

June 9, 2011

**Addendum #1**  
City of Portsmouth  
Portsmouth, New Hampshire  
Public Works Department

**MAPLE HAVEN DRAINAGE IMPROVEMENTS**  
**Bid #38-11**

This addendum forms part of the original document titled: Bid #38-11 Maple Haven Drainage Improvements

The following forms Addendum #1.

1. The attached "Proposal Form" replaces the original "Proposal Form" of the original bid document. The following changes were made:

Item # 583.8, Stone Fill, D50=12", is added.

Item # 603.34118, 18" Steel Flared End Section, is added.

Item # 603.82218 18" PE pipe (smooth interior), quantity is changed.

Item # 603.83218 18" Polypropylene HP pipe (smooth interior), is added.

Item # 603.14 CB, 4-foot diameter, Type C, is deleted.

2. The attached *NHDES Wetland and Non-Site Specific Permit 2011-00510* becomes part of the original Bid #38-11 documents.

3. The attached report titled "Ledge Probe Report", prepared by John Turner Consulting, Inc., dated May 13, 2011 is provided as information to bidders.

4. The attached "Special Provisions – Amendment to Section 603 – Culverts and Storm Drains" replaces the original "Special Provisions – Amendment to Section 603 – Culverts and Storm Drains".

5. The attached drawing Sheet C-9, *Winchester Street Ext. Plan and Profile*, revision 1, dated June 7, 2011, replaces the original Sheet C-9. The following changes were made within the U.S. Route 1 right-of-way based on comments received from the New Hampshire Department of Transportation:

- The pipe crossing U.S. Route 1 is changed to 18" Polypropylene HP (SaniTite) pipe.
- The Type C catch basin is eliminated.
- Steel flared end sections and stone fill are added to the pipe ends on the west side of U.S. Route 1

6. The attached drawing Sheet C-18, *Details Sheet*, revision 1, dated June 7, 2011, replaces the original Sheet C-18. Changes to the detail titled, "Route 1 Utility Crossing Detail" are based on comments received from the New Hampshire Department of Transportation.

7. All asphalt paving related portions of the work shall be completed by October 14, 2011. Substantial completion of all items will be November 18<sup>th</sup>, 2011. Final completion shall be by May 15, 2012.

**Please acknowledge this addendum within your proposal. Failure to do so may cause a bidder to be disqualified.**

**PROPOSAL FORM**

**MAPLE HAVEN DRAINAGE IMPROVEMENTS**

CITY OF PORTSMOUTH, N.H.

To the City of Portsmouth, New Hampshire, herein called the Owner.

The undersigned, as Bidder, herein referred to as singular and masculine declares as follows:

1. All interested in the Bid as Principals are named herein.
2. This bid is not made jointly, or in conjunction, cooperation or collusion with any other person, firm, corporation, or other legal entity;
3. No officer, agent or employee of the Owner is directly or indirectly interested in this Bid.
4. The bidder has carefully examined the sites of the proposed work and fully informed and satisfied himself as to the conditions there existing, the character and requirements of the proposed work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this Bid, and the bidder has carefully read and examined the Drawings, Agreement, Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof;
5. The bidder understands that the quantities of work calculated in the Bid or indicated on the Drawings or in the Specifications or other Contract Documents are approximate and are subject to increase or decrease or deletion as deemed necessary by the Portsmouth City Engineer. Any such changes will not result in or be justification for any penalty or increase in contract prices; and agrees that, if the Bid is accepted the bidder will contract with the Owner, as provided in the Contract Documents, this Bid Form being part of said Contract Documents, and that the bidder will supply or perform all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other activities required by the Contract Documents in the manner and within the time therein set forth, and that the bidder will take in full payment therefore the following item prices, to wit:

**PROPOSAL FORM**

<b>ITEM #</b>	<b>EST. QTY.</b>	<b>UNITS</b>	<b>ITEM DESCRIPTION &amp; UNIT PRICE IN WORDS</b>	<b>UNIT PRICE IN FIGURES</b>	<b>ITEM TOTAL IN FIGURES</b>
201.1	1	U	Remove existing large trees, stumps and vegetation where shown	\$ _____	\$ _____
202.5	18	Ea	Catch Basin or Manhole Structure Removal	\$ _____	\$ _____
202.5A	29	Ea	Fill and Abandon Drainage Structure	\$ _____	\$ _____
206.19	75*	Cy	Exploratory Excavation	\$ _____	\$ _____
206.2	100*	Cy	Rock Structure Excavation (minimum \$30/ Cy; maximum \$80/ Cy)	\$ _____	\$ _____
214	39,200	Sy	Fine Grading (F)	\$ _____	\$ _____
304.3	120*	Cy	Crushed Gravel for Drives	\$ _____	\$ _____
306.210	20,000	Sy	10" Reclaim, Rehandled & Removed Material as Directed for Maple Haven South (F)	\$ _____	\$ _____
306.212	19,200	Sy	12" Reclaim, Rehandled & Removed Material as Directed for Maple Haven North (F)	\$ _____	\$ _____
306.33	17,600	Gal	Emulsified Asphalt for injection (SS01 Emulsion)	\$ _____	\$ _____
306.5	35,300	Sy	6" Asphalt Emulsion Injection Process (Area based on new road width)	\$ _____	\$ _____

**PROPOSAL FORM** (continued)

<b>ITEM #</b>	<b>EST. QTY.</b>	<b>UNITS</b>	<b>ITEM DESCRIPTION &amp; UNIT PRICE IN WORDS</b>	<b>UNIT PRICE IN FIGURES</b>	<b>ITEM TOTAL IN FIGURES</b>
403.11	4,065	Tons	Machine Paving – 2” compacted thickness	\$ _____	\$ _____
403.12	120*	Tons	Hand Method Bituminous Paving	\$ _____	\$ _____
520.421	100*	Cy	Class F Flowable Fill (trench backfill)	\$ _____	\$ _____
583.8	10	CY	Stone Fill, D50=12"	\$ _____	\$ _____
603.00330	8	Lf	30” R.C. Pipe, 3000D	\$ _____	\$ _____
603.30330	1	Ea	30” R.C. Flared End Sections (with grate)	\$ _____	\$ _____
603.34118	2	Ea	18” Steel Flared End Sections	\$ _____	\$ _____
603.36130	1	Ea	30” Metal Flared End Sections (with grate)	\$ _____	\$ _____
603.81004	139	Ea	4” PVC, SDR 35, Drain Laterals to Property Line (Incl. Pipe Core and Fittings)	\$ _____	\$ _____
603.82212	4,164	Lf	12” PE pipe (smooth interior)	\$ _____	\$ _____
603.82215	2,952	Lf	15” PE pipe (smooth interior)	\$ _____	\$ _____

**PROPOSAL FORM** (continued)

<b>ITEM #</b>	<b>EST. QTY.</b>	<b>UNITS</b>	<b>ITEM DESCRIPTION &amp; UNIT PRICE IN WORDS</b>	<b>UNIT PRICE IN FIGURES</b>	<b>ITEM TOTAL IN FIGURES</b>
603.82218	1,243	Lf	18" PE pipe (smooth interior)	\$ _____	\$ _____
603.83218	79	Lf	18" Polypropylene HP pipe (smooth interior)	\$ _____	\$ _____
603.82222A	78	Lf	22" HDPE Pipe Lining System (for 24" CMP)	\$ _____	\$ _____
603.82224	1,058	Lf	24" PE pipe (smooth interior)	\$ _____	\$ _____
603.82230	373	Lf	30" PE pipe (smooth interior)	\$ _____	\$ _____
604.0007	59	Ea	Polyethylene Liner for CB	\$ _____	\$ _____
604.12	80	Ea	CB, 4-foot diameter, Type B (Includes Hood)	\$ _____	\$ _____
604.125	2	Ea	CB, 5-foot diameter, Type B (Includes Hood)	\$ _____	\$ _____
604.19	4	Ea	CB, 4-foot dia., 24"x36" grate (Inc. Hood)	\$ _____	\$ _____
604.195	2	Ea	CB, 5-foot dia., 24"x36" grate (Inc. Hood))	\$ _____	\$ _____
604.22	1	Ea	Drop Inlet Basin	\$ _____	\$ _____

**PROPOSAL FORM** (continued)

<b>ITEM #</b>	<b>EST. QTY.</b>	<b>UNITS</b>	<b>ITEM DESCRIPTION &amp; UNIT PRICE IN WORDS</b>	<b>UNIT PRICE IN FIGURES</b>	<b>ITEM TOTAL IN FIGURES</b>
604.32	32	Ea	Drainage manholes, 4-foot diameter	\$ _____	\$ _____
604.325	4	Ea	Drainage manholes, 5-foot diameter	\$ _____	\$ _____
604.326	4	Ea	Drainage manholes, 6-foot diameter	\$ _____	\$ _____
609.216	230	LF	New Straight Sloped Granite Curb 6" High	\$ _____	\$ _____
609.236	30	LF	New Curved Sloped Granite Curb 6" High	\$ _____	\$ _____
611.71008A	10*	Ea	Replace Water Gate Valve Sleeve and Cover	\$ _____	\$ _____
611.05206	50*	Lf	6" DI Water Main Pipe CL52	\$ _____	\$ _____
611.05208	50*	Lf	8" DI Water Main Pipe CL52	\$ _____	\$ _____
611.71006	1*	Ea	6" Water Main Gate Valve	\$ _____	\$ _____
611.70008	1*	Ea	8" Water Main Gate Valve	\$ _____	\$ _____
615.01	4	Ea	Traffic Signs (See Details)	\$ _____	\$ _____

**PROPOSAL FORM** (continued)

<b>ITEM #</b>	<b>EST. QTY.</b>	<b>UNITS</b>	<b>ITEM DESCRIPTION &amp; UNIT PRICE IN WORDS</b>	<b>UNIT PRICE IN FIGURES</b>	<b>ITEM TOTAL IN FIGURES</b>
615.5A	2	Ea	Steel Bollard, 6" diameter with HDPE sleeve	\$ _____	\$ _____
618.6	100*	Hr	Uniformed Portsmouth Police Flaggers	<u>\$50.00</u>	<u>\$5,000.00</u>
618.7	400*	Hr	Flaggers	<u>\$17.00</u>	<u>\$6,800.00</u>
619.1	1	U	Maintenance of Traffic	\$ _____	\$ _____
641A	10,000	Sy	Loam and Seed	\$ _____	\$ _____
645.531	660	Lf	Silt fence	\$ _____	\$ _____
645A	1	U	Suzanne Drive Outfall Reconstruction	\$ _____	\$ _____
645B	1	U	Mariette Drive Outfall Reconstruction	\$ _____	\$ _____
651.82	6	EA	Thuja Occidentalis Nigra (Dark American Arborvitae)	\$ _____	\$ _____
655.8	9	EA	Ilex Verticillata (Common Winter Berry)	\$ _____	\$ _____
692	1	U	Mobilization	\$ _____	\$ _____

**PROPOSAL FORM** (continued)

ITEM #	EST. QTY.	UNITS	ITEM DESCRIPTION & UNIT PRICE IN WORDS	UNIT PRICE IN FIGURES	ITEM TOTAL IN FIGURES
1060	3	EA	Sewer Lateral Repairs Identified on Drawings (includes all labor, pipe, and fittings; not to be used for breakage by contractor)	\$ _____	\$ _____

\* Indeterminate quantity

**TOTAL FOR PROJECT AND BASIS OF AWARD**

In Figures \$ \_\_\_\_\_

In Words \$ \_\_\_\_\_

**Pavement Repairs – Alternate A**

**In lieu of item 306.33 & 306.5 Asphalt Emulsion Injection: Remove Additional Excess Reclaim Material, Pave Additional Hot Mix Asphalt, Add Emulsion between Paving Layers**

203.1	1,720	CY	Remove Additional Excess Reclaim (approx. 1.75" thickness)	\$ _____	\$ _____
403.11	3,535	Tons	Additional Machine Paving (Finished Road would be 2 ¼" Binder & 1 ½" Top) (This must be same unit price as item # 403.11 in base bid above)	\$ _____	\$ _____
410.21	35,300	Sy	Emulsified Tack Coat	\$ _____	\$ _____

**Subtotal** \$ \_\_\_\_\_

Deduct equals bid item totals for item #306.33 & 306.5 from a previous page

306.33	17,600	Gal	Emulsified Asphalt for injection	<b>Deduct</b>	-\$ _____
306.50	35,300	Sy	6" Asphalt Emulsion Injection	<b>Deduct</b>	-\$ _____

**Total Difference in cost for Alternate A (Equals Subtotal – Deducts for no Injection)**

\$ \_\_\_\_\_



- To Bidder:

**The City reserves the right, after bid opening and prior to award of the contract, to modify the amount of the work in the event that bids exceed budgeted amounts.**

It is the intention of this contract that the items listed above describe completely and thoroughly the entirety of the work as shown on the plans and as described in the specifications. All other items required to accomplish the above items are considered to be subsidiary work, unless shown as a pay item.

The undersigned agrees that for extra work, if any, performed in accordance with the terms and provisions of the Contract Documents, the bidder will accept compensation as stipulated therein.

\_\_\_\_\_  
Date

\_\_\_\_\_  
Company

By: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Business Address

Title: \_\_\_\_\_

\_\_\_\_\_  
City, State, Zip Code Telephone: \_\_\_\_\_

**We certify that the Company is currently pre-qualified with the State of New Hampshire for Road Construction.**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed Name & Title

The Bidder has received and acknowledged Addenda No. \_\_\_\_\_ through \_\_\_\_\_.

All Bids are to be submitted on this form and in a sealed envelope, plainly marked on the outside with the Bidder's name and address and the Project name as it appears at the top of the Proposal Form.

## **SPECIAL PROVISIONS**

### **AMENDMENT TO SECTION 603 – Culverts and Storm Drains (Revised per Addendum No.1)**

**Replace 2.9.2 with the following:**

- 2.9.2** Corrugated polyethylene (HDPE) pipe shall conform to the requirements of AASHTO M 294, dual wall Type S, with smooth interior and annular exterior corrugations. **ADS N12-IB-ST or Approved equal.**

**Replace 2.9.5 with the following:**

- 2.9.4** Corrugated polyethylene (HDPE) pipe shall be joined with “soil tight” bell and spigot joint with gaskets meeting ASTM F477.

**Add to 2.9**

- 2.9.7** Where specified on the drawings (specifically, the Route 1 crossing area), corrugated polypropylene high performance (HP) pipe shall be **ADS SaniTite HP** pipe, or approved equal. Pipe shall have a smooth interior and annular exterior corrugations. HP pipe shall have minimum pipe stiffness of 46 psi when tested in accordance with ASTM D2412. Pipe shall be joined with a gasketed integral bell and spigot joint meeting the requirements of ASTM F2736. Polypropylene compound for pipe and fitting production shall be an impact modified copolymer meeting the material requirements of ASTM F2736, Section 4.

**Add to 4.1:**

- 4.1.2** Measurement for 4” PVC, schedule 35, drain laterals, Item 603.8104 shall be made from the service tap to the end cap at or near the property line.

**Add to 5.1**

- 5.1.4** Contract unit price for 4” PVC, schedule 35, drain laterals, Item 603.8104 shall include all labor and materials for tapping the main line drain, tap, insert, PVC pipe, fittings, and bedding materials. Restoration of sidewalks, lawns and private property associated with the pipe installation is subsidiary.





## FIELD REPORT

**To:** City of Portsmouth- Public Works Department  
680 Peverly Hill Road  
Portsmouth, NH 03801

**Attn:** Dave DesFosses

**Date:** May 16, 2010

**Re:** Future Road Construction  
Suzanne Dr., Simonds Dr., Wallis Rd., Winchester St, Denise St., Mariette Dr.

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In accordance with our agreement, John Turner Consulting, Inc. (JTC) has performed a Geotechnical investigation in order to determine depths to bedrock along Suzanne Drive, Simonds Drive, Wallis Road, Winchester Street, Denise Street and Mariette Drive in locations marked by the Public Works Department for the future road construction of new water and sewer lines.

The following table indicates the probe number as laid out on the respective street as well as an approximate address in order to coordinate specific probe locations. Furthermore, the table also lists the depth at which the probe hit refusal or was terminated.

JTC appreciates the opportunity to perform our services for you and look forward to being of help to the City of Portsmouth in the future.

Please do not hesitate to contact me at 603-749-1841 for any of your future needs.

Respectfully Submitted,

Kyle Urso  
Staff Engineer

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NH MA ME VT

JOHN TURNER CONSULTING

CONSULTJTC.COM

19 DOVER STREET  
DOVER, NH 03820  
T 603.749.1841 F 603.516.6851

6 CLINTON AVENUE  
WESTFIELD MA 01085  
T 413.642.0138 F 413.642.0164

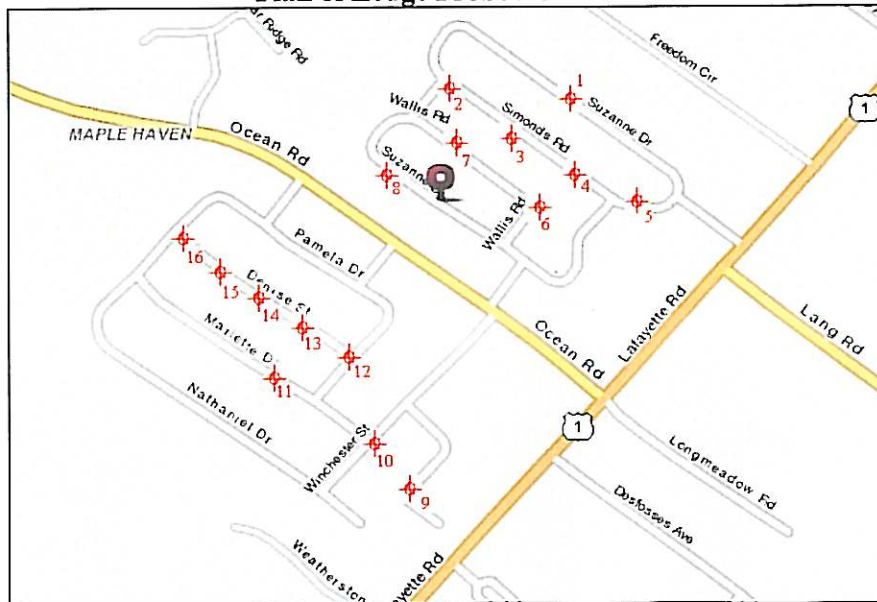
15 HOLLY STREET, UNIT 109  
SCARBOROUGH ME 04074  
T 207.833.7878



Address	Probe No.	Asphalt Thickness (in)	Soil Classification	Depth to Weathered Rock (ft)	Depth to Refusal in Probable Intact Bedrock (ft)
<b>Winchester Street</b>					
2	9	7 ½	Brown, Moist, Medium-Fine SAND, some Gravel, little Silt	-	10.0
21	10	5 ½	Brown, Moist, Medium-Fine SAND, some Silt, little Gravel grading to some Gravel	-	10.0
<b>Denise Street</b>					
4	15	3 ½	Brown, Moist, Medium-Fine SAND, some Silt, little Gravel grading to some Gravel	-	15.0
8	14	3 ½	Brown, Moist, Medium-Fine SAND, some Silt, little Gravel grading to some Gravel	-	15.0
12	13	3 ¾	Brown, Moist, Medium-Fine SAND, some Silt, little Gravel (See Boring Log)	-	15.0
28	12	3	Dark Brown, Medium-Fine SAND, some Gravel, trace Silt	-	10.0
<b>Mariette Drive</b>					
11	16	3 ½	Brown, Moist, Medium-Fine SAND, some Gravel, some Silt	-	10.0
12	11	3	Brown, Moist, Medium-Fine SAND, some Silt, little Gravel	-	10.0

Note: All locations premarked and numbered by client.

**Plan of Ledge Probe Locations**



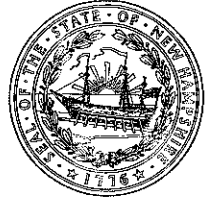








The State of New Hampshire  
DEPARTMENT OF ENVIRONMENTAL SERVICES



Thomas S. Burack, Commissioner

**WETLANDS AND NON-SITE SPECIFIC PERMIT 2011-00510**

**NOTE --  
CONDITIONS**

**Permittee:** Portsmouth Department of Public Works  
680 Peverly Hill Road  
Portsmouth, NH 03801  
**Project Location:** Suzanne and Mariette Drives, Portsmouth  
Portsmouth Tax Map/Lot No. 292/284/293 / 95/4/2  
**Waterbody:**

**APPROVAL DATE:** 04/18/2011      **EXPIRATION DATE:** 04/18/2016

Based upon review of the above referenced application, in accordance with RSA 482-A and RSA 485-A:17, a Wetlands Permit and Non-Site Specific Permit was issued. This permit shall not be considered valid unless signed as specified below.


**PERMIT DESCRIPTION:** Impact a total of 2,515 square feet of wetlands, including 1,580 square feet at Suzanne Drive, and 935 square feet at Mariette Drive, to replace existing, under-sized municipal stormwater outfalls with properly sized structures in the Maple Haven neighborhood.

**THIS APPROVAL IS SUBJECT TO THE FOLLOWING PROJECT SPECIFIC CONDITIONS:**

1. All work shall be in accordance with plans by Altus Engineering dated 2/21/2011, as received by the NH Department of Environmental Services (DES) on 3/14/2011.
2. Any further alteration of areas on this property that are within the jurisdiction of the DES Wetlands Bureau will require a new application and further permitting by the Bureau.
3. Orange construction fencing shall be placed at the limits of construction to prevent accidental encroachment on wetlands.
4. Appropriate siltation/erosion/turbidity controls shall be in place prior to construction, shall be maintained during construction, and remain in place until the area is stabilized. Silt fence(s) must be removed once the area is stabilized.
5. Work shall be done during periods of non-flow.
6. Within three days of final grading or temporary suspension of work, all exposed soil areas shall be stabilized by seeding and mulching during the growing season, or if not within the growing season, by mulching with tack or netting and pinning on slopes steeper than 3:1.
7. Proper headwalls shall be constructed within seven days of culvert installation.
8. Dredged material shall be placed outside of the jurisdiction of the DES Wetlands Bureau.

**GENERAL CONDITIONS THAT APPLY TO ALL DES WETLANDS PERMITS:**

1. A copy of this permit shall be posted on site during construction in a prominent location visible to inspecting personnel;
2. This permit does not convey a property right, nor authorize any injury to property of others, nor invasion of rights of others;
3. The Wetlands Bureau shall be notified upon completion of work;
4. This permit does not relieve the applicant from the obligation to obtain other local, state or federal permits, and/or consult with other agencies as may be required (including US EPA, US Army Corps of Engineers, NH Department of Transportation, NH Division of Historical Resources (NH Department of Cultural Resources), NHDES-Alteration of Terrain, etc.);
5. Transfer of this permit to a new owner shall require notification to and approval by DES;
6. This permit shall not be extended beyond the current expiration date.
7. This project has been screened for potential impacts to **known** occurrences of rare species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or have received only cursory inventories, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species.
8. Review enclosed sheet for status of the US Army Corps of Engineers' federal wetlands permit.

APPROVED:   
Dori Wiggin, East Region Supervisor

DES Wetlands Bureau

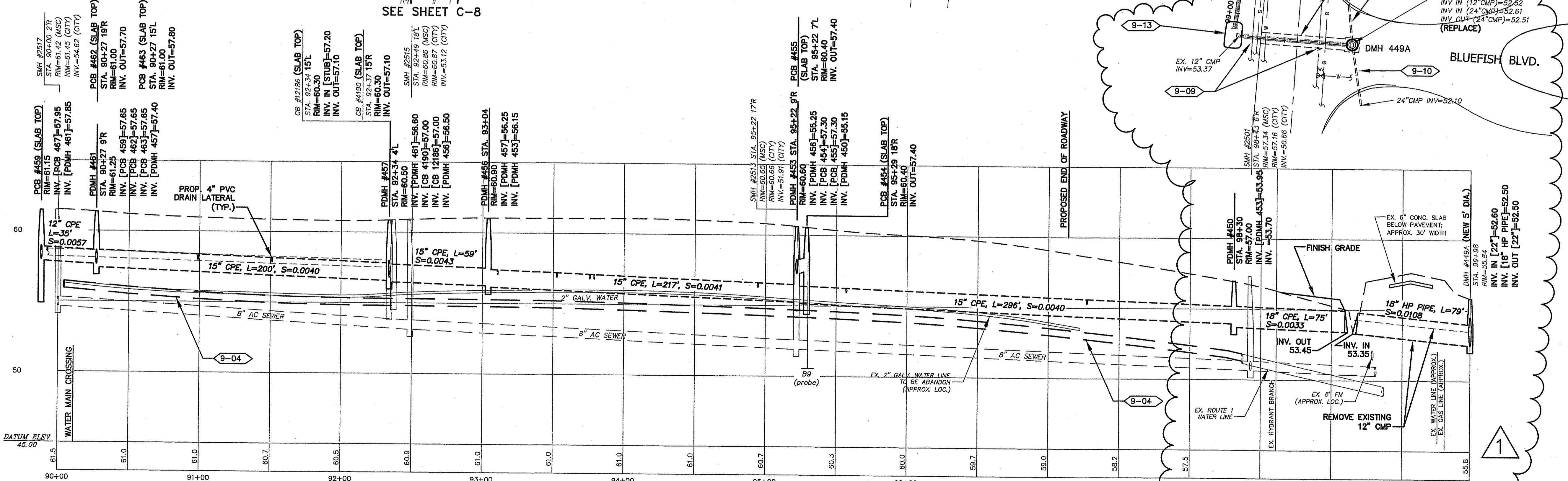
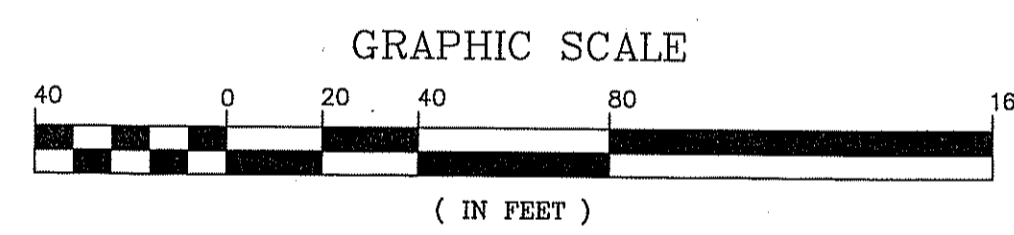
**BY SIGNING BELOW I HEREBY CERTIFY THAT I HAVE FULLY READ THIS PERMIT AND AGREE TO ABIDE BY ALL PERMIT CONDITIONS.**

OWNER'S SIGNATURE (required)

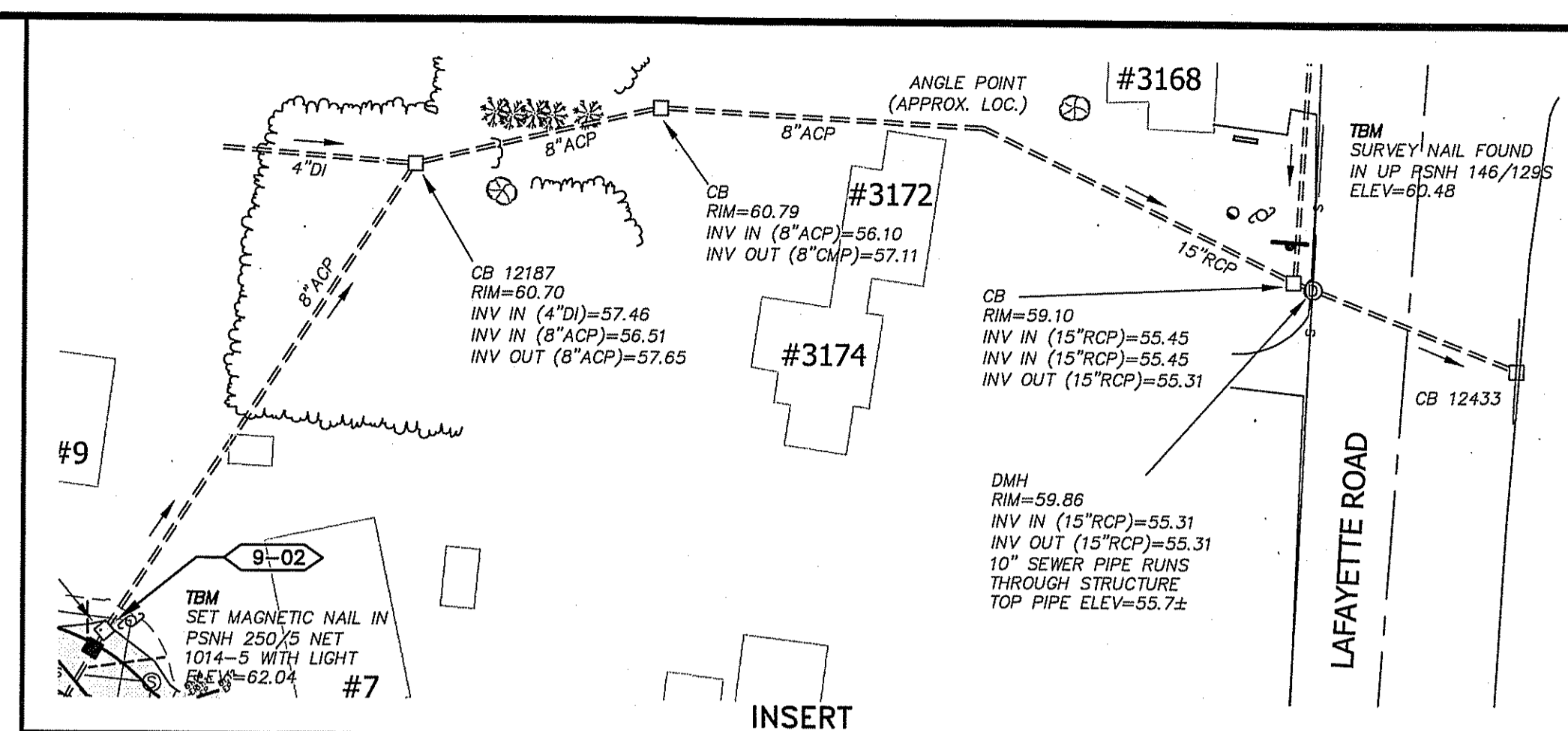
CONTRACTOR'S SIGNATURE (required)

**KEY NOTES:**

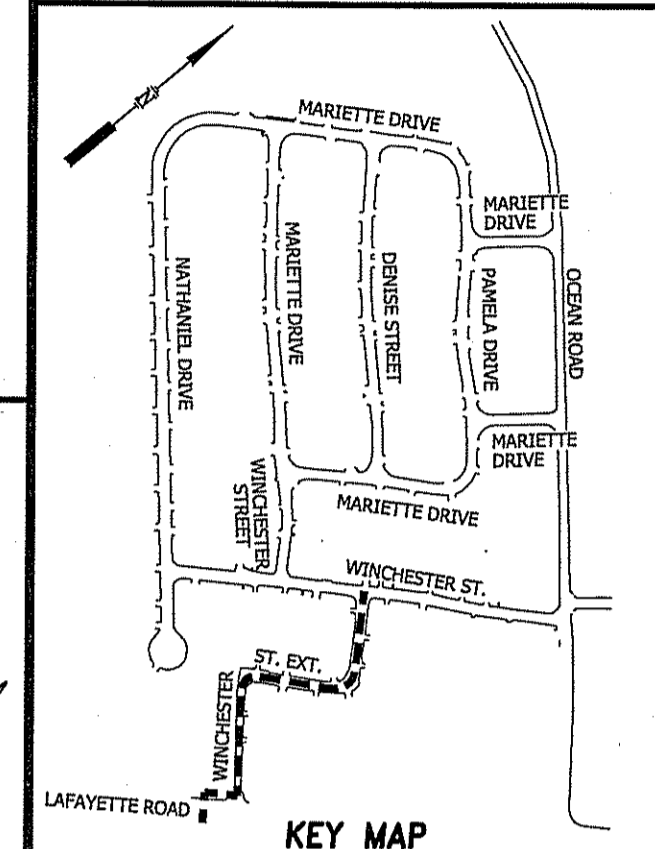
- NOTE # SHEET # OF NOTE
- 9-01 REMOVE EX. PIPE SECTIONS (AS NEEDED) FOR NEW DRAIN PIPE; PLUG AND ABANDON IN PLACE EXISTING DRAIN PIPE (TYPICAL)
- 9-02 ABANDON DRAIN LINE; PLUG AND CAP 8" AC PIPE; INSTALL 12"x3" LONG STUB W/CAP FOR FUTURE CONNECTION
- 9-03 REMOVE PAVED SURFACE; CONSTRUCT 5' WIDE 3 1/2" BIT. CONCRETE WALKWAY; INSTALL 5" LOAM AND SEED REMAINING AREA
- 9-04 PROPOSED NEW 6" D.I. WATER MAIN BY PORTSMOUTH WATER DEPARTMENT (NOT IN BID)
- 9-05 INSTALL "ROAD ENDS" SIGN AND BOLLARDS (2 TOTAL)
- 9-06 PROPOSED TAPPING SLEEVE AND VALVE (NOT IN BID)
- 9-07 INSTALL BEND W/THRUST BLOCK, TYP. (NOT IN BID)
- 9-08 REMOVE JERSEY BARRIER; INSTALL ARBORVITAE HEDGE ROW TO BE FIELD LOCATED (6 PLANTINGS TOTAL)
- 9-09 TEST PIT TO VERIFY LOCATION AND DEPTH OF ALL UTILITIES
- 9-10 REFURBISH EX. 24" CMP WITH 22" O.D. SNAP-TITE® SDR 32.5 HDPE CULVERT LINING SYSTEM OR APPROVED EQUAL; INSTALL PIPE AND GROUT PER MANUFACTURER'S SPECIFICATIONS
- 9-11 REPLACE 12" CMP CULVERT. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN AND SIGNED PACKAGE FOR APPROVAL BY NHDOT AND CITY OF PORTSMOUTH. CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE CONSTRUCTION SIGNAGE. LIMIT OF PAVEMENT REPAIR (8" MIN.). SEE ROUTE 1 UTILITY CROSSING DETAIL (SHEET C-18)
- 9-12 INSTALL "NO OUTLET" SIGN
- 9-13 INSTALL GALVANIZED STEEL FLARED END SECTIONS AT END OF EACH 18" PIPE. INSTALL APPROX. 150 SF OF STONE FILL (D50 = 12", DEPTH = 18") ITEM 583.5 AT BOTTOM OF SWALE, AROUND FLARED END SECTIONS AND SIDE SLOPES OF SWALE TO 2.5' ABOVE INVERT.



HORIZONTAL SCALE: 1" = 40'  
 VERTICAL SCALE: 1" = 4'



**ALTUS ENGINEERING, INC.**  
 133 COURT STREET PORTSMOUTH, NH 03801  
 VOICE: (603) 433-2335  
 FAX: (603) 433-4194



ISSUED FOR: **CONSTRUCTION**  
 ISSUE DATE: **JUNE 7, 2011**

**REVISIONS**

NO.	DESCRIPTION	BY	DATE
0	CONSTRUCTION DOC.S	JKC	5/17/11
1	ADDENDUM NO. 1	JKC	6/7/11

DRAWN BY: **RMB**  
 APPROVED BY: **JKC**  
 DRAWING FILE: **4149.DWG**

SCALE:  
 22"x34" 1" = 40'  
 11"x17" 1" = 80'

CLIENT:  
**CITY OF PORTSMOUTH**  
 1 JUNKINS AVENUE  
 PORTSMOUTH, NH 03801

PROJECT:  
**MAPLE HAVEN AREA DRAINAGE UPGRADE**  
 PROJECT #7136  
 PORTSMOUTH, NH

TITLE:  
**WINCHESTER STREET EXT. PLAN & PROFILE**  
 STA. 90+00 TO STA. 99+98

SHEET NUMBER:  
**C - 9**

P-4149

