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

Paul R. LePage
GOVERNOR

David Bernhardt
COMMISSIONER

January 18, 2013
Subject: **Yarmouth**
Federal Project No: IM-1108(600) & CM-1749(000)X
State WIN: 011086.00 & 017490.00
Amendment No. 2

Dear Sir/Ms:

Make the following changes to the Bid Documents:

In the Bid Book (pages 17 thru 28) **REMOVE** the "SCHEDULE OF ITEMS" 12 pages dated 121214 and **REPLACE** with the attached new "SCHEDULE OF ITEMS" 11 pages dated 130117.

In the Bid Book (page 61) **REMOVE** "SPECIAL PROVISION, SECTION 105, GENERAL SCOPE OF WORK" 1 page dated December 13, 2012 and **REPLACE** with the attached new "SPECIAL PROVISION, SECTION 105, GENERAL SCOPE OF WORK" 1 page dated 1/17/13.

In the Bid Book (page 62) **REMOVE** "SPECIAL PROVISION, SECTION 105, GENERAL SCOPE OF WORK, (Limitation of Operations)" 1 page dated December 14, 2012 and **REPLACE** with the attached new "SPECIAL PROVISION, SECTION 105, GENERAL SCOPE OF WORK(Limitation of Operations)" 1 page dated 1/17/13.

In the Bid Book **REMOVE** and disregard the following two Special Provisions added in error in Amendment #1;

1. "SPECIAL PROVISION, SECTION 400, HOT MIX ASPHALT PAVEMENTS, (Polymer Modified PGAB for HMA), 1 page dated March 21, 2011, added after page 109.
2. "SPECIAL PROVISION, SECTION 401, HOT MIX ASPHALT PAVEMENTS, (Asphalt Rich Base Mixture)" 2 pages dated April 17, 2009, added before page 110.

In the Bid Book, after page 111, **ADD** the attached "SPECIAL PROVISION, SECTION 404, OPEN-GRADE FRICTION COURSE" 10 pages dated January 15, 2013.

In the Bid Book, after page 121, **ADD** the attached "SPECIAL PROVISION, SECTION 607, FENCES, (Cedar Rail Fence)", 2 pages dated January 8, 2013.

In the Bid Book, before page 122, **ADD** the attached "SPECIAL PROVISION, SECTION 607, FENCES, (Wood Screening Fence)", 2 pages dated January 8, 2013.

In the Plans, Sheet Number 13 of 283, "ESTIMATED QUANTITIES" make the following **CHANGES** in pen and ink to the "ESTIMATED QUANTITIES";

Item 206.061, **CHANGE** the quantity from "1,104" to read "**1600**"
Item 604.090, **DELETE** in its entirety.
Item 652.381, **CHANGE** the quantity from "300" to read "**50**"

Link for TOPO Elevations:
http://www.maine.gov/mdot/filedownloads/win11086/index.htm

The following questions have been received:

Question: Can the Southbound ramps be closed?

Response: No

Question: Are there any specs/details for items 607.421 and 607.22? We didn't see any?

Response: The Special Provisions have been included in this amendment, please see the above changes.

Question: Please clarify the difference between these two wage classifications:
OPERATOR: Milling Machine - $25.73 wage + $23.27 fringe
OPERATOR: Milling Machine Reclaimer Combo - $24.77 wage + $8.39 fringe

Response: Contractor can elect to use either classification.

Question: I may have missed seeing a label, but can MDOT provide stations for item 201.12, "Selective Clearing and Thinning"?

Response: Please see the attached diagram containing locations for Selective Clearing (Item 201.12).

Question: Is there a specific location for item 526.301, "Temporary Concrete Barrier Type I"?

Response: No

Question: For item 615.25 "Bioretention Cell" the excavation is paid for by item 206.061 "Structural Earth Excavation – Drainage and Minor Structures, Below Grade", can MDOT provide the quantity or is it the entire 2,954 cy?

Response: 1485 cy is for Bio-retention, see change in quantity in amended schedule of items.

Question: The 18" pipe is paid for by item 603.179. All other pipe is incidental to item. Basis of Payment states the catch basins are incidental, but it looks like item 604.09 pays for them. Please clarify.

Response: See new schedule of items. Item has been deleted.

Question: Due to the special nature of item #462.30, will the Department consider a more conventional method of paving for Bid Item 462.30 Ultrathin Bonded Wearing Course?

Response: Please see the attached Special Provision. OGFC can be used as an alternate to the Utrathin Bonded Wearing Course. If the contractor elects to use OGFC it will be paid for at the 462.30 price.

Question: Is it the Departments intention to utilize a Rich Bottom Base and a Polymer HMA on this project? If so, then a new Special Provision 403 Box should be sent as well as revised quantities?

Response: Please see the above change. Special Provisions, Sections 400 and 401 were added in error in Amendment #1.

Question: Will the Department allow a 19.0mm HMA to be utilized for the base layers or as a Rich Bottom Base?

Response: No, please see the above change.

Question: Section 636 – Soil Nail Wall Design – page 152 #13 states that information pertaining to the cast in place wall and cast in place barrier will need to be included in the soil nail wall design item. If this is the case, the MDOT is asking for two separate designs for 2 separate structures, quite possibly from 2 different subcontractors. Will the units be amended to 2 each rather than 1 LS?

Response: No. The intent is for the soil nail wall contractor to design and construct the cast-in-place concrete facing. Payment for design and construction will be incidental to the design and construction of the soil nail wall, respectively. The cast-in-place concrete barrier shall be constructed as a Type IIIA barrier in accordance with MaineDOT standard details, no design is required. Payment for construction of this item is incidental to the soil nail wall construction.

Question: Some of the blasting required on the new northbound ramps is as close as 40ft to the I-295 travel lane, does the department plan to use any protective measures, other than temporary concrete barrier, to protect the traveling public?

Response: Contractor will be responsible for the overburden and developing a plan to account for this**.**

Question: If rolling state police closures are required during blasting operations, will they be paid through the 652.381 item? If not, who is responsible?

Response: Department will directly pay for any State Police used on the project.

Question: If rolling state police closures are required on I-295, will there be any time limitations for such closures?

Response: Rolling stops allowed up to 2:00pm, Monday- Thursdays only.

Question: Amendment #1 Section 150, Note 2 outlines what must be complete on NB ramps by the June 14th deadline, Note 4 states that no NB ramp closures will be allowed after June 14th? If the Contractor can't complete required work by the June 14th date, how will they complete the work?

Response: Please see specification in amendment package.

Question: Has the department done a critical path schedule to verify the constructability of the NB ramps by the June 14th deadline? Given the estimated production rates for subcontractors, long lead times for electrical items, and design/review for two separate wall structures, it seems unlikely the work will be complete prior to the June 14th deadline.

Response: Please see specification in amendment package.

Question: What is the elevation of the bottom of the Route 1 beam where the soil wall will be placed?

Response: Bearing elevations at the South Abutment are shown on the existing bridge drawings (sheet no. 32 of 109) included in appendix F of the Geotechnical Design report.

Question: Is there any noise or working hour ordinances in the town of Yarmouth?

Response: Contractor should check with the Town for any restrictions.

Question: Amendment #1, Section 502, structural concrete appears to address 18”/30” foundations and the concrete facing on the soil nail wall. Is there any specification for the cast in place barrier or the cast in place gutter?

Response: The cast in place concrete barrier shall be designed and constructed as a Type IIIA barrier in accordance with MaineDOT Standard details. The cast-in-place concrete gutter on top of the soil nail wall shall be designed by the contractor and submitted to MaineDOT for review and approval prior to construction.

Question: Is there a detail for the cast in place gutter on the top of the soil nail wall?

Response: Details for the cast-in-place gutter on the top of the soil nail wall are shown on Sheet Nos. 7 and 22. The design of the gutter shall be completed by the contractor and submitted to the Department for review and approval prior to construction.

Question: Are there any limitations for the lane closures on the SB off/on ramps?

Response: Ramps must remain open during construction.

Question: Page 257 Detail of pole top tenon bracket arm assembly; is this a requirement for each 30’ and 40’ or specific to one pole design?

Response: Yes for consistency with existing installations and future maintenance, the short arm that mounts to a post top tenon is required as detailed.

Question: Reference amendment #1/CADD files; we are unable to find existing TOPO elevations. Could the Department please provide this data as soon as possible?

Response: TOPO elevations can be accessed through the following link: http://www.maine.gov/mdot/filedownloads/win11086/index.htm

Question: The light standards appear to be specified as steel. Most of these projects allow either steel or aluminum. Would the aluminum equivalent meeting MDOT specifications be acceptable?

Response: No

Question: The plans call for pole top tenons to be used for mounting the luminaires. They allow for final positioning but are more expensive. Would the side mount arm bracket be allowed on this project?

Response: If the side mount arm is less than 2 feet.

Question: Special Provision, Section203; 3.03; L states no pourable or pumpable explosives shall be used unless approved in writing by the Resident. We suspect this specification has been added as protection for the perimeter control work. We suggest the appropriate location to tie such a restriction is in 3.03 G and not apply to the balance of the rock to be blasted. This restriction (at the direction of the resident) would significantly increase the cost of the work, especially considering the density of explosive charge per volume of rock that it will take to satisfactorily fragment the Shatter Rock Subgrade due to its confinement below subgrade excavation.

Response: "No exception to the use of pourable or pump able explosive products being used for production blasting holes only; however, such products shall not be used for any perimeter or first-row-in holes. We will review the results of blasting in the test sections and during production blasting, and if necessary, provide recommendations to the project team, all in an effort to help ensure the integrity of any cuts along the perimeter (i.e. final slopes)."

Question: Item 619.13, Bark Mulch is listed as 2 units, what is the depth of the 2 units?

Response: The depth of the two units of 619.13, Bark Mulch will be 4 inches deep as per MaineDOT standard specification 619.04, paragraph c, unless otherwise directed by the Resident.

Consider these changes and information prior to submitting your bid on January 23, 2013.

Sincerely,

George M. A. Macdougall P.E.
Contracts & Specifications Engineer

BIDDERS MUST ENTER ALL UNIT PRICES, MAKE ALL EXTENSIONS AND TOTAL THE BID.

MAINE DEPARTMENT OF TRANSPORTATION PAGE: 1
DATE: 130117
SCHEDULE OF ITEMS REVISED:

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
SECTION 0001 Project Items						
0010	201.11 CLEARING	8.000 AC				
0020	201.12 SELECTIVE CLEARING AND THINNING	1.000 AC				
0030	202.15 REMOVING MANHOLE OR CATCH BASIN	5.000 EA				
0040	202.202 REMOVING PAVEMENT SURFACE	7980.000 SY				
0050	202.203 PAVEMENT BUTT JOINTS	150.000 SY				
0060	203.20 COMMON EXCAVATION	55770.000 CY				
0070	203.21 ROCK EXCAVATION	36800.000 CY				
0080	203.212 SPECIAL PERIMETER CONTROL BLASTING	1050.000 LF				
0090	203.213 SHATTER SOLID ROCK SUBGRADE	5880.000 SY				
0100	203.27 ROCK BORROW	1270.000 CY				

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	206.061 STRUCTURAL EARTH EXCAVATION - DRAINAGE AND MINOR STRUCTURES, BELOW GRADE	1600.000 CY				
0120	206.07 STRUCTURAL ROCK EXCAVATION - DRAINAGE AND MINOR STRUCTURES	900.000 CY				
0130	304.10 AGGREGATE SUBBASE COURSE - GRAVEL	36510.000 CY				
0140	403.208 HOT MIX ASPHALT 12.5 MM HMA SURFACE	5880.000 T				
0150	403.209 HOT MIX ASPHALT 9.5 MM (SIDEWALKS, DRIVES, INCIDENTALS)	22.000 T				
0160	403.213 HOT MIX ASPHALT 12.5 MM BASE	13060.000 T				
0170	409.15 BITUMINOUS TACK COAT - APPLIED	3661.000 G				
0180	462.30 ULTRATHIN BONDED WEARING COURSE	3180.000 SY				
0190	526.301 TEMPORARY CONCRETE BARRIER TYPE I	LUMP	LUMP			
0200	527.305 QUADGUARD CRASH CUSHION	1.000 UN				

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0210	527.34 WORK ZONE CRASH CUSHIONS	2.000 UN				
0220	603.155 12 INCH REINFORCED CONCRETE PIPE CLASS III	34.000 LF				
0230	603.159 12 INCH CULVERT PIPE OPTION III	78.000 LF				
0240	603.161 15 INCH CORRUGATED METAL PIPE	27.000 LF				
0250	603.169 15 INCH CULVERT PIPE OPTION III	69.000 LF				
0260	603.179 18 INCH CULVERT PIPE OPTION III	912.000 LF				
0270	603.191 24 INCH CORRUGATED METAL PIPE	8.000 LF				
0280	603.195 24 INCH REINFORCED CONCRETE PIPE CLASS III	74.000 LF				
0290	603.199 24 INCH CULVERT PIPE OPTION III	215.000 LF				
0300	604.092 CATCH BASIN TYPE B1-C	8.000 EA				
0310	604.15 MANHOLE	1.000 EA				

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0320	604.182 CLEAN EXISTING CATCH BASIN AND MANHOLE	12.000 EA				
0330	605.09 6 INCH UNDERDRAIN TYPE B	4729.000 LF				
0340	605.10 6 INCH UNDERDRAIN OUTLET	298.000 LF				
0350	606.1721 BRIDGE TRANSITION - TYPE 1	4.000 EA				
0360	606.23 GUARDRAIL TYPE 3C - SINGLE RAIL	6252.000 LF				
0370	606.265 TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	4.000 EA				
0380	606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	30.000 EA				
0390	606.356 UNDERDRAIN DELINEATOR POST	8.000 EA				
0400	606.79 GUARDRAIL 350 FLARED TERMINAL	11.000 EA				
0410	607.22 CEDAR RAIL FENCE	50.000 LF				
0420	607.421 SCREENING FENCE	475.000 LF				

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CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0430	609.34 CURB TYPE 5	3000.000 LF				
0440	609.35 CURB TYPE 5 - CIRCULAR	140.000 LF				
0450	610.08 PLAIN RIPRAP	140.000 CY				
0460	613.319 EROSION CONTROL BLANKET	100.000 SY				
0470	615.07 LOAM	2943.000 CY				
0480	615.25 BIORETENTION CELLS	LUMP	LUMP			
0490	618.1401 SEEDING METHOD NUMBER 2 - PLAN QUANTITY	300.000 UN				
0500	618.1411 SEEDING METHOD NUMBER 3 - PLAN QUANTITY	177.000 UN				
0510	619.1201 MULCH - PLAN QUANTITY	477.000 UN				
0520	619.13 BARK MULCH	2.000 UN				
0530	620.54 STABILIZATION GEOTEXTILE	7700.000 SY				

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0540	621.025 EVERGREEN TREES (3 FOOT - 4 FOOT) GROUP A	20.000 EA				
0550	621.031 EVERGREEN TREES (4 FOOT - 5 FOOT) GROUP A	10.000 EA				
0560	621.037 EVERGREEN TREES (5 FOOT - 6 FOOT) GROUP A	15.000 EA				
0570	621.044 EVERGREEN TREES (6 FOOT - 8 FOOT) GROUP B	10.000 EA				
0580	621.045 EVERGREEN TREES (6 FOOT - 8 FOOT) GROUP C	5.000 EA				
0590	621.18 MEDIUM DECIDUOUS TREES (6 FOOT - 8 FOOT) GROUP C	15.000 EA				
0600	621.202 MEDIUM DECIDUOUS TREE (2 INCH - 2.50 INCH CALIPER) GROUP B	8.000 EA				
0610	621.245 LARGE DECIDUOUS TREES (2 FOOT - 3 FOOT) GROUP A	20.000 EA				
0620	621.255 LARGE DECIDUOUS TREES (8 FOOT - 10 FOOT) GROUP A	10.000 EA				
0630	621.273 LARGE DECIDUOUS TREE (2 INCH - 2.50 INCH CALIPER) GROUP A	16.000 EA				

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0640	621.546 DECIDUOUS SHRUBS (2 FOOT - 3 FOOT) GROUP A	100.000 EA				
0650	621.552 DECIDUOUS SHRUBS (3 FOOT - 4 FOOT) GROUP A	40.000 EA				
0660	621.711 HERBACEOUS PERENNIALS GROUP B	650.000 EA				
0670	621.80 ESTABLISHMENT PERIOD	LUMP	LUMP			
0680	626.11 PRECAST CONCRETE JUNCTION BOX	68.000 EA				
0690	626.22 NON-METALLIC CONDUIT	11345.000 LF				
0700	626.31 18 INCH FOUNDATION	6.000 EA				
0710	626.33 30 INCH FOUNDATION	48.000 EA				
0720	627.18 12 " SOLID WHITE PAVEMENT MARKING	3880.000 LF				
0730	627.733 4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	45400.000 LF				

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0740	627.744 6" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	32000.000 LF				
0750	627.75 WHITE OR YELLOW PAVEMENT & CURB MARKING	1150.000 SF				
0760	627.76 TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	LUMP	LUMP			
0770	629.05 HAND LABOR, STRAIGHT TIME	50.000 HR				
0780	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	50.000 HR				
0790	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	100.000 HR				
0800	631.32 CULVERT CLEANER (INCLUDING OPERATOR)	20.000 HR				
0810	634.180 RGS CONDUIT	140.000 LF				
0820	634.2042 LED LUMINARIES	54.000 EA				
0830	634.2082 REMOVE EXISTING LIGHT STANDARD	8.000 EA				
0840	634.2101 TYPE A LIGHT STANDARD	48.000 EA				

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0850	634.2102 TYPE B LIGHT STANDARD	6.000 EA				
0860	634.25 SERVICE POLE COMPLETE WITH CABINET AND CONTROLS	1.000 EA				
0870	634.313 # 4 AWG COPPER WIRING	33910.000 LF				
0880	634.316 #10 AWG COPPER WIRE	7500.000 LF				
0890	636.400 SOIL NAIL WALL DESIGN	LUMP	LUMP			
0900	636.411 SOIL NAIL WALL	1590.000 SF				
0910	639.18 FIELD OFFICE TYPE A	1.000 EA				
0920	643.72 TEMPORARY TRAFFIC SIGNAL EXIT 10 NB OFF RAMP	LUMP	LUMP			
0930	643.72 TEMPORARY TRAFFIC SIGNAL EXIT 17 NB RAMP	LUMP	LUMP			
0940	643.97 WOOD POLES WITH GUYS AND SPAN WIRE	1.000 EA				
0950	645.103 DEMOUNT GUIDE SIGN	6.000 EA				

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0960	645.106 DEMOUNT REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	50.000 EA				
0970	645.113 REINSTALL GUIDE SIGN	2.000 EA				
0980	645.116 REINSTALL REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGN	20.000 EA				
0990	645.251 ROADSIDE GUIDE SIGNS	350.000 SF				
1000	645.292 REGULATORY, WARNING, CONFIRMATION AND ROUTE MARKER ASSEMBLY SIGNS TYPE II	650.000 SF				
1010	645.511 FLASHING WARNING SIGN RIGHT CHEVRON SIGN	3.000 EA				
1020	645.511 FLASHING WARNING SIGN WRONG WAY SIGN	4.000 EA				
1030	652.30 FLASHING ARROW BOARD	2.000 EA				
1040	652.31 TYPE I BARRICADE	70.000 EA				
1050	652.312 TYPE III BARRICADE	45.000 EA				

CONTRACT ID: 011086.00 PROJECT(S): IM-1108(600)
CM-1749(000)X

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1060	652.33 DRUM	260.000 EA				
1070	652.34 CONE	200.000 EA				
1080	652.35 CONSTRUCTION SIGNS	3300.000 SF				
1090	652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES	LUMP	LUMP			
1100	652.38 FLAGGER	10000.000 HR				
1110	652.381 TRAFFIC OFFICER	50.000 HR				
1120	652.41 PORTABLE CHANGEABLE MESSAGE SIGN	6.000 EA				
1130	656.75 TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL	LUMP	LUMP			
1140	658.20 ACRYLIC LATEX COLOR FINISH, GREEN	1310.000 SY				
1150	659.10 MOBILIZATION	LUMP	LUMP			
	SECTION 0001 TOTAL					
	TOTAL BID					

SPECIAL PROVISION
SECTION 105
General Scope of Work

1. Prior to the Northbound Ramps being fully closed to the traveling public, temporary signals at Exit 10 and Exit 17 shall be fully functional and operating as approved by the resident engineer.

2. Northbound On and Off Ramps shall be completed and open to the traveling public on or before June 28, 2013. The following must be complete by the end of the day on June 28, 2013; All Northbound on and off ramp surface pavement, all permanent signing, and the removal of temporary traffic signals at Exit 10 and Exit 17.

3. Supplemental Liquidated Damages will be assessed the Contractor in the amount of Two-Thousand Five Hundred Dollars ($2,500.00) for every Calendar Day that the Northbound On/Off ramps remain closed to the traveling public beyond June 28, 2013 and shall continue until ramps are complete and open as directed.

4. No northbound on and off ramp closures will be allowed after June 28, 2013.

5. Northbound on and off ramps must remain operational after June 28, 2013.

SPECIAL PROVISION
SECTION 105
General Scope of Work
(Limitation of Operations)

1. Route 1: The Contractor shall maintain one lane of traffic in each direction from 7:00am to 7:00pm as directed by the resident engineer.

2. I-295: Temporary lane closures shall be approved and take place between the hours of 7:00pm and 6:00am.

Yarmouth
IM-1108(600)E
CM-1794(000)X
I-295 Exit 15 (Route 1)
Park & Ride Lot
Interchange Improvement and Park & Ride
January 15, 2013

SPECIAL PROVISION
SECTION 404
OPEN-GRADED FRICTION COURSE

404.01 Description The Contractor shall furnish and place a **One inch (1 inch)** course of 12.5mm graded open-graded friction course mixture (OGFC) on an approved base in accordance with the contract documents and in reasonably close conformity with the lines, grades, thickness, and typical cross sections shown on the plans or established by the Resident. The Department will accept this work under Quality Assurance provisions, in accordance with the requirements of Section 106 – Quality, Section 401 – Hot Mix Asphalt Pavement, and this Special Provision.

404.02 Materials Materials shall meet the following requirements:

Performance graded asphalt binder	702.01
Aggregates for HMA Pavement	703.07, except as noted in Table 1.

Mineral Filler Mineral filler shall consist of finely divided mineral matter such as rock or limestone dust or other suitable material. At the time of use it shall be sufficiently dry to flow freely and essentially free from agglomerations. Filler shall be free from organic impurities and have a plasticity index not greater than 4. Filler material for the mix shall meet AASHTO M17, except that the gradation requirements of M17 shall not apply.

Stabilizing additive Stabilizing additive shall consist of a fiber stabilizer, either cellulose or mineral fiber. The dosage rate for cellulose shall be approximately 0.3 percent by total mixture mass and sufficient to prevent draindown. Cellulose fibers shall conform to the properties outlined in Table 2. For mineral fibers, the dosage rate shall be approximately 0.4 percent by total mixture mass and sufficient to prevent draindown. Mineral fibers shall conform to the properties of Table 3.

TABLE 1 - AGGREGATE REQUIREMENTS

Criteria	Test Method	Specified Minimum	Specified Maximum
Micro-Deval	AASHTO TP 58-99	-	18.0
Flat and Elongated, %			
3 to 1	ASTM D4791	-	20
5 to 1	ASTM D4791	-	5
Fractured Faces, %			
One face	ASTM D5821	100	-
Two faces		90	-
Sand equivalent	AASHTO T176	50	-
Uncompacted Void Content of Fine Aggregate	AASHTO T304	45	-

TABLE 2 – Cellulose Fiber Properties

Property	Requirements
Method A - Alpine Sieve[1] Analysis	
Fiber Length	6 mm (0.25 in.) maximum
Passing 0.150mm (No. 100) sieve	70 ± 10%
Ash Content[2]	18 ± 5% non-volatiles
PH[3]	7.5 ± 1.0
Oil Absorbtion[4]	5.0 ± 1.0 (times fiber mass)
Moisture Content[5]	Less than 5.0% (by mass)

[1] Alpine Sieve Analysis. This test is performed using an Alpine Air Jet Sieve (Type 200 LS). A representative five gram sample of fiber is sieved for 14 minutes at a controlled vacuum of 75 kPa (11 psi). The portion remaining on the screen is weighed.

[2] Ash Content. A representative 2-3 gram sample of fiber is placed in a tared crucible and heated between 595° and 650°C (1100° and 1200° F) for not less than two hours. The crucible and ash are cooled in a desiccator and reweighed.

[3] pH Test. Five grams of fiber is added to 100 ml of distilled water, stirred and let sit for 30 minutes. The pH is determined with a probe calibrated with pH 7.0 buffer.

[4] Oil Absorption Test. Five grams of fiber is accurately weighed and suspended in an excess of mineral spirits for not less than five minutes to ensure total saturation. It is then placed in a screen mesh strainer (approximately 0.5 square millimeter hole size) and shaken on a wrist action shaker for ten minutes (approximately 1-¼ inch motion at 240 shakes/minute). The shaken mass is then transferred without touching, to a tared container and weighed. Results are reported as the amount (number of times it's own weight) the fibers are able to absorb.

[5] Moisture Content. Ten grams of fiber are weighed and placed in a 121° C (250 °F) forced air oven for two hours. The sample is then reweighed immediately upon removal from the oven.

TABLE 3 – Mineral Fiber Properties

Sieve Analysis	
Fiber Length[2]	6 mm (0.25in.) maximum mean test value
Thickness[3]	0.050 mm (0.0002 in.) maximum mean test value
Shot Content[4]	
0.250 mm (No. 60) Sieve	90 ± 5% passing
0.063 mm (No. 230) Sieve	70 ± 10% passing

Mineral fibers[1]

[1] The European experience and development of the above criteria are based on the use of basalt mineral fibers.

[2] The fiber length is determined according to the Bauer McNett fractionation.

[3] The fiber thickness is determined by measuring at least 200 fibers in a phase contrast microscope.

[4] Shot content is a measure of non-fibrous material. The shot content is determined on vibrating sieves. Two sieves, the 0.250 mm (No. 60) and the 0.063 mm (No. 230) are typically utilized. For additional information, see ASTM C612.

404.03 Composition of Mixtures The Contractor shall compose the open-graded friction course with aggregate, Performance Graded Asphalt Binder (PGAB), stabilizing fibers and mineral filler if required. OGFC shall be designed and tested according to AASHTO R35 and the requirements listed in Tables 4 and 5. The Contractor shall size, uniformly grade, and combine the aggregate fractions in proportions that provide a mixture meeting the grading requirements of the Job Mix Formula (JMF).

The Contractor shall submit for Department approval a JMF to the Central Laboratory in Bangor for each mixture to be supplied. The Department shall then have 15 calendar days in which to process a new design before approval. The JMF shall establish a single percentage of aggregate passing each required sieve size within the limits shown in Table 4. The general composition limits given in Table 4 indicate the control points of mixtures permissible under this specification. The JMF shall state the source, gradation, and percentage to be used of each portion of the aggregate and mineral filler if required. It shall also state the proposed PGAB content, the name and location of the refiner, the supplier, the source of PGAB submitted for approval, the type of PGAB modification if applicable, and the location of the terminal if applicable.

In addition, the Contractor shall provide the following information with the proposed JMF:

Properly completed JMF indicating all mix properties (Gmm, VMA, VFB, etc.)
Stockpile Gradation Summary
Design Aggregate Structure Consensus Property Summary
Design Aggregate Structure Trial Blend Gradation Plots (0.45 power chart)
Trial Blend Test Results for at least three different asphalt contents
Design Aggregate Structure for at least three trial blends
Test results for the selected aggregate blend at a minimum of three binder contents
Specific Gravity and temperature/viscosity charts for the PGAB to be used
Recommended mixing and compaction temperatures from the PGAB supplier
Material Safety Data Sheets (MSDS) For PGAB

Asphalt Content vs. Air Voids trial blend curve
Test report for Contractor's Verification sample
Test reports for PG binder content and gradation of RAP when used in the JMF
Supplier's recommended mixing and compaction temperatures for PGAB

TABLE 4. Aggregate Gradation Control Points

Sieve Designation	Nominal Maximum Aggregate Size---Control Points - Percentage by Weight Passing Square Mesh Sieves (Combined Aggregate)	
	12.5 mm OGFC	9.5 mm OGFC
19 mm	100	
12.5 mm	90 – 100	100
9.5 mm	55 – 75	85 – 100
4.75 mm	10 – 25	20 – 40
2.36 mm	5 – 10	5 – 10
0.075 mm	2.0 – 4.0	2.0 – 4.0

At the time of JMF submittal, the Contractor shall identify and make available the stockpiles of all proposed aggregates at the plant site. There must be a minimum of 135 Mg [150 ton] for stone stockpiles, 70 Mg [75 ton] for sand stockpiles, and 45 Mg [50 ton] of blend sand before the Department will sample. The Department shall obtain samples for laboratory testing. The Contractor shall also make available to the Department the PGAB and stabilizing fibers proposed for use in the mix in sufficient quantity to test the properties of the asphalt and to produce samples for testing of the mixture. Before the start of paving, the Contractor and the Department shall split a production sample for evaluation. The Contractor shall test its split of the sample and determine if the results meet the requirements of the Department's written policy for mix design verification (See Maine DOT Policies and Procedures for HMA Sampling and Testing available at the Central Laboratory in Bangor). If the results are found to be acceptable, the Contractor will forward their results to the Department's Lab, which will test the Department's split of the sample. The results of the two split samples will be compared and shared between the Department and the Contractor. If the Department finds the mixture acceptable, an approved JMF will be forwarded to the Contractor and paving may commence. The first day's production shall be monitored, and the approval may be withdrawn if the mixture exhibits undesirable characteristics such as checking, shoving or displacement. The Contractor shall be allowed to submit aim changes within 24 hours of receipt of the first Acceptance test result. Adjustments will be allowed of up to 2% on the percent passing the 2.36 mm sieve through the 0.075 mm and 3% on the percent passing the 4.75 mm or larger sieves. Adjustments will be allowed on the %PGAB of up to 0.2%. Adjustments will be allowed on GMM of up to 0.010.

The Contractor shall submit a new JMF for approval each time a change in material source or materials properties is proposed. The same approval process shall be followed. The cold feed percentage of any aggregate may be adjusted up to 10 percentage points from the amount listed on the JMF, however no aggregate listed on the JMF shall be eliminated.

TABLE 5: VOLUMETRIC DESIGN CRITERIA

Air Voids @ N_{Design}	20.0 percent
Binder Content	6.0 percent minimum
VCA_{mix}	Less than VCA_{DRC}
Draindown	0.3 percent maximum (AASHTO T 305)
Gyrations @ N_{Design}	50

404.04 Temperature Requirements After the JMF is established, the temperature of the mixture shall conform to the PGAB supplier's recommended mixing sand compaction temperature, with the following tolerances:

In the truck at the mixing plant	290°F to 335 °F
At the Paver	290°F to 335 °F

The JMF and the mix subsequently produced shall meet the requirements of Tables 1, 4 and 5. Under no circumstances will the Department accept HMA (unless the binder has been modified) that has been heated to temperatures over 179°C [340°F].

404.05 Performance Graded Asphalt Binder Unless otherwise noted in Special Provision 403 - Hot Bituminous Pavement, PGAB shall be 70 – 28, modified with polymer. The PGAB shall meet the applicable requirements of AASHTO M320 - Standard Specification for PGAB. The RTFOT (AASHTO T 240) residue of the polymer modified PGAB shall be tested by the Contractor according to ASTM D 6084 and have a minimum elastic recovery value of 60% at a test temperature of 25 °C. The Contractor shall provide the Department with documentation and test results from the asphalt binder provider showing that the PGAB meets the requirements of this special provision. The Department may take an informational sample of the polymer modified PGAB at any time to evaluate its elastic recovery value.

The Contractor shall provide the Department with an approved copy of the Quality Control Plan for PGAB in accordance with AASHTO R 26-01 Certifying Suppliers of PGAB. The Contractor shall request approval from the Department for a change in PGAB supplier or source by submitting documentation stating the new supplier or source a minimum of 24 hours prior to the change. In the event that the PGAB supplier or source is changed, the Contractor shall make efforts to minimize the occurrence of PGAB co-mingling.

404.06 Weather and Seasonal Limitations Section 401.06 shall apply, with the following change: The atmospheric temperature must be 16°C [60°F] or higher for placement of OGFC.

404.07 Hot Mix Asphalt Plant Section 401.07 shall apply.

401.08 Hauling Equipment Section 401.08 shall apply.

404.09 Pavers Section 401.09 shall apply.

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404.10 Rollers Section 401.10 shall apply, with the following exceptions: Pneumatic rollers will not be required. Steel wheel rollers shall have a minimum weight of 12 tons, one of which will be equipped and used with oscillatory compaction capability should it be needed.

404.101 Surface Tolerances Section 401.101 shall apply.

404.11 Preparation of Existing Surface Section 401.11 shall apply, with the following requirements:

The surface where the OGFC is to be placed shall be cleaned of all foreign and loose material. Immediately before beginning paving operations, ensure that the surface is dry. The tack coat shall not be placed unless the weather restrictions are met. When precipitation has occurred within 24 hours before application, the Department will determine when the surface is completely dry.

A tack coat of RS-1 shall be applied to curbs, gutters, manholes, and other similar structures. Exposed surfaces of these structures shall be cleaned and a uniform coating of RS-1 shall be applied to contact surfaces before paving.

In areas inaccessible to distributor spray bars, hand spraying equipment shall be used to apply tack coat. Traffic or construction vehicles will not be allowed on tack coated surfaces.

Only apply tack coat that can be paved over in the same day. Apply a tack coat of RS-1 at a rate of 0.10 to 0.15 gallons per square yard and at a spraying temperature of 90-140 °F. Adjust the spraying temperature and application rate to produce a uniform coating, with no excess material.

404.12 Hot Mix Asphalt Documentation Section - 401.12 shall apply.

404.13 Preparation of Aggregates Section - 401.13 shall apply.

404.14 Mixing Section - 401.14 shall apply.

404.15 Spreading and Finishing Section - 401.15 shall apply.

404.16 Compaction Section - 401.16 shall apply, with the following exceptions: Pneumatic rollers will not be required to compact the OGFC. The OGFC shall be compacted by oscillatory and static rollers. Three complete passes will be required with a steel roller operated in static mode, unless otherwise directed by the Department. A minimum of one complete pass in will be made with a roller in oscillatory mode if it is determined that inplace voids content is too high.
If the OGFC is unstable during compaction, it may be allowed to cool until rolling can be completed without excessive displacement. Following compaction, no traffic will be allowed on the OGFC for a period of 4 hours.

404.17 Joints Section - 401.17 shall apply, with the following addition: Prior to placing the an adjoining pass, the Contractor shall apply a tack coat of RS-1 at a rate of 0.10 to 0.14 gallons per square yard over the entire vertical face and three inches of the horizontal base being paved over directly adjacent. Transverse construction joints shall be treated in a similar manner. The Department will not permit broken or raveled edges and joints that are not straight.

404.18 Quality Control Method A, B & C Section 401.18 shall apply, with the following additions and changes:

Test Strip A test strip shall be constructed prior to the placement of OGFC on the project. The test strip shall be constructed offsite to establish the proper mix design, production, placement, and compaction procedures for this contract prior to full plant production and placement on the project site.

The test strip shall consist of a 20 ton minimum quantity. The Contractor shall work cooperatively with the Department to develop the mix gradation and asphalt content, and shall notify the Department at least 48 hours prior to their intent to construct the test strip. The Contractor shall provide the Department with two mix samples from the test strip for mix verification. The samples shall be tested for conformance to the contract requirements before further production.

In addition to the mix samples, a minimum of three cores will be sampled from the test strip, and shall be evaluated for density, porosity, and asphalt coating.
In the event that the cores or mix samples do not meet the requirements set forth in this specification, mixture gradation and asphalt contents will be adjusted and new test strips will be required until the requirements are met. Any modifications to the mixture shall be submitted as a change to the JMF by contract modification. There will be no separate payment for material placed in the offsite test strip. The test strip shall be considered incidental to Item 404.31 Open-Graded Friction Course.

OGFC mix production will not resume unless the Department is confident material meeting the contract requirements can be produced.

The maximum silo storage time for OGFC mixes shall be two hours.

Reasons for the Contractor to cease paving, Item d. Revise to read, "The Fractured Faces value falls below the requirements of Special Provision 404, Table 1 - Aggregate Requirements."

Reasons for the Contractor to cease paving, Item f. Revise to read, "The Flat and Elongated value exceeds the requirements of Special Provision 404, Table 1- Aggregate Requirements"

404.19 Quality Control Method D Section - 401.19 shall apply.

404.20 Acceptance – Section 401.20 shall apply, with the following additions and changes:

Under TABLE 4: ACCEPTANCE CRITERIA, add the following Note: "Bulk Specific Gravity determination for use in volumetric calculations shall be tested using AASHTO T331, Vacuum Sealing Method."

Sections 401.201, 401.202 and 401.203 shall apply, with the following exceptions:

Replace Table 6 - Method B Acceptance Limits with the following:

TABLE 7: METHOD B ACCEPTANCE LIMITS

Property	USL and LSL
Percent Passing 4.75 mm and larger sieves	Target +/-7
Percent Passing 2.36 mm to 1.18 mm sieves	Target +/-5
Percent Passing 0.60 mm	Target +/-4
Percent Passing 0.30 mm to 0.075 mm sieve	Target +/-3
PGAB Content	Target +/-0.5
Air Voids	20.0 % +/-2.5

404.21 Method of Measurement The Department will measure Open-graded friction course by the Mg [ton] in accordance with Section 108.1 - Measurement of Quantities for Payment.

404.22 Basis of Payment The Department will pay for the work, in place and accepted, in accordance with the applicable sections of this Section, for each type of OGFC specified.

The Department will pay for the work specified in Section 404.11, for the OGFC used, except that cleaning objectionable material from the pavement and furnishing and applying bituminous material to joints and contact surfaces is incidental.

Payment for this work under the appropriate pay items shall be full compensation for all labor, equipment, materials, and incidentals necessary to meet all related contract requirements, including design of the JMF, implementation of the QCP, obtaining core samples, transporting cores and samples, filling core holes, applying emulsified asphalt to joints, and providing testing facilities and equipment.

The Department will make a pay adjustment for quality as specified below.

404.221 Pay Adjustment for the Quality of Open-graded friction course The Department will sample, test, and evaluate Open-graded friction course in accordance with Section 106 - Quality and Section 404.20 - Acceptance.

404.222 Pay Factor (PF) (Method B) Section 401.222 shall apply, with the following changes:

Pay Adjustment Method B

The Department will use the following criteria for pay adjustment: density, Performance Graded Asphalt Binder content, voids @$N_{d,}$ and the percent passing the nominal maximum, 4.75 mm, 2.36 mm and 0.075 mm sieves for the type of HMA represented in the JMF. If the pay factor for PGAB content falls below 0.86, then the PGAB pay factor shall be 0.70.

PGAB Content, Air Voids and Gradation: The Department will determine a pay adjustment using Table 7: Method A Acceptance Limits as follows:

PA = (voids @ N_d PF- 1.0)(Q)(P)x0.10 + (PGAB PF- 1.0)(Q)(P)x0.15 + (% Passing Nom. Max PF-1.0)(Q)(P)X0.05+(% passing 4.75 mm PF-1.0)(Q)(P)X0.05+(%passing 2.36 mm PF-1.0)(Q)(P)X0.05+(%passing 0.075 mm PF-1.0)(Q)(P)X0.10

The Department will measure OGFC voids using core samples tested according to AASHTO T-166. The Department will randomly determine core locations. The Contractor shall cut 6 in [150 mm] diameter cores at no additional cost to the Department by the end of the working day following the day the pavement is placed, and immediately give them to the Department.
There will be no incentive/disincentive for inplace air voids, as samples will be taken for informational, shutdown, and quality monitoring only.

404.223 Process for Dispute Resolution (Methods A, B & C only) Section 401.223 shall apply.

Payment will be made under:

Pay Item	Pay Unit
404.31 Open-Graded Friction Course 12.5 mm Nominal Maximum Size	Megagram [Ton]

Yarmouth
11086.00
January 8, 2013

SPECIAL PROVISION
SECTION 607
FENCES
(Cedar Rail Fence)

Description: This work shall consist of furnishing and erecting a 54" high Cedar Rail Fence as shown on the plans and in accordance with these Special Provisions and as directed by the Resident Engineer.

Materials: Posts shall be 6"x 6" Pressure Treated and a minimum of 96" long. Rails shall be 4"x 4" x 96" long northern white cedar and screws shall be exterior grade.

Construction Requirements: The fence shall be placed as shown on the plans or as directed by the Engineer. Posts shall be set 8'-0" O.C. and set plumb in augured or hand dug holes approximately 4 feet in depth. There shall be 3 rails for each section of fence. Fence rails shall be screwed to the posts. The fence shall be constructed as shown on the special detail or as directed by the Resident Engineer.

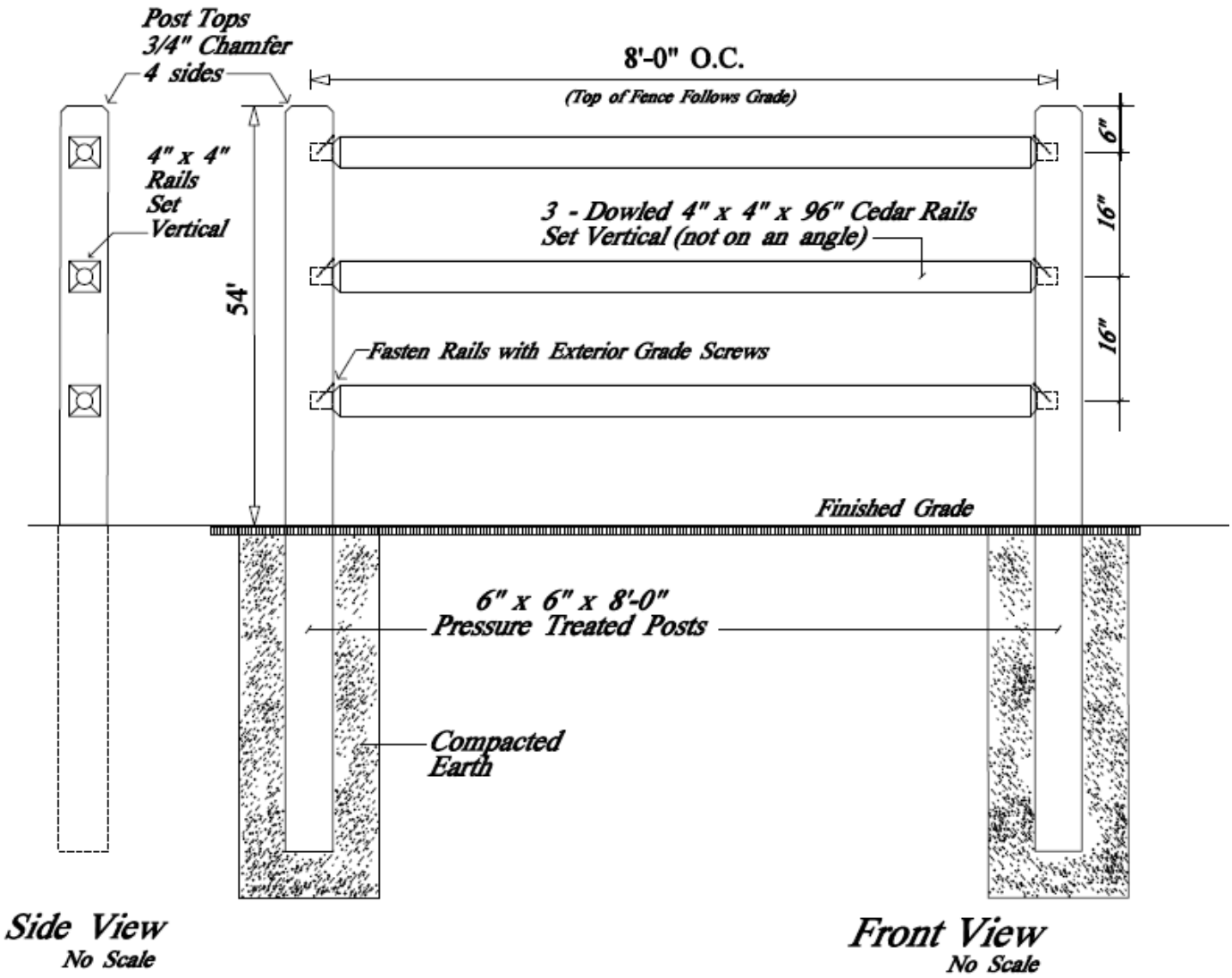
After the posts are placed, the rails are installed and the posts aligned, the holes shall be backfilled with earth placed in 8" layers loose measure and each layer thoroughly compacted. The completed fence shall have the tops of the posts at a uniform height above ground following the gradient of the ground.

Upon completion of fence installation, all surfaces shall receive two coats of Sherwin Williams WOODSCAPES® Acrylic Solid Color Stain color SW3026 (King's Canyon) or equal approved by the Resident Engineer. Stain shall be applied according to manufacturer's directions.

Method of Measurement: Fencing will be measured by the linear foot accepted in place. Measurement will be along the gradient of the fence from outside to outside of end posts. Excavation in rock for placement of fence posts in holes shall be incidental to the project.

Basis of Payment: The accepted quantities of fence will be paid for at the contract unit price per linear foot complete in place. Payment shall be full compensation for furnishing and assembling all material, for excavation and backfilling holes and for all incidentals necessary to complete the work. Payment will be made under:

Pay Item		Pay Unit
607.22	Cedar Rail Fence	Linear Foot



Cedar Rail Fence Detail

Yarmouth WIN 11086.00 (Item 607.22)

MaineDOT

Drawn by L. Johannesman 1.15.2013

SPECIAL PROVISION
SECTION 607
FENCES
(Wood Screening Fence)

Description: This work shall consist of furnishing and erecting a double-sided Wood Screening Fence as shown on the plans and in accordance with these Special Provisions and as directed by the Resident Engineer.

Materials: Posts shall be 6"x 6" Pressure Treated and a minimum of 10' long. Rails, fence boards and trim/cap boards shall be northern white cedar. Nails shall be aluminum ring shank and screws shall be exterior grade.

Construction Requirements: The fence shall be placed as shown on the plans or as directed by the Engineer. Posts shall be set 8'-0" O.C. and set plumb in augured or hand dug holes approximately 4 feet in depth. There shall be 3 rails for each section of fence. All boards shall be securely fastened. Fence boards shall be nailed to each of the rails with 2 nails per rail on all rails. The fence shall be constructed as shown on the special detail or as directed by the Resident Engineer.

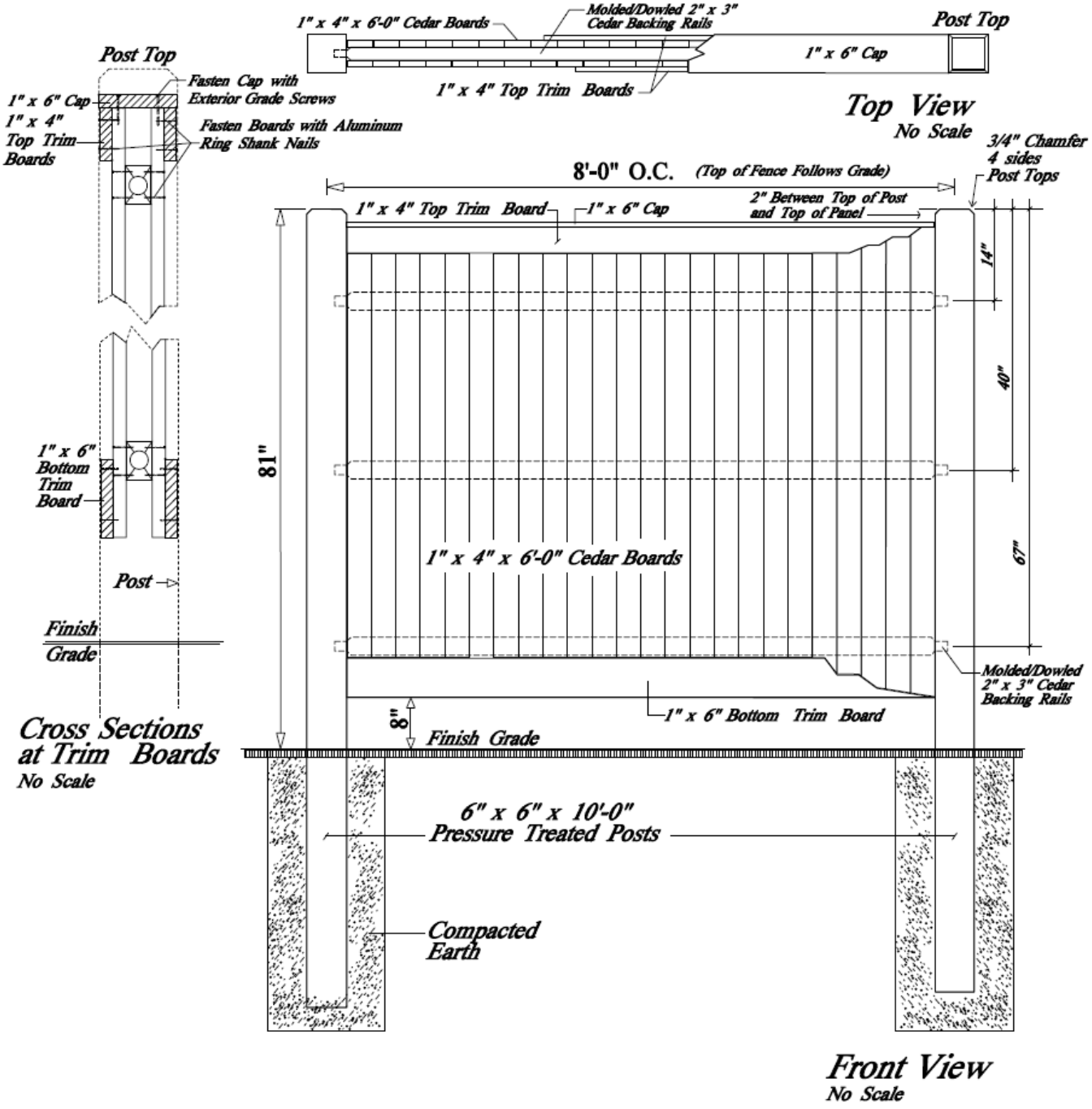
After the posts are placed, the rails are installed and the posts aligned, the holes shall be backfilled with earth placed in 8" layers loose measure and each layer thoroughly compacted. The completed fence shall have the tops of the posts at a uniform height above ground following the gradient of the ground.

Upon completion of fence installation, all surfaces shall receive two coats of Sherwin Williams WOODSCAPES® Acrylic Solid Color Stain color SW3026 (King's Canyon) or equal approved by the Resident Engineer. Stain shall be applied according to manufacturer's directions.

Method of Measurement: Fencing will be measured by the linear foot accepted in place. Measurement will be along the gradient of the fence from outside to outside of end posts. Excavation in rock for placement of fence posts in holes shall be incidental to the project.

Basis of Payment : The accepted quantities of fence will be paid for at the contract unit price per linear foot complete in place. Payment shall be full compensation for furnishing and assembling all material, for excavation and backfilling holes and for all incidentals necessary to complete the work. Payment will be made under:

Pay Item		Pay Unit
607.421	Wood Screening Fence	Linear foot



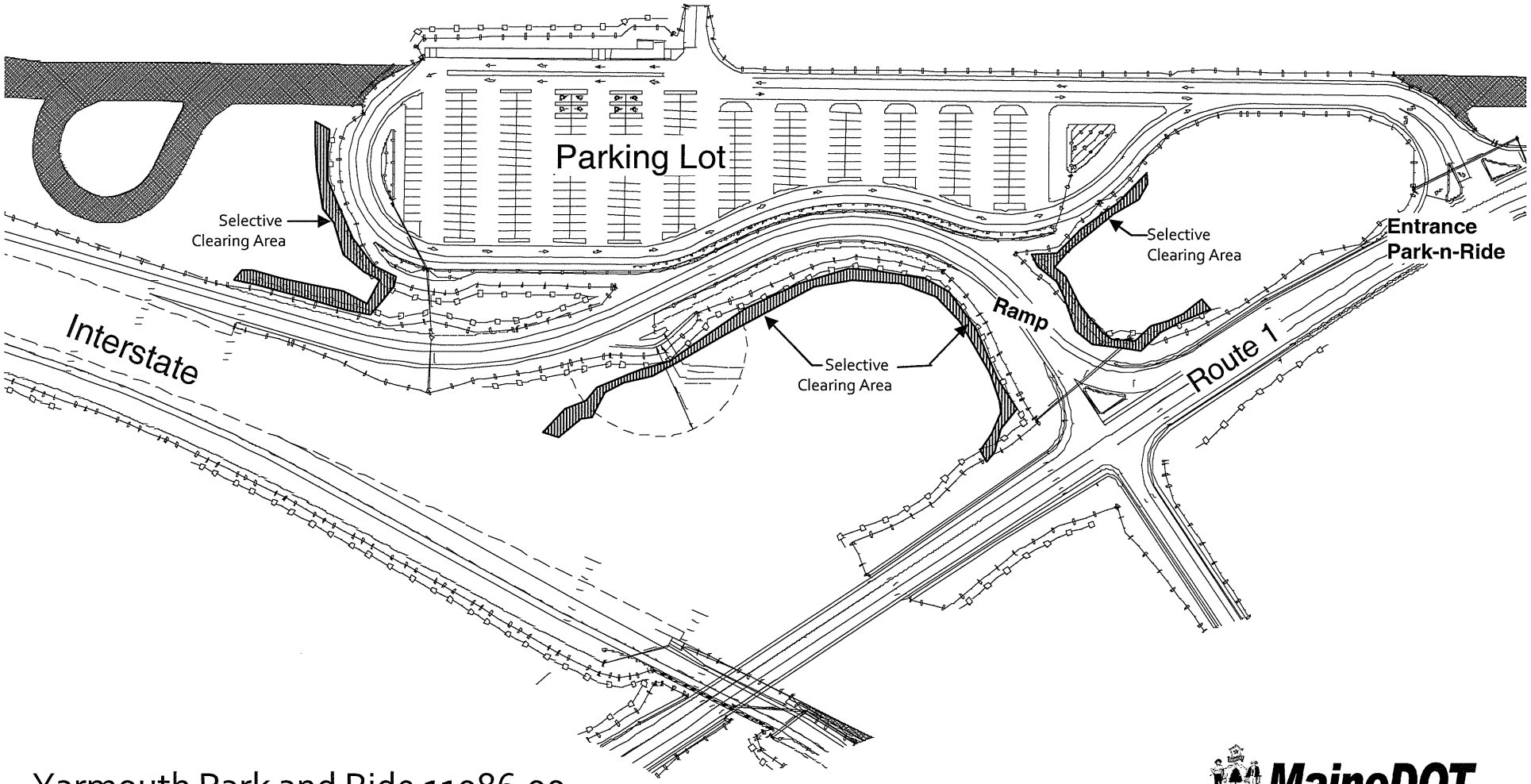
Double Sided Wood Screening Fence Detail

Yarmouth WIN 11086.00 (Item 607.421)

MaineDOT

Drawn by L. Johannesman 1.15.2013

The locations for Selective Clearing (Item 201.12) on the project are indicated in the areas below or as directed by the Resident. Wooded edges will be landscape areas viewed by the public and shall be selectively cleared and pruned in a natural manner under selective clearing specifications.



Yarmouth Park and Ride 11086.00

MaineDOT

Drawn by L. Johannesman 1.15.2013