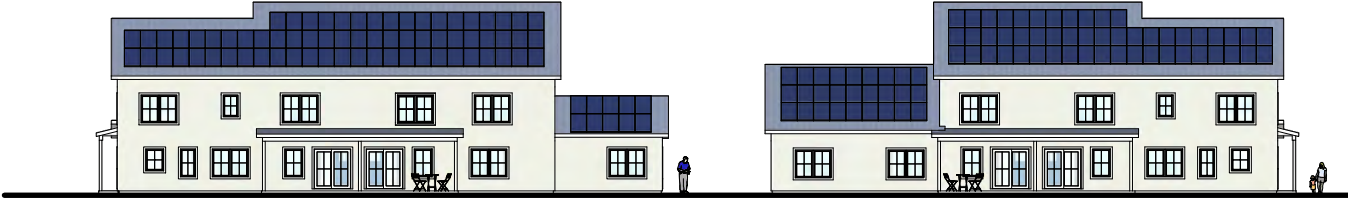
3 Bldg 02 1st Floor Plan
Scale: 1/32" = 1'-0"



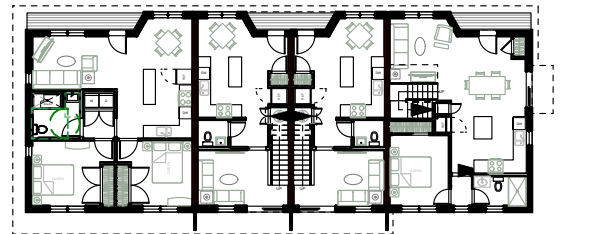
2 Bldg 01 2nd Floor Plan
Scale: 1/32" = 1'-0"



6 Worker Housing East Elevation
Scale: 1/32" = 1'-0"

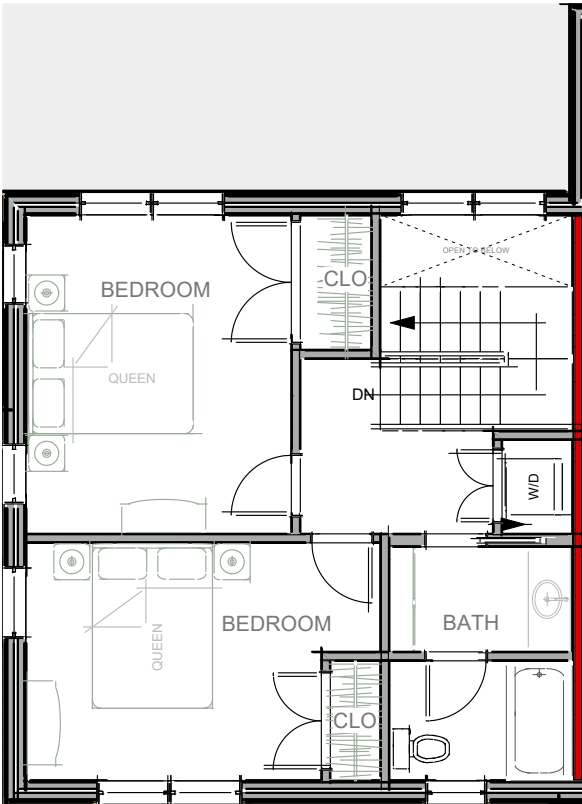


5 Worker Housing South Elevation
Scale: 1/32" = 1'-0"

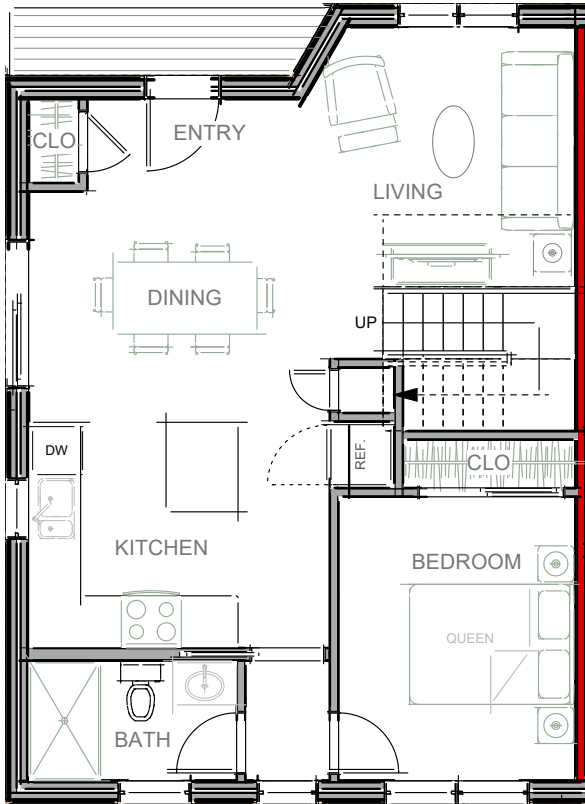


1 Bldg 01 1st Floor Plan
Scale: 1/32" = 1'-0"

Approximate Area = 1215sf/Unit

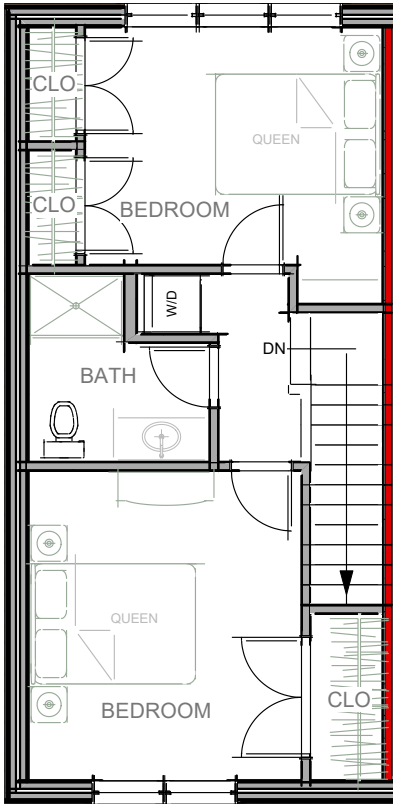


5 TYP 3-Bdrm Unit 2nd Floor
A03 Scale: 1/8" = 1'-0"

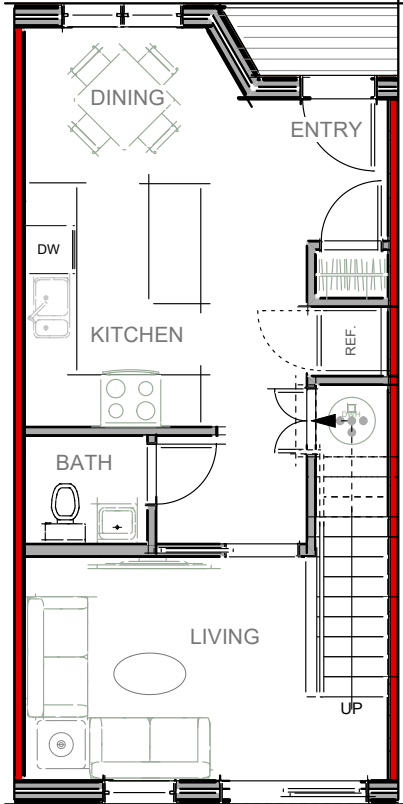


4 TYP 3-Bdrm Unit 1st Floor
A03 Scale: 1/8" = 1'-0"

Approximate Area = 920sf/Unit

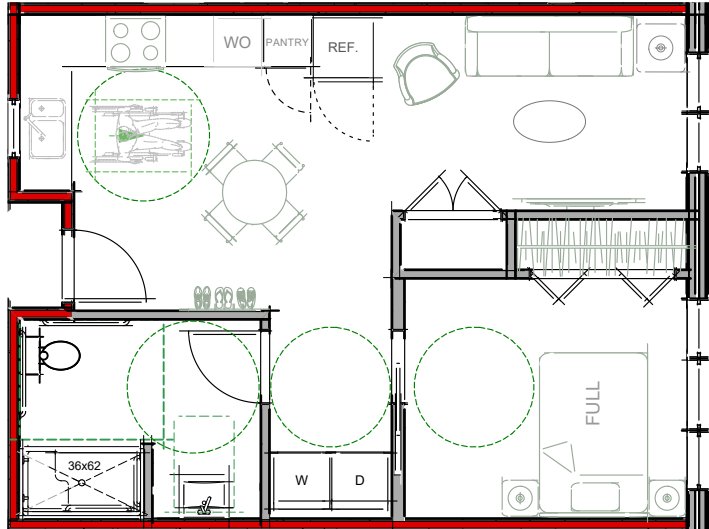


3 TYP 2-Bdrm Unit 2nd Floor
A03 Scale: 1/8" = 1'-0"



2 TYP 2-Bdrm Unit 1st Floor
A03 Scale: 1/8" = 1'-0"

Approximate Area = 600sf/Unit



1 TYP 1-Bdrm Senior Unit Plan
A03 Scale: 1/8" = 1'-0"

D. Management Plan

The management agent for this Project will be HRA. Information about HRA and its relevant experience has been provided above.

RDI and HRA have worked together before on 9 affordable housing projects totaling 143 rental units. All of the rental housing that has been developed by RDI is managed by HRA. Sample projects at which RDI and HRA have worked together are the Crocker Bank Building and Cutlery Apartments and Sanderson Place. Full details for these projects have been included in the Developer and Development Team section.

HRA will provide full-service property management including but not limited to:

- Conduct outreach and marketing for the Project
- Hold the lottery for tenants and managing waiting list
- Tenant selection according to EOHLC-approved Affirmative Fair Marketing and Resident Selection Plan
- Lease up units
- Compliance with all regulatory requirements and reports to funders
- Collect rent and security deposits
- Track all Project financing and ensuring the Project is managed on budget
- Maintain low vacancy rate through rapid turn-over of units and keeping wait list up to date
- Enforce lease terms
- Maintain and repair the buildings
- Maintain the grounds, including snow removal and landscaping
- Oversee trash removal
- Maintain adequate insurance
- Coordinate sub-contractors and tradesmen
- Ensure compliance with audit requirements
- Coordinate with legal counsel
- Asset management—maintain schedule of replacements and manage capital reserves

Target Market

Rents in the Project are designed to be affordable to populations at certain income tiers by ensuring that these households do not pay more than 35% of their gross income for housing costs (rent and utilities).

Proposed rents for units targeted to very low-income senior households (<30% AMI) will be set at the Section 8 Housing Choice Voucher Payment Standard for a 1-bedroom apartment in Erving, which are based on HUD's Fair Market Rents. Currently this rent is \$1,218 for a 1-bedroom unit (including all utilities). This rent will be affordable to the target population because these units are expected to have

Section 8 project-based rental subsidies. This subsidy source limits occupant payments to 30% of gross income for rent.

The 50% AMI units are set at 100% of HUD's Fair Market Rent for Erving. Currently a one-bedroom apartment rent is \$1,107, a 2-bedroom apartment rent is \$1,454, and a 3-bedroom apartment rent is \$1,766 (including all utilities). These rents will be affordable to the target population because RDI plans to apply for project-based rental subsidies through the Massachusetts Rental Voucher Program for these units. Similar to Section 8 subsidy, this subsidy source limits occupant payments to 30% of gross income for rent.

The 60% AMI units are projected to rent for \$1,065 for a 1-bedroom unit and \$1,278 for a 2-bedroom unit. A single person household in a 1-bedroom unit earning 60% AMI (\$41,880) would spend 31% of gross income for rent; a two-person household living in a one-bedroom unit and earning 60% AMI (\$47,820) would spend 27% of income for rent. A two-person household earning 60% AMI (\$47,820) and renting a 2-bedroom apartment would spend 32% of income for rent, and a three-person household earning 60% AMI (\$53,820) and renting a 2-bedroom apartment would spend 28% of gross income on rent.

Future rent levels will be strictly prescribed by funders who establish maximum rent levels annually: 30% and 50% rents will be governed by HUD's annual Fair Market Rents; 60% rent limits will be set at or below LIHTC rent limits, which change annually based on HUD income limits for Franklin County. For budgeting purposes, a 2% annual increase in rents is projected.

Marketing and Lottery

HRA will be responsible for the marketing and lottery processes. HRA will follow an Affirmative Fair Housing Marketing and Selection Plan that will be created during predevelopment. This Plan will be consistent with EOHLIC's Guidelines and will receive prior approval from EOHLIC before being implemented. HRA has repeated experience developing and following such Plans and conducting lotteries using fair housing guidelines.

With the Town's assistance, the Developer will seek EOHLIC approval for a local preference for this Project. Allowable categories for local preference are:

- (1) Current residents: A household in which one or more members is living in the city or town at the time of application. Documentation of residency should be provided, such as rent receipts, utility bills, street listing or voter registration listing.
- (2) Municipal Employees: Employees of the municipality, such as teachers, janitors, firefighters, police officers, librarians, or town hall employees.
- (3) Employees of Local Businesses: Employees of businesses located in the municipality.

(4) Households with children attending the locality's schools.

The *maximum* local preference set-aside allowed by DHCD is 70% of eligible units.

The lottery and resident selection process shall be conducted in accordance with the *Affirmative Fair Housing Marketing and Resident Selection Plan Guidelines, updated May 2013* published by EOHLC and will follow a Plan that has received prior EOHLC approval.

The lottery agent will be HRA. HRA has conducted numerous affordable housing lotteries in the past. The most recent lottery conducted by HRA was for Sanderson Place in Sunderland (in 2022), which it manages and RDI owns. HRA's role was to manage all aspects of the lottery process including drafting the Affirmative Housing Marketing and Resident Selection Plan; gaining EOHLC approval of the Plan; conducting marketing in accordance with the Plan; showing units to prospective tenants; coordinating the lottery event; compiling lottery results to generate project wait lists; notifying participants of their placement on the wait lists. The outcome of these lotteries was to generate bona fide wait lists for the respective projects in a fair and open manner.

Summary of Marketing

At least 9 months before units are ready for occupancy, broad-based marketing of the project will take place including: print, on-line, radio, direct mail and other types of outreach. Outreach will target local and regional groups working with seniors, such as the Erving Senior Center, LifePath, Meals on Wheels, VNA, TRIAD, the SHINE Program, and others. Low-income seniors on current HRA and RDI wait lists for Housing Choice mobile vouchers or senior housing, particularly those who currently live in Erving and surrounding communities, will be notified. HRA will work with the Erving Senior Center on outreach to reach all seniors who are Erving residents, who are employed in Erving, or who have immediate family living in town.

Outreach for the eight multi-generational family units will include coordination with the Erving Elementary School, Erving Library, and Erving Recreation Commission to reach a wide range of families in town. Notice will also be provided to households on HRA and RDI waitlists in Erving and surrounding communities. HRA and RDI will work with regional organizations including Community Action Pioneer Valley, North Quabbin Community Coalition, MassHire Franklin Hampshire Career Center, and Greenfield Community College, to get word out to families seeking housing.

TTY services will be utilized, as needed, for deaf or hard of hearing applicants and HRA staff will be available to assist applicants who need help to complete an application.

Summary of Lottery

Approximately 3 months before units are ready for occupancy, a lottery will be held to rank applicants following EOHLIC standards. To enter the lottery, households must complete a lottery application to verify age (for age-restricted units) and income eligibility. If a local preference is approved by EOHLIC the lottery will consist of two pools of applicants—the “open” pool and the “local preference” pool. The “local preference” pool will be adjusted to reflect the minority composition of the region, as required by EOHLIC. A wait list for the Project will be created from lottery results. Applicants will be screened in order of their placement on the wait list. Tenant screening will include verification of income using 3rd party documentation and reference checks. Preference for two- and three-bedroom units will be for households requiring the total number of bedrooms.⁴ Maximum household size is based on health and sanitary code.

⁴ Based on EOHLIC Affirmative Fair Housing and Resident Selection Guidelines, household size should be appropriate for the number of bedrooms in the home. Households with disabilities must not be excluded from a preference for a larger unit based on household size if such larger unit is needed as a reasonable accommodation.

E. Implementation Plan and Timetable

Following this narrative is a proposed Implementation Plan / Timetable with key Project milestones. Many activities will take place simultaneously in order for the Project to move forward at the desired pace. The timetable shows that the Developer can proceed with initial funding applications (specifically Rural and Small-Town Development Fund and Federal Home Loan Bank) within 6 months of the Town's selection of the Developer.

The milestone that has the most potential for variation from the timetable is receiving financing from EOHLIC through the State's "One Stop" funding round. The attached timetable assumes that an application is made when the Project is "ready to proceed" which is a requirement to be competitive at the State level. However, even when "ready to proceed" and worthy projects are submitted to EOHLIC, there is such a high level of demand for resources that it is not unusual for a project to have to re-submit a second time to receive funding. This can mean an added year until project implementation.

Required Approvals and Permits

The schedule for securing approvals is included in the Implementation Plan / timetable that is attached.

- ✓ Project Eligibility Letter (EOHLIC)
- ✓ Comprehensive Permit (Erving ZBA)
- ✓ Groundwater Protection District Special Permit (Erving Selectboard)
- ✓ Orders of Conditions (Erving Conservation Commission)
- ✓ Storm Water Management Permit (DEP)
- ✓ Finding of "No Adverse Impact" (Mass Historic Commission)
- ✓ Environmental Assessment and Finding of No Significant Impact (EOHLIC / HUD)
- ✓ Subsidy Layering Review (EOHLIC)
- ✓ Typical Local Construction Permits including: Driveway Permit, Building Permit, Plumbing, Electrical, and HVAC Permits, and any other permits local officials may require

Anticipated Zoning Waivers

The Care Drive parcels are located in the Central Village (CV) zoning district and the Groundwater Protection Overlay District (GP). Anticipated zoning waivers include:

1. Allow for more than one principal structure or dwelling on a lot (Sec. 3.1.1, Sec. 4.1)
2. Allow for Multi-Unit Dwellings by-right through a Comprehensive Permit from the Zoning Board of Appeals (Sec. 3.1.2 A)
3. Allow for an Accessory Structure / Building larger in size than 300 sq. ft. (Sec. 4.3.2)

Environmental Requirements

The likely use of federal funds to accomplish this project will trigger a National Environmental Policy Act (NEPA) environmental review. This will include a comprehensive assessment of impacts of the proposed development on the surrounding environment, as well as of conditions in the surrounding

environment on the proposed development. The areas of likely concern in this review (based on information known at this time) include:

Historic – A Project Notification Form will be filed with the Massachusetts Historic Commission (MHC) for review. MHC will issue a “finding of no adverse impact,” assuming the project does not impact historically significant resources.

Environmental Site Hazards - If selected by the Town, one of our first actions will be to conduct a Phase I Environmental Site Assessment to verify that there is no contamination on the site. Should environmental hazards be identified, we would work together with the Town towards remediating the site so that it can be used for housing.

Wetlands – According to the 2017 *Senior Housing Master Plan Project Report* provided as part of Addendum #2, a wetland scientist conducted a preliminary identification and regulatory assessment. Two jurisdictional, intermittent streams were identified, one running between the Elementary School and Library parcels, and one running to the north of the Senior Center parcel. A 100 ft. buffer is associated with each of these resource areas. If selected by the Town, RDI will consult with the Erving Conservation Commission on confirming the boundary delineation of resource areas on site. If jurisdictional wetlands are identified, the project team will work with the Conservation Commission and regional DEP office to review the project and clarify which permitting category the project falls within in regard to State or Federal review.

Stormwater Pollution Prevention Plan - Since the site is greater than one acre, the selected site contractor may be required to submit a NPDES (National Pollutant Discharge Elimination System) SWPP (Stormwater Pollution Prevention Plan) permit prior to mobilizing on the site. The objective of this permit is to reduce negative impacts to nearby water bodies during construction. A NPDES SWPP permit requires the contractor to demonstrate the reduction of sediment, debris, and chemicals into nearby storm systems or rivers, lakes, or coastal waters.

To assist the contractor in appropriately bidding and anticipating the extent of and materials required for protection, the design team will prepare a stormwater management and erosion control plan. Within this plan, the limit of work is indicated as well as the extent of construction fencing, erosion control fencing, storm structure silt sacks, as well as notes indicating terms and conditions for preventing runoff or sedimentation during construction. Any specific terms associated with protecting jurisdictional wetlands as determined by the Erving Conservation Commission or state DEP will be integrated into the bid documents.

Implementation Plan / Timetable

Project Milestone	Projected Completion Date
Proposals Due to Town	October 25, 2023
Town Selects Developer	December 1, 2023
Execute Development Agreement	January 1, 2024
Complete Phase I Environmental Site Assessment	February 1, 2024
Apply for CEDAC Predevelopment Loan	February 5, 2024
Complete wetlands delineation / Determination of Applicability	March 1, 2024
Approval of CEDAC Predevelopment Loan	March 15, 2024
Dig test pits and complete soils analysis (for stormwater planning and geotechnical data for building design)	April 1, 2024
Complete schematic designs	May 1, 2024
Complete Traffic Study, as needed	May 1, 2024
Prepare request for Project Eligibility Letter (PEL); submit to EOHLC	May 15, 2024
Submit MHC Project Notification Form	May 15, 2024
Obtain professional cost estimate	June 1, 2024
Prepare and submit Community One Stop Application	June 1, 2024
EOHLC Review of PEL, Site Visit, and Issuance of PEL	June 15, 2024
Prepare Notice of Intent; submit to Erving ConCom	June 15, 2024
Obtain MHC approval	June 15, 2024
Prepare Comprehensive Permit Application and submit to Erving ZBA	July 1, 2024
Prepare application and submit to Federal Home Loan Bank	July 31, 2024
ConCom issues Orders of Conditions	August 30, 2024
ZBA Hearings for Comprehensive Permit	September 1, 2024
ZBA issues permit for Project	October 1, 2024
Prepare and Submit Pre-Application to EOHLC for Winter 2025 One Stop Funding Round	October 15, 2024
EOHLC approves Project for Submission	November 15, 2024
Obtain Preliminary Commitment Letters from Funders: construction loan, LIHTC	November 15, 2024
Funding Award from Federal Home Loan Bank	December 31, 2024
Complete 75% Construction Drawings; obtain updated cost estimates	January 1, 2025
Prepare and Submit One Stop Funding Application to EOHLC	January 15, 2025
Funds awarded by EOHLC	May 1, 2025
Complete construction and site plans; select and enter into contract with GC	August 1, 2025
Apply for and obtain construction-related permits	December 1, 2025

Prepare for, and close on, EOHLIC funds	January 1, 2026
Execution of land lease with the Town with affordable housing deed restriction	January 1, 2026
Construction Begins	February 1, 2026
Market Project, screen in-coming applications	September 2026 - February 2027
Lottery for Tenant Selection	March 2027
Construction Complete	May 1, 2027
Certificate of Occupancy Issued	May 15, 2027
Lease-Up of Units to Achieve full occupancy	October 1, 2027
Final Closing with Funders—sustained occupancy	January 1, 2028

Appendix

Contents:

Certificate of Tax Compliance

Certificate of Non-Collusion

Disclosure of Beneficial Interest

IRS 501 (c)(3) Letter of Determination

Development Team Staff Resumes and Firm Qualifications

Rural Development, Inc.

Austin Design Cooperative

Christine Rogers

Berkshire Design Group

Center for EcoTechnology

Lenders Letters of Interest

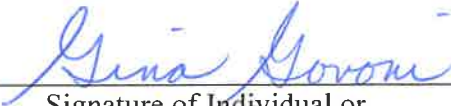
Community Economic Development Assistance Corporation (CEDAC)

Massachusetts Housing Investment Corporation (MHIC)

Greenfield Savings Bank

CERTIFICATE OF TAX COMPLIANCE

Pursuant to Massachusetts General Laws, Chapter 62C, Section 49A, I certify under the penalties of perjury that to my best knowledge and belief, the bidder identified below has filed all state tax returns and paid all state taxes required by law and has followed state laws related to reporting employee and contractor wages and withholdings, and submitting child support payments.




Signature of Individual or
Corporate Officer

Rural Development, Inc.

Corporate Name

Gina Govoni, Executive Director


Printed Name and Title



Date

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, government entity, or other organization, entity or group of individuals.




Signature of Individual or
Corporate Officer

Rural Development, Inc.

Corporate Name

Gina Govoni, Executive Director

Printed Name and Title



Date

Attachment H | TAX COMPLIANCE CERTIFICATE

Tax Compliance Certificate

Pursuant to M.G.L., Chapter 62C, sec. 49A, the individual executing this proposal certifies, under pains and penalties of perjury, that to the best of his/her knowledge and belief the Proposer has complied with all of the laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Name of Proposer: Rural Development, Inc.

Signature: 

Printed Name: Gina Govoni

Title: Executive Director

Date: 10/19/23

**DISCLOSURE STATEMENT FOR
TRANSACTION WITH A PUBLIC AGENCY CONCERNING REAL PROPERTY M.G.L. c.
7C, s. 38 (formerly M.G.L. c. 7, s. 40J)**

The undersigned party to a real property transaction with a public agency hereby discloses and certifies, under pains and penalties of perjury, the following information as required by law:

(1) Real Property: Care Drive, Erving, MA 01344

(2) Type of Transaction, Agreement, or Document: Long Term Ground Lease

(3) Public Agency Participating in Transaction: Town of Erving

(4) Disclosing Party's Name and Type of Entity (if not an individual):
Rural Development, Inc. 501 (c)(3) nonprofit corporation

(5) Role of Disclosing Party (Check appropriate role):

Lessor/Landlord Lessee/Tenant

Seller/Grantor Buyer/Grantee

Other (Please describe): _____

(6) The names and addresses of all persons and individuals who have or will have a direct or indirect beneficial interest in the real property excluding only 1) a stockholder of a corporation the stock of which is listed for sale to the general public with the securities and exchange commission, if such stockholder holds less than ten per cent of the outstanding stock entitled to vote at the annual meeting of such corporation or 2) an owner of a time share that has an interest in a leasehold condominium meeting all of the conditions specified in M.G.L. c. 7C, s. 38, are hereby disclosed as follows (**attach additional pages if necessary**):

<u>NAME</u>	<u>RESIDENCE</u>
Rural Development, Inc.,	241 Millers Falls Rd., Turners Falls, MA 01376
Franklin County Regional Housing and Redevelopment Authority,	<u>241 Millers Falls Rd., Turners Falls, MA 01376</u>
Austin Design Cooperative,	167 Main Street, Suite 302, Brattleboro, VT 05301
Berkshire Design Group,	4 Allen Pl. Northampton, MA 01060
Center for EcoTechnology,	320 Riverside Dr, Florence, MA 01062
Christine Rogers,	18 Browne St. #3, Brookline, MA 02446

(7) None of the above-named persons is an employee of the Division of Capital Asset Management and Maintenance or an official elected to public office in the Commonwealth of Massachusetts, except as listed below (insert “none” if none):

None

(8) The individual signing this statement on behalf of the above-named party acknowledges that he/she has read the following provisions of Chapter 7C, Section 38 (formerly Chapter 7, Section 40J) of the General Laws of Massachusetts:

No agreement to rent or to sell real property to or to rent or purchase real property from a public agency, and no renewal or extension of such agreement, shall be valid and no payment shall be made to the lessor or seller of such property unless a statement, signed, under the penalties of perjury, has been filed by the lessor, lessee, seller or purchaser, and in the case of a corporation by a duly authorized officer thereof giving the true names and addresses of all persons who have or will have a direct or indirect beneficial interest in said property with the commissioner of capital asset management and maintenance. The provisions of this section shall not apply to any stockholder of a corporation the stock of which is listed for sale to the general public with the securities and exchange commission, if such stockholder holds less than ten per cent of the outstanding stock entitled to vote at the annual meeting of such corporation. In the case of an agreement to rent property from a public agency where the lessee's interest is held by the organization of unit owners of a leasehold condominium created under chapter one hundred and eighty-three A, and time- shares are created in the leasehold condominium under chapter one hundred and eighty- three B, the provisions of this section shall not apply to an owner of a time-share in the leasehold condominium who (i) acquires the time-share on or after a bona fide arms length transfer of such time-share made after the rental agreement with the public agency is executed and (ii) who holds less than three percent of the votes entitled to vote at the annual meeting of such organization of unit owners. A disclosure statement shall also be made in writing, under penalty of perjury, during the term of a rental agreement in case of any change of interest in such property, as provided for above, within thirty days of such change.

Any official elected to public office in the commonwealth, or any employee of the division of capital asset management and maintenance disclosing beneficial interest in real property pursuant to this section, shall identify his position as part of the disclosure statement. The commissioner shall notify the state ethics commission of such names, and shall make copies of any and all disclosure statements received available to the state ethics commission upon request.

The commissioner shall keep a copy of each disclosure statement received available for public inspection during regular business hours.

(9) This Disclosure Statement is hereby signed under penalties of perjury.

Rural Development, Inc.

Disclosing Party


Authorized Signature of Disclosing Party


Date

Gina Govoni, Executive Director

Print Name & Title of Authorized Signer

CINCINNATI OH 45999-0038

In reply refer to: 0255483628
Sep. 21, 2020 LTR 4170C 0
22-3139262 000000 00

00010876

SEP 21 2020 11:25 AM
BODC:TE

RURAL DEVELOPMENT INC
241 MILLERS FALLS RD
TURNERS FALLS MA 01376-1604

034855

Person to contact: MRS. HUBBARD

Dear Taxpayer:

We're responding to your request of Sep. 14, 2020, about the tax-exempt status of RURAL DEVELOPMENT INC

We issued a determination letter in APRIL 1992, granting this organization exemption from federal income tax under Internal Revenue Code Section 501(c)(03).

Our records show this organization is not a private foundation within the meaning of Internal Revenue Code (IRC) Section 509(a) because it's described in IRC Sections 509(a)(1) and 170(b)(1)(A)(vi).

Donors can deduct contributions to this organization as provided in Internal Revenue Code (IRC) Section 170. Bequests, legacies, devises, transfers, or gifts to the organization or for its use are deductible for federal estate and gift tax purposes if they meet the requirements of IRC Sections 2055, 2106, and 2522.

If an organization fails to file a required annual return or notice for three consecutive years, its tax-exempt status is revoked by operation of law. This is stated in IRC Section 6033(j)(1). The revocation is effective on the filing due date of the third annual return or notice. For more information about filing requirements, you can visit our website at www.irs.gov/eo.

If you have questions, call 877-829-5500 between 8 a.m. and 5 p.m., local time, Monday through Friday (Alaska and Hawaii follow Pacific time).

Thank you for your cooperation.

0255483628
Sep. 21, 2020 LTR 4170C 0
22-3139262 000000 00
00010877

RURAL DEVELOPMENT INC
241 MILLERS FALLS RD
TURNERS FALLS MA 01376-1604

Sincerely yours,



Steve M. Brown, Operations Manager
Operations 3-CIN



Gina Govoni

68 Nonotuck Street, Florence MA 01062

Cell Phone: (617) 877-5688

ggovoni@gmail.com

PROFILE

- Mission-driven professional with twenty years of progressive leadership experience managing and positioning community development programs for growth and expansion.
- Skilled in building and managing collaborative partnerships with business professionals, community development professionals, local officials, elected representatives and volunteers.
- Highly skilled at leading staff and colleagues through periods of programmatic and organizational transition and growth.

EDUCATION

Brandeis University, The Heller School for Social Policy and Management (2003)

- MBA, Specializing in Non-Profit Management

University of Massachusetts at Amherst (1998)

- BA, Majors: Women's Studies and Sociology
- Recipient, Senior Leadership Award, for demonstrating leadership in community service

Additional Coursework Completed:

- Mortgage Lending Certification, Neighborworks America Homeownership and Full Cycle Lending (February 2018)
- Homeownership Counseling Certification for Program Managers and Executive Directors, Neighborworks Training Institute (2015)
- Real Estate Finance and Investment Fundamentals, Harvard Extension School (2006)

EXPERIENCE

Franklin County Regional Housing & Regional Development Authority (HRA), Turners Falls, MA (July 2019-) Executive Director

Oversight of 264 units of residential property, including units owned and some which are managed through third-party agreements. I also oversee Rural Development Incorporated, a non-profit subsidiary of HRA that develops private affordable housing units. Additionally, I oversee the administration of housing vouchers, counseling and education services and CDBG programs throughout the county and North Quabbin region.

Way Finders, f/k/a HAPHousing, Springfield, MA, (April 2015 – July 2019)

Senior Vice President, Homeownership and Financial Education Services

Way Finders is a regional housing and community development serving western Massachusetts. Way Finders is a Neighborworks (NWA) chartered member and the Homeownership and Financial Education line of business has achieved the Full Cycle Lending status. I oversee financial education, homebuyer education, foreclosure intervention, and home ownership services.

- Project lead for NWA's Sustainable Business Program, which has led to the organization's implementation of Salesforce and a customer-facing triage tool.
- Sustained 200 graduates annually from the Financial Education workshop since 2016.
- Doubled the conversion rate of First Time Homebuyer workshop graduates who purchased homes from 17% to 35% between 2016 and 2018.
- Oversight of publicly-funded lending programs for low and moderate income homeowners resulting in over \$1 million in community investment annually.

South Middlesex Opportunity Council (SMOC), Framingham, MA, (May 2014 – March 2015)
Family Services Division Director

SMOC is a regional community action agency where I oversaw emergency shelter and housing search services for families who are homeless, financial assistance programs for families facing imminent homelessness and educational programming and case management services promoting family self-sufficiency.

- Direct supervision of 4 subordinate directors; indirect supervision of 7 additional managers and an overall staff of approximately 60 FTE's.
- Administration of a 188 units of family shelter housing including 129 units of scattered site apartments and 5 congregate shelters.
- Oversight of a housing search and stabilization team serving nearly 200 families in transition.
- Management of a housing consumer education center (HCEC) that administers homelessness prevention funds, foreclosure intervention counseling as well as education for first time homebuyers.

Key Accomplishments:

- Eliminated backlog of over 20 offline scattered site shelter units to contractually comply with a 24 hour unit turnover mandate.
- Strengthened the structure of the maintenance team and the communication process between maintenance and the scattered site and congregate shelter programs.
- Established weekly, monthly and quarterly reports that measured the division's performance against contractual and agency driven goals.
- Restructured the department to focus on the goal of exiting more families into permanent housing.

Massachusetts Housing Partnership (MHP), Boston, MA, Homeownership Director (2003 - April 2014)

MHP is an innovative quasi-public agency focused on increasing affordable housing in the commonwealth. I directed MHP's homeownership department, which has served over 17,000 low-income homebuyers, leveraging over \$2.8 billion in discounted private mortgage financing.

- Directed the Soft Second Loan Program, a mortgage subsidy program that operates with one subordinate manager, four direct staff, and contractual partnerships with approximately fifty partner lenders and working relationships with nearly sixty homebuyer counseling agencies.
- Oversaw the approval, distribution and recapture of between \$4- \$9 million in mortgage subsidies and loan loss reserves annually.
- Successfully lead product redevelopment with three primary objectives- meeting changing mortgage lending regulations, aligning with secondary market standards and maintaining the market position and performance of the Soft Second program.
- Facilitated product trainings for lenders and community groups; developed and facilitated specialized presentations for various trade group forums.
- Managed the design and implementation of a unique counseling program for multifamily purchasers.
- Developed and managed customized programs using employer-based assistance, federal neighborhood stabilization funds, and Section 8 for homeownership vouchers.
- Managed procurement and selection processes for software consultants, research consultants, marketing consultants and direct service providers. Negotiated contracts; provided project management and developed management tools for projects and multi-year service contracts.
- Reduced loan processing and servicing times by implementing web-based technology and cross-training staff on key aspects of loan processing and servicing.

Family Services of Western Pennsylvania, Ways to Work Program Liaison, Pittsburgh, PA (2000-2002)

Ways to Work was a pilot initiative developed by a regional group of government and non-profit professionals aiming to smooth the transition from welfare to full employment.

- Implemented and managed pilot auto loan program for low-income families in a rural three county area. Aided in program expansion to a fourth county.
- Recruited four participating lenders and managed working relationships.
- Counseled applicants and borrowers on budgeting and credit repair and originated the first thirty loans in partnership with the banks.
- Provided delinquency intervention counseling.

CIVIC INVOLVEMENT AND COMMUNITY SERVICE

Commissioner, Natick Housing Authority (NHA) - Served as the Governor's Appointee on Board of Directors (volunteer position), Term: January 2009- January 2013.

- Served as Chair of the Board from January 2010 to term end.
- Drove the implementation of organizational reforms including written evaluations for employees, monthly vacancy reports and the Authority's first strategic plan.
- Improved financial position from insolvency in mid-2011 to a surplus in December 2012.
- Negotiated a memorandum of understanding with the tenants' organization that resulted in improved tenant-staff communication and regular involvement during board meetings.
- Paved the way for a working relationship with state officials and other Town officials resulting in increased operating subsidy, capital grant funding and resource sharing.

Member, Mortgage Lending Committee, Massachusetts Community and Banking Council, 2003 - present.

- Active participant in this statewide mortgage lending roundtable where I was charged with presenting default statistics and industry comparisons for the MHP SoftSecond Program.
- Served as the community co-chair from 2013-2014.

Selection Committee Member, CHAPA's Massachusetts Homeownership Collaborative, 2004 – 2014.

- Serving as an elected member of the ten-member committee charged with evaluating the ethics, curriculum and conduct of homebuyer education agencies for certification.
- Duties include application review and the on-site monitoring of pre-purchase classes.
- Key participant in the development of standards and implementation of online education.

FRANKLIN COUNTY REGIONAL HOUSING & REDEVELOPMENT AUTHORITY / RURAL DEVELOPMENT, INC., Montague, MA
December 2021 – Present

- Provides strategic oversight of a multi-year real-estate development pipeline; coordinates monthly Real Estate Committee meetings; actively seeks out new development and funding opportunities.
- Assesses initial project feasibility from a financial, environmental, zoning and community perspective.
- Coordinates with HRA Property Management on marketing, lease-up, and occupancy of a new 33-unit LIHTC property in Sunderland; assists with final close-out of the development process.
- Facilitates funding applications and due diligence process for projects in pre-development.
- Collaborates with community partners and stakeholders around housing needs and opportunities.
- Supports communities with initial pre-development and feasibility for locally initiated housing projects.

PREVIOUS EMPLOYMENT & EXPERIENCE

FRANKLIN REGIONAL COUNCIL OF GOVERNMENTS, Greenfield, MA

October 2017–December 2021 - *Senior Land Use and Housing Planner*

- Assisted municipalities with implementing local housing initiatives as the Regional Housing Coordinator for the Improving Housing to Improve Health program.
- Convened and facilitated the Small-Town Housing Work Group.
- Served as project manager for municipal Green Communities energy efficiency and clean energy technical assistance, and residential clean energy activities under the Affordable Access Regional Coordination program.
- Assisted with grant writing and project administration for various projects.

May 2009–September 2017 - *Land Use and Natural Resources Planner*

- Collaborated with town committees to update and develop Housing Plans, Open Space and Recreation Plans, Master Plans, Economic Development chapters, Multi-Hazard Mitigation Plans.
- Worked on regional economic development, scenic byways, and transportation planning efforts.

UNIVERSITY OF MASSACHUSETTS AMHERST, Amherst, MA

September 2008 – May 2009 - *Teaching Assistant*

THE MIT PRESS, Cambridge, MA

2005–2008 - *Acquisitions Assistant; Administrative Assistant*

- Acted as a liaison between authors and departments at a university press; assisted in preparing manuscripts for the publishing process while monitoring the review of manuscripts and proposals.

EDUCATION

Master of Regional Planning (M.R.P.) with a Concentration in Land Use, 2010

UNIVERSITY OF MASSACHUSETTS AMHERST, Amherst, MA

B.A. English, 2004

JAMES MADISON UNIVERSITY, Harrisonburg, VA

RELEVANT TRAINING & SERVICE

- National Development Council HD423 Computer Spreadsheet Analysis for Rental Housing certificate: August 2023
- National Development Council HD410 Home Ownership Finance certificate: May 2023
- Certified Credit Compliance Professional, Spectrum Companies: September 2022
- National Development Council HD420-OL Rental Housing Development Finance certificate: June 2022
- Franklin County Regional Housing & Redevelopment Authority Board of Commissioners: March – December 2021
- MA DOER Green Communities Advisory Committee member: May – November 2021
- Non-Medical Volunteer, Franklin Medical Reserve Corps: 2020 – 2021
- Affirmative Fair Housing Marketing Plan, Resident Selection Plan, and Lottery Training: December 2017

Jennifer Hale

Whole Systems-oriented designer interested in buildings, fair housing, environmental justice, recycling, and mapping

Experience

Franklin County Regional Housing and Redevelopment Authority, Montague, MA (April 2023-present)

- Housing Development Project Coordinator
- Seeks out and pursues housing development and redevelopment opportunities
- Assists with preliminary feasibility and due diligence, project design, development and schedules
- Assists with funding and financing applications, researching new funding opportunities
- Negotiates and procures contracts with contractors, overseeing associated work

JHale Drafting Services, Owner (part time, 2017-present)

- Project Designer and Drafter, architectural and landscape design services
- Wetlands Permitting Administration, project design, drafting
- Designer and Drafter consulting with Dome Design Build on one or more residential projects per year

Jablonsky DeVriese Architects, Springfield, MA (Part time Jan 2018-May 2023)

- Project Designer / Technical Drafter (commercial, mixed use, institutional projects)

Fitch Architecture and Community Design (Formerly: Kraus-Fitch Architects), Amherst, MA (2006-2013, 2014-2017)

- Project Designer (residential and cohousing, commercial and institutional)
- Technical Drafter (construction drawings)
- Proposals and Promotional materials
- New Employee Training

Walter Cudnohufsky Associates, Ashfield, MA 2005-2006, 2014, 2015-2019

- Designer/drafter (residential landscape design)
- SketchUp Modeling
- Created and administered Excel Spreadsheet to organize attendance and payment for Walter Cudnohufsky Watercolor Workshops 2015-2019

Roberge Associates, Greenfield, MA 2001-2002, 2004

- AutoCAD drafting of survey plans
- Deed Research
- Survey Field Crew

Shelburne Arts Co-op, Shelburne, MA (Member 2012-present)

- Board of Directors 2014-2020
- Jurying Committee Chair, 2014-2018
- Decorations, Promotional materials
- Retail Sales, New Member Training

2023 Trainings:

Neighborworks America: CP124el: Risk Management in Construction Rehab

Mel King Institute : Introduction to Affordable Housing Development

Housing Toolbox: "Pathways to Homeownership"; "Distressed and Abandoned Properties"; "Lotteries, Marketing, and Monitoring: The Ins and Outs of supporting Local Affordable Housing Development"

Education

Master of Art in Landscape Design (July, 2000)

Conway School of Landscape Design, Conway, MA

CADD Drafting Certificate- (Aug 2002)

Holyoke Community College, Holyoke, MA

Bachelor of Arts in Art -December (1994)

Earlham College, Richmond, Indiana



RURAL DEVELOPMENT, INC.

241 Millers Falls Road • Turners Falls, MA 01376
Telephone: (413) 863-9781 • Fax (413) 863-9289

Rural Development, Inc. (RDI) is a non-profit corporation launched by Franklin County Regional Housing and Redevelopment Authority (HRA). RDI was incorporated in 1991 to address those housing needs that HRA could not adequately or efficiently address as a public housing authority. Though HRA and RDI are separate entities, each with their own board of directors, they share staff.

Since inception, RDI has developed over 100 affordable homeownership units, and 8 rental housing projects totaling 118 units, with another 33 under construction in Sunderland. RDI has provided development consultation to numerous other historic and mixed-use projects in Franklin County.

RDI's mission is to advance the right of all people in Franklin County and the North Quabbin region to occupy environmentally responsible, energy efficient, affordable housing and to improve economic independence. Further, RDI strives to promote environmental awareness, and to operate in a manner that is respectful of the rural character of our region.

Properties Developed by RDI

Crocker Bank Building and Cutlery Apartments

The Crocker Bank Building and the Cutlery Block apartments were RDI's first affordable rental housing and mixed-use development. The project, completed in 2001, restored two historic properties in the Town of Montague. Forty-eight (48) one- and two-bedroom apartments and 3 first floor commercial spaces were redeveloped in the downtown village of Turners Falls. The project was part of an overall effort to revitalize the downtown area and complements other efforts undertaken by the Town of Montague.

The Crocker Bank Building, an anchor property in the Turners Falls National Register Historic District, was gutted in a tragic fire with loss of life in 1997. Faced with the unacceptable prospect of having to tear the building down, the Town of Montague approached RDI and Historic Massachusetts, Inc. for assistance. HMI obtained a Historic Preservation Project grant to stabilize the building and held it until RDI was able to put together the financing package. In order to make the numbers work, RDI combined reconstruction of the Crocker building with the restoration of a nearby block of attached brick row houses once used for housing by the employees of the Russell Cutlery factory – the *Cutlery Block Apartments*. Built in the mid-1800s and long neglected by a series of absentee owners, more than half the apartments were uninhabitable and drug activity was a major problem.

Funding for the \$7 million project included loans and grants from the Massachusetts Equity Fund, Property and Casualty Initiative (PCI), Massachusetts Housing Investment Corporation,

Massachusetts Historic Preservation Project Funds, Massachusetts Housing Partnership, the Community Economic Development Corporation, the Housing Stabilization Fund Program, Historic Massachusetts Inc., Western MA Electric Company, Berkshire Gas Company, the Town of Montague, RDI and other sources. The gap in financing was covered by equity generated through the syndication of low income housing tax credits from the Department of Housing & Community Development and historic tax credits.

Following a 12-month restoration, the project was selected by the Massachusetts Historic Commission for a 2002 Historic Preservation award and was recognized by the Boston Globe as the first historic buildings in Massachusetts renovated to meet Energy Star standards. Both buildings are listed on the National Register of Historic Buildings. Rents in the project are discounted to be affordable to tenants whose income is at or below 60% of the area median income for Franklin County.

As noted earlier, the outstanding debt on CCLP was refinanced in 2021. The PCI loan was refinanced using Chapter 102 funds from the Massachusetts Housing Partnership (MHP). As a component of this refinance, commercial leases were strengthened and approximately \$145,000 in exterior work was completed on the Cutlery Building.

Moltenbrey Building

The Moltenbrey Building, located at the central intersection in downtown Turners Falls, is a 3-story brick building constructed in 1877. For many years, it has provided the only dedicated sober rental housing in Franklin County. RDI acquired the property in 2001 in an attempt to stop the deterioration of the building at the hands of a non-responsive absentee owner. Due to the deteriorated condition of the building, tenants were relocated by RDI with financial assistance in 2003.

Construction on the project began in July 2004 and the first tenants moved in 12 months later. The renovation included replacement of all major systems (electrical, plumbing, heating, fire prevention), installation of an elevator and accessibility modifications throughout the building, including first floor commercial spaces. In the two upper floors, 26 “enhanced” SRO apartments were created, each with its own kitchenette and full bathroom. Two units are fully accessible and barrier-free. The second floor includes a spacious common kitchen and meeting room. On the first floor, four commercial spaces were renovated. Asbestos and lead were removed and the historic features of the building were carefully preserved.

The renovated Moltenbrey apartments provide housing for persons committed to sober living and recovery from alcohol and substance abuse. Professional behavioral health professional under separate contract with the Commonwealth of Massachusetts provide recovery services and group activities. Housing is made extremely affordable through the use of project-based Section 8 subsidies managed by the Franklin County Regional Housing and Redevelopment Authority. Tenants in good standing who complete a year of residency and comply with their recovery plans are eligible to receive mobile Section 8 Housing Choice Vouchers.

The total development cost of the Moltenbrey project was more than \$3.5 million. Funding sources included Greenfield Cooperative Bank, CEDAC, HOME, Western MA Electric Company, Berkshire Gas Company, LIHTC and historic tax credits.

Orange Recovery House

In 2000, Judge Thomas Merrigan, First Justice of the Orange District Court, approached RDI with the idea of creating a recovery house for men in Orange. RDI assembled a local project team to make Judge Merrigan's dream a reality. The team, comprised of staff from RDI, Beacon Programs of the Franklin Medical Center, the state representative from Orange, the Bureau of Substance Abuse Services of the MA Department of Public Health, and Franklin County Drug Court, garnered community support for the project. Their efforts started with the Orange Chief of Police, who was quickly convinced of the need for community-based services in his town.

In June 2001, RDI acquired a two-story Victorian home in downtown Orange for the future recovery house. Construction on the project began in October of 2005 and the building was ready for occupancy on July 1, 2006.

The project was made possible by a predevelopment loan from CEDAC and a \$50,000 grant from Mass Housing's Center for Community Recovery Innovations. The total project cost of \$1.25 million was funded by the Affordable Housing Trust Fund and Housing Stabilization Funds.

To reduce the cost of financial reviews for ORH and Orange Teen House (OTG)OTH, HRA legally combined OTH with ORH in early 2020. The new structure, known as North Quabbin Opportunity Housing (NQOH) merged the boards of the two entities, but kept each of the programs separate and intact. HRA also negotiated a rental increase with the service provider (ServiceNet) in ORH, which will bring that property to a budget neutral position by early 2023.

Ashfield House

The Ashfield House, an 18-unit historic structure on Main Street in the western Franklin County hilltown of Ashfield, was purchased by RDI in December 2004 after many years of negotiating with the seller whose family had owned the property for three generations. She was determined to keep the building as affordable housing in a community where housing prices have steadily risen beyond what local residents could afford. With predevelopment and acquisition loans from CEDAC, RDI was able to prepare for and submit a Massachusetts "One Stop" application for funds to acquire and renovate the building, while maintaining full occupancy. Using a combination of public and private loans totaling \$1,770,550 construction began in February 2006 and was completed a year later. The scope of the project included primarily life safety, structural, environmental and cosmetic improvements. Lenders include the Affordable Housing Trust Fund, DHCD's Housing Stabilization Fund and the Greenfield Cooperative Bank.

Prospect & Grove Apartments

In 2003, the Massachusetts Community Economic Development Assistance Corporation

(CEDAC) requested that RDI acquire and renovate two properties in Orange that had been renovated in 1993 by a local community development corporation using Housing Development Support Program funds from the Town of Orange, a conventional mortgage from the Athol Savings Bank and Housing Innovations Funds (HIF) serviced by CEDAC. The project was out of compliance with the terms of all 3 loans. CEDAC offered to commit additional HIF funds to take out the Athol Savings Bank and renovate the properties, but would not forgive the original HIF loan; the two loans would be rolled into one new loan.

The two 3-unit properties were poorly maintained, in part because the nonprofit owner had been using rent to pay the operating expenses of their organization instead of investing in the properties. In addition, the units were being rented to families without regard to income, real estate taxes were in arrears for many years, and a ground floor unit in the Prospect Street property had serious water damage. Each of these conditions was named in the CEDAC loan documents as potential foreclosure triggers.

Due to complex issues that made it difficult for the property owner to transfer title, the lenders pursued foreclosure as the most efficient path to conveying the property to RDI. While the process was pending, RDI assumed management of the property at the request of CEDAC. RDI advanced \$12,000 of its own funds to clear the outstanding property and water/sewer taxes. In April 2007, RDI purchased the property at the foreclosure auction, assuming the notes from HIF, and the Athol Savings Bank.

RDI formed a limited liability company, with RDI as the sole member, to own the properties. The Town of Orange (the "Senior Lender") consented to the new CEDAC loan to P&G, LLC. Upon closing with CEDAC for a new HIF loan, P&G, LLC paid off the Athol Savings Bank note in its entirety, renovated the properties, and obtained Section 8 project-based vouchers from HRA to make the units on Prospect Street affordable. P&G, LLC executed a Management Agreement with the HRA for maintenance and management of the two properties.

Greenfield Upper Story Redevelopment

In 2009, the Massachusetts Housing Investment Corporation (MHIC) invited RDI to provide requisition and accounting services to major private redevelopment project in Greenfield involving eight historic properties and five building owners. The projects, which are funded with New Markets Tax Credits, state and federal historic credits, conventional loans and owner equity, are expected to be a catalyst for significant revitalization of downtown Greenfield. The first three projects closed at the end of 2009 and were completed in 2010. RDI also served as the non-profit pass through for the state historic credits for these projects.

Orange Teen House

In 2013, Dial Self, a regional non-profit focused on the needs of homeless youth, in concert with the Massachusetts Community Economic Development Assistance Corporation (CEDAC), approached RDI with an active project, in search of RDI's support and technical assistance to bring the project to fruition. RDI then engaged as the sponsor and developer for the pre-development, construction and close-out phases of the Orange Teen Housing, Inc. Using a

combination of public and private loans totaling \$2,215,092, construction was completed in September 2015. Orange Teen House is located in downtown Orange and offers ten subsidized apartments for youth (18-24) who are homeless or at risk of homelessness at the time of application and willing to participate in contracted supportive services provide by Dial Self. Eight units are subsidized through the Project Based Housing Choice Voucher Program, two units through the Massachusetts Rental Voucher Program.

Wisdom Way Solar Village

In 2012, through RDI's Home Ownership Program, and with the help of many partners, built a village of twenty Near Zero Net Energy Condominiums in Greenfield, MA. This is a mixed ability development includes sixteen units that are restricted to owners at low and moderate incomes, two units were sold to market owners, and two units were retained as affordable rental units. Construction for the development of all twenty units was approximately \$6,330,000. RDI received approximately \$270,000 in funding from the Massachusetts Community Based Housing (CBH) Program to build two homes within the village that are fully handicapped accessible to people with physical disabilities. The two CBH units are managed by HRA.

Sanderson Place

In 2014, a group of residents formed in support of senior housing at 120 North Main Street in Sunderland. RDI worked with this group as a project sponsor through a very transitional time in RDI's leadership. With the constant support of Valley CDC as lead project manager, Sanderson Place was funded in its first rental round in June 2020.

Sanderson Place includes 33 total apartments (30 one-bedroom apartments and 3 two-bedroom apartments). The resident population will be low income seniors, 62+ years of age. A total of 12 units, including the eight Section 8 project-based vouchers units will serve households earning 30% AMI or less; the balance of units will house households earning 60% AMI or less. Seven of the eight Section 8 project-based vouchers will be placed in one-bedroom apartments, one Section 8 project-based vouchers will be placed in a two-bedroom unit. Six of the one-bedroom units with MRVP project-based vouchers will also be restricted to households making at or below 30% of AMI. Construction of Sanderson Place will be completed in winter 2022/2023.



RESUME for THOMAS CHALMERS, AIA

EXPERIENCE

Austin Design Cooperative, Inc. Brattleboro, VT

2012–Present *Senior Architect & Project Manager*

Tom's responsibilities include design, project management, code and zoning research, production, construction observation, and client relations. He has worked extensively with residential, commercial, and institutional clients on projects that include multi-family affordable housing, town halls, community buildings, and library renovations. Tom is registered in multiple states throughout New England. In addition to bringing a design approach that encompasses energy efficiency and universal design to all his design projects, Tom has completed numerous accessibility audits and plan review projects for DCAMM.

TCA / T. Chalmers Architects, Builders Weston, MA

1999–2012 *Owner*

Architect for residential, light commercial, and institutional projects. Builder and carpenter for design-build and frame and finish subcontract projects. Assumed institutional and commercial projects at close of JA Architects.

JA Architects Boston, MA

1990–1999 *Partner*

With partner Eric Jahan, responsible for design, documents, and construction supervision of \$2–\$4 million public school and institutional renovation projects.

KJA Architects Somerville, MA

1987–1990 *Architect*

Construction documents and supervision for Corliss Elderly Housing, Lowell Street Housing, and Robsham Visitors Center, U Mass, Amherst.

Ithaca Neighborhood Housing Services Ithaca, NY

1981–1984 *Project Manager*

Design, documents, and supervision for twenty-unit multi-use school conversion, super-insulated duplex, forty units of multi-family gut rehabilitation.

EDUCATION

Massachusetts Institute of Technology

Master of Architecture, 1987

Participant in MIT Summer Design Studio in Kyoto Japan, 1986

Recipient, AIA Foundation Scholastic Award, 1986

University of California, Berkeley

Bachelor of Arts, Geography, 1978

Summa Cum Laude

Phi Beta Kappa



HONORS AWARDS & PUBLICATIONS

2nd Place Winner, with Eric Jahan, National Competition for Affordable Housing. Entry published in *Progressive Architecture*, June 1991, pp 78-79.

“Houses for Dorchester” (Master of Architecture Design Thesis), MIT, 1987.

Kendell, Stephen, and Thomas C. Chalmers, *Shell/Infill: A Technical Study of a New Strategy for 2x4 Housebuilding*, Design and Housing Program, Department of Architecture, MIT, 1986.

PROFESSIONAL LICENSING & AFFILIATIONS

Registered Architect	Massachusetts License	# 8317
	Connecticut License	#13083
	New Hampshire License	#04336
	Vermont License	#003.0118143
	New Jersey License	#21A1021143000
	Rhode Island	#4930

Member:	AIA, Western MA AIA
	NCARB



RESUME for PATRICK KITZMILLER

EXPERIENCE

Austin Design Cooperative, Inc. Brattleboro, VT

2015–Present *Architect & Project Manager*

Patrick's responsibilities include design, project management, code and zoning research, 3-D modeling, drafting, and client relations. He has worked extensively with residential projects, light commercial, and projects dealing with accessibility issues.

Theater at the University of Massachusetts Amherst Amherst, MA

2014–2015 *Prop Master*

Patrick worked as a contractor for several productions in the UMass Theater as a resident Prop Master. Responsibilities included the design and creation of various properties, centering mainly on furniture pieces spanning a number of styles and materials.

Theater at the University of Massachusetts Amherst Amherst, MA

2012–2014 *Teaching Assistant*

Responsibilities included the construction of a variety of set pieces including furniture and scenery for more than a dozen large scale theater productions. Patrick also acted as an instructor and project manager for teams of students.

Evergreen Homebuilders Brattleboro, VT

2007–2010 *Builder*

Responsibilities included project management and crew leading for residential construction projects. Patrick also worked as an in-house designer and trim carpenter.

Applehouse Carpentry Leesburg, VA

2005–2007 *Carpenter*

Patrick worked on dozens of construction projects in the capacity of crew leader and trim carpenter.

EDUCATION

University of Massachusetts Amherst, MA

Master of Architecture, 2014

Keene State College Keene, NH

Bachelor of Science, Architecture, 2010

Summa Cum Laude



VOLUNTEER EXPERIENCE

Austin Design, Inc. 2011–2012

Pro Bono work designing an educational facility and housing for a project in central Haiti.

Peace Corp: Agroforestry Volunteer in El Salvador 1999–2002

Service covered a range of projects including a potable water project, watershed protection, reforestation, and environmental education.

PROFESSIONAL LICENSING & AFFILIATIONS

Registered Architect	Massachusetts License	# 952057
	Vermont License	# 003.1034348
NCARB certification		# 101980



Austin Design Cooperative, Inc.: Firm Profile

Operating since 1993, Austin Design, Inc., has provided architectural design services to institutional, commercial, and residential clients throughout New England. In 2022, the employees formed a worker-owned cooperative, Austin Design Cooperative, Inc., to buy the company from its founder, Bill Austin. Our team remains intact and committed to delivering the same caliber of service to our clients.

Austin Design Cooperative's ethos is one of balance. We balance deep experience with fresh eyes, proven methods with innovative materials, creative form with intuitive function. This thinking is intentionally built into our culture through the eclectic backgrounds, skills, and personalities of our team. Our approach and our people are about designing balance without building compromise.

Every building project should be an exciting and positive experience. We advocate a team approach among client, consultants, users, and ourselves that allows everyone to share expertise, knowledge, a passion for good design, and an efficient process. Most importantly, we strive to be good listeners and attend closely to the concerns and input of our clients as we seek a harmony between what is absolutely necessary, desired, and possible. We want the final result to be something our clients can feel proud of and have a sense of ownership for years to come.

With roughly thirty years of experience in all aspects of architectural design and construction management in Massachusetts and across New England, our team has an excellent track record for completing projects on time and on budget. We will apply our diverse background in fostering community, multi-use programming, housing, sustainable and energy-efficient design, and public sector work to your project.

General Information

- **Size:** 2 Registered Architects, 3 Project Managers, 3 Draftspeople, 1 Office Manager, 1 Bookkeeper
- **Office Locations:** Vermont Office: 167 Main Street, Suite 302, Brattleboro, VT 05301
Massachusetts Office: 289 Main Street, Greenfield, MA 01301
- **Years in Business:** 30 years
- **Organizational History:** Austin Design established 1993, incorporated 2004;
Austin Design Cooperative incorporated 2022
- **Areas of Expertise:** Municipal, Housing, Recreational, Hospitality, Sustainable and Energy-Conscious Design, Accessible and Universal Design, Historic Preservation
- **Types of Clients:** Public agencies and authorities, towns, and publicly funded non-profits and organizations; private residential, commercial, and institutional clients
- **Contact Information:** Tom Chalmers tom@austin.design (413) 287-8879

Relevant Experience:

The team at Austin Design Cooperative has been working in Massachusetts and New England since 1993. Previously operating as Austin Design, Inc., the employees formed a worker-owned cooperative in 2022 and bought the company from its retiring former owner Bill Austin. The bulk of our team remains intact and continues to offer the same high level of expertise and years of experience to areas of critical importance to this project, noted below with some relevant projects highlighted:

1) Housing Projects: Energy Efficient Sustainable, and Accessible: Austin Design Cooperative and consultants have extensive experience in the design and construction of highly energy efficient, sustainable housing structures and communities. As architects we focus on sustainability and community in every aspect of our designs. From passive and active solar siting and open space design, to welcoming interior spaces and inviting finishes, the sustainable communities embody healthful living and respect for the surrounding environment. Our approach includes smaller than average homes, air sealing, high R value insulation, passive solar design, high efficiency heating systems, solar photovoltaic, improved indoor air and light quality, and universal accessible design.

Austin Design Cooperative, Inc.

Prospect Place Family Housing, Northampton, MA: 2022- Currently in Pricing / Funding

Fee: \$296,279 architectural - \$488,226 Total; Construction: \$9,000,000.

Client: Valley CDC; Contractor: Saloomey Construction

Valley CDC hired Austin Design to work with them and contractor Saloomey Construction to renovate a vacant and abandoned 70,000 sf, 2 story nursing home in Northampton, MA, converting it to 60 units of affordable family housing. The new floor plan was configured to allow the units to take advantage of the windows along the perimeter, with communal and support space occupying the center of the building. A skylight lit center courtyard connects the two floors. Envelope improvements include replacement of roof insulation and roofing, replacement of windows, cutting in of new windows, replacement of exterior doors, installation of new skylights, and repointing and treatment of brick and stucco facade. Energy improvements include increased roof insulation and wall insulation. HVAC work includes geothermally sourced ducted heat pump units in each apartment, central ducted ERV units for ventilation and tempered fresh air supply. Plumbing includes geothermally assisted heat pump water heaters and low flow fixtures. Universal design features include 4 MAAB Group 2A accessible units and two units meeting DHCD CBH guidelines. The building is all electric and exceeds the MA stretch code energy requirements.

23 Laurel Street Housing, Northampton, MA: 2022-Currently in Bidding / Construction

Fee: \$232, 825 architectural - \$461, 238 Total, Construction: \$6,465,300.

Client: Valley CDC; Contractor: TBD

The proposed development consists of 20 townhouse style new construction apartments located on a vacant 1.62-acre parcel at 23 Laurel Street, Northampton. All apartments will be affordable to future tenants. A "building block" floor plan is replicated and joined in various patterns to create 7 unique buildings, each containing between 2-4 apartments. This development includes 8 one-bedroom units, 10 two-bedroom units, and 2 three-bedroom units. Site features include patios, parking, connecting walkways, covered bike storage area, mail station, playground, pavilion, and dumpster enclosure. Site utilities include connections to public water, sewer, and electricity, and construction of on-site stormwater management facilities. The City of Northampton has stipulated that this development shall not use any fossil fuels for utilities. The Owner contracted with CET for HERS rating and compliance with applicable incentive programs. 23 Laurel Street is designed to comply with the Mass Save All-Electric Homes Level 2 Program. Universal design features include a fully accessible site, accessible parking, 3 accessible units and 2 adaptable units.

East Gables Supportive Housing, Northampton, MA: 2019-2023 - Complete**Fee: \$232,825 architectural - \$461,238 Total, Construction: \$6,465,300.****Client: Valley CDC; Contractor: Western Builders**

Together with Valley CDC, Austin Design Cooperative has completed a new 28 unit, 12,564 square foot 3 story apartment building designed to provide supportive housing for formerly homeless individuals. The building is accessed thru a main at-grade lobby with an open stair leading down to the lower ground floor level and up to the first floor. Egress stairs at each end provide direct access from all floors to the exterior. A 4-stop elevator connects the lobby and all 3 floors. Interior common and support spaces include a resident common room, resident services coordinator office, property manager office and laundry room. Site features include parking, connecting walkways, covered bike storage area, shed, dumpster enclosure, and covered smoking area. The building features universal design, with an accessible site and 2 accessible units. The building is on the cutting edge of current energy efficiency, with Passive House, Energy Star, Indoor Air Plus, and Zero Energy Ready Homes certifications.

Sanderson Place Senior Housing, Sunderland, MA: 2017-2023 - Complete**Fee: \$317,307 architectural- \$678,390 Total, Construction: \$ 9,591,634****Client: Rural Development, Inc.; Contractor: Marois Construction**

Austin Design, working with Rural Development Inc. and Valley CDC, designed a 33 unit, 3 story senior housing development project on a village lot in the center of Sunderland, MA. The project includes 3 units in a renovated historic home at the street and a new 30-unit building at the rear of the site. The plan calls for two barn scaled wings meeting at a central public core. There is a variety of community and service space at the core of the building, including a dining room, library, exercise room, laundry room and offices. The central lobby includes siting and gathering spaces on all three levels. All the units are accessible. The building envelope and MEP systems will be designed to maximize energy efficiency and life cycle performance.

Austin Design, Inc.**Goshen Senior Housing, Goshen, MA: 2012 – 2017****Fee: \$70,000, Construction: \$1,891,692****Client: Hilltown CDC; Contractor Sovereign Builders, Inc.**

The project consists of 10 affordable units in 3 buildings in a small town infill site. The units are all energy efficient, sustainable and include one fully accessible apartment. Austin Design participated in the market and preliminary site development study as architectural consultant to develop preliminary designs in response to qualities and features expressed by the Building Committee and refined through community charrettes. The floor plans evolved in response to clear directives by the community while the massing and exterior style responded to a strong sense that the buildings should blend with the style and scale of existing residential buildings. ADI prepared final construction documents, assisted in bidding and selection of a contractor and monitored the construction process. The project was completed in 2017 and is fully occupied.

Accessible Units at Greeley Village, Lexington, MA: 2014-2016**Fee: \$72,000, Construction:\$1,165,902****Client: Lexington Housing Authority; Contractor: Construction Dynamics, Inc.**

The Greeley Village project provided a new 4 unit fully accessible, energy efficient infill structure for an existing elderly housing community in Lexington, MA. ADI resumed the architectural and engineering design of four new accessible units for Greeley Village, an elder housing development in Lexington, MA begun by a previous architect. Services for the one-story building include a full review of existing conditions, drawings, and test reports. Project design goals include affordability and efficiency of construction, energy efficiency and passive solar features, accessibility of the building and site, cost-effective and low-maintenance site and storm water management systems, and full and complete input on the part of the community residents and staff. Responsible for the design development, construction document, bidding, construction administration, and completion phases, Austin Design worked in accordance with the Lexington Housing Authority and the Department of Housing and Community Development's (DHCD) Guidelines and Procedures.

Stratton Manor Housing Modernization, Bernardston, MA: 2012**Fee: \$17,000, Construction:\$295,084****Client: FCR HOUSING & REDEVELOPMENT AUTHORITY.; Contractor: Diversified Construction Services.**

This exterior modernization project funded jointly by Federal and Town funds, administered through the Franklin County Regional Housing and Redevelopment Authority improved the appearance, viability and maintenance of a 3 building 20 unit public housing project constructed in 1980. The work included new roofing, new siding and windows, trim and corner boards and exterior painting. Special detailing was required to improve the weatherization of the window installation against an existing applied rigid insulation and strapping system. Work was carefully coordinated to minimize disruption of tenant routines.

Wisdom Way Solar Village, Greenfield, MA: 2011 *Affordable, Energy Efficient Homes***Fee: \$_____, Construction:\$4,510,243.****Client: Rural Development Inc.; Contractor: LML Construction.**

Wisdom Way Solar Village is part of a continuing collaboration between Austin Design Inc. and Rural Development Inc. to design and build affordable energy-efficient homes, many of which are near zero net energy. This community is located in Greenfield, Massachusetts and is comprised of 20 units (ten duplexes), including two fully accessible units. Careful air-sealing and super-insulated walls have eliminated the need for a central heating system in these homes. The homes include photovoltaic panels and solar thermal hot water systems, features that are both sustainable and affordable over the long term.

Sawmill Brook, Lenox, MA: 2008-2015 *Sustainable Community***Fee: \$30,430.****Client: Tri-Corner Community Development Corporation.**

Sawmill Brook is a 50-unit community of townhouses and apartments in Lenox, Massachusetts was under development by Tri-Corner Community Development Corporation of Great Barrington, Massachusetts. A minimum of 50% of the houses will be affordable units. The design focuses on sustainability with the goal of LEED certification. The site strategy is for groupings of units positioned around community green spaces. Units have been sited to provide each with a public, community front and a private, view and family-oriented rear. The units wrap around each other to link community porches together and to separate private decks.

Westhampton Woods Senior Housing, Westhampton, MA: 2007 Sustainable Senior Housing**Client: Hilltown Community Development Corporation.**

This small development provides affordable housing for seniors in Westhampton, Massachusetts. The 8.7-acre site contains seven residential units and one common space in 4 duplexes. Austin Design worked with the Westhampton Senior Housing Committee and the Hilltown Community Development Corporation to develop a floor plan that met both the project budget and the needs of the residents. The homes include high-efficiency HVAC systems, including in-slab radiant heating. Built to Energy Star standards, the project provides a comfortable community in a beautiful rural setting.

Katywil Eco-Village, Greenfield, MA: 2006-2015 Colrain, MA, Energy Efficient Community

Katywil Eco-Village is described by its founder, Bill Cole, as a "community of people who treasure the beauty of this land and its subtle pleasures, who wish to simplify their lives, and who relish the company of others." Currently under development, the Katywil home merges vernacular New England styles with modern strategies for energy efficiency and independence. The result is a community that speaks to the area's rich cultural history -- one that has always valued self-sufficiency -- while also looking forward to a sustainable future centered on community.

Colrain Zero Net Energy House, Colrain, Ma: 2004-2005 Affordable, LEED Gold Rating

This house was the second affordable home in the nation to receive a LEED for Homes Gold rating. Compact yet comfortable, the house was designed to meet strict energy-conservation goals while providing cozy living spaces. It features extensive air-sealing strategies, super-insulated walls and ceilings, triple-glazed windows, and a radiant concrete slab floor. The building was sited for passive and active solar systems, including a 3.2kw grid-tied photovoltaic system and a solar thermal system for heat and hot water. Steven Winter Associates Inc. provided energy engineering and currently is monitoring the home's energy usage for one year. The home was built by Rural Development Inc.

Pomeroy Lane, Amherst, MA: 1993 Sustainable, Barrier Free Community

A group of concerned parents wanted to ensure that their grown children with cognitive and physical disabilities would have comfortable, community-focused long-term housing. As a response, the parents formed ABODES, the non-profit group with whom we worked to develop this 24-unit community. To create sense of community, outdoor common areas were created to invite interaction among residents and visitors. A community building provides gathering space for large events and family functions. Parking, including covered carports, was provided along the edge of the site to provide a car-free, safe community environment. Designed to tenets of universal design, the homes and community building are barrier-free. Additionally, all the units have a southern exposure for passive solar gain and the roofs were oriented to allow for future installation of solar panels.

Tom Chalmers with JA Architects:**Houses For People with Special Needs Methuen, MA: 1999** *New Construction, Barrier Free*

A new community residence housing a group home for people with special needs on the ground floor and 2 independent living units on the second floor. New Construction. Methuen Housing Authority.

Tom Chalmers with KJA Architects:**Corliss Elderly Housing, Methuen, MA: 1990** *New Construction, Elderly Housing*

A 40-unit apartment building for the Methuen Housing Authority including 21 units of congregate housing for the elderly plus 20 independent apartments. New construction on a downtown site, combing both unit types in a single brick building. Methuen Housing Authority. The project was completed in 1990

Lowell Street Housing Methuen, MA 1989: *New Construction, Family Housing*

Sixteen units of family housing including eight barrier-free houses. New construction. Client: Methuen Housing Authority. Construction cost: \$2,100,000.

Thoreau Street Housing Concord, MA 1987: *New Construction, Family Housing*

A group home for 8 mentally retarded adults and three units of family housing. New construction. Client: Concord Housing Authority. Construction completed 1987. Construction cost: \$700,000. This project received the 1988 Massachusetts NAHRO Award for Housing Program Innovation.

Alternative Model Community Residence Statewide, MA 1987-1989: *New Construction, Special needs Housing*

A Prototype Model Community Residence for 8 mentally retarded adults. Nine residences were constructed from 1987 to 1989. Client: Massachusetts Division of Capital Planning and Operations. Combined construction cost: \$4,500,000.



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Vermont

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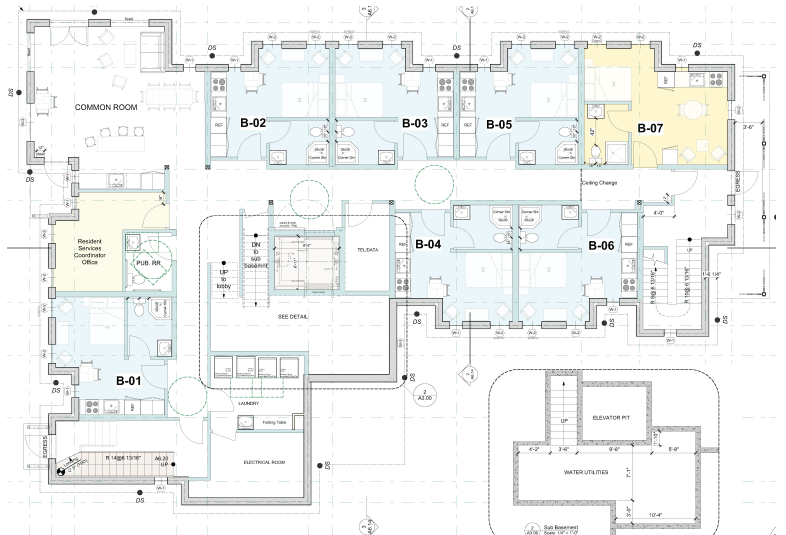


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AMHERST STUDIO APARTMENTS 2019- 2023

Austin Design is working with Valley CDC to design and permit a 28 unit, 2 1/2 story \$7 million SRO housing project for the homeless in Amherst MA. Currently working its way thru the special permit phase in Amherst, the project consists of 28 small studio apartments, common areas and 2 on-site staff offices. It is sited on a village lot close to town center and shopping areas. Construction features include superinsulating the envelope to Passive House standards, PV solar, fully accessible site and common spaces and 2 fully accessible units. Completion is planned for Fall 2021.





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SUNDERLAND SENIOR HOUSING 2017- 2022

Austin Design, working with Rural Development Inc. and the Valley CDC, is designing a 33 unit, 3 story \$9 million senior housing development project on a village lot in the center of Sunderland, MA. The project includes 4 units in a renovated historic home at the street and a new 30 unit building at the rear of the site. The plan calls for two barn scaled wings meeting at a central public core. There is a variety of community and service space at the core of the building, including a dining room, library, exercise room, laundry room and offices. The central lobby includes sitting and gathering spaces on all three levels. All the units are accessible. The building envelope and MEP systems will be designed to maximize energy efficiency and life cycle performance. Completion and occupancy is expected in 2021.





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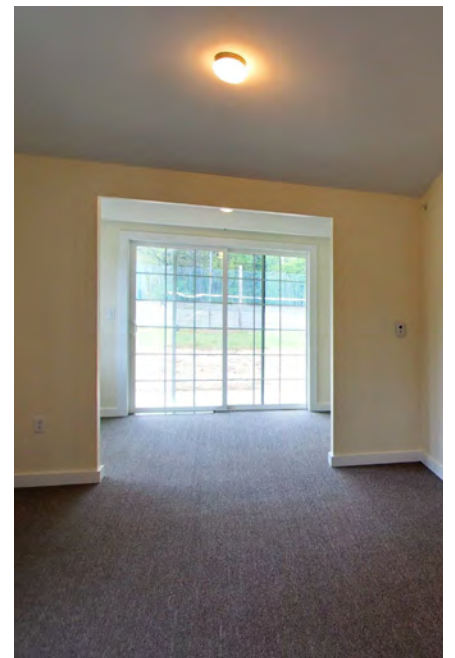
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GOSHEN SENIOR HOUSING 2012-2017

Austin Design participated in the market and preliminary site development study as architectural consultant to develop preliminary designs in response to qualities and features expressed by the Building Committee and refined through community charrettes. The floor plans evolved in response to clear directives by the community while the massing and exterior style responded to a strong sense that the buildings should blend with the style and scale of existing residential buildings. ADI is now preparing final construction documents. The project consists of 10 affordable units in 3 buildings in a small town infill site. The units will all be energy efficient, sustainable and include one fully accessible apartment.





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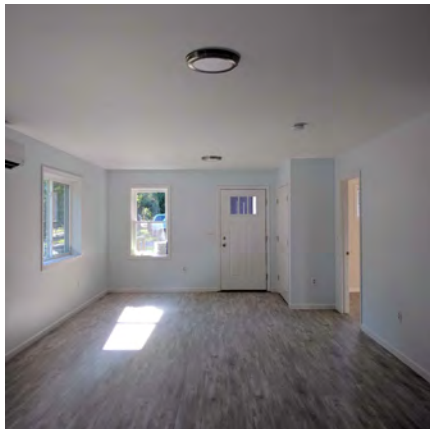
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HABITAT FOR HUMANITY 2018

This is a single family, low-income home designed and constructed for Pioneer Valley Habitat for Humanity. The family moving into this home will have a low interest mortgage with a chosen local bank. The house was constructed by volunteers on an average of 2 day per week for about a year and a half.

The house is about 1000 SF and provides all the necessities for a small family living in a single family home.





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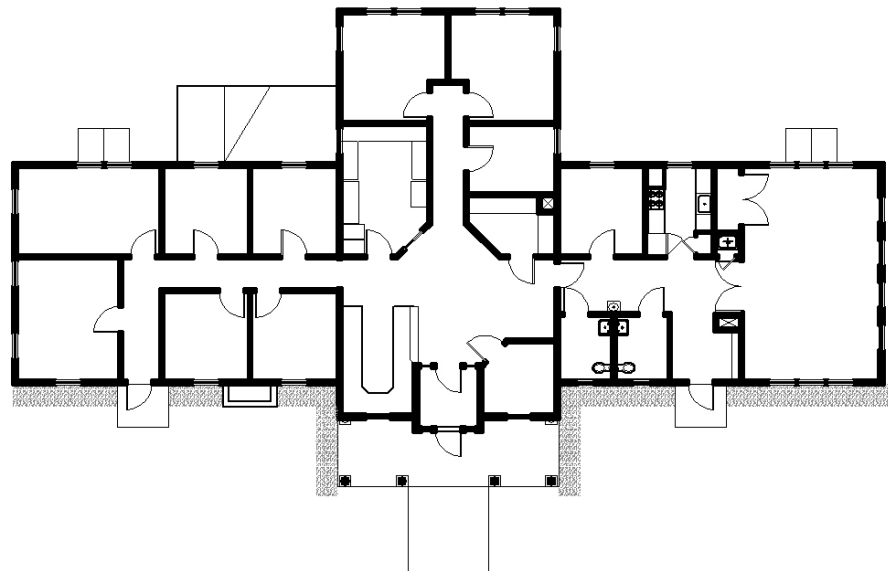
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HILLTOWN COMMUNITY CENTER 2003

A 6,200 square foot office and daycare facility designed for the Hilltown Community Development Corporation in Chesterfield Massachusetts. Built close to the center of the village, this building reflects the scale and style of neighboring buildings.





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KATYWIL ECO-VILLAGE 2008

Katywil Eco-Village is described by its founder, Bill Cole, as a "community of people who treasure the beauty of this land and its subtle pleasures, who wish to simplify their lives, and who relish the company of others."

Currently under development, the Katywil home merges vernacular New England styles with modern strategies for energy efficiency and independence. The result is a **community** that speaks to the area's rich **cultural history** -- one that has always valued self-sufficiency -- while also looking forward to a sustainable future centered on community.





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ACCESSIBLE UNITS AT GREELY VILLAGE 2015

Austin Design assumed designer services for this 4 unit accessible housing project for DHCD upon completion of schematic design by Studio G Architects. We completed design development, construction documents, bidding and construction supervision to produce a 4 unit building that stresses universal design, high levels of energy conservation and passive solar heating. Natural solar shading devices including awnings and roof overhangs have been designed and optimized with window size and placement to minimize summer insolation without the use of internal shading devices. Low maintenance, durable materials such as fiber cement panel siding, vinyl windows, polished CMU demising walls and stained concrete flooring are used to reduce initial and life cycle costs.





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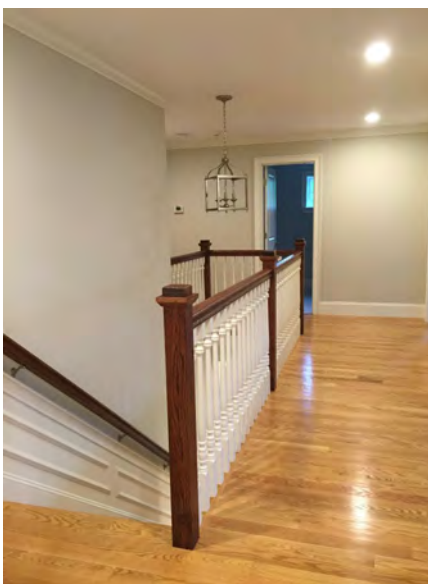
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LACONIA STREET IN PROGRESS

Austin Design is working with a team of builder/developers to design one duplex and two single family homes on an infill lot in Lexington, MA. The houses are to be designed to provide energy-efficient market rate housing that responds to site and planning board requirements and fits within the context of the surrounding neighborhood.

The units, while varying in size from 1,800 to 4,000 square feet, will be massed and detailed to form a cohesive whole, with the duplex assuming a carriage house relationship to the larger homes.



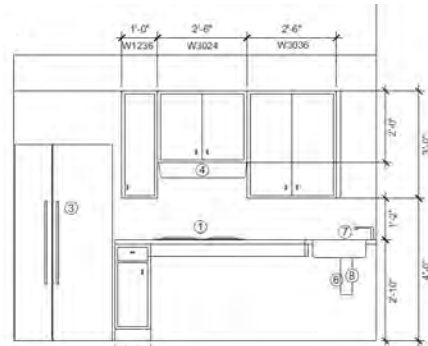
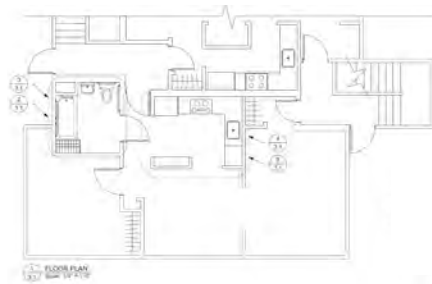
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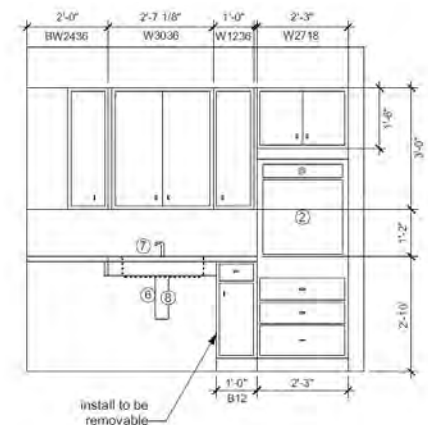
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5 KITCHEN ELEVATIONS - TYPICAL
3.1 Scale: 1/2" = 1'-0"


PHEASANT HILL VILLAGE 2016

Pheasant Hill Village is a development of 30 residential buildings containing 200 dwelling units, an office and community building and a service garage on approximately 34 acres.

Austin Design provided an extensive accessibility audit and construction documents to update 23 units, site-wide accessible routes, community building access, and unit parking and approaches to building entrances in accordance with Federal 2010 ADA Standards for Accessible Design, UFAS and State 521 CMR Massachusetts Architectural Access Board regulations.



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PIONEER VALLEY COHOUSING 1994

This community consists of 32 homes, an 8,000 square foot Common House and other structures. The design of the project was developed through a consensus-based process that included numerous participants. Emphasis was placed on creating a sense of **community**, healthy indoor environments, and **sustainability**.



Pioneer Valley Cohousing was one of the first of its kind in the area and has been very successful, inspiring other similar communities in Western Massachusetts.





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SAWMILL BROOK 2008

Sawmill Brook is a **50-unit community** of townhouses and apartments in Lenox, Massachusetts currently under development by Tri-Corner Community Development Corporation of Great Barrington, Massachusetts. A minimum of 50% of the houses will be **affordable units**.

The design focuses on sustainability with the goal of LEED certification. The **site strategy** is for groupings of units positioned around community green spaces. Units have been sited to provide each with a public, community front and a private, view and family-oriented rear. The units wrap around each other to link community porches together and to separate private decks.





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WESTHAMPTON SENIOR HOUSING 2005

This small development provides **affordable housing** for seniors in Westhampton, Massachusetts. The 8.7 acre site contains seven residential units and one common space in 4 duplexes.

Austin Design worked with the Westhampton Senior Housing Committee and the Hilltown Community Development Corporation to develop a floor plan that met both the project budget and the needs of the residents. The homes include high-efficiency HVAC systems, including in-slab radiant heating. Built to Energy Star standards, the project provides a comfortable **community** in a beautiful rural setting.



**Christine Rogers –
Development and Financial Consultant**

SELECTED EXPERIENCE



Sanderson Place, Sunderland, MA

Financial consultant for 30 units of senior housing including, investor and general contractor selection, financial closing and ongoing requisitions and budget management.

Rural Development, Inc.
Completed 2023
TDC \$13.5 million, 9% LIHTC



37 Wales, Boston, MA

Financial consultant for multiphase project including demolition, extensive site work and construction of 20 units of permanent supportive housing.

Heading Home
Under Construction, Spring 2024 Completion
TDC \$16.5 million, MDFA Tax-Exempt Bond



1208D Parkway, Boston

Manage construction completion, lease up and permanent loan closing for a 60- unit mixed income 4% LIHTC project.

B’Nai B’Rith Housing
Completed 2023
TDC \$32.5 million

Christine Gimbel Rogers

18 Browne Street #3, Brookline, MA 02446 phone- 908-303-9793 email- christine.gimbel.rogers@gmail.com



Shirley Meadows, Devens, MA

Project management for the creation of 58 units of senior rental housing, including funding, investor selection, financial closing, construction management, marketing and project closeout.

Women's Institute
Completed July 2020
TDC: \$20 million, 9% LIHTC



Reid & Hughes, Norwich, CT

Oversee acquisition, financing and emergency stabilization of historic vacant building for future redevelopment

Women's Institute
Completed 2018
TDC \$1 million



Terrapin Ridge, Sandwich, MA

New Construction of 30 Units multi-family rental housing in nine townhouses, including clubhouse, playground and photovoltaic. Construction completion, financial analysis, requisition processing and closeout.

RBC Capital Investments/ POAH
Completed August 2021
TDC: \$15.6 million, 9% LIHTC

Christine Gimbel Rogers

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The Richardson, Chelmsford, MA

Acquisition and occupied rehabilitation of 16 units of affordable housing. Financial closing ongoing requisitions and budget management.

Chelmsford Housing Authority
Completed September 2021
TDC \$4.5 million



The Elms, Harvard, MA

Manage construction completion and permanent loan closing for nine affordable family rental units.

Chelmsford Housing Authority
Completed 2018
TDC \$4.5 million



Christine Gimbel Rogers

18 Browne Street #3, Brookline, MA 02446 phone- 908-303-9793 email- christine.gimbel.rogers@gmail.com



Rachel Loeffler, RLA, ASLA
Principal, Landscape Architect

Rachel integrates research into the design practice through creative and technical approaches. She is a registered landscape architect in Massachusetts, Connecticut, Rhode Island, and New Hampshire. Rachel brings over 20 years of experience to the profession with a breadth of experience in design, planning, and construction. She has worked locally, nationally, and internationally. She contributed to a range of projects encompassing campuses, large parks, playgrounds, schools, brownfield remediation, waterfronts, rooftop gardens, and therapeutic gardens. Rachel has taught and been a visiting critic at numerous institutions. Rachel combines her extensive professional experience with an integration of systems thinking, conceptual rigor, information graphics, programming, materiality, and sustainability.

EDUCATION

2005	Harvard University, Master in Landscape Architecture	Cambridge, MA
2000	Washington University in St. Louis, B.A. in Architecture, Magna cum laude	St. Louis, MO
1999	Santa Reparata International School of Art, Summer Study Abroad	Florence, Italy

PROFESSIONAL EXPERIENCE

2014-present	Principal, Landscape Architect, Berkshire Design Group	Northampton, MA
2012-2014	Senior Associate, Dodson & Flinker	Ashfield, MA
2002-2012	Associate, Hargreaves Associates	Cambridge, MA
2000-2002	Designer, Hawkins Partners	Nashville, TN

PROFESSIONAL REGISTRATIONS

2011-present	Massachusetts-Registered Landscape Architect	License #1617
2013-present	Connecticut-Registered Landscape Architect	License #1298
2013-present	Rhode Island--Registered Landscape Architect	License # 605

PROFESSIONAL SERVICE

2019-present	BSLA Landscape Architecture Advocacy Chair-Commonwealth of MA	Statewide
2020	Inside/ Out BSLA Conference Organizer- socially distanced conference	Statewide
2018-2020	WMBSLA President	Northampton, MA
2017-present	Harvard Admissions	Cambridge, MA
2018-present	Jones Library Garden Committee	Amherst, MA
2017-2019	Amherst Public Shade Tree Committee	Amherst, MA
2013-present	ASLA, BSLA Awards Committees [Statewide, Harvard, UMass]	National/ State
2012-present	BSLA Parking Day Western Massachusetts	Amherst, MA
2012-present	Women in Design Western Massachusetts	Northampton, MA
2010-2012	BSLA Emerging Professionals Committee	Boston, MA
2010	Building with Haiti, New Children's Academy: Design Services	Porta Prince, Haiti

TEACHING AND LECTURES

Fall 2022	Studio Critic: The Conway School of Landscape Design	Northampton, MA
March 2021	Emerging Professionals Lecture Series: Licensure	Online
Feb 2020	APA Massachusetts Conference "G6: Connecting the Secret Stream: Nature-Based Stormwater Planning through Storytelling and Community Connection in Holyoke's Day Brook Watershed"	Springfield, MA
Feb 2020	Symposium on Urbanization and Stream Ecology: <i>Workshop Case Study group developing Low Impact Development strategies to localized flooding.</i>	Austin, TX
2014-2019	University of Massachusetts, Amherst LARP Graduate Level Design Studio Instructor	Amherst, MA
SP19	<i>"Prospect and Refuge: Parks for Climate/ Social Resiliency"</i>	
SP17	<i>"+ Scape: Hybridizing the Contemporary Common "</i>	
FL14	<i>"Shelter: Beyond Housing Towards Community"</i>	
SP 2020	Evening Lecture Series, Guest Speaker: <i>"Sustaining Creativity Through Applied Research"</i>	
Fall 2019	Building and Technology Lecture: <i>"Sustainable Approaches to Site Design."</i>	
Fall 2017	Zube Public Lecture Series, Guest Speaker: <i>"Formalizing Function"</i>	
2015-2018	The Conway School of Landscape Design Instructor, Site Engineering [FL 15- Sp 16] Guest Instructor, as needed [FL 16- present]	Easthampton, MA Northampton, MA
2007-2012	The Boston Architectural College: Graduate Level Design Studio Instructor	Boston, MA
FL08, 09	<i>"Sustain This: Urban Farm/ Community Center"</i>	
SP09, 10	<i>"Gene Splicing Urban Form"</i>	
SP08- SP12	Thesis Advisor for Master in Architecture Students: <i>Steven Berger, Benjamin Herter, Robin Wilcox, Paul Baccala, David Mitchell, Rebecca Grace, Becki Maisch, Adrienne Ott, Michael Rozas</i>	

2015-present

Studio Guest Critic at Various Institutions

<i>University of Massachusetts Amherst, LARP</i>	Amherst, MA
<i>Conway School of Landscape Design</i>	Northampton, MA
<i>The Boston Architectural College</i>	Boston, MA
<i>Smith College Landscape Design Studies Program</i>	Northampton, MA
<i>Williams College Architecture Design Studies Program</i>	Williamstown, MA
<i>Rhode Island School of Design</i>	Providence, RI
<i>Wentworth Institute of Technology</i>	Boston, MA
<i>Harvard Graduate School of Design</i>	Cambridge, MA
<i>Laurentian University, School of Architecture</i>	Sudbury, Ontario

REPRESENTATIVE PROJECTS

JS Bryant School: Cummington, MA

Adaptation of existing 200 acre farm and homestead into a boarding school to support Transgender Secondary School students. Intensive Farming, arts, and therapy programming on the site. Design integration of thereaputic aspects of land, terrain, and planting along with stormwater management, access and circulation. *[SD- CO]*

Amherst Jones Library: Amherst, MA

Expansion and renovation of the existing Jones Library. Site Design and regrading makes all entrances 100% accessible, carves out more types of hang out spaces and function spaces on the library property and balances stormwater flows with a new rain garden and subsurface drainage. Project has explored the harvesting and reuse of existing site materials such as Goshen and Granite for integration within the new design. *[SD- CO]*

PA School for the Deaf Campus Plan: Philadelphia, PA

Campus planning as related to facilities, educational programming, access and circulation, and property acquisition. Integration of DeafSpace research and application to campus gathering spaces, pedestrian connections, and streetscapes to create quality outdoor gathering spaces specific to the Deaf campus needs. Emphasis on integration with local codes and zoning requirements. Many of the proposed site amenities integrate stormwater elements to reduce the school’s stormwater tax burden and reduce runoff into the Delaware River *[Landscape, Civil, Campus Planning]*

Hills House Historic Estate: Amherst, MA

Research, Layout, and Design of a new Historic Landscape utilizing over 200 varieties of rare conifers and flowering trees. Attention to contrast, colors, form, and availability. *[SD- CO]*

Meadow Terraces: Northampton, MA

Design of series of Terraces with large retaining walls, IPE and stainless steel cable rails, lighting, and a meadow installation using native pollinator plants to stabilize the 47’ slope, provide access to lower portions of the site. Meadow landscape design based upon various cloud formations and layered patterns in the sky. *[SD- CO]*

Apen Heights Apartments: Amherst, MA

Site Design of a new apartment complex in Amherst, MA. Design Features three courtyards for various uses. One courtyard is designed as a Courtyard for all ages. Elements such as balance logs, artificial turf sloped laws, stepping stones, willow nest, shade sail, and raised storage bench, as well as various circulation paths, textures, catenary lighting, and materials provide multi-layered use for patrons of all ages. Project provides privacy to adjacent residents while accommodating welcoming spaces for active and passive recreation. *[SD- CO]*

Winchento

Design, Permitting, and Construction of a new 44 unit Veteran's Housing Center in Winchendon Center. Project reuses two existing historic structures and connects them with a new wing. Site design includes stormwater management, recreational amenities, and therapeutic elements of landscape. Project includes bocce courts, lawn areas for horseshoes, a memorial wall, courtyard gardens and seating nooks, raised garden beds. *[SD- CO]*

Forman School Campus Plan: Litchfield, CT

Campus planning as related to facilities, educational programming, access and circulation, and property acquisition and creating quality outdoor gathering spaces for campus. Application of theories of prospect and refuge into the campus exterior spaces to facilities outdoor learning and mental health benefits. Emphasis on integration with local codes and zoning requirements. *[Landscape, Civil, Master Planning]*

Norwich Free Academy Master Plan: Norwich, CT

Campus planning as related to facilities, educational programming, access and circulation, and property acquisition for an independent/ public school in Norwich, CT. Emphasis improving quality of existing spaces on campus and eliminating vehicular/ pedestrian conflicts. Project seeks to layer programmatic use of exterior spaces to maximize pedestrian benefit. *[Landscape, Civil, Planning]*

Miss Porter's School Master Plan: Farmington, CT

Master planning as related to facilities, educational programming, access and circulation, and property acquisition and creating quality outdoor gathering spaces for campus. Emphasis on social scale of communication within exterior spaces surrounding the pedestrian core, and activation of highly valued spaces within campus. *[Landscape, Civil, Master Planning]*

Miss Porter's School Admissions Building: Farmington, CT

Renovation of existing Grist Mill building into a new admissions building and arrival landscape. New ADA arrival garden, parking, and complex permitting at state, local, and federal levels. Project connects the school back to the Farmington River with views, seating areas, and trails. *[SD- Construction Observation]*

Center School New Campus: Greenfield, MA

Project began with the development of possible idealized hypothetical campus layouts and assistance in site selection and review of over a 100 possible new campus locations. Campus vision maximized the interaction of new England landscapes with the arrival experience and day-to-day exploration of students. Site Selected and developed integrates wetlands, forest, vernal pool, salamander crossings within the campus design. Project served as a case study for carbon sequestration, offsetting embodied carbon associated with development, and using the landscape as a learning laboratory and forest school curriculum (immersive outdoor curriculum). Twenty-acre site features successional forests, and wildflower meadows. *[Concept- Construction Observation]*

Holyoke Peck and Chestnut Middle Schools: Holyoke, MA

Preliminary Site Design and Utility Design for two new middle schools funded by the MSBA in Holyoke. Site Design expresses curriculum requirements for this age group for Math, Science, Art, and Literature. Site elements to extend classroom learning out into the landscape as well as principles outlined with trauma informed design. *[Currently in Schematic Design]*

WNEU New Performance Hall: Springfield, MA

New Performance Gardens and Arrival landscape for Western New England University's performance hall renovations. Outdoor spaces double as park-like spaces for students and formalized event spaces. *[Feasibility]*

South Hadley Elementary School: South Hadley, MA

Site Design for Prek-2nd Grade Elementary School with strong emphasis on natural play elements. Site features woods, landform, and stormwater as teaching elements engaged with formally as well as through play.

SD-CO [Design Drawings, Presentations, Construction Documents]
Rachel Loeffler, ASLA | Berkshire Design Group

Granby Elementary School: Granby, MA

Site Design for PreK- 6th Grade school with emphasis on play as landform sculpture, and use of meadow plantings to expand site habitat and reduce carbon footprint. Project integrates developmental requirements of play categories on the site for a 100% Universally Accessible design. *SD-CO [Design through Construction Observation]*

MA Sustainable Equestrian Horse Park Vision Plan: Hypothetical Site, MA

Vision Plan and design for a 100-acre Equestrian Event Park, featuring a race track, thoroughbred retirement areas, Olympic event venues for driving, jumping, dressage, and eventing, along with welcome center and hotel. Design of park introduces a “horse way” horse/ walking trail allowing access to all venues via horseback with only two vehicular crossings. Project funded by 1% of gambling in the State, and analyzed by UMass as an economic generator for Olympic caliber event spaces. Master plan considers nutrient infrastructure of manure, hay, and supporting agriculture offsite.

BOSTON 2024 Western Mass Planning Group: Berkshire, Hampden, Hampshire, and Franklin Counties

Support to Western Massachusetts’s supplemental bid to Boston 2024 to bring 1/3 of the games to Western Mass. Study used UMass Amherst Campus as a satellite village and placed larger venues with legacy value to the region such as an Olympic rowing center, Velodrome, Mt Biking, BMX, Road Biking, White Water Kayaking, Volleyball, and Equestrian Eventing to western Massachusetts. *[Vision Planning, stakeholder meetings, venue mapping, reports, and presentations]*

Waggin’ Trails Dog Park: Northampton, MA

New 50 acre off leash dog park with over 20 acres of trails, wetlands, and streams. Design includes a competition jumping dog pond, fenced in trails, small dog, large dog, puppy, and sand mounds. The park includes an office building with covered plaza. Design allows for wildlife corridor, and large acres of land fenced in for dogs and owners. *[Master Planning, Permitting, Construction Documents, CO]*

JCA Courtyard: Amherst, MA

Site Design for a new courtyard for all ages. Features an elevated wood deck, space for Huppah, Sukkot structure, shabbat service benches, climbing logs, stump scramble, garden beds, and accessible walks. Organization of layout informed by the original Temple layout in Israel.

[Schematic Design through Design Development]

Amherst SRO Housing: Amherst, MA

Site Design, and feasibility for a possible SRO housing apartment of 25 units in downtown Amherst. Site design engages nature-based stormwater strategies as exterior seating areas and community gardens. *[Schematic Design through CO]*

Jewish Geriatric Services: Longmeadow, MA

Site Design for new Small House Addition and Healing Courtyard to the existing Jewish Geriatric Services facility. *DD- CO [Design Drawings, Construction Documentation, Construction Observation]*

Winchester Locke-Farm Feasibility Study: Winchester, MA

Site Analysis, Cost Estimate, and Massing Studies of various housing typologies to ensure maximum conservation of natural resources. *Project Manager [SD-DD]*

Greylock Glen Trails Project: Adams, MA

New 32-mile trail system in Greylock Glen: hiking, Nordic, and carriage trails

Project Manager CD-CO [Design Drawings, Permitting, Presentations, Construction Documentation, Construction Observation]

Hershey Children's Hospital & Oncology Center: Hershey, PA

New Campus Buildings with Roof Courtyards, Gardens, and Playgrounds. Integration of Environmental Psychology studies about maximizing patient recovery rates into design of various healing gardens for different user groups. *Project Manager SD-CO [Design Drawings, Presentations, Construction Documentation, Construction Observation]*

Long Bridge Park Phase I & II: Arlington, VA

30 Acre, Active and Passive Use Park over contaminated post-industrial site. Development of park uses over landfill, under FAA flight cone, and adjacent to rail. *Job Captain SD-CD [Design Drawings, Strategies, Grading, Detailing, Construction Documentation, Coordination]*

Knoxville Riverfront Park: Knoxville, TN

New 150 acre park associated with adjacent development in downtown Knoxville. Playgrounds, and innovative subsurface wetland. *Project Manager DD-CD [Design Drawings, Stormwater Strategies, Wetland Design, Federal/State Permitting, Construction Documentation]*

Exxon Mobil Headquarters: Texas

New 480 Acre Corporate Campus near Woodlands Texas, park and campus design, paving and circulation networks, grading, greywater reuse and green infrastructure techniques. *DD-CD [Site Grading and Construction Documentation and Detailing]*

Richmond Riverfront: Richmond, VA

Assisting the City of Richmond target park potential for economic redevelopment and strategize their Post-Industrial Riverfront redesign *Master Planning [Site Analysis and Strategies]*

London Olympic Park: London, UK

Planning and Construction Documents associated with the 2012 Olympic venue and Legacy Park. *DD-CD [Site Grading and Detailing]*

The American Indian Cultural Center and Museum: Oklahoma City, OK

Planning and Construction Documents associated with a series of trails, event spaces, and ritual sites for AICC's new museum. *DD-CD [Site Layout and Detailing]*

Sherwood Forest Visitor Centre: Nottingham, UK

Site Design for a new museum and demonstration landscape about traditional methods of land management in the UK. *DD [Planting, Grading, Programmatic Strategies]*

Louisville Waterfront Park: Louisville, KY

SD-CD [Model Building, Construction Documentation, Site Diagrams]

Drexel University Gateway and Quad: Philadelphia, PA

DD-CD [Model Building, Construction Documentation]

New York World Trade Center International Competition: NYC, NY

Winning Entry Selected in Competition [Presentation Support]

Denver Union Station: Denver, CO

DD [Presentation Graphics]

Xochimilco Master Plan: Mexico City, MEX *DD [Stormwater mitigation, Presentation Graphics]*

Christopher Chamberland, P.E.

Principal Civil Engineer

Since joining Berkshire Design, Chris Chamberland has become a leader in the field of sustainable water systems. He has developed innovative net-zero-water systems, including rainwater harvest drinking water systems and on-site greywater treatment, for the three projects in Western Massachusetts to be fully certified under the Living Building Challenge. He has developed designs for dozens of sites that rely on green infrastructure to provide environmentally-sensitive stormwater management that safeguards water quality, while reducing site impacts and enhancing site aesthetics.

Overall, Mr. Chamberland has seventeen years of experience in site development, stormwater management, roadway, and utility design for various public and private clients in New England and beyond. His work on a wide variety of civil engineering projects in rural, suburban and urban settings have provided the experience necessary to take on most any design challenge. His other projects include public plazas, subdivisions, municipal roadways, site design for institutions, airports and public transit facilities.

EDUCATION

2012	Columbia University, Master of Science, Civil Engineering	New York, NY
2005	University of Notre Dame, Bachelor of Science, Civil Engineering	South Bend, IN

PROFESSIONAL EXPERIENCE

2013- <i>present</i>	Principal Civil Engineer, Berkshire Design Group	Northampton, MA
2007-2013	Civil Engineer, URS Corporation	New York, NY
2005-2007	Engineer in Training, SEA Consultants, Inc.	Rocky Hill, CT

PROFESSIONAL REGISTRATIONS

2014	Massachusetts – Registered Professional Engineer	License #51074
2010	New York – Registered Professional Engineer	License #088178
2015	Connecticut – Registered Professional Engineer	License #30968
2017	Rhode Island – Registered Professional Engineer	License #12505
2019	New Hampshire – Registered Professional Engineer	License #16210
2015	Massachusetts Soil Evaluator	License #13861
2008	LEED Accredited Professional	

LECTURES & WORKSHOPS

2019	Holistic Solutions to Net Positive Energy, Carbon, and Water on Campus	Amherst, MA
2019	The Water Cycle of Buildings – Living Future UnConference	Seattle, WA
2018	Integrated Design for the R.W. Kern Center – Efficiency Vermont	Burlington, VT
2017	Meeting Net Positive Water Through Innovation and Advocacy – Greenbuild	Boston, MA
2016	Architecture & Water Panel – AIA Connecticut	New Haven, CT
2015	Net Zero Water: A Dry Topic	Boston, MA
2015	LBC Projects Pushing Regulatory Limits in Massachusetts – Greenbuild	Washington, DC

REPRESENTATIVE PROJECTS

Rocky Hill Bike Path: Northampton, MA

Design of horizontal & vertical alignment, site work, stormwater management, ADA accessibility, and erosion controls for a 0.75 mile shared use (bicycle & pedestrian) path through City-owned conservation land. The project sought to expand Northampton's robust portfolio of bicycle infrastructure by linking existing neighborhoods, including one of the City's elementary schools with an ADA accessible asphalt path.

Village Hill Co-Housing: Northampton, MA

Design of the vehicular circulation, pedestrian walkways, utility infrastructure, stormwater management, erosion controls, and construction phasing for this 32-unit co-housing community on the grounds of the former Northampton State Hospital. Designed to foster intentional community and sustainable living, the site design includes elements of universal design and green infrastructure throughout.

Hampshire College R.W. Kern Center: Amherst, MA

Design, permitting, commissioning, and operation of an innovative Net-Zero-Water system for this fully-certified Living Building Challenge admissions building and campus center. The Kern Center is designed to supply all site water needs from captured precipitation and to treat and dispose of all wastewater on site. Site design included LID stormwater management strategies to capture and infiltrate stormwater on-site. Engaged with students who began to study the building's water systems while construction was ongoing.

Hitchcock Center for the Environment: Amherst, MA

Design, permitting, commissioning and operation of net zero water systems for this fully-certified Living Building Challenge environmental education center. Worked with stakeholders to develop educational programs embedded into every building system. The project is designed to supply all water needs from a rainwater harvest system and to treat and dispose of all wastewater on site.

Edward P. Evans Academic Center at Eaglebrook: Deerfield, MA

Design and construction documents for this 38,000 square foot academic building for the highly-selective Eaglebrook preparatory school. The new building sits at the edge of the school's private pond, which provides habitat, recreation, stormwater management, and an aesthetic anchor to the campus core. The project includes a green roof system and geothermal well field and incorporated a renewal of the main campus quad. The project demolished multiple existing buildings and required the relocation of several existing utility systems to allow for new construction.

Lloyd Center for the Environment: Dartmouth, MA

Civil engineering and site design for this 1,000 square foot welcome center designed to meet the Living Building Challenge. The project includes an innovative greywater treatment system that purifies used water with a micro-sized septic tank and greywater treatment garden that provides a prominent landscape feature and teaching tool, in addition to treating and disposing of the building's wastewater on site.

Hampshire College Quad Renewal: Amherst, MA

This project re-imagined the campus core of Hampshire College by converting an asphalt bus turnaround loop into a wildflower meadow. BDG designed a new campus loop road to divert vehicle traffic around the site of the new R.W. Kern Center and incorporated new transit infrastructure.

Miss Porter's School Admissions Building: Farmington, CT

Civil engineering design and permitting for the admissions offices and welcome center for this highly-selective girl's preparatory school. The project renovated a historic grist mill building overhanging the Farmington River and rejuvenated the site with extensive landscaping and accessibility improvements.

Timothy D. Armstrong, PLS

Principal, Survey Manager

Mr. Armstrong has 20 years of experience in the land surveying practice and has been licensed in Massachusetts since 2015. His experience covers a wide range of survey projects, from small boundary surveys to interstate GPS networks including ALTA/NSPS Land Title Surveys, site development, construction layout, road survey, and interstate energy transmission projects. Mr. Armstrong is also experienced with GIS systems, GPS project integration, and survey data analysis. His current responsibilities as Survey Manager at Berkshire Design Group include project management, project scheduling, work quality analysis and client coordination.

EDUCATION

1997	Wheaton College, Bachelor of Science, Biology	Norton, MA
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PROFESSIONAL EXPERIENCE

2019-present	Principal, Survey Manager, The Berkshire Design Group, Inc.	Northampton, MA
2016-2019	Chief Land Surveyor, Hill Engineers, Architects, Planners	Dalton, MA
2016	Survey Manager, Freeman Companies	Hartford, CT
2008-2016	Surveyor, Hatch Mott MacDonald	Holyoke, MA
2003-2008	Survey Technician, H. L. Eaton & Associates, Inc.	Hadley, MA
2000-2003	Survey Technician, Beals & Thomas, Inc.	Southborough, MA
1997-1998	Survey Technician, Ducharme & Wheeler	Bolton, MA

PROFESSIONAL REGISTRATIONS

2015	Massachusetts- Registered Professional Land Surveyor	License #51619
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PROFESSIONAL SOCIETIES

2018-2019	Vice President, Western Mass Chapter, MALSCE
2019- <i>present</i>	President, Western Mass Chapter, MALSCE
2010- <i>present</i>	Massachusetts Association of Land Surveyors and Civil Engineers

ADDITIONAL EDUCATION

2011-2014	University of Wyoming, Land Surveying Coursework	Laramie, WY
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THE BERKSHIRE DESIGN GROUP

Landscape Architecture
Civil Engineering
Site Planning
Land Surveying



4 Allen Place
Northampton, MA 01060
Tel 413-582-7000
E-mail: bdg@berkshiredesign.com



The Berkshire Design Group, is an award-winning firm of landscape architects, civil engineers and land surveyors specializing in master planning, park and recreation design, independent and public schools, site planning and commercial development. We creatively find the extra dimensions inherent in all design opportunities to envision a future that meets our clients' needs. From concept to implementation we have the experience to navigate our clients through the maze of regulations and permitting to get projects constructed on time. We provide our clients with a complete range of design and engineering services and have the management skills necessary to coordinate diverse projects and collaborative professional teams. Great design and quality control are our primary objectives. There are many reasons to hire The Berkshire Design Group:

We see the big picture: Understanding a community and the environmental, political, and economic challenges that define a project are essential skills that we possess. We assist our clients in seeing the larger vision of designs and have the experience to understand how each decision affects the project's goals, budget, and time lines.

We know the process: The Berkshire Design Group knows how to guide clients through the permitting and regulatory process with federal and state agencies, local planning boards, conservation commissions and other municipal boards. Our designs respond to these constraints so your project is approved in a minimal amount of time.

We practice environmentally sensitive design: Designing for a sustainable future is a hallmark of our firm's approach to projects. From designing innovative stormwater management systems to developing LEED certified designs, to considering ecological impacts of lighting, planting, planting to increase pollinator and bird habitat and helping clients understand the embodied carbon incurred due to construction we help educate our clients to make informed choices and minimize environmental impact.

We are creative: Every design problem holds the opportunity for a creative, innovative and elegant solution. We thoroughly explore the possibilities to create a design that is beautiful, economical and functional.

We love what we do: Our firm has dedicated professionals who are passionate about their work. We put our heart and soul into each project to ensure the highest quality product.

We have the services you need: By combining land surveyors, civil engineers and landscape architects into one office, we can provide you with the full range of creative to technical services that are required for any land development project.

We get things done: A project isn't successful unless it's actually built. Our practical and pragmatic side allows us to transform ideas into reality.

SUSTAINABILITY



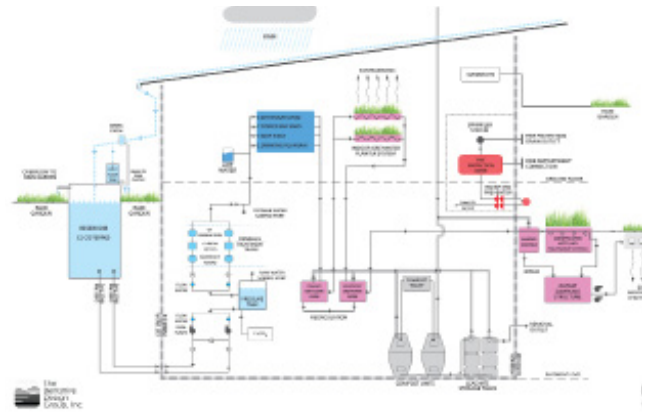
The Berkshire Design Group, Inc. has been leading sustainable design strategies for the New England Region since 1984. We work with our clients holistically to craft an integrated project that minimizes negative impacts on the environment and improves a project's immediate surroundings. We've been reducing greenhouse emissions, improving water quality, and developing cutting edge design solutions since the firm began.

Not only has the firm developed many of the prototypes and standards used by the Massachusetts Department of Environmental Protection for Stormwater Design, we've lead the site design and construction of the:

- First Certified Living Building Challenge in New England**
- First Net Zero Community in New England**
- First PassiveHaus Childcare Center in New England**

Across the country there are several voluntary accreditation programs which a client or project may pursue. Of these, USGBC's LEED Rating System is the most common; others include: The Sustainable Sites Initiative, The Star Communities Rating System for Cities, Envision Sustainable Infrastructure Rating System, and the Net Zero Building Challenge. The Berkshire Design Group has completed numerous projects within each category and serves as a regional expert for many of these programs. For example, The Berkshire Design Group is working with Mass Development on the first Net Zero Neighborhood in Northampton, Massachusetts.

SUSTAINABILITY



Living Building Certified Projects

Hampshire College R.W. Kern Center – Certified Living Building – Amherst, MA
Hampshire College Hitchcock Environmental Education Center – Certified Living Building – Amherst, MA
Smith College Bechtel Environmental Classroom – First Certified Living Building in Eastern US – Whately, MA
Lloyd Center for the Environment Welcome Center – Pursuing Living Building Challenge – Dartmouth, MA
Class of 1966 Environmental Center – Rainwater Harvest Design Consulting –
Living Building Challenge Petal Certified – Williamstown, MA

Sustainable Design Projects

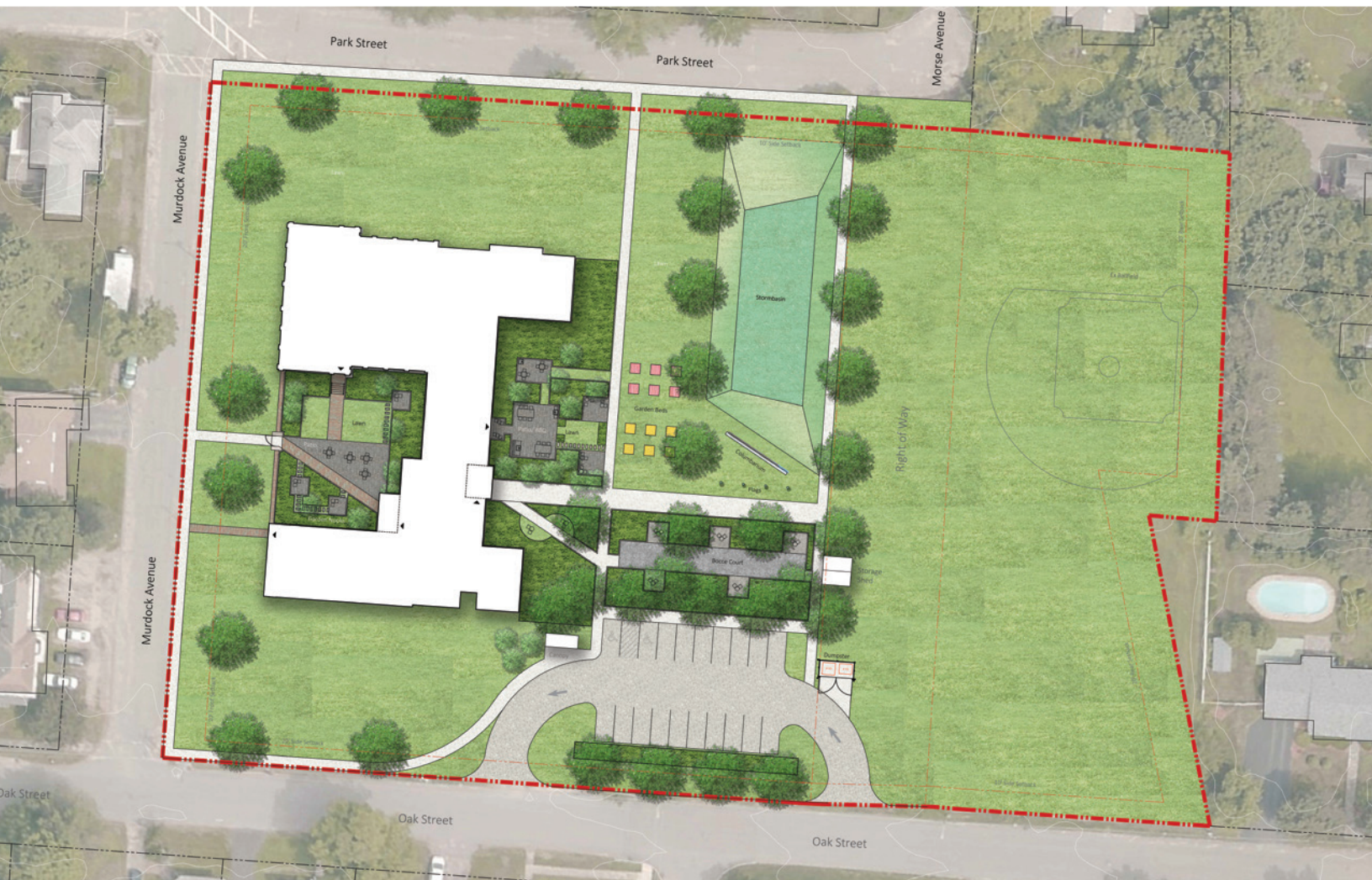
Center School – Bird habitat, Carbon Sequestration, Salamander Crossing, living classroom – Greenfield, MA
East Meadow School- Wildlife Meadow Plantings Bird Habitat- Granby, MA
Greenfield Community Center- Rain Gardens with layered plantings- Greenfield MA
Unity Park – Rain Gardens- Montague, MA
Eddy's Place Bioretention Area- Hadley, MA
Florence Savings Bank – Bioswale- Granby, MA
Blanchard Road Park – Rain Gardens- Burlington, MA
Children First Day School – Rain Garden- Granby, MA
Downtown Amherst Sidewalks – Structural Soil- Amherst, MA
Agawam Rosewood Way Development- Porous pavement- Agawam, MA
Hampshire College- Campus Core Reclamation & Wildflower Meadow – Amherst, MA
Miss Porter's Admissions Building Renovation- Invasive species removal- Farmington, CT
River Valley Market – Bioswale Parking Islands & Stormwater Recycling Systems- Northampton, MA
Eaglebrook School – Daylighted Stream, Pond Habitat Restoration, Stormwater Treatment- Deerfield, MA
Holyoke Middle Schools- Integration of STEM curriculum with site design, water cycle, rain gardens, runnels, eco classroom, geologic time – Holyoke, MA
Waggin Trails Dog Park- Alternative dog waste collection, stormwater as dog park features- pond and weeping rock wall, protection of wetland areas and wildlife corridor- Northampton, MA
Massachusetts Equestrian Center- new thoroughbred facility including nutrient recycling for fields and farms

Net Zero Project

University of Massachusetts Crotty Hall

LEED Certified Projects

Northampton Police Department – LEED Gold
Smith College Friedman Apartment Complex – LEED Gold
Kendrick Place, Amherst, MA – LEED Gold
Olympia Place, Amherst, MA – LEED Gold
Northampton Senior Center – LEED Silver
Granby East Meadow Elementary School- LEED Silver
Grafton Library- LEED Silver Anticipated
Holyoke Middle Schools – LEED Silver Anticipated



Winchendon Veteran's Housing,

Winchendon, MA

Scope of Services: Feasibility, Schematic Design, Design Development, Comprehensive Permitting 40B process, Construction Documentation and Construction Observation.

The project renovates, expands, and repurposes two historic school buildings. Project transforms the site and existing buildings into Veteran's Senior Housing. Outdoor amenities include a stormwater pool, bocce courts, BBQ patios, therapeutic gardens, and spaces to gather and reflect. Incorporates Trauma informed design principles within the landscape to support residents towards a holistic approach to physical, mental, and emotional health.

The estimated date of completion is 2024 and estimated construction costs is \$14 M.



Sanderson Place Senior Housing, *Sunderland, MA*

The project offers thirty-three (33) new affordable apartments in a mix of one-bedroom and two-bedroom units. The project includes renovation of the existing Village House with three units facing North Main Street. The larger 2-story building, taking cues from the vernacular architecture of the region. This building is nestled away from the street in the location of the previous barn. It includes a fitness room, 2 laundry rooms, a library, and an outdoor deck. The building overlooks the adjacent wetlands meadow and offers dramatic views of Mount Sugarloaf to the east. Storm water runoff is largely managed through bio-filtration and an extensive planting palette seeks to blend the site into the surroundings and accentuate the residential character of the location. These new housing units help provide opportunities for seniors who want to age in a place locally, helping offset the regions affordable housing crisis.

Scope of Services: Schematic design, permitting, design development, construction documentation, bidding and negotiation and construction observation.

Completed in 2022. Estimated construction costs were \$8.2M.

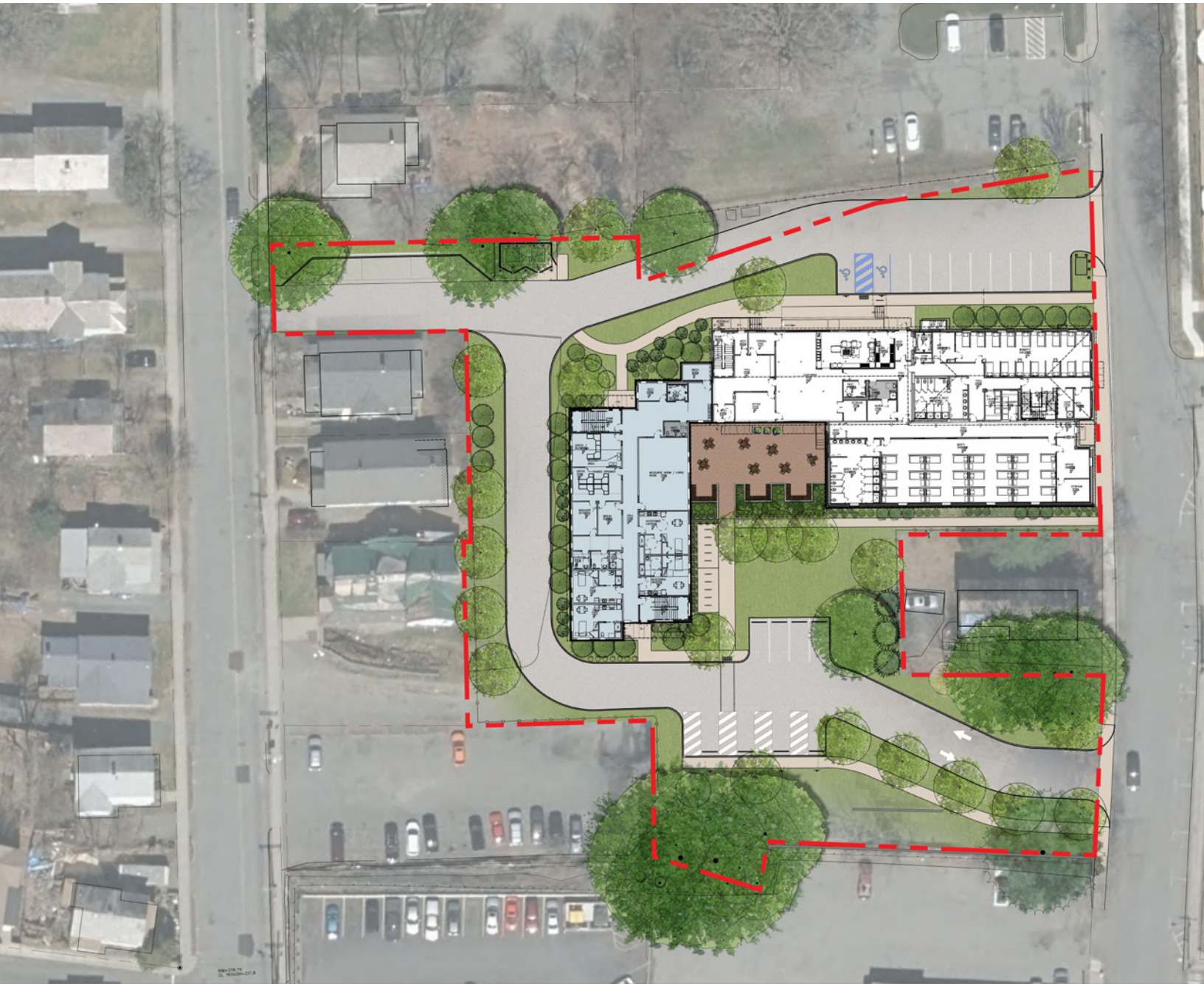


East Gables

Amherst, MA

Scope of Services: Feasibility, Schematic Design, Design Development, Comprehensive Permitting 40B process, Construction Documentation and Construction Observation.

Recently completed 28 Bedroom, single occupancy apartments within downtown Amherst. Features landscaped areas and stormwater amenities.



Wells Street Housing

Greenfield, MA

Scope of Services: Schematic Design, Design Development, Comprehensive Permitting 40B process, Construction Documentation and Construction Observation.

Redevelopment of an existing building on Wells Street in Downtown into permanent housing + overnight shelter with support services. Site features, outdoor patio space, rain garden planting, sun lawn and other landscape features. Fully accessible building with EV ready parking spaces.

Comprehensive HERS Ratings

Erving, MA | October 10, 2023



As a 40+ year old non-profit organization, the Center for EcoTechnology (CET) is proud to be a trusted resource for developers, architects, and contractors building high performance buildings. We provide practical solutions that save energy, materials and money and have a positive impact on our environment and community.

The Home Energy Raters in CET's **High Performance Building Team** have extensive experience with multi-family projects, including providing HERS Ratings and inspection services in new and existing construction, ENERGY STAR and LEED for Homes verification, duct and envelope leakage testing, consulting, and technical assistance.

Matt Zarotny,
Senior Building Scientist

413-441-1751
matt.zarotny@cetonline.org

Emma Thomas,
Program Consultant

413-340-3775
highperformance@cetonline.org

WE MAKE GREEN MAKE SENSE

High Performance Building Team BY THE NUMBERS

- Since 1999 CET has been providing Home Energy Rating services to both new residential construction and existing dwellings, having completed over **4,500 single and multi-family ratings**.
- CET's Raters have completed **thousands** of diagnostic tests for envelope and duct tightness and advised **hundreds of builders** on leakage reduction techniques.
- Since participating in the first LEED for Homes pilot in 2004, CET has completed **dozens** of single- and multi-family LEED for Homes projects.
- To educate the construction industry about changes to the energy code, CET has provided approximately **100 energy code trainings** across Connecticut and Massachusetts.

This is proposal does not constitute an agreement.

PROJECT DESCRIPTION

The Erving Affordable Housing Project will consist of (1) 1-story building with a total of 16 dwelling units, and (2) two story townhome buildings with 10 dwelling units. The project will need to meet the requirements of the IECC 2021 Energy Code.

SCOPE OF SERVICES

Comprehensive HERS Ratings – Design Stage

- **Preliminary HERS Ratings and Consulting:** CET will perform HERS energy modeling of the dwelling units to be constructed based on drawings and specifications in REM/Rate software. Results will be reported using the HERS index as required for Stretch Energy Code. CET will provide recommendations for improving the HERS index, including adjustments to insulation, air barriers, windows, mechanical systems, plumbing systems, lighting, and appliances. Preliminary HERS ratings will be performed at 2 stages of design:
 - A sample of units modeled at the 50% construction drawings
 - All units modeled at the 100% construction drawing stage.
- **Energy Efficiency Plan:** Once design specifications have been finalized, CET will develop an Energy Efficiency Plan for the building, summarizing the energy efficiency features to be included. This plan can be used for permitting and to document expected performance.

Comprehensive HERS Ratings – Construction Stage

- **Pre-Construction Meeting (1 site visit):** Just before construction gets started, this meeting will be used to review the Energy Efficiency Plan and to review the verification process with the contractor.
- **Foundation Inspection (1 site visit):** An inspection of the foundation insulation and existing building. Framing and air sealing requirements are typically reviewed at this visit as well. Contractor to provide photo-documentation of all foundation insulation not visible during the visit.
- **Framing Inspections (3 site visits):** An inspection of the windows, framing, HVAC systems, and plumbing systems prior to insulation.
- **Insulation Inspections (3 site visits):** An inspection of the insulation and air sealing prior to drywall.
- **Mid-Construction Compartmentalization Testing (2 site visits):** Preliminary blower door tests of up to 5 individual apartments partway through construction to verify compartmentalization approach is effective.
- **Final Inspections (4 site visits):** An inspection of the completed buildings, including verification of air tightness, mechanical systems, lighting, and appliances. Includes a whole-building blower door test, individual compartmentalization blower door tests of apartments, and ventilation system testing. Blower door testing will be performed according to RESNET Sampling Guidelines with a maximum of 11 apartments to be tested.
- **Final Home Energy Rating:** Based on inspection results, CET will produce Final Home Energy Rating Certificates for all units.

PRICING INCENTIVES*

Service	Price
Comprehensive HERS Ratings	\$38,935

Additional services beyond the stated scope of work, such as site visits, meetings, or additional inspections, will be invoiced at \$160/hour per person, including travel.

Pricing Assumptions

- The project configuration does not change from the project description.
- Construction to be completed within 3 years.
- Consistency of construction sufficient to allow for RESNET sampling. (First 7 units pass their tests so that only 1 in 5 will need to be tested after that)

QUALIFICATIONS & STAFFING

CET has extensive experience assisting multifamily projects throughout the Northeast with energy code compliance and advanced certifications. We are familiar with a wide variety of approaches for designing and constructing high performance buildings and are uniquely qualified to provide support to this project. CET provides support to architects, contractors, and developers throughout the design and construction process to ensure that buildings achieve their performance and certification goals.

A few highlights of the multi-family projects CET has recently supported:

- Middle Street Apartments, 49-unit Passive House mid-rise building in Portland, ME
- Harvard University Housing, 9-unit Passive House renovation project in Cambridge, MA
- Sanderson Place, 33-unit high performance multifamily new construction and renovation, Sunderland, MA
- Cole Avenue Apartments, 41-unit ENERGY STAR new construction and renovation, Williamstown, MA
- Bentley Apartments, 45-unit ENERGY STAR apartment complex in Great Barrington, MA
- Amherst Apartments, 88-unit high performance apartment building in Amherst, MA
- Russell Terrace, 10-unit high performance townhouse development in Holyoke, MA
- Lawson Green, 30-unit ENERGY STAR apartment building in Scituate, MA
- Shirley Meadow, 58-unit ENERGY STAR affordable housing project in Shirley, MA
- Sugarbush Meadow, 150-unit high performance apartment complex in Sunderland, MA
- Sergeant House, 31-unit high performance renovation and addition in Northampton, MA
- The Clarion, 39-unit LEED Silver mid-rise apartment building in Boston, MA
- Garfield House, 40-bedroom Passive House dormitory in Williamstown, MA
- Powerhouse Square, 22 high performance mid-rise condominiums in Great Barrington, MA
- Hillside Residence, 36-unit ENERGY STAR senior housing building in West Springfield, MA
- University Drive Housing, 36-unit high performance low-rise apartment building in Amherst, MA
- Bostwick Gardens, 31-unit ENERGY STAR low-rise senior housing addition in Great Barrington, MA
- Lumber Yard, 55-unit high performance mid-rise apartment building in Northampton, MA
- Christopher Heights, 83-unit LEED Gold assisted living building in Belchertown, MA
- Parsons Village, 38-unit townhome-style ENERGY STAR affordable housing project in Easthampton, MA
- Leyden Woods, 200-unit ENERGY STAR affordable housing project in Greenfield, MA
- Highland Woods, 40-unit high performance low-rise senior housing building in Williamstown, MA
- University Drive Housing, 36-unit high performance low-rise apartment building in Amherst, MA
- Christopher Heights, 83-unit LEED Gold assisted living building in Northampton, MA
- Cass St Veteran's Housing, 20-unit ENERGY STAR project in Springfield, MA
- Soldier On Veteran's Housing: 44-unit LEED and ENERGY STAR project in Northampton, MA
- Smith College, 21-unit LEED and ENERGY STAR student housing project, Northampton, MA

Matthew Zarotny, CET's Senior Building Scientist and Lead Rater, is a Home Energy Rater, Passive House Rater, and Passive House Verifier. Matt came to the High Performance Building department as CET's Lead Energy Specialist for CET's Mass Save existing home program team. While supervising a team of field energy specialists, Matt promoted consistent field work and provided daily support to find technical and customer relevant solutions. Previous to becoming the Lead Energy Specialist, Matt conducted hundreds of Mass Save residential energy assessments at CET from 2011 – 2014, during which he provided customers with energy efficiency recommendations, savings estimates, rebate proposals, and financing options. He is a BPI-certified Building Analyst. Matt has a Masters in Management from Colorado Technical University and a BS in Geography from UMASS.

John Saveson, Home Energy Rater and Passive House Verifier, has worked in numerous aspects of the design, construction, and weatherization industries for over 30 years. Employed by the Center for EcoTechnology since 2008, he has worked as an Energy Auditor, QA Inspector for home weatherization services, Energy Auditor Supervisor, and Field Test Proctor for BPI (Building Performance Institute) trainings. As a certified BPI Building Analyst John has performed extensive diagnostic and combustion safety testing for residential buildings. After becoming a certified HERS rater in 2011 John has been performing Home Energy Ratings and ENERGY STAR verification for high performance homes and multifamily buildings. He holds a B.S. in Architecture from M.I.T. and an M.A. in Landscape Design from the Conway School of Landscape Design.

Lia Douillet joined CET's High Performance Building Team and became certified as a HERS Rater in 2022. Prior to that, she worked in residential construction and earned a B.S. in Building & Construction Technology (BCT) and an M.S. in Environmental Conservation from UMass Amherst. Her academic background focused on building science, reducing building energy consumption and emissions associated with the built environment, and high-performance building.

Chad Simmons has been with CET since 2014 conducting home energy assessments under the Mass Save and municipal utility programs. He is trained in post job installation inspections, combustion safety testing, blower door testing, duct sealing & insulation evaluations and has extensive experience with customer education. Chad attained his BPI Certification as a Building Analyst in 2014. Now certified as a HERS Rater, Chad performs residential energy modeling, code testing, field inspections and blower door testing.

October 19, 2023

Gina Govoni
Executive Director
Rural Development, Inc.
241 Millers Falls Road
Turners Falls, MA 01376

RE: Kuehn Planning Grant

Dear Ms. Govoni:

We are pleased to be able to offer **Rural Development, Inc.** a Kuehn Planning Grant of **\$15,000** for your project **Care Drive Housing** (the “Project”) – congratulations!

The grant will be made in accordance with the terms and conditions outlined in this letter. Please note that the grant award is based on our current understanding of your Project. As additional facts and issues are more clearly defined, we may add to or amend the conditions outlined below.

CEDAC represents and grantee acknowledges that Kuehn Charitable Foundation, a tax-exempt organization (“KCF”), has provided CEDAC with the funds to be able to award this Kuehn Planning Grant to you.

I. Use of Grant Funds

The grantee is Rural Development, Inc. The grantee is responsible for all grant administration, monitoring and compliance. The grant will be used to complete a Phase I Environmental Site Assessment, and research potential cost-saving energy-efficient construction methods, in particular panelized construction.

Grant funds will be expended according to the Grant Budget (Attachment A). See below for provisions for changing the Grant Budget. Grant funds may only be used to pay for the costs of the Project described above and in the Grant Budget.

II. Grant Timetable

The grant term will end one year from the date of this letter. By this date, all costs reimbursable under the grant must have been incurred and all work associated with these costs must have been completed. Invoices documenting and substantiating such costs may be submitted as costs are incurred, up to once per month, and must be submitted to CEDAC no later than 45 days after the end of this grant term. Project Manager, Lionel Romain, will work closely with you to monitor your progress in meeting these requirements. If for any reason the proposed work is not complete by the end of the grant term and/or invoices have not been submitted within 45 days after the end of the grant term, CEDAC may recapture any unused funds and reallocate them to other uses.

Any extensions to these deadlines will be at the sole discretion of CEDAC.

III. General Conditions

Grantee: Grantee must continue to be in good standing with CEDAC and current on all required filings to governmental agencies.

Reporting Requirements: Grantee must submit an interim report by **April 15, 2024**, with a final report due by **October 15, 2024**. The reports should include the following:

- A description of progress made toward the completion of the tasks for which the funds are being used.
- Any conclusion made concerning the overall feasibility of the proposed project or the next steps to be completed.

Modification or Revocation of Grant: CEDAC reserves the right to discontinue, modify or withhold any payments to be made under this grant or to require a total or partial refund of any grant funds if, in CEDAC's sole discretion, such action is necessary: (1) because grantee has used grant funds for any purpose not permitted hereunder or otherwise has failed to fully comply with the terms and conditions of this grant; (2) to protect the purpose and objectives of the grant or any other charitable activities of CEDAC; or (3) to comply with the requirements of any law or regulation applicable to grantee, CEDAC or this grant.

Publicity: Grantee will credit CEDAC as grantor, and KCF as sponsor and funder, of this Kuehn Planning Grant, in all publicity regarding the Project. Grantee will allow CEDAC to review and approve the text of any proposed publicity concerning this grant prior to its release. CEDAC and KCF may include information regarding this grant, including the amount and purpose of the grant, any photographs grantee may have provided, grantee's logo or trademark, or other information or materials about grantee's organization and its activities, in the periodic public reports, newsletters, and news releases of KCF and CEDAC.

Indemnification: Grantee agrees to indemnify and hold CEDAC and KCF harmless from and against all claims, liabilities, damages, penalties, costs and expenses (including, without limitation any reasonable attorneys' fees and costs related thereto) incurred by CEDAC or KCF arising out of any breach by grantee of any term or provision of this grant agreement or any actions taken by grantee pursuant to this grant.

Execution in Counterparts; Electronic Delivery: This Agreement and any other Grant Documents may be executed in one or more counterparts, each of which shall be deemed to be an original and all of which, when taken together, shall be deemed to be one and the same agreement or document. A signed copy of this Agreement or any other Grant Documents, and a signed copy of any certification, requisition or other instrument transmitted by facsimile, email or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original executed copy of this Agreement or such other Grant Document, certification, requisition or other instrument for all purposes, it being expressly agreed that each party to this Agreement shall be bound by any such electronically transmitted signed copy and shall accept such electronically transmitted signed copy from the other party as an original executed copy for all purposes.

IV. Specific Grant Conditions


Budget: Any changes to the Grant Budget in Attachment A must be approved in writing by CEDAC before Grantee incurs the expense for which it will seek reimbursement through the grant.

Release of Funds: No funding shall be released to the grantee until the following shall have occurred:

- Invoices are certified by Grantee and submitted as directed in Attachment B to this agreement.

V. Acceptance of Grant Award

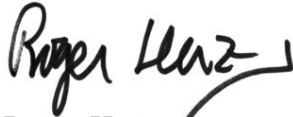
Please review and sign the statement below if you wish to accept the grant award and return one original of this letter to us within 30 days of the date of this letter. If we do not receive this written confirmation within 30 days, the grant award will automatically expire.

<input checked="" type="checkbox"/> On behalf of Rural Development, Inc., I hereby accept a Kuehn Planning Grant of \$15,000 subject to the terms and conditions set forward in this letter.	
<input type="checkbox"/> I do not wish to accept the Kuehn Planning Grant of \$15,000 .	
	10/19/23
Signature	Date
Gina Govoni	Executive Director
Print Name	Title

One scanned copy of the original signed acceptance of grant award should be returned to the attention of Lionel Romain at lromain@cedac.org.

Again, congratulations, and we look forward to working with you.

Sincerely,



Roger Herzog
Executive Director

Attachment A
Kuehn Planning Grant Budget

	Grant	TOTAL
Description of Uses:		
1. Architecture and Design – Austin Design	\$8,000	\$8,000
2. Phase 1 ESA (Consultant TBD)	\$5,000	\$5,000
3. Energy Consultant (CET)	\$2,000	\$2,000
TOTAL	\$15,000	\$15,000



21 Custom House Street
Boston, MA 02110
Tel: (617) 850-1000
Fax: (617) 850-1100

Guilliaem Aertsen
Chairman

Moddie Turay
President and CEO

October 19, 2023

Gina Govoni
Executive Director
Rural Development, Inc.
241 Millers Falls Road
Turners Falls, MA 01376

RE: Care Drive, Erving, MA (“The Project”)

Dear Gina:

Thank you for your interest in having the Massachusetts Housing Investment Corporation (“MHIC”) provide equity financing for the Care Drive project located in Erving, MA. It is our understanding, based on the information provided to us, that this development will create 26 units of rental housing, all of which will be affordable to senior and family households earning less than 60% of the area median income. MHIC is excited to continue the partnership with Rural Development, Inc (“RDI”) and build upon the success of our recent Sanderson Place investment.

This letter of interest will serve as an outline of a proposal that will set forth the terms and conditions under which one or more of the Massachusetts Housing Equity Funds (“MHEF”) will acquire an interest in the project owner in anticipation of receiving federal low-income housing tax credits (“LIHTC”) in connection with such investment. This letter of interest will serve as an outline of a proposal that would be subject to completion of usual and customary due diligence and approval of MHIC’s investment committee and MHEF’s Board of Directors.

MHIC is familiar with and fully supports the goals of the Executive Office of Housing and Livable Communities (“EOHLC”) regarding LIHTC investor business practices described in the 2022-2023 Qualified Allocation Plan (the “QAP”). MHIC confirms that, if it is selected as the LIHTC investor for the Project, the final transaction documents will conform to the requirements set forth in the 2022-2023 QAP.

MHEF is also interested in placing the Massachusetts Low-Income Housing Tax Credits for \$0.81. We believe this can be achieved through a direct placement or through a broker.

A. Project and Owner:

Project Owner: A to-be-formed single purpose entity, subject to MHIC’s approval.

Sponsor: RDI

Managing Member: A to-be-formed single purpose entity controlled by RDI

Guarantor: Entities or Individuals subject to MHIC's approval

B. Terms and Conditions:

Price: The Project expects to receive an allocation of 9% LIHTC from EOHLC in an annual amount of \$985,000. The annual credit may be prorated for initial rent-up in the first credit year. The total LIHTC anticipated to be delivered to the Project Owner is \$9,850,000.

MHEF's capital contributions for a 99.99% share of the Project Owner as the investor member will be \$8,765,623 (\$0.89 per \$1.00 of LIHTC).

The price is based upon information provided by the Sponsor as of the date of this letter. Any material change to the financing structure, scope of the Project, development budget, anticipated completion and lease-up schedules, amount of LIHTC allocation or number of tax-credit units will result in a change to the final price.

Capital Contributions: MHEF will make its Capital Contribution in the following installments:

Date	Milestone	Amount	%
7/1/2026	Initial	\$1,314,843	15%
7/1/2027	Completion - 100%	\$2,191,406	25%
1/1/2028	Perm Loan/Stabilization ("Break-Even Installment")	\$4,821,093	55%
4/1/2028	Final - 8609 & Tax Return	\$438,281	5%

Should a different capital contribution schedule from the above be required to meet the funding needs of the Project, we will work with you to modify the above schedule subject to MHEF's underwriting requirements and subject to adjustment of the price to achieve the same yield to MHEF. We will also assist you to explore different syndication structures to achieve savings on sales tax on construction materials and to maximize syndication proceeds, if you so desire.

The Managing Member will be required to make certain warranties and representations prior to the delivery of each installment of the Capital Contribution by MHEF.

Adjustments to

Capital Contribution: The Capital Contribution shall be adjusted to reflect any change in the timing of delivery of the LIHTC or changes in the LIHTC amount, subject to the availability of funds. The sum of the adjusters shall not exceed 2% of

the total amount of the Capital Contribution, unless approved by MHEF in its sole discretion and subject at all times to the availability of funds.

Recapture/
Disallowance
Payment:

If the Project Owner or MHEF suffers recapture or disallowance of all or a portion of the LIHTC for any reason (except for a recapture and/or disallowance arising as the result of the acts or omissions of MHEF or a change of law), the Managing Member shall make a payment, on an After-Tax Basis, to MHEF (a “Recapture/Disallowance Payment”) equal to \$1.00 for each \$1.00 of recaptured or disallowed credit.

Reserve
Requirements:

The Managing Member will be required to establish an operating reserve with an initial deposit equal to 50% of the Project’s projected first year annual operating expenses, including replacement reserve deposits, and 50% of annual debt service which shall be made at the time of the Break-Even Installment. Thereafter, in any year in which the balance of funds in the operating reserve is less than 50% of annual operating expenses plus 50% of annual debt service (the "Operating Reserve Minimum") and in that year the Project is operating at a debt service coverage less than 1.10x, a deposit shall be made to the operating reserve of an amount equal to all net cash flow until such time as the balance in the operating reserve again equals the Operating Reserve Minimum. In any year that the Project is operating at a debt service coverage at or above 1.10x, no deposits from net cash flow will be required.

Replacement Reserve: In addition to the operating reserve, the Managing Member will be required to maintain a replacement reserve by making monthly installment deposits as shown in the financial forecasts.

Project schedule:

Construction Closing	7/1/2026
Construction Completion/Occupancy Start	7/1/2027
Stabilization/Permanent Closing	1/1/2028

Financing:

It is anticipated the Project will be financed with the following sources:

Source	Amount	Interest Rate	Term	Amortization
EOHLC Soft Debt	\$3,400,000	0%	30	N/A
FHLB Boston	\$850,000	0%	30	N/A

In addition to the permanent financing sources described above, it is expected that the Project will be financed with construction loan in the amount of \$6,000,000, which will each have a term of at least 18 months.

Developer Fee: The Sponsor (or developer, as applicable) shall receive a Developer Fee which shall be paid on a schedule to be determined. If as of the end of the thirteenth year following substantial completion there is any unpaid Development Fee, the Managing Member shall make a capital contribution (a “Deferred Development Fee Capital Contribution”) to the Project Owner sufficient to permit the Project Owner to pay all unpaid Development Fee (and accrued interest) in full.

Guarantees: The Managing Member will, under the terms set forth in the MHEF form Operating Agreement, be required to guarantee the development and operations of the Project, including the obligation to make any Development Deficit Loan, Operating Deficit Loan, Deferred Development Fee Capital Contribution, Adjuster Payment and Recapture/Disallowance Payment(s) (as such terms are defined in the MHEF form Operating Agreement).

The Guarantor will, under the terms set forth in the MHEF form sponsor’s guaranty, be required to guarantee certain obligations of the Managing Member with respect to development costs, operating deficits, unauthorized withdrawals and any Deferred Development Fee Capital Contribution, Adjuster Payment and Recapture/Disallowance Payment(s) (as such terms are defined in the MHEF form Operating Agreement).

The Guarantor shall be required to have a minimum net worth and liquidity determined at closing and maintained throughout the LIHTC compliance period (tested annually).

Distributions: Profits, losses and tax credits shall be allocated 99.99% to MHEF or an affiliate and 0.01% to the Managing Member. Unless otherwise specified herein or in the final Operating Agreement, cash flow from operations after costs, liabilities and reserves shall be applied as follows: (a) first, to the operating reserve to the extent required above; (b) second, to the payment of the Deferred Development Fee, including interest thereon; (c) third, to the payment of any incentive and/or company management fee to the Managing Member; (d) fourth, to subordinate debt.

Racial Equity and Inclusion: MHIC was founded and is guided in our work by a commitment to racial equity and inclusion (REI). One of our core values is ensuring that the benefits of our financing flow to MBEs and workers of color in the communities where we provide financing. In coordination with our customers and general contractor partners, we will set ambitious but achievable REI expectations for professional services, direct construction, ongoing expenses, and workers of color.

Reports: The Managing Member will be responsible for providing unaudited quarterly and audited annual financial reports and statements, budgets, tax returns and K-1's, annual reports, certificates of insurance and such other information on

the management and operation of the Project Owner's property as MHEF may request, as detailed in the MHEF form Operating Agreement.

The foregoing is not intended to describe all of the terms and provisions of the investment but is intended as a summary of the major conditions of the investment. *Please be aware that this is not a commitment of funds, and that any commitment is fully conditioned upon market conditions, further due diligence and review and approval of MHIC's Investment Review Committee and Board of Directors.*

Thank you very much for considering MHIC for the financing of this project.

Sincerely,

A handwritten signature in black ink, appearing to read 'JP Vachon', written in a cursive style.

John-Paul Vachon

Deputy Director- Equity



P.O. Box 1537 ▪ 400 Main Street ▪ Greenfield, MA 01302-1537
(413) 774-3191 ▪ www.greenfieldsavings.com

October 11, 2023

Gina Govoni, Executive Director
Rural Development, Inc.
241 Millers Falls Road
Turners Falls, MA 01376

Re: Care Drive Senior Housing Development

Dear Gina:

Greenfield Savings Bank is pleased to provide this Letter of Intent to support Rural Development, Inc. and the proposed development project located on Care Drive in Erving, Massachusetts. The Project proforma indicates that the development will provide twenty-six residential units of affordable multi-generational workforce housing the Erving, Massachusetts area.

Greenfield Savings Bank has maintained an active working relationship with Rural Development, Inc. and its affiliated entities for the past twenty-three years. Most recently, Greenfield Savings Bank provided construction and permanent financing for the completion of Sanderson Place, a thirty-three unit residential affordable senior housing complex located in Sunderland, MA. Greenfield Saving Bank worked with the development team over a two-year period to successfully complete the construction project. Greenfield Savings Bank found the project team to be knowledgeable and professional during the development and construction phase. Further, the organization maintains a positive reputation for providing hosing related services to low and moderate income individuals in the Franklin County community; this expertise adds significant value to the successful management of housing developments of this size and nature.

This letter is a general overview as to Greenfield Savings Bank's interest in the subject project and the experience with the developer. This letter is not intended to create any legal liability on the part of either you or the Bank. Any commitment to extend financing is subject to and contingent upon completing full due diligence and project analysis by the Bank and further approval by the Bank's Executive Committee and the issuance of a commitment letter.

Greenfield Savings Bank looks forward to further discussing our support for this project and I look forward to our continued dialog. Should you have any questions or concerns, please contact me directly at (413) 775-8153.

Respectively,

A handwritten signature in blue ink, appearing to read "Andrew J. Bresciano", is written over a blue circular stamp or seal.

Andrew J. Bresciano
First Vice President

Prepared by:

Rural Development, Inc
241 Millers Falls Road,
Turners Falls, MA 01376

(413)863-9781

Executive Director:
Gina Govoni

Project Manager:
Alyssa Larose

Project Coordinator:
Jen Hale

Architects:

Tom Chalmers, AIA
Patrick Kitzmiller
Austin Design Cooperative
Brattleboro, VT

Development Consultant:
Christine Rogers

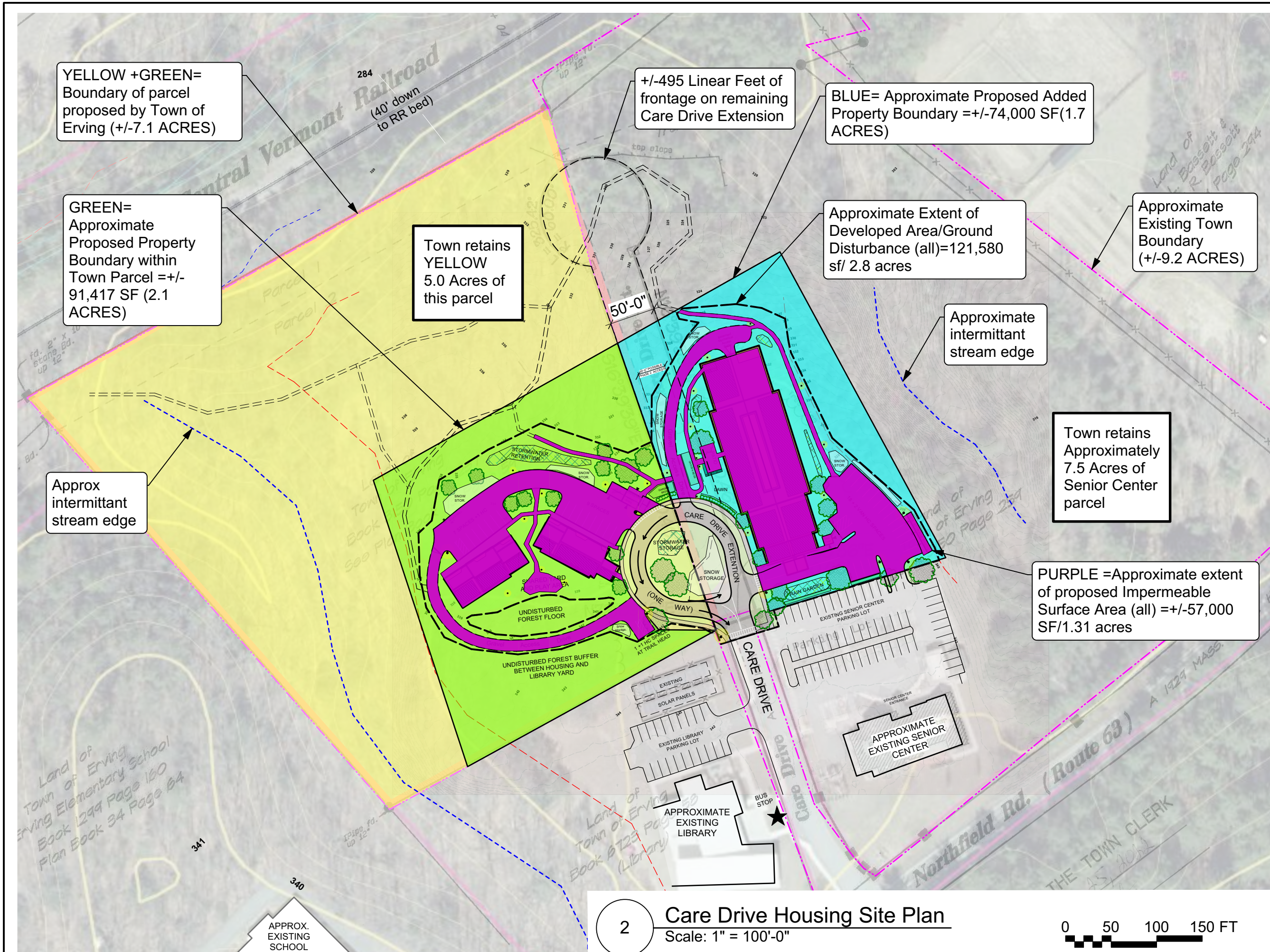
Care Drive Housing Town of Erving, MA

Date: Nov 3, 2023

Site Boundary
Preliminary Plan



0-0.1



YELLOW +GREEN=
Boundary of parcel
proposed by Town of
Erving (+/-7.1 ACRES)

GREEN=
Approximate
Proposed Property
Boundary within
Town Parcel +/-
91,417 SF (2.1
ACRES)

Town retains
YELLOW
5.0 Acres of
this parcel

+/-495 Linear Feet of
frontage on remaining
Care Drive Extension

BLUE= Approximate Proposed Added
Property Boundary +/-74,000 SF (1.7
ACRES)

Approximate Extent of
Developed Area/Ground
Disturbance (all)=121,580
sf/ 2.8 acres

Approximate
Existing Town
Boundary
(+/-9.2 ACRES)

Approximate
intermittant
stream edge

Town retains
Approximately
7.5 Acres of
Senior Center
parcel

PURPLE =Approximate extent
of proposed Impermeable
Surface Area (all) +/-57,000
SF/1.31 acres

Approx
intermittant
stream edge





RURAL DEVELOPMENT, INC.

241 Millers Falls Road • Turners Falls, MA 01376
Telephone: (413) 863-9781 • Fax (413) 863-9289

November 15, 2023

Dear Mariah,

Thank you and the Erving Senior Housing Committee for your thoughtful review and questions on Rural Development, Inc.'s proposal for housing at Care Drive. Please see our responses, below. We look forward to discussing the proposal further with the Committee at their meeting next Monday. Please do not hesitate to reach out with additional questions.

1. Could RDI move the senior housing building farther back (in the direction of the railroad tracks) on the property to create more space/separation between the two buildings?

RDI prioritized the connection to the senior center when locating the senior housing on the site. Having close proximity between the two buildings is advantageous for seniors, especially during the winter months and for those with mobility issues.

Due to grade changes further back on the property, moving the building back will result in higher site and construction costs, and will also impact drainage on the site. However, we can explore how far the building could be shifted back without significantly impacting costs during the schematic design phase with the civil and landscape engineers. We can also explore opportunities to create a feeling of separation with landscaping that will be less expensive than shifting the whole building.

2. Could RDI add any additional senior housing units? Of these, could any be market rate units?

The senior building is already quite long. Adding more units will push the building further back into the site, requiring expensive site work and engineering (see above). Adding senior units will also increase the cost of the project and require additional local contribution. Adding two more affordable senior units, for 20 total, increases the funding gap to over \$800,000. Adding four additional senior units increases the funding gap to over \$1.4M. We explored including market rate units in the development. Market rate units do not qualify for tax credits and other subsidies, and the rent we can charge for market rate units does not recoup the cost to develop them. As an example, adding four market rate senior units results in a funding gap of approximately \$1.6M. Further, the market analysis presented in the proposal shows that many senior households fall within low-income ranges that can benefit from affordable housing.

Equal Housing Opportunity



3. In the shared kitchenette, would a sink and oven be included?

As proposed the kitchenette includes a sink, refrigerator, and space for countertop appliances such as a microwave, and is intended to be used more as a catering space, as opposed to a cooking space. We are open to discussing the needs for this space, including a warming drawer or other appliances for warming/heating up food.

4. What type of HVAC system is being proposed?

The specific design of the HVAC system will be developed in the design process; however, the system will be all electric with heating, cooling, and ventilation in every unit. The Executive Office of Housing and Livable Communities requires affordable housing developments to meet Enterprise Green Communities standards and prioritizes projects that go well beyond code requirements for energy efficiency.

5. Could RDI provide an example cleaning/maintenance schedule from Sanderson Place?

Sanderson Place is managed by the Franklin County Regional Housing and Redevelopment Authority (HRA) through a management agreement. HRA provides 24/7 on call maintenance for residents. Currently, the common areas at Sanderson are cleaned by HRA staff once per week. All common areas including community room, property management office, telehealth office, restroom, fitness room, elevator lobbies and hallways, are cleaned and sanitized. Cleaning frequency may vary depending on activities and use of the spaces. HRA staff clear sidewalks of snow, and maintain contracts for regular landscaping, trash and recycling, and plowing. HRA maintains a monthly preventative maintenance plan for all properties and is attached for the Committee's information. Inspections for the elevator, generator, fire extinguishers, fire alarms and sprinklers are scheduled based on code requirements.

6. Could RDI provide more information on why they are considering a solar battery and where it may be located? It was noted in the meeting that there were recently some updates to the Zoning Regulations regarding solar batteries in Erving, which RDI should be aware of if you aren't already.

RDI is considering battery energy storage, paired with the proposed solar PV system, to provide back-up power to the buildings in the event of a power outage. The State requires back-up power for senior housing and awards extra points to projects proposing on-site solar energy storage. The State is also pushing affordable housing developers away from using any on-site fossil fuels. Generators typically use diesel, take up a large amount of space, and are expensive. The exact size and location of the battery storage system would be determined with the solar installer during the design phase but is expected to be within the same space as the solar inverter. Under Erving's

zoning, the proposed energy storage system falls under the definition of “Energy Storage System, Accessory.”

Other notes:

- 1. The Town is unlikely to be interested in abandoning the road layout beyond the development. It may need to be adjusted with this project, but the Town will likely want to retain access to the property behind the buildings for potential future use. Since a pump station will need to be installed if this development moves forward, a location for that will also need to be decided upon.**

RDI proposed the current layout to allow Erving to maintain access for a future phase of development to the rear of the property. We are happy to work with the Town on the appropriate easement needed for that access. RDI will also work with the Town on the location of the pump station in relation to the project. We expect the pump station will be located on public property and be maintained as part of the public sanitary sewer system.

- 2. It should be noted that the Town clears public roads and sidewalks adjacent to town buildings of snow, but does not clear driveways or sidewalks along privately owned land. It is appreciated that areas for snow storage are included on the site plan. If this proposal is selected, a conversation about snow clearing and snow storage will need to be discussed to make sure that the Highway Department has input on appropriate locations of snow storage.**

Yes, RDI would clear snow from the sidewalks around Care Drive Extension, and in the senior housing and workforce housing parking areas and walkways. We will work with the Highway Department to ensure Care Drive Extension is constructed to the Town’s standards.

- 3. The Town is unlikely to approve creating a bus stop in the library loading zone since this location is used for delivery drop off and short term patron drop off. A better potential location for the bus stop can be discussed.**

Yes, we spoke with Michael Perrault at the FRTA, who is open to working with RDI and the Town on finding a suitable location for a bus stop and shelter.

Sincerely,

A handwritten signature in black ink that reads "Gina Govoni". The signature is written in a cursive, flowing style.

Gina Govoni
Executive Director

January Preventive Maintenance

PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completed Date
Common Room Areas of 667		
Wash Walls		
Clean Kitchen Stoves and Cabinets		
Wash and Polish Floors		
Mid Winter Service Check on Snowblowers		
Trim any Snow Bent Branches or Report removal for spring		
Check Oil Tank levels (where appropriate)		
Check locations with sump pumps for testing		
Check laundry dryer vents and clear lint traps		
Refill Sand buckets		
Check plumbing in bathrooms for leaks		
Quarterly check of the emergency lighting batteries		

February Preventive Maintenance

PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completion Date
Refill All sand buckets at location entrances		
Inventory Supplies in locations with garages		
Check outside walkway/hallway lighting		
Check gutters and drains for ice removal and any plow damage		
Check Water heaters for leaking or corrosion		
Check Oil Tank levels (where appropriate)		
Check locations with sump pumps for testing		
Check laundry dryer vents and clear lint traps		
Refill Sand buckets		
Check plumbing in bathrooms for leaking or need to change washers		

March Preventive Maintenance

PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completion Date
Begin Sand Clean up in Walkways and Stairwells (sweeping)		
Review battery Stock for smoke detector battery change		
Review Stock for need of smoke detectors		
Begin picking up sticks and branches(snow pending)		
Check all water heaters and boilers for leaks		
Make list of lawnmowers on property for spring tune up		
Clean all common area light fixtures and glass		
Place rodent traps in basements and storage areas		
Check laundry dryer vents and clear lint traps		
Clean all common hallways of sand, inspect for damage		
Wipe down common area furniture		

April Preventive Maintenance

PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completion Date
Begin grounds care: trash, inspect for plow damage and report to office		
Sweep doorways and door jambs		
Inspect all gutters and downspouts		
Create list for spring clean up: need for soil replacement, damaged bushes		
Begin window washing in common rooms and hallway windows		
Create paint list and inspect trim work for repairs		
Review roofs for any winter damage		
Start cleaning maintenance rooms, sweep and prepare for summer work		
Sweep around dumpsters		
Check laundry dryer vents and clear lint traps		
Quarterly check of the emergency lighting batteries		

July Preventive Maintenance

PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completion Date
Common Room Areas of 667		
Wash Walls		
Clean Kitchen Stoves and Cabinets		
Wash and Polish Floors		
Check Oil Tank levels where appropriate		
Check locations with sump pumps for testing		
Check laundry dryer vents and clear lint traps		
Check plumbing in bathrooms for leaking or need to change washers		
Quarterly check of the emergency lighting batteries		

August Preventive Maintenance

PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completion Date
Check and clean all common room air conditioner filters		
Check all water tanks for seepage/humidity damages or rusting		
Check all basements for ventilation and humidity issues		
Check and repair any lose railings on porches		
Check gutters for animal nesting and clear		
Check eaves for nesting and clear		
Check dumpsters for heat related odors and request sanitizing from vendor		
Follow up on grills and yard fire pits: remove as needed		
paint hallways and common doors		
Follow up on Annual Inspections for completion/check in with PM's		
Check laundry dryer vents and clear lint traps		

September Preventive Maintenance

PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completion Date
Create boiler list for annual service (assigned locations per maintenance)		
Inspect/repair/ replace fall tools, rakes, etc		
Common area windows should be cleaned		
Common area rugs shampoo as needed		
Review snowblowers and prepare for winter tune up (coordinated effort)		
Trim back any vegetation growing too close to buildings		
Check Oil Tank levels where appropriate		
Check locations with sump pumps for testing		
Check laundry dryer vents and clear lint traps		
Replace damaged sand buckets		
Get count of need of batteries for fall battery change over		

October Preventive Maintenance

PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completion Date
Maintain clear walkways of leaf debris		
Get sand to location to prepare buckets for winter		
Schedule additional staff for ladders for gutters		
Remove all common area air conditioners		
Snow blowers should have returned		
Remove gas and add stabilizer to lawn mowers		
Get lawn mowers off properties to store for winter		
Common hallways should get waxed prior to winter		
use shop vacuum on baseboard heating units to clear dust		
Refill Sand buckets		
Check plumbing in bathrooms for leaking or need to change washers		
Begin battery changes in smoke detectors		
Clear lighting of any nesting and bugs/replace bulbs as needed		
Check laundry dryer vents and clear lint traps		
Quarterly check of the emergency lighting batteries		

November Preventive Maintenance

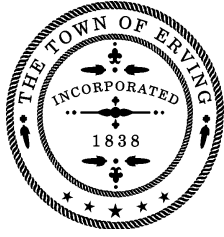
PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completion Date
Maintain clear walkways of leaf debris		
Get sand to location to prepare buckets for winter		
Schedule additional staff for ladders for gutter (weather permitting)		
Snow blowers should have returned		
Check locations for on site ice melt-have order placed		
Check that the winter spreaders are in working order/replace as needed		
Check all porches for clearance of items before snow fall		
Reminder to PM to notice tenants to remove items for plowing		
Put out Stakes for notice of plowing: outline drives		
Check shovels for replacement		
Check laundry dryer vents and clear lint traps		

December Preventive Maintenance

PM Assistant to add work orders for each property for monthly maintenance
 Follow up for closure at the end of the month and closure

TASK	Assignment Date	Completion Date
Finish any outside work prior to snow and ground freeze		
Ice melt should be on property		
Finish leaf clean up and clear storm drains prior to snow fall		
Stabilize all mowers, leaf blowers and weed whackers - drain gas		
Check properties with generators - Fuel level and did maintenance occur		
Get all snow blowers on property (if not completed)		
Door hinges should be greased		
Check laundry dryer vents and clear lint traps		



TOWN OF ERVING

SELECT BOARD

12 East Main Street
ERVING, MASSACHUSETTS 01344

Tel. 413-422-2800 ext. 1100

Jacob A. Smith, Chair
Scott Bastarache
James Loynd
Board of Selectmen

Bryan Smith
Administrative Coordinator

December 18, 2023

ALCOHOLIC BEVERAGE LICENSES ANNUAL REPORT 2024 For Calendar Year 2023

Alcoholic Beverage Licenses Issued for Retail Sale in 2023:

◆One (1) Restaurant All Alcoholic Licenses Issued	\$500.00 ea.
◆Three (3) Retail Package Store Licenses Issued	\$300.00 ea.
◆One (1) Innkeeper Liquor License Issued	\$525.00 ea.

This represents all fees on our established schedule of fees and in 2023 Erving collected a total of \$1,925.00.

There were no violations that came to the attention of the Town of Erving in 2023.

Jacob A. Smith, Chair

Scott Bastarache

James Loynd

COMMONWEALTH OF MASSACHUSETTS
ALCOHOLIC BEVERAGES CONTROL COMMISSION

95 Fourth Street, Suite 3, Chelsea, MA 02150

2024 Seasonal Population Increase Estimation Form

Municipality:

Date:

Alcoholic Beverages Control Commission
c/o Licensing Department
95 Fourth Street, Suite 3
Chelsea, MA 02150

To Whom It May Concern:

Acting under authority contained in M.G.L. Ch. 138, s17, as amended, our Board at a meeting held on

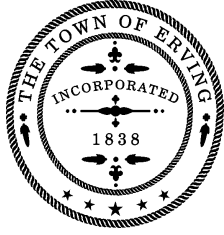
estimated that the temporary increased resident population

of , as of July 10, 2024 will be .

This estimate was made and voted upon by us at a meeting called for the purpose, after due notice to each of the members of the time, place and purpose of said meeting, and after investigation and ascertainment by us of all the facts and after cooperative discussion and deliberation. The estimate is true to the best of our knowledge and belief. The above statements are made under the pains and penalties of perjury.

Very truly yours,

Local Licensing Authorities



TOWN OF ERVING

SELECT BOARD

12 East Main Street
ERVING, MASSACHUSETTS 01344

Tel. 413-422-2800
Fax 413-422-2808
Email: administrator@erving-ma.gov

Jacob A. Smith, Chair
Scott Bastarache
James Loynd
Select Board

Bryan Smith
Town Administrator

December 15, 2023

To: Select Board
From: Bryan Smith, Town Administrator

RE: Calendar Year 2024 Liquor License Renewals

The following Erving businesses have applied for liquor license renewals for calendar year 2024. The license renewals have met the requirements and our office has verified that the applicants are current on tax payments. It is my recommendation that the Select Board, as the local licensing authority, issues the calendar year 2024 liquor license renewals for the businesses listed and with the effective and expiration dates listed.

Business Name	Address	License Type	Effective Date	Expiration Date
French King Bowling Center	55 French King Highway	Liquor License Restaurant/All Alcohol	01-Jan-24	31-Dec-24
Weatherheads	63 French King Highway	Liquor License - Retail Package Store	01-Jan-24	31-Dec-24
Flis Market	5 West Main Street	Liquor License - Retail Package Store	01-Jan-24	31-Dec-24
French King Motor Inn	129 French King Highway	Liquor License - Innkeeper	01-Jan-24	31-Dec-24

Franklin Grocery has declined to renew the Retail Package Store liquor license that the establishment has previously held, as such that license will be available for assignment as of January 1, 2024. The Select Board should be aware that even with the proposed renewals, as listed above, the Town has the following available liquor licenses in calendar year 2024:

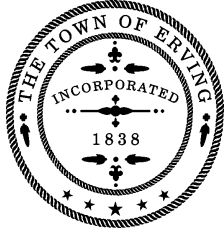
Liquor License Type	2024 Issued	2024 Remain Available	2024 Total
On Premise Retail- Alcoholic Beverage	2	12	14
On Premise Retail- Wine & Malt	0	5	5
Off Premise Retail- Alcoholic Beverage	2	1	3
Off Premise Retail- Wine & Malt	0	5	5

Recommended Vote Language:

Motion 1: A motion to renew a Restaurant/ All Alcohol Liquor License, effective January 1, 2024 through December 31, 2024 to the French King Bowling Center at 55 French King Highway, Erving, MA.

Motion 2: A motion to renew an Innkeeper Liquor License, effective January 1, 2024 through December 31, 2024 to the French King Motor Inn at 129 French King Highway, Erving, MA.

Motion 3: A motion to renew a Retail Package Store Liquor License, effective January 1, 2024 through December 31, 2024 to the Weatherheads Store at 63 French King Highway, Erving, MA; and to Flis Market at 5 West Main Street, Erving, MA.



TOWN OF ERVING

SELECT BOARD

12 East Main Street
ERVING, MASSACHUSETTS 01344

Tel. 413-422-2800
Fax 413-422-2808
Email: administrator@erving-ma.gov

Jacob A. Smith, Chair
Scott Bastarache
William A. Bembury
Select Board

Bryan Smith
Town Administrator

December 15, 2023

To: Select Board
From: Bryan Smith, Town Administrator

RE: Calendar Year 2024 License Renewals

The following Erving businesses have applied for license renewals for calendar year 2024. The license renewals have met the requirements and our office has verified that the applicants are current on tax payments. It is my recommendation that the Select Board, as the local licensing authority, issues the calendar year 2024 license renewals for the businesses listed and with the effective and expiration dates listed.

Business Name	Address	License Type	Effective Date	Expiration Date
French King Bowling Center	55 French King Highway	Automatic Amusement Devices	01-Jan-24	31-Dec-24

Business Name	Address	License Type	Effective Date	Expiration Date
Dunkin Donuts	63 French King Highway	Common Victualers	01-Jan-24	31-Dec-24
Flis Market	5 West Main Street	Common Victualers	01-Jan-24	31-Dec-24
Freight House	11 East Main Street	Common Victualers	01-Jan-24	31-Dec-24
French King Bowling Center	55 French King Highway	Common Victualers	01-Jan-24	31-Dec-24
French King Motor Inn	129 French King Highway	Common Victualers	01-Jan-24	31-Dec-24
French King Restaurant	127 French King Highway	Common Victualers	01-Jan-24	31-Dec-24

Business Name	Address	License Type	Effective Date	Expiration Date
Greenfield Automotive	38 French King Hwy	Auto Repair	01-Jan-24	31-Dec-24
Tim's RV, Inc.	15 East Main Street	Class I / Agent of Vehicle Manufacturer	01-Jan-24	31-Dec-24
Accurate Automotive	21 Lester Street	Class II / Auto Repair / Retail	01-Jan-24	31-Dec-24
Rose Ledge Companies	21 Poplar Mtn. Road	Class II / Auto Repair / Retail	01-Jan-24	31-Dec-24
Stoneville Auto	64 East Main Street	Class II / Auto Repair / Retail	01-Jan-24	31-Dec-24
Tim's RV, Inc.	15 East Main Street	Class II / Auto Repair / Retail	01-Jan-24	31-Dec-24
Erving Equipment	38 French King Hwy	Class II / Used Vehicle Retail	01-Jan-24	31-Dec-24
Rose Ledge Companies	21 Poplar Mtn. Road	Class III / Buy, Sell Vehicle Parts	01-Jan-24	31-Dec-24
Stoneville Auto	64 East Main Street	Class III / Buy, Sell Vehicle Parts	01-Jan-24	31-Dec-24

Recommended Vote Language:

Motion 1: A motion to renew an Automatic Amusement Device License, effective January 1, 2024 through December 31, 2024 to the French King Bowling Center at 55 French King Highway, Erving, MA.

Motion 2: A motion to renew a Common Victualers License, effective January 1, 2024 through December 31, 2024 to Dunkin Donuts at 63 French King Highway, Erving, MA; and to Flis Market at 5 West Main Street, Erving, MA; and to Freight House at 11 East Main Street, Erving, MA; and to the French King Bowling Center at 55 French King Highway, Erving, MA; and to the French King Motor Inn at 129 French King Highway, Erving, MA; and to the French King Restaurant at 127 French King Highway, Erving, MA.

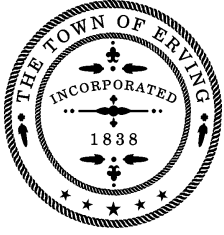
Motion 3: A motion to renew an Auto Repair License, effective January 1, 2024 through December 31, 2024 to Greenfield Automotive at 38 French King Highway, Erving, MA.

Motion 4: A motion to renew a Class I: Agent of Vehicle Manufacturer License, effective January 1, 2024 through December 31, 2024 to Tim's RV, Inc. at 15 East Main Street, Erving, MA.

Motion 5: A motion to renew a Class II: Auto Repair / Retail License, effective January 1, 2024 through December 31, 2024 to Accurate Automotive at 21 Lester Street, Erving, MA; and to Rose Ledge Companies at 21 Poplar Mountain Road, Erving, MA; and to Stoneville Auto at 64 East Main Street, Erving, MA; and to Tim's RV, Inc. at 15 East Main Street, Erving, MA.

Motion 6: A motion to renew a Class II: Used Vehicle Retail License, effective January 1, 2024 through December 31, 2024 to Erving Equipment at 38 French King Highway, Erving, MA.

Motion 7: A motion to renew a Class III: Buy & Sell Vehicle Parts License, effective January 1, 2024 through December 31, 2024 to Stoneville Auto at 64 East Main Street, Erving, MA.



TOWN OF ERVING

SELECT BOARD

12 East Main Street
ERVING, MASSACHUSETTS 01344

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Jacob A. Smith, Chair
Scott Bastarache
James Loynd
Select Board

Bryan Smith
Town Administrator

December 15, 2023

To: Select Board
Finance Committee
Capital Planning Committee
From: Bryan Smith, Town Administrator

RE: Request to Schedule a Special Town Meeting

I am requesting that a Special Town Meeting is called by the end of January 2024. I recently received the bid documents for a 5-year student transportation contract for the School Department. The bids were opened on December 7, 2023, and are valid for 60 days. We need Town Meeting approval for the School Committee to have the authorization to award the contract for a term of 5 years (anything beyond 3 years).

I know that January is very busy for all 3 boards, we have a very active budget meeting calendar, but I do believe it is important to support the School Committee and the School Staff to allow them to award this contract as the services need to be in place for July 1, 2024. With that said, I am concerned that a single question warrant is not going to be an efficient use of Town resources and may not encourage enough voters to attend to ensure that we have a quorum. I have reviewed other open requests with departments and boards & commissions. Other topics that we could have ready for a January Special Town Meeting, include:

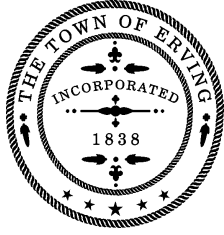
- Transfer Opioid Settlement Funds received before June 30, 2023 into the Stabilization Fund. This topic was passed over at the October STM and is ready to be addressed now that free cash is available.
- The layout of Bridge Street
- The layout of Maple Avenue
- The closing of some special articles that departments, boards and commissions have told the Capital Planning Committee are no longer needed and transfer the balance into the Capital Stabilization Fund for future appropriation. These projects are either complete and there are remaining funds, or the projects are no longer needed. The proposed list includes:

STM Warrant Article: To see if the Town will close the Capital Project Special Article line items, as presented below, and transfer the remaining balances in the aggregate sum of \$195,475.69 into the Capital Stabilization Fund, and take any action related thereto.

Line Item	Description	Balance in Account
01-171-902-57800	Poplar Mountain Conservation Area Surveying	\$195.00

01-192-909-57800	Town Hall Phone	\$2,224.00
01-192-919-57800	Town Hall Lighting System	\$3,502.69
01-210-912-57800	Police- Safety Speed Monitoring Equipment	\$748.48
01-220-919-57800	Fire Dept Cab for Gator	\$5,000.00
01-220-920-57800	Fire Dept GPS Units	\$13.98
01-220-922-57800	Fire Dept Class A Uniforms	\$672.90
01-301-905-57800	EES Classroom Furniture	\$38,419.00
01-301-912-57800	EES Carpet Replacement	\$21,788.00
01-301-915-57800	Phone System Upgrade/Replace	\$5,000.00
01-429-922-57800	Trench Box & Trench Shield	\$5,200.00
01-433-903-57800	Solid Waste Roll off	\$5,000.00
01-541-904-57800	Senior Center Exit Roofs	\$3,200.00
01-541-911-57800	Senior Center HVAC System	\$25,275.00
01-650-903-57800	Resurface Tennis Courts Vets Park	63,000.00
01-650-904-57800	Roofs- Bath House & Shed Zilinski Field	\$1,736.64
01-650-911-57800	Riverfront Park Water Tower Assessment	\$4,700.00
01-650-912-57800	Park Grant Writer	\$20,000.00
Total		\$195,475.69

- A request from the Highway and Buildings & Grounds Departments to reappropriate approximately \$75,000 from the dry storage appropriation (there is a balance of approximately \$159,000) to be used towards the procurement of a modular office to be placed down on Public Works Boulevard. With the knowledge that the request for a new Public Works Office and dry storage garage facility is several years out of funding, finding appropriate office space for the departments needs to be prioritized. Glenn has been operating the departments out of the Senior Center office for 4 years and the Center has become much busier.



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Scott Bastarache
James Loynd
Select Board

Bryan Smith
Town Administrator

December 18, 2023

Weston & Sampson Engineers, Inc.
Attn: Christopher Wester, Vice President
712 Brook Street, Suite 103
Rocky Hill, Connecticut 06067

Dear Christopher Wester,

The Town of Erving (“Town”) engaged Weston & Sampson Engineers (“Weston & Sampson”) on the design for the replacement of Swamp Road Bridge in Erving, MA, on June 6, 2022. The Town has recently been awarded a Small Bridge Design Grant from the Massachusetts Department of Transportation and it is our understanding that Weston & Sampson is not one of the vendors working under that program at this time.

Article 10 of our agreement outlines the provisions for terminating the agreement with the understanding that either party can terminate the agreement upon ten (10) days’ written notice to the other party. With respect, the Town is exercising the option to terminate the agreement out of the owner’s convenience. Per the agreement the Town understands that Weston & Sampson is entitled to be paid for costs related to services rendered to date. Please provide the Town Administrator with a final invoice at your earliest convenience.

In exchange Weston & Sampson will provide the Town with all reports, records, CAD files and similar information that is related to the Swamp Road Bridge project that Weston & Sampson has prepared as part of the project. All records, reports, files, and similar information shall be sent to the Town Administrator’s office.

Thank you for your work on this project.

Respectfully,

Jacob A. Smith, Chair
Erving Select Board



TOWN OF ERVING

12 Main Street
Erving, Massachusetts 01344
Telephone: (413) 422-2800
Facsimile: (413) 422-2808
Email: administrator@erving-ma.gov

FAC-____
Policy

Flags, Banners & Signs for Governmental Flagpoles, Buildings & Properties Policy

Approved: _____ Date: _____

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.01 Issue Date / Effective Date

This policy is issued and effective on _____.

.02 Purpose

The purpose of this policy is to establish guidelines for the display of flags, banners, and signs on Town flagpoles, Town buildings, and Town property.

.03 Applicability

This policy is applicable to all Town owned flagpoles, buildings, and property.

.04 Policy

It is the policy of the Town of Erving that all flags, banners, or signs will be displayed in conformance with Federal and State laws and this policy. This includes, but is not limited to, the Federal "Our Flag" publication and Massachusetts General Law Chapter 2, Section 6 and Section 6A.

.05 Eligible Flags and Order of Precedence

Only the United States, Commonwealth of Massachusetts, Town of Erving and official flags of the U.S. Military and POW/MIA flags may be flown on any Town owned flagpole. Outdoor flags will be flown on Town flagpoles in the following order of precedence:

1. First, the United States flag;
2. Second, the Commonwealth of Massachusetts flag;
3. Third, the Town of Erving flag; and

4. Fourth, official flags of the U.S. Military and POW/MIA.

.06 Federal, State, and Local Proclamation of Special Occasion

Flags flown on Town flagpoles shall be displayed in accordance with the standards referenced above in Sections .04 and .05. The Select Board, or if time is of the essence, the Town Administrator may order flags to be lowered to half-staff including, but not limited to, flags of the United States and the Commonwealth of Massachusetts in honor of the death of a Town employee killed in the line of duty, or in the observance of a specific event or circumstance, or if ordered by the President of the United States or the Governor of the Commonwealth.

.07 Eligible Banners and Signs

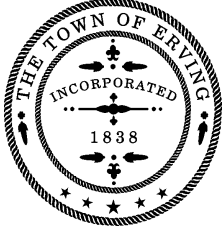
Only banners and signs regarding Town business or Town sponsored events may be erected on or attached to Town buildings or Town property.

.08 Other Flags

The Town's flagpoles are not intended to serve as a forum for free expression by the public. The only flags permitted on Town owned flagpoles are those set forth in Section .05., and all other flags are prohibited from being flown on any and all Town of Erving flagpoles.

.09 Other Banners and Signs

Town buildings and other Town property are not intended to serve as a forum for free expression by erection on or attachment to banners or signs. The only banners or signs permitted on Town buildings or Town property are those set forth in Section .07, and all other banners and signs are prohibited from erection on or attachment to any Town building or Town property.



TOWN OF ERVING

SELECT BOARD

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Jacob A. Smith, Chair
Scott Bastarache
James Loynd
Select Board

Bryan Smith
Town Administrator

December 15, 2023

To: Select Board
From: Bryan Smith, Town Administrator
CC: Peter Sanders, Water & Wastewater Superintendent

RE: Wastewater Asbestos Cement Pipe Disposal Project

At the May 2023 Annual Town Meeting, the voters appropriated \$20,000.00 for the Wastewater Department to remove and dispose of asbestos containing sewer pipe. The attached proposal from Tighe & Bond will provide the professional services for scoping the project, assisting the Town with the selection of a licensed vendor to transport and dispose of the material in accordance with all applicable regulations, project management, air sampling and final reports.

It is my recommendation that we proceed with professional services to support the Wastewater Department with the project.

Recommended Vote Language:

A motion to engage Tighe & Bond for professional services for the remediation of asbestos cement pipe in the Wastewater Department for a fee of \$7,000.00, and to authorize Bryan Smith, Town Administrator, to execute all necessary agreements.

1450040.031
December 8, 2023

Mr. Bryan Smith
Administrative Coordinator
Town of Erving
12 East Main Street
Erving, MA 01344

Re: Proposal for Asbestos Cement Pipe Debris Management at DPW Storage Area, Erving, MA

Dear Mr. Smith:

It is our understanding that the Town is seeking assistance to remediate an existing pile of asbestos cement pipe segments currently located at a DPW storage yard. These abatement considerations were first discussed with Town of Erving representative Peter Sanders whom we understand will help manage this project. Enclosed are details of our services which also help explain the steps necessary for this remediation.

Task 1 – NTWP Preparation and Contractor Selection

To conduct lawful abatement of the asbestos cement pipe (aka Transite) segments of varying size, the Town will need to prepare and submit a Non-Traditional Work Plan (NTWP) to the Massachusetts Department of Environmental Protection (MassDEP) for review and approval before conducting abatement. The reason for this submission is to seek approval to “bulk load” the asbestos piping segments into an appropriate dumpster. Bulk loading of asbestos is prohibited by MassDEP unless a specific request through the NTWP process is granted. During the NTWP approval process, the Town shall also seek and employ the services of a licensed asbestos contractor to conduct the clean-up operations.

It is recommended that a licensed asbestos project designer prepare and submit the NTWP on behalf of the Town. Tighe & Bond will provide a licensed project designer to prepare and submit the NTWP and participate in MassDEP correspondence as necessary to obtain approval. We will also assist the Town in obtaining a qualified abatement contractor capable of performing the work.

Task 2 –Project Monitoring, Air Sampling and Closeout Report

Part of the MassDEP’s NTWP requirements include the need for full time project monitoring and air sampling by a licensed third-party project monitoring entity retained by the Owner. Tighe & Bond will provide the services of a Massachusetts licensed Asbestos Project Monitor (APM) to observe and document the abatement activities, collect and analyze up to ten perimeter air samples using phase contrast microscopy (PCM) analysis and conduct post abatement visual inspections. At the end of the project we will provide one closeout report containing inspection and air sampling results, contractor’s waste disposal documentation and any other pertinent information generated during the project.

In addition to on-site project monitor observation, we will provide the services of a Project Manager who is familiar with the asbestos abatement and NTWP requirements and will support field staff and manage the project.

We envision the contractor’s onsite preparation and abatement work can be conducted in one to two days. Our services and cost are based upon a two-day remediation period.



For the purposes of budgeting we have developed the following costs:

- Task 1 – NTWP Preparation and Contractor Selection Support - \$3,000
- Task 2 – Project Monitoring/Management, Air Sampling and Closeout Report - \$4,000

Excluded Activities

The following services are not included in this proposal, but can be provided by Tighe & Bond under supplemental agreement if necessary:

- Additional site visits, project monitoring or reporting beyond what is described herein
- Payment of MassDEP NTWP filing fees which are currently waived for cities and towns
- Public Bidding or preparation of a publicly bid abatement package
- Licensed Site Professional (LSP) services
- Soil related investigation or sampling

Project Fee

Tighe & Bond will perform these services for a lump sum fee of \$7,000, invoiced monthly based on percentage complete. In the event that the scope of work is increased for any reason, the lump sum fee to complete the work shall be mutually revised by written amendment. Our attached Terms and Conditions is part of this letter agreement. The project schedule is based upon a reasonable MassDEP review and approval period followed by a two-day onsite abatement activity. This schedule may need to be adjusted as the project progresses, allowing for changes in scope, character or size of the project requested by you, or for delays or other causes beyond our reasonable control.

Very truly yours,

TIGHE & BOND, INC.



Brian F. Day
Principal Environmental Scientist
t: 508.471.9603
e: bfd@tighebond.com

Acceptance:

On behalf of the **Town of Erving**, the scope, fee, and terms of this proposal are hereby accepted.

Authorized Representative

Date

Enclosure: Terms and Conditions

[HTTPS://TIGHEBOND-MY.SHAREPOINT.COM/PERSONAL/BFDAY_TIGHEBOND_COM/DOCUMENTS/ERVING DPW NT PLAN AND MONITORING PROP 3.DOCX](https://tighebond-my.sharepoint.com/personal/bfd@tighebond.com/documents/Erving%20DPW%20NT%20Plan%20and%20Monitoring%20Prop%203.docx)



“CLIENT” is defined in the acceptance line of the accompanying proposal letter or the name the proposal is issued to; Tighe & Bond, Inc. is hereby referenced as “CONSULTANT”; “PROJECT” is defined in the accompanying proposal letter

1. SCHEDULE OF PAYMENTS

1.1 Invoices will generally be submitted once a month for services performed during the previous month. Payment will be due within 30 days of invoice date. Monthly payments to CONSULTANT shall be made on the basis of invoices submitted by CONSULTANT and approved by CLIENT. If requested by CLIENT, monthly invoices may be supplemented with such supporting data as reasonably requested to substantiate them.

1.2 In the event of a disagreement as to billing, the CLIENT shall pay the agreed portion.

1.3 Interest will be added to accounts in arrears at the rate of one and one-half (1.5) percent per month (18 percent per annum) or the maximum rate allowed by law, whichever is less, of the outstanding balance. In the event counsel is retained to obtain payment of an outstanding balance, CLIENT will reimburse CONSULTANT for all reasonable attorney’s fees and court costs.

1.4 If CLIENT fails to make payment in full within 30 days of the date due for any undisputed billing, CONSULTANT may, after giving seven days’ written notice to CLIENT, suspend services and retain work product until paid in full, including interest. In the event of suspension of services, CONSULTANT will have no liability to CLIENT for delays or damages caused by such suspension.

2. SUCCESSORS AND ASSIGNS

2.1 CLIENT and CONSULTANT each binds itself, its partners, successors, assigns and legal representatives to the other parties to this Agreement and to the partners, successors, assigns and legal representatives of such other parties with respect to all covenants of this Agreement. CONSULTANT shall not assign, sublet or transfer its interest in this Agreement without the written consent of CLIENT, which consent shall not be unreasonably withheld.

2.2 This Agreement represents the entire and integrated Agreement between CLIENT and CONSULTANT and supersedes all prior negotiations, representations or Agreements, whether written or oral. This Agreement may be amended only by written instrument signed by both CLIENT and CONSULTANT. References to this agreement include these Terms & Conditions, any accompanying proposal or description of services, as well as any other documents referenced or incorporated therein. In the event one or more provisions of any of the foregoing documents conflict with the provisions of these Terms & Conditions, the provisions of these Terms & Conditions shall control.

2.3 Nothing contained in this Agreement shall create a contractual relationship or cause of action in favor of a third party against CLIENT or against CONSULTANT.

3. STANDARD OF CARE

3.1 In providing services, CONSULTANT will use that degree of care and skill ordinarily exercised under similar circumstances by individuals providing such services in the same or similar locality for similar projects.

4. TERMINATION

4.1 This Agreement may be terminated by either party upon seven days’ written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party. In addition, CLIENT may terminate this Agreement for its convenience at any time by giving written notice to CONSULTANT. In the event of any termination, CLIENT will pay CONSULTANT for all services rendered and reimbursable expenses incurred under the Agreement to the date of termination and all services and expenses related to the orderly termination of this Agreement.

5. RECORD RETENTION

5.1 CONSULTANT will retain pertinent records relating to the services performed for the time required by law, during which period the records will be made available upon reasonable request and upon reimbursement for any applicable retrieval/copying charges.

5.2 Samples - All soil, rock and water samples will be discarded 30 days after submission of CONSULTANT’s report, unless mutually agreed otherwise or unless CONSULTANT’s customary practice is to retain for a longer period of time for the specific type of services which CONSULTANT has agreed to perform. Upon request and mutual agreement regarding applicable charges, CONSULTANT will ship, deliver and/or store samples for CLIENT.

6. OWNERSHIP OF DOCUMENTS

6.1 All reports, drawings, specifications, computer files, field data, notes, and other documents, whether in paper or electronic format or otherwise (“documents”), are instruments of service and shall remain the property of CONSULTANT, which shall retain all common law, statutory and other reserved rights including, without limitation, the copyright thereto. CLIENT acknowledges CONSULTANT’s documents, including electronic files, as the work papers of CONSULTANT and CONSULTANT’s instruments of professional services. Nevertheless, the final documents prepared under this Agreement shall become the property of CLIENT upon completion of the services and payment in full of all monies due to CONSULTANT. Under no circumstances shall the transfer of ownership of CONSULTANT’s documents, electronic files or other instruments of services be deemed a sale by CONSULTANT and CONSULTANT makes no warranties, either express or implied, of merchantability and fitness for any particular purpose. In no case shall ownership of documents include CONSULTANT’s logo, signature, professional stamps, templates, base plans, specifications or design details. CLIENT’s payment to CONSULTANT of the compensation set forth in the Agreement shall be a condition precedent to the CLIENT’s right to use documents prepared by CONSULTANT. It is understood that CLIENT may be required to make copies of documents available to the public under the Freedom of Information Act or the Massachusetts Public Records Law prior to receipt of payment by CONSULTANT. Further, provided, however, that in the event of CLIENT’S termination of this Agreement under paragraph 4.1 due to substantial failure by ENGINEER to perform in accordance with the terms of this Agreement CLIENT shall have right to use documents prepared by ENGINEER prior to such termination, conditional on payment of services rendered and subject reuse and alternation terms noted below

6.2 Documents provided by CONSULTANT are not intended or represented to be suitable for reuse by CLIENT or others on any extension or modification of this PROJECT or for any other projects or sites. Reuse of documents by CLIENT or others on

extensions or modifications of this project or on other sites or use by others on this PROJECT, without CONSULTANT's written permission and mutual agreement as to scope of use and as to compensation, if applicable, shall be at the user's sole risk, without liability on CONSULTANT's part, and CLIENT agrees to indemnify and hold CONSULTANT harmless from all claims, damages, and expenses, including attorney's fees, arising out of such unauthorized use or reuse.

6.3 Electronic Documents - CONSULTANT cannot guarantee the authenticity, integrity or completeness of data files supplied in electronic writeable format. If CONSULTANT provides documents in writeable electronic format for CLIENT's convenience, CLIENT agrees to waive any and all claims against CONSULTANT resulting in any way from the unauthorized use, alteration, misuse or reuse of the electronic documents, and to defend, indemnify, and hold CONSULTANT harmless from any claims, losses, damages, or costs, including attorney's fees, arising out of the unauthorized use, alteration, misuse or reuse of any electronic documents provided to CLIENT.

6.4 Electronic Data Bases - In the event that CONSULTANT prepares electronic data bases, geographical information system (GIS) deliverables, or similar electronic documents, it is acknowledged by CLIENT and CONSULTANT that such PROJECT deliverables will be used and perhaps modified by CLIENT and that CONSULTANT's obligations are limited to the deliverables and not to any subsequent modifications thereof. Once CLIENT accepts the delivery of maps, databases, or similar documents developed by CONSULTANT, ownership is passed to CLIENT. CONSULTANT will retain the right to use the developed data and will archive the data for a period of three years from the date of PROJECT completion.

7. INSURANCE

7.1 CONSULTANT will retain Workmen's Compensation Insurance, Professional Liability Insurance with respect to liabilities arising from negligent errors and omissions, Commercial General Liability Insurance, Excess Liability, Unmanned Aircraft, Cyber Liability, and Automobile Liability during this PROJECT. CONSULTANT will furnish certificates at CLIENT's request.

7.2 Risk Allocation - To the fullest extent permitted by law, and not withstanding any other provision of this Agreement, the total liability, in the aggregate, of the CONSULTANT to the CLIENT and anyone claiming by or through the CLIENT, for any and all claims, losses, costs or damage, of any nature whatsoever, the liability of CONSULTANT to all claimants with respect to this PROJECT will be limited to an aggregate sum not to exceed \$100,000 or CONSULTANT's compensation for consulting services, whichever is greater. It is intended that this limitation apply to any and all liability or cause of action however alleged or arising, unless otherwise prohibited by law.

7.3 Damages - Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither CLIENT nor CONSULTANT, their respective officers, directors, partners, employees, contractors or subconsultants shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of or connected in any way to the PROJECT or to this Agreement. This mutual waiver of certain damages shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation and any other consequential damages that may be incurred from any cause of action including negligence, strict liability, breach of contract and breach of strict or implied warranty. Both CLIENT and CONSULTANT shall require similar

waivers of consequential damages protecting all the entities or persons named herein in all contracts and subcontracts with others involved in this PROJECT.

7.4 CLIENT agrees that any and all limitations of CONSULTANT's liability or waivers of damages by CLIENT to CONSULTANT shall include and extend to those individuals and entities CONSULTANT retains for performance of the services under this Agreement, including but not limited to CONSULTANT's officers, partners, and employees and their heirs and assigns, as well as CONSULTANT's subconsultants and their officers, employees, and heirs and assigns.

8. DISPUTE RESOLUTION

8.1 In the event of a disagreement arising out of or relating to this Agreement or the services provided hereunder, CLIENT and CONSULTANT agree to attempt to resolve any such disagreement through direct negotiations between senior, authorized representatives of each party. If any disagreement is not resolved by such direct negotiations, CLIENT and CONSULTANT further agree to consider using mutually acceptable non-binding mediation service in order to resolve any disagreement prior to proceeding to litigation.

9. SITE ACCESS

9.1 Right of Entry - Unless otherwise agreed, CLIENT will furnish right-of-entry on the land for CONSULTANT to make any surveys, borings, explorations, tests or similar field investigations. CONSULTANT will take reasonable precautions to limit damage to the land from use of equipment, but the cost for restoration of any damage that may result from such field investigations is not included in the agreed compensation for CONSULTANT. If restoration of the land is required greater than those included in the scope of work, upon mutual agreement this may be accomplished as a reimbursable additional service at cost plus ten percent.

9.2 Damage to Underground Structures - Reasonable care will be exercised in locating underground structures in the vicinity of proposed subsurface explorations. This may include contact with the local agency coordinating subsurface utility information and/or a review of plans provided by CLIENT or CLIENT representatives for the site to be investigated. CONSULTANT shall be entitled to rely upon any information or plans prepared or made available by others. In the absence of physically confirmed underground structure locations, CLIENT agrees to accept the risk of damage and costs associated with repair and restoration of damage resulting from the exploration work.

10. OIL AND HAZARDOUS MATERIALS

10.1 If, at any time, evidence of the existence or possible existence of asbestos, oil, or other hazardous materials or substances is discovered, outside of any agreed scope of work or greater than those anticipated in any agreed scope of work, CONSULTANT reserves the right to renegotiate the fees for CONSULTANT's services and CONSULTANT's continued involvement in the PROJECT. CONSULTANT will notify CLIENT as soon as practical if evidence of the existence or possible existence of such hazardous materials or substances is discovered.

10.2 The discovery of the existence or possible existence of hazardous materials or substances, outside or greater than any proposed in the agreed scope of work, may make it necessary for CONSULTANT to take accelerated action to protect human health and safety, and/or the environment. CLIENT agrees to compensate CONSULTANT for the cost of

any and all measures that in its professional opinion are appropriate to preserve and/or protect the health and safety of the public, the environment, and/or CONSULTANT's personnel. To the full extent permitted by law, CLIENT waives any claims against CONSULTANT and agrees to indemnify, defend and hold harmless CONSULTANT from any and all claims, losses, damages, liability, and costs, including but not limited to cost of defense, arising out of or in any way connected with the existence or possible existence of such hazardous materials substances at the site.

11. SITE INVESTIGATIONS

11.1 In soils, groundwater, soil gas, indoor air, or other investigations, conditions may vary between successive test points and sample intervals and for locations at or between where observations, exploration, and investigations have been made. Because of the variability of conditions and the inherent uncertainties in such evaluations, explorations, or investigations, changed or unanticipated conditions may occur that may affect overall PROJECT costs and/or execution. These variable conditions and related impacts on cost and PROJECT execution are not the responsibility of CONSULTANT.

11.2 CLIENT recognizes that special risks occur whenever engineering or related disciplines are applied to provide information regarding subsurface conditions. Even an agreed sampling and testing program, implemented with appropriate equipment and personnel with the assistance of a trained professional performing in accordance with the applicable professional standard of care, may provide data or information which differs significantly from that discovered or encountered subsequently. Environmental, geological, and geotechnical conditions, that CONSULTANT may infer to exist between sampling points may differ significantly from those discovered or encountered subsequently. The passage of time also should be considered, and CLIENT recognizes that due to natural occurrences or direct, or indirect human intervention at or near the site, actual conditions may quickly change. CONSULTANT shall not be responsible for the identification of emerging contaminants for which no current regulatory provisions exists nor shall CONSULTANT be held liable for not identifying or discussing these compounds even if those compounds are detected at a later date. CLIENT realizes that these risks cannot be eliminated. The services included in this agreement are those agreed to, or selected, consistent with CLIENT's risk preferences and other considerations including cost and schedule.

11.3 By authorizing CONSULTANT to proceed with the site investigation services, CLIENT confirms that CONSULTANT has not created nor contributed to the presence of any existing hazardous substances or conditions at or near the site. CLIENT recognizes that there is an inherent risk in drilling, borings, punching or driving probes, excavating trenches or implementing other methods of subsurface exploration at or near a site contaminated by hazardous materials. Further, CLIENT recognizes that these are inherent even through the exercise of the Standard of Care. CLIENT accepts the risk and agrees to defend, indemnify, and hold CONSULTANT and each of CONSULTANT's subcontractors, consultants, officers, directors, and employees harmless against and all claims for damages, costs, or expenses direct or consequential, in connection with a release of hazardous substances, except to the extent that such claims, damages, or losses are adjudicated to have resulted from CONSULTANT's gross negligence or willful misconduct in the performance of the services.

12. FEDERAL AND STATE REGULATORY AGENCY AUDITS

12.1 For certain services rendered by CONSULTANT, documents filed with federal and state regulatory agencies may be audited after the date of filing. In the event that CLIENT's PROJECT is selected for an audit, CLIENT agrees to compensate CONSULTANT for time spent preparing for and complying with an agency request for information or interviews in conjunction with such audit. CLIENT will be notified at the time of any such request by an agency, and CONSULTANT will invoice CLIENT based on its standard billing rates in effect at the time of the audit.

13. CLIENT'S RESPONSIBILITIES

13.1 Unless otherwise stated in the Agreement, CLIENT will obtain, arrange, and pay for all notices, permits, and licenses required by local, state, or federal authorities; and CLIENT will make available the land, easements, rights-of-way, and access necessary for CONSULTANT's services or PROJECT implementation.

13.2 CLIENT will examine CONSULTANT's studies, reports, sketches, drawings, specifications, proposals, and other documents and communicate promptly to CONSULTANT in the event of disagreement regarding the contents of any of the foregoing. CLIENT, at its own cost, will obtain advice of an attorney, insurance counselor, accountant, auditor, bond and financial advisors, and other consultants as CLIENT deems appropriate; and render in writing decisions required by CLIENT in a timely manner.

14. OPINIONS OF COST, FINANCIAL ANALYSES, ECONOMIC FEASIBILITY PROJECTIONS, AND SCHEDULES

14.1 CONSULTANT has no control over cost or price of labor and materials required to implement CLIENT's PROJECT, unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs, competitive bidding procedures and market conditions, time or quality of performance by operating personnel or third parties, and other economic and operational factors that may materially affect the ultimate PROJECT cost or schedule. Therefore, CONSULTANT makes no warranty, expressed or implied, that CLIENT's actual PROJECT costs, financial aspects, economic feasibility, or schedules will not vary from any opinions, analyses, projections, or estimates which may be provided by CONSULTANT. If CLIENT wishes additional information as to any element of PROJECT cost, feasibility, or schedule, CLIENT at its own cost will employ an independent cost estimator, contractor, or other appropriate advisor.

15. CONSTRUCTION PHASE PROVISIONS

The following provisions shall be applicable should the CONSULTANT be retained to provide Construction Phase Services in connection with the PROJECT:

15.1 CLIENT and Contractor - The presence of CONSULTANT's personnel at a construction site, whether as onsite representatives or otherwise, does not make CONSULTANT or CONSULTANT's personnel in any way responsible for the obligations, duties, and responsibilities of the CLIENT and/or the construction contractors or other entities, and does not relieve the construction contractors or any other entity of their respective obligations, duties, and responsibilities, including, but not limited to, all construction methods, means, techniques, sequences, and procedures necessary for coordinating and completing all portions of the construction work in accordance with the construction contract documents and for providing and/or enforcing all

health and safety precautions required for such construction work.

15.2 Contractor Control - CONSULTANT and CONSULTANT's personnel have no authority or obligation to monitor, to inspect, to supervise, or to exercise any control over any construction contractor or other entity or their employees in connection with their work or the health and safety precautions for the construction work and have no duty for inspecting, noting, observing, correcting, or reporting on health or safety deficiencies of the construction contractor(s) or other entity or any other persons at the site except CONSULTANT's own personnel.

15.3 On-site Responsibility - The presence of CONSULTANT's personnel at a construction site is for the purpose of providing to CLIENT an increased degree of confidence that the completed construction work will conform generally to the construction documents and that the design concept as reflected in the construction documents generally has been implemented and preserved by the construction contractor(s). CONSULTANT neither guarantees the performance of the construction contractor(s) nor assumes responsibility for construction contractor's failure to perform work in accordance with the construction documents.

15.4 Payment Recommendations - Recommendations by CONSULTANT to CLIENT for periodic construction progress payments to the construction contractor(s) are based on CONSULTANT's knowledge, information, and belief from selective observation that the work has progressed to the point indicated. Such recommendations do not represent that continuous or detailed examinations have been made by CONSULTANT to ascertain that the construction contractor(s) have completed the work in exact accordance with the construction documents; that the final work will be acceptable in all respects; that CONSULTANT has made an examination to ascertain how or for what purpose the construction contractor(s) have used the moneys paid; that title to any of the work, materials, or equipment has passed to CLIENT free and clear of liens, claims, security interests, or encumbrances; or that there are no other matters at issue between CLIENT and the construction contractors that affect the amount that should be paid.

15.5 Record Drawings - Record drawings, if required as part of CONSULTANT's agreed scope of work, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the PROJECT was finally constructed. CONSULTANT is not responsible for any errors or omissions in the information from others that are incorporated into the record drawings.

16. DESIGN WITHOUT CONSTRUCTION PHASE SERVICES

The following provisions shall be applicable should the CONSULTANT be retained to provide design services but not be retained to provide Construction Phase Services in connection with the PROJECT:

16.1 It is understood and agreed that the CONSULTANT's Scope of Services under this proposal does not include project observation or review of the Contractor's performance or any other construction phase services, and that such services will be provided by the CLIENT or others. The CLIENT assumes all responsibility for interpretation of the Contract Documents and for construction observation, and the CLIENT waives any claims against the CONSULTANT that may be in any way connected thereto.

16.2 In addition, the CLIENT agrees, to the fullest extent permitted by law, to indemnify and hold harmless the CONSULTANT, its officers, directors, employees and subconsultants (collectively, CONSULTANT) against all damages, liabilities or costs, including reasonable attorney's fees and defense costs, arising out of or in any way connected with the performance of such services by other persons or entities and from any and all claims arising from modifications, clarifications, interpretations, adjustments or changes made to the Contract Documents to reflect changed field or other conditions, except for claims arising from the sole negligence or willful misconduct of the CONSULTANT.

17. SCHEDULE

17.1 The CLIENT agrees that the CONSULTANT is not responsible for damages arising directly or indirectly from any delays for causes beyond the CONSULTANT's reasonable control. For purposes of this Agreement, such causes include, but are not limited to, strikes or other labor disputes; severe weather disruptions or other natural disasters, pandemics, or acts of God; fires, riots, war or other emergencies; failure of any government agency to act in timely manner; failure of performance by the CLIENT or the CLIENT's contractors or consultants.

17.2 The CONSULTANT's schedule includes reasonable allowances for review and approval times required by the CLIENT, performance of services by the CLIENT's consultants, and review and approval times required by public authorities having jurisdiction over the PROJECT. This schedule shall be equitably adjusted as the PROJECT progresses, allowing for changes in scope, character or size of the PROJECT requested by the Client, or for delays or other causes beyond the Consultant's reasonable control.

18. MISCELLANEOUS TERMS

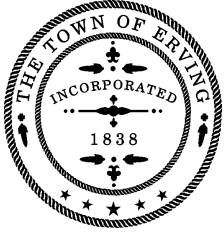
18.1 GOVERNING LAW - The CLIENT and the CONSULTANT agree that this Agreement and any legal actions concerning its validity, interpretation and performance shall be governed by the laws of the jurisdiction where the PROJECT is located, without regard to any conflict of laws provisions, which may apply the laws of other jurisdictions.

18.2 LENDERS' REQUIREMENTS- The CONSULTANT shall not be required to execute any documents subsequent to the signing of this Agreement that in any way might, in the sole judgment of the CONSULTANT, increase the CONSULTANT's contractual or legal obligations or risks, or adversely affect the availability or cost of its professional or general liability insurance.

18.3 CORPORATE PROTECTION - Notwithstanding anything to the contrary contained herein, the CLIENT agrees that as the CLIENT's sole and exclusive remedy, any claim, demand or suit shall be directed and/or asserted only against the CONSULTANT, a Massachusetts corporation, and not against any of the CONSULTANT's individual employees, officers or directors.

18.4 TITLES - The section headings used in this Agreement are intended principally for convenience and shall not be used in interpreting this Agreement or in determining any of the rights or obligations of the parties to this Agreement.

18.5 Upon execution, these terms as incorporated into the accompanying proposal represent the final intent of the parties. Any modification, rescission, or waivers of these terms shall only be effective and binding if agreed to in writing by the parties.



TOWN OF ERVING

SELECT BOARD

12 East Main Street
ERVING, MASSACHUSETTS 01344

Tel. 413-422-2800

Fax 413-422-2808

Email: administrator@erving-ma.gov

Jacob A. Smith, Chair
Scott Bastarache
James Loynd
Select Board

Bryan Smith
Town Administrator

December 15, 2023

To: Select Board
From: Bryan Smith, Town Administrator
CC: Glenn McCrory, Highway Superintendent
Philip Wonkka, Fire Chief

RE: Asbestos Remediation Professional Services for Fire Station 2 and Historical Museum Project

I am working with Glenn McCrory, Chief Wonkka, and the Historical Commission members are on the preliminary stages of facility maintenance at Fire Station 2 and the Pearl B. Care Historical Museum. Both projects have led us to be cautious about proceeding with repairs until we were certain about whether the materials contain asbestos. We have recently worked with ATLAS Technical Services LLC (ATLAS) and they have confirmed that both locations involve asbestos containing materials. I describe the work that needs to be done at both locations below, but first I want to explain the recommendation to engage ATLAS for further professional consulting services. We believe that both projects will need to be small capital projects that will be presented to the Select Board, Finance Committee and Capital Planning Committee. Without an opinion of probable cost and a clear scope of work for an abatement professional to respond to, we cannot accurately prepare our request for the anticipated capital projects. The proposal from ATLAS for professional services is attached.

Fire Station 2¹: The floor tiles in the administrative and training sections of the building have been lifted from the cement slab in recent years. Past practice was to just cover the tiles with another material, which just leads to multiple layers of loosening floor coverings as opposed to solving the problem. More tiles are lifting, and we conducted the testing to be sure that we were indeed working with materials that are asbestos containing. We would want ATLAS to help us prepare a scope of work to remediate all the floor tile and adhesive. Once the floor tile was remediated, we would have to be prepared for a new floor covering or to seal the concrete.

Historical Museum: The Historical Commission is very much interested in opening the Historical Museum as it has been winterized for several years. Buildings & Grounds began working with the Historical Commission to open the museum and to turn systems back on. Some work needs to be done on the heating system. For context the boiler is relatively new, but the distribution pipes

¹ While this request is focused on Fire Station 2 because the tiles are lifting at this location, it should be noted that both fire stations were built around the same time frame, and I believe it is a reasonable assumption that similar materials would have been used at Fire Station 1.

and the registers are much older. The vendor needs access to the distribution pipes in the basement, but they are wrapped in insulation that has been confirmed to contain asbestos. We would want ATLAS to help us prepare a scope of work to remediate all the pipe wrappings in the basement so that the pipes are accessible.

Recommended Vote Language:

A motion to engage ATLAS Technical Services LLC for professional consulting services for the remediation of asbestos cement pipe at Fire Station 2 and the Pearl B. Care Historical Museum for a design services fee of \$1,500 and a remediation oversight rate of \$850.00 per day, and to authorize Bryan Smith, Town Administrator, to execute all necessary agreements.



73 William Franks Dr.
West Springfield, MA 01089
413.781.0070 | oneatlas.com

December 5, 2023

Bryan Smith, Town Administrator
Town of Erving
12 East Main Street
Erving, MA 01344

Phone (413) 422-2800 ext. 1102
Email: bryan.smith@erving-ma.gov

Subject: Hazardous Materials Consulting Services Proposal
Erving Fire Station and Old Firehouse Museum Projects
Erving, Massachusetts
ATLAS Proposal # 23-13691

Dear Mr. Smith:

ATLAS Technical Services LLC (ATLAS) is pleased to provide this proposal for performance of Hazardous Materials Consulting Services of the above referenced sites. As you have indicated, select interior areas of the buildings, are scheduled for renovations. At the fire station building, asbestos containing material (ACM) floor tile and mastic have been identified and at the Old Firehouse Museum building Presumed ACM (PACM) thermal system insulation (TSI) on piping/fitting/debris have also been identified.

ATLAS's Scope of Services shall include the following at the sites:

I. Asbestos Designs (2)

ATLAS will visit both Sites to review conditions, quantities, and Client specifics in order to prepare two (2) separate technical specifications for remediation of identified asbestos-containing materials to be disturbed during the forthcoming projects. The technical specification section shall detail the type, locations, and quantity of material designated for abatement. The technical specification section will require removal in accordance with applicable state and federal regulations and per the requirements of the owner. The section will be provided in a CSI format that can easily incorporate with the overall project specification and contractor bid documents. ATLAS's abatement design scope of work does not include drawings. ATLAS has included project management functions through the bidding phase in this proposal. This will include pre-bid meetings, questions from bidders and bid review.

II. Remediation Oversight

ATLAS will perform construction administration services (i.e. oversight and testing) during remediation of asbestos-containing material. ATLAS shall utilize MA licensed asbestos project monitors for all project monitoring activities. While on-site, ATLAS shall perform the following:

Asbestos Project Monitoring

- ATLAS shall review and document the abatement contractor's on-site paperwork and work activities. Deficiencies in safety procedures or engineering controls will be reported to the abatement site supervisor and to the Client.
- ATLAS, with the abatement site supervisor shall perform visual inspections of each work area at the conclusion of the abatement. The visual inspection shall ensure that all ACM's as identified in the specification have been removed in accordance with the Contract Specification and the containment is clean to the point of no visible debris.
- ATLAS shall perform perimeter air monitoring and Final Air Clearance testing for each abatement work area. All samples shall be collected and analyzed on-site by Phase Contrast Microscopy (PCM) in accordance with state of Massachusetts and EPA regulations prior to containment teardown.
- The ATLAS Project Manager for this project shall perform submittal reviews, attend pre-construction meetings, prepare RFI responses and attend project meetings which are estimated at one per week for the duration of the abatement schedule.
- At the completion of the project, ATLAS shall provide the Client with copies of all on-site documentation (i.e. air sample results, and certificates of visual inspection for each containment area cleared).

COST PROPOSAL AND FEES

ATLAS is prepared to initiate project activity upon receipt of a written authorization to proceed which reflects the fees below:

Design Services (2-Separate Designs) (Lump Sum)	\$ 1,500.00
*Remediation Oversight	\$850.00/ Day

*Includes up to 8-hr day (inclusive of travel), on-site analysis of PCM air samples, management oversight, and final report. *ATLAS will determine actual number of days once Abatement Schedule is determined.*

TIME AND MATERIALS RATES (as needed for additional requested services)

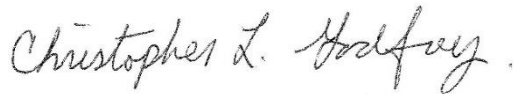
Project Manager/Asbestos-Lead Paint Designer	\$145/hr.
Asbestos Project Monitor	\$85/hr.

CONCLUSION AND SCHEDULE

ATLAS's primary objective during all phases of work will be client satisfaction and continuous coordination with you to ensure that all project tasks are completed on time. ATLAS can begin at your earliest convenience.

If you have any questions regarding this proposal or require further information or clarification, please do not hesitate to contact me directly at 413- 519-0773.

Sincerely,



Christopher Godfrey
Senior Project Manager



Brian Williams
Area Manager

Attachment: Client Services Agreement
Distribution: bryan.smith@erving-ma.gov

ATTACHMENT
TITLE: Client Service Agreement

ATLAS

CLIENT SERVICES AGREEMENT

This AGREEMENT is made this 5th day of December, 2023, by and between, Bryan Smith, Town Administrator Town of Erving, 12 East Main Street, Erving, MA 01344, its employees, officers, directors, affiliates, subsidiaries, and agents (CLIENT) and ATLAS TECHNICAL CONSULTANTS LLC, its employees, officers, directors, affiliates, subsidiaries, and agents (ATLAS) at 73 William Franks Drive, West Springfield, MA. 01089.

Whereas, CLIENT intends to employ ATLAS to provide [type of work to be performed + project name/location + proposal number] (hereinafter referred to as "Services");

Whereas, ATLAS desires to contract with CLIENT and perform such Services and CLIENT desires to accept such Services;

Now, therefore, in consideration of the terms and conditions hereinafter set forth, the parties mutually agree as follows:

DESIGNATED REPRESENTATIVES Except as expressly specified otherwise in writing, the parties designate the following named individuals as their authorized representatives to provide approvals, directives, and permissions, including changes, and to receive notices or other communications under this agreement at the following addresses:

ATLAS: _____

CLIENT: _____

PROPOSAL NAME/NUMBER/DATE: #23-13691, 12/5/2023, Town of Erving, Haz Mat Svcs.

1. SERVICES TO BE PERFORMED ATLAS shall perform the Services as described in the Proposal referenced above, which is attached hereto as Exhibit A and incorporated into this Agreement by reference. The Proposal describes the work to be performed (Services), the location (Site), fees and/or rates to be charged, certain special conditions of performance including equipment, sampling protocols, and necessary reimbursable expenses. ATLAS will be authorized to proceed with the Services, when CLIENT indicates its acceptance by signing this Agreement or, if not practical because of timing or other constraints, by e-mail to ATLAS. The Proposal, this Agreement and any attachments pertaining thereto shall comprise the Contract Document.

2. ADDITIONAL SERVICES If any additional or different Services are required to complete an existing Proposal, these additional Services shall be conveyed to CLIENT and approved by the CLIENT in writing.

3. COMPENSATION CLIENT will pay ATLAS for Services and expenses in accordance with the Proposal. ATLAS will make reasonable, good faith efforts to perform the Services and accomplish the objectives defined in this Agreement within any written cost estimate provided by ATLAS. CLIENT recognizes that unforeseen circumstances along with changes in scope and schedule can influence the completion of Services within the estimated costs. The use of an estimate of fees or a "not to exceed" limitation is ATLAS's professional judgment of costs, given the information that was provided but is not a guarantee that the Services will be completed for that amount. ATLAS will submit periodic invoices to CLIENT together with reasonable supporting documentation requested by CLIENT and a final bill upon completion of its services. Unless otherwise agreed in writing, there shall be no retainage. Payment is due within thirty (30) days of the invoice date regardless of whether CLIENT has been reimbursed by any other party. ATLAS reserves the right to assess a finance charge of 1.5% per month, calculated from the invoice due date, on any invoices not paid within thirty (30) days. ATLAS reserves the right to withhold reports until payment is received and may further suspend work and vacate the site if all undisputed payment amounts are not received within sixty (60) days after the invoice date. CLIENT will indemnify ATLAS for all claims concerning the suspension of work for nonpayment regardless of whether the claims are made by the CLIENT, someone claiming through the CLIENT, or by a third party. CLIENT agrees to pay ATLAS's attorney's fees, and all other costs incurred in collecting past due amounts.

If CLIENT objects in good faith to any portion of an invoice, CLIENT must so notify ATLAS within ten (10) days of the invoice date, identifying the cause of disagreement, and pay when due the portion of the invoice not in dispute. The parties will immediately make every effort to resolve the disputed portion of the invoice. Any dispute over invoiced amounts due which cannot be resolved within fourteen (14) days by direct negotiation between the parties shall be resolved in accordance with the Dispute Resolution provisions of this Agreement. Payment thereafter will first be applied to accrued interest and then to the unpaid principal amount. Finance charges as stated above shall be paid by the CLIENT on all disputed invoice amounts that are subsequently resolved in ATLAS's favor, calculated on the unpaid balance from the due date of the invoice.

4. PREVAILING WAGE It shall be CLIENT's sole responsibility to notify ATLAS in writing of any prevailing wage requirements before any services are performed for the project. In the event notification is not given to ATLAS, CLIENT shall be fully responsible for payment of all fines, penalties, and/or damages imposed upon ATLAS.

5. EXPENSES Unless otherwise stated in the Proposal, CLIENT agrees to pay ATLAS for its reimbursable expenses, in addition to its fees. Reimbursable expenses are expenditures made by ATLAS in the interest of the contracted Services. Reimbursable expenses shall be billed, and paid, in accordance with the schedule included with the Proposal. ATLAS will submit a Change Order to CLIENT detailing other reimbursable expenses not outlined in the Proposal.

6. INSURANCE ATLAS agrees that it now carries, and will continue to carry during the performance of any Services under this Agreement, Workers' Compensation and Employer's Liability, Commercial General Liability (including Contractual Liability), Commercial Automobile Liability, Professional Liability and Contractor's Pollution Liability insurance coverage with limits at or above those described, as follows:

a.	Workers' Compensation (statutory)	
	Employer's Liability	
	Each accident	\$1,000,000
	Disease – Each Employee	\$1,000,000
	Disease – Policy Limit	\$1,000,000
b.	Commercial General Liability	
	Each Occurrence	\$1,000,000
	Personal and Advertising Injury	\$1,000,000
	General Aggregate	\$2,000,000
	Products and Completed Operations Aggregate	\$2,000,000
c.	Commercial Automobile Liability	
	Combined Single Limit	\$1,000,000
d.	Errors and Omissions / Professional Liability	
	Each Claim	\$1,000,000
	Annual Aggregate	\$1,000,000
e.	Contractor's Pollution Liability	
	Each Claim	\$1,000,000
	Annual Aggregate	\$1,000,000

7. OBLIGATIONS OF CLIENT CLIENT warrants that all information provided to ATLAS concerning the required Services is complete and accurate to the best of CLIENT's knowledge. CLIENT agrees to advise ATLAS prior to commencement of the Services, and during the work, of any hazardous conditions on or near the Site known to CLIENT. CLIENT understands that ATLAS is relying upon the completeness and accuracy of information supplied to it by CLIENT and ATLAS will not independently verify such information unless otherwise provided in the Service Order. CLIENT shall be solely responsible for and shall indemnify and hold harmless ATLAS for any costs, expenses or damages incurred by ATLAS due to CLIENT's failure to follow applicable reporting and governmental requirements. CLIENT will not hold ATLAS liable if ATLAS's recommendations are not followed and expressly waives any claim against ATLAS, and agrees

to defend, indemnify and hold ATLAS harmless from any claim or liability for injury or loss that results from failure to properly implement ATLAS's recommendations.

8. STANDARD OF CARE ATLAS's Services as defined by the Proposal shall be performed in accordance with generally accepted industry principles and practices, consistent with a level of care and skill ordinarily practiced by members of the same profession currently providing similar services under similar circumstances at the time the Services were provided. No other representation nor a warranty of any kind, express or implied, is made or intended by ATLAS, its employees or agents, in connection with the Services provided under this Agreement. CLIENT agrees to give ATLAS written notice of any breach or default under this Section 8 within one (1) year of the completion of the Services and to provide ATLAS a reasonable opportunity to cure such breach or default, without the payment of additional fees to ATLAS, as a condition precedent to any claim for damages.

9. LIMITATIONS OF METHOD RELIABILITY The CLIENT recognizes and agrees that all testing and remediation methods have inherent reliability limitations; no method or number of sampling locations can guarantee that a condition will be discovered within the performance of the Services as authorized by the CLIENT. The CLIENT further acknowledges and agrees that reliability of testing or remediation methods varies according to the sampling frequency and other variables and that these factors, including cost, have been considered in the CLIENT's selection of Services. ATLAS's observations and standardized sampling, inspection and testing procedures employed only represent conditions observed and activities only at the precise location and time where and when Services were performed at the time of the Site visit. CLIENT recognizes that conditions of materials and activities at other locations may vary from those measured or observed, and that conditions at one location and time do not necessarily indicate the conditions of apparently identical material(s) at other locations and times. ATLAS is not responsible for changes that may occur to the Site after ATLAS completes the Services.

10. CONTROL OF WORK AND JOB-SITE SAFETY ATLAS shall be responsible for its activities and that of its employees and subcontractors, and CLIENT acknowledges that ATLAS will not direct, supervise or control the work of other consultants and contractors or their subcontractors. Furthermore, ATLAS shall not guarantee or be responsible for health and safety, procedures, construction means, methods, techniques, sequences, or procedures, nor be responsible for the acts or omissions of contractors or other parties on the Site. ATLAS's testing, observation, or inspection of the work of other parties on a project, even if performed on a continuous basis, shall not relieve such parties of their responsibility to perform their work in accordance with applicable plans, specifications and safety requirements. Continuous monitoring by ATLAS's employees does not mean that ATLAS is observing or verifying all Site work or placement of all materials. CLIENT agrees that ATLAS will only make on-Site observations appropriate to the Services provided by ATLAS and will not relieve others of their responsibilities to perform the work.

11. TEST AND SAMPLING LOCATIONS Unless otherwise specified in the Proposal, the Services do not include surveying the Site or precisely identifying sampling, inspection or test locations, depths or elevations, and any sampling, inspection and test locations, depths and elevations will be based on field estimates and information furnished by CLIENT and its representatives. Unless stated otherwise in the report, the accuracy of any test or sampling locations and elevations will be commensurate only with approximate measurements or estimates. CLIENT should retain the services of a professional surveyor if greater accuracy is required. CLIENT will furnish a diagram indicating the accurate location of the Site. Sample locations may also be indicated on the diagram. ATLAS reserves the right to deviate a reasonable distance from the boring and sampling locations unless the CLIENT specifically revokes this right in writing at the time the diagram is supplied.

12. INTERPRETATION OF DATA ATLAS is responsible only for those data, interpretations, and recommendations regarding the actual materials and activities observed, sampled, inspected or tested, and shall not be responsible for the use or interpretation of ATLAS data by third parties, or the information developed by third parties from such data. CLIENT acknowledges that subsurface conditions may vary from those encountered at the locations where the borings, surveys, or explorations are made by ATLAS. CLIENT further recognizes that the data interpretations and recommendations of ATLAS's personnel are based solely on the information available to them, and that ATLAS may make certain inferences based upon the information derived from these observations, samples, inspections, or tests to formulate professional opinions regarding conditions in other areas.

13. THIRD PARTY INFORMATION ATLAS is dependent on information available from various governmental agencies and private database firms to aid in evaluating the history of the Site. ATLAS shall not be liable for any such agency's

or database firm's failure to make relevant files or documents properly available, to properly index files, or otherwise to fail to maintain or produce accurate or complete records.

14. SITE ACCESS CLIENT grants or shall obtain for ATLAS a right of entry to all parts of the Site necessary to complete the requested Services and unless otherwise specified in the Proposal, it represents that it has obtained the applicable permits and licenses for the proposed Services. If CLIENT does not own the Site, CLIENT represents that it has or will obtain prior to the commencement of the Services, the authority and permission of the owner and/or the occupant of the Site. CLIENT acknowledges that due to the nature of some Services unavoidable damage may occur. CLIENT waives its right of recovery for such unavoidable damage, and if CLIENT is not the owner of the Site, CLIENT agrees to indemnify and defend ATLAS against any claims by the owner and/or occupant for any such damage.

Unless otherwise specified in the Proposal, ATLAS is not liable for damages caused by exploratory demolition or investigation to identify, quantify, or evaluate building materials, systems, and/or components not readily accessible to ATLAS during ATLAS's performance of the Services. ATLAS is not responsible for unforeseen conditions that exist on the Site within building systems that prohibit or deter ATLAS from gaining access to building materials, systems, and/or components.

15. ENGINEERING AND CONSTRUCTION SERVICES If the Services requested only require geotechnical engineering, subsurface exploration, construction materials testing, and/or engineering, ATLAS assumes that there are no hazardous substances or constituents in the soils or groundwater underlying the Site. ATLAS's duties and responsibilities are limited to performing tests and monitoring of specific construction activities as outlined in the Proposal. Unless otherwise specified in the Proposal, any consulting, testing or monitoring related to environmental conditions, including, but not limited to hazardous waste, soil or groundwater contamination, or air pollutants are not part of ATLAS's engineering and construction Services. If it becomes apparent during the field exploration that hazardous substances or constituents may be present, field operations will be terminated without liability.

16. OPINIONS OF COSTS ATLAS may, subject to the terms and limitations set forth in this Agreement, provide estimates relative to costs for remediation or construction as appropriate based on available data, designs, or recommendations. However, these opinions are intended to provide information on the range of costs and are not intended for reliance or use in firm budgeting or negotiation unless specifically agreed to in writing by ATLAS. CLIENT acknowledges that ATLAS's estimate may end up being substantially different than the ultimate cost, and CLIENT agrees it will not hold ATLAS liable for any variances between actual and estimated quantities, and further agrees to defend, indemnify and hold ATLAS harmless from any claim or liability for any such increased costs.

17. UTILITIES Unless otherwise specified in the Proposal, it is CLIENT's responsibility to mark or furnish the locations of all underground man-made obstructions at all Sites that the CLIENT owns and/or operates. CLIENT shall indemnify, defend and hold harmless ATLAS from and against any claims, losses or damages incurred or asserted against ATLAS related to the CLIENT's or a third party's failure to mark, protect or advise ATLAS of underground structures or utilities.

18. ROOF CUTS Unless otherwise specified in the Proposal, if roof cuts/samples are required by the Services, it is the CLIENT's responsibility to make appropriate repairs. If a roofing contractor or maintenance personnel selected by CLIENT is not on the roof to make repairs at the time samples are obtained, ATLAS may make temporary repairs, which may result in additional charges. ATLAS personnel are not certified in roofing repair, therefore under no circumstances, shall ATLAS be responsible for any water damage to the roofing system, building, or its contents resulting from ATLAS's temporary repairs.

19. SAMPLES AND EQUIPMENT Unless otherwise specified in the Proposal or required by law, ATLAS will not retain any samples obtained from the Site. At no time does ATLAS assume title to the samples; all samples shall remain the property of the CLIENT.

All laboratory and field equipment contaminated during ATLAS's Services that cannot readily and adequately cleansed of its hazardous contaminants shall become the property and responsibility of CLIENT. CLIENT shall purchase all such equipment as an expense of the Services, and it shall be turned over to CLIENT for proper disposal unless otherwise specified in the Service Order.

20. HAZARDOUS CONDITIONS OR SUBSTANCES The CLIENT acknowledges that Services that include hazardous or toxic materials and/or investigations of chemicals involve inherent uncertainties, such as limitations on laboratory

analytical methods and variations in subsurface conditions. Such uncertainties may adversely affect a Service Order's result, even though the Services are performed with skill and care. CLIENT further acknowledges that ATLAS has neither created nor contributed to the creation or existence of any hazardous, radioactive, toxic, irritant, pollutant, substance or constituent at the Site. All Site generated hazardous and non-hazardous waste, including used disposable protective gear and equipment, are the property of the CLIENT.

CLIENT agrees to defend, indemnify and hold harmless ATLAS against all claims for injury or loss sustained by any party, including the United States, from exposure, release, or the presence of any such hazardous, radioactive, toxic, irritant, pollutant, substance or constituent at the Site. This indemnity includes but is not limited to, ATLAS acting as CLIENT's agent to sign waste manifests, allegations that ATLAS is a handler, generator, operator, treater or storer, transporter or disposer under any federal, state or local, law, regulation or ordinance, and CLIENT's or third party's violation of federal, state or local, law, regulation or ordinance, related to the handling, storage, or disposal of hazardous substances or constituents at/or introduced to the Site, before or after the completion of the Services.

21. RIGHT TO STOP WORK If, during the performance of the Services, any unforeseen hazardous substance, material, element, constituent, condition, or occurrence is encountered which, in ATLAS 's reasonable judgment significantly affects or may affect the Services provided, the risk involved in providing the Services, or the recommended scope of Services, ATLAS may immediately suspend work.

22. ATLAS AND CLIENT INDEMNIFICATION To the fullest extent permitted by law, ATLAS shall indemnify and hold harmless CLIENT against claims, demands, and lawsuits to the extent arising out of or caused by the negligence or willful misconduct of ATLAS in connection with activities conducted in the performance of the Services.

To the fullest extent permitted by law, the CLIENT shall indemnify and hold harmless ATLAS, its affiliates, shareholders, directors, officers, employees and agents, from and against claims, demands, and lawsuits, to the extent arising out of or caused by CLIENT's breach of this Agreement or the negligence or willful misconduct of the CLIENT or other contractors retained by CLIENT in connection with activities conducted in the performance of the Services. CLIENT agrees that all indemnifications granted to ATLAS shall also be granted to those subcontractors retained by ATLAS for the performance of the Services.

23. LIMIT OF LIABILITY ATLAS 's total liability for all claims or causes of action of any kind, including but not limited to negligence, bodily injury or property damage, breach of contract or warranty, shall not exceed Fifty Thousand Dollars (\$50,000) or ATLAS's total fee for the Services rendered under this Agreement, whichever is greater.

24. CONSEQUENTIAL DAMAGES In no event shall either party be liable to the other party for any consequential, incidental, punitive, liquidated or indirect damages, including but not limited to loss of income, loss of profits, loss or restriction of use of property, or any other business losses, regardless if such damages are caused by breach of contract, negligent act or omission, other wrongful act, or whether ATLAS shall be advised, shall have other reason to know, or in fact shall know of the possibility of such damages.

25. WARRANTY ATLAS is not a manufacturer. If any equipment is used or purchased by ATLAS for a Proposal the manufacturer's warranties if any on the equipment are solely those of the manufacturer. ATLAS makes no other representation, guarantee, or warranty, expressed or implied, in fact or by law, whether of merchantability, fitness for any particular purpose or otherwise, concerning any of the goods or Services which may be furnished by ATLAS to CLIENT.

26. DOCUMENTS Project-specific documents and data produced by ATLAS under this Agreement shall become the property of CLIENT upon completion of the Services and payment of amounts owed ATLAS. ATLAS shall have the right, but not the obligation, to retain copies of all such materials.

27. RELIANCE Documents and data (including reports) produced by ATLAS pursuant to this Agreement relate solely to the Services for which Atlas has been retained, and are not intended or represented by ATLAS to be suitable for use or reliance beyond the scope or purpose for which they were originally prepared. No third party may rely upon such documents and data without the prior written consent of Atlas. Any such unauthorized use or dissemination will be at the sole risk and expense of the CLIENT or such third party.

28. THIRD-PARTY CLAIMS CLIENT agrees to pay ATLAS 's costs (including reasonable attorney's fees) for defending ATLAS against any claims that a third party or a regulatory agency asserts against ATLAS related to the Services that

were provided to CLIENT. Claims include legal actions by a third party or regulatory agency that are based upon the discoveries, findings or conclusions disclosed in documents or reports supplied to CLIENT by ATLAS.

29. SUBPOENAS The CLIENT is responsible for payment of ATLAS's time and expenses resulting from ATLAS's response to subpoenas issued by any party, involving any legal or administrative proceeding in which ATLAS is not named as a party, in connection with any Services performed under this Agreement. Charges are based on fee schedules in effect at the time the subpoena is served. ATLAS shall not object on CLIENT's behalf to any subpoena, but will make reasonable efforts to cooperate with CLIENT if CLIENT chooses to object.

30. TERMINATION OF CONTRACT This Agreement may be terminated by either party upon seven (7) days written notice provided that any incomplete or unfinished Services will remain in effect until completed, unless otherwise agreed to in writing. In the event of termination or suspension, by the CLIENT, ATLAS shall be paid for Services performed prior to the termination date plus reasonable termination and suspension expenses.

31. ASSIGNMENT Neither the CLIENT nor ATLAS may assign, or transfer its benefits, rights, duties, or interest in this Agreement without the written consent of the other party. This Agreement shall be binding on and inure to the benefit of the successors and assigns of the parties.

32. FORCE MAJEURE Neither CLIENT nor ATLAS shall hold the other responsible for damages or delays in performance caused by uncontrollable events, which could not reasonably have been anticipated or prevented, including but not limited to, acts of God, the public enemy, acts or directives of the Government of the United States or of the several states, or any foreign country, or any of them acting in their sovereign capacity, materially different Site conditions, wars, riots, terrorism, rebellions, sabotage, fires, explosions, accidents, floods, strikes, epidemics, pandemics, viral outbreaks, or other conceded acts of workers, lockouts, or changes in laws, regulations, or ordinances.

33. NOTICES All notices given by either party to the other under this Agreement shall be in writing and may be delivered by: (i) regular mail, postage prepaid; (ii) certified or registered mail; (iii) facsimile; (iv) email; or (v) hand-delivery, to the parties at the addresses, facsimile numbers, and email addresses appearing on the first page of this Agreement, unless otherwise designated in writing. Notices sent by mail will be deemed to be received three (3) days after deposit in the mail, properly addressed. Notices sent by certified or registered mail will be deemed to be received upon the date of the acknowledgment. Notices sent by facsimile or email will be deemed to be received upon successful transmission to the proper facsimile number, provided that the sender can produce a facsimile transmission confirmation report, or upon transmission to the proper email address (with confirmation of transmission). Notices delivered by hand-delivery will be deemed to be received upon acceptance by the respective party or its agent.

34. DISPUTE RESOLUTION In any dispute arising out of or relating to this Agreement, or a breach thereof, the parties shall first make all good faith attempts to resolve any difference by businesslike negotiations. If the conflict is not settled through negotiation, it shall be submitted to nonbinding mediation unless otherwise mutually agreed to in writing. This mediation process shall be a condition precedent to either party pursuing arbitration, litigation, or some other dispute resolution procedure, and the parties agree that any such legal action taken without first submitting to dispute resolution in accordance herewith will not be ripe for adjudication. The costs of the mediation shall be equally shared by all involved parties.

35. GENERAL PROVISIONS The captions and headings throughout this Agreement are for convenience only and do not define, limit, modify, or add to the meaning of any provision of this Agreement. If any provision of this Agreement is in conflict with any provision of the Proposal, the terms and conditions of this Agreement shall prevail unless the conflict concerns the scope of Services to be provided. If any provision shall to any extent be deemed invalid, it shall be modified if possible to fulfill the intent of the parties as reflected in the original provision and the remainder of this Agreement shall not be affected.

This Contract Document represents the entire understanding between the parties and supersedes any and all prior contracts whether written or oral. Nothing contained in this Contract Document shall be construed to be for the benefit of any persons not a party to this Agreement. No third party beneficiary rights are created.

The validity, interpretation, and performance of this Agreement shall be governed by and construed in accordance with the laws of the state in which the Site is located. Any legal action arising out of this Agreement shall be venued in a court



of competent jurisdiction within the state and county of the Site.

No waiver by either party of any default by the other party in the performance of any provision of this Agreement shall operate as or be construed as a waiver of any future default, whether like or different in character.

ATLAS is solely responsible for the performance of this Agreement, and no parent, subsidiary or affiliated company, or any of its directors, officers, employees, or agents shall have any legal responsibility whether in contract or tort, including negligence.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date first above written.

ATLAS TECHNICAL CONSULTANTS LLC:

BY: _____

PRINTED NAME: Christopher L. Godfrey

TITLE: Senior Project Manager

DATE: December 5, 2023

CLIENT:

(Person authorized to execute contracts)

BY: _____

PRINTED NAME: _____

TITLE: _____

DATE: _____

EXHIBIT "A"

PROPOSAL

A detailed proposal needs to be attached to the Agreement as Exhibit "A"