



**CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC SERVICES
CONTRACT, NOTICE AND SPECIFICATIONS
for
ANDERSON STREET
NEIGHBORHOOD BYWAY PROJECT
PHASE 2 OF 2
CONTRACT 1 OF 3 - SRF IMPROVEMENTS**

Bid Number: 1516

Dated: September 21, 2015

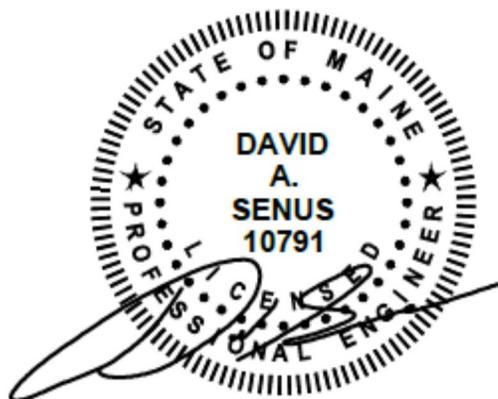


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NOTICE TO CONTRACTORS

Bid No. 1516
CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC SERVICES

ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2
CONTRACT 1 OF 3 - SRF IMPROVEMENTS

Sealed proposals, addressed to Purchasing, Room 103, City Hall, 389 Congress Street, Portland, Maine 04101, and endorsed on the outside of the envelope with the name of the Bidder, Project Name and Bid number will be received until 3:00 PM (prevailing time) on **Thursday, October 15, 2015**, at which time they will be publicly opened and read.

PROJECT NAME: ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2

LOCATION: Located on the following streets:

- Plowman Street, beginning approximately 75 feet to the west of the intersection of the right turn (westerly) ramp of the Tukey Street Connector, for approximately 150 linear feet to the intersection of the Tukey Street Connector ramp terminus at Anderson Street.
- Anderson Street for approximately 1728 linear feet to the south to the terminus of Phase 1 for sidewalk and storm drain improvements.
- Cove Street for approximately 175 linear feet to the west to the extent of new storm drain improvements.
- Fox Street (paving) for approximately 1,000 linear feet from Anderson Street to Franklin Street.

Copies of the above documents will be available at the Purchasing Office, Room 103, City Hall, 389 Congress Street, Portland, ME 04101, upon payment in advance of \$200.00 for each set of plans and specifications or \$230.00 for each set of plans and specifications to be mailed. Each prospective bidder will be required to obtain from the City each copy of the proposal form and each set of plans; e-mail jrl@portlandmaine.gov, phone (207) 874-8654, or fax (207) 874-8652.

OUTLINE OF WORK: There will be three separate contracts for this work. The project includes pedestrian improvement work that is being funded through the Community Development Block Grant Program (CDBG) and storm drain improvements that are being funded by the State of Maine Department of Environmental Protection (DEP) Clean Water State Revolving Loan Fund (CWSRF) program. The Portland Water District (PWD) work is funded separately through their capital improvement fund.

The work includes, but is not limited to, the following items detailed on the plans:

Contract 1 of 3: CWSRF Funded Work

1. Separated Storm drain installation.
2. Soil filter system construction.
3. Base course and surface course pavement as shown on plans.

Contract 2 of 3: CDBG Funded Work

1. Brick sidewalk construction.
2. Resetting of existing Type 1 curb and installation of new Type 1 curb.
3. Construction of pedestrian ramp improvements, including detectable warning panels.

4. Pavement markings.
5. Landscaping including loam, seed, mulch, and plantings.
6. Relocation of existing signage.

Contract 3 of 3: PWD Funded Work

1. Installation of approximately 1,840 linear feet of water main and appurtenances in Anderson St.

MANDATORY PRE-BID CONFERENCE

A mandatory pre-bid meeting will be held at **Department of Public Services, 55 Portland Street, Downstairs Basement Room, Portland, Maine on Thursday, October 1, 2015 at 10:00 a.m.** Firms not represented at this meeting will not be allowed to bid on this project.

BID BOND

A bid must be accompanied by Bid security made payable to Owner in an amount of 5% of Bidder's maximum bid price and in the form of a certified check or Bid bond issued by surety meeting the requirements of the General Conditions. No bid may be withdrawn for at least 60 days after receipt of bids unless released by the Owner.

AGENCY NOT A PARTY

This contract is expected to be funded in whole or in part by the State of Maine Department of Environmental Protection (DEP) Clean Water State Revolving Loan Fund (CWSRF) program. Neither the State of Maine nor any of its departments, agencies, or employees is or will be a party to this contract. The word "agency" in the contract documents refers to the DEP and all other involved funding agencies.

PERFORMANCE AND PAYMENT BOND

The successful bidder must submit Performance and Payment Bonds to the City prior to contract award. Detail information can be found in the General Conditions.

INSURANCE

The successful bidder shall agree to defend, indemnify and save the City harmless from all losses, costs or damages caused by its acts or those of its agents, and, before signing the contract, will produce evidence satisfactory to the City's Corporation Counsel of coverage for General Public and Automobile Liability insurance in amounts not less than \$500,000 per person, for bodily injury, death and property damage, protecting the contractor and the City, and naming the City as an additional insured from such claims, and shall also procure Workers' Compensation insurance.

BASIS OF AWARD

Contract shall be awarded to the responsible bidder whose bid, complying with conditions and requirements provided in this Notice and bid form, is the lowest total base bid as identified on the total bid form which will be the total from the SRF bid form, the CDBG bid form and the PWD bid form.

CONTRACT TIME

Work on this project shall be completed, including all underground utility work, sidewalk and curb installation, and base course paving, by **June 30, 2016**. Final surface paving and landscaping shall be completed by **October 14, 2016**.

TAXES

The City is exempt from Maine state sales and use taxes on all materials to be incorporated in the work. Said taxes shall not be included in the bid. Detailed information can be found in the General Conditions and the CWSRF General Conditions.

AMERICAN IRON AND STEEL

The Contractor shall comply with the Use of American Iron and Steel in accordance with Public Law 113-76, Section 436. The law and its requirements and guidance, including certification forms, can be found in the SRF supplementary conditions.

SRF DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

The Contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 40 CFR part 33, Disadvantaged Business Enterprises (DBE), in the award and administration of subcontracts. Failure by the Contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies.

1. During the bidding period, the Contractor is required to make the good faith efforts as described in the CWSRF Supplementary Conditions if they will be awarding subcontracts.
2. The Contractor must comply with the following provisions when submitting their bid:
 - (a) The Contractor must complete and submit DEP Form 6100-4, 'DBE Program Subcontractor Utilization Form' (**copy attached**) as part of the prime contractor's bid or proposal package to the Owner. Note, only DBE subcontractors should be listed. If no DBE subcontractors are to be used, the Contractor must still complete and submit the form.
 - (b) The Contractor must have each of its proposed DBE subcontractors complete the DEP Form 6100-3, 'DBE Program Subcontractor Performance Form' (**copy attached**). The completed forms must be submitted as part of the prime contractor's bid or proposal package to the Owner.
3. Prior to contract award, as the Successful Bidder, the Contractor must comply with the following provisions:
 - (a) The Contractor must submit to the Owner documentation of its good faith efforts (such as copies of solicitation letters and emails) and data relied upon in formulating its fair share objectives. Solicitation documentation must include proof of receipt. The records must be submitted to the Owner even if the goals were met.
 - (b) The Contractor must submit to the Owner a bidders list of all firms that bid or quote on subcontracts, including both MBE/WBEs and non-MBE/WBEs. The purpose of a bidders list is to provide contractors who conduct competitive bidding with as accurate a database as possible about the universe of MBE/WBE and non-MBE/WBE subcontractors. The list must include the following information:
 - (1) Entity's name with point of contact;
 - (2) Entity's mailing address, telephone number, and e-mail address;
 - (3) The procurement on which the entity bid or quoted, and when; and
 - (4) Entity's status as an MBE/WBE or non-MBE/WBE.

Additional information and forms may be found in the CWSRF Supplementary Conditions.

SUSPENSION AND DEBARMENT

The eligibility of successful bidder will be verified through the federal government's Excluded Parties List System prior to Maine Department of Environmental Protection approval of the contract award.

Furthermore, by entering into the contract, the Contractor shall certify that no part of the contract shall be subcontracted to a Debarred or Suspended person or firm. Detailed information may be found in the CWSRF Supplementary Conditions.

RESTRICTIONS ON LOBBYING

The successful bidder must submit certification regarding Lobbying (EPA form 6600-06) to the Owner prior to contract award. If applicable, the Contractor shall also complete and submit the Disclosure of Lobbying Activities form (EPA Standard Form LLL) to the Owner prior to contract award. Detailed information and forms can be found in the CWSRF Supplementary Conditions.

DAVIS-BACON AND RELATED ACTS

The Contractor must comply with Davis-Bacon (DB) and Davis-Bacon Related Acts (DBRA). All laborers and mechanics employed by the Contractor and subcontractors on this project shall not be paid less than the prevailing wage rates contained in the wage determination published in these bidding documents. Any laborers and mechanics not listed in the wage determination but employed by the Contractor and subcontractors on this project shall be paid at least as much as the lowest wage rate for other similar trade classifications already contained in the wage determination published in these bidding documents. A form 1444 submission will be required to obtain additional employee rate classifications, after contract award. No allowances or extra considerations on behalf of any contractor or subcontractor will be permitted subsequently by reason of error or oversight on account of Department of Labor wage determinations. The Contractor and subcontractors shall pay all employees weekly. The Contractor and subcontractors shall submit weekly certified payrolls to the Owner or designated representative, including a payroll summary with signed certification form WH-347. Detailed information and forms can be found in the CWSRF Supplementary Conditions.

FEDERAL REQUIREMENTS

The Contractor must comply with all Federal requirements per the CWSRF Supplementary Conditions, including submittal of pre-award certification regarding Lobbying.

STATE MINIMUM WAGES

All laborers and mechanics employed or working upon the construction site of the project shall be paid not less than the prevailing State minimum wage rate regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

BID PROTESTS

All protests arising from the Owner's procurement practices must be submitted to the Owner as soon as practical. The Owner will investigate the basis for the protest, seek the advice of legal counsel, document all meetings and actions, and attempt to resolve the protest promptly and equitably.

MODIFYING OR WITHDRAWING OF BID

Bids may be modified or withdrawn as follows:

- A. Before the time for bid opening:
 1. A bidder may modify a bid at any time by delivering an original, written notice of the modification signed by the bidder. The modification must be set forth clearly.
 2. Upon providing proof of identity, a bidder may withdraw a bid at any time by physically retrieving the bid, or by delivering an original, signed notice that the bid is withdrawn. Any bid security shall be returned to the bidder.

3. It is solely the bidder's responsibility to properly deliver any written modification or withdrawal. Delivery must be made to the Procurement Official with responsibility for the bid.

B. After the time for bid opening:

1. Bids may only be modified as determined by the City.
2. Bids may only be withdrawn with the consent of a Procurement Official. The official has sole discretion to determine whether to permit the withdrawal of a bid or the release of any bid security.

SUBMISSION OF BIDS

All Bids shall be submitted on the attached form and are to remain open for sixty (60) days after their opening. Late bids, bids without the required amount or form of surety, bids not signed and facsimile bids will not be accepted.

REJECTION OF BID

The City of Portland, Maine, reserves the right to reject any and all bids should it be deemed for the best interest of the City to do so. The City reserves the right to substantiate any bidder's qualifications, capability to perform, availability, past performance record and to verify that bidders are current in their obligations to the City.

EQUAL OPPORTUNITY PROVISIONS

Vendor shall comply fully with the Nondiscrimination and Equal Opportunity Provisions of the Workforce Investment Act of 1998, as amended (WIA, 29 CFR part 37); the Nontraditional Employment for Women Act of 1991; title VI of the Civil Rights Act of 1964, as amended; section 504 of the Rehabilitation Act of 1973, as amended; the Age Discrimination Act of 1975, as amended; title IX of the Education Amendments of 1972, as amended; and with all applicable requirements imposed by or pursuant to regulations implementing those laws, including but not limited to 29 CFR part 37.

LIEN WAIVERS

Prior to any payment by the City, the Contractor may be required to supply the City with a Waiver of Lien – Material and Labor for the total awarded contract cost, guaranteeing payment in full for all labor and materials used or required in connection with the work described in this bid. The City may also require waivers of lien, signed by individual subcontractors and materials suppliers, with requests for progress payments.

Any mechanic's lien or any other lien which may be filed against the premises which are the subject of the contract by reason of the work described herein shall be defended (by counsel reasonably acceptable to the City) and promptly discharged by the Contractor at its own expense. If the Contractor should fail either to defend the City against the lien or to discharge it, then the City may do so at the Contractor's expense. In the event of such an undertaking by the City, the Contractor will promptly reimburse the City for all its costs and expenses in so doing including, but not limited to, reimbursement of the City's reasonable counsel fees and costs which may be incurred by it in substituting a bond in place of the lien.

CONTRACTOR RESPONSIBILITIES

The Contractor shall furnish all labor, materials, fixtures, supplies, equipment and transportation necessary to do the work as specified. Work shall be conducted in an orderly manner and all work shall be performed in accordance with best trade policy and in conformance with pertinent OSHA,

Local, State and Federal Government regulations. Contractors will be responsible for acquiring all necessary permits, licenses and pay all associated fees (including dump disposal fees and disposal taxes, if applicable), unless otherwise specified herein.

The Contractor shall erect, and maintain at all times, any and all safeguards necessary for the protection of life and property of all maritime, pedestrian and vehicular traffic, where applicable.

GENERAL INFORMATION

All questions shall be directed in writing ONLY to the Purchasing Office at the above address and be received at least five business days prior to the bid opening date (FAX 207-874-8652, or E-mail jrl@portlandmaine.gov). Questions received after this time will not be addressed. Responses from the City that substantially alter this bid will be issued in the form of a written addendum to all bid holders registered in the Purchasing Office. Oral explanations or interpretations given before the award of the contract will not be binding.

Bids from vendors not registered with the Purchasing Office may be rejected; receipt of this document directly from the City of Portland indicates registration. Should a vendor receive this Request from a source other than the City, please contact 207-874-8654 to ensure that your firm is listed as a vendor for this Bid.

It is the custom of the City of Portland, Maine to pay its bills 30 days following equipment delivery and acceptance, and following the receipt of correct invoices for all items covered by the purchase order. If your organization prefers to receive payment via electronic transfer rather than by check, please see the web link below* and include that EFT form with your bid submission. In submitting bids under these specifications, bidders should take into account all discounts; both trade and time allowed in accordance with this payment policy and quote a net price. The City is exempt from the State's sales and use tax as well as all Federal excise taxes.

* <http://www.portlandmaine.gov/DocumentCenter/Home/View/817>

Pursuant to City procurement policy and ordinance, the City is unable to contract with businesses or individuals who are delinquent in their financial obligations to the City. These obligations may include but are not limited to real estate and personal property taxes and sewer user fees. Bidders who are delinquent in their financial obligations to the City must do one of the following: bring the obligation current, negotiate a payment plan with the City's Treasury office, or agree to an offset which shall be established by the contract which shall be issued to the successful bidder.

DISCLAIMER

The City disclaims any and all responsibility for injury to contractors, their agents or others while examining the job or at any other time.

All materials and equipment used as well as all methods of installation shall comply at a minimum with any and all Federal, OSHA, State and/or local codes, including applicable municipal ordinances and regulations.

September 21, 2015
Matthew Fitzgerald
Purchasing Manager

BID

Bid No.1516

CITY OF PORTLAND, MAINE
DEPARTMENT OF PUBLIC SERVICES

**ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2
CONTRACT 1 OF 3 -SRF IMPROVEMENTS**

Proposal of _____
Name

Address _____

The name and address shown on the above lines shall be the official name and address of the person, partnership or corporation submitting this bid and shall agree with the "Signature of Bidder" in the case of an individual, the "Name of Firm or Partnership" in the case of a firm or partnership, or the "Name of Bidder" in the case of a corporation.

TO: Matthew Fitzgerald, Purchasing Manager
City Hall, Room 103
389 Congress Street
Portland, ME 04101

Dear Mr. Fitzgerald:

The undersigned, having carefully examined the site of the work, the Plans, the Standard Specifications, including all current amendments or revisions thereof, the Supplemental Specifications, Special Provisions, Contract Agreement and Contract Bonds contained herein for the ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT, do(es) hereby propose and offer to enter into a contract to supply all the materials, tools, equipment and labor required to perform and construct the whole of the work in strict accordance with the terms and conditions of this contract at the unit prices stated in the following "Schedule of Items" submitted by the undersigned.

This Bid may be accepted by the City of Portland at any time within sixty (60) calendar days after opening of the bids.

(Fill out prices in ink, in writing and in figures; in case of a discrepancy between prices in writing and prices in figures, the writing shall govern. In case of discrepancy between total of items and total of bid amount stated, total of items shall govern. Use the pages in this document when submitting proposal and submit contract document intact.)

Any pay items with quantities marked with an asterisk (*) on the bid sheets are not anticipated at time of bid and therefore are indeterminate. These items are part of the Contract Proposal and will also be used should any extra work be necessary. Actual quantities will be measured in the field or calculated from the contract drawings. The unit bid prices will be used to calculate payment amounts regardless of final quantities.

**ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2
CONTRACT 1 OF 3 - SRF IMPROVEMENTS BASE BID FORM**

Item No.	Quantity	Item with Unit Bid Price Written in Words	UNIT PRICE		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents
202.15	EA	REMOVE EXISTING MANHOLE OR CATCH BASIN @ _____				
	9	_____ Per Each				
202.16	LF	REMOVE EXISTING STORM / SEWER PIPE @ _____				
	158	_____ Per Linear Foot				
202.20	SY	REMOVE EXISTING BITUMINOUS CONCRETE PAVEMENT @ _____				
	7,500	_____ Per Square Yard				
202.202	SY	REMOVE EXISTING PAVEMENT SURFACE @ _____				
	2,700	_____ Per Square Yard				
203.20	CY	COMMON EXCAVATION @ _____				
	550	_____ Per Cubic Yard				
203.25*	CY	GRANULAR BORROW @ _____				
	500	_____ Per Cubic Yard				
203.28	VF	TEST PIT EXCAVATION @ _____				
	90	_____ Per Vertical Foot				
203.30	TONS	ASH OR CONTAMINATED SOIL DISPOSAL @ _____				
	2,000	_____				

ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2						
CONTRACT 1 OF 3 - SRF IMPROVEMENTS BASE BID FORM						
Item No.	Quantity	Item with Unit Bid Price Written in Words	UNIT PRICE		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents
		Per Ton				
203.31*	CY	CRUSHED STONE, 703.31 – TYPE “A” (OVERDEPTH)				
	150	@ _____ _____ Per Cubic Yard				
206.061*	CY	EARTH EXCAVATION, BELOW GRADE (OVERDEPTH)				
	150	@ _____ _____ Per Cubic Yard				
206.07*	CY	STRUCTURAL ROCK EXCAVATION				
	10	@ _____ _____ Per Cubic Yard				
304.09	CY	AGGREGATE BASE COURSE – CRUSHED TYPE “B”				
	1,100	@ _____ _____ Per Cubic Yard				
304.10	CY	AGGREGATE SUBBASE COURSE – GRAVEL TYPE “D”				
	510	@ _____ _____ Per Cubic Yard				
403.207	TON	HOT BITUMINOUS PAVEMENT – GRADING “B” (19.0 MM)				
	1,350	@ _____ _____ Per Ton				
403.210	TON	HOT BITUMINOUS PAVEMENT – GRADING “D” (9.5 MM) – ANDERSON STREET				

ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2						
CONTRACT 1 OF 3 - SRF IMPROVEMENTS BASE BID FORM						
Item No.	Quantity	Item with Unit Bid Price Written in Words	UNIT PRICE		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents
	690	@ _____ Per Ton				
403.2101	TON	HOT BITUMINOUS PAVEMENT – GRADING “D” (9.5 MM) – FOX STREET				
	380	@ _____ Per Ton				
603.131	LF	8” DIAMETER STORM DRAIN PIPE				
	25	@ _____ Per Linear Foot				
603.149	LF	10” DIAMETER STORM DRAIN PIPE				
	401	@ _____ Per Linear Foot				
603.169	LF	15” DIAMETER STORM DRAIN PIPE				
	280	@ _____ Per Linear Foot				
603.179	LF	18” DIAMETER STORM DRAIN PIPE				
	413	@ _____ Per Linear Foot				
603.199	LF	24” DIAMETER STORM DRAIN PIPE				
	162	@ _____ Per Linear Foot				
604.121	EA	1’ DIAMETER AREA DRAIN				
	2	@ _____ Per Each				

**ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2
CONTRACT 1 OF 3 - SRF IMPROVEMENTS BASE BID FORM**

Item No.	Quantity	Item with Unit Bid Price Written in Words	UNIT PRICE		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents
604.122	EA	1.5' DIAMETER AREA DRAIN @ _____				
	8	Per Each				
604.13	EA	4' DIAMETER CATCH BASIN @ _____				
	12	Per Each				
604.15	EA	4' DIAMETER MANHOLE @ _____				
	8	Per Each				
604.153	EA	5' DIAMETER MANHOLE @ _____				
	1	Per Each				
604.168	EA	PROVIDING FRAME & COVER FOR EXISTING MANHOLES @ _____				
	11	Per Each				
604.18	EA	ADJUSTING MANHOLE OR CATCH BASIN TO GRADE @ _____				
	14	Per Each				
605.09	LF	6" UNDERDRAIN TYPE B @ _____				
	171	Per Linear Foot				

**ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2
CONTRACT 1 OF 3 - SRF IMPROVEMENTS BASE BID FORM**

Item No.	Quantity	Item with Unit Bid Price Written in Words	UNIT PRICE		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents
605.11	LF	12" UNDERDRAIN TYPE C @ _____				
	558	Per Linear Foot				
605.13	LF	18" UNDERDRAIN TYPE C @ _____				
	830	Per Linear Foot				
605.15	LF	24" UNDERDRAIN TYPE C @ _____				
	309	Per Linear Foot				
614.14	EA	MASONRY PLUG \geq 8" @ _____				
	9	Per Each				
615.07	LS	LOAM @ _____				
	1	Per Lump Sum				
619.1301	CY	BARK MULCH @ _____				
	35	Per Cubic Yard				
621.273	EA	LARGE DECIDUOUS TREE (2"-2.5" CAL) GP A @ _____				
	13	Per Each				

**ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2
CONTRACT 1 OF 3 - SRF IMPROVEMENTS BASE BID FORM**

Item No.	Quantity	Item with Unit Bid Price Written in Words	UNIT PRICE		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents
626.151	LS	TEMPORARILY RELOCATE AND RESET CONTROL BOX @ _____ _____				
	1	Per Lump Sum				
629.05*	HR	HAND LABOR, STRAIGHT TIME @ _____ _____				
	10	Per Hour				
629.06*	HR	MASON , STRAIGHT TIME @ _____ _____				
	10	Per Hour				
631.10*	HR	AIR COMPRESSOR (INCLUDING OPERATOR) @ _____ _____				
	10	Per Hour				
631.11*	HR	AIR TOOL (INCLUDING OPERATOR) @ _____ _____				
	10	Per Hour				
631.12*	HR	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR) @ _____ _____				
	10	Per Hour				
631.14*	HR	GRADER (INCLUDING OPERATOR) @ _____ _____				
	10	Per Hour				

**ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2
CONTRACT 1 OF 3 - SRF IMPROVEMENTS BASE BID FORM**

Item No.	Quantity	Item with Unit Bid Price Written in Words	UNIT PRICE		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents
631.172*	HR	TRUCK – LARGE (INCLUDING OPERATOR) @ _____				
	10	Per Hour				
631.22*	HR	FRONT END LOADER (INCLUDING OPERATOR) @ _____				
	10	Per Hour				
631.36*	HR	FOREMAN, STRAIGHT TIME @ _____				
	10	Per Hour				
632.05	EA	6" WYE PIPE CONNECTION @ _____				
	10	Per Each				
632.061	EA	10" INSERTA-TEE PIPE CONNECTION @ _____				
	2	Per Each				
632.07	EA	CLEANOUT @ _____				
	4	Per Each				
633.05	LF	SIX INCH DIAMETER SEWER LATERAL @ _____				
	80	Per Linear Foot				
637.071	LS	DUST CONTROL @ _____				
	1	Per Lump Sum				

**ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2
CONTRACT 1 OF 3 - SRF IMPROVEMENTS BASE BID FORM**

Item No.	Quantity	Item with Unit Bid Price Written in Words	UNIT PRICE		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents
652.38	HR	FLAGGERS @ _____				
	600	_____ Per Hour				
652.39	LS	WORK ZONE TRAFFIC CONTROL @ _____				
	1	_____ Per Lump Sum				
654.08	EA	DENSITY TEST @ _____				
	36	_____ Per Each				
656.75	LS	TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL @ _____				
	1	_____ Per Lump Sum				
890.01*	LF	GAS MAIN RELOCATION @ _____				
	100	_____ Per Linear Foot				
890.02*	LF	GAS SERVICE RELOCATION @ _____				
	100	_____ Per Linear Foot				
900.01	LS	SOIL FILTER SYSTEMS @ _____				
	1	_____ Per Lump Sum				

ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT – PHASE 2 OF 2						
CONTRACT 1 OF 3 - SRF IMPROVEMENTS BASE BID FORM						
Item No.	Quantity	Item with Unit Bid Price Written in Words	UNIT PRICE		TOTAL PRICE	
			Dollars	Cents	Dollars	Cents
TOTAL AMOUNT OF BID WRITTEN AND IN NUMBERS BASED ON ESTIMATE OF QUANTITIES						
<hr/> <hr/> <p style="text-align: center;"><i>(Written)</i></p>						

Any pay items with quantities marked with an asterisk (*) on the bid sheets are not anticipated at time of bid and therefore are indeterminate. These items are part of the Contract Proposal and will also be used should any extra work be necessary. Actual quantities will be measured in the field or calculated from the contract drawings. The unit bid prices will be used to calculate payment amounts regardless of final quantities.

NOTE THAT THERE ARE THREE SEPARATE BID CONTRACTS FOR THIS PROJECT:

- SRF IMPROVEMENTS**
- CDBG IMPROVEMENTS**
- PWD (WATER) IMPROVEMENTS**

THREE SEPARATE CONTRACTS WILL BE WRITTEN FOR THIS PROJECT BUT THE BASIS OF AWARD IS FOR THE LOWEST BID FOR ALL THREE CONTRACTS.

BASIS OF AWARD BID FORM ANDERSON STREET NEIGHBORHOOD BYWAY PROJECT PHASE 2 OF 2 PORTLAND, MAINE	
Total of SRF Improvements Bid Written in Numbers	\$
Total of CDBG Improvements Bid Written in Numbers	\$
Total of PWD Improvements Bid Written in Numbers	\$
TOTAL: BASIS OF AWARD	\$

The undersigned also agrees as follows:

FIRST: To do any extra work, not covered by the above schedule of items, which may be ordered, and to accept as full compensation therefore such prices as may be agreed upon in writing by the Engineer and the Contractor; or in case no agreement is made, to accept as full compensation the amount determined upon a "force account" basis as provided in the State of Maine Department of Transportation Standard Specifications, Revision of December 2002, including all current additions or modifications thereof .

SECOND: To begin work on the date specified in the Engineer's "Notice to Commence Work" and to prosecute said work in such a manner as to complete all underground utility work, sidewalk and curb installation, and base course paving by **June 30, 2016**, and completion of surface course paving and landscaping items by **October 14, 2016**, or within the time limits given in the Special Provisions.

THIRD: That this offer is to continue open to acceptance until the formal contract is executed by the successful bidder of this work, and the City may at any time without notice accept this proposal whether any other proposal has previously been accepted or not. Provided, however, that the City will accept, in writing, one of the proposals made, or reject all proposals made, within sixty (60) calendar days after the date of opening of the proposals.

The undersigned as Bidder, declares that the only persons or parties interested in this Proposal are those named herein; that the bidder is not financially interested in, or otherwise affiliated in a business way with any other bidder on this contract; and that this Proposal is made without collusion with any other person, firm or corporation.

"The undersigned declares that any person(s) employed by the City of Portland, Maine, who has direct or indirect personal or financial interest in this proposal or in any portion of the profits which may be derived therefrom, has been identified and the interest disclosed by separate attachment. (Please include in your disclosure any interest which you know of. An example of a direct interest would be a City employee who would be paid to perform services under this proposal. An example of an indirect interest would be a City employee who is related to any officers, employees, principal or shareholders of your firm or you.) If in doubt as to status or interest, please disclose to the extent known."

Respectfully submitted this _____ day of _____, 2015

Acknowledgement of Receipt of Addenda:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____
_____	_____

IF AN INDIVIDUAL, SIGN HERE

Signature of Bidder _____

Address _____

Phone # _____

Email Address _____

Social Security Number _____

(Signatures for a Firm, Partnership or Corporation on next page.)

IF A FIRM OR PARTNERSHIP, SIGN HERE

Signature of Bidder _____

Name of Firm or Partnership _____

Business Address _____

Telephone Number _____ Fax Number _____

Email Address _____ SS No. or Tax I.D. Number _____

Names and Addresses of Members of Firm or Partnership:

IF A CORPORATION, SIGN HERE

Name of Bidder _____

Authorized Signature _____
(Name) (Title)

Business Address _____

Telephone Number _____ Fax Number _____

Email Address _____ SS No. or Tax I.D. Number _____

Incorporated under the Laws of the State of _____

Names and Addresses of Officers of the Corporation:

President _____

Secretary _____

Treasurer _____ SS

Before me, personally appeared _____ and acknowledged that the signature to the preceding bid is his/her signature in his/her official capacity.

Date: _____

Notary Public - Signature and Seal

ALL CORPORATIONS MUST SIGN THIS FORM
AND SUBMIT WITH THE BID PROPOSAL

(Insert copy of that part of the records of the corporation wherein authority is given to the officer of that corporation to sign this bid on behalf of the corporation.)

(date)

The above is a true copy of the records of the _____
Corporation, which records are in my legal custody.

Officer having custody of the records

ss

Before me appeared, _____,
_____ of the _____ Corporation, and made
oath that the above statement is true.

Notary Public - Signature and Seal

NOTICE

(This Must Be Filled Out)

The full names and residences of all persons interested in this bid as principals are as follows:
(In case of Corporation, include and identify President, Treasurer, Manager)

_____	_____
_____	_____
_____	_____

ALL CONTRACTORS SHALL FILL IN THE FOLLOWING INFORMATION
BEFORE SUBMITTING BID

	Name and Address of Materials Supplier	Materials to be Supplied
1	_____	_____
2	_____	_____
3	_____	_____
4	_____	_____
5	_____	_____
6	_____	_____
7	_____	_____

	Name and Address of Contractor	Service or Trades to be Supplied	Anticipated \$ Amount
1	_____	_____	_____
2	_____	_____	_____
3	_____	_____	_____
4	_____	_____	_____
5	_____	_____	_____
6	_____	_____	_____
7	_____	_____	_____

This is a Sample Contract or Agreement ONLY; the final terms and conditions in the actual Agreement will be determined by the City's Corporation Counsel Office, and may contain additional provisions.

Bid #1516

SAMPLE AGREEMENT
BETWEEN THE CITY OF PORTLAND
AND

AGREEMENT entered into this _____ day of _____, 2015, by and between the **CITY OF PORTLAND**, a body politic and corporate, (hereinafter the "**CITY**"), and _____, a corporation with a mailing address of _____ (hereinafter the "**CONTRACTOR**").

W I T N E S S E T H

WHEREAS, the **CITY** did advertise for Requests for Bids by Bid #_____ titled

_____ ; and

WHEREAS, the **CONTRACTOR** did under date of _____, 2015, submit a bid for such work; and

WHEREAS, after due consideration of all of the bids the **CITY** did award the bid to the **CONTRACTOR**; and

NOW, THEREFORE, in consideration of the mutual promises made by each party to the other, the parties covenant and agree as follows:

1. The **CONTRACTOR** will furnish the materials, supplies, equipment and labor and will perform all work required to construct separated storm and sewer infrastructure_(hereinafter the "Work"), in accordance with the specifications contained in the Notice and Specifications issued to the Contractors under date of _____ by the Purchasing Manager for the City of Portland, and also in accordance with **CONTRACTOR**'s Proposal dated _____.

A copy of said Notice and Specifications, including all items in TABLE OF CONTENTS, and **CONTRACTOR**'s Proposal are attached to this Agreement and made a part hereof as Exhibits A and B respectively. The restatement of any of the terms contained in the Notice and Specifications or Proposal shall not be deemed to waive any terms not so restated. If a disagreement is found between the said attachments and this document, then this document shall govern; provided, however, that this document and its attachments shall be construed to be supplemental to one another to the extent possible.

2. **CONTRACTOR** covenants and agrees that all work performed and materials used shall be free from all defects, and that all work shall be performed in a good workmanlike manner. Unless a longer warranty period is specified in the attachments hereto, all Work provided hereunder shall be warranted by **CONTRACTOR** for one (1) full year from the date of completion of all Work hereunder and acceptance thereof by the **CITY**. Notwithstanding the

foregoing, any longer period specified in the attachments shall stay in effect. **CONTRACTOR** shall perform in compliance with all applicable federal, state and local laws and rules and shall obtain at its own cost all necessary permits.

3. Prior to the execution of this Agreement, **CONTRACTOR** will procure and maintain Public Liability Insurance coverage and Automobile Insurance coverage for the Work agreed to under this Agreement and as outlined within the contract documents, whether such operations be by themselves or by any subcontractor under them, with a limit of liability of not less than \$1,000,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than \$1,000,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$500,000 for all property damage sustained by any one person in any one accident-, and a limit of liability of not less than \$500,000 aggregate for any such damage sustained by two or more persons in any one accident. Name **CITY** as an additional insured on the policy, and provide the **CITY** a certificate of insurance evidencing such coverage, in this way: certificate must say either: A) "the policy actually been endorsed to name the City of Portland as an Additional Insured" and copy of the endorsement must come to the City of Portland with the certificate, or B) "the policy already includes an endorsement, such as the General Liability Expansion Endorsement, by which the City of Portland is, in fact, automatically made an additional insured." A Certificate which merely has a box checked under 'Addl Insr,'" or the like, or which merely states The City of Portland is named an Additional Insured, will not be acceptable. **CONTRACTOR** shall furnish and thereafter maintain certificates evidencing such coverage, which certificates shall guarantee thirty (30) days' notice to **CITY** of termination of insurance from insurance company or agent.
4. The **CONTRACTOR** shall furnish to the **CITY**, upon execution of this Agreement, a Contract Performance Bond and a Contract Labor and Material Payment Bond each in the amount of _____ Dollars (\$_____.00), guaranteeing one hundred percent (100%) performance of this Agreement, including the guarantee period, and free and clear of any and all liens, attachments and encumbrances.

The Bonds shall remain in effect for one (1) year after final acceptance of the Work, and protect the **CITY**'s interest in the one (1) year guaranty of workmanship and materials, and also shall insure settlement of claims, for the payment of all bills for labor, materials and equipment by the **CONTRACTOR**.

5. To the fullest extent permitted by law, the **CONTRACTOR** shall defend, indemnify and hold harmless the **CITY**, its officers and employees, from and against all claims, damages, losses, and expenses, just or unjust, including but not limited to the costs of defense and attorney's fees arising out of or resulting from the performance of this Agreement, provided that any such claims, damage, loss or expense (1) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, including the loss of use therefrom, and (2) is caused in whole or in part by any negligent act or omission of the **CONTRACTOR**, anyone directly or indirectly employed by it, or anyone for whose act it may be liable.

CONTRACTOR shall further defend, indemnify and hold the **CITY** harmless from any claim or lien of any nature filed against the **CITY** or its property as a result of services performed or materials provided under this Agreement by a subcontractor, supplier or anyone employed by **CONTRACTOR**. In the event such claim or lien is filed against **CITY**, **CONTRACTOR** shall defend such claim on behalf of **CITY** by counsel acceptable to **CITY** or shall otherwise

discharge such claim or lien by a means acceptable to **CITY**. **CITY**'s acceptance hereunder shall not be unreasonably withheld.

6. **CONTRACTOR** shall begin Work upon issuance of a notice to proceed issued by the **CITY**'s Director of Public Services_(hereinafter "Director") and shall complete the Work no later than _____. Placement of final surface course pavement shall be completed after _____. The time for performance may be extended by the written consent of the Director or her designee.
7. The **CONTRACTOR** shall perform the work to the satisfaction of the responsible **CITY** official who will have the right of inspection at all times, and whose approval and acceptance of the work will be a condition precedent to payments by the **CITY** under this Contract. **CITY** inspectors will have the authority to stop work in progress if such work is being done contrary to the plans, specifications, or engineering practice. In the event that any dispute arises as to the amount, nature or scope of the Work required under this Contract, the decision and judgment of the responsible **CITY** official will be final and binding.
8. Upon performance of all the terms and conditions of this Agreement, **CITY** will pay **CONTRACTOR** _____ Dollars (\$ _____), in full payment for the **CONTRACTOR**'s performance.
9. **CONTRACTOR** shall keep accurate records of all Work performed and furnished under this Agreement and shall submit such information on monthly invoices. Payment for such Work shall be made to **CONTRACTOR** not more than thirty (30) days after receipt of an invoice and acceptance of the Work by the **CITY**.
10. **CITY** reserves the right to require **CONTRACTOR** to provide waivers of lien for labor and materials prior to the issuance of final payment by the **CITY**.
11. Payment shall be in accordance with Section 108 – Prior to substantial completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as the **CITY** may determine or may withhold, including but not limited to liquidated damages in accordance with general conditions:
 - a. 95 percent of work completed (with balance being retainage); and
 - b. 95 percent of cost of materials and equipment not incorporated in the work (with balance being retainage)
 Upon substantial completion, the **CITY** shall pay an amount sufficient to increase total payments to the **CONTRACTOR** to 98 percent of the work completed, less such amounts as the **CITY** shall determine in accordance with general conditions. The final two percent of the value of the Work shall be retained for a period of one year from the date of substantial completion.
12. The **CITY** may terminate this Agreement for cause by written Notice to the **CONTRACTOR**. In the event of such termination, **CONTRACTOR** shall receive compensation for any satisfactory work completed prior to termination.
13. The **CITY** shall have the right to terminate this Agreement at any time for its convenience on prior written Notice to **CONTRACTOR**. If Agreement is terminated by the **CITY** for convenience, the **CITY** shall pay the **CONTRACTOR** for any unpaid, unrecovered, or unrecoverable out-of-pocket costs for supplies, materials and/or services provided or amounts expended or incurred in reliance on this Agreement prior to the effective date of such notice.

- 14. Any disputes arising out of or in the course of this Agreement, which are not settled by mutual agreement of the parties, shall be resolved in the courts of the State of Maine.
- 15. Out of concern for the public, **CITY** employees and **CONTRACTOR's** employees, all work performed by **CONTRACTOR** shall be in conformance with pertinent OSHA, local, state and federal government regulations.

IN WITNESS WHEREOF, the said **CITY OF PORTLAND** has caused this Agreement to be signed and sealed by Jon P. Jennings, its City Manager, thereunto duly authorized, and _____
 _____ has caused this Agreement to be signed and sealed by
 _____, its _____ thereunto duly authorized, the
 day and year first above written.

WITNESS:

CITY OF PORTLAND

By: _____

Jon P. Jennings
Its City Manager

WITNESS:

By: _____

(Print or type name)

Its _____

Approved as to form:

Approved as to funds:

Corporation Counsel's Office

Finance

SAMPLE CONTRACT ADDENDUM

ADDENDUM #X

To Contract Documents For:

City of Portland Bid Number:

Project Dated:

Current Date: XXXX

The attention of firms submitting proposals for the work named in the above Invitation is called to the following modifications to the documents as were issued.

The items set forth herein, whether of clarification, omission, addition and/or substitution, shall be included and form a part of the Contractor's submitted material and the corresponding Contract when executed. No claim for additional compensation, due to lack of knowledge of the contents of this Addendum will be considered.

ALL BIDDERS ARE ADVISED THAT RECEIPT OF THIS NOTICE MUST BE DULY ACKNOWLEDGED ON THE BID PROPOSAL FORM OR BY THE INSERTION OF THIS SHEET, SIGNED, AND SUBMITTED WITH YOUR PROPOSAL.

**MATTHEW F. FITZGERALD
PURCHASING MANAGER**

NOTE: Questions and Answers are listed on the following pages.

Receipt of **Addendum No. X** to the City of Portland's **BID #**____: _____ is hereby acknowledged.

COMPANY: _____

NAME: _____

SIGNED BY: _____ DATE: _____

PRINT NAME & TITLE: _____

ADDRESS: _____

_____ Zip Code

SAMPLE NOTICE OF AWARD

Date

Addressee

RE: NOTICE OF AWARD

Dear

Your firm has been awarded the contract for the subject project for your total low bid of \$_____. This letter will serve as notice of award and that the contract documents are ready for signature.

A pre-construction conference will be scheduled for a later date, in the Engineering Office, 55 Portland Street. Please be prepared to execute the contract within twelve (12) calendar days of this letter, as per the contract documents. You must have your firm's corporate seal on your person at the time of execution.

Separate performance and payment bonds in the full amount of the bid and the following insurance certificates shall be executed and presented for approval: insurance coverages for Contractor's Public Liability Insurance shall have \$1,000,000 limits. The standard Certificate of Insurance forms shall have the cancellation statement edited. The words "endeavor to" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the company" shall be crossed out. Evidence of proper Workers' Compensation Insurance and Blast Damage Insurance, if applicable, must also be presented for approval.

Should you have any questions pertaining to the above, please contact me at 874-8846.

Very truly yours,
CITY OF PORTLAND

Project Engineer

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged and a copy returned to the City of Portland.

By _____ Title _____

This, the _____ day of _____, 2015.

SAMPLE NOTICE TO COMMENCE WORK

Date

Addressee

RE: NOTICE TO COMMENCE WORK

Dear

You are hereby notified to commence work in accordance with the Agreement dated _____, 2015, on or before _____, 2015, and you are to complete the work by _____, 2015 with finish paving complete by _____, 2015. The date of completion of all work is therefore _____.

Very truly yours,
CITY OF PORTLAND

Project Engineer

ACCEPTANCE OF NOTICE

Receipt of the Above NOTICE TO COMMENCE WORK is hereby acknowledged by:

_____ this, the _____ day of _____, 2015.

By: _____

Title: _____

SAMPLE NOTICE OF FINAL COMPLETION

Date

Addressee

RE: NOTICE OF FINAL COMPLETION

Dear

The subject project was inspected on _____, by _____, and was found to be fully completed in accordance with the contract plans and specifications.

The work is hereby approved and accepted by the City of Portland as of _____, which begins the one year guarantee period. At this point it is essential that the city is provided with the attached statement and lien waiver *(as well as subcontractor/supplier lien waivers) certifying that all the obligations for equipment rentals, materials and supplies purchased, and labor employed on this project have been discharged. If you have any questions please feel free to call me at 874-8846.

Yours truly,
CITY OF PORTLAND

Project Engineer

WAIVER OF LIEN - MATERIAL OR LABOR

State of _____

County of _____

To all whom it may concern:

The undersigned _____ has been employed to furnish
_____ for the project known as

City of Portland, County of Cumberland, State of Maine.

The undersigned for and in consideration of the sum of \$ _____ and other good and valuable consideration the receipt whereof is hereby acknowledged, do hereby waive and release any and all rights and liens, or claim of right to lien on said above described project under the statutes of the State of Maine relating to Mechanic's Lien on account of Labor or Material or both furnished or which may be furnished by the undersigned to or on account of said _____ for said building and premises.

This Waiver of Lien shall become effective upon the issuance of a check by the City of Portland payable to _____ and _____ in the amount of _____.

Given under oath, my hand and seal this _____ day of _____, 20 _____.

By: _____

(Print or type name)

Its _____

Notarized: _____ this _____ day of _____, 20 _____.

My commission expires

WAIVER OF LIEN - (Subcontractor/supplier/employee)

The undersigned _____ has
 performed labor and furnished materials and/or performed services for
 _____ on behalf of the City of Portland, in performance
 of the contractor's agreement of _____ with the City of Portland for the

 at _____.

In consideration of the sum of \$ _____, the undersigned hereby waives all rights and liens, including, but not limited to, liens pursuant to 10 M.R.S.A. Sec. 3251, et. seq., which the undersigned may now or hereafter claim or assert against the above described building, appurtenance, wharf, pier and/or land; the above-described project; and the City of Portland.

This Waiver of Lien shall become effective upon the issuance of a check by the City of Portland payable to _____ in the amount of \$_____.

IN WITNESS WHEREOF the undersigned has hereto set its hand this _____ day of _____, 20_____.

By: _____
 (print or type name)

Its _____

State of Maine
 _____,ss

Before me appeared _____ and acknowledged that the signature to the preceding waiver is his/her signature in his/her official capacity.

Date: _____

 (Notary Public)

SAMPLE CONTRACTOR’S FINAL AFFIDAVIT

STATE OF MAINE

COUNTY OF CUMBERLAND

Before me, the undersigned, a _____
(Notary Public, Justice of Peace, Alderman)

in and for said County and State personally appeared:

(Printed Name) _____
(Individual, Partner or duly authorized representative of corporate contractor)

Who being duly sworn according to law deposes and says that the cost of all the Work, and outstanding claims and indebtedness of whatever nature arising out of the performance of the contract between

Owner: CITY OF PORTLAND

And Contractor: _____

Of (Address): _____

Dated (Agreement Date): _____

For the construction of (Project): _____

and necessary appurtenant installations have been paid in full.

Signature: _____
(Individual, Partner, or duly authorized representative of corporate contractor)

Sworn to and subscribed before me this _____ day of _____, 2015.

Signature: _____

CONTRACT DOCUMENTS AND SPECIFICATIONS

The City of Portland, Maine has also adopted for this project the "State of Maine, Department of Transportation, Standard Specifications, Revision of December, 2002", including all current additions or modifications thereof, (hereinafter referred to as "Standard Specifications"). A copy of the Standard Specifications can be found online at http://www.state.me.us/mdot/contractor-consultant-information/contractor_cons.php.

The City of Portland has also made specific changes to the MaineDOT Standard Specifications to incorporate the City of Portland's Technical and Design Standards and Guidelines, Revision December 2002. As such, the Contract Agreement, Special Provisions, and Supplemental Specifications contained hereinafter shall take precedence and shall govern in any case of conflict with the MaineDOT Standard Specification. Supplemental Specifications are modifications, additions and deletions to the Standard Specifications. Special Provisions are specifications in the contract that are for additional items not covered in the Standard Specifications.

PRIORITY OF CONFLICTING CONTRACT DOCUMENTS

If the Contractor discovers any ambiguity, error, omission, conflict, or discrepancy ("ambiguity, etc.") related to the Contract Documents that may significantly affect the cost, quality, Conformity, or timeliness of the Work, the Contractor must comply with Section 3.03 Reporting and Resolving Discrepancies of the EJCDC Standard General Conditions (which is similar to Section 104.3.3 - Duty to Notify Department If Ambiguities Discovered of the MaineDOT Standard Specifications).

In the case of ambiguity, etc., the following components of the Contract Documents shall control in the following descending order of priority:

- City of Portland Bid Amendments (most recent to least recent)
- Project Specific Permit Requirements
- City of Portland Special Provisions
- City of Portland Plan Set
- City of Portland Supplemental Specifications
- City of Portland Standard Details
- EJCDC C-710 Standard General Conditions
- MaineDOT Repair Specifications
- MaineDOT Standard Specifications
- MaineDOT Standard Details

SPECIAL PROVISIONS - GENERAL

The following Special Provisions and Supplemental Specifications shall amend the Standard Specifications. In case of conflicts, these Special Provisions (1) and Supplemental Specifications (2) shall take precedence and shall govern.

- (1) Special Provisions - specifications in the contract which are for additional items not covered in the Standard Specifications.
- (2) Supplemental Specifications - modifications, additions and deletions to the existing Standard Specifications.

1. Working Hours

- A. From 7:00 a.m. to 7:00 p.m. Monday through Friday.
- B. From June 1 of any year through August 31 of the same year, no construction work shall be performed between 8:00 p.m. of any day and 7:00 a.m. of the following day.
- C. On Saturdays, Sundays, and legal holidays, construction work shall not be performed before 8:00 a.m.

Construction shall not interfere with the normal flow of traffic on arterial streets. The full inbound roadway lane width shall be maintained between 7:00 a.m. and 9:00 a.m. and the full outbound roadway lane width shall be maintained between the hours of 3:30 p.m. and 6:00 p.m.

The definition of work for the purpose of this provision shall include the starting or moving of equipment, machinery, or materials. Any day worked for four hours or more shall be considered a full working day.

2. Utility Coordination

The Contractor shall be responsible for notifying utility representatives of the anticipated construction schedule. The Contractor shall be responsible for all utility coordination, protection of existing infrastructure, and any damages to existing utilities as a result of the work at no additional cost to the City.

3. Notification of Abutters

Abutters shall be notified by the Contractor sufficiently in advance of any construction affecting driveways, sidewalks, or utilities.

4. Existing Traffic Signs

All existing traffic signs which are to be removed during construction shall be carefully dismantled and the posts removed and shall be stacked in an area approved by the Engineer. The Contractor shall protect the signs from damage while in his possession and shall repair, at no additional cost to the City, any damages cause by his operations.

Prior to the start of any construction work, the Contractor and Engineer shall prepare a mutually acceptable inventory of all signs within the project limits which shall be used as a guide for replacement should signs be removed for construction purposes. The signs shall be inventoried by station location and approximate offset, legend of sign and post. This work shall be considered as subsidiary obligation of the contract for which no specific payment will be made.

This work shall be considered as subsidiary obligation of the contract for which no specific payment will be made.

5. Protection of Trees

The Contractor shall be responsible for the preservation of all trees on the project that are not called for to be removed. Any trees damaged by the Contractor's operations shall be repaired using approved tree dressing or paint in accordance with the appropriate provisions of Section 201 of the Standard Specifications, or replaced as deemed necessary by City Arborist at no additional cost to the City.

6. Maintenance and Protection of Traffic

The Contractor shall be responsible for the maintenance and protection of all vehicular and pedestrian traffic at all times during construction and shall erect suitable warning signs, flashers, barriers or temporary lighting devices of sufficient size and number to afford protection to the traveling public. The Contractor shall be held responsible for all damage to the work due to any failure of the warning devices to properly protect the work from the traffic, pedestrians or other causes.

Guidelines for the construction and erection of barricades, lighting devices, warning signs, etc. may be found in the most recent edition of "Manual on Uniform Traffic Control Devices for Streets and Highways" published by the Department of Transportation of the Federal Highway Administration.

The Contractor shall maintain an accessible pedestrian route (meeting A. D. A. requirements) along all streets within the Project area at all times.

This work shall be considered a subsidiary obligation of the contract for which no specific payment will be made.

7. Materials

Materials shall meet the requirements specified in the specifications. Equals shall be approved only prior to the bid opening.

8. Survey

The Contractor shall be responsible for establishing a construction layout, maintaining these controls during construction and providing all additional survey required, which shall be done by a competent Engineer or Surveyor.

9. Sheeting and Bracing

Any sheeting or bracing required for the satisfactory installation of drainage structures and pipes shall be considered as incidental to the appropriate bid item, and not paid for separately.

10. Waste Areas

The disposal of waste and surplus materials shall be as outlined in Section 203.06 – Waste Areas of the Standard Specifications.

11. Occupational Safety and Health

The Contractor is hereby advised that all work to be furnished to the City shall be performed with equipment, methods, and use of personnel in conformance with the pertinent Occupational Safety and Health Act requirements of the State of Maine and with the regulations for construction as specified by the Department of Labor and Occupational Safety and Health Administration (OSHA) as currently amended.

12. Pre-construction Conference

A conference will be held at 55 Portland Street, Portland, Maine within ten (10) days after the awarding of the contract. At this time, the Contractor will be required to submit a graphically illustrated schedule and a plan showing project activities. City officials and representatives of the various utility companies involved in the project will be present at this meeting.

It is the purpose of this meeting to inform the various agencies of the proposed work schedule, and to give them the opportunity of discussing any difficulties and offering suggestions to the Contractor concerning proposed schedule in order that full cooperation may be reached.

13. Schedule of Operations

The Contractor shall submit 3 days prior to the pre-construction conference a detailed schedule showing the sequencing, critical path items, milestones and scheduling of the work. This schedule must show sufficient detail to insure compliance with the contract completion dates. Updates will be required as work progresses.

14. Setting of Pipes to Line and Grade

If laser beam equipment is used for laying storm drain pipe, frequent checks shall be made to assure close adherence to line and grade. If lasers are not used, batter boards are to be set at maximum twenty-five foot (25') intervals and grades transferred to the boards with a transit, level, or line level. Setting pipes to grade by use of "pop" levels or carpenter levels will not be permitted.

15. Extent of Open Excavation

The extent of excavation open at any one time shall be controlled by OSHA regulations and by existing conditions and location of work area.

16. Traffic Officers

The presence of Portland Police will be a determination made by the Traffic Engineer based on the Traffic Control Plan the City will be providing to the Contractor for this project. If Police are required, the City will hire and reimburse them. The Police Department requires 48 hours notice for any Police detail onsite.

17. Limitation of Operations

The Contractor shall conduct the work at all times in such a manner and in such sequence as will assure the least interference with traffic. Contractor shall not open up work to the prejudice or detriment of work already started. The Engineer may require the Contractor to finish a section on which work is in progress before work is started on any additional sections, if finishing such section is essential to public convenience.

The Contractor shall be required to construct roadway subbase concurrent to their trench backfilling operation if the street is not being reconstructed.

Waste and surplus material shall not be stockpiled, but shall be disposed of in areas as designated in Section 203.06, Waste Areas, of the Standard Specifications.

18. Dust Control for Street

Calcium chloride shall be spread only on disturbed unpaved areas. Calcium chloride shall not be spread on paved areas that are covered by granular material. These areas shall be swept clean of all granular material. Dust on paved areas shall be controlled with water before sweeping.

19. Trench Pavement Replacement

The Contractor shall be responsible for repairing any trench pavement that has experienced excess settlement, cracking or opening of pavement joints. Repair may include overlay, removal of unacceptable material and complete replacement, joint sealing or re-cutting pavement as required. This work may be necessary after final acceptance of the work and prior to expiration of the maintenance bond. This work shall be done at no additional cost to the City.

20. City of Portland's Street Excavation Ordinance

The Contractor is hereby advised that all work shall conform to the regulations of Chapter 25 of the Municipal Code, "Excavations in Public Places", as currently amended. The Contractor shall be responsible for obtaining the Street Opening Permit for this project; however, no street opening fee will be charged. The Contractor will be required to obtain an Excavator's License from the City and maintain this license for the duration of the project. The Contractor will be required to pay the normal Excavator's License fees to the City to obtain this license.

21. Questions Regarding Plan and Documents

Questions from prospective bidders relative to this Contract shall be communicated in writing at least 5 days before bid opening to the following:

Purchasing Office
 City Hall – Room 103
 Tel. (207) 874-8654
 Fax: (207) 874-8652
 Email: mff@portlandmaine.gov

Questions received after this time will not be addressed. Responses from the City that substantially alter this bid will be issued in the form of a written addendum to all bid holders registered in the Purchasing Office. Oral explanations or interpretations given before the award of this contract will not be binding. Receipt of any addenda must be acknowledged in writing as part of a proposal. Each bidder shall be responsible for ensuring that they have received any and all addenda. The City will not assume responsibility for the receipt by the Contractor for any addenda.

22. Record Drawings

The Contractor shall keep daily records of all changes in the work, ties to all new service connections, and elevations of all inverts. The Contractor shall maintain a record of all service lateral locations and locations of buried fittings, etc., throughout the project. Such locations shall be recorded by 3 ties from fixed permanent points. Prior to requesting final payment, the Contractor shall submit these records to the City and the inspector in a clearly legible form in order to produce record drawings.

Prior to final payment the Contractor shall be required to submit a set of record drawings for the project. The record drawings shall show all changes in red, clearly drawn on a paper set of the original construction plans. Once all information has been received and verified then the City will produce the record drawings from the information received.

23. Waste Material

All waste material shall be removed from the site and the area left clean upon completion of work. Any equipment or structures damaged by the Contractor shall be repaired or replaced at no additional cost to the City. The Contractor shall notify the City of the final waste disposal location

and if so located in the City shall be responsible to provide evidence of all necessary local fill permits and State permits at no extra cost to the City.

24. Quality Assurance

The Contractor shall be responsible at all times for maintaining quality assurance during performance of his work. Particular attention to compaction shall be paid during backfilling operations. Strict adherence to Section 203.11 and 304.04 of the Standard Specifications will be required when backfilling trenches, preparing subgrade, and placing subbase and base gravels.

In-place density tests of the backfill material shall be conducted by an independent testing laboratory. The amount and frequency of testing shall follow the requirements of Section 654. A minimum of one density test per 100 feet of trench may be required. The Contractor shall be responsible for procuring and paying for the testing services, when provided for in contract. Satisfactory compaction shall be as required in Section 654.

The use of an independent testing laboratory, by the Contractor, shall receive prior approval from the City Inspector.

25. Sanitary Facilities

The Contractor shall provide self-contained toilet units in sufficient numbers for use of all persons involved in the work.

26. Bids

No bids shall be withdrawn within a period of sixty (60) days after the opening of the bids.

27. Subsurface Soils Information

All subsurface soils information, including but not limited to ledge, boring, refusal, or groundwater elevations, is approximate only and is shown on the Drawings for design purposes only and the convenience of the Contractor. The Contractor shall make his own investigations regarding the actual location and/or nature of such information and shall not rely on nor make claims for any extra payments based on the information shown on the drawings.

28. Unauthorized Use of Fire Hydrants

In conformance with the Maine Department of Human Services, the Portland Water District requires the use of an approved air gap or reduced pressure zone back flow prevention device to assure the protection of the public water supply when filling tank trucks, street sweepers, jet machines or any other related equipment, or any other needs that require a connection to a public or private hydrant. Contractors working for the City are required to apply to the Portland Water District for a hydrant meter and back flow prevention device. All costs associated with temporary water meters and backflow prevention devices shall be considered incidental.

29. Project Funding

The proposed project is part of the City of Portland Combined Sewer Overflow (CSO) Abatement plan and is subject to Portland City Council review and funding approval. The project is financed through the State of Maine Clean Water State Revolving Fund (CWSRF) and shall be subject to the conditions outlined herein, **including the Engineers Joint Contract Documents Committee (EJCDC) Standard General Conditions C-710 and CWSRF Supplementary Conditions.**

The pedestrian improvements that are part of this project are funded through the Community Development Block Grant Program (CDBG) and are subject to the **CDBG Supplementary Conditions**.

The PWD water main work is being funded separately by PWD.

30. Anti-Idling Policy

Please note that following these Special Provisions – General, the City's Administrative Regulation #25 regarding the City's Anti-Idling Policy has been provided. Although this Policy is directed to City Employees regarding the use of City Vehicles, we as a City, along with its citizenry, request your compliance as well. It is our goal to protect and preserve the natural environment and improve the air quality in the City of Portland. As a business partner of our City and a responsible organization, your assistance in this effort will be expected and greatly appreciated.

31. Working Drawings

Submittals and shop drawings, defined as Working Drawings in the Standard Specifications Section 101.2 Definitions, shall be provided to the Engineer for review and approval. Requirements and timelines for working drawing review shall be in accordance with Section 105.7 of the Standard Specifications.

32. Sewer Bypass Pumping

The Contractor shall prepare and submit a bypass pumping plan to the Engineer for review and approval in advance of work. The plan shall identify the equipment to be used along with the operations and maintenance procedures proposed by the Contractor to bypass flow throughout the duration of construction. No overflow of sanitary sewage or combined sewage to any overland area or receiving water is permissible. The Contractor shall be solely responsible for all damages or fines associated with overflows that occur as a result of the sewer installation work. All costs associated with bypass pumping shall be considered incidental to the pay items within Section 603 – Pipe Culverts and Storm Drains.

33. Test Pits

Test pits, if required, shall be completed at least two weeks prior to the start of construction or ordering of materials. The Contractor shall promptly provide test pit information to the Engineer for review, and shall notify the Engineer of any potential utility crossing conflicts.

STORM SERVICE LATERAL LOCATION RECORD

Date Installed: _____ City of: _____

Type/Size of Service Pipe: _____ Street: _____

Connection at Sewer Main: _____ Dwelling No: _____

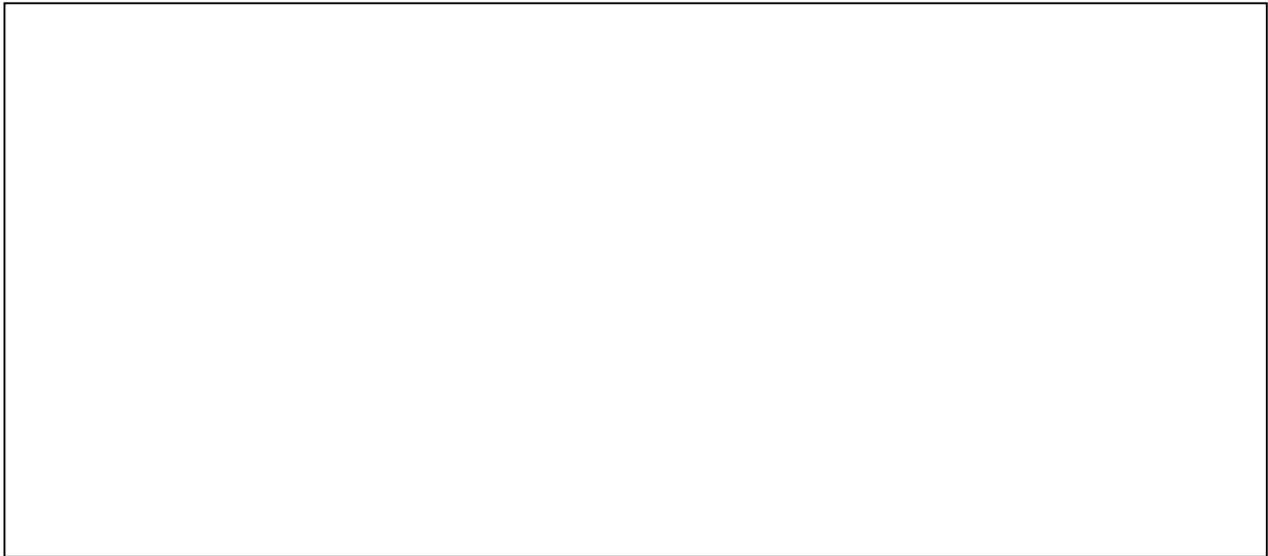
Depth, end of Service Pipe: _____ Occupant: _____

Length of Service Pipe Laid: _____ Owner: _____

Measured, Located by: _____

Project Contractor: _____

Location Diagram
(Provide 3 Ties to Permanent Objects)



Remarks _____

ANTI-IDLE POLICY

Purpose:

To inform all City employees of the need to eliminate unnecessary idling of vehicles in order to reduce the cost of City operations and to reduce emissions created by City vehicles. Our goal is to protect and preserve the natural environment and improve air quality in the City of Portland.

Policy:

It is the policy of the City of Portland to continually improve the efficient use of vehicle fuels in an effort to reduce operating costs and emissions. City vehicles will not be permitted to idle unnecessarily. Operators of City equipment will adhere to the following standards:

- 1) Idling is prohibited (with the limited exceptions listed below) when the ambient temperature is above 32 degrees F.
- 2) 10 minute maximum idle time limit when ambient temperature is 32 F and below
- 3) Vehicles will not be left idling when the operator is out of the vehicle (with the limited exceptions listed below)

For the health and safety of operators, there will be occurrences when vehicles will be left running. Examples include protection from the elements or for the use of the vehicle safety features (including the use of air conditioning in street sweepers to keep dust out of the cab).

Exceptions

Due to the emergency nature of some City operations, the following exceptions will apply to this policy:

- Emergency response vehicles when responding to an emergency
- Fire vehicles which must maintain onboard medication at a specific temperature
- Vehicles whose batteries may be discharged because of onboard electrical equipment (i.e. emergency lights, radar, computers, etc.)

Non-Compliance

After a reasonable period of education about this new policy, employees will be subject to progressive discipline under AR 25 if they do not comply with this policy.

**SUPPLEMENTAL SPECIFICATION
SECTION 101 - CONTRACT INTERPRETATION**

The provisions of Section 101 of the Standard Specifications shall apply with the following additions or modifications:

Scope of Section

This Section contains abbreviations, definitions, and general rules of interpretation and shall apply with the following additions or modifications.

101.2 Definitions

Chief Engineer

The definition in the Standard Specifications shall be deleted and replaced with the following. Chief Engineer shall mean the City Engineer, City of Portland, Maine, Department of Public Services, acting directly or through his or her duly authorized representatives, who are responsible for the design and administration of the project.

City

Where the term City or CITY is provided in these documents, it shall mean the City of Portland, Maine.

Closeout Documentation

Replace "A letter stating the amount of monies paid to DBE subcontractors to meet Contract DBE goals" with "DBE Goal Attainment Verification Form".

Commissioner

The definition in the Standard Specifications shall be deleted and replaced with the following: Commissioner shall mean the Director of Public Services, City of Portland, Maine.

Department

The definition in the Standard Specifications shall be deleted and replaced with the following: Department shall mean the Department of Public Services, City of Portland, Maine acting through its Director or through his or her duly authorized representative.

Owner

The definition in the Standard Specifications shall be deleted and replaced with the following: Owner shall mean the City of Portland.

**SUPPLEMENTAL SPECIFICATION
SECTION 102 - BIDDING**

The provisions of Section 102 of the Standard Specifications shall apply with the following additions or modifications:

Scope of Section

This Section includes requirements related to eligibility to Bid and the Bidding process from advertisement to Bids, through Bid Opening, to the analysis of Bids.

102.1.4 Qualifications of Bidder

The following paragraph will be added as Section 102.1.4.

The City reserves the right to reject any bid if the evidence submitted by, or the investigation of such bidder, fails to satisfy the City that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. The City reserves the right to reject any or all bids if it would be in the public interest to do so. "The City reserves the right to substantiate bidder's qualifications, capability to perform, availability, past performance record and verify that the bidder is current in its financial obligations to the City."

102.3 Examination of documents, site and other information

This subsection shall be amended by the addition of the following paragraph.

Plans, Specifications and Bid Forms may be seen at the Engineering Office, Department of Public Services, 55 Portland Street, Portland, Maine; or may be obtained at the Purchasing Office, Room 103, City Hall, upon payment as specified in the published "Notice to Contractors".

102.5.1 Questions from Bidder

This subsection shall be amended to read as follows. Bidders shall direct all technical or Engineering questions including requests for explanations or interpretation or for the use of products or methods other than those described in the specifications in writing to the Purchasing Office not later than five (5) working days prior to the date designated for the opening of the bids. All answers to such requests will be made as addenda to the contract and will be issued in writing to all Bidders.

No oral interpretation will be given to the contract documents.

102.5.2 Bidder's Duty To Notify Department If Ambiguities Discovered

Bidders shall not take advantage of any ambiguity, error, omission, conflict, or discrepancy ("ambiguity, etc.") relating to the Bid Documents, Geotechnical Information, site conditions, or any other information that may significantly affect the cost, quality, Conformity, or timeliness of the Work. If a Bidder discovers any such ambiguity, etc., it must notify the Purchasing Agent immediately in writing. Failure to provide such notice constitutes a waiver of any claim for entitlement for additional compensation or time related to such ambiguity, etc.

102.7.1 Location and Time

This subsection shall be amended to read as follows: Each Bid shall be submitted, document intact, in a sealed envelope. The envelope shall be clearly marked to indicate the name of the Bidder, project name, bid number and be addressed to Purchasing, Room 103, City Hall, 389 Congress Street, Portland, Maine 04101. Bids may be mailed or delivered in person, but they shall be filed prior to the time and at the place specified in the "Notice to Contractors". Bids received after the time for opening of bids will be returned to the bidder unopened.

102.7.2 Effects of Signing and Delivery of Bids

This subsection shall be amended by the addition of the following: Corporations will be required to affix their corporate seal on their Bids.

SUPPLEMENTAL SPECIFICATION

SECTION 103 - AWARD AND CONTRACTING

The provisions of Section 103 of the Standard Specifications shall apply with the following additions or modifications:

Scope of Section

This Section includes requirements related to the final determination of Bid responsiveness and Award and Execution of the Contract.

103.3.2 Notice of Determination

This subsection shall be amended by the addition of the following paragraph: The City reserves the right to reject any bid if the evidence submitted by, or the investigation of such bidder, fails to satisfy the City that such bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein. The City reserves the right to reject any or all bids if it would be in the public interest to do so. A proposal which includes a combination of abnormally low and abnormally high unit prices, which results in an unbalanced bid, may be rejected. "The City reserves the right to substantiate bidder's qualifications, capability to perform, availability, past performance record and then verify that the bidder is current in its financial obligations to the City."

103.4 Notice of Award

This subsection shall be amended to read as follows: The award of contract, if it be awarded, shall be made within sixty (60) days after the opening of proposals to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified by mail at the address shown on their proposal, that their bid has been accepted and that they have been awarded the contract.

Basis of award of the contract shall be on the Base Bid.

**SUPPLEMENTAL SPECIFICATION
SECTION 104 - GENERAL RIGHTS AND RESPONSIBILITIES**

The provisions of Section 104 of the Standard Specifications shall apply with the following additions or modifications:

Scope of Section

This Section sets forth certain rights and responsibilities of the Department and the Contractor that are generally applicable to all contracts. This Section is not all inclusive and additional rights and responsibilities are set forth elsewhere in the Contract.

104.2.3 Authority of Project Manager and Resident

This subsection shall be amended by the addition of the following paragraph: The Resident Engineer or Resident Inspector will not be responsible for nor issue directions regarding the Contractor's safety precautions or programs; nor will they issue directions relative to, or assume control over any aspect of the methods, techniques or procedures of construction.

104.4.6 Utility Coordination

This subsection shall be amended by the addition of the following paragraphs: At points where the Contractor's operations are adjacent to properties of railways, telephone, gas, water and/or power companies, or are adjacent to other property, damage to which might result in considerable expense, loss or inconvenience, work shall not be commenced until all arrangements necessary for the protection thereof have been made.

It is anticipated that utility poles will not be relocated prior to commencement of contract work. The Contractor is advised to schedule its work to accommodate the possibility of utility pole and overhead wire obstructions.

The Contractor shall cooperate with the owners of any underground or overhead utility lines in their removal and rearrangement operations in order that these operations may progress in a reasonable manner, and the duplication or rearrangement work may be reduced to a minimum, and that services rendered by those parties will not be unnecessarily interrupted.

No person, firm, or corporation, including City forces, shall make or cause to be made any opening or excavation in a City Street, way, or public place until contact has been made with all utilities to locate any existing underground gas, water, telephone, power or other installations within said street, way or public place. When gas or other flammable service to buildings is discontinued, the existing service line for such service shall be terminated at a point outside the building.

In the event of interruption to water or utility services as a result of accidental breakage, or as a result of being exposed or supported, the Contractor shall promptly notify the proper authority. The Contractor shall cooperate with the same authority in the restoration of such service as promptly as possible.

Water lines, gas lines, service connections, water and gas meter boxes, water and gas valve boxes, light standards, cableways, signals and all other utility appurtenances within the limits of the proposed construction are to be moved as necessary by the owners with or without expense to the Contractor, unless otherwise provided for, or as noted in the plans.

The Contractor shall ascertain the location of existing utilities and any other necessary information by direct inquiry at the office of the following utility owners:

Electric:
Central Maine Power Company
162 Canco Road
Portland ME 04103
Attention:
Breanne Pierce
Tom Atwood

Water:
Portland Water District
225 Douglass Street
Portland ME 04101
Attention:
Jay Arnold
William 'Ned' Pierce

Telephone:
Verizon / FairPoint
13 Davis Farm Road
Portland ME 04103
Attention:
John Caprio

Fire Alarm:
Portland Fire Department - Electric
109 Middle Street
Portland ME 04101
Attention:
Ben Diaz

Gas:
Unitil Corporation
1075 Forest Avenue
Portland ME 04103
Attention:
Rick Bellemare
Steve Lewis
Matt Doughty

Cable TV:
Time Warner Cable
118 Johnson Road
Portland ME 04102
Attention:
Deb Paiement
Don Johnson

Railroad:
Maine Central Railroad
P. O. Box 9701
Portland ME 04104
Attention:
Mr. Robert Hough

Sewer:
Dept. of Public Services
55 Portland Street
Portland ME 04101
Attention:
John Emerson

The completeness of the above listing is not guaranteed by the City of Portland.

104.5.10 Warranty and Maintenance Bonds

This subsection shall be amended to read as follows: Warranty and Maintenance Bonds may be required of the Contractor or the subcontractor for specified items that the Department deems appropriate. The Bond must name the "City of Portland" as an obligee. The Contractor shall provide a copy of said bond to the Department as part of the projects closeout documentation prior to final acceptance. Should the subcontractor be required to provide a Warranty or Maintenance Bond, the Contractor hereby authorizes the Department to directly contact Landscape Subcontractor and/or its Surety in the event of a failure of the bonded item to perform as specified. The amount and duration of the Warranty and Maintenance bond for each project will be stated in the contract agreement.

**SUPPLEMENTAL SPECIFICATION
SECTION 107 - TIME**

The provisions of Section 107 of the Standard Specifications shall apply with the following additions or modifications:

107.1 Contract Time and Contract Completion Date

Work on this project shall be completed as specified in the Notice to Bidders and Agreement between the City of Portland and the Contractor.

107.7 Liquidated Damages

107.7.1 General

Except as expressly provided otherwise in this Contract, the Contractor shall owe the Department the per diem amount specified in Section 107.7.2 below for each Day that any portion of the Work remains incomplete after the Contract Time has expired. Liquidated Damages will be deducted from amounts otherwise due the Contractor. For related provisions, see Sections 107.1 - Contract Time and Contract Completion Date, 107.5.1(D) - Winter Suspensions - Impact on Liquidated Damages, and 109.5 - Adjustments for Delay of the Standard Specifications.

Permission for the Contractor or the Surety to continue and finish Work after the Contract Time has expired shall not waive the Department's rights to assess Liquidated Damages.

107.7.2 Schedule of Liquidated Damages

The specific per diem rates for Liquidated Damages are set forth below. By executing the Contract, the Contractor acknowledges that such an amount is not a penalty and that the daily amount set forth in the Contract is a reasonable per diem forecast of damages incurred by the Department due to the Contractor's failure to Complete the Work within the Contract Time.

Original Contract Amount		Per Diem Amount of Liquidated Damages Calendar Day
From More Than	To and Including	
0	\$100,000	\$100
\$100,000	\$300,000	\$175
\$300,000	\$500,000	\$250
\$500,000	\$1,000,000	\$325
\$1,000,000	\$2,000,000	\$500
\$2,000,000	\$4,000,000	\$750
\$4,000,000	and more	\$1,000

**SUPPLEMENTAL SPECIFICATION
SECTION 108 - PAYMENT**

The provisions of Section 108 of the Standard Specifications shall apply with the following additions or modifications:

Scope of Section

This Section contains general provisions related to payment including measurement of quantities, progress payment, retainage, the right to withhold payment, and other payment-related items.

108.3 Retainage

Prior to substantial completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages in accordance with general conditions:

- a. 95 percent of work completed (with balance being retainage); and
- b. 95 percent of cost of materials and equipment not incorporated in the work (with balance being retainage)

Upon substantial completion, Owner shall pay an amount sufficient to increase total payments to the Contractor to 98 percent of the work completed, less such amounts as Engineer shall determine in accordance with general conditions. The final two percent of the value of the Work shall be retained for a period of one year from the date of substantial completion.

108.4.1 Price Adjustment for Hot Mix Asphalt

This Subsection is revised by applying the following additions and modifications:

For all contracts with hot mix asphalt, a price adjustment for performance graded binder will be made for the following pay items:

- Item 403.206 Hot Mix Asphalt - 25 mm
- Item 403.207 Hot Mix Asphalt - 19 mm
- Item 403.208 Hot Mix Asphalt - 12.5 mm
- Item 403.209 Hot Mix Asphalt - 9.5 mm (sidewalks, drives, & incidentals)
- Item 403.210 Hot Mix Asphalt - 9.5 mm
- Item 403.211 Hot Mix Asphalt - Shim
- Item 403.212 Hot Mix Asphalt - 4.75 mm
- Item 403.213 Hot Mix Asphalt - 12.5 mm (base and intermediate course)

Price adjustments will be based on the variance in costs for the performance graded binder component of hot mix asphalt. They will be determined as follows:

The quantity of hot mix asphalt for each pay item will be multiplied by the performance graded binder percentages given in the table below times the difference in price between the base price and the period price of asphalt cement. Adjustments will be made upward or downward, as prices increase or decrease.

Item 403.206: 4.8%	Item 403.210: 6.2%
Item 403.207: 5.2%	Item 403.211: 6.2%
Item 403.208: 5.6%	Item 403.212: 6.8%
Item 403.209: 6.2%	Item 403.213: 5.6%

Hot Mix Asphalt: The quantity of hot mix asphalt will be determined from the quantity shown on the progress estimate for each pay period.

Base Price: The base price of performance graded binder to be used is the price per standard ton current with the bid opening date. This price is determined by using the average New England Selling Price, as listed in the Asphalt Weekly Monitor.

Period Price: The period price of performance graded binder will be determined by the Department by using the average New England Selling Price, listed in the Asphalt Weekly Monitor current with the date of asphalt placement. The maximum Period Price for paving after the adjusted Contract Completion Date will be the Period Price on the adjusted Contract Completion Date.

108.8 Final Payment

This subsection is revised by adding the following paragraphs: Prior to final payment the following shall be accomplished:

- A. Contractor and the Engineer shall jointly inspect the project to assure completion of all items including Punch List.
- B. Contractor shall submit Record Drawings indicating all changes and additions made during construction.
- C. Waivers of Lien shall be provided to the City for the project.
- D. Contractor shall submit the Warranty and Maintenance Bonds in the amount specified in the contract.
- E. Contractor shall submit all Service Lateral Records.
- F. Final Clean-up shall be completed. No payment will be made for the final clean-up and the cost thereof shall be considered incidental to the appropriate item.
- G. Final Acceptance Notification will be prepared by the City and forwarded to the Contractor for the project along with Final Payment.
- H. Final Contractor Lien Waiver needs to be signed and forwarded to the City.

**SUPPLEMENTAL SPECIFICATION
SECTION 110 - INDEMNIFICATION, BONDING, AND INSURANCE**

Scope of Section

This Section contains general requirements for indemnification, bonding, and insurance by the Contractor.

110.2 Bonding

This subsection is amended by the addition of the following: whenever the word "Treasurer of the State of Maine" appears in the Standard Specifications, it shall mean the City of Portland, Maine.

110.3 Insurance

This subsection shall be amended to read as follows: Before work is started under the contract, the Contractor will be required to file with the City of Portland, a Certificate of Insurance, executed by an insurance company or companies satisfactory to the City and licensed by the State of Maine Insurance Department to do business in the State of Maine, stating that the Contractor carries insurance in accordance with the following requirements and stipulations:

- A. Workers' Compensation Insurance: With respect to all the operations the Contractor performs and all those performed for him by subcontractors, the Contractor or the subcontractor shall carry Workers' Compensation Insurance or shall qualify as a self-insurer with the State of Maine Industrial Accident Commission, all in accordance with the requirements of the laws of the State of Maine.
- B. Commercial General Liability: Operations under the CONTRACT DOCUMENTS, whether such operations be by themselves or by any SUBCONTRACTOR under them, requires insurance to be written with a limit of liability of not less than \$1,000,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than \$1,000,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$500,000 for all property damage sustained by any one person in any one accident-, and a limit of liability of not less than \$500,000 aggregate for any such damage sustained by two or more persons in any one accident. The insurance certificate shall also name the City as additional insured on Liability portions (not W/C). The standard Certificate of Insurance forms shall have the cancellation statement edited. The words "endeavor to" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the company" shall be crossed out.
- C. Public Liability and Automobile Liability Insurance: **CONTRACTOR** will procure and maintain Public Liability Insurance coverage and Automobile Insurance coverage for the Work agreed to under this Agreement and as outlined within the contract documents, whether such operations be by themselves or by any subcontractor under them, with a limit of liability of not less than \$1,000,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than \$1,000,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$500,000 for all property damage sustained by any one person in any one accident-, and a limit of liability of not less than \$500,000 aggregate for any such damage sustained by two or more persons in any one accident. Name **CITY** as an additional insured on the policy, and provide the **CITY** a certificate of insurance evidencing such coverage, in this way: certificate must say either: A) "the policy actually been endorsed to name the City of Portland as an Additional Insured" and copy of the endorsement must come to the City of Portland with the certificate, or B) "the policy already includes an endorsement, such as the General Liability

Expansion Endorsement, by which the City of Portland is, in fact, automatically made an additional insured." A Certificate which merely has a box checked under 'Addl Insr,' or the like, or which merely states The City of Portland is named an Additional Insured, will not be acceptable. **CONTRACTOR** shall furnish and thereafter maintain certificates evidencing such coverage, which certificates shall guarantee thirty (30) days' notice to **CITY** of termination of insurance from insurance company or agent.

- D. **Blasting:** When explosives are to be used in the prosecution of the work, the insurance required under paragraphs (a), (b), and (c) above shall also contain provisions for protection, in the amounts stated, against damage claims due to such use of explosives.
- E. **Execution and Limitation:** Each policy shall be signed by the President and Secretary of the insurance company and shall be countersigned by a licensed resident agent in the State of Maine as an authorized representative of the company.
- F. **Claims:** Each insurance policy shall state that the insurance company shall agree to investigate and defend the insured against all claims for damages, even if groundless.
- G. **Compliance:** with the requirements of this subsection may be met by procurement of insurance covering all work under contract with the City or may be met by procurement of separate insurance for each individual contract. In either case a Certificate of Insurance shall be filed for each contract to show evidence that all required insurance has been obtained.
- H. **Termination or Change of Insurance:** Each insurance policy shall be endorsed to provide that the insurance company shall notify the City by certified mail at least 30 days in advance of cancellations or of any change in the policy. No change shall be made without prior written approval of the City. The Contractor shall keep all the required insurances in continuous effect until 31 days after the date of final acceptance of the project or until such time as may be established by the City.
- I. **Contractual Liability Insurance:** The Contractor shall carry Contractual Liability Insurance covering the liability Contractor has assumed under the contract to indemnify and save harmless the City of **Portland, its officers and employees with respect to bodily injuries in or death of any person or persons or injury to or destruction of property. The limits for such insurance** shall be not less than those specified for Commercial General Liability Insurance in paragraph (b) above.

**SUPPLEMENTAL SPECIFICATION
SECTION 202 - REMOVING STRUCTURES AND OBSTRUCTIONS**

The provisions of Section 202 of the Standard Specifications shall apply with the following additions and modifications:

202.011 Depth of Removal

All structures and obstructions, with the exception of manholes and catch basins, see section 202.05, shall be removed to a depth as required to allow construction of the project as presented in the construction documents. In roadway areas, removal shall be to a depth below all subbase gravel. In areas of utility piping or structures, removal will be to a depth sufficient to allow placement of said piping and structures, including supportive materials such as bedding layers, antifoatation slabs and foundations. Removal below subgrade depth shall only be performed at the direction of the City.

202.03 Removing Existing Superstructure, Structural Concrete, Railings, Curbs, Sidewalks and Bridges

This section is modified by adding the following sentence to the first paragraph: All granite curbing, sidewalk brick, and cobblestones removed and not reused in construction of the proposed project shall be delivered to the City stockyard as directed and considered incidental to contract pay item 202.091.

The Contractor shall be responsible for the removal without damage, cleaning and stacking at the City Stockyard, all straight and curved curbing, terminal sections and curb corners which are designated to be replaced with new curb and shall be incidental to cost of removing existing curbing paid under Item 202.091.

Each section of straight curbing shall have its overall length painted legibly and plainly on one end. Each section of circular curbing shall have its overall arc length and radius painted on one end.

Removing and stacking curb or edging shall include all labor, equipment, tools and materials for excavating, removing, cleaning, backfilling, handling, stacking and any incidental work necessary.

202.04 Removing Portland Cement Concrete Pavement

This section is modified by adding the following sentence: This work shall include the removal of the existing cobblestone pavers beneath the bituminous pavement and delivery to the City Stockyard.

202.05 Removing Manholes or Catch Basins

The first sentence of this subsection shall be modified by: Deleting "600 mm [2 feet] below subgrade," and Substituting the following: "4 feet below finish grade."

202.06 Removing Bituminous Concrete Pavement

This section is modified by adding the following paragraphs: Prior to the removal of bituminous pavement, the limit of the removal area shall be saw cut to the appropriate depth for this given location where new pavement will be matched to existing pavement. Existing bituminous asphalt or Portland Cement Concrete pavement areas to be totally removed shall be saw cut to the full existing pavement depth.

The cutting equipment used shall be exclusively designed for the purpose. It shall be capable of establishing a straight and vertical cut and to minimize chipping of the edge of the existing surface to remain.

202.061 Removing Pavement Surface

This section is modified by adding: The milled surface shall have a uniform texture and provide acceptable rideability for vehicles. Should resurfacing be delayed or the resulting milled surface be unsatisfactory for any reason, a bituminous leveling course or temporary pavement may be required. The Contractor shall clean the milled surface and surrounding area of all loose material prior to use by traffic.

202.07 Method of Measurement

Saw cutting pavement and roadway butt joints are incidental to the contract pay items 202.20 and 202.202 and shall not require measurement.

202.08 Basis of Payment

The accepted quantity of removal of existing bituminous pavement or pavement surface shall be at the contract unit price per square yard, which will be full compensation for removal of the pavement surface by a milling operation or other method, dust control, hauling, placement of a bituminous leveling course, temporary removal of detrimental objects and all tools, equipment, labor and other materials necessary to satisfactorily complete the work.

Removal of existing sidewalk and driveway, including subbase, shall be incidental to the applicable sidewalk or driveway pay items. Refer to Section 608 for further details.

Separate payment for manhole and catch basin removal shall be made whenever the center of the structure to be removed is eight feet or more from the center of a new manhole or catch basin. If the center of a manhole or catch basin to be removed is less than 8 feet from the center of a new structure, no separate payment will be made for manhole or catch basin removal, in which case the cost of manhole or catch basin removal shall be considered incidental to the cost of the new structure.

Separate payment for pipe removal shall be made whenever a pipe called out for demolition is outside the horizontal limits of excavation for a proposed pipe or structure by four or more feet.

Pay Item	Payment will be made under:	Pay Unit
202.15	Remove Existing Manhole or Catch Basin	Per Each
202.16	Remove Existing Storm/Sewer Pipe	Linear Foot
202.20	Remove Existing Bituminous Concrete Pavement	Square Yard
202.202	Remove Existing Pavement Surface	Square Yard

**SUPPLEMENTAL SPECIFICATIONS
SECTION 203 - EXCAVATION AND EMBANKMENT**

The provisions of Section 203 of the Standard Specifications shall apply with the following additions and modifications:

203.01 Description

Paragraph (b) Rock Excavation shall be modified to read: "each having a volume of one-half cubic yard or more".

Paragraph (d) shall be added to read: Soils encountered during construction containing petroleum or chemical odors, soil staining, ash, municipal solid waste asbestos containing material and/or other hazardous waste, and/or discolored groundwater, form or sheen on groundwater may be considered a contaminated soil as determined by the Engineer. If the Contractor encounters suspected contaminated soils, the Engineer shall be notified and soils will be sampled or field screened to evaluate the level of potential impact and to establish handling/remedial requirements. If contaminated soils are encountered, the Contractor shall stockpile the material (if approved by the Engineer) or stop excavation activities until the environmental impact and disposal requirements are determined. The Contractor shall not be entitled to any extra compensation for delays caused by the excavation of suspected and/or contaminated soils. Any delays shall be considered incidental to the costs of construction. If soils are determined to be contaminated, the Contractor shall handle the material in accordance with environmental regulations and dispose of the material at secure licensed landfill. Disposal of contaminated soils shall be paid for under pay item 203.30.

203.04 General

The Contractor shall excavate rock if encountered to the lines and grades indicated on the drawings, shall dispose of the excavated material, and shall furnish acceptable material for backfill in place of the excavated rock.

In general, rock in pipe trenches shall be excavated so as to be not less than six inches (6") from the pipe after it has been laid. If needed, before the pipe is laid, the trench shall be backfilled to the established trench profile with thoroughly compacted, suitable material or, when so specified or indicated on the drawings, with the same material as that required for bedding the pipe, furnished and placed at no additional cost to the City.

The Contractor shall remove all dirt and loose rock from the designated areas and shall clean the surface of the rock thoroughly, using steam to melt snow and ice, if necessary. Water in depressions shall then be removed as required so that the whole surface of the designated area can be inspected to determine whether seams or other defects exist.

The surface of rock foundations shall be left sufficiently rough to bond well with the masonry and embankments to be built thereon; and, if required, shall be cut to rough benches or steps. Before any masonry or embankment is built on or against the rock, the rock shall be scrupulously freed from all vegetation, dirt, sand, clay, boulders, scale, excessively cracked rock, loose fragments, ice, snow, and other objectionable substances. Picking, barring, wedging, streams of water under sufficient pressure, stiff brushes, hammers, steam jets, and other effective means may be used to accomplish this cleaning. All free water left on the surface of the rock shall be removed.

203.042 Explosives

The Contractor shall keep explosives on the site only in such quantity as may be needed for the work under way and only during such time as they are to be used. Contractor shall notify the Engineer, in

advance, of his intention to store and use explosives. Explosives shall be stored in a secure manner and separate from all tools. Caps or detonators shall be safely stored at a point over 100 feet distant from the explosives. When the need for explosives has ended, all such materials remaining on the work shall be promptly removed from the premises.

The Contractor shall observe 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 his license on the work and shall permit examination thereof by the Engineer or other officials having jurisdiction.

203.043 Blasting Precautions

All operations involving explosives shall be conducted with all possible care to avoid injury to persons and property. Blasting shall be done only with such quantities and strengths of explosives and in such manner as will break the rock approximately to the intended lines and grades and yet will leave the rock not excavated in an unshattered condition. Care shall be taken to avoid excessive cracking of the rock upon or against which any structure will be built, and to prevent injury to existing pipes or other structures and property above or below ground. Rock shall be well covered with logs or mats, or both, when required. Sufficient warning shall be given to all persons in the vicinity of the work before a charge is exploded.

All blasting shall be completed within a distance of 50 feet before any portion of a masonry structure is placed or any pipe is laid.

Any site where electric blasting caps are located or where explosive charges are being placed or have been placed shall be designated as a "Blasting Area". A "Blasting Area" within three hundred (300) feet of any traveled way shall be marked by approved signs with information similar to the following:

"BLASTING AREA - TURN OFF RADIO TRANSMITTERS"

and on the reverse side:

"END OF BLASTING AREA"

The Contractor shall notify each public utility company having structures in proximity to the site of the work of his intention to use explosives and such notice shall be given sufficiently in advance to enable the companies to take such steps as they may deem necessary to protect their property from injury. Such notice shall not relieve the Contractor of responsibility for any damage resulting from his blasting operations.

All persons within the danger zone of blasting operations shall be warned by the Contractor, and no blasting shall be done until the zone is cleared. Flagmen, furnished by the Contractor, shall be so stationed as to stop all approaching traffic during blasting operations.

The Contractor shall be liable for all damages to persons or property caused by blasting or explosions, or arising from neglect to properly guard and protect the excavations and all portions of the work, and Contractor shall wholly indemnify the Owner against all claims on such account. No compensation will be allowed the Contractor in any event, or under any circumstances, for loss incurred by him or arising from his neglect to fully comply with these requirements.

203.044 Excess Rock Excavation

If rock is excavated beyond the limits of payment indicated in the drawings, specified, or authorized in writing by the Engineer, the excess excavation, whether resulting from over-breakage or other causes, shall be backfilled, by the Contractor at no cost to the City.

In pipe trenches, excess excavation below the elevation of the bottom of the bedding, cradle, or envelope shall be filled with material of the same type, placed and compacted in the same manner, as specified for bedding, cradle, or envelope. Excess excavation above said elevation and outside of trench pay width shall be filled with earth as specified in the specifications at no cost to the City.

203.045 Blasting Records

The Contractor shall keep and submit to the Engineer an accurate record of each blast. The record shall show the general location of the blast, the depth and number of drill holes, the kind and quantity of explosives used, and other data required for a complete record.

203.046 Shattered Rock

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 the Contractor, at no additional cost to the City.

203.047 Removal of Boulders

Piles of boulders or loose rock encountered within the limits of earth embankments shall be removed to a suitable place of disposal.

203.048 Disposal of Excavated Rock

Excavated rock may be used in backfilling trenches subject to the following limitations:

1. Pieces of rock larger than permitted under the section titled Excavation and Embankment: Section 203.01, shall not be used for this purpose.
2. The quantity of rock used as backfill in any location shall not be so great as to result in the formation of voids.
3. Rock backfill shall not be placed within 18-inches of the surface of the finish grade.

Surplus excavated rock shall be disposed of as specified in Section 203.06, "Waste Areas".

203.049 Backfilling Rock Excavations

When rock has been excavated and the excavation is to be backfilled, the backfilling above normal depth shall be done as specified under the "Excavation and Embankment, Section 203". If material suitable for backfilling is not available in sufficient quantity from other excavations as approved by the Engineer, the Contractor shall furnish and install suitable material from outside sources, under pay item 203.25 "Granular Borrow".

203.06 Waste Area

This subsection is revised to read as follows:

1. Surplus Earth and Rock Excavation:
If the Contractor proposes to permanently place or permanently stockpile any surplus soil and rock, including soil or rock unsuitable for trench backfill or embankment construction, on property in the City of Portland, the Contractor or property owner shall obtain any Site Plan

Permit required from the City Planning Authority or any Fill Permit required from the MaineDEP or U. S. Army Corps of Engineers, before the surplus soil and rock is permanently placed or stockpiled. The Contractor shall provide copies of the required permits to the Engineer. Stockpile locations shall meet the applicable setback requirements in the City Land Use Code.

2. Temporary Stockpiles:

If the contractor proposes to temporarily stockpile any surplus soil and rock, including soil or rock unsuitable for trench backfill or embankment construction, in the City of Portland, the contractor shall obtain approval for each stockpile location from the Engineer. Stockpile locations shall meet the applicable setback requirements in the City Land Use Code.

3. Trees, Stumps and other Material, Excepting Granular Material:

The disposal of trees, stumps, stubs and brush shall be the responsibility of the Contractor. If the disposal site is within private property, the Contractor shall be required to obtain written permission from the landowner for use of the disposal site for the above mentioned materials. A copy of the permission and evidence of a fill permit if required shall be provided to the Engineer. The Contractor or landowner shall obtain a dumping permit at 55 Portland Street.

4. Surplus Cobblestones, Bricks, and Granite Curb Stone:

Cobblestones, bricks and curbing removed during construction and not incorporated into the project shall remain the property of the City and shall be cleaned to remove all excess granular material there from and hauled to a storage area or project site in the City, as directed by the Engineer. Bricks shall be palletized and curbing shall be stockpiled in an organized manner at the approved location.

203.18 Method of Measurement

Test pits will be measured per vertical foot.

In the fourth paragraph of this subsection, the sentence stating, "when measured in vehicles, the quantity for payment shall be 90 percent of the quantity determined for earth", delete 90 percent and insert 80 percent.

There will be no measurement for laboratory testing of contaminated soil that is required by the landfill or treatment facility. Testing is incidental to the disposal of ash or contaminated soil.

203.19 Basis of Payment

This subsection shall be amended by the addition of the following paragraph:

The accepted quantity of test pit excavation will be paid for at the contract unit price per vertical foot. Payment shall be full compensation for furnishing all labor, materials and equipment necessary for excavation, test excavation, backfilling, pavement replacement as applicable, disposal of materials and protection of utilities.

Pay Item	Payment will be made under:	Pay Unit
203.20	Common Excavation	Cubic Yard
203.25	Granular Borrow	Cubic Yard
203.28	Test Pit Excavation	Vertical Foot

203.30	Ash or Contaminated Soil Disposal	Ton
203.31	Crushed Stone, 703.31 – Type “A” (Overdepth)	Cubic Yard

**SUPPLEMENTAL SPECIFICATION
SECTION 206 - STRUCTURAL EXCAVATION**

The provisions of Section 206 of the Standard Specifications shall apply with the following additions and modifications:

206.01 Description

For Structural Earth Excavation, only that trench excavation for pipe below the established trench profile, as indicated on the Pipe Installation Detail, shall be included under this section. Trench excavation to the established profile shall be considered as incidental to the appropriate pipe item. For Structural Rock Excavation, the trench shall be excavated to the established trench profile as indicated on the Typical Trench Detail. The payment width for Structural Rock Excavation shall be as described in Section 206.04, of the Supplemental Specifications.

- (a) Drainage and Minor Structures shall include sewer and storm drain pipes, culverts, manholes and catch basins, structural plate culverts, box and pipe culverts, underdrains, berm ditches, cut slope down spout ditches, culvert end walls, concrete steps and other minor structures.
- (c) Special Backfill. The Contractor shall furnish, place, and compact special backfill material as indicated on the plans or as directed and specified herein.

The special backfill shall be a sandy, granular material and shall meet the requirements of Section 703.06 (b) Aggregate Subbase - Sand of the Supplemental and Standard Specifications. The special backfill shall be spread in layers of uniform thickness not exceeding eight inches (8") before compaction and moistened and allowed to dry. Then it shall be thoroughly compacted by means of suitable power driven tampers or other power driven equipment to a uniform density of 95% of maximum density.

206.02 Construction Methods

The fourth paragraph of the Standard Specifications shall be modified to read as follows:

When the foundation is to be placed on solid rock, the rock shall be excavated to a firm surface, either level, stepped or serrated. In trenches for sewer and storm drain pipes, culverts, manholes, and catch basins, box and pipe culverts, structural plate pipes and structural plate pipe arches, when solid or disintegrated rock or boulders are encountered, the rock shall be excavated to a depth of six inches below the bottom of the proposed pipe or structure, unless otherwise indicated on the plans or ordered. The six inch level below the bottom of the proposed pipe shall be defined as "Established Trench Profile". For the installation of underdrain, the rock shall be excavated to three inches below the bottom of the proposed pipe, unless otherwise ordered. Underdrain shall be installed at the proper elevation in accordance with Section 605 and as indicated on the plans.

206.04 Method of Measurement

Paragraph (a) of the Standard Specifications shall be deleted and the following paragraphs added:

There will be no measurement for earth excavation except excavation required below a plane parallel with and six inches below the bottom of the structure or trench, hereinafter referred to as Earth Excavation, Below Grade.

When Structural Rock is encountered for sewer and storm drains, the quantity to be measured for payment will be the amount actually excavated to the "Established Trench Profile" as defined in Section 206.02 of the Supplemental Specifications, provided the maximum allowable horizontal

dimensions do not exceed the payment limit, dimension "A", as indicated on the Pipe Installation Detail.

When Structural Rock is encountered for manholes and catch basins, headwalls, steps, structural plate pipes and arches and other drainage structures, other than sewer and storm drains and underdrains, the quantity to be measured for payment will be the amount actually excavated to the "Established Trench Profile", provided the maximum allowable horizontal dimensions do not exceed those bounded by vertical surfaces eighteen inches outside the lines of the base as shown on the plans.

206.05 Basis of Payment

Material used for Special Backfill and Crushed Stone for Pipe Bedding shall be backfilled as indicated on the plans or as ordered, and shall be incidental to the cost of the pipe.

"Drag Boxes", if utilized by the Contractor will be allowed; however, no payment will be made for any excess excavation, backfill material or surface restoration used beyond the payment limit, dimension "A", as shown on the Pipe Installation Detail.

Excavated materials suitable for backfill shall be used to backfill normal excavations incidental to this section. Disposal of surplus excavated materials shall be in accordance with Section 203.06, Waste Areas.

No additional payment shall be made for protection of existing trees, shrubs, utility poles, structures, and utilities.

Payment will be made under:		<u>Pay Unit</u>
<u>Pay Item</u>		
206.061	Earth Excavation, Below Grade (Overdepth)	Cubic Yard
206.07	Structural Rock Excavation	Cubic Yard

**SUPPLEMENTAL SPECIFICATION
SECTION 304 - AGGREGATE BASE AND SUBBASE COURSES**

The provisions of Section 304 of the Standard Specifications shall apply with the following additions and modifications:

304.02 Aggregate

Sources of Aggregate and preliminary test results shall be submitted ten working days prior to any placement of material on the job. Failure of these preliminary tests will be grounds for rejection of material from that source. Aggregates will be tested on the job and shall meet these specifications as the material is incorporated into the work.

304.07 Basis of Payment

The costs for laboratory testing and source documentation shall be incidental to providing Type "B" and Type "D" gravel. The costs for all failing tests shall be the responsibility of the contractor.

<u>Pay Item</u>	Payment will be made under:	<u>Pay Unit</u>
304.09	Aggregate Base Course – Crushed Type "B"	Cubic Yard
304.10	Aggregate Subbase Course – Gravel Type "D"	Cubic Yard

**SUPPLEMENTAL SPECIFICATION
SECTION 401 - PLANT MIX PAVEMENTS - GENERAL**

The provisions of Section 401 of the Standard Specifications shall apply with the following additions and modifications:

401.11 Preparation Of Existing Surfaces

All streets to be paved shall be swept of all debris (sand, grass, etc.) prior to paving. Any grass or other vegetation growing in the street shall be removed prior to paving. Tack coat shall be applied per Supplemental Specification Section 409.

Where pavement placed under this Contract joins an existing pavement, the existing pavement, when directed by the Engineer, shall be removed a minimum of 1-foot wide and 1 ½-inch deep in order to provide a vertical butt joint. The butt joint shall also be tack coated.

All streets to be shimmed shall be reviewed with Paving Inspector prior to placement to determine depth or grade to be achieved.

All vertical cuts in existing pavements shall be tack coated. The surface of the joint once completed shall be flush with the existing pavement.

Specified compaction of bituminous pavement in all work included in this contract shall be achieved without the assistance of vibratory action of the roller unless otherwise directed.

All work under this section shall be considered incidental to the related contract pay items.

401.17 Joints:

All vertical cuts in existing pavements shall be treated with an approved asphaltic tack coat material. The surface of the joint once completed shall be flush with the existing pavement. Vertical joints in Grading 12.5mm shall be offset from vertical joints in 19mm horizontally by at least one foot.

**SUPPLEMENTAL SPECIFICATION
SECTION 403 – HOT BITUMINOUS PAVEMENT**

The provisions of Section 403 of the Standard Specifications shall apply with the following additions or modifications:

403.02 General

This section shall include Hot Bituminous Pavement – Grading “B” (19.0mm) and Hot Bituminous Pavement - Grading “D” (9.5 mm). The Hot Bituminous Pavement - Grading “B” (19.0mm) shall be placed as base course within the limits shown on the drawings. The Hot Bituminous Pavement – Grading “D” (9.5mm) shall be placed as surface course within the limits shown on the drawings (not including Fox Street).

Temporary trench patch asphalt shall be placed in all street trenches if the Contractor is not going to be actively working that area at the site for more than 16 hours (e.g., over a weekend). Temporary trench patch asphalt may be required for sewer, storm drain, or curb installation if the weather conditions do not meet MaineDOT specifications for placing pavement. All temporary pavement shall be removed and replaced with final pavement that is placed in accordance with the specifications. Refer to Supplemental Specification 108.4.1 for information regarding price adjustment for Hot Mix Asphalt.

403.04 Method of Measurement

The method of measurement for Hot Bituminous Pavement – Grading “B” (19.0 mm) and Hot Bituminous Pavement – Grading “D” (9.5 mm) HMA will be measured by the ton.

403.05 Basis of Payment

The accepted quantity for Hot Bituminous Pavement – Grading “B” (19.0mm) and Hot Bituminous Pavement - Grading “D” (9.5 mm) will be paid for at the contract unit price per ton in place. This price will include fine grading, tack coat, and all labor, materials, and equipment necessary to complete the work.

Temporary trench patch asphalt will be incidental to the cost of curb, sewer, and/or storm drain installation.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
403.207 Hot Bituminous Pavement – Grading “B” (19.0 mm)	Ton
403.210 Hot Bituminous Pavement – Grading “D” (9.5 mm) – Anderson Street	Ton
403.2101 Hot Bituminous Pavement – Grading “D” (9.5 mm) – Fox Street	Ton

**SUPPLEMENTAL SPECIFICATION
SECTION 409 - BITUMINOUS TACK COAT**

The provisions of Section 409 of the Standard Specifications shall apply with the following additions or modifications:

409.07 Application of Bituminous Material

The rates of application shall be 0.050 gallons per square yard when paving over milled surfaces. During application, care shall be taken to assure curbing shall not be discolored. Curbing discolored by tack coat shall be cleaned by Contractor at no cost to the City.

409.08 Method of Measurement

The application of the bituminous tack coat will be incidental to the application of Hot Mix Asphalt and will require no measurement or payment.

409.09 Basis of Payment

The payment for this work will be incidental to Section 403 - Hot Bituminous Pavement.

**SUPPLEMENTAL SPECIFICATIONS
SECTION 502 - STRUCTURAL CONCRETE**

The provisions of Section 502 of the Standard Specifications shall apply with the following additions or modifications:

502.01 Description

This work shall consist of furnishing and placing flowable concrete fill as detailed on the plans.

502.03 Materials

Bentonite Clay Trench Dams:

The Bentonite Clay Trench Dams shall consist of granular or powdered sodium bentonite equal to Volclay® C/S Granular. Hydrate in place by addition of water. Hydrated bentonite shall have a minimum wet particle size of 94% passing the No. 200 sieve and 92% passing the No 325 sieve. The maximum moisture content of the dry granulars shall be 12%.

Flowable Fill:

Flowable fill shall be a rigid-setting mixture of Portland Cement, sand, and water. It shall not require vibration during placing. Flowability shall be measured in accordance with ASTM D 6103: the spread diameter shall be at least 8", without noticeable segregation. It shall self-consolidate and be hand-tool-excavatable.

Sand gradation shall conform to the following:

U.S. Standard Sieve	Percent Passing
3/8 inch	100
No. 4	95-100
No. 16	45-80
No. 50	10-30
No. 100	2-10
No. 200	0-3

The compressive strength shall be measured in accordance with ASTM D 4832 At 28 days it shall be between 30-80 psi, and at 90 days it shall not exceed 100 psi.

502.19 Basis of Payment

Payment for flowable concrete fill and bentonite clay trench dams at soil filters shall be made under Section 900, Pay Item 900.01.

**SUPPLEMENTAL SPECIFICATION
SECTION 603 - PIPE CULVERTS AND STORM DRAINS**

The provisions of Section 603 of the Standard Specifications shall apply with the following additions and modifications:

603.011 Description

This work shall consist of the construction of storm drains and sewer pipes by means of trenched or trenchless installation, casing pipe, and service leads hereinafter referred to as "pipe", as shown on the plans, details, and specified herein.

When alternative pipe material is listed in the Bid, the Contractor shall signify his choice of pipe to be used by inserting his mark in the proper space provided.

The Contractor shall install locating/warning tape over the centerline of all sanitary, storm, and combined sewer pipes including main lines, service leads, stubs, and catch basin laterals both within the right of way and outside of the established street as required by City ordinance. Both a green warning tape and a number 10 or 12 gauge single strand coated wire shall be installed at a maximum of 24 inches below finish surface grade for the entire length of the pipe. Magnetic warning tape may be used in place of the separate warning tape and wire. The end of all service stubs shall be recorded on the included sheet entitled Storm and Sanitary Sewer Service Lateral Location Record and submitted to the City upon completion of the work.

All connections shall be made in conformance with the Plumbing Code of the City of Portland and the Maine State Plumbing Code.

603.012 Materials

Pipe materials shall be limited to, and meet the requirements specified for, the various subsections of the specifications listed below:

Pipes conveying sanitary sewer flows:

P.V.C. Ring Type Sewer Pipe - (SDR 35 or Equal)-----	ASTM-----	D3034
ADS/Hancor SaniTite HP Polypropylene Pipe -----	ASTM-----	F2736, F2487, F1417

Pipes conveying solely storm drain flow:

Reinforced Concrete Pipe (Class III) -----	Stand. Spec-----	706.02
P.V.C. Ring Type Sewer Pipe - (SDR 35 or Equal)-----	ASTM-----	D3034
ADS/Hancor N-12 HP Pipe-----	ASTM-----	D2412, D3212, F477

603.013 Construction Requirements

Maintenance of Existing Flows:

1. Keep existing sewers and drains in operation
2. If existing sewers and drains are disturbed, provide for maintenance of such flows until work is completed.
3. Do not allow raw sewage to flow or stand on ground surface or in an excavation.

Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings:

PVC pipe may be used for sanitary sewer and storm drain applications.

Open ends of pipe shall be closed by suitable temporary bulkheads to prevent entrance of earth and other materials when pipe laying is not in progress. The Contractor shall take all necessary precautions to prevent floatation of the pipe as a result of the water in the trench.

Each pipe length shall be inspected before being laid. Pipe shall be laid to conform to the lines and grades indicated on the drawings. Each pipe shall be so laid as to form a close joint with the next adjoining pipe and bring the inverts continuously to the required grade.

Bell holes shall be excavated or provided in the base material to receive the bell or coupling so that only the barrel of the pipe receives bearing pressure from the supporting material.

When each pipe has been properly bedded, enough of the backfill material shall be placed and compacted between the pipe and the sides of the trench to hold the pipe in correct alignment.

No pipe or fitting shall be permanently supported on blocks, wedges, boards or stones.

All joints shall be made in a dry trench and in accordance with the manufacturer's recommendations.

All PVC Gravity Sewer Pipe supplied shall conform to all aspects of ASTM specification D3034-73A and/or ASTM Specification F789 for PVC sewer pipe, joints and fittings. Joints shall be rubber gasketed "Bell and Spigot" type. Installation of materials shall be as suggested in ASTM D2321. Minimum "pipe stiffness" at 5% deflection shall be 46 psi for all sizes when tested in accordance with ASTM D2412.

It is the responsibility of the Contractor to ensure that the trench and the backfill around the pipe has been compacted sufficiently to limit deflection in the pipe to no more than 5%. All flexible pipe installed under this contract shall be tested by a "go-no-go" mandrel permitting no greater than 5% deflection. Testing of the pipe shall be done in the presence of a City inspector. The inspector shall be given a minimum of 24 hour advance notice before testing is to take place. All pipe not passing the 5% deflection limit test shall be removed and replaced at no additional cost to the City.

Pipe bundles shall be stored on a flat surface so as to support the barrels evenly. This is important as in hot weather PVC pipe will deflect or warp causing installation problems in line and grade. If a warped section is found, the Contractor shall not use such length of pipe.

In order to ensure proper compaction, alignment, and grade, and eliminate any construction problems that may be encountered, the Contractor shall be required to use only the 12-1/2 foot lengths of PVC pipe.

Pipe shall remain stacked in the original shipping bundles, and only pipe taken off the bundle for one day's laying shall be distributed along the trench.

PVC pipe will not bond to concrete or mortar and therefore connection to a cast-in-place or brick manhole and catch basin shall be made as detailed on the project plans.

Reinforced Concrete Pipe:

Reinforced concrete pipe may be used for storm drain applications.

Reinforced concrete pipe shall be obtained only from a manufacturer of established good reputation in the industry. The pipe shall have a smooth and even interior surface, free from projections, indentations, or irregularities of any kind.

The joint shall be such that when joined the pipes will form a continuous and uniform line without projections, off-sets or irregularities and be capable of satisfying the specified leakage requirements.

Pipes shall be joined with rubber or rubber type gaskets that conform to the requirements established in ASTM Designation C443.

Each length of pipe shall be provided with proper ends made either of concrete formed on machined rings to ensure accurate joint surfaces or of metal rings. The diameters of the joints surface, depended upon to compress the gasket, shall not vary from the theoretical diameters by more than 1/16 inch. The joint shall be sealed by the rubber gasket so that the joint will remain tight under all conditions of service.

The rubber gasket shall be applied in accordance with the manufacturer's recommendations.

After the pipes are aligned in the trench and are ready to be jointed, all joint surfaces shall be cleaned. Immediately before jointing the pipe, the inside surface of the groove shall be thoroughly lubricated with a recommended lubricant. Pipe shall then be coupled immediately by carefully pushing each pipe into place without damage to pipe or gasket. The position of the gasket in the joint shall then be inspected to be sure it is properly put together and is tight.

Pipes shall be coupled by any suitable arrangement of come-along, winch, jack, or other power equipment that can exert sufficient force to couple pipe to its tightest position.

All RCP pipe where the pipe joint gap is 0.5 inches wide or more shall be sealed on the inside with cement mortar. Cement mortar if used shall be applied by trowel and the joint shall be thoroughly filled and finished smoothly with the inside surface of the pipe.

All pipe thirty-six inches in diameter or larger shall be sealed on the inside with cement mortar or with gunite by the grout-weld method using a pneumatic machine of the Nicholson, Bondactor, or equal type. Cement mortar if used shall be applied by trowel and the joint shall be thoroughly filled and finished smoothly with the inside surface of the pipe. The grout-weld seal shall be applied only by experienced and skilled workmen in accordance with the instructions of the manufacturers of the machine.

The pipe shall be laid accurately to line and grade. Pipe bedded in compacted crushed stone shall not be supported on blocking, wedges, brick, or anything except the bedding material. Pipe on concrete cradle shall be supported on solid concrete blocks or precast concrete saddles which become part of the completed cradle.

Each length of pipe shall be shoved home against the pipe previously laid, and held securely in position. Joints shall not be "pulled" or "cramped". Holes provided for jointing shall be filled and compacted.

Pipe from which a core has been cut and the resulting hole repaired, shall be placed with the cored hole located forty-five degrees above or below the horizontal centerline of the pipe.

To prevent the entrance of earth and other materials when pipe laying is not actually in progress, the open ends of pipe shall be closed by suitable temporary bulkheads. The Contractor shall take all necessary precautions to prevent floatation of the pipe because of flooding of the trench. If water is in the trench when work is resumed, the bulkheads shall not be removed until the danger of earth and other materials entering the pipe has passed.

All pipe joints and structures shall be made water tight. There shall be no visible leakage, spurting or gushing of water, sand, silt, clay or soil of any description entering the pipe lines at the joints or structures. Where there is evidence of water or soil entering the pipeline, connecting pipes or structures, defects shall be repaired.

Shorter lengths of RCP may be required to construct the pipe lengths between structures.

ADS/Hancor N-12 HP Pipe:

N-12 HP pipe may be used for storm drain applications.

Pipe shall be manufactured by Advanced Drainage Systems, Inc. Pipe shall be a dual wall profile design for pipe diameters 12-inches to 24-inches and triple wall profile design for pipe diameters 30-inches to 60-inches in storm sewer and drainage applications. Pipe shall have minimum pipe stiffness of 46 psi when testing in accordance with ASTM D2412.

Pipe shall be joined with the N-12 HP gasketed integral bell & spigot joint and joints shall be watertight according to the requirements of ASTM D3212. Spigot shall have 2 o-ring gaskets securely seated in a gasket groove. Gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the manufacturer and covered with a removable, protective wrap to ensure the gaskets are free from debris and damage. A joint lubricant available from the manufacturer shall be used on the gaskets and bell during joint assembly.

Bell and spigot connections shall utilize a spun-on, welded or integral bell and spigot with gaskets meeting ASTM F477. Fitting joints shall meet the watertight joint performance requirements of ASTM D3212.

Virgin material for pipe and fitting production shall be impact modified copolymer polypropylene conforming with the requirements of ASTM D4101.

Installation shall be in accordance with ASTM D2321 and Hancor's recommended installation guidelines.

Shorter lengths of N-12 HP pipe may be required to meet the required spacing between structures.

ADS/Hancor SaniTite Pipe

SaniTite pipe may be used for sewer line applications.

SaniTite pipe shall have a smooth interior and annular exterior corrugations. 24-inch through 60-inch shall meet AASHTOM M294, Type S or ASTM F2306 with the modifications listed herein.

The 24-inch through 60-inch pipe shall be watertight according to the requirements of ASTM D3212. Gaskets shall be made of polyisoprene meeting the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable wrap to ensure the gasket is free from debris. Spigot shall be designed to accept two gaskets which can be fully inserted into the bell.

Fitting shall conform to AASHTO M294 or ASTM F2306. Fittings shall be fabricated from the same materials as the pipe.

To assure watertightness, field performance verifications may be accomplished by testing in accordance with ASTM F2487 or ASTM F1417. Appropriate safety precautions must be used when field-testing any pipe material. Contact the manufacturer for recommended leakage rates.

Virgin material for pipe and fitting production shall be high-density polyethylene conforming with the minimum requirements of cell classification 435400C as defined and described in the latest version of ASTM D3350, except that carbon black content should not exceed 4%. The 24-inch through 60-inch virgin pipe material shall comply with the notched constant ligament-stress (NCLS) test as specified in Sections 9.5 and 5.1 of AASHTO M294 and ASTM F2306 respectively.

Installation shall be in accordance with ASTM D2321 and ADS published installation guidelines for low head irrigation pipe, with the exceptions that only Class I and II backfill materials shall be acceptable and minimum cover in traffic areas for 24-inch through 48-inch shall be one foot and for 60-inch diameters, the minimum cover shall be 2 feet.

603.033 Testing

Gravity sewers shall be tested by one of the following methods:

- A. Low pressure air
- B. Infiltration
- C. Exfiltration

Pipes with diameters of 24-inch or smaller shall be tested for acceptance by one of following test methods: low pressure air, infiltration, or exfiltration. Pipes with diameters larger than 24-inch shall be tested for acceptance by one of the following test methods: infiltration or exfiltration.

Approval of method will be made by the Engineer with due consideration for subsurface conditions and size and type of pipe.

The Contractor shall have the proper plugs, weirs, and other equipment to perform all required tests. Testing of each section of sewer installed shall include the portions of service laterals installed under this contract.

A. Low Pressure Air:

When low pressure air test is used, it shall be conducted in compliance with the following:

After completing backfill of the wastewater line, the Contractor shall, at no additional cost to the City, conduct a line acceptance test using low pressure air. The test shall be performed according to stated procedures and in the presence of the Engineer.

Procedures:

All pneumatic plugs shall be seal tested before being used in the actual test installation. One length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be introduced into the plugs at 25 psig. The sealed pipe shall be pressured to five psig. The plugs shall hold against this pressure without bracing and without movement of the plugs out of the pipes.

After a manhole to manhole reach of pipe has been backfilled and cleaned, and the pneumatic plugs are checked by the above procedure, the plugs shall be placed in the line at each manhole

and inflated to 25 psig. Low pressure air shall be introduced into this sealed line until the internal air pressure reaches four psig greater than the average back pressure off any ground water that may be over the pipe. At least two minutes shall be allowed for the air pressure to stabilize.

After the stabilization period (3.5 psig minimum pressure in the pipe), the air hose from the control panel to the air supply shall be disconnected. The portion of line being tested shall be termed "acceptable" if the time required in minutes for the pressure to decrease from 3.5 to 2.5 psig (greater than average back pressure of any ground water that may be over the pipe) shall not be less than the time shown for the given diameters in the following table:

<u>Pipe Diameter</u> <u>(In Inches)</u>	<u>Minutes</u>
4.....	2.0
6.....	3.0
8.....	4.0
10.....	5.0
12.....	5.5
15.....	7.5
18.....	8.5
21.....	10.0
24.....	11.5

In areas where groundwater is known to exist, the Contractor shall install a one-half inch diameter capped pipe nipple, approximately 10-inches long, through the manhole wall on top of one of the sewer lines entering the manhole. This shall be done at the time the sewer line is installed. Immediately prior to the performance of the Line Acceptance Test, the groundwater shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clear it, and then connecting a clear plastic tube to the nipple. The hose shall be held vertically and a measurement of the height in feet shall be divided by 2.3 to establish the pounds of pressure that will be added to all readings. (For example, if the height of the water is 11-1/2 feet, then the added pressure will be five psig, and the 2.5 psig to 7.5 psig. The allowable drop of one pound and the timing shall remain the same.)

If the installation fails the air test, the Contractor shall, at no additional cost to the City, determine the source of the leakage. Contractor shall then repair or replace all defective materials and/or workmanship.

B. Infiltration:

An infiltration test requires groundwater levels to be a minimum of one foot above the crown of the pipe of the high end of the section being tested. Infiltration test procedures are:

1. Engineer to determine length of sewer main and the connecting lines to be tested.
2. With all connecting pipes plugged (other than those included in test section) install a V notch weir in downstream end of pipe. The V notch weir must be constructed accurately and installed to maintain a watertight seal between weir and pipe.
3. Allow time for water to build up behind weir until steady, uniform flow passes through V notch.
4. Readings shall be taken and recorded.

C. Ex-filtration:

Ex-filtration test procedures are:

1. Engineer to determine length of sewer to be tested.

2. Properly cap or plug and block service laterals, stubs and fittings into sewer lines being tested.
3. Plug upstream and downstream ends of test section providing a water supply connection downstream and standpipe in manhole upstream.
4. Fill test section and upstream standpipe and allow time for water absorption in manholes.
5. Measure drop in upstream standpipe over three or four to 15 minute periods and compute leakage. Note: The upstream manhole may be used as the standpipe. Test sections shall be kept short enough to maintain a reasonably low head to prevent excess pressures.

Leakage in gravity sewers shall not exceed 300 gallons per inch diameter, per day, per mile of pipe when tested by either internal pressure or external pressure means. Should the pipe as laid fail to meet these requirements, the Contractor shall perform the necessary work, at no additional cost to the City, to meet these requirements.

603.034 Inspection

Pipe may be inspected at the manufacturing plant, or on the work site, and shall be subject to rejection at any time, even though sample pipes may have been accepted as satisfactory at the manufacturing plant.

All pipe shall be subject to thorough inspection and tests. All tests shall be made in accordance with the methods prescribed by, and the acceptance or rejections shall be based on, applicable ASTM specifications.

Pipe will be inspected upon delivery and all pipe which does not conform to the requirements of this contract will be rejected and shall be immediately removed from the work area by the Contractor.

Unsatisfactory pipe will be either permanently rejected or minor repairs made. After delivery, any pipe will be rejected which has been damaged beyond the possibility of satisfactory repair.

If such pipe is found in the pipeline, it shall be removed and replaced or encased in a Class A concrete collar or envelope as directed, at no additional cost to the City.

An inspection of the interior of all mainline pipe and catch basin lateral connections installed as part of the project shall be completed prior to final paving of the project by experienced personnel trained in locating breaks, obstacles and service connections by closed circuit television. A video tape and suitable log shall be provided to the City for review prior to final paving.

603.035 Anti-floatation System

Anti-floatation system for each pipe material shall be per the design of the pipe manufacturer and provided where required. Contractor shall submit pipe manufacturer's antifloatation calculations for the selected pipe material (of the three pipe material options) and details, signed and stamped by a licensed Professional Engineer in the State of Maine, to the City for approval prior to installation. The anti-floatation calculations shall follow the subsequent criteria:

- a. Groundwater elevation shall be set at grade above the pipe.
- b. Factor of safety shall be 1.1; downward forces from the weight of the pipe and soils over pipe shall be 1.1 times the buoyant uplift forces.
- c. The pipe shall be considered empty. Calculations shall not consider the weight of internal water.

603.11 Method of Measurement

The Engineer shall have the right to take samples of the concrete after it has been mixed, or as it is being placed in the forms, and to require cores to be cut from the finished pipe for any inspection and tests Engineer may require. Holes left by the removal of cores shall be filled in an approved manner by the Contractor at no additional cost to the City.

Pipes will be measured by the linear foot in place within the limits specified below.

Removal of existing pipe within four feet of the horizontal limits of excavation for proposed pipes or structures shall be incidental to the pay item for which the proposed pipe or structure is installed.

For measurement purposes the end of the pipe in closed structures will be considered at the inside face of the wall of the structure, and in masonry headwalls it will be considered to be at least the face of the headwall.

603.12 Basis of Payment

The accepted quantities of pipe for culverts, drains and sewers will be paid for at the contract unit price per linear foot, complete in place.

Payment for trench excavation to the established trench profile indicated on the plans, with the exception of structural rock excavation and pavement section removal, will be included in the cost of the applicable pay item. Pipe bedding materials, backfilling and backfilling materials shall also be included in the cost of the applicable pipe pay item.

The costs of all necessary sheeting, shoring and bracing of existing structures, pipes, or utilities in or near the trench shall be considered incidental to the applicable pay items. Payment for approved undercuts below the established trench profile will be paid for as Earth Excavation, Below Grade, as specified in Section 206 of the Supplemental Specifications.

Overdepth rock excavation will be paid for as Structural Rock Excavation as specified in Section 206 of the Supplemental Specifications.

Backfilling of the trench shall be incidental to the cost of the pipe pay item, except in the case where the Engineer requires the Contractor to backfill with Granular Borrow. Granular Borrow, in this case, will be paid for under pay item 203.25.

Should the Contractor elect to utilize "drag boxes" during storm drain line installation work, overcutting of the trench beyond the limits for excavation shown on the Pipe Installation Detail will be allowed to accommodate the boxes. However, no payment will be made for the excess excavation and backfill material beyond the payment limit, dimension "A", as shown on the Pipe Installation Detail.

If any excavation including a utility trench is extended to a depth of more than 20 feet, it will be necessary to have the side slopes or trench sheeting and shoring designed by a professional engineer registered in the State of Maine. No extra payment will be made for the engineered sheeting and shoring methods, materials or equipment used by the Contractor, or engineering services. All trench stabilization shall be considered incidental to the applicable pay items.

The costs for PVC bends, retainer glands and thrust blocking shall be incidental to the appropriate pipe item.

The costs for providing exterior drops to manholes, as specified on the plans, shall be incidental to the appropriate pipe item.

The cost of locating/warning tape including installation shall be considered incidental to the appropriate pipe item.

The cost of maintaining flows in existing sewer lines and manholes and any maintenance and cleaning of said sewers that may be required as a result of new sewer installation shall be incidental to the related pay item and no separate payment for this work will be made.

The cost of cutting pipe and/or connectors necessary to construct new storm drain and sewer pipe, in addition to the work and materials necessary to connect new or existing pipes to existing pipes, catch basins, or manholes, shall be incidental to the appropriate pay item. Changes to flow lines, profile grades, and pipe inverts of one foot or less shall be incidental to the appropriate pay items.

The accepted quantity of service leads will be paid for at the contract unit price per linear foot of pipe installed, complete in place. The amount bid for each lateral shall be full compensation for furnishing all labor, equipment, tools, adapters, reducers, and materials necessary to satisfactorily connect all laterals.

Payment for trench excavation, with the exception of structural rock excavation, will be included in this item. Pipe bedding materials, backfilling and backfilling materials shall also be included in this item for payment.

Payment for non-standard lengths of pipe shall be at the contract unit price per linear foot for those pay items and no additional payment shall be made.

Payment for bypass pumping associated with the sewer and storm drain pipe construction shall be considered incidental to the appropriate pipe item and no additional payment shall be made. Bypass pumping shall be manhole to manhole unless otherwise directed by the City Engineer. Raw sewage shall not be discharged to trench.

Pay Item	Payment will be made under:	Pay Unit
603.131	8" Diameter Storm Drain Pipe	Linear Foot
603.149	10" Diameter Storm Drain Pipe	Linear Foot
603.169	15" Diameter Storm Drain Pipe	Linear Foot
603.179	18" Diameter Storm Drain Pipe	Linear Foot
603.199	24" Diameter Storm Drain Pipe	Linear Foot

**SUPPLEMENTAL SPECIFICATION
SECTION 604 - MANHOLES, INLETS, AND CATCH BASINS**

The provisions of Section 604 of the Standard Specifications shall apply with the following additions and modifications:

604.01 Description

This work shall consist of the construction and placement of all manholes, inlets, and catch basins.

604.02 Materials

Manhole frames and covers used on this project for both new and altered structures shall be 24" circular "sewer" and "drain" frames and covers, or approved equal. Covers shall be solid. Sewer covers shall have "Sewer" cast into the cover, and storm covers shall have "Drain" cast into the cover. Catch basin frames and grates shall be as detailed on the plans.

All castings shall comply with the American Iron and Steel (AIS) Requirements. Approved castings include the following:

Manholes:

1. East Jordan: Model Number 2160A for Cover; Model Number 1690Z for Frames.
2. Neenah: Model Number 14960002 or 14960003 for Cover; Model Number 14960001 for Frame.

Catch Basin:

1. East Jordan: Model Number 2440M for Grate; Model Number 7375Z for Frames.
2. Neenah: Model Number 32480002 for Grate; Model Number 32480001 for Frame.

604.03 Construction Requirements

Concrete Blocks shall not be used in any way in the construction or alteration of manholes or catch basins.

All manhole bases, barrel sections and top sections shall be marked, by the manufacturer, with the appropriate manhole station (and offset if applicable) and the street name, if more than one street is incorporated within a single contract.

Between the third and fourth paragraphs of the Subsection insert the following paragraphs:

Sanitary sewer and storm drain inverts shall be constructed by brick set in cement mortar, approved fiberglass insert, or by factory pre-cast concrete. Such pre-cast concrete shall be epoxy coated and the shelf shall have a permanent non-skid surface. Pre-cast concrete invert shall be cured at least 7 days in a controlled environment with use of plasticizers to reduce moisture content before applying epoxy. Epoxy shall be Sikagard 62 or approved equal and shall be cured to manufacturers specifications before delivery to the project site.

Storm drain shelves, channels and inverts shall be constructed by brick set in cement mortar, approved fiberglass insert, or by factory pre-cast concrete.

Special precautions shall be taken to provide adequate ventilation and attending personnel for the safety of all workers who may be required to enter existing sewers or sewers under construction.

It is emphasized to the Contractor that sanitary sewer and drainage construction under this contract shall be coordinated with existing sewer facilities so that continuous service and handling of existing flows is accomplished.

In the existing fifth paragraph, first sentence of that Subsection delete only "Metal frames and traps", and substitute therefore "Metal frames, steps, other appurtenances, and traps".

The outside surface of any masonry work for catch basins and manholes shall be plastered with mortar from 1/4 inch to 3/8 inch thick. The masonry shall be properly wetted before the plaster is applied. The plaster shall be carefully spread and troweled so that all cracks are thoroughly worked out. After hardening, the plaster shall be carefully checked by being tapped for bond and soundness.

All brick masonry surfaces with mortar shall be waterproofed with one coat of DEHYDRATINE 6 TROWEL MASTIC, DEHYDRATINE 10 SEMI-MASTIC or approved equal.

All poured concrete or precast concrete surfaces shall be waterproofed with two heavy coats of bituminous waterproofing materials. The material shall be MINWAX FIBROUS BRUSH COAT made by the Minwax Company, New York, New York; TREMCO 121 FOUNDATION COATING, made by the Tremco Manufacturing Company, Cleveland, Ohio; INERTOL NO-7 made by Inertol Company, Newark, New Jersey or approved equal.

All waterproofing material shall be applied according to the manufacturer's specifications and directions.

Catch basins shall be constructed as shown on the contract drawings. Unless otherwise indicated, catch basins shall have A-4 inlet stones, and Casco traps which shall be incidental to the contract unit price of the structure.

Leakage tests may be required on each manhole. The tests, if ordered, shall be the exfiltration test made as described below:

After the manhole has been assembled in place, all lifting holes and all exterior joints shall be filled and pointed with an approved non-shrinking grout or approved bituminous mastic as shown on the construction drawings. The test shall be made prior to placing the shelf and invert and before filling and pointing the horizontal joints. If the groundwater table has been allowed to rise above the bottom of the manhole, it shall be lowered for the duration of the test. All pipes and other openings into the manhole shall be suitably plugged and the plugs braced to prevent blow out.

The manhole shall then be filled with water to the top of the cone section. If the excavation has not been backfilled and observation indicates no visible leakage, that is, no water visibly moving down the surface of the manhole, the manhole may be considered to be satisfactorily water-tight. If the test, as described above is unsatisfactory, or if the manhole excavation has been backfilled, the test shall be continued. A period of time may be permitted if the Contractor so wishes, to allow for absorption. At the end of this period, the manhole shall be refilled to the top of the cone, if necessary, and the measuring time of at least 8 hours begun. At the end of the test period, the manhole shall be refilled to the top of the cone, measuring the volume of water added. This amount shall be extrapolated to a 24-hour rate and the leakage determined on the basis of depth. The leakage for each manhole shall not exceed 1 gallon per vertical foot for a 24-hour period. If the test fails this requirement, but the leakage does not exceed 3 gallons per vertical foot per day, repairs by approved methods may be made to bring the leakage within the allowable rate of one gallon per foot per day.

Leakage due to a defective section or joint or exceeding the three gallon per vertical foot per day shall be the cause for the rejection of the manhole. It shall be the Contractor's responsibility to uncover the manhole as necessary and to disassemble, reconstruct or replace it. The manhole shall then be retested and, if satisfactory, interior joints shall be filled and pointed.

No adjustment in the leakage allowance will be made for unknown causes such as leaking plugs and absorptions. It will be assumed that all loss of water during the test is a result of leaks through the joints or through the concrete. Furthermore, the Contractor shall take any steps necessary to assure the Engineer that the water table is below the bottom of the manhole throughout the test.

604.031 Drainage Structures Abandoned or Removed

The existing castings on manholes and/or catch basins to be abandoned or removed shall be carefully removed, cleaned and delivered to the City stockyard as directed. This work shall be incidental to the contract. All such castings shall become the property of the City.

Inlet stones for catch basins to be abandoned or removed shall be carefully removed, cleaned and delivered to the City Stockyard as directed and shall be considered incidental to the contract.

The inlets and outlets of structures to be abandoned shall be plugged with bricks and mortar. The upper portions of the masonry shall be removed to a depth of four feet below the finished grade, and the structures shall be completely filled with selected excavated material placed in six inch layers and thoroughly compacted. Prior to backfilling, the sump shall be pumped and cleared of all water and foreign materials.

The existing masonry of structures to be removed shall be completely removed. The inlets and outlets shall be fully plugged with bricks and mortar. The cavity shall be completely filled with selected excavated materials placed in 6 inch layers and thoroughly compacted.

604.032 Remove Existing Drainage Structures and Replace with New Drainage Structures

The existing castings on manholes and/or catch basins to be removed and replaced shall be carefully removed, cleaned and delivered to a City stockyard as directed. This work shall be incidental to the contract. All such castings shall become the property of the City. Existing inlet stones for catch basins to be replaced shall be carefully removed, cleaned, and delivered to a City Stockyard as directed and shall be incidental to the cost of said item.

604.04 Altering, Adjusting, and Replacing Catch Basins and Manholes

Replace existing manhole frame and cover shall include removal of existing frame and cover, reconstructing riser brick and furnishing and installing a new frame and cover that meets the City's specifications.

Alter existing manhole and catch basin shall include making alterations as indicated on the plans or as required by field conditions. Alterations may include (as applicable) adjustments to manhole invert channel caused by new pipe connections, waterproofing, installation of new steps, replacement of inlet stone, replacement of frame and/or grate, replacement of outlet trap.

Adjust existing structure to grade shall include adjusting a catch basin frame and grate or manhole frame and cover to grade. Adjusting manholes and catch basins to grade shall include removing and resetting curb inlet stone and terminal curbs (as applicable), removing and resetting frame and cover/grate, and fully reconstructing riser brick to install frame at finish grade.

Core inlet/outlet pipe hole in catch basin or manhole shall include equipment and labor costs to coring a new hole in a catch basin or manhole. Costs for connection boot or mortaring pipe in place are incidental to cost of the pipe.

604.045 Winterization

The Contractor will have the choice of two methods for winterizing the new catch basin and manhole frames and covers.

- A. The Contractor may elect to leave the frames and covers at grade with the binder pavement during the Winter.
- B. Or, the Contractor may elect to plate the manholes for the winter; however, the contractor shall measure and document location ties to each structure.

In either event, the Contractor maintains responsibility for the frame and cover during with Winter months. In the event of a loose frame and cover, the removal of the pavement ramp, or damage to the frame and cover, it is the Contractors responsibility to respond with replacement of damaged structure or additional pavement material to safeguard the public and structure.

The work to install the frame and cover in the Spring will be considered the completion of the initial manhole installation. No additional payment for winterizing frames and covers will be provided.

In the event of a structure requiring additional winterizing mix after surface is no longer available, QPR mix may be substituted as an alternate material.

604.05 Method of Measurement

Under this Subsection the following sections shall be amended as follows:

- a. Subsection (a) of the Standard Specifications shall be deleted and the following paragraph shall be included:
Complete structures. Each drain basin, catch basin and manhole will be measured per each complete.
- b. Subsections (c) and (d) of the Standard Specifications shall be deleted and the following paragraph shall be included:
All steps, castings or other appurtenances installed as shown on the plans or as required shall not be measured for payment and shall be incidental to the pay items for new structures.
- c. Separate payment for manhole and catch basin removal shall be made whenever the center of the structure to be removed is 8 feet or more from the center of a new manhole or catch basin. If the center of a manhole or catch basin to be removed is less than 8 feet from the center of a new structure, no separate payment will be made for manhole or catch basin removal, in which case the cost of manhole or catch basin removal shall be considered incidental to the cost of the new structure.
- d. Each existing drainage structure to be removed and replaced with a new drainage structure will be considered as one unit, including inlet stone, tipdowns, frame, grate, Casco trap, adjustment to grade, connection of underdrain to basin, and installation of new inlet/outlet.
- e. Method of measurement for structural excavation and subsequent gravel backfill or granular borrow if ordered, shall be bounded by a vertical plane measured 18-inches around the outside diameter of each structure.

604.06 Basis of Payment

The first paragraph shall be amended by adding the following sentence:

The cost of furnishing and installing steps, installing reinforced steel concrete stubs and other appurtenances shall be considered as incidental to the structure and no separate payment will be made therefore.

The cost for installing a steel plate over top of the structure shall be considered incidental.

All castings shall comply with the American Iron and Steel (AIS) Requirements.

The following paragraphs shall be added:

The cost of excavation and backfill of all drain basins, catch basins, manholes, either new, abandoned, or removed and/or replaced shall be included in the cost of the specific work for each type of structure.

The cost of furnishing and installing curb inlet stones shall be incidental to the catch basin structures and no separate payment will be made.

The cost of resetting curb inlet stones and tipdowns shall be considered incidental to the cost of adjusting catch basins to grade and no separate payments will be made. The cost of delivering inlet stones and/or castings to the City stockyard or other approved sites shall be considered as incidental to the contract items involved.

The cost of maintaining flows in existing sewer lines and manholes and any maintenance and cleaning of said sewers that may be required as a result of new manhole installations shall be incidental to the related pay item and no separate payment for this work will be made.

The cost of removal of existing structures shall be incidental to the installation of proposed structure which will replace it.

Pavement and gravel reconstruction to provide "dish" for catch basins shall be incidental to the catch basin structure and no separate payment will be made. Refer to "Typical Pavement Grading on Slopes for Catch Basins and Inlets" detail for detail of "dish" construction.

The cost of cutting pipe and/or connectors necessary to construct new storm drain and sewer pipe, in addition to the work and materials necessary to connect new or existing pipes to existing pipes, catch basins, or manholes, shall be incidental to the appropriate pay item. Changes to flow lines, profile grades, and pipe inverts of one foot or less shall also be incidental to the appropriate pay items.

The cost of winterizing frames and covers is incidental to pay items in this section.

Connection of existing pipes to proposed structures, including all necessary excavation, fittings and backfill shall be considered incidental to the respective structure and no separate payment shall be made.

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
604.121 1' Diameter Area Drain	Each

604.122	1.5' Diameter Area Drain	Each
604.13	4' Diameter Catch Basin	Each
604.15	4' Diameter Manhole	Each
604.153	5' Diameter Manhole	Each
604.168	Providing Frame & Cover for Existing Manholes	Each
604.18	Adjusting Manhole or Catch Basin to Grade	Each

**SUPPLEMENTAL SPECIFICATION
SECTION 605 - UNDERDRAINS**

The provisions of Section 605 of the Standard Specifications shall apply with the following additions and modifications:

605.01 Description

The proposed underdrain shall be constructed as shown on the plans and specified herein. The type of pipe material used for this purpose shall be SDR-35 or HDPE as indicated on the plans. Coiled pipes shall not be used.

605.02 Materials

The underdrain drainage layer shall conform to the requirements of Subsection 703.30 of these specifications. Material for pipe shall conform to the appropriate subsection of Section 700 of the Standard Specifications for the particular type of pipe supplied. Underdrain filter fabric material shall be equal to Mirafi 140N.

Underdrain Transition Course shall conform to the requirements of Subsection 703.22 of these specifications

605.04 Underdrain Construction

Underdrain shall be constructed as shown on the plans and detail sheets of the Contract Drawings.

605.06 Method of Measurement

Underdrain shall be measured per linear foot, complete in place

605.07 Basis of Payment

Trench excavation, couplings, connections of pipe, crushed stone, sand, subbase gravel, underdrain filter fabric and all other appurtenances necessary to satisfactorily furnish and install the underdrain shall be considered as incidental to the cost the underdrain.

Payment for Underdrain Drainage Layer and Underdrain Transition Course at the soil filters will be paid for under Section 900, Pay Item 900.01.

<u>Pay Item</u>	Payment will be made under:	<u>Pay Unit</u>
605.09	6" Underdrain Type B	Linear Foot
605.11	12" Underdrain Type C	Linear Foot
605.13	18" Underdrain Type C	Linear Foot
605.15	24" Underdrain Type C	Linear Foot

**SUPPLEMENTAL SPECIFICATION
SECTION 614 - MASONRY PLUG**

The following items shall be considered additions to the Standard Specifications under Section 614.

614.01 Description

This work shall consist of the construction of Masonry Plugs as shown on the plans and details, and specified herein.

614.02 Materials

Materials shall meet the requirements for the various subsections of the specifications listed below:

Bricks shall conform to requirements of ASTM Standard Specifications for Sewer Brick, Designation C-32-63, Grade MA and SA.

Masonry Mortar shall conform to Section 705 of the Standard Specifications.

614.03 Construction Methods

Excavation shall be made to the required depth and width to perform the work as required.

614.04 Method of Measurement

The installation of a masonry plug into a pipe with a diameter of less than 8 inches shall be incidental to the project and shall require no measurement or payment. The installation of a plug into a pipe with a diameter of 8 inches and larger shall be paid for on a per each basis, complete in place.

614.05 Basis of Payment

The accepted quantity of Masonry Plugs in pipes 8 inches and larger will be paid for at the contract unit price per each, which price shall include the cost of all excavation, bricks, mortar, flowable concrete, all labor, materials, and any equipment necessary to satisfactorily complete the work.

	Payment will be made under:	
<u>Pay Item</u>		<u>Pay Unit</u>
614.14	Masonry Plug \geq 8"	Each

**SUPPLEMENTAL SPECIFICATION
SECTION 615 - LOAM**

The provisions of Section 615 of the Standard Specifications shall apply with the following additions and modifications:

615.01 Description

Provide and furnish all labor, materials and equipment required or inferred from the Contract Drawings and Specifications to complete the Work of this Section.

615.02 Method of Measurement

Loam will be measured by the cubic yard complete in place after finishing to the required depths as shown on the plans or directed.

615.03 Quality of Loam

Topsoil shall be fertile, friable natural loam of the following types: sandy loam, clay loam, loam, silt loam, sandy clay loam, or other soil approved by the Landscape Architect. It shall not have a mixture of subsoil and contain no slag, cinders, stones, sticks, roots, trash or other extraneous material larger than 1.5" in diameter or length. Topsoil must also be free of noxious weeds. All topsoil shall be tested by a recognized laboratory for pH and soluble salts. A pH of 4.5 to 7.5 is required. Topsoil shall not contain soluble salts higher than 500 parts per million and shall not contain more than 20 percent organic matter or less than 3 percent organic matter. Phosphorus, nitrogen and potassium shall be in the medium to medium high range according to standard soil test results.

615.04 Basis of Payment

The contents of this subsection shall be deleted and the following added:

Percentage of lump sum value, as stated in the bid form, shall be equal to the percentage of work completed to date relative to total work as shown on Contract Plans.

	Payment will be made under:	
<u>Pay Item</u>		<u>Pay Unit</u>
615.07	Loam	Lump Sum

**SUPPLEMENTAL SPECIFICATIONS
SECTION 619 - MULCH**

The provisions of Section 619 of the Standard Specifications shall apply with the following additions and modifications:

619.01 Description

Provide and furnish all labor, materials and equipment required or inferred from the Contract Drawings and Specifications to complete the Work of this Section. Bark mulch shall be placed at a minimum depth of 2 inches in plant beds.

619.02 Method of Measurement

Mulch will be measured by the cubic yard complete in place after finishing to the required depths as shown on the plans or directed.

619.03 Quality of Mulch

Shredded & Aged Bark: shall consist of bark fibers shredded from either softwood trees or hardwood trees that shall be free of chunks of wood or other debris and whose fibers shall not exceed 4" in length and shall be of a consistent texture and color.

619.04 Basis of Payment

The accepted quantities of loam will be paid for at the contract unit price per cubic yard complete in place.

Payment will be made under:

Pay Item

Pay Unit

619.1301

Bark Mulch

Cubic Yard

**SUPPLEMENTAL SPECIFICATIONS
SECTION 620 - GEOTEXTILE**

The provisions of Section 620 of the Standard Specifications shall apply with the following additions or modifications:

620.01 Description

This work shall consist of furnishing and installing geotextile fabric as shown on the plans.

620.02 Materials

Fabrics shall be as follows:

Non-Woven Geotextile Fabric: Contractor shall use Mirafi 180N Filter Fabric, or approved equal.

620.06 Basis of Payment

Payment for geotextile fabric at soil filters shall be made under Section 900, Pay Item 900.01.

**SUPPLEMENTAL SPECIFICATIONS
SECTION 621 - LANDSCAPING**

The provisions of Section 621 of the Standard Specifications shall apply with the following additions or modifications:

621.001 Description

Provide and furnish all labor, materials and equipment required or inferred from the Contract Drawings and Specifications to complete the Work of this Section.

621.0018 Layout

The location of plants as shown on the plans shall be considered approximate only. The exact locations will be designated on the ground by the Landscape Architect, upon request. Plant quantities may, in some cases, be increased or decreased.

621.0028 Quality Assurance

All plants shall conform to the current edition of the "USA Standard for Nursery Stock" sponsored by the American Association of Nurserymen (AAN), unless otherwise indicated in the plans or specifications.

All plants shall be first class representatives of their normal species or varieties, unless otherwise specified. All plants must have a good, healthy, well-formed upper growth and a large, fibrous, compact root system. Plants sheared into stiff or formal shapes will be rejected unless they have outgrown such shearing.

All plants shall be nursery grown unless otherwise stipulated. No plant will be considered nursery grown unless it has been transplanted at least once and has been growing in a nursery for at least 2 full growing seasons.

All plants must be healthy and vigorous; free from disease, injuries, insects and their eggs or larva, mechanical wounds, decay, or any other defects.

All plants shall be true to name. Each plant when not tied in bundles shall be labeled legibly and securely. The current edition of "Standardized Plant Names" prepared by the Editorial Committee of the American Joint Committee on Horticultural Nomenclature shall be the authority for all plant names. The Landscape Architect will reject any plants concerning any doubt or confusion arising about nomenclature, either at the time of delivery or at any subsequent time.

The Landscape Architect reserves the right to plainly mark all rejected plants with paint or by other means to ensure that they are not used on the job. Rejected plants may not be used on the project, will not be paid for, and must be replaced by the contractor with approved plants.

621.0029 Setting Plants

The plants shall be set plumb and straight in the prepared plant bed(s), and level such that the top of plant crown is equal height to the top of mulch.

621.0037 Method of Measurement

The quantity of plants to be measured for payment will be the number of individual plants furnished and planted as required and accepted, excluding replacements.

621.0038 Basis of Payment

Each item of "Planting" will be paid for at the contract unit price for each accepted plant furnished and planted. Payment shall constitute full compensation for; furnishing and placing plants, digging, delivering, rodent protection, preparing plant pits, beds and drains; planting, watering, fertilizing, mulching, pruning, and the cleanup of planting areas; for all, fertilizer, mulch and other necessary materials; all labor, equipment, tools and any other incidentals necessary to complete the work.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
621.273	Large Deciduous Tree (2-2.5" Cal) Group A	Each

**SUPPLEMENTAL SPECIFICATION
SECTION 626 – FOUNDATIONS CONDUIT & JUNCTION BOXES FOR HIGHWAY SIGNING,
LIGHTING AND SIGNALS**

The provisions of Section 626 of the Standard Specifications shall apply with the following additions and modifications:

626.01 Description

This work shall consist of temporarily relocating the existing electrical control box and wiring for the Bayside Trail lighting system during the installation of the storm drain pipe and the resetting of the electrical control box after completion of the storm drain pipe installation. All electrical and controls work shall be performed by a licensed electrician hired by the Contractor.

626.04 Method of Measurement

The relocation and resetting of the existing electrical control box shall be paid for on a lump sum basis, complete in place.

629.05 Basis of Payment

The accepted quantity of relocating and resetting the control box will be paid for at the contract lump sum price. Payment shall be full compensation for furnishing all labor, materials and equipment necessary for temporarily relocating and resetting the existing electrical control box, including costs for a licensed electrician.

Payment will be made under:

Pay Item

Pay Unit

626.151	Temporarily Relocate and Reset Control Box	Lump Sum
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**SUPPLEMENTAL SPECIFICATION
SECTION 629 – HAND LABOR**

The provisions of Section 629 of the Standard Specifications shall apply with the following additions and modifications:

629.04 Basis of Payment

The accepted quantities of labor will be paid at the contract unit price per hour.

	Payment will be made under:	
<u>Pay Item</u>		<u>Pay Unit</u>
629.05	Hand Labor, Straight Time	Hour
629.06	Mason, Straight Time	Hour

**SUPPLEMENTAL SPECIFICATION
SECTION 631 – EQUIPMENT RENTAL**

The provisions of Section 631 of the Standard Specifications shall apply with the following additions and modifications:

629.04 Basis of Payment

The accepted quantities of labor will be paid at the contract unit price per hour.

<u>Pay Item</u>	Payment will be made under:	<u>Pay Unit</u>
631.10	Air Compressor (Including Operator)	Hour
631.11	Air Tool (Including Operator)	Hour
631.12	All Purpose Excavator (Including Operator)	Hour
631.14	Grader (Including Operator)	Hour
631.172	Truck – Large (including operator)	Hour
631.22	Front End Loader (including operator)	Hour
631.36	Foreman, Straight Time	Hour

SUPPLEMENTAL SPECIFICATION
SECTION 632 - WYES OR TEES FOR SEWER AND STORM DRAIN CONNECTIONS

632.01 Description

This work shall consist of the furnishing and satisfactory connection of all Wye/Inserta-Tee Pipe Sections to the main sewer and storm drain. A wye shall be used for all new sewer pipe connections. If a wye is installed for a future house connection, the wye shall be closed with an approved stopper (incidental to the wye) in accordance with the manufacturer's specifications. If a wye is installed for reconnection to an existing lateral, sufficient new lateral pipe shall be installed to make a clean reconnection as shown on the "Typical House Lateral Reconnection Detail". The Contractor shall be responsible for locating and reconnecting existing laterals to the new storm drain.

This work shall include the connection of storm drain leads from catch basins to the mainline storm drain as shown on the drawings. A pre-fabricated tee connection shall be used and installed in accordance with manufacturer specifications. Connection of catch basin/storm drain lateral leads to storm drain larger than 18-inch diameter may be performed with the use of a coring machine and suitable connection device, approved by the Department of Public Services. The connecting pipe shall be at least half the size of the main line pipe in order to use a coring tee-type connection. All cores into mainline storm drain and subsequent installation of tee connection shall be approved and witnessed by the Inspector.

632.02 Method of Measurement

Wye pipe and Inserta-Tee connections will be measured by each connection complete in place.

Cleanouts will be measured per each complete in place.

632.03 Basis of Payment

The accepted quantities of Wye pipe connections will be paid for at the contract unit price per each. The price bid for Wye pipe sections shall be full compensation for furnishing, laying, and jointing the house laterals to the main sewers. The price bid for Wye pipe sections involving large diameter pipe shall be full compensation for furnishing, core drilling and joining laterals to main line. Payment for trench excavation, with the exception of structural rock excavation, will be included in this item. Pipe bedding materials, backfilling and backfilling materials shall also be included in this item for payment.

The accepted quantities of Inserta-Tee connections will be paid for at the contract unit price per each. The price bid for Inserta-Tee connections shall be full compensation for furnishing, laying, and jointing the catch basin laterals to the main storm drain. The price bid for Inserta-Tee connections involving large diameter storm drain shall be full compensation for furnishing, core drilling and joining storm drain laterals to main storm drain. Payment for trench excavation, with the exception of structural rock excavation, will be included in this item. Pipe bedding materials, backfilling and backfilling materials shall also be included in this item for payment.

The cost of locating/warning tape including installation shall be considered incidental to the appropriate lateral.

The accepted quantities of cleanouts will be paid for at the contract unit price per each. The price bid for cleanouts shall be full compensation for furnishing, excavation, laying, connection to underdrain, backfilling and all labor, materials, and any equipment necessary to satisfactorily complete the work.

Payment for the new lateral pipe at each connection will be paid for under Section 633, Pay Item 633.05.

Payment will be made under:

Pay Item

Pay Unit

632.05	6" Wye Pipe Connection	Each
632.061	10" Inserta-Tee Pipe Connection	Each
632.07	Cleanout	Each

**SUPPLEMENTAL SPECIFICATION
SECTION 633 - HOUSE LATERALS**

The provisions of Section 633 of the Standard Specifications shall apply with the following additions or modifications:

633.01 Description

This work shall consist of the satisfactory connection of all proposed laterals to the new sewer as shown in the contract drawings and reconnection of all existing laterals to the new sewer. All connections shall be made in conformance with the Plumbing Code of the City of Portland and the Maine State Plumbing Code. The Contractor shall be responsible for locating and reconnecting existing sewer laterals to new sewer. The Contractor shall install locating/warning tape over the centerline of all sanitary and storm sewer laterals as required by City ordinance. Both a green warning tape and a number 10 or 12 gauge single strand coated wire shall be installed at a maximum of 24 inches below finish surface grade for the entire length of the pipe. Magnetic warning tape may be used in place of the separate warning tape and wire. The Contractor shall complete the Storm and Sanitary Sewer Service Lateral Location Record Form included in this document.

633.02 Method of Measurement

House laterals will be measured by the linear foot complete in place.

633.03 Basis of Payment

The accepted quantity of house laterals will be paid for at the contract unit price per linear foot of pipe installed, complete in place. The amount bid for each lateral shall be full compensation for furnishing all labor, equipment, tools, adaptors, reducers, and materials necessary to satisfactorily connect all laterals.

The cost of locating/warning tape including installation shall be considered incidental to the appropriate lateral.

Payment for trench excavation, with the exception of structural rock excavation, will be included in this item. Pipe bedding materials, backfilling and backfilling materials shall also be included in this item for payment.

	Payment will be made under:	
<u>Pay Item</u>		<u>Pay Unit</u>
633.05	Six Inch Diameter Sewer Laterals	Linear Foot

**SUPPLEMENTAL SPECIFICATION
SECTION 637 – DUST CONTROL**

The provisions of Section 637 of the Standard Specifications shall apply with the following additions or modifications:

637.01 Description:

This work shall consist of applying water and calcium chloride to control dust resulting from traffic and Contractor’s operations and sweeping of project area.

637.05 Method of Measurement

Water and calcium chloride acceptably applied for the item Dust Control, as well as sweeping of the project area, will be measured for payment as one lump sum. It is assumed that 25% of the effort/cost will be to support the CDBG improvements, and 75% to support the SRF improvements.

637.06 Basis of Payment:

Dust control will be paid for at the contract lump sum price. Payment will be full compensation for furnishing and applying water and calcium chloride as required, as well as sweeping of the project area.

	Payment will be made under:	
<u>Pay Item</u>		<u>Pay Unit</u>
637.071	Dust Control	Lump Sum

**SUPPLEMENTAL SPECIFICATION
SECTION 652 - MAINTENANCE OF TRAFFIC**

The provisions of Section 652 of the Standard Specifications shall apply with the following additions

652.3.6 Traffic Control

All work areas within the project - No construction work shall be performed during the following hours, without prior written approval from the City.

- A. From September 1 of any year through may 31 of the following year, no construction work shall be performed between 7:00 p. m. of any day and 7:00 a. m. of the following day.
- B. From may 1 of any year through August 31 of the same year, no construction work shall be performed between 8:00 p. m. of any day and 7:00 a. m. of the following day.
- C. On Saturdays, Sundays, and legal holidays, construction work shall not be performed before 8:00 a. m.

The following general traffic control items shall be incorporated into the traffic control plan for this project:

- Contractor shall maintain access to all driveways within the project limits. Two way traffic shall be maintained at all times in the project area. Two way traffic flow must be maintained on all streets during non-working hours.
- Contractor shall submit a written and graphic Traffic Control Plan to the City for review and approval. The TCP must be approved before any work may be started.

652.7 Method of Measurement

The accepted quantity of flagger time will be the number of hours the designated station is occupied. The number of hours authorized for payment will be measured to the nearest ¼ hour.

Work Zone Traffic Control shall be measured as a percentage of work completed to date relative to total work as shown on Contract Plans.

It is assumed that 25% of the total flagger time will be to support the CDBG improvements and 75% would support the SRF improvements. Work Zone Traffic Control efforts would be broken down accordingly.

652.8 Basis of Payment

Preparation of traffic control plans, constructions signage, electronic variable message signs, barrels, cones, barriers, maintenance of traffic control devices, flaggers, and other necessary incidentals to maintain traffic in accordance with the specifications and the MUTCD shall be paid for Lump Sum under item 652.39 Work Zone Traffic Control.

<u>Pay Item</u>	Payment will be made under:	<u>Pay Unit</u>
652.38	Flagger	Hour
652.39	Work Zone Traffic Control	Lump Sum

**SUPPLEMENTAL SPECIFICATION
SECTION 654
SOIL BACKFILL COMPACTION TESTING**

The provisions of Section 654 of the Standard Specifications shall apply with the following additions and modifications:

654.01 Description

This work shall consist of furnishing an approved certified soil testing laboratory, to conduct in-place density tests of backfill materials in the field and all related laboratory tests.

654.02 General

Upon completion of the field test, the results shall be made available to the City Inspector on site. Copies of all test results shall be transmitted to the Engineering Department of the City of Portland.

The minimum in-place densities shall meet or exceed the laboratory maximum density as determined by ASTM D 1557 - 78 as follows:

Trench Backfill	Ninety-five percent	(95%)
Aggregate Base Course and Aggregate Subbase Course	Ninety-five percent	(95%)

Frequency: One density test, at top of aggregate base, every 50 linear feet of pipe trench, no less than one test per trench, located within limits of paved roadway.

654.03 Method of Measurement

Density tests will be measured by each conducted. If the initial tests do not meet the specifications, the areas shall be retested at no additional cost to the City.

654.04 Basis of Payment

The accepted quantities of density tests will be paid for at the contract unit price per each.

	Payment will be made under:	
<u>Pay Item</u>		<u>Pay Unit</u>
654.08	Density Test	Each

**SUPPLEMENTAL SPECIFICATION
SECTION 656 - TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL**

The provisions of Section 656 of the Standard Specifications shall apply with the following additions and modifications:

656.01 Description

Contractor shall provide temporary soil and water pollution control as necessary. Catch basin filter sacks shall be installed in all existing catch basins within the limits of work, and immediately downgradient as determined by the Engineer.

645.09 Method of Measurement

Temporary Soil Erosion and Water Pollution Control shall be measured as a percentage of work completed to date relative to total work as shown on Contract Plans. It is assumed that 25% of the effort/cost will be to support the CDBG improvements, and 75% to support the SRF improvements.

645.10 Basis of Payment

The accepted quantity will be paid for at the contract lump sum price.

	Payment will be made under:	
<u>Pay Item</u>		<u>Pay Unit</u>
656.75	Temporary Soil Erosion and Water Pollution Control	Lump Sum

**SUPPLEMENTAL SPECIFICATION
SECTION 700 - MATERIAL DETAILS**

The following are revisions and additions to the Standard Specifications. Provisions contained herein shall be considered to supplement or supersede those portions of the Standard Specifications as they apply to the Contract.

The GENERAL STATEMENT of this Division is hereby revised to read as follows:
All materials which are to be used in the work for which there is no prescribed testing by the project inspectors or other certified laboratories, the Contractor shall, prior to final acceptance as specified in subsection 105.17(b), submit a Materials Certification Letter similar to:

Company Letterhead

Mr. _____ Resident Date _____
Address _____ Project No. _____
_____ Town _____

"This is to certify that the below listed materials, which are incorporated into the above designated project, comply with the pertinent specified material requirements of the contract. Processing, project testing and inspection control of raw materials are in conformity with the applicable drawings and/or standards of all articles furnished. (List only those items used.)

- Castings, Grates, Frames and Traps
- Concrete Blocks, Bricks, Precast Sections, Appurtenant Structures
- Culverts, Underdrain, Sanitary Sewer Pipe and Storm Drain Pipe
- Regulatory Signs and Posts

All records and documents pertinent to this letter and not submitted herewith shall be maintained available by the undersigned for a period of not less than three years from the date of completion of the project.

The Materials Certification letter shall be signed by a person having legal authority to bind the Contractor.

Materials for which the above Certificate is acceptable may be subject to random sampling and testing by the City. Certified materials which fail to meet specification requirements may not be accepted.

**SUPPLEMENTAL SPECIFICATION
SECTION 703 -AGGREGATES**

The provisions of Section 703 of the Standard Specifications shall apply with the following additions and modifications:

703.02 Coarse Aggregate for Concrete

Designated Aggregate Size

Sieve Size	Percent Passing Sieve				
	2 in.	1½ in.	1 in.	¾ in.	½ in.
2 in.	95-100	100	-	-	-
1-1/2 in.	-	95-100	100	-	-
1 in.	50-70	-	90-100	100	-
3/4 in.	-	50-70	-	90-100	100
1/2 in.	15-30	-	25-60	-	90-100
3/8 in.	-	10-30	-	20-55	-
No. 4	0-5	0-5	0-10	0-10	0-15
F.M. (+0.20)	7.45	7.20	6.95	6.70	6.10

Aggregate used in concrete shall not exceed the following maximum designated sizes:

- a. 2 inches for mass concrete
- b. 1-1/2 inch for piles, pile caps, footings, foundation mats, and walls 8 inches or more thick
- c. 3/4 inch for slabs, beams, and girders.
- d. 1/2 inch for fireproofing on steel columns and beams
- e. 1 inch for all other concrete

703.06 (a) Aggregate Base

Aggregate base - crushed, type "B" shall not contain particles of rock which will not pass the two inch square mesh sieve, and shall conform to the type "B" aggregate, as listed in the subsection of the Standard Specifications.

"Crushed" shall be defined as consisting of rock particles with at least 50 percent of the portion retained on the 1/4 inch square mesh sieve, having a minimum of 2 fracture faces.

703.06 (b) Aggregate Subbase

Gravel subbase shall not contain particles of rock which will not pass the three inch square mesh sieve, and shall conform to type "D" Aggregate, as listed in this subsection of the Standard Specifications.

Gravel subbase shall not contain particles of rock which will not pass the three inch (3") square mesh sieve, and shall conform to type "D" Aggregate, as listed in this subsection of the Standard Specifications.

Sieve Size	Aggregate Type
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	Type B	Type D	Type F
3"	--	100	--
2"	100	--	--
1"	--	--	100
1/2"	35-75	--	--
1/4"	25-60	25-70	60-100
No. 40	0-25	0-30	0-50
No. 200	0-5	0-7	0-7

703.12 Aggregate for Crushed Stone Dust Surface

Stone Dust shall meet the following gradation requirements:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
1/2" -----	100
No. 4 -----	90 – 100
No. 10-----	50 – 70
No. 20-----	30 – 50
No. 60-----	20 – 30
No. 200-----	15 – 25

The stone shall be free from vegetation, lumps or balls of clay, and other deleterious substances.

703.18 Common Borrow

Common borrow shall not contain any particle of bituminous material.

703.19 Granular Borrow

Granular borrow shall contain no particles which will not pass a three inch square mesh sieve.

703.20 Gravel Borrow

Gravel borrow shall not contain particles of rock which will not pass three inch square mesh sieve.

703.22 Underdrain Transition Course

Granular material for underdrain transition course shall be free from organic matter and shall conform to the following gradations:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
1 – inch-----	95 – 100
1/2 – inch-----	75 – 100
No. 4-----	50 – 100
No. 20-----	15 – 80
No. 50-----	0 – 15
No. 200-----	0 – 5.0

703.30 Crushed Stone for Pipe Bedding and Underdrain Drainage Layer

"Crushed Stone" shall be defined as rock of uniform quality and shall consist of clean, angular fragments of quarried rock, free from soft disintegrated pieces or other objectionable matter.

Crushed stone used as a bedding material for pipe and underdrain shall be uniformly graded and shall meet the follow gradations:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
3/4 – inch-----	100
3/8 – inch-----	20 – 55
No. 4-----	0 – 10

The stone shall be free from vegetation, lumps or balls of clay, and other deleterious substances.

703.31 Crushed Stone for Excavation Below Grade

Crushed stone shall meet the following gradation requirements:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
2-1/2 –inch-----	100
2 –inch-----	95 – 100
1-inch-----	0 – 30
3/4-inch-----	0 – 5

The stone shall be free from vegetation, lumps or balls of clay, and other deleterious substances.

703.50 Structural Fill

Structural fill shall meet the following gradation requirements:

Sieve Designation	Percentage by Weight Passing Square Mesh Sieve
4 – inch-----	100
3 – inch-----	90 – 100
1/4 - inch-----	25 – 90
No. 40-----	0 - 30
No. 200-----	0 - 5

The fill shall be free from vegetation, lumps or balls of clay, and other deleterious substances.

**SUPPLEMENTAL SPECIFICATIONS
SECTION 890
NATURAL GAS**

The following items shall be considered additions to the Standard Specifications under Section 890.

890.01 Description

The contractor shall field verify the location of the gas line prior to work and notify the Engineer of potential conflicts.

If a gas main or service must be relocated due to a field determined utility conflict, Contractor shall provide the excavation, bedding and backfill of new gas service in accordance with the plans. Coordination of all gas main and gas service relocation work with Unitil Corp. and homeowners shall be the responsibility of the Contractor and shall be incidental to the pay items in this section.

890.02 Method of Measurement

Gas main/service relocation will be measured by the length in linear feet along the centerline of the new natural gas service pipe.

890.03 Basis of Payment

The accepted quantities of gas main/service relocation will be paid for at the contract unit price per linear foot complete and in place.

<u>Pay Item</u>	Payment will be made under:	<u>Pay Unit</u>
890.01	Gas Main Relocation	Linear Foot
890.02	Gas Service Relocation	Linear Foot

**SUPPLEMENTAL SPECIFICATIONS
SECTION 900 - STORMWATER MANAGEMENT SYSTEMS**

The following items shall be considered additions to the Standard Specifications under Section 900.

900.01 Description

This work shall consist of the construction of soil filters and underdrained box filter systems in accordance with these specifications and in conformity with lines, grades, and details shown on the plans.

900.02 Materials

Materials shall meet the requirements specified in the subsections of this specification.

900.03 Submittals

Contractor shall provide submittals, including the source and gradation of the loamy sand specified herein in conformance with ASTM C136 – Standard Test Method for Sieve Analysis and ASTM C117 – Standard Test Method for Materials finer than 75µm, a soil textural analysis in conformance with ASTM D422 – Standard Test Method for Particle-Size Analysis of Soils and product data for all piping and drain elements specified herein.

900.04 Soil Filters

Materials:

Underdrain Pipe shall be as specified in Supplemental Section 605. Diameter shall be as specified on Contract Plans.

Underdrain Cleanouts shall be as specified on the plans.

Underdrain Drainage Layer shall be as specified in Supplemental Section 703.

Underdrain Transition Course shall be as specified in Supplemental Section 703.

Geotextile Fabric shall be as specified in Supplemental Section 620.

Soil Filter Material shall be a loamy sand soil combined with 30% by volume of moderately fine, wood fiber or bark mulch. The resulting mixture shall have no less than 10% passing the 200 sieve. Soil filter media shall be a uniform mix, free of stones, stumps, roots, or other similar objects larger than 2 inches. Subcomponents of the Soil Filter Media include:

Loamy Sand shall consist of native loamy sand (as defined by the United States Department of Agriculture) that contains no less than 10% passing the #200 sieve and between 2-5% clay as determined through soil textural analysis.

Wood Fiber Mulch shall consist of a moderately fine, well-composted hardwood bark free of refuse, physical contaminants and material toxic to plant growth mulch. The mulch shall have 100% passing a 1-inch screen.

Loam, Seed, and Mulch shall be as specified in Section 615.

Area Drain shall be as specified in Supplemental Section 604 and on the plans.

Cobblestone shall be 4" by 4" by 4" and provided by the Contractor as specified on the plans.

6-inch Wide Terminal Curb shall be as specified on the plans.

6-inch Wide by 24-inch Deep Straight & Circular Granite Curb shall be as specified on the plans. Curbing shall be finished on both faces for all curbing installed with two exposed faces.

Concrete Fill shall be as specified in Supplemental Section 502 and on the plans.

Bentonite Clay Trench Dam shall be as specified in Supplemental Section 502 and on the plans.

Construction Methods:

Soil Filters shall be constructed in an excavation conforming to the lines and grades depicted on the plans and detailed within the Contract Documents. Any modifications to the elevation, shape or location of the Soil Filters, or any component of the Soil Filters, shall be at the direction of and approval of the Engineer.

Soil Filters shall be constructed using the following methods and components:

- a. Contractor shall limit compaction of subgrade prior to installation of the drainage and soil filter materials. Subgrade of soil filter beds shall be mechanically raked with a toothed or "ripper-type" excavator bucket prior to installation of backfill in order to open subgrade and promote infiltration. Alternative methods must be approved by the engineer.
- b. Non-woven geotextile fabric shall be placed on all sides of the excavation to separate the soil filter layer, underdrain drainage layer, and underdrain transition course from the adjacent soil. Large tree roots must be trimmed flush with the side walls in order to prevent fabric puncturing or tearing during installation procedures. Fabric shall be placed to prevent soil from migrating into and clogging the filter. All seams shall have a minimum of 12 inches overlap. Contractor shall not wrap fabric over top of underdrain drainage layer, as fabric in this zone will cause clogging and prevent flow from percolating between the soil filter materials and the underdrain drainage layer.
- c. Underdrain pipe shall be bed, perforations down, in the underdrain drainage layer. Pipe shall be bed with at least 6 inches of bedding above and 6 inches of bedding below the pipe. Pipe shall be bed level at elevation.
- d. Soil Filter Material shall be a minimum of 12 inches depth, placed above the underdrain transition course. The soil filter media shall be lightly compacted and shall be mixed off site and installed fully mixed. The Contractor should avoid excessive compaction of the soil filter material during installation and should utilize wide track or marsh track equipment or light equipment with turf tires if travel on soil filter material is necessary. Up to 20% natural compaction may occur in the soil filter and natural settling should be accounted for by the Contractor. The Contractor shall presoak the placed soil filter materials to speed up the natural compaction process. Final grades shall conform to lines and grades depicted on the plans. The finish surface grade of the soil filter materials shall be level. The surface of the soil filter shall be mulched as shown on the plans.
- e. Erosion Control: The soil filter material must not be installed until the entire area that drains to the filter has been permanently stabilized with pavement or other structures unless the runoff is diverted around the filter. The area that drains to the soil filter shall be kept stable, avoiding erosion and deposition of sediments into the stormwater management system. A temporary geotextile may be used at the surface of the soil filter material as temporary protection from sedimentation during construction.

900.06 Method of Measurement

Soil Filters will be measured on a lump sum basis for the following materials complete in place: underdrain drainage layer material, underdrain transition course material, geotextile fabric, soil filter material, loam, seed, mulch, landscaping, cobble stone, curbing, concrete fill, and bentonite clay trench dams.

900.07 Basis of Payment

The accepted quantities of soil filters will be paid for at the contract lump sum price. This price shall include excavation and all labor, materials (curbing, geotextile, soil filter material, underdrain transition course, underdrain drainage layer, loam, seed, mulch, landscaping, concrete fill and bentonite clay trench dams), and equipment required to complete the work in accordance with the plans and specifications.

Removal of existing curbing shall be incidental to the soil filter systems pay item.

The cost of sawcutting and removing existing pavement, and providing aggregate subbase, aggregate base and pavement patch as required to install 24-inch deep curbing shall be incidental to the soil filter systems pay item.

Storm drain pipe, underdrain, cleanouts, and area drains located within the limits of the soil filters shall be paid for under the applicable pay items.

<u>Pay Item</u>	Payment will be made under:	<u>Pay Unit</u>
900.01	Soil Filter Systems	Lump Sum

CWSRF SUPPLEMENTARY CONDITIONS

1. Agency Not a Party

“This contract is expected to be funded in whole or in part by the State of Maine Department of Environmental Protection (DEP) Clean Water State Revolving Loan Fund (CWSRF) program. Neither the State of Maine nor any of its departments, agencies, or employees is or will be a party to this contract. The word “agency” in the contract documents refers to the DEP and all other involved funding agencies.”

2. Contract Award Approval

“The Owner and Contractor shall furnish the documents as required by this contract to the State of Maine Department of Environmental Protection (DEP) Clean Water State Revolving Loan Fund (CWSRF) program for contract award approval. Concurrence by the Agency in the award of the Contract is required before the Contract is effective.”

3. Conflict of Interest

“Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer. Owner’s officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in Contractor. Owner’s officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.”

4. Gratuities

“If Owner finds after a notice and hearing that Contractor, or any of Contractor’s agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract. In the event this Contract is terminated as provided in above paragraph, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.”

5. Audit and Access to Records

“Owner, Agency, the Comptroller General, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor, which are pertinent to the Contract, for the purpose of making audits, examinations, excerpts and transcriptions. Contractor

shall maintain all required records for three years after final payment is made and all other pending matters are closed.”

6. Anti-Kickback

“Contractor shall comply with the Copeland Anti-Kickback Act (18 USC 874 and 40 USC 276c) as supplemented by Department of Labor regulations (29 CFR Part 3, “Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States”). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.”

7. Clean Air and Pollution Control Acts

“If this Contract exceeds \$100,000, Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 USC 7401 *et seq.*) and the Federal Water Pollution Control Act as amended (33 USC 1251 *et seq.*). Contractor will report violations to the Agency and the Regional Office of the EPA.”

8. State Energy Policy

“Contractor shall comply with the Energy Policy and Conservation Act (P.L. 94-163). Mandatory standards and policies relating to energy efficiency, contained in any applicable State Energy Conservation Plan, shall be utilized.”

9. Equal Opportunity Requirements

- A. “If this Contract exceeds \$10,000, Contractor shall comply with Executive Order 11246, “Equal Employment Opportunity,” as amended by Executive Order 11375, “Amending Executive Order 11246 Relating to Equal Employment Opportunity,” and as supplemented by regulations at 41 CFR part 60, “Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”
- B. “Contractor’s compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative active obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the Contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting Contractor’s goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.”
- C. “Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.”

10. Restrictions on Lobbying

“Contractor and each subcontractor shall comply with Restrictions on Lobbying (Public Law 101-121, Section 319) as supplemented by applicable Agency regulations. This Law applies to the recipients of contracts and subcontracts that exceed \$100,000 at any tier under a Federal loan that exceeds \$150,000 or a Federal grant that exceeds \$100,000. If applicable, Contractor must complete a certification form on lobbying activities related to a specific Federal loan or grant that is a funding source for this Contract. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 USC 1352. Each tier shall disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Certifications and disclosures are forwarded from tier to tier up to the Owner. Necessary certification and disclosure forms are attached to these supplementary conditions.”

11. Environmental Requirements

“When constructing a project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental constraints:

1. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.
2. Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, i.e., alluvial soils on NRCS Soil Survey Maps.
3. Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO).
4. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.”

12. Suspension and Debarment

“The Contractor must comply with Subpart B and Subpart C of 2 CFR Part 180 and Part 1532. By entering into this contract, the contractor certifies that neither the contractor’s firm, nor any person or firm who has an interest in the contractor firm, is a Debarred or Suspended person or firm. Furthermore, by entering into this contract, the contractor shall certify that no part of this contract shall be subcontracted to a Debarred or Suspended person or firm. Contractors may access the federal government’s Excluded Parties List System on the internet for verification of excluded parties”

13. Taxes

Add the following language to General Conditions Article 6.10 :

“The Owner is exempt from Maine state sales and use taxes on all materials to be incorporated in the work. The Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the work. The Owner’s exemption does not apply to construction tools, machinery, equipment, or other property purchased or leased by Contractor or to supplies or materials not incorporated into the work.”

14. State Minimum wages

“All laborers and mechanics employed or working upon the construction site of the project shall be paid not less than the prevailing State minimum wage rate regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. The most current version of the State of Maine poster for Minimum Wage (as per the Department of Labor website) must be posted where it can be easily seen by employees.”

15. Posting Documents

“The contractor shall post documents in accordance with all applicable state and federal labor and employment laws. Posters shall be located and maintained by the Contractor at such place or places on the project site where employees can easily see them. Posters displayed outdoors must be laminated or otherwise protected from the weather. The most current version of workplace posters can be found on the internet on the state and federal Department of Labor websites.”

16. SRF Project Sign

“At the start of the project, the Contractor shall provide and erect a project sign as detailed and specified in the attachment to these supplementary conditions. The location of the sign shall be as directed by the Engineer. No other contractor, subcontractor, or material signs will be permitted on the sign. The Contractor shall maintain and keep the project sign in good condition until the work is completed when the sign will be removed. Provide adequate supports for the sign as site conditions may require and keep sign a proper distance above prevailing grade to permit public viewing.”

17. SRF Disadvantaged Business Enterprises Program

“The Contractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 40 CFR part 33, Disadvantaged Business Enterprises (DBE), in the award and administration of subcontracts. Failure by the Contractor to carry out these requirements is a material breach of this contract which may result in the termination of this contract or other legally available remedies.

The goals for this project are a minimum of 0.64% certified Minority Business Enterprise (MBE) and a minimum of 1.64% certified Women’s Business Enterprise (WBE) participation. Lists of certified businesses may be found on the following internet websites: EPA Office of Small and Disadvantaged Business Utilization (OSDBU), State of Maine Department of Transportation (DOT), and the United States Small Business Administration (SBA).

The contractor must maintain all records documenting its compliance with the requirements of this part, including documentation of its good faith efforts (such as copies of solicitation letters and emails) and data relied upon in formulating its fair share objectives.

1. During the bidding period, the Contractor is required to make the following good faith efforts if they will be awarding subcontracts:
 - (a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. This will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
 - (b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
 - (c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. This will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
 - (d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
 - (e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
 - (f) Employ the good faith efforts described above even if the prime contractor has achieved its fair share objectives under subpart D of this part.

2. The Contractor must comply with the following provisions when submitting their bid:
 - (a) The contractor must complete and submit EPA Form 6100-4, 'DBE Program Subcontractor Utilization Form' (**copy attached**) as part of the prime contractor's bid or proposal package to the Owner. Note, only DBE subcontractors should be listed. If no DBE subcontractors are to be used, the contractor must still complete and submit the form.
 - (b) The contractor must have each of its proposed DBE subcontractors complete the EPA Form 6100-3, 'DBE Program Subcontractor Performance Form' (**copy attached**). The completed forms must be submitted as part of the prime contractor's bid or proposal package to the Owner.

3. Prior to contract award, as the Successful Bidder, the Contractor must comply with the following provisions:
 - (a) The contractor must submit to the Owner documentation of its good faith efforts (such as copies of solicitation letters and emails) and data relied upon in formulating its fair share objectives. Solicitation documentation must include proof of receipt. The records must be submitted to the Owner even if the goals were met.
 - (b) The contractor must submit to the Owner a bidders list of all firms that bid or quote on subcontracts, including both MBE/WBEs and non-MBE/WBEs. The purpose of a bidders list is to provide contractors who conduct competitive bidding with as accurate a database as possible about the universe of MBE/WBE and non-MBE/WBE subcontractors. The list must include the following information:
 - (1) Entity's name with point of contact;
 - (2) Entity's mailing address, telephone number, and e-mail address;
 - (3) The procurement on which the entity bid or quoted, and when; and
 - (4) Entity's status as an MBE/WBE or non-MBE/WBE.

4. Following contract award, the Contractor must comply with the following additional provisions:
 - (a) The contractor must provide EPA Form 6100-2, 'DBE Program Subcontractor Participation Form' (**copy attached**) to all DBE subcontractors listed on Form 6100-4. EPA Form 6100-2 gives a DBE subcontractor the opportunity to describe the work the DBE subcontractor received from the prime contractor, how much the DBE subcontractor was paid and any other concerns

the DBE subcontractor might have during the course of the project, for example, reasons why the DBE subcontractor believes it was terminated by the prime contractor. If DBE subcontractors choose to complete this form, the completed form should be sent directly to the DEP DBE Coordinator. The address is: Maine Department of Environmental Protection, Attn: Ms. Kelly Stevens, DBE Coordinator, Bureau of Land and Water Quality, Division of Water Quality Management, 17 State House Station, Augusta, Maine 04333-0017.

(b) Complete the CWSRF DEP Progress Report of DBE Subcontractor Utilization Form (**copy attached**) for all contractor pay applications whether or not they include invoiced amounts from DBE subcontractors. The progress report should be attached to the corresponding pay application for processing through the Owner.

(c) Pay subcontractors for satisfactory performance no more than 30 days from the prime contractor's receipt of payment from the Owner.

(d) Notify the Owner in writing prior to any termination of a DBE subcontractor for convenience by the prime contractor.

(e) If a DBE subcontractor fails to complete work under the subcontract for any reason, the prime contractor must employ the good faith efforts described above if soliciting a replacement subcontractor. Documentation of good faith efforts shall be submitted to the Owner upon request.”

18. Davis-Bacon and Related Acts

“The Contractor must comply with the following contract and subcontract provisions of the Davis-Bacon and Davis-Bacon Related acts. Attachments to these provisions include: the wage determination for this contract, four forms, and a poster.

1. Applicability of the Davis-Bacon (DB) prevailing wage requirements

Davis-Bacon prevailing wage requirements apply to the construction, alteration, and repair of treatment works carried out in whole or in part with assistance made available by a State water pollution control revolving fund. If an Owner encounters a unique situation at a site that presents uncertainties regarding DB applicability, the Owner must discuss the situation with the State official before authorizing work on that site.

2. Obtaining Wage Determinations

(a) Owners shall obtain the wage determination for the locality in which a covered activity subject to DB will take place prior to issuing requests for bids, proposals, quotes or other methods for soliciting contracts (solicitation) for activities subject to DB. These wage determinations shall be incorporated into solicitations and any subsequent contracts. Prime contracts must contain a provision requiring that subcontractors follow the wage determination incorporated into the prime contract.

(i) While the solicitation remains open, the Owner shall monitor www.wdol.gov weekly to ensure that the wage determination contained in the solicitation remains current. The Owner shall amend the solicitation if DOL issues a modification more than 10 days prior to the closing date, the Owner may request a finding from the State official that there is not a reasonable time to notify interested contractors of the modification of the wage determination. The State official will provide a report of its findings to the Owner.

(ii) If the Owner does not award the contract within 90 days of the closure of the solicitation, any modifications or supersedes DOL makes to the wage determination contained in the solicitation shall be effective unless the State official, at the request of the Owner, obtains an extension of the 90 day period from DOL pursuant to 20 CFR 1.6(c)(3)(iv). The Owner shall monitor www.wdol.gov on a weekly basis if it does not award the contract within 90 days of

closure of the solicitation to ensure that wage determinations contained in the solicitation remain current.

(b) If the Owner carries out activity subject to DB by issuing a task order, work assignment or similar instrument to an existing contractor (ordering instrument) rather than by publishing a solicitation, the Owner shall insert the appropriate DOL wage determination from www.wdol.gov into the ordering instrument.

(c) Owners shall review all subcontracts subject to DB entered into by prime contractors to verify that the prime contractor has required its subcontractors to include the applicable wage determinations.

(d) As provided in 29 CFR 1.6(f), DOL may issue a revised wage determination applicable to a Owner's contract after the award of a contract or the issuance of an ordering instrument if DOL determines that the Owner has failed to incorporate a wage determination or has used a wage determination that clearly does not apply to the contract or ordering instrument. If this occurs, the Owner shall either terminate the contract or ordering instrument and issue a revised solicitation or ordering instrument or incorporate DOL's wage determination retroactive to the beginning of the contract or ordering instrument by change order. The Owner's contractor must be compensated for any increases in wages resulting from the use of DOL's revised wage determination.

3. Contract and Subcontract provisions

(a) The State official shall insure that the Owner(s) shall insert in full in any contract in excess of \$2,000 which is entered into for the actual construction, alteration and/or repair, including painting and decorating, of a treatment work under the CWSRF financed in whole or in part from Federal funds or in accordance with guarantees of a Federal agency or financed from funds obtained by pledge of any contract of a Federal agency to make a loan, grant or annual contribution (except where a different meaning is expressly indicated), and which is subject to the labor standards provisions of any of the acts listed in § 5.1, the following clauses:

(1) Minimum wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The

wage determination (including any additional classification and wage rates conformed under paragraph (a)(1)(ii) of this section) and the Davis-Bacon poster (WH-1321, attached) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. Additional copies of this poster can be obtained from the US Department of Labor website.

(ii)(A) Any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The EPA award official shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Owner agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), Form 1444 (attached) shall be completed and sent by the Owner to the State official. The State official will transmit the request, to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210 and to the EPA DB Regional Coordinator concurrently. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the State official or will notify the State official within the 30-day period that additional time is necessary. Additional copies of Form 1444 may be obtained from the US Department of Labor website.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the Owner do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the State official shall refer the questions, including the views of all interested parties and the recommendation of the State official, to the Administrator for determination. The request shall be sent to the EPA DB Coordinator concurrently. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the State official or will notify the State official within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii)(B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable

standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(2) Withholding. The Owner shall upon written request of the EPA Award Official or an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the State Official may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) Payrolls and basic records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to the Owner. Such documentation shall be available on request of the State Official or EPA. As to each payroll copy received, the Owner shall provide written confirmation in a form satisfactory to the State indicating whether or not the project is in compliance with the requirements of 29 CFR 5.5(a)(1) based on the most recent payroll copies for the specified week. The payrolls shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on the weekly payrolls. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 (attached) is available for this purpose. Additional copies of the form are available from the US Department of Labor Wage and Hour Division Web site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the Owner for transmission to the State or EPA if requested by EPA, the State, the contractor, or the Wage and Hour Division of the Department of

Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the Owner.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (1) That the payroll for the payroll period contains the information required to be provided under § 5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under § 5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;
- (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
- (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 (page 2 of the form is attached) shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the State, EPA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency or State may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees--

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to

the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the EPA determines may by

appropriate, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and Owner, State, EPA, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of eligibility.

(i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

4. Contract Provision for Contracts in Excess of \$100,000.

(a) Contract Work Hours and Safety Standards Act. The Owner shall insert the following clauses set forth in paragraphs (a)(1), (2), (3), and (4) of this section in full in any contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by Item 3, above or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (a)(1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards,

employed in violation of the clause set forth in paragraph (a)(1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a)(1) of this section.

(3) Withholding for unpaid wages and liquidated damages. The Owner, upon written request of the EPA Award Official or an authorized representative of the Department of Labor, shall withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (a)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a)(1) through (4) of this section.

(b) In addition to the clauses contained in Item 3, above, in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other statutes cited in 29 CFR 5.1, the Owner shall insert a clause requiring that the contractor or subcontractor shall maintain payrolls and basic payroll records during the course of the work and shall preserve them for a period of three years from the completion of the contract for all laborers and mechanics, including guards and watchmen, working on the contract. Such records shall contain the name and address of each such employee, social security number, correct classifications, hourly rates of wages paid, daily and weekly number of hours worked, deductions made, and actual wages paid. Further, the Owner shall insert in any such contract a clause providing that the records to be maintained under this paragraph shall be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the State and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview employees during working hours on the job.

5. Compliance Verification

(a). The Owner shall periodically interview a sufficient number of employees entitled to DB prevailing wages (covered employees) to verify that contractors or subcontractors are paying the appropriate wage rates. As provided in 29 CFR 5.6(a)(6), all interviews must be conducted in confidence. The Owner must use Standard Form 1445 or equivalent documentation to memorialize the interviews. Copies of the SF 1445 are attached and are available from EPA on request.

(b) The Owner shall establish and follow an interview schedule based on its assessment of the risks of noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. Owners must conduct more frequent interviews if the initial interviews or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. Owners shall immediately conduct necessary interviews in response to an alleged violation of the prevailing wage requirements. All interviews shall be conducted in confidence.

(c). The Owner shall periodically conduct spot checks of a representative sample of weekly payroll data to verify that contractors or subcontractors are paying the appropriate wage rates. The Owner shall establish and follow a spot check schedule based on its assessment of the risks of

noncompliance with DB posed by contractors or subcontractors and the duration of the contract or subcontract. At a minimum, if practicable, the Owner must spot check payroll data within two weeks of each contractor or subcontractor's submission of its initial payroll data and two weeks prior to the completion date the contract or subcontract. Owners must conduct more frequent spot checks if the initial spot check or other information indicates that there is a risk that the contractor or subcontractor is not complying with DB. In addition, during the examinations the Owner shall verify evidence of fringe benefit plans and payments there under by contractors and subcontractors who claim credit for fringe benefit contributions.

(d). The Owner shall periodically review contractors and subcontractors use of apprentices and trainees to verify registration and certification with respect to apprenticeship and training programs approved by either the U.S Department of Labor or a state, as appropriate, and that contractors and subcontractors are not using disproportionate numbers of, laborers, trainees and apprentices. These reviews shall be conducted in accordance with the schedules for spot checks and interviews described in Item 5(b) and (c) above.

(e) Owners must immediately report potential violations of the DB prevailing wage requirements to the EPA DB Regional Coordinator, the State Official, and to the appropriate DOL Wage and Hour District Office listed at <http://www.dol.gov/esa/contacts/whd/america2.htm> ”

19. American Iron and Steel (AIS) Requirements

“The Contractor acknowledges, to and for the benefit of the Owner and the State (Maine Department of Environmental Protection), that it understands the goods and services under this Agreement are being funded with monies made available by the Clean Water State Revolving Fund (CWSRF) that have statutory requirements commonly known as “American Iron and Steel;” that requires all of the iron and steel products used in the project to be produced in the United States (“American Iron and Steel Requirement”) including iron and steel products provided by the Contactor pursuant to this Agreement. See attached Public Law 113-76, Section 436. The Contractor hereby represents and warrants, to and for the benefit of the Owner and the State, that (a) the Contractor has reviewed and understands the American Iron and Steel Requirement, (b) all of the iron and steel products used in the project will be and/or have been produced in the United States in a manner that complies with the American Iron and Steel Requirement, unless a waiver of the requirement is approved, and (c) the Contractor will provide any further verified information, certification or assurance of compliance with this paragraph, or information necessary to support a waiver of the American Iron and Steel Requirement, as may be requested by the Owner or the State. While the Contractor has no direct contractual privity with the State, as a lender to the Owner for the funding of its project, the Owner and the Contractor agree that the State is a third-party beneficiary and neither this paragraph (nor any other provision of this Agreement necessary to give this paragraph force or effect) shall be amended or waived without the prior written consent of the State.

The Owner shall maintain files on the project site for American Iron and Steel (AIS) manufacturer certifications. The Contractor and subcontractors shall provide step manufacturer certifications to the Owner for each AIS item delivered to the site. The files shall be made available to State and Federal officials for inspection upon request. See sample Step Manufacturer Certification attachment for information that should be included.

The Contractor and its subcontractors shall submit to the Owner, an AIS Compliance Certification (see form attached) with each contractor pay application. The Owner, shall in turn, submit this certification from the Contractor, with their AIS Compliance Certification (see form attached), to the State with the SRF pay requisition.

The nationwide waiver to the American Iron and Steel law permits the use of products when they occur in de minimis incidental components of such projects funded by the Act that may otherwise be prohibited under section 436(a). Funds used for such de minimis incidental components cumulatively

may comprise no more than a total of 5 percent of the total cost of the materials used in and incorporated into a project; the cost of an individual item may not exceed 1 percent of the total cost of the materials used in and incorporated into a project. It is the State's interpretation that all CWSRF projects will contain incidental components that might not comply with the law and therefore it is likely that the Owner will use the de minimis waiver. The Contractor is required to provide the necessary documentation. Owners should, in consultation with their contractors, determine the items to be covered by this waiver, must retain relevant documentation (i.e., invoices) as to those items in their project files, and must summarize in reports the types and/or categories of items to which this waiver is applied, the total cost of incidental components covered by the waiver for each type or category, and the calculations by which they determined the total cost of materials used in and incorporated into the project. The Owner shall maintain files on the project site for this documentation. The files shall be made available to State and Federal officials for inspection upon request."

The Contractor shall refer to the attached guidance taken from an EPA Memorandum. Additional information regarding the AIS requirements can be found on this website

http://water.epa.gov/grants_funding/aisrequirement.cfm

20. List of Attachments to the CWSRF Supplementary Conditions

- A. Lobbying certification - EPA form 6600-06
- B. Disclosure of Lobbying Activities Form - EPA standard form LLL
- C. SRF Project Sign Drawing
- D. DBE Program Subcontractor Utilization Form - EPA 6100-4
- E. DBE Program Subcontractor Performance Form - EPA 6100-3
- F. DBE Program Subcontractor Participation Form - EPA 6100-2
- G. Progress Report of DBE Subcontractor Utilization Form - DEP form
- H. Davis Bacon Project Wage Determination (to be made into a poster also)
- I. Davis Bacon Poster "Employee Rights" WH-1321
- J. Davis Bacon DOL Form 1444
- K. Davis Bacon DOL Form 1445
- L. Davis Bacon DOL form WH-347 page 1 (optional),
- M. Davis Bacon DOL form WH-347 page 2 (mandatory)
- N. Owner's Davis Bacon Compliance Report
- O. AIS Covered Products Q &A
- P. AIS Law & Certifications
- Q. AIS Step Manufacturer Certification

ATTACHMENT A - LOBBYING CERTIFICATION - EPA FORM 6600-06

EPA Project Control Number

CERTIFICATION REGARDING LOBBYING

CERTIFICATION FOR CONTRACTS, GRANTS,

LOANS AND COOPERATIVE AGREEMENTS

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including sub-contracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31 U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Typed Name & Title of Authorized Representative

Signature and Date of Authorized Representative

ATTACHMENT B - DISCLOSURE OF LOBBYING ACTIVITIES FORM EPA STANDARD FORM LL

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

Approved by OMB
0348-0046

1. Type of Federal Action: <input type="checkbox"/> a. contract <input type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. Report Type: <input type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change For Material Change Only: year _____ quarter _____ date of last report _____
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier _____, <i>if known:</i> Congressional District, if known:	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, if known:	
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, <i>if applicable:</i> _____	
8. Federal Action Number, if known:	9. Award Amount, if known: \$ _____	
10.a. Name and Address of Lobbying Registrant <i>(if individual, last name, first name, MI):</i>	b. Individuals Performing Services <i>(including address if different from No. 10a)</i> <i>(last name, first name, MI):</i>	
<small>11. ation requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.</small>	Signature: _____ Print Name: _____ Title: _____ Telephone No.: _____ Date: _____	
Federal Use Only:		Authorized for Local Reproduction Standard Form LLL (Rev. 4/2012)

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

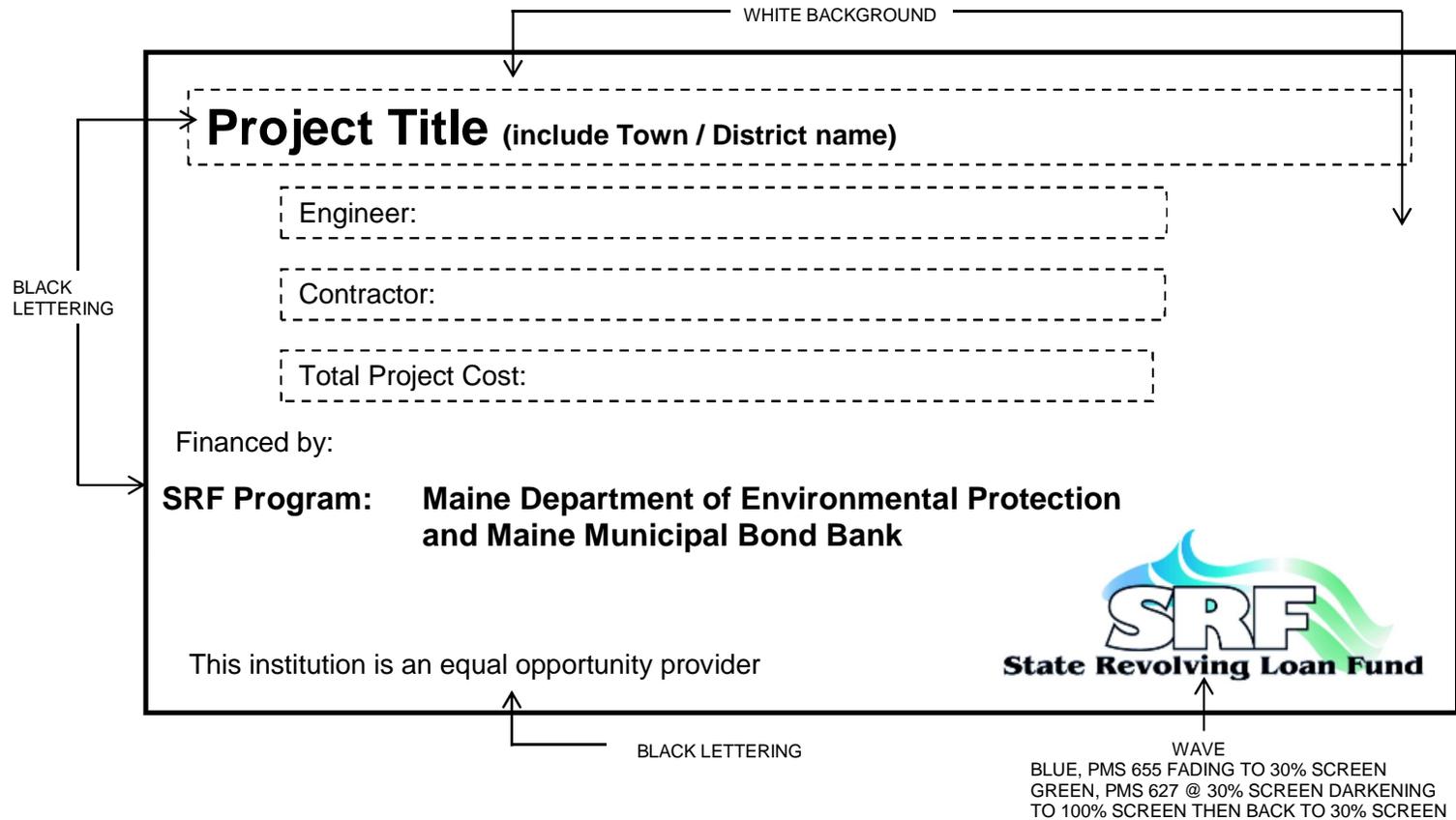
1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a followup report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, State and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.
5. If the organization filing the report in item 4 checks "Subawardee," then enter the full name, address, city, State and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.
10. (a) Enter the full name, address, city, State and zip code of the lobbying registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in item 4 to influence the covered Federal action.

(b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

According to the Paperwork Reduction Act, as amended, no persons are required to respond to a collection of information unless it displays a valid OMB Control Number. The valid OMB control number for this information collection is OMB No. 0348-0046. Public reporting burden for this collection of information is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, DC 20503.

ATTACHMENT C - SRF PROJECT SIGN DRAWING

Temporary Construction Sign for CWSRF Projects



MINIMUM SIGN DIMENSIONS: 1200 x 2400 x 19 MM (4' x 8' x 3/4") EXTERIOR
PLYWOOD (A-B GRADE)
MINIMUM LETTERING SIZE: 5 CM (2-INCHES)

ATTACHMENT D - DBE PROGRAM SUBCONTRACTOR UTILIZATION FORM - DEP 6100-4

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

This form is intended to capture the prime contractor's actual and/or anticipated use of identified certified DBE¹ subcontractors² and the estimated dollar amount of each subcontract. An EPA Financial Assistance Agreement Recipient must require its prime contractors to complete this form and include it in the bid or proposal package. Prime contractors should also maintain a copy of this form on file.

Prime Contractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Issuing/Funding Entity:			

I have identified potential DBE certified subcontractors	___ YES	___ NO	
If yes, please complete the table below. If no, please explain:			
Subcontractor Name/ Company Name	Company Address/ Phone/ Email	Est. Dollar Amt	Currently DBE Certified?
Continue on back if needed			

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Utilization Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

ATTACHMENT E - DBE PROGRAM SUBCONTRACTOR PERFORMANCE FORM - DEP 6100-3

Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Performance Form

This form is intended to capture the DBE¹ subcontractor's² description of work to be performed and the price of the work submitted to the prime contractor. An EPA Financial Assistance Agreement Recipient must require its prime contractor to have its DBE subcontractors complete this form and include all completed forms in the prime contractor's bid or proposal package.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Submitted to the Prime Contractor Involving Construction, Services, Equipment or Supplies	Price of Work Submitted to the Prime Contractor
DBE Certified By: ___ DOT ___ SBA Other: _____		Meets/ exceeds EPA certification standards? ___ YES ___ NO ___ Unknown

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

**Disadvantaged Business Enterprise (DBE) Program
DBE Subcontractor Performance Form**

I certify under penalty of perjury that the forgoing statements are true and correct. Signing this form does not signify a commitment to utilize the subcontractors above. I am aware of that in the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302 (c).

Prime Contractor Signature	Print Name
Title	Date

Subcontractor Signature	Print Name
Title	Date

The public reporting and recordkeeping burden for this collection of information is estimated to average three (3) hours per response. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed form to this address.

ATTACHMENT F - DBE PROGRAM SUBCONTRACTOR PARTICIPATION FORM - DEP 6100-2

Disadvantaged Business Enterprise (DBE) Program DBE Subcontractor Participation Form

An EPA Financial Assistance Agreement Recipient must require its prime contractors to provide this form to its DBE subcontractors. This form gives a DBE¹ subcontractor² the opportunity to describe work received and/or report any concerns regarding the EPA-funded project (e.g., in areas such as termination by prime contractor, late payments, etc.). The DBE subcontractor can, as an option, complete and submit this form to the EPA DBE Coordinator at any time during the project period of performance.

Subcontractor Name		Project Name	
Bid/ Proposal No.	Assistance Agreement ID No. (if known)	Point of Contact	
Address			
Telephone No.		Email Address	
Prime Contractor Name		Issuing/Funding Entity:	

Contract Item Number	Description of Work Received from the Prime Contractor Involving Construction, Services, Equipment or Supplies	Amount Received by Prime Contractor

¹ A DBE is a Disadvantaged, Minority, or Woman Business Enterprise that has been certified by an entity from which EPA accepts certifications as described in 40 CFR 33.204-33.205 or certified by EPA. EPA accepts certifications from entities that meet or exceed EPA certification standards as described in 40 CFR 33.202.

² Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

ATTACHMENT G - PROGRESS REPORT OF DBE SUBCONTRACTOR UTILIZATION FORM - DEP FORM



**STATE OF MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
CWSRF DBE PROGRAM**

PROGRESS REPORT OF DBE SUBCONTRACTOR UTILIZATION FORM

TO INSURE PROMPT PAYMENT THE FOLLOWING INFORMATION MUST BE SUBMITTED WITH ALL REIMBURSEMENT REQUESTS WHETHER THEY INCLUDE INVOICED AMOUNTS FROM A QUALIFYING WBE OR MBE PARTICIPANT OR NOT:

Municipality/District: _____ SRF #: _____

Name of Project: _____ Contractor: _____

Contractor's Payment Request No. _____ Period covered by the request _____

The accompanying Reimbursement Request includes the following WBE/MBE participation:

Name & Address of WBE/MBE firm to be paid	WBE	MBE	Source of Certification, i.e., DOT, EPA or SBA	Amount to be paid this request	Type of Work

This attachment must be signed by an authorized representative of the contractor.

Signature _____ Date _____

Name: _____ Title: _____

Address: _____

Phone: _____ E-Mail: _____

**ATTACHMENT H - DAVIS BACON PROJECT WAGE DETERMINATION
(TO BE MADE INTO A POSTER)**

General Decision Number: ME150018 03/20/2015 ME18

Superseded General Decision Number: ME20140018

State: Maine

Construction Type: Heavy

County: Cumberland County in Maine.

HEAVY CONSTRUCTION PROJECTS including Water and Sewer Lines

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of \$10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015
1	03/20/2015

* ELEC0567-005 03/01/2015

	Rates	Fringes
ELECTRICIAN.....	\$ 31.53	14.30

LABO0976-004 12/01/2013

	Rates	Fringes
LABORER (CONCRETE WORKER).....	\$ 19.71	16.42

SUME2011-013 03/16/2011

	Rates	Fringes
CARPENTER, Includes Form Work....	\$ 18.00	1.94
CONCRETE FINISHER.....	\$ 17.29	2.51
IRONWORKER, Reinforcing.....	\$ 20.00	0.00
LABORER: Asphalt Raker.....	\$ 16.93	1.91
LABORER: Common or General.....	\$ 13.56	1.99

LABORER: Landscape.....	\$ 15.00	0.58
LABORER: Pipelayer.....	\$ 14.42	2.38
LABORER: Flagger.....	\$ 12.43	0.95
LABORER: Wheelman.....	\$ 18.74	2.86
OPERATOR: Asphalt Paver.....	\$ 18.16	2.30
OPERATOR: Asphalt Roller.....	\$ 15.70	1.62
OPERATOR: Backhoe.....	\$ 22.22	6.48
OPERATOR: Bulldozer.....	\$ 20.43	6.13
OPERATOR: Crane.....	\$ 22.60	9.29
OPERATOR: Drill.....	\$ 17.09	3.79
OPERATOR: Excavator.....	\$ 19.88	5.06
OPERATOR: Loader.....	\$ 16.93	3.51
OPERATOR: Mechanic.....	\$ 24.35	6.66
OPERATOR: Roller.....	\$ 15.99	6.31
TRUCK DRIVER: Low Bed Truck.....	\$ 16.43	3.07
TRUCK DRIVER.....	\$ 14.67	2.04

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====
Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular

rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date

for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

ATTACHMENT I - DAVIS BACON POSTER "EMPLOYEE RIGHTS" WH-1321

EMPLOYEE RIGHTS UNDER THE DAVIS-BACON ACT

FOR LABORERS AND MECHANICS EMPLOYED ON FEDERAL OR FEDERALLY ASSISTED CONSTRUCTION PROJECTS

THE UNITED STATES DEPARTMENT OF LABOR WAGE AND HOUR DIVISION

PREVAILING WAGES

You must be paid not less than the wage rate listed in the Davis-Bacon Wage Decision posted with this Notice for the work you perform.

OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 in a work week. There are few exceptions.

ENFORCEMENT

Contract payments can be withheld to ensure workers receive wages and overtime pay due, and liquidated damages may apply if overtime pay requirements are not met. Davis-Bacon contract clauses allow contract termination and debarment of contractors from future federal contracts for up to three years. A contractor who falsifies certified payroll records or induces wage kickbacks may be subject to civil or criminal prosecution, fines and/or imprisonment.

APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY

If you do not receive proper pay, or require further information on the applicable wages, contact the Contracting Officer listed below:

or contact the U.S. Department of Labor's Wage and Hour Division.



For additional information:

1-866-4-USWAGE

(1-866-487-9243) TTY: 1-877-889-5627



WWW.WAGEHOUR.DOL.GOV

ATTACHMENT J - DAVIS BACON DOL FORM 1444

REQUEST FOR AUTHORIZATION OF ADDITIONAL CLASSIFICATION AND RATE

CHECK APPROPRIATE BOX
 SERVICE CONTRACT
 CONSTRUCTION CONTRACT

OMB Number: **9000-0089**
 Expiration Date: **7/31/2014**

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the FAR Secretariat (MVP), Office of Acquisition Policy, GSA, Washington, DC 20405; and to the Office of Management and Budget, Paperwork Reduction Project (9000-0089), Washington, DC 20503.

INSTRUCTIONS: THE CONTRACTOR SHALL COMPLETE ITEMS 3 THROUGH 16, KEEP A PENDING COPY, AND SUBMIT THE REQUEST, IN QUADRUPPLICATE, TO THE CONTRACTING OFFICER.

1. TO: ADMINISTRATOR, Employment Standards Administration WAGE AND HOUR DIVISION U.S. DEPARTMENT OF LABOR WASHINGTON, D.C. 20210		2. FROM: (REPORTING OFFICE)		
3. CONTRACTOR				4. DATE OF REQUEST
5. CONTRACT NUMBER	6. DATE BID OPENED (SEALED BIDDING)	7. DATE OF AWARD	8. DATE CONTRACT WORK STARTED	9. DATE OPTION EXERCISED (If APPLICABLE) (SCA ONLY)
10. SUBCONTRACTOR (IF ANY)				

11. PROJECT AND DESCRIPTION OF WORK (ATTACH ADDITIONAL SHEET IF NEEDED)

12. LOCATION (CITY, COUNTY AND STATE)

13. IN ORDER TO COMPLETE THE WORK PROVIDED FOR UNDER THE ABOVE CONTRACT, IT IS NECESSARY TO ESTABLISH THE FOLLOWING RATE(S) FOR THE INDICATED CLASSIFICATION(S) NOT INCLUDED IN THE DEPARTMENT OF LABOR DETERMINATION

NUMBER: _____ DATED: _____

a. LIST IN ORDER: PROPOSED CLASSIFICATION TITLE(S); JOB DESCRIPTION(S); DUTIES; AND RATIONALE FOR PROPOSED CLASSIFICATIONS (SCA ONLY) <i>(Use reverse or attach additional sheets, if necessary)</i>	b. WAGE RATE(S)	c. FRINGE BENEFITS PAYMENTS

14. SIGNATURE AND TITLE OF SUBCONTRACTOR REPRESENTATIVE (IF ANY)	15. SIGNATURE AND TITLE OF PRIME CONTRACTOR REPRESENTATIVE	
16. SIGNATURE OF EMPLOYEE OR REPRESENTATIVE	TITLE	CHECK APPROPRIATE BOX-REFERENCING BLOCK 13. <input type="checkbox"/> AGREE <input type="checkbox"/> DISAGREE

TO BE COMPLETED BY CONTRACTING OFFICER (CHECK AS APPROPRIATE - SEE FAR 22.1019 (SCA) OR FAR 22.406-3 (DBA))

- THE INTERESTED PARTIES AGREE AND THE CONTRACTING OFFICER RECOMMENDS APPROVAL BY THE WAGE AND HOUR DIVISION. AVAILABLE INFORMATION AND RECOMMENDATIONS ARE ATTACHED.
- THE INTERESTED PARTIES CANNOT AGREE ON THE PROPOSED CLASSIFICATION AND WAGE RATE. A DETERMINATION OF THE QUESTION BY THE WAGE AND HOUR DIVISION IS THEREFORE REQUESTED. AVAILABLE INFORMATION AND RECOMMENDATIONS ARE ATTACHED.

(Send copies 1, 2, and 3 to Department of Labor)

SIGNATURE OF CONTRACTING OFFICER OR REPRESENTATIVE	TITLE AND COMMERCIAL TELEPHONE NO.	DATE SUBMITTED
--	------------------------------------	----------------

ATTACHMENT K - DAVIS BACON DOL FORM 1445

LABOR STANDARDS INTERVIEW

CONTRACT NUMBER			EMPLOYEE INFORMATION		
NAME OF PRIME CONTRACTOR			LAST NAME		FIRST NAME
			STREET ADDRESS		
NAME OF EMPLOYER			CITY		STATE
			ZIP CODE		
SUPERVISOR'S NAME			WORK CLASSIFICATION		WAGE RATE
LAST NAME	FIRST NAME	MI			

ACTION	CHECK BELOW	
	YES	NO
Do you work over 8 hours per day?		
Do you work over 40 hours per week?		
Are you paid at least time and a half for overtime hours?		
Are you receiving any cash payments for fringe benefits required by the posted wage determination decision?		

WHAT DEDUCTIONS OTHER THAN TAXES AND SOCIAL SECURITY ARE MADE FROM YOUR PAY?

HOW MANY HOURS DID YOU WORK ON YOUR LAST WORK DAY BEFORE THIS INTERVIEW?	TOOLS YOU USE	
DATE OF LAST WORK DAY BEFORE INTERVIEW (YYMMDD)		
DATE YOU BEGAN WORK ON THIS PROJECT (YYMMDD)		

THE ABOVE IS CORRECT TO THE BEST OF MY KNOWLEDGE

EMPLOYEE'S SIGNATURE			DATE (YYMMDD)
INTERVIEWER	SIGNATURE	TYPED OR PRINTED NAME	DATE (YYMMDD)

INTERVIEWER'S COMMENTS

WORK EMPLOYEE WAS DOING WHEN INTERVIEWED	ACTION <i>(If explanation is needed, use comments section)</i>	YES	NO
	IS EMPLOYEE PROPERLY CLASSIFIED AND PAID?		
	ARE WAGE RATES AND POSTERS DISPLAYED?		

FOR USE BY PAYROLL CHECKER

IS ABOVE INFORMATION IN AGREEMENT WITH PAYROLL DATA?

YES NO

COMMENTS

CHECKER

LAST NAME	FIRST NAME	MI	JOB TITLE
SIGNATURE			DATE (YYMMDD)

**ATTACHMENT L - DAVIS BACON DOL FORM WH-347
OPTION PAYROLL FORM**

**ATTACHMENT M - DAVIS BACON DOL FORM WH-347
MANDATORY PAYROLL CERTIFICATE FORM**

Date _____

I, _____
(Name of Signatory Party) (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the
(Contractor or Subcontractor)

_____ ; that during the payroll period commencing on the
(Building or Work)

_____ day of _____, _____, and ending the _____ day of _____, _____,
all persons employed on said project have been paid the full weekly wages earned, that no rebates have
been or will be made either directly or indirectly to or on behalf of said

_____ from the full
(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly
from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part
3 (29 C.F.R. Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948,
63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are
correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the
applicable wage rates contained in any wage determination incorporated into the contract; that the
classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide
apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of
Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a
State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

- in addition to the basic hourly wage rates paid to each laborer or mechanic listed in
the above referenced payroll, payments of fringe benefits as listed in the contract
have been or will be made to appropriate programs for the benefit of such
employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

- Each laborer or mechanic listed in the above referenced payroll has been paid,
as indicated on the payroll, an amount not less than the sum of the applicable
basic hourly wage rate plus the amount of the required fringe benefits as listed
in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE

SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR
SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE
31 OF THE UNITED STATES CODE.

ATTACHMENT N - OWNER'S DAVIS BACON COMPLIANCE REPORT



Owner's Davis-Bacon Compliance Report



Project Name _____ SRF Project # C230 _____

Project Owner: _____

Certified Payrolls Reviewed By: _____
(Printed name of Owner's Representative)

Employee interviews have been conducted in accordance with the contract requirements. Yes No

Prime Contractor: _____

Prime Contractor's Pay Application No: _____ (Note: Only one allowed per Compliance Report)

Application Period: From _____ to _____

Check one box and sign below:

- For the application period indicated, there were no certified payrolls reported because there were no workers on the site that were subject to the Davis-Bacon and Related Acts.
- For the application period indicated, the certified payrolls are in compliance with the Davis-Bacon and Related Acts.
- For the application period indicated, the certified payrolls are not in compliance with the Davis-Bacon and Related Acts. A Compliance Report for the corrective action will be submitted ASAP.

Summary of noncompliant findings and follow up actions needed:

Owner's Representative Signature

Date

ATTACHMENT O - AIS COVERED PRODUCTS Q&A

Covered Iron and Steel Products

(Guidance taken from EPA Memorandum dated March 20, 2014)

1) What is an iron or steel product?

For purposes of the CWSRF and DWSRF projects that must comply with the AIS requirement, an iron or steel product is one of the following made primarily of iron or steel that is permanently incorporated into the public water system or treatment works:

- Lined or unlined pipes or fittings;
- Manhole Covers;
- Municipal Castings (defined in more detail below);
- Hydrants;
- Tanks;
- Flanges;
- Pipe clamps and restraints;
- Valves;
- Structural steel (defined in more detail below);
- Reinforced precast concrete; and
- Construction materials (defined in more detail below).

2) What does the term ‘primarily iron or steel’ mean?

‘Primarily iron or steel’ places constraints on the list of products above. For one of the listed products to be considered subject to the AIS requirements, it must be made of greater than 50% iron or steel, measured by cost. The cost should be based on the material costs.

3) Can you provide an example of how to perform a cost determination?

For example, the iron portion of a fire hydrant would likely be the bonnet, body and shoe, and the cost then would include the pouring and casting to create those components. The other material costs would include non-iron and steel internal workings of the fire hydrant (i.e., stem, coupling, valve, seals, etc). However, the assembly of the internal workings into the hydrant body would not be included in this cost calculation. If one of the listed products is not made primarily of iron or steel, United States (US) provenance is not required. An exception to this definition is reinforced precast concrete, which is addressed in a later question.

4) If a product is composed of more than 50% iron or steel, but is not listed in the above list of items, must the item be produced in the US? Alternatively, must the iron or steel in such a product be produced in the US?

The answer to both question is no. Only items on the above list must be produced in the US. Additionally, the iron or steel in a non-listed item can be sourced from outside the US.

5) What is the definition of steel?

Steel means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements. Metallic elements such as chromium, nickel, molybdenum, manganese, and

silicon may be added during the melting of steel for the purpose of enhancing properties such as corrosion resistance, hardness, or strength. The definition of steel covers carbon steel, alloy steel, stainless steel, tool steel and other specialty steels.

6) What does ‘produced in the United States’ mean?

Production in the United States of the iron or steel products used in the project requires that all manufacturing processes, including application of coatings, must take place in the United States, with the exception of metallurgical processes involving refinement of steel additives. All manufacturing processes includes processes such as melting, refining, forming, rolling, drawing, finishing, fabricating and coating. Further, if a domestic iron and steel product is taken out of the US for any part of the manufacturing process, it becomes foreign source material. However, raw materials such as iron ore, limestone and iron and steel scrap are not covered by the AIS requirement, and the material(s), if any, being applied as a coating are similarly not covered. Non-iron or steel components of an iron and steel product may come from non-US sources. For example, for products such as valves and hydrants, the individual non-iron and steel components do not have to be of domestic origin.

7) Are the raw materials used in the production of iron or steel required to come from US sources?

No. Raw materials, such as iron ore, limestone, scrap iron, and scrap steel, can come from non-US sources.

8) If an above listed item is primarily made of iron or steel, but is only at the construction site temporarily, must such an item be produced in the US?

No. Only the above listed products made primarily of iron or steel, permanently incorporated into the project must be produced in the US. For example trench boxes, scaffolding or equipment, which are removed from the project site upon completion of the project, are not required to be made of U.S. Iron or Steel.

9) What is the definition of ‘municipal castings’?

Municipal castings are cast iron or steel infrastructure products that are melted and cast. They typically provide access, protection, or housing for components incorporated into utility owned drinking water, storm water, wastewater, and surface infrastructure. They are typically made of grey or ductile iron, or steel. Examples of municipal castings are:

- Access Hatches;
- Ballast Screen;
- Benches (Iron or Steel);
- Bollards;
- Cast Bases;
- Cast Iron Hinged Hatches, Square and Rectangular;
- Cast Iron Riser Rings;
- Catch Basin Inlet;
- Cleanout/Monument Boxes;
- Construction Covers and Frames;
- Curb and Corner Guards;
- Curb Openings;

Detectable Warning Plates;
 Downspout Shoes (Boot, Inlet);
 Drainage Grates, Frames and Curb Inlets;
 Inlets;
 Junction Boxes;
 Lampposts;
 Manhole Covers, Rings and Frames, Risers;
 Meter Boxes;
 Service Boxes;
 Steel Hinged Hatches, Square and Rectangular;
 Steel Riser Rings;
 Trash receptacles;
 Tree Grates;
 Tree Guards;
 Trench Grates; and
 Valve Boxes, Covers and Risers.

10) What is ‘structural steel’?

Structural steel is rolled flanged shapes, having at least one dimension of their cross-section three inches or greater, which are used in the construction of bridges, buildings, ships, railroad rolling stock, and for numerous other constructional purposes. Such shapes are designated as wide-flange shapes, standard I-beams, channels, angles, tees and zees. Other shapes include H-piles, sheet piling, tie plates, cross ties, and those for other special purposes.

11) What is a ‘construction material’ for purposes of the AIS requirement?

Construction materials are those articles, materials, or supplies made primarily of iron and steel, that are permanently incorporated into the project, not including mechanical and/or electrical components, equipment and systems. Some of these products may overlap with what is also considered “structural steel”. This includes, but is not limited to, the following products: wire rod, bar, angles, concrete reinforcing bar, wire, wire cloth, wire rope and cables, tubing, framing, joists, trusses, fasteners (i.e., nuts and bolts), welding rods, decking, grating, railings, stairs, access ramps, fire escapes, ladders, wall panels, dome structures, roofing, ductwork, surface drains, cable hanging systems, manhole steps, fencing and fence tubing, guardrails, doors, and stationary screens.

12) What is not considered a ‘construction material’ for purposes of the AIS requirement?

Mechanical and electrical components, equipment and systems are not considered construction materials. Mechanical equipment is typically that which has motorized parts and/or is powered by a motor. Electrical equipment is typically any machine powered by electricity and includes components that are part of the electrical distribution system.

The following examples (including their appurtenances necessary for their intended use and operation) are NOT considered construction materials: pumps, motors, gear reducers, drives (including variable frequency drives (VFDs)), electric/pneumatic/manual accessories used to operate valves (such as electric valve actuators), mixers, gates, motorized screens (such as traveling screens), blowers/aeration equipment, compressors, meters, sensors, controls and switches, supervisory control and data acquisition

(SCADA), membrane bioreactor systems, membrane filtration systems, filters, clarifiers and clarifier mechanisms, rakes, grinders, disinfection systems, presses (including belt presses), conveyors, cranes, HVAC (excluding ductwork), water heaters, heat exchangers, generators, cabinetry and housings (such as electrical boxes/enclosures), lighting fixtures, electrical conduit, emergency life systems, metal office furniture, shelving, laboratory equipment, analytical instrumentation, and dewatering equipment.

13) If the iron or steel is produced in the US, may other steps in the manufacturing process take place outside of the US, such as assembly?

No. Production in the US of the iron or steel used in a listed product requires that all manufacturing processes must take place in the United States, except metallurgical processes involving refinement of steel additives.

14) What processes must occur in the US to be compliant with the AIS requirement for reinforced precast concrete?

While reinforced precast concrete may not be at least 50% iron or steel, in this particular case, the reinforcing bar and wire must be produced in the US and meet the same standards as for any other iron or steel product. Additionally, the casting of the concrete product must take place in the US. The cement and other raw materials used in concrete production are not required to be of domestic origin. If the reinforced concrete is cast at the construction site, the reinforcing bar and wire are considered to be a construction material and must be produced in the US.

ATTACHMENT P - AIS LAW & CERTIFICATION



From the “Consolidated Appropriations Act, 2014”

H.R. 3547 (PL113-76, enacted 1/17/2014)

USE OF AMERICAN IRON AND STEEL

“SEC. 436. (a)(1) None of the funds made available by a State water pollution control revolving fund as authorized by title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) or made available by a drinking water treatment revolving loan fund as authorized by section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j-12) shall be used for a project for the construction, alteration, maintenance, or repair of a public water system or treatment works unless all of the iron and steel products used in the project are produced in the United States.

(2) In this section, the term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(b) Subsection (a) shall not apply in any case or category of cases in which the Administrator of the Environmental Protection Agency (in this section referred to as the “Administrator”) finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(c) If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public on an informal basis a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(d) This section shall be applied in a manner consistent with United States obligations under international agreements.

(e) The Administrator may retain up to 0.25 percent of the funds appropriated in this Act for the Clean and Drinking Water State Revolving Funds for carrying out the provisions described in subsection (a)(1) for management and oversight of the requirements of this section.

(f) This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency’s capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of the enactment of this Act.”



CERTIFICATION BY THE OWNER
OF COMPLIANCE WITH THE
USE OF AMERICAN IRON AND STEEL LAW
enacted on 1/17/2014

(To be attached to each SRF requisition submitted for payment)

We, the Owner named, _____, having obtained a loan from the State of Maine Clean Water State Revolving Fund (CWSRF), to fund the Project named _____, hereby submit to the Department of Environmental Protection, certification from each contractor working on the Project that the use of American Iron and Steel in the construction of the Project complies with the law, or that a waiver has been obtained from the U.S. Environmental Protection Agency. Thereby, it is to the best of the Owner's knowledge that the costs being requested with this SRF requisition # _____ are in compliance with the Use of American Iron and Steel Law.

Signature of Official

Printed name

Date

Attachment: Certification by Contractor

ATTACHMENT Q - AIS STEP MANUFACTURER CERTIFICATION

Sample Step Manufacturer Certification

(Documentation must be provided on company letterhead)

Date

Company Name

Company Address

City, State Zip

Subject: American Iron and Steel Step Manufacturer Certification for Project
Name _____

I, _____ (company representative), certify that the _____ (melting, bending, coating, galvanizing, cutting, etc.) process for _____ (manufacturing or fabricating) the following products and/or materials shipped or provided for the project is in full compliance with the American Iron and Steel requirement as mandated in EPA's State Revolving Fund Programs.

Item, Products and/or Materials:

1. _____
2. _____
3. _____

Such process took place at the following location: _____(address)

If any of the above compliance statements change while providing material to this project we will immediately notify the prime contractor and the engineer.

Company representative

Signature

Date

**ATTACHMENT R - EJCDC C-700 STANDARD GENERAL CONDITIONS OF THE
CONSTRUCTION CONTRACT**

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

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



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NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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 which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer 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, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer’s written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will

sign and deliver the Agreement.

28. *Notice to Proceed*—A written notice given 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 under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *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.
40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

41. *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 for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *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 at the Site.
44. *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 thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, 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 Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *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, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

- A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. 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 Paragraph 9.09 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. 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 14.04 or 14.05).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean 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, shall mean 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, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. 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 Bonds and Evidence of Insurance

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement 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 Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

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

2.05 Before Starting Construction

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), 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 Documents;
 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.

2.06 *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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, 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 instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial 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 for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall 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 component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one 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. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.

- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement 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, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, 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 Contract Documents.

3.03 *Reporting and Resolving Discrepancies A. Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, 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) any standard, specification, manual, or code, or (c) 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
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 Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract

Documents); 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 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 1. A Field Order;
 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier 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 editions; or
 2. 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.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be

deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

**ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS;
HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS**

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor 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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- 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 the Work is to be performed 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.

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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; or
 - 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.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
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 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition 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 meet any one or more of the categories described in Paragraph 4.03.A; and
 - 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 Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final 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
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be

conducted by or for Contractor prior to Contractor's making such final commitment; or

- c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, 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 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they

are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *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.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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; or
 - 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 any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) 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 4.06.E.

- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. 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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. 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. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. 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 or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. 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 a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract

Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds 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 shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed 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:
1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims 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.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary

Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
 - C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
 - D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
 - E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their 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 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 Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (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. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

- B. 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:
 - 1. loss 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 perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, 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. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who

was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *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. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *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 at all times maintain good discipline and order at the Site.
- B. 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 shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *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.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall 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 shall 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.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 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 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description 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 or no substitution is permitted, 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.
 - 1. "*Or-Equal*" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it 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; and
 - 3) it has a proven record of performance and availability of responsive service.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and

- 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) 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
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and

- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

- B. Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. 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.
- F. Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A.* Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B.* If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or

other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the

difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (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 any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *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 a particular 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 shall be disclosed by Owner 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.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. 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 opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *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. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *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.

6.11 *Use of Site and Other Areas*

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

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
 3. 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 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 by or based upon Contractor's performance of the Work.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall 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 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 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 property to stresses or pressures that will endanger it.

6.12 *Record Documents*

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

6.13 *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. 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, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. 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. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. 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.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.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 (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).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of 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.

6.16 *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 threatened 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 thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will 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 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. 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 6.17.D.

- B. 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. *Submittal Procedures:*

- 1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples

and with the requirements of the Work and the Contract Documents;

- b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. 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, conform to the information given in 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 (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.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's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

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.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *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 and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, modification, or improper 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.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - 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 or the issuance of a notice of acceptability by Engineer;
 - 6. any inspection, test, or approval by others; or
 - 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. 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 performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury 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 6.20.A shall 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.

- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations

and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 Related Work at Site

- A. Owner may perform other work related to the Project at the Site with Owner’s employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner’s employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. 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. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor’s Work depends upon work performed by others under this Article 7, 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.

7.02 Coordination

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
 - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

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

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *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.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *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 Documents.

8.12 *Compliance with Safety Program*

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 pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *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 Documents.

9.02 *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 9.09. 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.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which 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. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. 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, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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 shall 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 Paragraph 14.07.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 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *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 by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 2. changes in the 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; and
 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of

executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *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.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
 - 1. deny the Claim in whole or in part;
 - 2. approve the Claim; or
 - 3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall 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 shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall 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, who 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 shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including 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, and hand tools not owned by the workers, 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.
- c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the 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 property insurance established in accordance with Paragraph 5.06.D), 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 shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall 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 telegrams, long distance telephone calls, telephone 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 Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety 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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. 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.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 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:*
1. Contractor agrees that:
 - a. 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
 - b. 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 on account of any of the foregoing will be valid.
- C. *Contingency Allowance:*
1. Contractor agrees that a 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 on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 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. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- 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. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for 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, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall 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 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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 the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's

ability to complete the Work within the Contract Times.

- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will 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 therewith as applicable.

13.03 Tests and Inspections

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- 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 and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. 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.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, 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, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay 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 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. 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, or both, 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, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *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, 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 shall 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.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay 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 correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *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 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, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If 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. 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 correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. 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.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, 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.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or

warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay 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) 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 pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *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 rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, 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, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, 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 (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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *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. 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 shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, 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 9.07, 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 Documents; 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, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, 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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. 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;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action 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, when Contractor remedies the reasons for such action.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *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 (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- 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 tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment.

Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. 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 tentative list.

14.05 *Partial Utilization*

- 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. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and 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 14.04.A through D for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and 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 14.04 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 5.10 regarding property insurance.

14.06 *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 is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *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, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) 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.

B. *Engineer's Review of Application and Acceptance:*

1. 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 Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. 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. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner may Terminate for Cause*

- A. The occurrence of any one or more of the following events will 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 established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. 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
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.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 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) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. 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. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner may Terminate For Convenience*

- A. Upon seven 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;
 3. 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) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor may Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven 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 15.03.
- 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, seven 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 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
2. agrees with the other party to submit the Claim to another dispute resolution process; or
3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times

- A. When any period of time is referred to in the Contract Documents 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.

17.03 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 Documents. 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.

17.04 Survival of Obligations

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 Controlling Law

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 Headings

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

APPENDIX A - BORING LOGS

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.1'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts			Depth	Stratum Description
								4" Pavement
								Brown Sand and Gravel Trace Silt
								Brown Silty Fine Sand
							5'	
								Brown Fine Sand with Organics (Fill)(Petroleum Odor)
							10'	
								Brown Silt Some Sand
							15'	
								Bottom of Exploration @ 15' (No Refusal)
							20'	
							25'	
							30'	

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.5'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts				Depth	Stratum Description
								4" Pavement	
								Brown Sand and Gravel Trace Silt	
								Brown Silty Fine Sand	
							5'		
								Brown Sandy Silt	
							10'		
								Grey Silt Some Sand	
							15'		
								Bottom of Exploration @ 15' (No Refusal)	
							20'		
							25'		
							30'		

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.5'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts			Depth	Stratum Description
								5" Pavement
								Brown Sand and Gravel Trace Silt
								Brown Silty Fine Sand
							5'	Organic Sand and Silt
							10'	Grey Fine Sand (Strong Petroleum Odor)
							15'	Grey Clayey Silt
								Bottom of Exploration @ 15' (No Refusal)
							20'	
							25'	
							30'	

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.7'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts			Depth	Stratum Description
								3" Pavement
								Brown Sand and Gravel Trace Silt
							5'	Brown Silty Fine Sand Occasional Cobble
							10'	Grey Silty Fine Sand
							15'	Grey Clayey Silt
								Bottom of Exploration @ 15' (No Refusal)
							20'	
							25'	
							30'	

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.9'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts				Depth	Stratum Description
									3.5" Pavement
									Brown Sand and Gravel Trace Silt
								5'	Brown Silty Fine Sand
								10'	Grey Silty Fine Sand
								15'	Grey Clayey Silt
									Bottom of Exploration @ 15' (No Refusal)
								20'	
								25'	
								30'	

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.2'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts			Depth	Stratum Description
								3.5" Pavement
								Brown Sand and Gravel Trace Silt
								Brown Silty Fine Sand
							5'	
							10'	Grey Silty Fine Sand
							15'	Grey Clayey Silt
								Bottom of Exploration @ 15' (No Refusal)
							20'	
							25'	
							30'	

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.8'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts			Depth	Stratum Description
								3" Pavement
								Brown Sand and Gravel Trace Silt
							5'	Brown Silty Fine Sand
							10'	Grey Silty Fine Sand
							15'	Grey Clayey Silt
								Bottom of Exploration @ 15' (No Refusal)
							20'	
							25'	
							30'	

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.3'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts			Depth	Stratum Description
								3.5" Pavement
								Brown Sand and Gravel Trace Silt
							5'	Brown Silty Fine Sand
							10'	Grey Silty Fine Sand
							15'	Grey Clayey Silt
								Bottom of Exploration @ 15' (No Refusal)
							20'	
							25'	
							30'	

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.3'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts				Depth	Stratum Description
									5" Pavement
									Brown Sand and Gravel Trace Silt
								5'	Brown Fine Sand Some Silt
									Grey Silty Fine Sand
									Organic Layer 7'-8'
								10'	
									Grey Clayey Silt
								15'	
									Bottom of Exploration @ 15' (No Refusal)
								20'	
								25'	
								30'	

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.9'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts				Depth	Stratum Description
								5" Pavement	
								Brown Sand and Gravel Trace Silt	
								Brown Fine Sand Some Silt	
							5'		
								Grey Silty Fine Sand	
								Organic Layer 7'-8'	
							10'		
								Grey Clayey Silt	
							15'		
								Bottom of Exploration @ 15' (No Refusal)	
							20'		
							25'		
							30'		

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		5.1'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts				Depth	Stratum Description
								5" Pavement	
								Brown Sand and Gravel Trace Silt	
							5'	Brown Fine-Coarse Sand Some Silt	
							10'	Grey Clayey Silt	
							15'	Bottom of Exploration @ 15' (No Refusal)	
							20'		
							25'		
							30'		

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.2'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts				Depth	Stratum Description
								3.75" Pavement	
								Brown Sand and Gravel Trace Silt	
							5'		
								Brown Fine-Course Sand Some Silt and Cobbles with Organics	
							10'		
								Grey Clayey Silt	
							15'	Bottom of Exploration @ 15' (No Refusal)	
							20'		
							25'		
							30'		

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

Type	Casing SSA	Sample SS	Core	Ground Water Observation 6.8'	
Size	4"	1 3/8"		Start Date: 5/9/14	Finish Date: 5/9/14
Hammer Wt.		140			
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts			Depth	Stratum Description
							4" Pavement	
							Brown Sand and Gravel Trace Silt	
							5'	
							Brown Fine-Course Sand Some Silt	
							10'	
							Grey Clayey Silt	
							15'	
							Bottom of Exploration @ 15' (No Refusal)	
							20'	
							25'	
							30'	

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.3'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts				Depth	Stratum Description
								5" Pavement	
								Brown Sand and Gravel Trace Silt	
							5'		
								Brown Fine-Course Sand Some Silt	
							10'		
								Grey Clayey Silt	
							15'	Bottom of Exploration @ 15' (No Refusal)	
							20'		
							25'		
							30'		

Northern Test Boring, Inc. Boring Log

Client: City of Portland	Project Name: Anderson Street Sidewalk Improvements
Location: Portland, Me	Driller: Mike Nadeau

	Casing	Sample	Core	Ground Water Observation	
Type	SSA	SS		6.9'	
Size	4"	1 3/8"		Start Date:	Finish Date:
Hammer Wt.		140		5/9/14	5/9/14
Hammer Fall		30"			

No.	Pen	Rec	Sample Depth	Sample Blow Counts				Depth	Stratum Description
								3.5" Pavement	
								Brown Sand and Gravel Trace Silt	
							5'		
								Brown Fine-Course Sand Some Silt	
							10'		
								Grey Clayey Silt	
							15'		
								Bottom of Exploration @ 15' (No Refusal)	
							20'		
							25'		
							30'		