



STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
16 STATE HOUSE STATION  
AUGUSTA, MAINE  
04333-0016

JOHN ELIAS BALDACCI  
GOVERNOR

DAVID A. COLE  
COMMISSIONER

June 26, 2007  
Subject: **Gorham**  
Project No. HP-8151(200)  
Pin No. 8151.20  
**Amendment No. 1**

Dear Sir/Ms:

Please make the following changes to the Bid Documents:

- 1.) In the Bid Book, in the "Notice To Contractor" fifth paragraph, forth sentence, delete **Monday** and replace with **Friday**. Make this change in pen and ink.
- 2.) In the "Schedule of Items" Item # 203.20 change the Bid Quantity from **125,000.00 Cy**, to now read **147,500.00 Cy**. Make this change in pen and ink.
- 3.) In the Bid Book delete in their entirety the Abutment Drawings pages 62 thru 65 and replace with the new attached Abutment Drawings pages 62-A thru 65-A.
- 4.) In the Bid Book, Special Provision Section 209 Wick Drains (Prefabricated Vertical Wick Drains) delete page 4 of 7 and replace with the new attached page 4 of 7.
- 5.) Delete in its entirety Special Provision Section 403 "Hot mix Asphalt Overlay" 2 pages total dated May 14, 2007, and replace with the new attached Special Provision Section 403 "Hot mix Asphalt Overlay" 2 pages total dated June 25, 2007.
- 6.) In the Bid Book, Special Provision 639 Engineering Facilities (Instrumentation – Geotechnical) delete pages 6 of 13, 7 of 13, and page 8 of 13 and replace with the new attached pages 6 of 13, 7 of 13, and page 8 of 13.
- 7.) In the Bid Book, Special Provision 639 Engineering Facilities (Geotechnical Instrumentation – Traditional Settlement Platforms) delete Detail No. 1, page 5 of 6, and replace with the new attached Detail No. 1, page 5 of 6.



PRINTED ON RECYCLED PAPER

- 8.) On Plan Sheet page 8 entitled, "Estimated Quantities" Item # 203.20 change the Bid Quantity from **125,000.00 Cy**, to now read **147,500.00 Cy**. Make this change in pen and ink.
- 9.) On Plan Sheets 43 and 44 add the following note with pen and ink:

"Prefabricated Vertical Wick Drains shall be installed from a working mat. The working mat shall have a minimum thickness of 2 feet and shall be constructed of Common Borrow (703.18). The working mat may remain in place after Prefabricated Vertical Wick Drain installation as a part of the embankment construction with the approval of the Resident."

The Department has received the following questions:

**Question:** Piezometers at P-1, sheet 45 indicates to be installed at sta. 405 +50 while the Special Provision 639 Table on pg. 6 indicates Sta. 404 + 50. Which is correct?

**Response:** *Please see new replacement pages to the "Special Provision 639 Engineering Facilities (Instrumentation – Geotechnical)" as referenced in this amendment.*

**Question:** Piezometers at P-3, the nearby boring (BB-GTGB-301 is at ground surface elevation 138.5 while SP 639, Pg. 7 indicates piezometers to be installed at El. 152 and EL. 142. These elevations are above ground surface. What are correct elevations for piezometers at P-3?

**Response:** *Please see new replacement pages to the "Special Provision 639 Engineering Facilities (Instrumentation – Geotechnical)" as referenced in this amendment.*

**Question:** Piezometers at P-5, based on the nearby boring (BB-GGB-401), the piezometers at El. 136 will be in the sand stratum and the piezometers at El. 130 will be in bedrock. What are the correct elevations for piezometers?

**Response:** *Please see new replacement pages to the "Special Provision 639 Engineering Facilities (Instrumentation – Geotechnical)" as referenced in this amendment.*

**Question:** SP 639 (Traditional Settlement Platforms), on Pg. 1, materials call for 2-inch diameter black iron pipe while the detail on Pg. 5 indicates 4-inch diameter pipe. What is the correct pipe diameter?

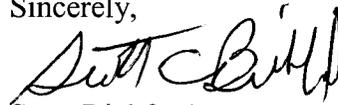
**Response:** Page 1 calling for a 2 inch diameter black iron pipe is correct.

**Question:** Note 1 on Sheets 43, 44 and 45 indicates that instrumentation must be installed prior to installation of vertical drains and filling. In our experience this will put the instrumentation at high risk to damage from pushing drains. Can instrumentation be installed after installation of vertical drains and prior to placing fill?

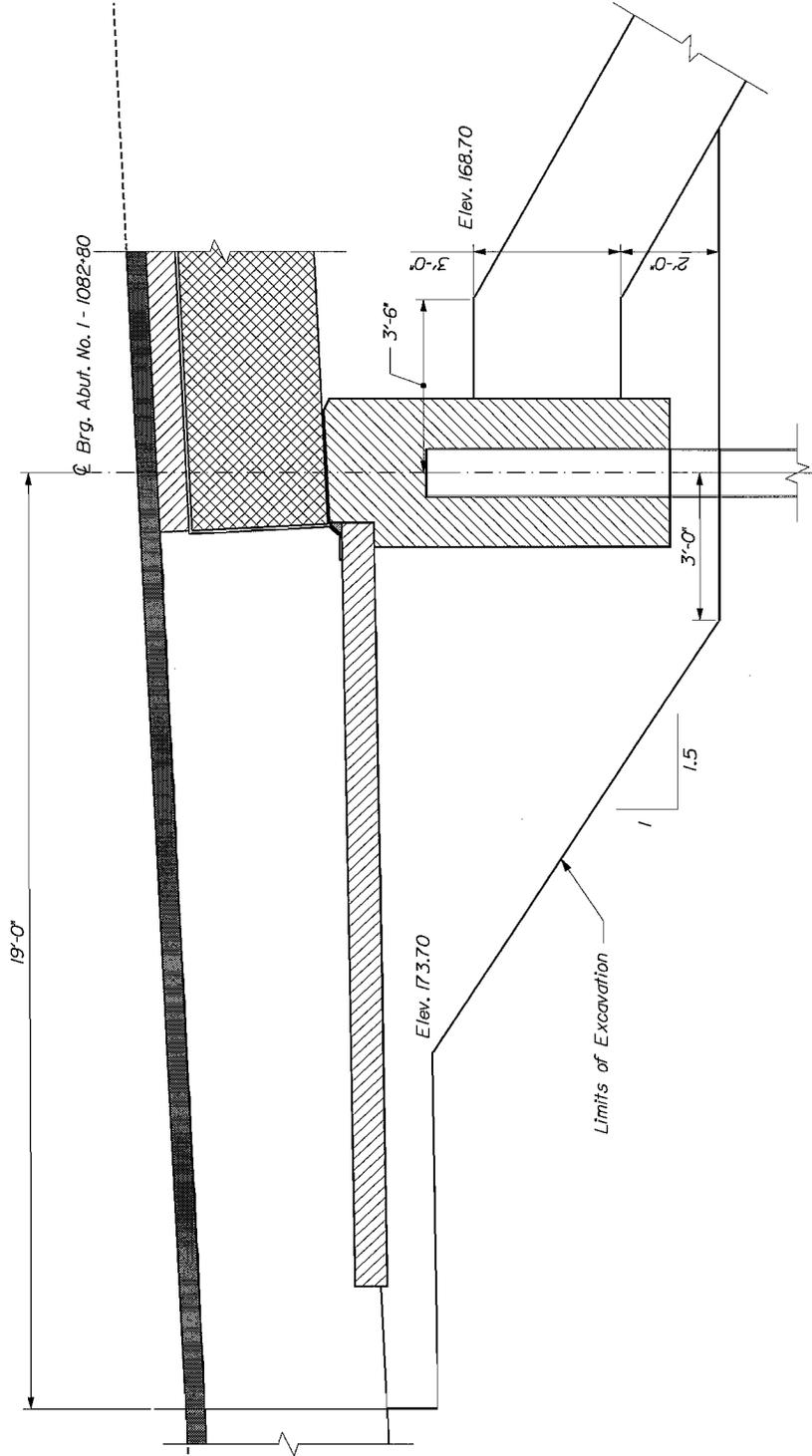
**Response:** *Yes, instrumentation can be installed after PV wick drain installation. The location of the piezometers will need to be flagged and care should be taken that no wick drain be installed at those locations. If a wick drain is installed at any piezometer location, the wick will need to be removed in its entirety to the satisfaction of the Geotechnical Engineer. The Department agrees to allow this change. However, all instrumentation sequence changes need to be approved by the Geotechnical Engineer.*

Consider these changes and information prior to submitting your bid on July 3, 2007.

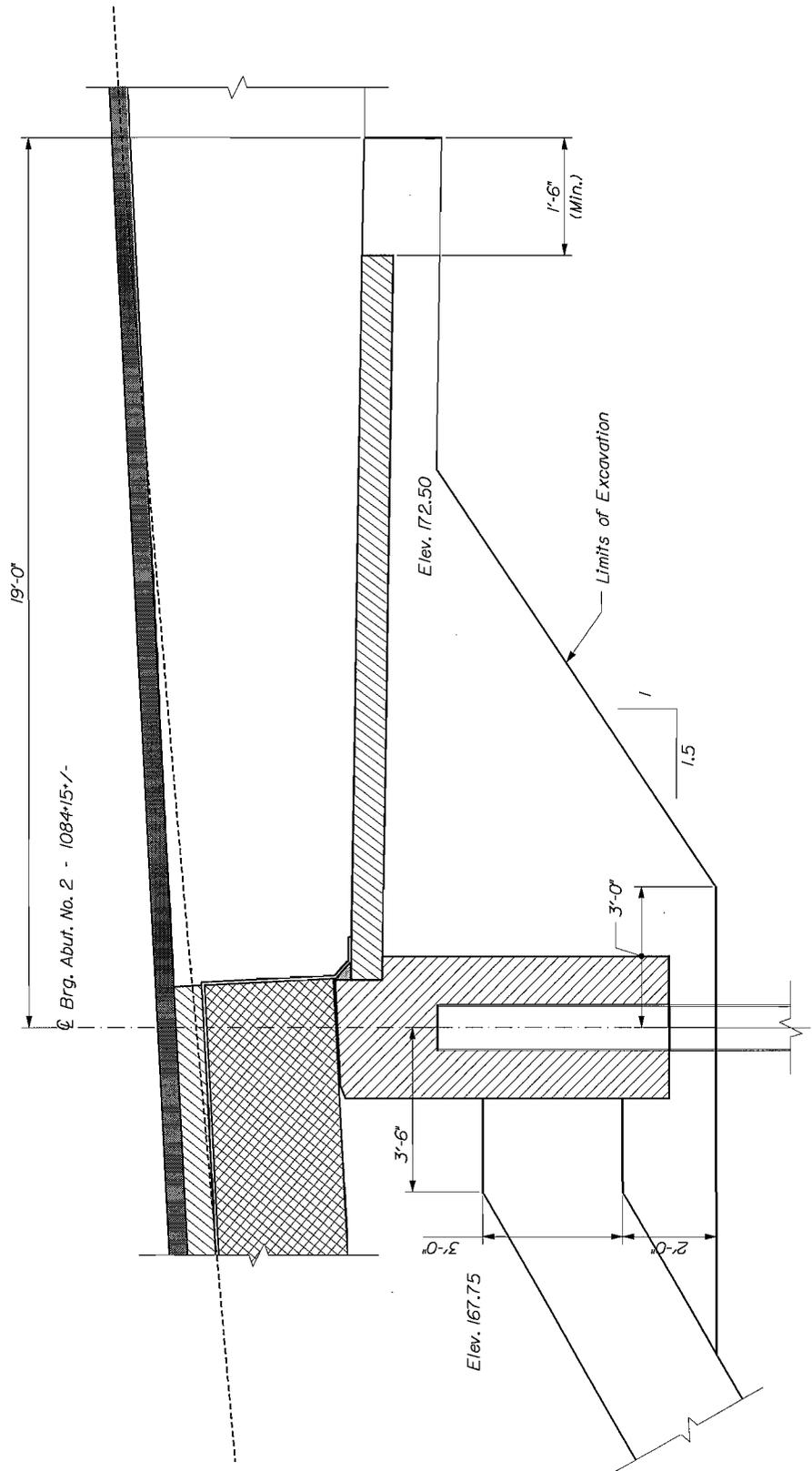
Sincerely,

A handwritten signature in black ink, appearing to read "Scott Bickford". The signature is written in a cursive, flowing style.

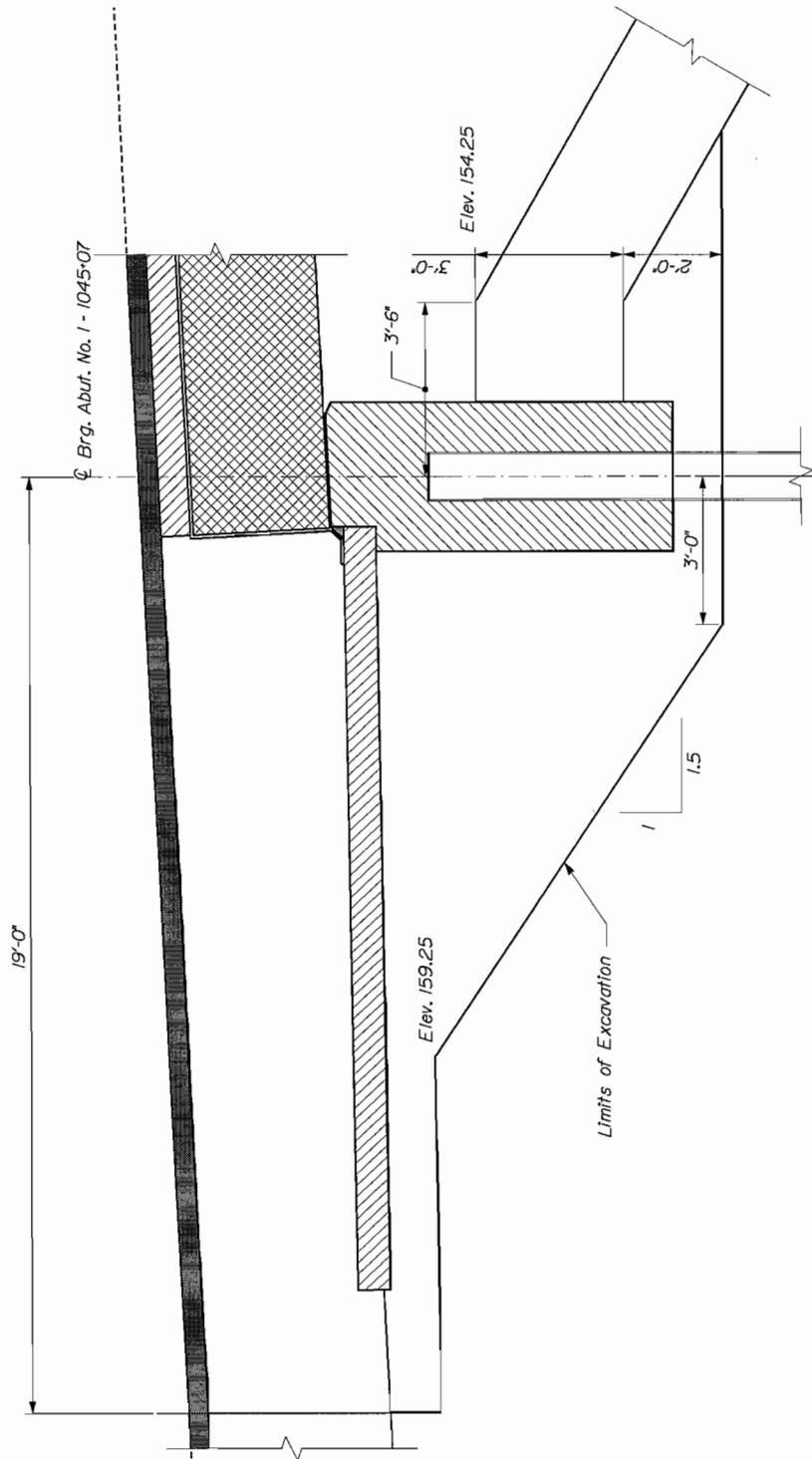
Scott Bickford  
Contracts & Specifications Engineer



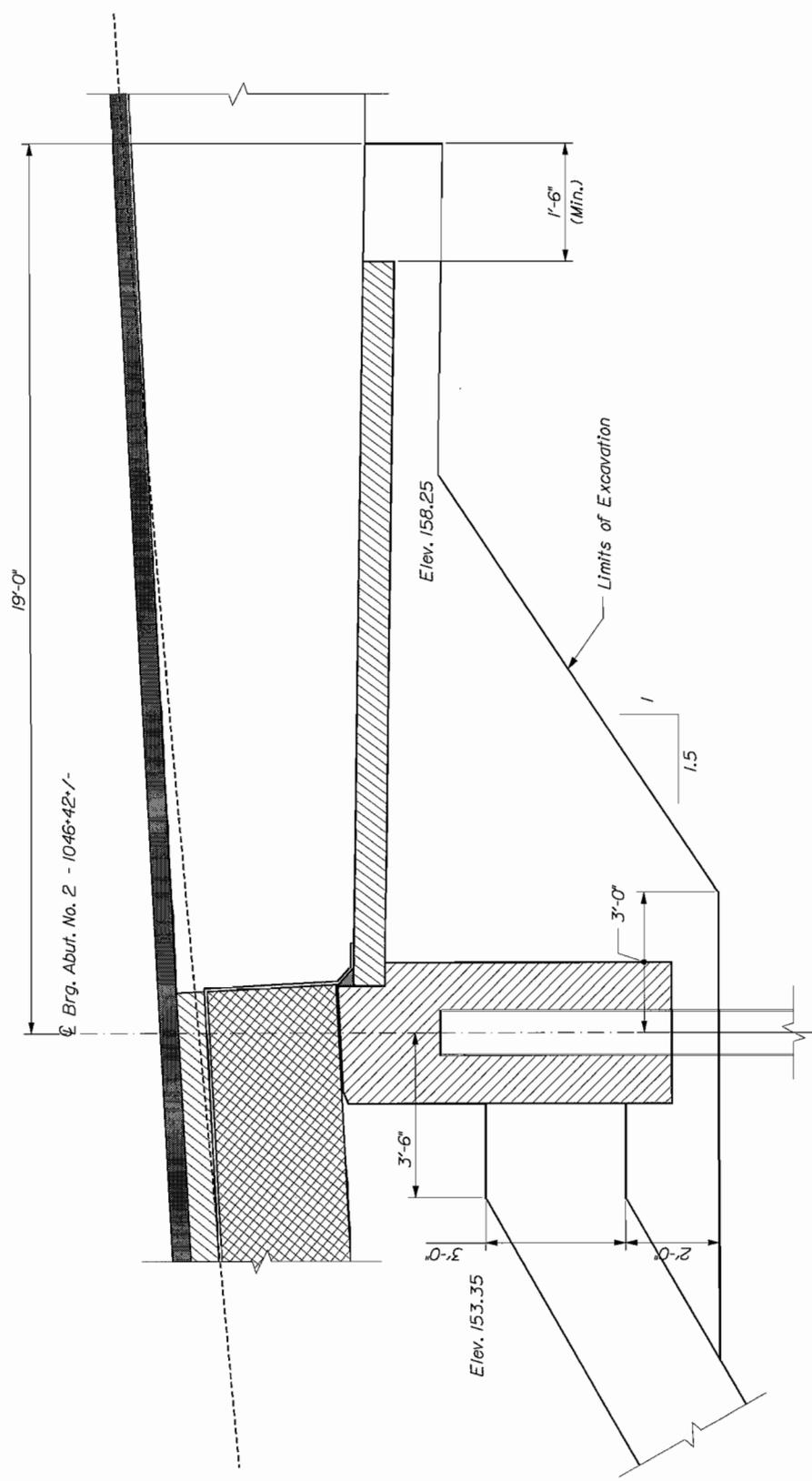
GULLY BROOK ABUTMENT 1



GULLY BROOK ABUTMENT 2



NEWT ABUTMENT 1



19'-0"

⊘ Brg. Abut. No. 2 - 1046-42'-1-

Elev. 158.25

1'-6"  
(Min.)

Limits of Excavation

1  
1.5

3'-0"

3'-6"

Elev. 153.35

3'-0"

2'-0"

NEWT ABUTMENT 2

plans to select equipment, method and materials suitable for the site conditions and capable of producing a satisfactory PV drain installation to the minimum elevation. The Contractor may be required to install up to ten (10) trial drains as designated by the Resident. The Contractor will be compensated for each trial drain if the installation satisfies the requirements of the Contract Documents. No compensation will be allowed for installing unsatisfactory trial drains.

Approval by the Resident of the method and equipment used to install the trial drains shall not constitute acceptance of the method for the remainder of the project. If the Resident considers that the method of installation does not produce a PV drain that satisfied the requirements of the Contract Documents, the Contractor shall alter the method and/or equipment in order to achieve compliance.

Prior to installing the PV drains, any existing pavement shall be removed and the site shall be graded sufficiently level to allow vertical and proper drain installation. This grading work shall be incidental.

The PV drains shall be located, numbered, and staked by the Contractor. The Contractor shall take all reasonable precautions to preserve the stakes and is responsible for any necessary restaking. PV drains shall be installed in a triangular pattern, with a spacing of 5, 6 or 7 feet, as shown on the plans. The locations of the PV drains shall not vary by more than 3 inches from the locations indicated on the drawings. PV drains that are out of proper location by more than 3 inches or are damaged or improperly installed will be rejected. Rejected drains may be removed or abandoned in place, at the Contractor's option. Two weeks prior to construction, the Contractor shall submit drawings to the Resident for approval showing the method of field locations, PV drain layout, and numbering plan.

During construction, individual test samples shall be cut from at least one product roll selected at random. Individual samples shall be no less than 10 feet in length and shall be full width. Samples submitted for tests shall indicate the linear feet of PV drain represented by the sample. The total length represented by the sample shall not be used until the Resident has accepted the sample (verified physical dimensions, manufacturer, PV drain designation, and manufacturers' certification of physical and chemical properties).

Should any individual sample selected at random fail to meet any specification requirement, then that roll shall be rejected and two additional samples shall be taken at random from two other rolls representing the shipment. If either of these two additional samples fail to comply with any portion of the specification, then the entire quantity of vertical drain represented by that sample shall be rejected.

The sequence of installation for the PV drains is as shown in the Notes, included with the Plans. In the preparatory stage of installation and prior to the installation of PV drains, the Contractor shall:

- a. Remove any surface obstructions present at the location of proposed PV drains,

**SPECIAL PROVISION**  
**SECTION 403**  
**HOT MIX ASPHALT OVERLAY**

<b>Desc. of Course</b>	<b>Grad. Design</b>	<b>Item Number</b>	<b>Bit Cont. % of Mix</b>	<b>Total Thick</b>	<b>No. Of Layers</b>	<b>Comp. Notes</b>
<b><u>6" HMA Mainline Travelway</u></b>						
<b><u>Bypass, Route 114, Route 202</u></b>						
<b><u>Route 202 and 114 Roundabout Full Construction Areas</u></b>						
Wearing	12.5mm	403.208	N/A	1 1/2"	1	5,7,22
Base	12.5mm	403.213	N/A	1 1/2"	1	5,7,
Base	19.0mm	403.207	N/A	3"	1/more	4,7,21
<b><u>7 1/2" HMA Mainline Travelway</u></b>						
<b><u>Route 25 and Route 25 Roundabout</u></b>						
<b><u>Full Construction Areas</u></b>						
Wearing	12.5mm	403.208	N/A	1 1/2"	1	5,7,22
Base	12.5mm	403.213	N/A	3"	2	5,7,
Base	19.0mm	403.207	N/A	3"	1	4,7,21
<b><u>3" HMA Shoulders, Guardrail widenings</u></b>						
<b><u>Full Construction Areas</u></b>						
Wearing	12.5mm	403.208	N/A	1 1/2"	1	5,7
Base	12.5mm	403.213	N/A	1 1/2"	1	5,7
<b><u>4" HMA - Flaggy Meadow Road</u></b>						
<b><u>Travelway, Shoulders and Guardrail widenings</u></b>						
<b><u>Full Construction Areas</u></b>						
Wearing	12.5mm	403.208	N/A	1 1/2"	1	5,7
Base	19.0mm	403.207	N/A	2 1/2"	1	5,7,12
<b><u>3" HMA Bridge Decks</u></b>						
Wearing	9.5mm	403.210	N/A	1 1/2"	1	5,8
Base	9.5mm	403.210	N/A	1 1/2"	1	5,8
<b><u>Shim</u></b>						
Shim (as directed)	9.5mm	403.211	N/A	variable	1/more	5,10
<b><u>Islands, Misc.</u></b>						
Wearing	9.5mm	403.209	N/A	2"	2/more	2,3,10,11,14

**COMPLEMENTARY NOTES**

- The density requirements are waived.
- The design traffic level for mix placed shall be <0.3 million ESALS.
- The design traffic level for the **initial base layer over gravel** shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **50 gyrations**.
- The aggregate qualities shall meet the design traffic level of 3 to <10 million ESALS for mix placed under this contract. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **75 gyrations**.
- Section 106.6 Acceptance, (1) Method A.
- Section 106.6 Acceptance, (2) Method B.

10. Section 106.6 Acceptance, (2) Method D.
11. A **“FINE”** 9.5 mm mix with a gradation above or through the restricted zone shall be used for this item. A 4.75mm mixture may be substituted for the island and sidewalk surface layers.
12. A mixture meeting the gradation of 12.5 mm hot mix asphalt may be used at the option of the contractor.
14. A mixture meeting the requirements of section 703.09 Grading ‘D’, with a minimum PGAB content of 6%, and the limits of Special Provision 401, Table 9 (Drives and Sidewalks) for PGAB content and gradation may be substituted for this item. A job mix formula shall be submitted to the department for approval.
21. A **“FINE”** 19.0 mm mix with a gradation above or through the restricted zone shall be used for this item.
22. The final pavement surface of the mainline traveled way shall be evaluated for smoothness in accordance with the Standard Specifications, revision of December 2002, Section 402 - Pavement Smoothness. Roundabouts and approaches to the roundabouts will be excluded from the incentive/disincentive.

#### Tack Coat

A tack coat of emulsified asphalt, RS-1 or HFMS-1, Item 409.15 shall be applied to any existing pavement or recycled layer at a rate of approximately 0.025 gal/yd<sup>2</sup>, and on milled pavement approximately 0.05 gal/yd<sup>2</sup>, prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim / intermediate course and the surface course, at a rate not to exceed 0.025 gal/yd<sup>2</sup>.

Tack used between layers of pavement will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

specifications), and a list of similar projects where the VW piezometers and VW settlement cells have been installed. The Contractor shall allow a minimum of four weeks for the Resident to evaluate the material. Two weeks after contract award, the Contractor shall submit written documentation showing that the Technical Representative meets the qualifications of this Special Provision.

At least two weeks prior to the installation of the VW piezometers and VW settlement cells, the Contractor shall submit to the Resident for review details of the sequence and method of installation. Review by the Resident shall not relieve the Contractor of his responsibility to install VW piezometers and VW settlement cells in accordance with this Special Provision.

### **CONSTRUCTION REQUIREMENTS**

VW piezometers. Six groups of two to three nested VW piezometers shall be installed at the centerline of each proposed Abutment. The locations of the piezometer groups (as shown on the Plans) are as follows:

<b>Piezometer No.</b>	<b>Location</b>
P-1	Station 405+50 CL
P-2	Station 406+84 CL
P-3	Station 1045+07 CL
P-4	Station 1046+42 CL
P-5	Station 1082+80 CL
P-6	Station 1084+15 CL

The construction sequence for the VW piezometers shall be performed as detailed in the Construction Notes, included with the Plans. The installation procedure for the VW piezometers shall be as follows or as recommended by the Technical Representatives, and approved by the Resident.

A. The VW piezometers shall be installed after removal of the existing pavement on the exposed subgrade, as stated on the plans.

B. Piezometer locations shall be marked on the working surface with stakes. The stakes marking the piezometer locations shall be clearly marked with some distinguishing feature to differentiate them from PV drain and VW Settlement cell locations, as approved by the Resident.

C. Drill a 4.5-inch diameter borehole using schedule HW, flush joint casing. Casing shall be advanced by driving with a 300-lb hammer falling a distance of 16 inches, sampling as designated by the Resident, to 2 feet below the desired bottom transducer elevation. Sampling shall be with 1-3/8-inch ID split-spoon sampler, driven with a 140-lb hammer falling a distance of 30 inches. Transducer elevations shall be as follows:

P-1: one at Elevation 208 feet; one at Elevation 198 feet, and one at Elevation 183 feet.

P-2: one at Elevation 205 feet; one at Elevation 195 feet, and one at Elevation 180 feet.

- P-3: one at Elevation 136 feet; and one at Elevation 129 feet.
- P-4: one at Elevation 135 feet; and one at Elevation 127 feet.
- P-5: one at Elevation 152 feet; and one at Elevation 143 feet.
- P-6: one at Elevation 140 feet; and one at Elevation 127 feet.

Piezometers installation sequence shall be from lowest in elevation to highest.

Drilling for piezometer installation shall be performed by one of the following drilling contractors, or approved equal:

Maine Test Boring Brewer, Maine	Telephone: 207.989.7820
Great Works Test Boring Berwick, Maine	Telephone: 207.384.2546

- D. Flush hole with clean water.
- E. Place bentonite pellets above the bottom of the hole to 1 foot below the bottom of the deepest transducer location.
- F. Install the first transducer within a 2 foot column of filter sand per manufacturer's directions. At least 12 inches of sand shall be above the transducer.
- G. Place a layer of bentonite pellets above the filter sand to 1 foot below the elevation of the second transducer.
- H. Install the second transducer within a 2 foot column of filter sand per manufacturer's directions. At least 12 inches of sand shall be above the transducer.
- I. Place a layer of bentonite pellets above the filter sand to 1 foot below the elevation of the third transducer.
- J. Install the third transducer (if necessary) within a 2 foot column of filter sand per manufacturer's direction. At least 12 inches of sand shall be above the transducer.
- K. Place a 2 foot layer of bentonite pellets above the filter sand.
- L. Grout remainder of borehole with cement/bentonite grout.
- M. Temporary casing is withdrawn during installation.
- N. Cables are run by the Contractor in trench cut in subgrade, as shown on Detail No. 1 to instrumentation cabinet, as shown on Detail No. 2.
- O. An additional 3 feet of cable (minimum) is required for within the instrumentation cabinets, each cable shall be clearly marked with the corresponding VW piezometer's identification number.

P. The trench is filled with filter sand, as shown on Detail No. 1 of this Special Provision.

Q. The location of each of the VW piezometers shall be determined using conventional survey methods. The elevation, Station and offset are required. The VW piezometer locations shall become part of the record for each instrument.

The Resident is required to read the piezometers at the end of each working day, during embankment construction and for a period of 10 working days after embankment construction. The piezometers shall be read once a week for the remainder of the preload time period of up to 120 days. At the end of each week, the Resident shall send the piezometer readings along with the VW settlement cell readings to the Geotechnical Engineer for review.

VW Piezometer cables which are damaged during construction operations shall be repaired by the Contractor per the Manufacturer's preferred method. No payment will be made for repair of damaged piezometer cable.

Instrumentation cabinet. The Contractor shall determine the location of the instrumentation cabinets. The instrumentation cabinets shall be installed at locations which is accessible to the Resident, and where there is little possibility of the instrumentation cabinet being damaged by construction operations. The instrumentation cabinets shall be installed as shown on Detail No. 2 of this Special Provision. Alternate installation methods may be used by the Contractor, as approved by the Resident, provided exposed VW piezometer cables are protected.

VW settlement cells. The locations of the VW settlement cells S-1 and S-2 are as follows:

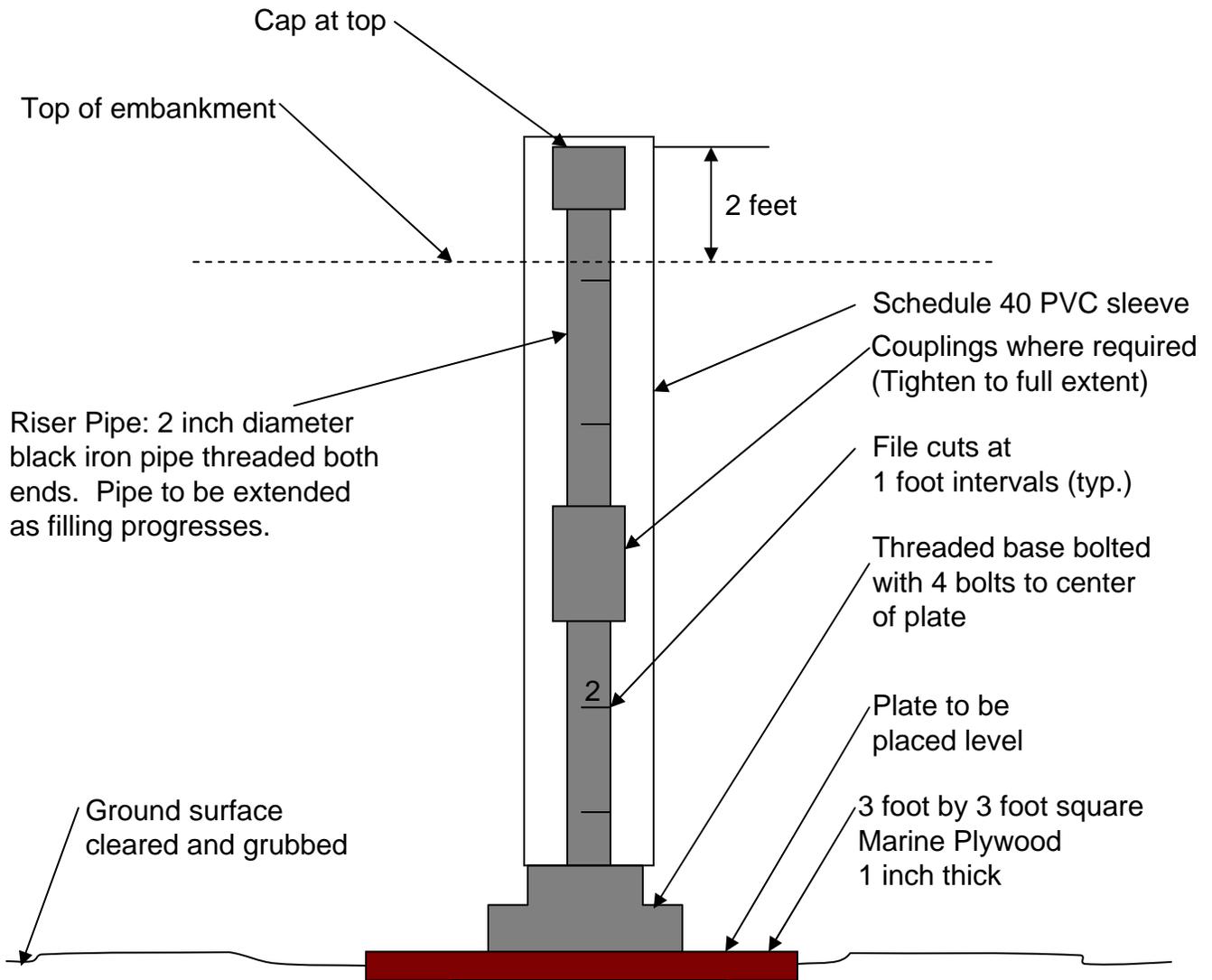
<b>Settlement Cell No.</b>	<b>Location</b>
S-1	Station 405+50 CL
S-2	Station 406+84 CL

The Resident reserves the right to change the locations of the settlement cells during construction. This shall be at no additional cost to the contract.

The construction sequence for the VW settlement cells shall be performed as detailed in the Construction Notes, included with the Plans. The installation procedure for the VW settlement cells shall be as follows or as recommended by the Technical Representatives, and approved by the Resident.

A. The VW settlement cells shall be installed after removal of the existing pavement on the exposed subgrade, as stated on the Plans.

B. Settlement cell locations and the connecting trench shall be marked on the working surface with stakes. The stakes marking the settlement cell locations shall be clearly



## Settlement Platform Detail

Not to scale

### Notes:

1. A PVC sleeve shall be placed over the riser pipe and couplings. The PVC Sleeve shall have an inside diameter 2 inches greater (minimum) than the outside diameter of the riser pipe coupling.
2. Pipe lengths shall be added as required to provide a minimum 2 foot projection over embankment at any stage of construction. A minimum 2 foot projection above the top of the completed embankment is required. A maximum pipe length of 5 feet is allowed.