



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

Janet T. Mills
GOVERNOR

Bruce A. Van Note
ACTING COMMISSIONER

January 18, 2019
Subject: Bridge Replacements &
Highway Construction
State WINs: 017280.00, 017912.00,
021691.00 & 023849.00
Location: Fryeburg
Amendment No. 1

Dear Sir/Ms.:

NOTE – A new Proposed Schedule of Items, reflecting the changes in the attached Estimated Quantities sheet, will be issued in the next amendment, planned for Tuesday, January 22, 2019.

Please make the following changes to the Bid Documents:

In the Bid Book:

CHANGE on page 14, NOTICE TO CONTRACTORS, the Bid Opening date from January 23, 2019 to read “January 30, 2019”. Make this change in pen and ink.

REMOVE page 93, SPECIAL PROVISION – SECTION 107 – TIME – (Scheduling of Work and Supplemental Liquidated Damages), 1 page, dated December 4, 2018, and **REPLACE** with the attached, revised SPECIAL PROVISION – SECTION 107 – TIME – (Scheduling of Work and Supplemental Liquidated Damages), 1 page, dated January 8, 2019.

ADD the attached, revised SPECIAL PROVISION – SECTION 401 – HOT MIX ASPHALT PAVEMENTS – (Asphalt Rich Base Mixture), 2 pages, dated December 28, 2016.

REMOVE pages 131 – 133, SPECIAL PROVISION – SECTION 403 – HOT MIX ASPHALT – Alternate 1, 3 pages, dated December 13, 2018, and **REPLACE** with the attached, revised SPECIAL PROVISION – SECTION 403 – HOT MIX ASPHALT – Alternate 1, 3 pages, dated January 10, 2019.

ADD the attached, revised SPECIAL PROVISION – SECTION 403 – HOT MIX ASPHALT – Alternate 2, 3 pages, dated January 10, 2019.

REMOVE pages 134 – 135, SPECIAL PROVISION – SECTION 403 – HOT MIX ASPHALT, 2 pages, dated December 13, 2018, and **REPLACE** with the attached, revised SPECIAL PROVISION – SECTION 403 – HOT MIX ASPHALT, 2 pages, dated January 14, 2019.

In the Plan Set:

WIN 023849.00:

REMOVE SHEET NUMBER A12 OF A20 – ABUTMENT NO. 1 PLAN AND ELEVATION, and **REPLACE** with the attached SHEET NUMBER A12A OF A20 - ABUTMENT NO. 1 PLAN AND ELEVATION.

WIN 017280.00:

REMOVE SHEET NUMBER 16 OF 374 - ESTIMATED QUANTITIES, and **REPLACE** with the attached SHEET NUMBER 16A OF 374 - ESTIMATED QUANTITIES.

REMOVE SHEET NUMBER 19 OF 374 - GENERAL NOTES, and **REPLACE** with the attached SHEET NUMBER 19A OF 374 - GENERAL NOTES.

WIN 17912.00:

REMOVE SHEET NUMBER B19 OF B22, PRECAST NEXT BEAM DETAILS (1 OF 2), and **REPLACE** with the attached SHEET NUMBER B19A OF B22, PRECAST NEXT BEAM DETAILS (1 OF 2).

The following questions have been received:

Question: Would a bid extension of one week, 1-30-19, be considered?

Response: Yes, see above change to NOTICE TO CONTRACTORS.

Question: Due to the complexity of this project coupled with the large amount of MaineDOT and other New England work bidding, we are requesting an extension of one week on the bid date.

Response: Yes, see above change to NOTICE TO CONTRACTORS.

Question: Will the DOT allow the use of Sanitite HP as an alternate to the RCP class III culverts on the project?

Response: No, Route 302 is a Priority 1 Corridor.

Question: Will 65 gyration mixes be allowed on this project?

Response: 65 Gyration mixes will be allowed for use for this project.

Question: Note 67 on page 19 states "Payment for transport and stockpile of the pavement will be incidental to common exc item 203.20" Is the excavation also paid for under item 203.20 common exc? Is the pavement salvaged in fill areas paid for under bid item 203.20 common exc?

Response: See revised general note sheet.

Question: Note 67 on page 19 states "6,000 CY of the pavement salvaged....shall remain the property of the state...." Does the state assume the remaining quantity of pavement salvaged will satisfy the amount required for the 5" FDR w/ emulsifier? The quantities given on the summary page do not reflect it.

Response: See revised general note sheet.

Question: For deck placements on the Eddy Flats and Shortridge Bridges would the department consider the use of a razorback air screed even though spec 502.13 states placements where Lightweight, vibrating screeds may be used must be less than 16 feet wide. The plans show placements to be 16'-2", 5', and 16'-2".

Response: The use of a Razorback will NOT be allowed for the deck placements of Eddy Flats and Shortridge Bridges. A Bidwell must be used.

Question: Can the existing plans for the Shortridge Bridge be made available? None are currently posted on the DOT website.

Response: Existing plans have been posted to the MaineDOT web site under the heading "Existing Plans (B)".

Question: On Sheet B19 of B22 in Detail "NEXT F Beam Part Reinforcing Elevation" there is a note indicating #4 bars that are 10'-0" long. Are these in addition to the full beam length mild reinforcing in the top flange? And if so, how many of these bars are required?

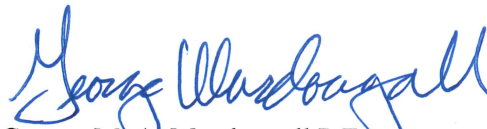
Response: No, see above changes to the Bid Documents.

Question: On Sheet B19 of B22 in Detail "NEXT 28 F Beam Typical Section - At Ends" there is a note saying "#4 bar @ 6" - End Zone Reinforcing". This detail seems to show that there will be a second layer of #4 bars in the end zone that isn't shown in other details on the page. If this second layout of straight bar is required at 6" what is the end zone distance these bars need to be included for?

Response: The transverse top flange reinforcement is spaced at 6 inches for a distance of 4 feet from the end of each beam. The spacing for the rest of the top flange transverse reinforcement is 8 inches. Please see the above changes to the Bid Documents.

Consider these changes and information prior to submitting your bid on **January 30, 2019**.

Sincerely,



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

SPECIAL PROVISION

SECTION 107

TIME

(Scheduling of Work and Supplemental Liquidated Damages)

North Fryeburg Road (Route 113) may be closed to traffic for a maximum of 7 continuous Calendar Days. Route 113 shall be opened to traffic on or before August 23rd, 2019. Route 113 may not be closed until after June 14th, 2019. Route 113 shall have two lanes of traffic open on August 10th, 2019, and no work will be allowed on this date. Car and truck traffic shall be detoured separately as shown on the Plans. The Contractor will be assessed Supplemental Liquidated Damages at the rate of three thousand dollars (\$3,000.00) per Calendar Day for each Calendar Day, or any portion of a Calendar Day, that Route 113 remains closed after the 7 continuous Calendar Days or the date specified above, whichever comes first.

Open to traffic is defined as having aggregate subbase course gravel (ASCG) and temporary concrete barrier over the buried structure and approaches, complete, in-place, and accepted, with a minimum 12-foot-wide roadway open for alternating one-way traffic.

Surface pavement and guardrail shall be complete, in-place, and accepted within 7 continuous Calendar Days after the new structure is open to traffic. The Contractor will be assessed Supplemental Liquidated Damages at the rate of three thousand dollars (\$3,000.00) per Calendar Day for each Calendar Day, or any portion of a Calendar Day, that the surface pavement and guardrail over the new structure and approaches have not been completed, as specified above.

Temporary lane closures may be allowed before and after the completion of the 7 continuous Calendar Day road closure, as approved by the Resident and controlled through work areas by properly certified Flaggers. Night time lane closures will not be allowed, unless otherwise specified herein. The Contractor shall provide a minimum roadway width of 24 feet for two-way traffic and 12 feet for one-way alternating traffic.

This assessment of supplemental liquidated damages will be in addition to the liquidated damages specified in Section 107 of the Standard Specifications.

SPECIAL PROVISION

SECTION 107

TIME

(Scheduling of Work and Supplemental Liquidated Damages)

North Fryeburg Road (Route 113) may be closed to traffic for a maximum of 7 continuous Calendar Days. Route 113 shall be opened to traffic on or before August 23rd, 2019. Route 113 may not be closed until after June 14th, 2019. Route 113 shall have two lanes of traffic open on August 10th, 2019, and no work will be allowed on this date. Car and truck traffic shall be detoured separately as shown on the Plans. The Contractor will be assessed Supplemental Liquidated Damages at the rate of three thousand dollars (\$3,000.00) per Calendar Day for each Calendar Day, or any portion of a Calendar Day, that Route 113 remains closed after the 7 continuous Calendar Days or the date specified above, whichever comes first.

Open to traffic is defined as having aggregate subbase course gravel (ASCG) and temporary concrete barrier over the buried structure and approaches, complete, in-place, and accepted, with a minimum 12-foot-wide roadway open for alternating one-way traffic.

Surface pavement and guardrail shall be complete, in-place, and accepted within 7 continuous Calendar Days after the new structure is open to traffic. The Contractor will be assessed Supplemental Liquidated Damages at the rate of three thousand dollars (\$3,000.00) per Calendar Day for each Calendar Day, or any portion of a Calendar Day, that the surface pavement and guardrail over the new structure and approaches have not been completed, as specified above.

Temporary lane closures may be allowed before and after the completion of the 7 continuous Calendar Day road closure, as approved by the Resident and controlled through work areas by properly certified Flaggers. Night time lane closures will not be allowed, unless otherwise specified herein. The Contractor shall provide a minimum roadway width of 24 feet for two-way traffic and 12 feet for one-way alternating traffic.

This assessment of supplemental liquidated damages will be in addition to the liquidated damages specified in Section 107 of the Standard Specifications.

SPECIAL PROVISION
DIVISION 401
HOT MIX ASPHALT PAVEMENTS
(Asphalt Rich Base Mixture)

The Special Provision 400 – Pavements; Section 401 – Hot Mix Asphalt Pavements; the following subsections have been modified with the following:

Description The Contractor shall furnish and place one or more courses of Asphalt Rich Base Hot Mix Asphalt 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 these specifications and the requirements of Section 106 – Quality, the provisions of AASHTO M 323 except where otherwise noted in sections 401 and 703 of these specifications, and the Maine DOT Policies and Procedures for HMA Sampling and Testing.

MATERIALS

401.02 Materials The Asphalt Rich Base HMA shall be designed for an Air Void Target of 2.5 % at 50 Gyration.

401.03 Composition of Mixtures The Asphalt Rich Base HMA shall meet the following design criteria:

The mixture shall be based upon a MaineDOT approved and active 9.5 mm, 12.5 mm, or 19.0 mm 50 gyration JMF. The gradation aims of the design shall exactly match the aims of the base approved design it is based upon. No aim changes shall be permitted to the asphalt-rich design unless they exactly match those applied to the base design. Asphalt-rich designs shall only be permitted to be carried over from year to year if the base JMF from which it was generated is carried over as well and the gradation aims remain identical. If the base JMF is terminated for any reason, the asphalt-rich design shall be terminated as well.

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 following requirements for verification:

ASPHALT-RICH VERIFICATION CRITERIA

PGAB Content	Design Value $\pm$ 0.3%
Air Voids at N_d	2.5% $\pm$ 0.5%
Voids in the Mineral Aggregate	See Section 401.03 Composition of Mixtures <u>Table 1</u>
Voids Filled with Binder	74% - 88%
Fines/Eff. Binder Ratio	0.4-1.2
Gradation	Passing 4.75 mm and larger sieves: Target $\pm$ 7% Passing 2.36 mm to 1.18 mm sieve: Target $\pm$ 4% Passing 0.60 mm: Target $\pm$ 3% Passing 0.30 mm to 0.075 mm sieve: Target $\pm$ 2%
Passing NMAS sieve minimum	90.0%
Average G_{mm}	Design Value $\pm$ 0.02

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.

401.16 Compaction The Contractor shall be responsible for any rutting or flushing of the asphalt-rich base mixture during placement or after opening to traffic. The asphalt-rich base layer shall be protected from damage due to traffic or environmental factors.

401.201 Method A Lot Size will be the entire production per JMF for the project, or if so agreed at the Pre-paving Conference, equal lots of up to 4500 tons, with unanticipated over-runs of up to 1500 ton rolled into the last lot. Sublot sizes shall be 750 ton for mixture properties, 500 ton for base or binder densities and 250 ton for surface densities. The minimum number of sublots for mixture properties shall be 4, and the minimum number of sublots for density shall be five.

TABLE 5: METHOD A ACCEPTANCE LIMITS

Property	USL and LSL
Passing 4.75 mm and larger sieves	Target +/-7%
Passing 2.36 mm to 1.18 mm sieves	Target +/-4%
Passing 0.60 mm	Target +/-3%
Passing 0.30 mm to 0.075 mm sieve	Target +/-2%
PGAB Content	Target +/-0.4%
Air Voids	2.5% +/-1.5%
Fines to Effective Binder	0.4 to 1.2
Voids in the Mineral Aggregate	LSL Only from Table 1
Voids Filled with Binder	74% – 93%
% TMD (In place density)	96.0% +/- 2.5%

Payment will be made under:

<u>Pay Item</u>	<u>Pay Unit</u>
403.2102 – 9.5mm Asphalt Rich Base HMA	Ton
403.2132 – 12.5mm Asphalt Rich Base HMA	Ton
403.2072 – 19.0mm Asphalt Rich Base HMA	Ton

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT

Desc. Of Course	Grad Design.	Item Number	Total Thick	No. Of Layers	Comp. Notes
<u>Route 302 - 4" HMA Overlay Areas</u>					
<u>Mainline Travelway & Shoulders (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	5,7,19,20,22,26,28,30
Base	12.5 mm	403.213	2 ½"	1	1,4,7,15,26
<u>Route 302 - 4" HMA Overlay Areas</u>					
<u>Sta. 74+14 to Sta. 79+00 Parking/Shoulder Area (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	5,7,24,28,30
Base	12.5 mm	403.213	2 ½"	1	1,4,7,15,24
<u>Route 302 - Bridge Approaches - 6" HMA Overlay Areas</u>					
<u>Mainline Travelway (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	5,7,19,20,22,26,28,30
Base	12.5 mm	403.213	2 ½"	1	1,4,7,15,26
Base	12.5 mm	403.213	2"	1	1,4,7,15
<u>Bridge Deck(s) - 3" HMA Overlay Areas</u>					
<u>Mainline Travelway & Shoulders (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	2,5,7,20,28,30
Base	12.5 mm	403.2131	1 ½"	1	2,4,8,15,30
<u>Approach Roads - 4" Overlay Areas</u>					
<u>Mainline Travelway & Shoulders (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	5,7,28,30
Base	12.5 mm	403.213	2 ½"	1	1,4,7,15
<u>Drives, Islands, Off Street Parking Areas, Misc.</u>					
Wearing	9.5 mm	403.209	2" – 3"	1/more	2,3,10,11,14,16

COMPLEMENTARY NOTES

1. The required PGAB for this mixture will meet a **PG 64-28** grading.
2. The incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on **bridge decks**.
3. The design traffic level for mix placed shall be <0.3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
5. 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 **65 gyrations**.
7. Section 106.6 Acceptance, (1) Method A.
8. Section 106.6 Acceptance, (2) Method B. The Contractor may request a contract modification to change to testing method "A" prior to work starting on this item.
10. Section 106.6 Acceptance, (2) Method D.

Fryeburg - Alternate 1
NH-1728(000)E, BR-1791(200)X, & 2384900
Route 302
Rehabilitation & Bridge Replacements
January 10, 2019

11. The combined aggregate gradation required for this item shall be classified as a 9.5mm “**fine graded**” mixture, (using the Primary Control Sieve control point) as defined in 703.09.
14. The combined aggregate gradation required for this item shall be classified as a 9.5mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.
15. The entire HMA base pavement section (consisting of all base layers) shall be completed before winter suspension. Any surface or base HMA placed after the seasonal limitations shall be considered temporary and removed and replaced the following construction season. The Department will not be responsible for costs or time related to the placement, removal or replacement of temporary pavement.
16. Compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a **3-5 ton** vibratory roller. Areas less than 2 feet wide shall be compacted with a minimum of a **150 pound** plate compactor. An approved release agent is required to ensure the mixture does not adhere to hand tools, rollers, pavers, and truck bodies. The use of petroleum based fuel oils, or asphalt stripping solvents will not be permitted.
19. The Contractor may, at their option, use a Material Transfer Vehicle (MTV) for **all mainline travelway and adjacent shoulders surface course** if paved in the same operation. See Special Provision 401 – Material Transfer Vehicle for specifics.
20. The Contractor may place the specified HMA pavement course, not to exceed 2 inch compacted depth, over the full single travel lane width, for each production day. If this option is utilized the Contractor will be required to place a matching course of HMA over the adjacent section of travel lane before the end of the following calendar day. The Contractor will also be responsible for installing additional warning signage that clearly defines the centerline elevation differential hazard. Unless otherwise addressed in the contract, the Contractor shall install additional centerline delineation such as a double RPM application, or temporary painted line for centerline depths exceeding $\frac{3}{4}$ ” inch, and provide a single RPM application placed on the newly placed pavement for $\frac{3}{4}$ ” inch or less layers. The Traffic Control Plan shall be amended to include this option and the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed prior to the work, at a maximum spacing of 0.50 mile for the entire length of effected roadway section. On roadways with two-way traffic, the Contractor will be required to place the specified course over the full width of the mainline traveled way being paved prior to opening the sections to weekend or holiday traffic. If this option is utilized, all additional signing, labor, traffic control devices, or incidentals will not be paid for directly, will be considered incidental to the appropriate 652 items.
22. The final pavement surface shall be evaluated for smoothness in accordance with the most current 400 Standard Specification section 402 – Pavement Smoothness. Acceptance limits shall be as outlined under the **Level II** classification.
24. The entire roadway (from curb to curb, including parking areas and bike lanes) shall be considered mainline travelway for density testing purposes according to the specified testing method.
26. Centerline joint density testing shall be applied to the specified HMA layer. See Special Provision 401 – Hot Mix Asphalt Longitudinal Joint Density for project specifics.
28. The mixture shall meet the minimum requirements of Special Provision 401 – HMA Hamburg Wheel Tracker Specification.

Fryeburg - Alternate 1
NH-1728(000)E, BR-1791(200)X, & 2384900
Route 302
Rehabilitation & Bridge Replacements
January 10, 2019

30. The required PGAB shall be a storage-stable, homogeneous, polymer modified asphalt binder that meets **PG 64E-28** grading requirements in AASHTO M 332. All polymer modified asphalt grades utilized on the Project shall be treated with an approved liquid anti-strip. PG binders shall be treated either at the asphalt source terminal with the required dose rate on the delivery documentation, or at the hot mix asphalt plant utilizing a system integrated with the plants controls that will introduce a minimum 0.50 percent anti-strip by weight of asphalt binder used unless a rate is otherwise recommended by the anti-strip manufacturer. The PGAB and anti-strip blend shall meet the **PG 64E-28** requirements. The Contractor shall provide supporting test data showing the PGAB and anti-strip blend meet the required criteria.

Tack Coat

A tack coat of emulsified asphalt, RS-1, RS-1h, CRS-1 or CRS-1h, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.030 gal/yd², and on milled pavement approximately 0.05 gal/yd² prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and surface course as well as to any bridge membrane prior to the placement of HMA layers at a rate not to exceed 0.030 gal/yd². Tack used will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION
SECTION 403
HOT MIX ASPHALT

Desc. Of Course	Grad Design.	Item Number	Total Thick	No. Of Layers	Comp. Notes
<u>Route 302 - 7" HMA Overlay Areas</u>					
<u>Mainline Travelway & Shoulders (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	5,7,19,20,22,26,28,30
Intermediate	12.5 mm	403.213	2 ½"	1	1,4,7,15,26
Base	19.0 mm	403.2072	3"	1	1,4,7,15
<u>Route 302 - 4" HMA Overlay Areas</u>					
<u>Sta. 74+14 to Sta. 79+00 Parking/Shoulder Area (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	5,7,24,28,30
Base	12.5 mm	403.213	2 ½"	1	1,4,7,15,24
<u>Route 302 - Bridge Approaches - 7" HMA Overlay Areas</u>					
<u>Mainline Travelway (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	5,7,19,20,22,26,28,30
Intermediate	12.5 mm	403.213	2 ½"	1	1,4,7,15,26
Base	19.0 mm	403.2072	3"	1	1,4,7,15
<u>Bridge Deck(s) - 3" HMA Overlay Areas</u>					
<u>Mainline Travelway & Shoulders (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	2,5,7,20,28,30
Base	12.5 mm	403.2131	1 ½"	1	2,4,8,15,30
<u>Approach Roads - 4" Overlay Areas</u>					
<u>Mainline Travelway & Shoulders (As Indicated in Typical)</u>					
Wearing	12.5 mm	403.2081	1 ½"	1	5,7,28,30
Base	12.5 mm	403.213	2 ½"	1	1,4,7,15
<u>Drives, Islands, Off Street Parking Areas, Misc.</u>					
Wearing	9.5 mm	403.209	2" – 3"	1/more	2,3,10,11,14,16

COMPLEMENTARY NOTES

1. The required PGAB for this mixture will meet a **PG 64-28** grading.
2. The incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on bridge decks.
3. The design traffic level for mix placed shall be <0.3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
5. 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 **65 gyrations**.
7. Section 106.6 Acceptance, (1) Method A.
8. Section 106.6 Acceptance, (2) Method B. The Contractor may request a contract modification to change to testing method "A" prior to work starting on this item.

10. Section 106.6 Acceptance, (2) Method D.
11. The combined aggregate gradation required for this item shall be classified as a 9.5mm “**fine graded**” mixture, (using the Primary Control Sieve control point) as defined in 703.09.
14. The combined aggregate gradation required for this item shall be classified as a 9.5mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.
15. The entire HMA base pavement section (consisting of all base layers) shall be completed before winter suspension. Any surface or base HMA placed after the seasonal limitations shall be considered temporary and removed and replaced the following construction season. The Department will not be responsible for costs or time related to the placement, removal or replacement of temporary pavement.
16. Compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a **3-5 ton** vibratory roller. Areas less than 2 feet wide shall be compacted with a minimum of a **150 pound** plate compactor. An approved release agent is required to ensure the mixture does not adhere to hand tools, rollers, pavers, and truck bodies. The use of petroleum based fuel oils, or asphalt stripping solvents will not be permitted.
19. The Contractor may, at their option, use a Material Transfer Vehicle (MTV) for **all mainline travelway and adjacent shoulders surface course** if paved in the same operation. See Special Provision 401 – Material Transfer Vehicle for specifics.
20. The Contractor may place the specified HMA pavement course, not to exceed 2 inch compacted depth, over the full single travel lane width, for each production day. If this option is utilized the Contractor will be required to place a matching course of HMA over the adjacent section of travel lane before the end of the following calendar day. The Contractor will also be responsible for installing additional warning signage that clearly defines the centerline elevation differential hazard. Unless otherwise addressed in the contract, the Contractor shall install additional centerline delineation such as a double RPM application, or temporary painted line for centerline depths exceeding $\frac{3}{4}$ ” inch, and provide a single RPM application placed on the newly placed pavement for $\frac{3}{4}$ ” inch or less layers. The Traffic Control Plan shall be amended to include this option and the additional requirements. All signs and traffic control devices will conform to Section 719.01, and Section 652, and will be installed prior to the work, at a maximum spacing of 0.50 mile for the entire length of effected roadway section. On roadways with two-way traffic, the Contractor will be required to place the specified course over the full width of the mainline traveled way being paved prior to opening the sections to weekend or holiday traffic. If this option is utilized, all additional signing, labor, traffic control devices, or incidentals will not be paid for directly, will be considered incidental to the appropriate 652 items.
22. The final pavement surface shall be evaluated for smoothness in accordance with the most current 400 Standard Specification section 402 – Pavement Smoothness. Acceptance limits shall be as outlined under the **Level II** classification.
24. The entire roadway (from curb to curb, including parking areas and bike lanes) shall be considered mainline travelway for density testing purposes according to the specified testing method.
26. Centerline joint density testing shall be applied to the specified HMA layer. See Special Provision 401 – Hot Mix Asphalt Longitudinal Joint Density for project specifics.
28. The mixture shall meet the minimum requirements of Special Provision 401 – HMA Hamburg Wheel Tracker Specification.

Fryeburg – Alternate 2
NH-1728(000)E, BR-1791(200)X, & 2384900
Route 302
Rehabilitation & Bridge Replacements
January 10, 2019

30. The required PGAB shall be a storage-stable, homogeneous, polymer modified asphalt binder that meets **PG 64E-28** grading requirements in AASHTO M 332. All polymer modified asphalt grades utilized on the Project shall be treated with an approved liquid anti-strip. PG binders shall be treated either at the asphalt source terminal with the required dose rate on the delivery documentation, or at the hot mix asphalt plant utilizing a system integrated with the plants controls that will introduce a minimum 0.50 percent anti-strip by weight of asphalt binder used unless a rate is otherwise recommended by the anti-strip manufacturer. The PGAB and anti-strip blend shall meet the **PG 64E-28** requirements. The Contractor shall provide supporting test data showing the PGAB and anti-strip blend meet the required criteria.

Tack Coat

A tack coat of emulsified asphalt, RS-1, RS-1h, CRS-1 or CRS-1h, Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.030 gal/yd², and on milled pavement approximately 0.05 gal/yd² prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and surface course as well as to any bridge membrane prior to the placement of HMA layers at a rate not to exceed 0.030 gal/yd². Tack used will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.

SPECIAL PROVISION

SECTION 403

HOT MIX ASPHALT PAVEMENT

Desc. Of Course	Grad Design.	Item Number	Total Thick	No. Of Layers	Comp. Notes
<u>4" – Route 113 Travel Way, Shoulders, Guardrail Flareouts & Widening – Full Depth</u>					
Wearing	12.5 mm	403.2081	1½"	1	4,8,30
Base	12.5 mm	403.213	2½"	1	1,4,8
<u>1½" – Route 113 Travel Way & Shoulders – Mill & Overlay</u>					
Wearing	12.5 mm	403.2081	1½"	1	4,8,30
Wearing	9.5 mm	403.211	2"	2/more	2,4,10,11,14
<u>3" – Fire Station Entrance</u>					
Wearing	12.5 mm	403.2081	1½"	1	2,4,8,17,30
Base	12.5 mm	403.213	1½"	1	1,2,4,8,17
<u>2" – Drives & Incidentals</u>					
Wearing	9.5 mm	403.209	2"	2	2,3,10,11,14

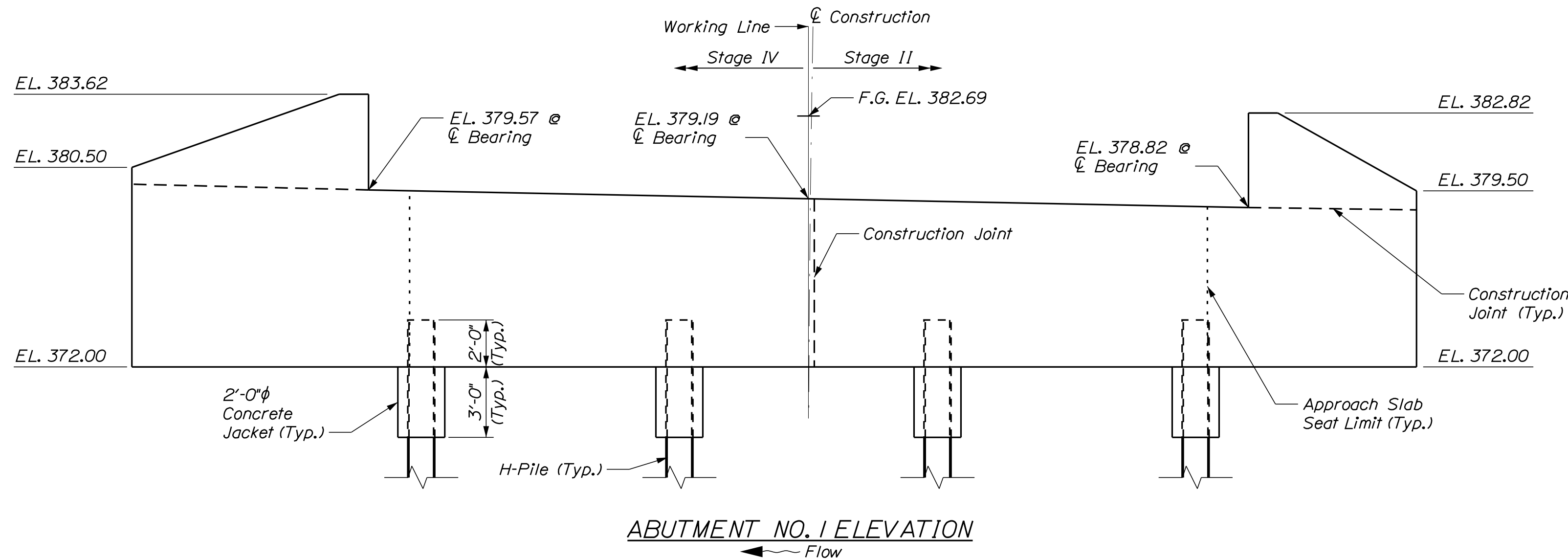
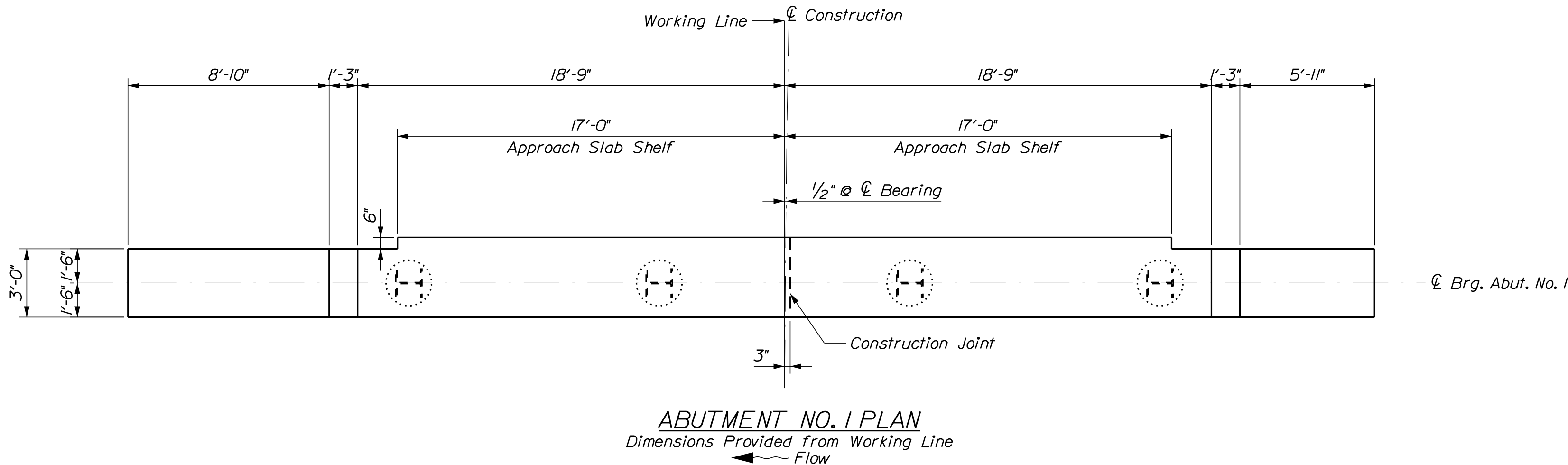
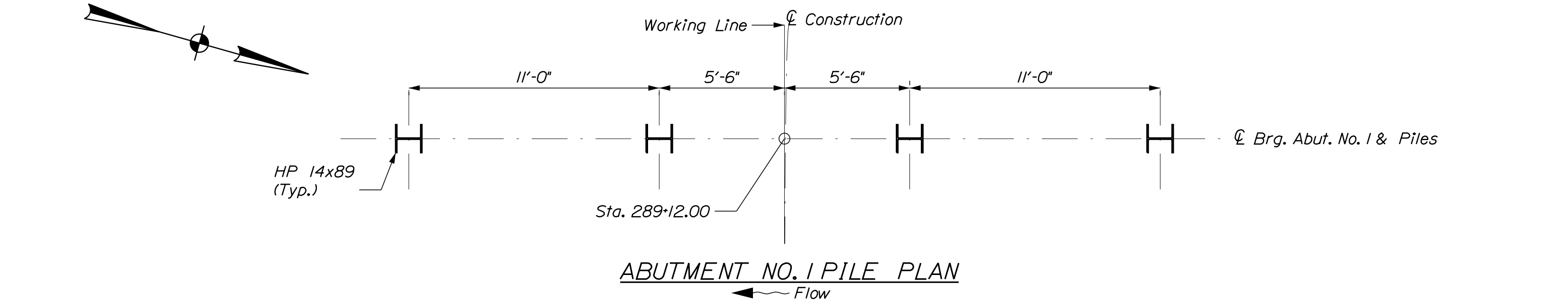
COMPLEMENTARY NOTES

1. The required PGAB for this mixture will meet a **PG 64-28** grading. All mixtures under this contract placed after the travel way surface season limitations defined in the Standard Specifications, shall utilize a warm mix additive.
2. The incentive/disincentive provisions for density shall not apply. Rollers shall meet the requirements of this special provision. The use of an oscillating steel roller shall be required to compact all mixtures pavements placed on bridge decks.
3. The design traffic level for mix placed shall be <0.3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
4. The design traffic level for mix placed shall be 0.3 to <3 million ESALS. The design, verification, Quality Control, and Acceptance tests for this mix will be performed at **65 gyrations**.
8. Section 106.6 Acceptance, (2) Method B. The Contractor may request a contract modification to change to testing method "A" prior to work starting on this item.
10. Section 106.6 Acceptance, (2) Method D.
11. The combined aggregate gradation required for this item shall be classified as a 9.5mm **"fine graded"** mixture, (using the Primary Control Sieve control point) as defined in 703.09.
14. The combined aggregate gradation required for this item shall be classified as a 9.5mm Thin Lift Mixture (TLM) mixture, using the Aggregate Gradation Control Points as defined in 703.09.

17. Compaction of the new Hot Mix Asphalt Pavement will be obtained using a minimal roller train consisting of a **10 ton** vibratory, **12 ton** pneumatic, and a **10 ton** finish roller for roadway work. A daily paving report, summarizing the mixture type, mixture temperature, equipment used, environmental conditions, and number of roller passes, shall be recorded and signed by the QCT and presented to the Department's representative by the end of the working day. An approved release agent is required to ensure the mixture does not adhere to hand tools, rollers, pavers, and truck bodies. The use of petroleum based fuel oils, or asphalt stripping solvents will not be permitted.
30. The required PGAB shall be a storage-stable, homogeneous, polymer modified asphalt binder that meets **PG 64E-28** grading requirements in AASHTO M 332. All polymer modified asphalt grades utilized on the Project shall be treated with an approved liquid anti-strip. PG binders shall be treated either at the asphalt source terminal with the required dose rate on the delivery documentation, or at the hot mix asphalt plant utilizing a system integrated with the plants controls that will introduce a minimum 0.50 percent anti-strip by weight of asphalt binder used unless a rate is otherwise recommended by the anti-strip manufacturer. The PGAB and anti-strip blend shall meet the **PG 64E-28** requirements. The Contractor shall provide supporting test data showing the PGAB and anti-strip blend meet the required criteria.

Tack Coat

A tack coat of emulsified asphalt, RS-1, RS-1h, CRS-1, or CRS-1h Item 409.15 shall be applied to any existing pavement at a rate of approximately 0.03 gal/yd², and on milled pavement approximately 0.05 gal/yd² prior to placing a new course. A fog coat of emulsified asphalt shall be applied between shim /base courses and surface course as well as to any bridge membrane prior to the placement of HMA layers at a rate not to exceed 0.03 gal/yd². Tack used will be paid for at the contract unit price for Item 409.15 Bituminous Tack Coat.



ABUTMENT NOTES

1. Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
2. Place 4-in. diameter drains in the breastwall and wingwalls at 10-ft maximum spacing. The exact location will be determined by the Resident.
3. Place the parapet portions of the wingwalls after erection of the precast units to ensure an accurate match with the superstructure.
4. Cover joints where waterstops are not required in accordance with Standard Details Section 502.
5. Payment for the concrete jackets around the top of the H-piles will be considered incidental to related Contract items. No separate payment will be made. Fill concrete may be used for the concrete jackets.
6. Payment for excavation necessary to construct the concrete pile jackets shall be considered incidental to related Contract items.
7. Install drainage geocomposite behind the abutments and wingwalls up to the approach slab seat elevation and in accordance with Special Provision Section 620, Drainage Geocomposite.

PILE NOTES

1. The maximum factored pile load is 323 kips for the Strength I limit state.
2. H-pile material shall be ASTM A 572, Grade 50.
3. Estimate of piles required:

Abutment No. 1: 4 ~ HP 14x89 @ 56 feet
Abutment No. 2: 4 ~ HP 14x89 @ 57 feet
4. The order lengths of the piles shall include an additional 5 feet of length for each test pile to accommodate dynamic pile testing equipment.
5. All piles shall be equipped with a pile tip in accordance with Standard Specifications Subsection 501.048 - Prefabricated Pile Tips.
6. Piles shall be driven to the required resistance on or within bedrock in accordance with Standard Specification 501 - Foundation Piles.
7. The Contractor shall submit to the Department, for review and acceptance, their proposed pile driving equipment with a completed "Pile and Driving Equipment Data Form," Figure 1, of Standard Specification 501 - Foundation Piles. Approval of the proposed pile driving equipment by the Department will be based on Department-conducted wave equation analyses and the criteria specified in Section 501 and Subsection 501.042, Equipment for Driving Piles. If the Department-conducted wave equation analyses show that the proposed driving system(s) is unacceptable, the Contractor shall modify or replace the proposed driving equipment in an amendment of the QCP, at their own expense, until subsequent wave equation analyses by the Department indicate the pile can be driven to the required resistance, without damage or excessive blows.
8. The Contractor shall provide access for the agents of the Department to perform two (2) dynamic load tests with signal matching and 24-hour (minimum) restrrike at each Abutment No. 1 and Abutment No. 2, as specified in Special Provision 502 - Dynamic Loading Test, to confirm the normal resistance of the piles. The dynamic pile load test at each abutment will be completed on the first production pile driven and will include a minimum 24-hour restrrike test. The required nominal resistance for the piles is the maximum factored axial pile load divided by a resistance factor equal to 0.65 per LRFD specifications.
9. The driving system shall be operating at efficiency equal to or greater than that used in the wave equation submittal. If the driving system is not operating at the required efficiency, as indicated by the approved wave equation analysis and/or dynamic load tests result, the Contractor shall rebuild or replace driving system components, in accordance with Standard Specification Section 501.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		STP-2384(900)		WIN		BRIDGE NO. 2765		23849.00		BRIDGE PLANS	
SHORTRIDGE BRIDGE		SACO RIVER OVERFLOW		OXFORD COUNTY		FRYEBURG		ABUTMENT NO. 1		PLAN AND ELEVATION		SHEET NUMBER	
A12A		OF A20		Stantec									

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
107.531	PROSECUTION OF WORK - BIWEEKLY UPDATES	1	LS
201.11	CLEARING	9	AC
201.23	REMOVING SINGLE TREE TOP ONLY	113	EA
201.24	REMOVING STUMP	120	EA
202.15	REMOVING MANHOLE OR CATCH BASIN	14	EA
203.21	ROCK EXCAVATION	700	CY
203.211	PRESPLITTING ROCK	500	LF
203.213	DRILLING AND BLASTING OF SOLID ROCK SUBGRADE	800	SY
203.2312	HEALTH AND SAFETY PLAN (HASP)	1	LS
203.2333	DISPOSAL/TREATMENT OF SPECIAL EXCAVATION	50	TON
203.25	GRANULAR BORROW	1,600	CY
203.33	SPECIAL FILL	80	CY
206.061	STRUCTURAL EARTH EXCAVATION - DR & MINOR ST BEL GD	142	CY
403.2081	HOT MIX ASPHALT 12.5 MM HMA SURFACE	8,470	TON
403.209	HOT MIX ASPHALT 9.5 MM (SIDEWALKS, DRIVES, INCIDENTALS)	1,040	TON
403.213	HOT MIX ASPHALT 12.5 MM BASE	14,200	TON
411.10	UNTREATED AGG. SURFACE COURSE, TRUCK MEAS., TYPE A	100	CY
508.13	SHEET WATERPROOFING MEMBRANE	1	LS
511.07	COFFERDAM - UPSTREAM	1	LS
511.07	COFFERDAM - DOWNSTREAM	1	LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES	1	LS
526.301	TEMPORARY CONCRETE BARRIER, TYPE I	1	LS
527.34	WORKZONE TRAFFIC CUSHION	2	UN
534.71	PRECAST CONCRETE BOX CULVERT: STA. 209+85	1	LS
603.16	15" CULVERT PIPE OPTION I	694	LF
603.169	15" CULVERT PIPE OPTION III	104	LF
603.17	18" CULVERT PIPE OPTION I	30	LF
603.175	18" RCP CLASS III	978	LF
603.179	18" CULVERT PIPE OPTION III	536	LF
603.195	24" RCP CLASS III	64	LF
603.199	24" CULVERT PIPE OPTION III	256	LF
603.205	30" RCP CLASS III	64	LF
603.215	36" RCP CLASS III	248	LF
603.239	48" RCP CLASS III	152	LF
603.275	72" RCP CLASS III	136	LF
603.55	CONCRETE PIPE TIES	52	GRP
604.072	CATCH BASIN TYPE A1-C	14	EA
604.092	CATCH BASIN TYPE B1-C	14	EA
604.243	CATCH BASIN TYPE F3-C	1	EA
604.247	CATCH BASIN TYPE F5-C	1	EA
605.09	6 INCH UNDERDRAIN TYPE B	11,231	LF
605.10	6 INCH UNDERDRAIN OUTLET	336	LF
605.11	12 INCH UNDERDRAIN TYPE C	990	LF
605.13	18 INCH UNDERDRAIN TYPE C	1,111	LF
605.15	24 INCH UNDERDRAIN TYPE C	221	LF
606.1301	31 INCH W-BEAM GUARDRAIL, MID-WAY SPLICE, SINGLE FACED	7,020	LF
606.1303	31 INCH W-BEAM GUARDRAIL, MID-WAY SPLICE, 15' RADIUS AND LESS	300	LF
606.1304	31 INCH W-BEAM GUARDRAIL, MID-WAY SPLICE, OVER 15' RADIUS	13	LF
606.1305	31 INCH W-BEAM GUARDRAIL, MID-WAY SPLICE, FLARED TERMINAL	20	EA
606.1307	BRIDGE TRANSITION (ASYMMETRICAL) - TYPE 1	6	EA
606.265	TERMINAL END - SINGLE RAIL - GALVANIZED STEEL	12	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	80	EA
606.356	UNDERDRAIN DELINEATOR POST	12	EA
606.47	SINGLE WOOD POST	24	EA
606.51	MULTIPLE MAILBOX SUPPORT	4	EA
608.08	REINFORCED CONCRETE SIDEWALK	303	SY
608.26	CURB RAMP DETECTABLE WARNING FIELD	92	SF
609.11	VERTICAL CURB TYPE I	1,298	LF
609.12	VERTICAL CURB TYPE I - CIRCULAR	50	LF
609.234	TERMINAL CURB TYPE I - 4 FOOT	27	EA
609.238	TERMINAL CURB TYPE I - 8 FOOT	40	EA
609.31	CURB TYPE 3	7,600	LF

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
609.38	RESET CURB TYPE 1	300	LF
610.08	PLAIN RIPRAP	410	CY
610.18	STONE DITCH PROTECTION	50	CY
610.210	STREAM CHANNEL ROCK	45	CY
613.319	EROSION CONTROL BLANKET	5,560	SY
613.40	TURF REINFORCEMENT MAT (TRM)	1,200	SY
615.07	LOAM	5,987	CY
618.13	SEEDING METHOD NUMBER 1	57	UN
618.14	SEEDING METHOD NUMBER 2	856	UN
619.12	MULCH	913	UN
619.14	EROSION CONTROL MIX	6,100	CY
620.54	STABILIZATION / REINFORCEMENT GEOTEXTILE	500	SY
620.58	EROSION CONTROL GEOTEXTILE	990	SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	70,900	LF
627.744	6" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	100	LF
627.75	WHITE OR YELLOW PAVEMENT & CURB MARKING	770	SF
627.77	REMOVING EXISTING PAVEMENT MARKING	2,500	SF
627.78	TEMPORARY PAVEMENT MARKING LINE, WHITE OR YELLOW	140,000	LF
629.05	HAND LABOR	200	HR
631.10	AIR COMPRESSOR (INCLUDING OPERATOR)	50	HR
631.11	AIR TOOL (INCLUDING OPERATOR)	50	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	50	HR
631.14	GRADER (INCLUDING OPERATOR)	20	HR
631.15	ROLLER, EARTH AND BASE (INCLUDING OPERATOR)	20	HR
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	100	HR
631.20	STUMP CHIPPER (INCLUDING OPERATOR)	50	HR
631.22	FRONT END LOADER (INCLUDING OPERATOR)	50	HR
639.18	FIELD OFFICE TYPE A	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL: STATION 209+92	1	LS
645.103	DEMOUNT GUIDE SIGN	49	EA
645.106	DEMOUNT REG., WARN., CONFIRM., & RTE. MARKER ASSBLY. SIGN	95	EA
645.113	REINSTALL GUIDE SIGN	31	EA
645.116	REINSTALL REG., WARN., CONFIRM., & RTE. MARKER ASSBLY. SIGN	21	EA
645.291	ROADSIDE GUIDE SIGNS, TYPE II	81	SF
645.292	REG., WARN., CONFIRM., & RTE. MARKER ASSBLY. SIGNS, TYPE II	639	SF
652.30	FLASHING ARROW BOARD	2	EA
652.33	DRUM	200	EA
652.34	CONE	300	EA
652.35	CONSTRUCTION SIGNS	960	SF
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	344	CD
652.38	FLAGGER	18,200	HR
652.381	TRAFFIC OFFICER	300	HR
652.41	PORTABLE CHANGEABLE MESSAGE SIGN	2	EA
656.75	TEMP SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
659.10	MOBILIZATION	1	LS
660.21	ON-THE-JOB TRAINING	2,000	HR
801.03	TEST PITS	6	EA
ALTERNATE 1 - FDR WITH EMULSION OPTION			
203.20	COMMON EXCAVATION	71,600	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	63,000	CY
307.332	FULL DEPTH RECYCLED PAVEMENT (W/EMULS. ASPHALT STABILIZER)	62,800	SY
409.15	BITUMINOUS TACK COAT - APPLIED	4,740	GAL
ALTERNATE 2 - HMA OPTION			
203.20	COMMON EXCAVATION	76,100	CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL	65,000	CY
403.2072	19 MM ASPHALT RICH BASE MIXTURE	10,800	TON
409.15	BITUMINOUS TACK COAT - APPLIED	6,600	GAL

EARTHWORK SUMMARY			
7" HMA PAVEMENT DESIGN ALTERNATE			
ALL QUANTITIES ARE IN CUBIC YARDS (CY)			
COMMON EXCAVATION FOR ESTIMATE			
COMMON EXCAVATION (FROM CROSS SECTIONS)	64,893		
EARTH FROM DRIVES, OLD ROAD, ETC.	2,880		
GRUBBING IN FILL	2,532		
CROSS CULVERTS IN FROST SUSCEPTIBLE SOIL	1,000		
PAVEMENT SALVAGE IN FILL	4,770		
TOTAL COMMON EXCAVATION (for estimate)		76,075	
FILL FOR BORROW CALCULATIONS			
COMMON FILL (FROM CROSS SECTIONS)	14,129		
FILL FOR DRIVES	345		
GRUBBING IN FILL	2,532		
PAVEMENT SALVAGE IN FILL	4,770		
TOTAL FILL		21,777	
ROCK EXCAVATION FOR ESTIMATE			
ROCK EXCAVATION (FROM CROSS SECTIONS)	700		
TOTAL ROCK EXCAVATION		700	
AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS			
(1) TOTAL COMMON EXCAVATION		76,075	
DEDUCTIONS:			
GRUBBING IN CUT	11,610		
GRUBBING IN FILL	2,532		
PAVEMENT SALVAGE (CUT & FILL)	12,593		
(2) TOTAL DEDUCTIONS		26,735	
TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2)		49,340	
TOTAL AVAILABLE STRUCT. EXCAVATIONS (USUALLY UNDERDRAIN ONLY)		4,521	
RIPRAP EXCAVATION	300		
TOTAL AVAILABLE NON-ROCK EXCAVATION		54,161	
COMPUTATION OF WASTE STORAGE & WASTE MATERIAL			
TOTAL AVAIL. WASTE STORAGE AREA (FROM CROSS SECTIONS)		6,952	
GRUBBING IN CUT	11,610		
GRUBBING IN FILL	2,532		
TOTAL WASTE MATERIAL TO BE UTILIZED (LOWER OF TOTAL AVAILABLE WASTE STORAGE AREA OR TOTAL WASTE MATERIAL)		6,952	
TOTAL WASTE MATERIAL TO BE WASTED (TOTAL WASTE MATERIAL MINUS TOTAL WASTE MATERIAL TO BE UTILIZED)		7,190	
COMPUTATION OF GRANULAR BORROW FOR ESTIMATE			
GRANULAR BORROW IN LOW WET AREAS	374		
GRANULAR BORROW FOR UNDER CULVERTS	1,226		
GRANULAR BORROW =	1,600 x 1.00 =	1,600	
COMPUTATION FOR COMMON BORROW FOR ESTIMATE			
(3) TOTAL FILL		21,777	
TOTAL AVAIL. NON-ROCK EXCAV.	54,161 x 0.90 =	48,745	
TOTAL AVAIL. ROCK EXCAV.	700 x 1.30 =	910	
TOTAL WASTE MATERIAL TO BE UTILIZED	6,952 x 0.90 =	6,257	
(4) TOTAL AVAILABLE EXCAVATION		55,912	
IF NO BORROW IS NEEDED, SURPLUS MATERIAL = AVAILABLE EXCAVATION MINUS TOTAL FILL, PLUS TOTAL WASTE MATERIAL TO BE WASTED		41,325	
SURPLUS MATERIAL = 41,325 CY			

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

NH-1728(000)E

WIN
17280.00
HIGHWAY PLANS

PROJ. MANAGER
DESIGN-DETAILED
CHECKED-REVISED
DESIGN-DET. ALD. 3
DESIGN-DET. ALD. 3

R. CARRELL
M. DEBOWSKI

BY

DATE

SIGNATURE

P.R. NUMBER

DATE

FRYEBURG
US ROUTE 302

ESTIMATED QUANTITIES

SHEET NUMBER

16A

OF 374

GENERAL NOTES:

1. THE UTILITIES INVOLVED IN THIS CONTRACT ARE AS FOLLOWS: CENTRAL MAINE POWER, FAIRPOINT, AND TIME WARNER CABLE.
2. ALL UTILITY FACILITIES SHALL BE ADJUSTED BY THE RESPECTIVE UTILITIES UNLESS OTHERWISE NOTED. EARTHWORK (CUT AND FILL) AND BLASTING FOR NEW POLE PLACEMENT MAY NEED TO TAKE PLACE EARLY IN THE PROJECT TO PROVIDE SUITABLE LOCATIONS FOR UTILITY RELOCATION.
3. A TEMPORARY RAMP SHALL BE CONSTRUCTED WITH HMA AT THE ENDS OF THE ROADWAY SECTION PAVED OR MILLED EACH DAY. THE USES OF MILLINGS OR RAP WILL NOT BE ALLOWED, BUT COLD PATCH MAY BE TEMPORARILY UTILIZED UNTIL HMA PLANTS ARE OPEN FOR THE SEASON. TEMPORARY RAMPS SHALL BE CONSTRUCTED AT A LENGTH OF FOUR FEET PER INCH OF TRANSITION DEPTH. MATERIALS, PLACEMENT, MAINTENANCE, AND REMOVAL SHALL BE INCIDENTAL TO CONTRACT ITEMS.
4. CLEARING LIMITS SHALL BE 5' BEYOND AND PARALLEL TO THE CONSTRUCTION SLOPE LINES OR AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE RESIDENT.
5. THE CLEARING LINES SHOWN ON THE PLANS ARE FOR ESTIMATING PURPOSES ONLY. THE ACTUAL LINES FOR CLEARING SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE RESIDENT.
6. CLEARING FROM STA. 229+00 TO END OF PROJECT (STA. 312+82) SHALL OCCUR FROM NOVEMBER 1 TO MARCH 31. ALL OTHER AREAS MAY BE CLEARED YEAR-ROUND.
7. CLEARING FROM START OF PROJECT (STA. 12+20.62) LEFT TO STA. 29+60 LEFT SHALL NOT BE CLEARED DURING THE LAST WEEK OF JULY THRU FIRST TWO WEEKS OF AUGUST.
8. STUMPS HAVE BEEN ESTIMATED TO BE REMOVED UNDER ITEM 201.24 REMOVE STUMP. HOWEVER, WHERE DIRECTED BY THE RESIDENT, ITEM 631.20 STUMP CHIPPER (INCLUDING OPERATOR) MAY BE USED TO REMOVE STUMPS.
9. GRUBBING IN FILL AREAS HAS BEEN SHOWN ON THE CROSS SECTIONS AND THE QUANTITIES NOTED. THESE LIMITS ARE APPROXIMATE AND HAVE BEEN USED FOR ESTIMATING PURPOSES ONLY. ACTUAL GRUBBING LIMITS MAY VARY BASED ON FIELD CONDITIONS AS DIRECTED BY THE RESIDENT. ESTIMATED GRUBBING DEPTHS ARE 6 INCHES IN FIELD AREAS AND 12 INCHES IN WOODED AREAS.
10. DRIVEWAY FILL SIDE SLOPES SHALL BE THE SAME AS THE NON-GUARDRAIL FILL SLOPES UNLESS OTHERWISE NOTED ON THE PLANS.
11. ALL WASTE MATERIAL NOT USED ON THE PROJECT SHALL BE DISPOSED OF OFF THE PROJECT IN ACCEPTABLE WASTE AREAS REVIEWED BY THE RESIDENT. GRADING, SEEDING AND MULCHING OF WASTE AREAS SHALL BE CONSIDERED INCIDENTAL.
12. REQUIRED DITCH PROTECTION SHOWN ON THE PLANS OR IN THE CONSTRUCTION NOTES IS FOR ESTIMATING PURPOSES ONLY. THE ACTUAL TYPE AND LOCATION OF DITCH PROTECTION MAY BE ALTERED BY THE RESIDENT.
13. IF FOUNDATION MATERIAL IS REQUIRED UNDER CULVERTS, IT SHALL MEET THE REQUIREMENTS FOR GRANULAR BORROW FOR UNDERWATER BACKFILL AS SPECIFIED IN STANDARD SPECIFICATION 703.19 AND WILL BE PAID FOR AS GRANULAR BORROW.
14. GRANULAR BORROW USED TO BACKFILL MUCK EXCAVATION OR IN LOW WET AREAS TO 1' ABOVE WATER LEVEL OR OLD GROUND SHALL MEET REQUIREMENTS FOR GRANULAR BORROW FOR UNDERWATER BACKFILL AS SPECIFIED IN STANDARD SPECIFICATION 703.19.
15. EXISTING INSLOPES IN PROPOSED FILL AREAS SHALL BE BENCHED BY EXCAVATING STEPS OF SUFFICIENT WIDTH TO PERMIT PLACING AND COMPACTING THE FILL MATERIAL ALONG WITH THE MATERIAL REMOVED.
16. RESIDENTIAL PAVED ENTRANCES SHALL BE CONSTRUCTED WITH: 2" HOT MIX ASPHALT AND 12" AGGREGATE SUBBASE COURSE GRAVEL.
17. COMMERCIAL PAVED ENTRANCES SHALL BE CONSTRUCTED WITH: 3" HOT MIX ASPHALT AND 11" AGGREGATE SUBBASE COURSE GRAVEL.
18. GRAVEL ENTRANCES SHALL BE CONSTRUCTED WITH 14" AGGREGATE SUBBASE COURSE GRAVEL OR 11" AGGREGATE SUBBASE COURSE GRAVEL AND 3" UNTREATED AGGREGATE SURFACE COURSE UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE RESIDENT.
19. A 3' PAVED LIP SHALL BE PLACED AT ALL GRAVEL ENTRANCES UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE RESIDENT.
20. ALL PAVED WALKS TO BE CONSTRUCTED WITH 12" AGGREGATE SUBBASE COURSE-GRAVEL AND 2" HOT MIX ASPHALT UNLESS OTHERWISE NOTED IN THE PLANS OR DIRECTED BY THE RESIDENT.
21. ANY NECESSARY CLEANING OF EXISTING PAVEMENT PRIOR TO PAVING SHALL BE INCIDENTAL TO THE RELATED PAVING ITEMS.
22. PRIOR TO SURFACE PAVING, EXISTING CULVERTS TO REMAIN SHALL BE CLEANED AS DIRECTED BY THE RESIDENT. PAYMENT WILL BE MADE UNDER ITEM 631.32 CULVERT CLEANER (INCLUDING OPERATOR).
23. GRANULAR BORROW USED UNDER PIPES SHALL MEET THE REQUIREMENTS FOR MATERIAL FOR UNDERWATER BACKFILL AS SPECIFIED IN STANDARD SPECIFICATION 703.19.

24. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED, FILLED WITH FLOWABLE FILL, OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT.
25. INLETS AND OUTLETS OF ALL ROADWAY CULVERTS SHALL BE RIPRAPPED UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT. DRIVEWAY CULVERTS (AS IDENTIFIED ON THE DRAINAGE SUMMARY SHEETS) DO NOT REQUIRE RIPRAP UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.
26. THE CULVERT SIZES SHOWN ON THE PLANS AND CROSS SECTIONS ARE FOR SMOOTHLINED PIPES. FOR COMPARABLE CORRUGATED SIZES SEE THE DRAINAGE SUMMARY SHEET.
27. FLAT TOPS FOR CATCH BASINS ARE NOT ALLOWED UNLESS NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.
28. PLASTIC END CAPS SHALL BE USED ON ALL DEAD-END 6" TYPE B UNDERDRAIN AND SHALL BE CONSIDERED INCIDENTAL.
29. ANY NECESSARY CUTTING OF EXISTING PIPES TO FIT IN AREAS OF PROPOSED CATCH BASINS WILL NOT BE PAID FOR SEPARATELY AND WILL BE CONSIDERED INCIDENTAL TO ITEM 604.
30. ANY NECESSARY CUTTING OF EXISTING CATCH BASINS TO ALLOW FOR PROPOSED PIPE CONNECTIONS WILL NOT BE PAID FOR SEPARATELY AND WILL BE CONSIDERED INCIDENTAL TO ITEM 603 OR 605.
31. ALL UNDERDRAIN NOT SHOWN ON THE CROSS SECTIONS WILL HAVE A FLOW LINE OF 5.5 FEET BELOW FINISH GRADE DIRECTLY ABOVE THE UNDERDRAIN AND UNDERDRAIN SAND BACKFILL PLACED TO AN ELEVATION EQUAL TO THE BOTTOM OF THE NEW GRAVEL LAYER. ALL UNDERDRAIN SHOWN ON THE CROSS SECTIONS WILL HAVE THE FLOW LINE SCALED FROM THE CROSS SECTIONS. ALL FLOW LINE ELEVATIONS ARE SUBJECT TO APPROVAL BY THE RESIDENT.
32. A 3 FT X 3 FT SQUARE RIPRAP PAD WITH 1.5 FT DEPTH SHALL BE CONSTRUCTED AT UNDERDRAIN OUTLETS.
33. EXISTING ABANDONED WATER MAINS BROKEN BY THE CONTRACTOR DURING CONSTRUCTION SHALL HAVE THE ENDS PLUGGED WITH BRICK AND MORTAR. COST FOR ALL LABOR AND MATERIAL WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO DIRECT PAYMENT WILL BE MADE.
34. GUARDRAIL END TREATMENTS SHALL BE INSTALLED CONCURRENTLY WITH THE PLACEMENT OF EACH SECTION OF BEAM GUARDRAIL.
35. ALL EXISTING GUARDRAIL SHALL BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR. REMOVAL AND DISPOSAL SHALL BE CONSIDERED INCIDENTAL TO THE GUARDRAIL ITEMS.
36. TWO REFLECTORIZED FLEXIBLE G.R. MARKERS (ITEM 606.353) WILL BE INSTALLED AT EACH GUARDRAIL END.
37. A DELINEATOR POST (ITEM 606.356) WILL BE INSTALLED AT EACH UNDERDRAIN OUTLET.
38. A DELINEATOR POST (ITEM 606.356) WILL BE INSTALLED AT EACH END OF A RUN OF BITUMINOUS CURB.
39. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL WILL BE CONSIDERED INCIDENTAL TO ITEM 606.
40. ALL CATCH BASINS TYPE A PLACED ON CIRCULAR CURB TYPE 1 SHALL HAVE THE CURB INLET CUT THE SAME RADIUS AS ADJACENT CIRCULAR CURB. PAYMENT SHALL BE INCIDENTAL TO ITEM 604.
41. IN AREAS WHERE CURB TYPE 1 WILL BE RESET, THE EXISTING CURB SUITABLE FOR USE AS TERMINAL ENDS SHALL BE CUT IF NECESSARY AND UTILIZED AS SUCH AND PAID FOR UNDER ITEM 609.38 (RESET CURB TYPE 1). REQUIRED CUTTING WILL BE PAID UNDER FORCE ACCOUNT PROCEDURES.
42. LOAM SHALL BE PLACED TO A NOMINAL DEPTH OF 4 INCHES IN LAWN AREAS AND 2 INCHES IN ALL OTHER AREAS UNLESS OTHERWISE NOTED OR DIRECTED.
43. WHITE PAVEMENT/CURB MARKING (ITEM 627.75) SHALL BE APPLIED TO ALL ISLAND TAPERED ENDS.
44. ANY BASE PAVEMENT NOT SURFACED BEFORE WINTER WILL REQUIRE TEMPORARY PAVEMENT MARKINGS OF PAINT, BOTH YELLOW CENTERLINE AND WHITE EDGE LINES AND WILL BE CONSIDERED PART OF ITEM 627.78.
45. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING ALL EXISTING MAILBOXES TO ENSURE THAT THE MAIL WILL BE DELIVERABLE. PAYMENT FOR THIS WORK WILL BE MADE UNDER THE APPROPRIATE RENTAL ITEMS.
46. PLANS OF PREVIOUSLY CONSTRUCTED PROJECTS ARE AVAILABLE ONLINE AT [HTTPS://MDOTAPPS.MAINE.GOV/MEPLANS/](https://mdotapps.maine.gov/meplans/) THE PROJECTS ARE:
- PROJECT * F-014-I(36), TOWN: FRYEBURG, DESCRIPTION: OSGOOD BRIDGE OVER DEAD LAKE STREAM, 0.152 MI, PLAN YEAR: 1986
- PROJECT * 3480.00, TOWN: FRYEBURG, DESCRIPTION: RESURFACING, 1.37 MI, NH STATE LINE TO ROUTE 5., PLAN YEAR: 1988
- PROJECT * 130-A, TOWN: FRYEBURG, DESCRIPTION: STATE HIGHWAY "B", 1.638 MI, PLAN YEAR: UNDATED
- PROJECT * 130-B, TOWN: FRYEBURG, DESCRIPTION: STATE HIGHWAY "B", 1.638 MI, PLAN YEAR: UNDATED

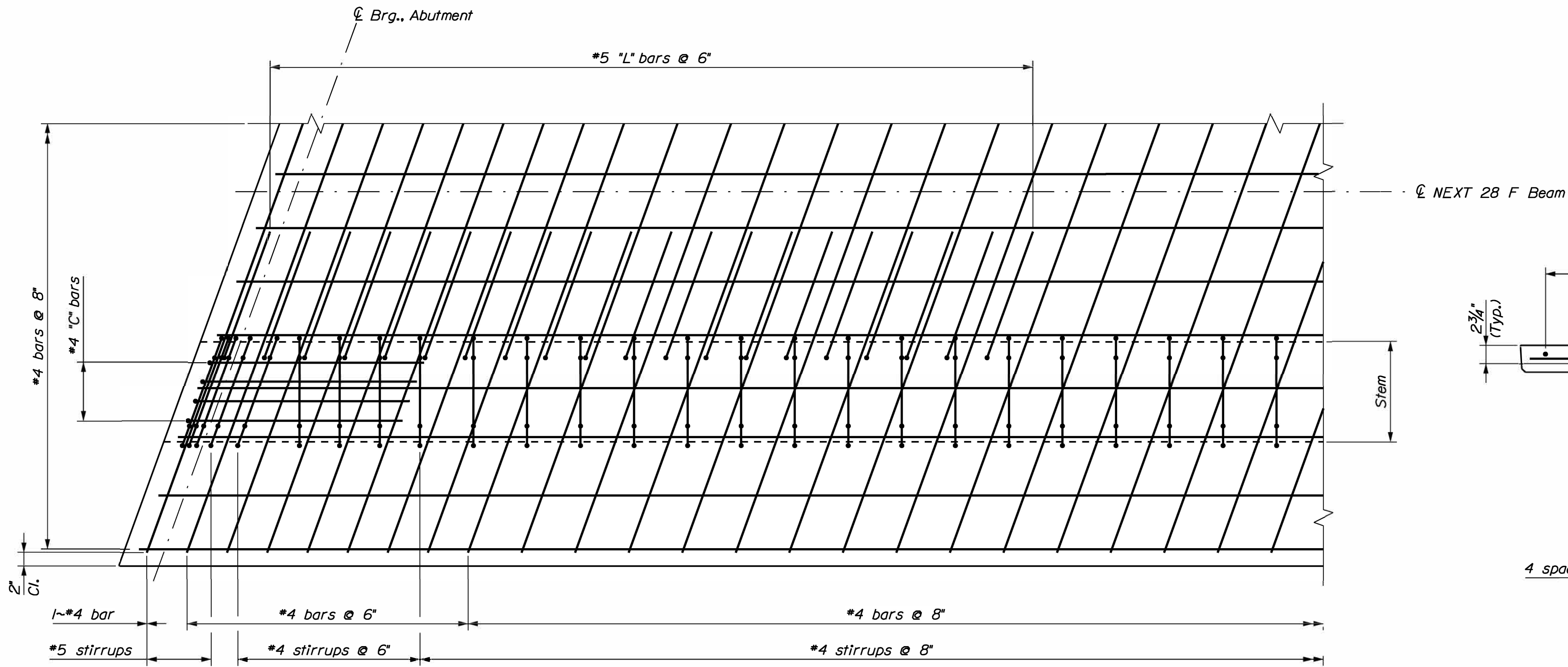
47. ALL COMPUTATION METHODS AND QUANTITIES USED FOR THE ENGINEER'S ESTIMATE FOR PLAN QUANTITY ITEMS ONLY ARE AVAILABLE BY CONTACTING PROJECT MANAGER ERNIE MARTIN AT 207-624-3381.
48. AREAS REQUIRING FILL ON THE PROJECT WILL COME FROM SUITABLE EXCAVATION FROM EXCAVATION AREAS.
49. ESTIMATED QUANTITIES FOR REQUIRED STRUCTURAL EARTH EXCAVATION, DRAINAGE AND MINOR STRUCTURES ARE INFORMATIONAL ONLY AND REPRESENT THE APPROXIMATE MINIMUM QUANTITY REQUIRED TO INSTALL DRAINAGE STRUCTURES. ADDITIONAL EXCAVATION FOR THE CONTRACTOR'S CONVENIENCE OR TO COMPLY WITH BACKSLOPING REQUIREMENTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCIDENTAL TO THE RELATED DRAINAGE ITEMS. THE ESTIMATED STRUCTURAL EARTH EXCAVATION, DRAINAGE AND MINOR STRUCTURES QUANTITIES ARE AS FOLLOWS:
- UNDERDRAIN TYPES B AND C: (4,521) CY
 - PIPES: (3,643) CY
 - CATCH BASINS: (455) CY
 - CONCRETE BOX CULVERTS: (375) CY
50. NO SEPARATE PAYMENT FOR SUPERINTENDENT OR FOREMAN WILL BE MADE FOR THE SUPERVISION OF EQUIPMENT BEING PAID FOR UNDER THE EQUIPMENT RENTAL ITEMS.
51. "UNDETERMINED LOCATIONS" SHALL BE DETERMINED BY THE RESIDENT.
52. FINAL STRIPING FOR THE PROJECT SHALL BE DONE BY THE CONTRACTOR PER THE STRIPING LAYOUT IN THE CONTRACT DOCUMENTS OR AS PROVIDED BY THE DEPARTMENT. PAYMENT SHALL BE MADE UNDER APPROPRIATE CONTRACT ITEMS.
53. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION'S BEST MANAGEMENT PRACTICES FOR EROSION CONTROL & SEDIMENT CONTROL, FEBRUARY, 2008. IN PARTICULAR, NOTE STANDARDS FOR THE FOLLOWING:
- TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL
 - MULCH
 - EROSION CONTROL BLANKET
 - RIPRAP
 - SEEDING
 - CHANNEL LININGS
 - RIPRAP DOWNSPOUT
 - ENERGY DISSIPATORS
 - CULVERT INLET AND OUTLET PROTECTION
 - CHECK DAMS
 - TEMPORARY STREAM DIVERSION
 - WINTER STABILIZATION
54. CELLAR DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION WILL BE HANDLED IN ACCORDANCE WITH THE "CELLAR DRAIN DETAILS" SHEET IN THE PLAN SET.
55. REMOVAL OF MISCELLANEOUS ITEMS AS IDENTIFIED IN THE PLAN SET OR AS DIRECTED BY THE RESIDENT INCLUDING WELLS, BUSHES, ROCK WALLS, FOUNDATION REMAINS, MISCELLANEOUS CONCRETE, BOULDERS, AND PERSONAL PROPERTY ITEMS IS INCIDENTAL TO ITEM 203.20 COMMON EXCAVATION.
56. EXISTING PAVEMENT AND GRAVEL WITHIN THE LIMITS OF CONSTRUCTION MUST BE REMOVED AND WILL BE PAID UNDER ITEM 203.20 COMMON EXCAVATION.
57. SHOULDERS ARE TO BE WIDENED AT GUARDRAIL ENDS AS SHOWN IN MAINE DOT STANDARD DETAIL 606(09).
58. PAVEMENT CUT LINES SHALL BE NEAT, CLEAN, AND STRAIGHT AS DIRECTED BY THE RESIDENT. PAYMENT FOR CUTTING OF EXISTING PAVEMENT SHALL BE INCIDENTAL TO ITEM 403.
59. GEOTECHNICAL INFORMATION FURNISHED OR REFERRED TO IN THIS PLAN SET IS FOR THE USE OF THE BIDDERS AND THE CONTRACTOR. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR INTERPRETATIONS WILL BE REPRESENTATIVE OF ACTUAL SUBSURFACE CONDITIONS AT THE CONSTRUCTION SITE. MAINE DOT SHALL NOT BE RESPONSIBLE FOR THE BIDDER'S OR CONTRACTOR'S INTERPRETATIONS OF OR CONCLUSIONS DRAWN FROM THE GEOTECHNICAL INFORMATION. THE BORING LOGS CONTAINED IN THE PLAN SET PRESENT FACTUAL AND INTERPRETIVE SUBSURFACE INFORMATION COLLECTED AT DISCRETE LOCATIONS. DATA PROVIDED MAY NOT BE REPRESENTATIVE OF THE SUBSURFACE CONDITIONS BETWEEN BORING LOCATIONS.
60. FOLLOW MAINE DOT STANDARD DETAIL 80K10 FOR CROSS SLOPE TRANSITION AT BRIDGES.
61. THE REMOVAL OF EXISTING CULVERTS AND HEADWALLS, BACKFILLING, AND COMPACTION IS INCIDENTAL TO THE PROPOSED CULVERT ITEMS.
62. UNLESS OTHERWISE NOTED SEEDING METHOD NO. 1 SHALL BE UTILIZED ON ALL LAWNS AND DEVELOPED AREAS; SEEDING METHOD NO. 2 SHALL BE UTILIZED ON ALL NON-GUARDRAIL SLOPES. SEEDING METHOD NO. 3 SHALL BE UTILIZED ON ALL GUARDRAIL FILL SLOPES, ON LONG NON-GUARDRAIL BACKSLOPES. SEEDING METHOD NO. 3 MAY BE USED INSTEAD OF METHOD NO. 2 IF NOTED OR DIRECTED BY THE RESIDENT.
63. GRANULAR BORROW USED TO MAINTAIN TRAFFIC SHALL BE INCIDENTAL TO THE CONTRACT.
64. EROSION CONTROL MIX SHALL BE USED IN PLACE OF MULCH ON 2:1 BACK SLOPES.
65. THE PAYMENT FOR EXISTING STREAMBED MATERIAL USED IN THE PROJECT SHALL BE INCIDENTAL TO THE 603 ITEMS.
66. THE PROJECT GEOTECHNICAL REPORT TITLED "GEOTECHNICAL DESIGN REPORT FOR THE RECONSTRUCTION OF US ROUTE 302" AND SOILS REPORT 2018-03, DECEMBER 2018, CAN BE ACCESSSED AT THE MAINE DOT WEBSITE.
67. SHOULD THE CONTRACTOR SELECT ALTERNATE 1 - 3,500 CY OF THE PAVEMENT SALVAGED FROM THE PROJECT SHALL REMAIN THE PROPERTY OF MAINE DOT. SHOULD THE CONTRACTOR SELECT ALTERNATE 2 - 6,000 CY OF THE PAVEMENT SALVAGED FROM THE PROJECT SHALL REMAIN THE PROPERTY OF THE MAINE DOT. THE QUANTITY OF PAVEMENT SALVAGE TO REMAIN AS THE PROPERTY OF MAINE DOT SHALL BE TRANSPORTED TO THE MAINE DOT MAINTENANCE FACILITY LOCATED AT 191 BRIDGTON ROAD, FRYEBURG. THE AREA AVAILABLE TO THE CONTRACTOR FOR STOCKPILING SHALL BE DESIGNATED BY THE RESIDENT. PAYMENT FOR TRANSPORTING AND STOCKPILING OF THE PAVEMENT SALVAGE SHALL BE INCIDENTAL TO COMMON EXCAVATION, ITEM 203.20. ANY PAVEMENT SALVAGED FROM THE REMAINDER OF THE PROJECT WILL BECOME THE PROPERTY OF THE CONTRACTOR, REMOVED FROM THE PROJECT, AND DISPOSED OF AT THEIR EXPENSE.
68. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING ALL EXISTING OPERATIONAL BUSINESS DIRECTIONAL SIGNS (OBDS) TO ENSURE THAT THEY ARE VISIBLE TO THE TRAVELING PUBLIC. PAYMENT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		NH-1728(000)E		WIN		19109.00		HIGHWAY PLANS	
DATE		BY		SIGNATURE		P.E. NUMBER		DATE			
PROJ. MANAGER		R. CARRELL		M. DEBOWSKI		S. BABALIS					
DESIGN-DETAILED		CHECKED-REVIEWED		DESIGN-DETAILED		DESIGN-DETAILED		REVISIONS 1		REVISIONS 2	
								REVISIONS 3		REVISIONS 4	
								FIELD CHANGES			
FRYEBURG		US ROUTE 302		GENERAL NOTES							
SHEET NUMBER											
19A											
OF 374											

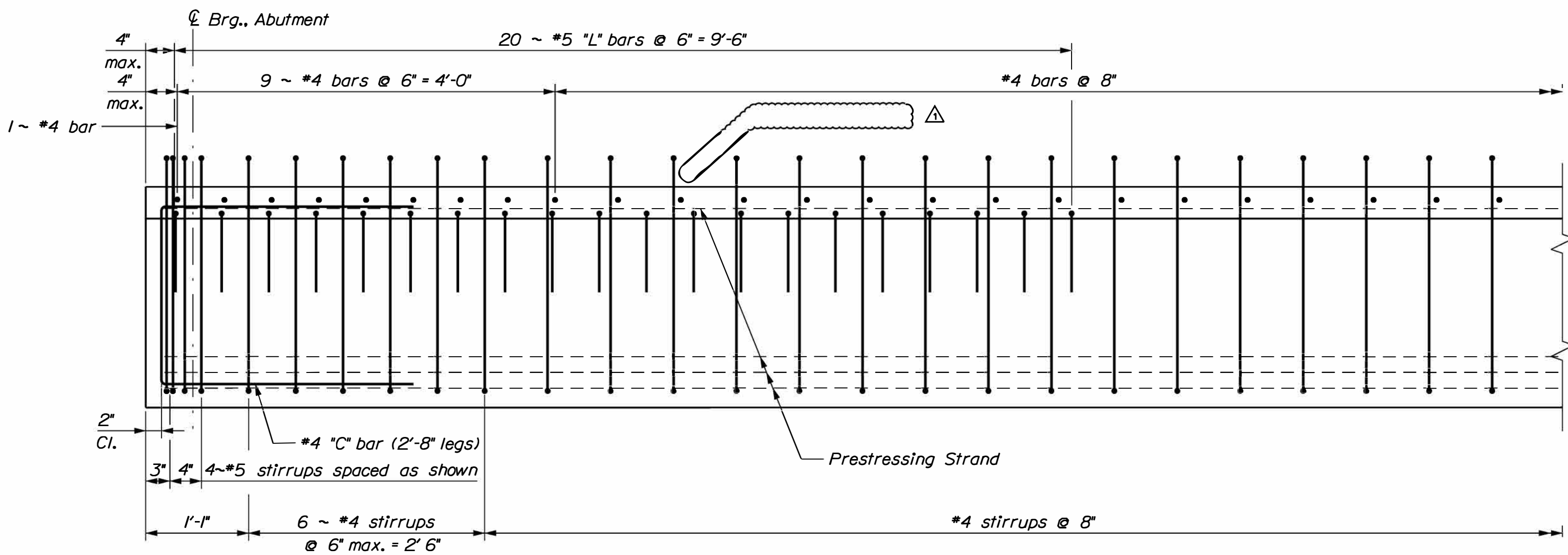
Username: garrett.a.gustafson Date:1/10/2019

Division: BRIDGE

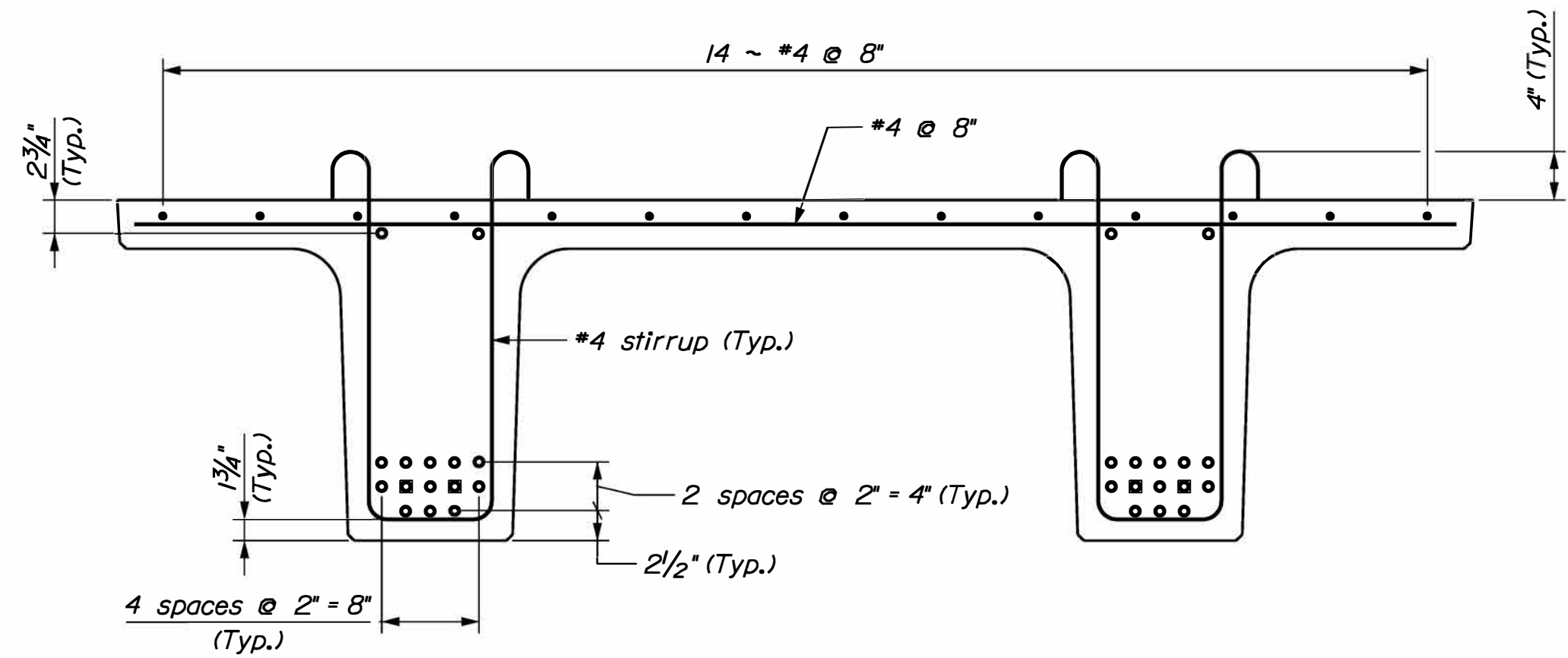
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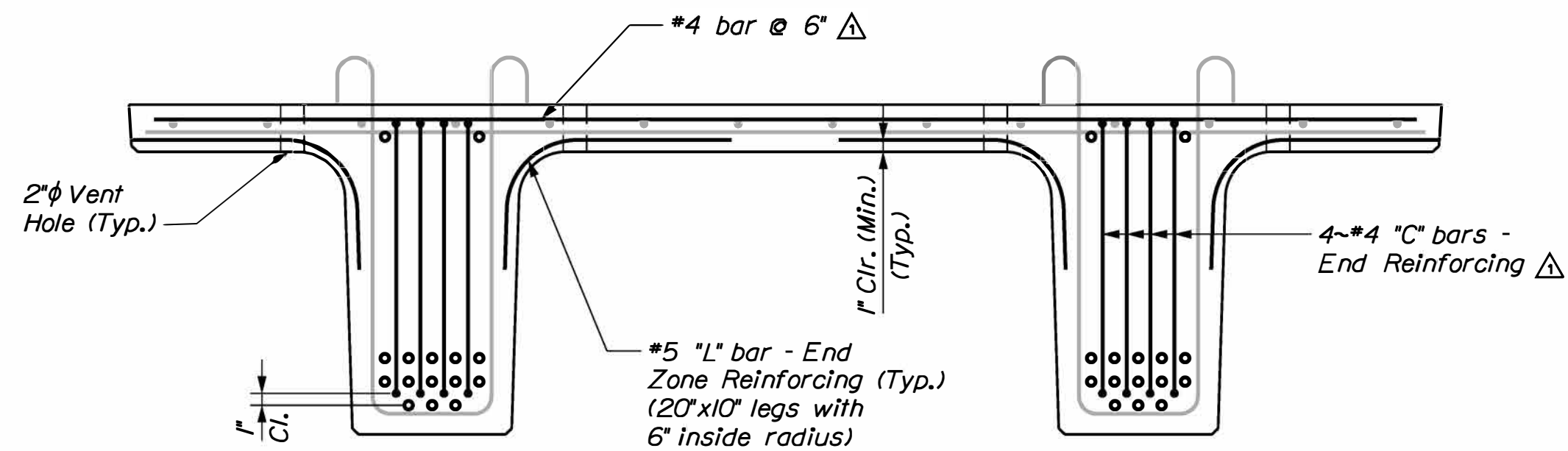
NEXT F BEAM PART REINFORCING PLAN
Prestressing strands not shown for clarity



NEXT F BEAM PART REINFORCING ELEVATION
Top flange longitudinal mild reinforcing not shown for clarity



NEXT 28 F BEAM TYPICAL SECTION
Strands debanded 4 ft.



NEXT 28 F BEAM TYPICAL SECTION - AT ENDS

PROJ. MANAGER	J. STILLWELL	BY	DATE
DESIGN-DETAILED	R.M.	D.B.V.S.F.	DEC. 2018
CHECKED-REVIEWED	J.S.	S.W.	DEC. 2018
DESIGN-DETAILED			
REVISIONS 1	Remove End Zone Ref's		1-10-19
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			