



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

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

July 25, 2023
Subject: Western Avenue-Interstate 95
Bridge Replacement
State WIN: 021672.00
Location: Augusta
Amendment No. 1

Dear Sir/Ms.:

Make the following changes to the Bid Documents:

In the bid book:

ADD the attached General Decision number: ME20230037 Wage rates totaling six pages

ADD Special Provision 401 Hot Mix Asphalt Pavement – Hamburg Wheel Tracker Specification, 4 pages, dated 9/14/21.

ADD Special Provision 401 Hot Mix Asphalt Pavement – Longitudinal Joint Density, 2 pages, dated 11/6/19.

REMOVE pages 140-146, Special Provision 530, Prefabricated Bridge Structure and Assembly, 7 pages, dated 5/23/23, and **REPLACE** with the attached, revised Special Provision 530, Prefabricated Bridge Structure and Assembly, 7 pages, dated 5/30/23.

In the Plan sheet:

REMOVE sheet 14, BORING LOCATION PLAN, 1 sheet dated 5/18/2023 and **REPLACE** with attached sheet 14, BORING LOCATION PLAN, 1 sheet dated 6/26/2023.

REMOVE sheet 15, INTERPRETIVE SUBSURFACE PROFILE NORTH FASCIA, 1 sheet dated 5/18/2023 and **REPLACE** with attached sheet 15, INTERPRETIVE SUBSURFACE PROFILE NORTH FASCIA, 1 sheet dated 6/26/2023.

REMOVE sheet 16, INTERPRETIVE SUBSURFACE PROFILE SOUTH FASCIA, 1 sheet dated 5/18/2023 and **REPLACE** with attached sheet 15, INTERPRETIVE SUBSURFACE PROFILE SOUTH FASCIA, 1 sheet dated 6/26/2023.

The following questions have been received:

Question: Can you please clarify required reinforcing? Contract documents call up low carbon Chromium Steel, but the special provisions say Stainless Steel. If itâ€™s chromium, what alloy is required?

Response: Reinforcing shall be Low-Carbon, Chromium. Please see the updated Special Provision 530 – Prefabricated Bridge Structure and Assembly. Please see page 266 of the bid book for the Low-carbon, chromium requirements.

Consider these changes and information prior to submitting your bid on **Augusta 2, 2023**.

Sincerely,



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

"General Decision Number: ME20230037 01/06/2023

Superseded General Decision Number: ME20220037

State: Maine

Construction Type: Highway

County: Kennebec County in Maine.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

<p>If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<ul style="list-style-type: none">. Executive Order 14026 generally applies to the contract.. The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<ul style="list-style-type: none">. Executive Order 13658 generally applies to the contract.. The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

OPERATOR: Roller (Earth).....	\$ 16.43	3.40
TRAFFIC CONTROL: Flagger.....	\$ 9.38 **	0.00
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper.....	\$ 17.47	4.80
TRUCK DRIVER: Dump Truck.....	\$ 14.32 **	5.81
TRUCK DRIVER: TackTruck.....	\$ 20.18	7.75

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

** workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage

determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage

determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

**SPECIAL PROVISION
DIVISION 400
PAVEMENTS**

**SECTION 401 - HOT MIX ASPHALT PAVEMENT
(HMA Hamburg Wheel Tracker Specification)**

401.03 Composition of Mixtures The Contractor shall compose the Hot Mix Asphalt Pavement with aggregate, Performance Graded Asphalt Binder (PGAB), and mineral filler if required. HMA shall be designed and tested according to AASHTO R35 and the volumetric criteria in Table 1. 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). Unless otherwise noted in Special Provision 403 - Hot Mix Asphalt Pavement, the design, verification, Quality Control, and Acceptance tests for this mix will be performed at 65 gyrations.

TABLE 1: VOLUMETRIC DESIGN CRITERIA

Design ESAL's (Millions)	Required Density (Percent of G _{mm})			Voids in the Mineral Aggregate (VMA)(Minimum Percent)					Voids Filled with Binder (VFB) (Minimum %)	Fines/Eff. Binder Ratio
				Nominal Maximum Aggregate Size (mm)						
	N _{initial}	N _{design}	N _{max}	25	19	12.5	9.5	4.75		
<3	≤90.5	96.0	≤98.0	13.0	14.0	15.0	16.0	16.0	65-80*	0.6-1.2
3 to <10	≤89.0									
≥ 10	≤89.0									

*For 9.5 mm nominal maximum aggregate size mixtures, the maximum VFB is 82.

*For 4.75 mm nominal maximum aggregate size mixtures, the maximum VFB is 84.

The Contractor shall submit for Department approval a JMF to the Asphalt Pavement Engineer for each mixture to be supplied. The JMF will be approved by the Department in accordance with the MaineDOT HMA Policies and Procedures for HMA Sampling and Testing Manual. 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 150 ton for coarse aggregate stockpiles and 75 ton for fine aggregate stockpiles before the JMF may be submitted. The Contractor shall provide aggregate samples to the Department unless otherwise required. The Contractor shall also make available to the Department the PGAB 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. 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 for a JMF as outlined in the MaineDOT HMA Policies and Procedures for HMA Sampling and Testing Manual: Mix Design Approval Section.

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. The cold feed percentage for RAP may be reduced up to 10 percentage points from the amount listed on the

JMF and shall not exceed the percentage of RAP approved in the JMF or for the specific application under any circumstances.

Before the start of paving, the Contractor shall provide the Department with eight boxes of plant produced HMA. 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 MaineDOT Policies and Procedures for HMA Sampling and Testing). 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 HMA meets the requirements for mix design verification, the mixture will be tested for rutting and moisture sensitivity in the Hamburg Wheel Tracker according to AASHTO T324, "Hamburg Wheel-Track Testing of Hot Mix Asphalt (HMA)." The sample will be required to meet the applicable requirements of Table 1A below for approval, depending on the PG binder grade required by the 403 Special Provision. If the sample meets the requirements of Table 1A, an approved JMF will be forwarded to the Contractor and paving may commence. The Department will have five business days from receipt of the sample at the Central Laboratory to process, test, and report the Hamburg Wheel Tracker sample. 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.

TABLE 1A: HAMBURG WHEEL TRACKER REQUIREMENTS

Specified PG Binder Grade	Test Temperature (°C)	Maximum Rut Depth (mm)	Minimum Number of Passes	Minimum Allowable SIP*
PG 64-28	45	12.5	20,000	15,000
PG 64E-28	48	12.5	20,000	15,000
PG 70E-28	50	12.5	20,000	15,000

* As calculated by the most recently published version of the MaineDOT HWT worksheet, which is available online at <http://www.maine.gov/mdot/contractors/publications/>

401.19 Contractor Quality Control - Method A, B, C & D The following language has been added to Section 401.19:

The project specific QCP shall address the sampling, transport, and testing of Hamburg Wheel Tracker QC samples and what potential steps will be taken if QC samples do not meet the requirements in Table 1A. The project-specific QCP shall also contain a sample Hamburg Wheel Tracker test report for approval. The Contractor shall sample and test HMA Pavement in the Hamburg Wheel Tracker according to AASHTO T324 in accordance with the following minimum frequencies:

TABLE 2A: MINIMUM QUALITY CONTROL FREQUENCIES

Test or Action	Frequency	Test Method
Hamburg Wheel Tracker	1 per 4,000 ton and at least once per Acceptance Lot	AASHTO T 324

The Contractor shall sample the HMA on the first day of production and test the sample in the Hamburg Wheel Tracker according to AASHTO T324. This sample will not count towards the

minimum quality control frequency specified in Table 2A. The Contractor shall submit all Hamburg Wheel Tracker test reports in writing, signed by the appropriate technician and present them to the Department within ten working days of initial sampling, except when otherwise noted in the project specific QCP due to local restrictions. The Contractor shall make the raw Hamburg Wheel Tracker data from QC samples available to the Department upon request. If a QC sample fails to meet the criteria in Table 1A, the Contractor will be required to submit a corrective action letter to the Resident, Materials Engineer, Pavement Quality Manager, and Pavement Quality Engineer by the end of the following working day with the proposed changes to bring the mixture back into compliance. The Department will respond and either accept or reject the Contractor's proposed corrective action by the end of the following working day from when the letter was received.

401.20 & 401.21 Acceptance Method(s) A, B, C & D The following language has been added to Section(s) 401.20 & 401.21

The Department will sample the HMA on the first day of production and at the acceptance frequencies specified in Table 3 to verify the compliance with the Hamburg Wheel Tracker Requirements. If an acceptance sample fails to meet the criteria in Table 1A, the Contractor shall cease paving operations and submit a corrective action letter to the Resident, Materials Engineer, Pavement Quality Manager, and Pavement Quality Engineer by the end of the work day with the proposed changes to bring the mixture back into compliance. Failure to do so will be treated as a second incident under 106.4.6 QCP Non-compliance. The Department will only allow the continuation of paving operations when it is satisfied that the corrective action will result in an improvement in results. The Department may require the submittal of a passing verification sample to allow further production.

TABLE 3: MINIMUM ACCEPTANCE FREQUENCIES

Test or Action	Frequency
Hamburg Wheel Tracker	1 per 4,000 ton or at least once per Acceptance Lot

The Department may take additional informational samples and test the HMA to verify compliance with the Hamburg Wheel Tracker Requirements. If an informational sample fails to meet the criteria in Table 1A, the Contractor will be required to submit a corrective action letter to the Resident, Asphalt Pavement Engineer, Pavement Quality Manager, and Pavement Quality Engineer by the end of the following working day with the proposed changes to bring the mixture back into compliance. The Department will respond and either accept or reject the Contractor's proposed corrective action by the end of the following working day from when the letter was received.

401.201 & 401.211 Pay Adjustments Method(s) A, B, C & D The following language has been added to Section(s) 401.201 & 401.211

For items accepted under Method(s) A, B, C & D, if the mix is within the tolerances listed in Table 1A, the Department will pay the contract unit price, otherwise pay adjustments as shown in Table 4 shall be applied to the quantity of mix represented by the test.

TABLE 4: HWT PAY ADJUSTMENT

Number of Passes	Pay Adjustment
< 20,000	-1.0% for every 1000 passes below target

A pay adjustment will not be applied to the acceptance sample taken on the first day of production per JMF.

SPECIAL PROVISION
SECTION 401
HOT MIX ASPHALT PAVEMENT

401 HOT MIX ASPHALT LONGITUDINAL JOINT DENSITY

401.30 Description The Department will measure the pavement density of longitudinal joints constructed between adjoining travel lanes; turn lanes, truck (climbing) lanes, and passing lanes will be considered travel lanes for longitudinal joint density testing unless otherwise noted in Section 403 – Hot Mix Asphalt Pavement. Core samples shall be tested according to AASHTO T-166. The Contractor shall cut 6-inch diameter cores at no additional cost to the Department by the end of the working day following paving. Pre-testing of the acceptance cores will not be allowed. If the Contractor and the Department mutually determine that a core is damaged, the Contractor shall cut new core(s) at the same offset and within 3 ft of the initial sample. The Contractor and the Department will mutually determine if underlying material is adhered to the core and if so will mark the core at the point where sawing is needed. The Department will place the cores in a secure container and the Contractor shall transport the cores to the designated MaineDOT lab. The cores will be saw cut by the Department to remove underlying layers. No recuts are allowed at a test location after the core has been tested.

For vertical longitudinal joints, cores shall be taken directly centered over the construction joint. For notch-wedge longitudinal joints, the cores shall be cut directly over the center of the tapered portion of the wedge.

As part of the project specific QCP, the Contractor shall include details as to methods of construction, rolling and compaction efforts, and action plan to adjust methods or equipment should the Quality level fall below 50 percent within limits. The Contractor shall be required to measure the joint density at randomly selected locations with a minimum frequency of one measurement per 750 linear feet. The Contractor shall have the option to cut calibration/verification cores at a rate not to exceed 1 per day.

If the Quality level for density falls below 50 percent within limits, the Contractor shall cease placement operations and submit a corrective action letter to the Department before proceeding with the Lot or before starting a new Lot. The Department will respond and either accept or reject the Contractor's proposed corrective action. If the Department accepts the corrective action, three stratified verification cores will be taken from the first 1500 foot section of longitudinal joint constructed for the purpose of evaluating the corrective action. These cores will be in addition to any Acceptance cores that may be designated in this area. The results from these cores shall be combined with the cores from the Lot in progress. Should the combined Quality level for density show an improvement, the Department will accept the corrective action and normal Acceptance sampling frequency shall resume. If an improvement has not been made to the combined Quality level for density, the Contractor shall cease production and submit an additional corrective action letter for consideration.

401.31 Acceptance This method utilizes Quality Level Analysis and pay factor specifications as described in Section 106. For Hot Mix Asphalt Pavement designated for acceptance under

Quality Assurance provisions, the Department will sample once per subplot on a statistically random basis, test, and evaluate in accordance with the following Acceptance Properties:

Lot size will be the entire length of longitudinal joint for the given HMA layer for the project, or equal Lots of a size agreed upon at the Pre-paving conference. The maximum subplot size shall be 2000 linear feet of longitudinal joint for density and the minimum number of sublots for any Lot shall be five. The Lot will be divided up into sublots of equal length. There shall be a separate Lot for each lift of HMA pavement, and Lots shall not be comprised of results from more than one HMA layer.

The Department will determine a pay factor using acceptance limits from Table 1.

TABLE 1: LONGITUDINAL JOINT DENSITY ACCEPTANCE LIMITS

PROPERTY	LSL
% TMD (In-Place Density)*	91.0%

* The Theoretical Maximum Density will be determined from the average of the G_{mm} values used to determine the percent compaction of the nearest acceptance cores on either side of the Longitudinal Joint Core from each adjacent mat.

The Department will calculate the Pay Adjustment for Longitudinal Joint Density as follows:

$$\text{PA} = (\text{joint density PF} - 1.0)(Q)(P) \times 0.40$$

Where

PA = Pay Adjustment
 Q = Quantity of traveled way pavement represented by PF in tons
 P = Contract price per ton
 PF = Pay Factor

If the joint density Pay Factor is less than 0.88, the Pay Adjustment shall be:

$$\text{PA} = (-0.05)(Q)(P)$$

SPECIAL PROVISION
SECTION 530
PREFABRICATED BRIDGE STRUCTURE AND ASSEMBLY
(Prefabricated Bridge Structure and Assembly)

530.01 Description This work shall consist of manufacturing, transporting, and erecting concrete/steel composite prefabricated bridge units (PBUs) as shown on the Contract Plans.

The work under this Section shall be performed in accordance with these specifications, the Contract Plans, and applicable Sections 502, 503, 504, 505, 506, and 534 of the Standard Specifications.

530.02 Materials Materials shall meet the requirements of Sections 502.03, 503.02, 504.02, and 505.02.

530.03 Drawings Working drawings shall be prepared and submitted in accordance with Sections 504.03 and 534.03.

The Contractor shall prepare and submit shop details for fabrication, handling and erection, and all other necessary working drawings, for approval. Fabrication and erection shall not begin until the Department's written approval of the submitted shop drawings has been received.

Fabrication drawings shall include:

1. Locations and details of all lifting inserts, blockouts, hardware, or devices.
2. Type and amount of any additional reinforcing required for lifting.
3. Details of any closure pour width or closure pour reinforcing revisions from what is shown in the Plans.
4. Labeling of precast versus cast-in-place concrete and who will perform the work (Fabricator or Contractor).

Working and Erection drawings shall include:

1. PBU erection sequence.
2. Crane charts.
3. Crane and pick locations.
4. Cables and lifting equipment.
5. Sequence and methods used to shim units if necessary.
6. Form materials, methods, equipment, and procedures for forming the slab, edges, blockouts, joints, and beam haunches.

7. Materials, methods, equipment, and procedures for installing closure pours and link slabs as shown on the Plans.

Fabrication and erection drawings shall include details of lifting and handling the PBUs, their storage, transportation, including handling at the production facility and construction site. PBUs shall not be handled or transported until the 28-day compressive strength of the concrete is attained as demonstrated with concrete cylinder tests.

530.04 Design Requirements Design computations shall be submitted for approval for handling, erection, and any closure pour width or closure pour reinforcing revisions and shall be reviewed, checked, and initialed accordingly and signed and sealed by a Professional Engineer licensed in the State of Maine.

530.05 General Fabrication Requirements The structural steel furnished under this Section shall be fabricated in a plant meeting the requirements of Section 504.04. After steel fabrication, the structural steel may be transported to a location, approved by the Department, where the remainder of the composite structure may be fabricated.

The Fabricator or Contractor constructing the reinforced concrete portion of the PBUs shall prepare and submit for approval a Quality Control Plan and erection/lifting plan(s) specific to the member detailed.

530.06 Inspection Concrete elements fabricated by a precast concrete Fabricator shall be inspected by the Department in accordance with Section 106 and Sections 534.05 to 534.09. Section 502 QC/QA acceptance methods shall not apply to concrete fabricated by a precast Fabricator. Concrete elements fabricated by the Contractor shall be inspected in accordance with Section 106 and 502 and QC/QA acceptance methods shall apply as shown in the Section 502 Special Provision.

530.07 Fabrication

- A. Forming Members Formwork shall meet the applicable requirements of Section 502.09 as well as the following: Relative bearing elevations shall be within +/- 0.01' of that shown on the Contract Plans to ensure PBUs are not subject to adverse twisting stresses and to ensure proper seating in their final positions in the field. The formwork and its supports, over the full width of the structural slab, shall remain in place until a minimum of 48 hours has elapsed after placement of the final section of slab. After this period, removal of formwork for sections meeting the requirements for form removal of Standard Specifications Section 502, Structural Concrete, may proceed.

- B. Structural Steel All diaphragms shown on the Contract Plans shall be installed prior to placing any concrete formwork or concrete.
- C. Reinforcing Steel Reinforcement and mechanical couplers shall be low-carbon chromium steel conforming to ASTM A1035, Type CS, Grade 100.
- D. Concrete Concrete mix for the PBUs shall meet the requirements of Section 502.05 for Concrete, Class A. Concrete shall be produced and tested in accordance with Sections 502.1701 through 502.1707 if produced by the Contractor and not a precast concrete Fabricator. Concrete for the closure pours, link slab, and end diaphragms shall be Class LP per Special Provision 502 Early Strength Concrete.
- E. Placing Concrete Placing concrete shall meet the applicable requirements of Section 502.08 and 502.10.
- F. Curing Curing shall meet the requirements of Section 502.14.
- G. Concrete Finishing Finishing shall conform to the requirements of Section 502.13 and the waterproofing membrane manufacturer.
- H. Dimensional Tolerances
- a. Geometry of Concrete Deck
 - i. Length (Each Unit) $\pm 3/4$ " (Adjacent PBU lengths shall not vary by more than $3/4$ ")
 - ii. Width $\pm 3/8$ "
 - iii. Deck Thickness $+ 3/8$ "/ $- 1/4$ "
 - iv. Deviation from Diagonals $\pm 3/4$ " (horizontal)
 - v. Deviation from End Squareness or Skew $\pm 3/4$ " (horizontal)
 - vi. Stringer Spacing $\pm 1/2$ " (within a PBU)
 - vii. Horizontal Alignment $\pm 3/8$ " (Deviation from straight line parallel to the centerline of the PBU)
 - viii. Insert Location. $\pm 3/8$ "
 - b. Reinforcing
 - i. Spacing ± 1 " (non-cumulative)
 - ii. Cover (top and Bottom Mat) $\pm 1/4$ "
 - c. Field Installation
 - i. See Installation Section herein.
 - ii. Deviation in joint width between PBUs shall be $\pm 1/2$ "
- I. Acceptance of Units Individual PBUs will not be accepted for any of the following:
- a. Fractures or cracks passing through the deck.

- b. Honeycombed open texture.
 - c. Dimensions not within the allowable tolerances as specified.
 - d. Separation of the concrete deck from the steel beams.
 - e. Defects that indicate proportioning, mixing, and molding not in compliance with the Specifications.
 - f. Damaged ends where such damage would prevent making a satisfactory joint.
 - g. PBUs with crack(s) within any part of the concrete that is/are greater than 0.03” in width.
 - h. Significant damage to the PBUs during transportation, erection, or construction as determined by the Resident.
 - i. PBUs not fabricated in accordance with the Contract Documents.
- J. Repair of PBUs PBUs that contain minor defects caused by manufacture or handling may be repaired at the manufacturing site. Repair procedures shall be in accordance with the approved Quality Control Plan and require approval by the Department. Minor defects are defined as holes, honeycombing, or spalls which are 6 inches or less in diameter and do not penetrate deeper than 1 inch into the concrete. Surface voids or “bugholes” that are less than 5/8 inch in diameter and less than 1/4 inch deep need not be repaired. Repairs shall be made using an overhead and vertical concrete repair material satisfactory to the Department. The repair material shall be cured as specified by the manufacturer. The Department shall approve final repairs.
- K. Cracking Crack widths less than 0.01” shall be sealed with a penetrating sealer using Department approved materials and procedures. Crack widths measuring 0.01” to 0.03” shall be epoxy injected using Department approved materials and procedures. At the Department’s discretion, cracked members shall be repaired or replaced at the Contractor’s expense.
- L. Labeling Each PBU shall be clearly and permanently labeled on the underside of the deck (in the vicinity of the up-station end) with the following information:
- a. Manufacturer
 - b. Date of Manufacture
 - c. Mark Number
- M. Production Site Handling PBUs shall not be lifted, moved, or otherwise disturbed until the concrete has reached full design strength.
- N. Pre-Assembly The PBUs shall be pre-assembled at the fabrication location to assure proper match between adjacent PBUs before shipping to the project site, to the satisfaction of the Department.

- O. Shipping A 48-hour advance notice of the loading and shipping schedule shall be provided. The PBUs shall be secured on the vehicle to ensure cracking will not occur during transport. The Contractor shall secure the necessary hauling permits.

530.08 Installation

- A. General The PBUs shall be fabricated in accordance with the applicable Sections of the Specifications and/or the Special Specifications. Construction procedures and permissible variations other than those contained herein shall be submitted for approval.
- B. Erection Plan Cranes, lifting devices, and other equipment for erecting the PBUs shall be of adequate design and capacity to safely erect, align, and secure all members and components in their final positions without damage. The Contractor is solely responsible for the methods and equipment employed for the erection of the precast concrete/steel composite superstructure units.

The Contractor shall submit Working Drawings in accordance with Section 105 for the methods and sequences of precast concrete/steel composite superstructure unit erection, any temporary bracing, and the equipment to be used for the erection. The erection plan shall include the necessary computations to indicate the magnitude of stress in the segments during erection and to demonstrate that all of the erection equipment has adequate capacity for the work to be performed. The erection plan shall contain provisions for all stages of construction, including temporary stoppages and hourly sequencing information.

The PBUs may be used to support limited construction equipment and vehicles prior to constructing zipper pours and other closure pours only with written permission of the Department. The proposed use of the precast concrete/steel composite superstructure units for support of equipment/vehicles shall be detailed in the erection plan with location of wheel lines/axles noted and extents of traffic plating and other devices to cover gaps and openings in the deck.

Submittal of the erection plans is for the Department's information only, and shall in no way be construed as approval of the proposed method of erection. Unless otherwise directed by the Department, the Contractor shall follow the erection plans as submitted.

- C. Erection of PBUs PBUs shall be installed to the correct line and grade as shown on the approved drawings and as indicated in the approved erection procedures. Prior to setting PBUs and to avoid torsion stresses, bearing elevations within a given PBU shall be adjusted as approved by the Resident to match relative elevations used during the deck

casting operations. After all the PBUs are erected, they shall be inspected to ensure the correctness of their location

- D. Matching Elevation of PBUs Adjacent units shall match elevations within 1/4 inch vertically (along longitudinal edges) and 1/8 inch vertically at the end of PBUs. If the tolerance is not met, the PBUs shall be adjusted as indicated in the procedures shown on the approved Working Drawings.
- E. Filling and Sealing Longitudinal Joints Prior to placement of closure pour concrete, the surface of the joint shall be free of any material, such as oil, grease, or dirt, which may prevent bonding of the sealing materials.
- F. Sealing of Lifting Holes After the PBUs are in their final locations, a bonding agent shall be applied and the lifting holes filled with cementitious grout. A removable form shall be provided at the bottom surface of the deck to retain the grout if required. Grout shall not be placed until ambient temperatures are compatible with grout manufacturer recommendations.
- G. Loading PBUs may be loaded upon erection and before closure pours are constructed in accordance with the approved erection procedure. Once the closure pours are placed, no further loading of the PBUs will be allowed until closure pour material has properly cured and as approved by the Resident.
- H. Final Repairs After the installation work is complete, remaining concrete defects, holes for inserts, and lifting holes shall be repaired as indicated and approved by the Department.

530.09 Method of Measurement The quantity of Prefabricated Bridge Structure and Assembly will be measured as one lump sum, complete, in place and accepted.

530.10 Basis of Payment The accepted quantity of Prefabricated Bridge Structure and Assembly will be paid for at the Contract lump sum price. Payment will be full compensation for detailing, fabrication, repairing, quality control testing, transportation, handling, and installing the materials specified, including deck concrete, link slab, longitudinal closure pours, and end closure pour concrete, reinforcing steel and mechanical couplers, structural steel, shear studs, connectors, temporary bearings, and shims; for designing and installing lift brackets and any other material contained within or attached to the members; for furnishing and implementing the erection plan; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work. Any closure pour width or closure pour reinforcing detail revisions that the Contractor submits for approval shall be incidental.

Pay adjustments for compressive strength, permeability, and air content will be determined using the Quality Level Analysis specified in Section 106 and the Pay Factors (PFs) included in the Contract Special Provisions only if the concrete elements are fabricated by the Contractor and not by a precast concrete Fabricator.

Median and sidewalk concrete will be paid for separately.

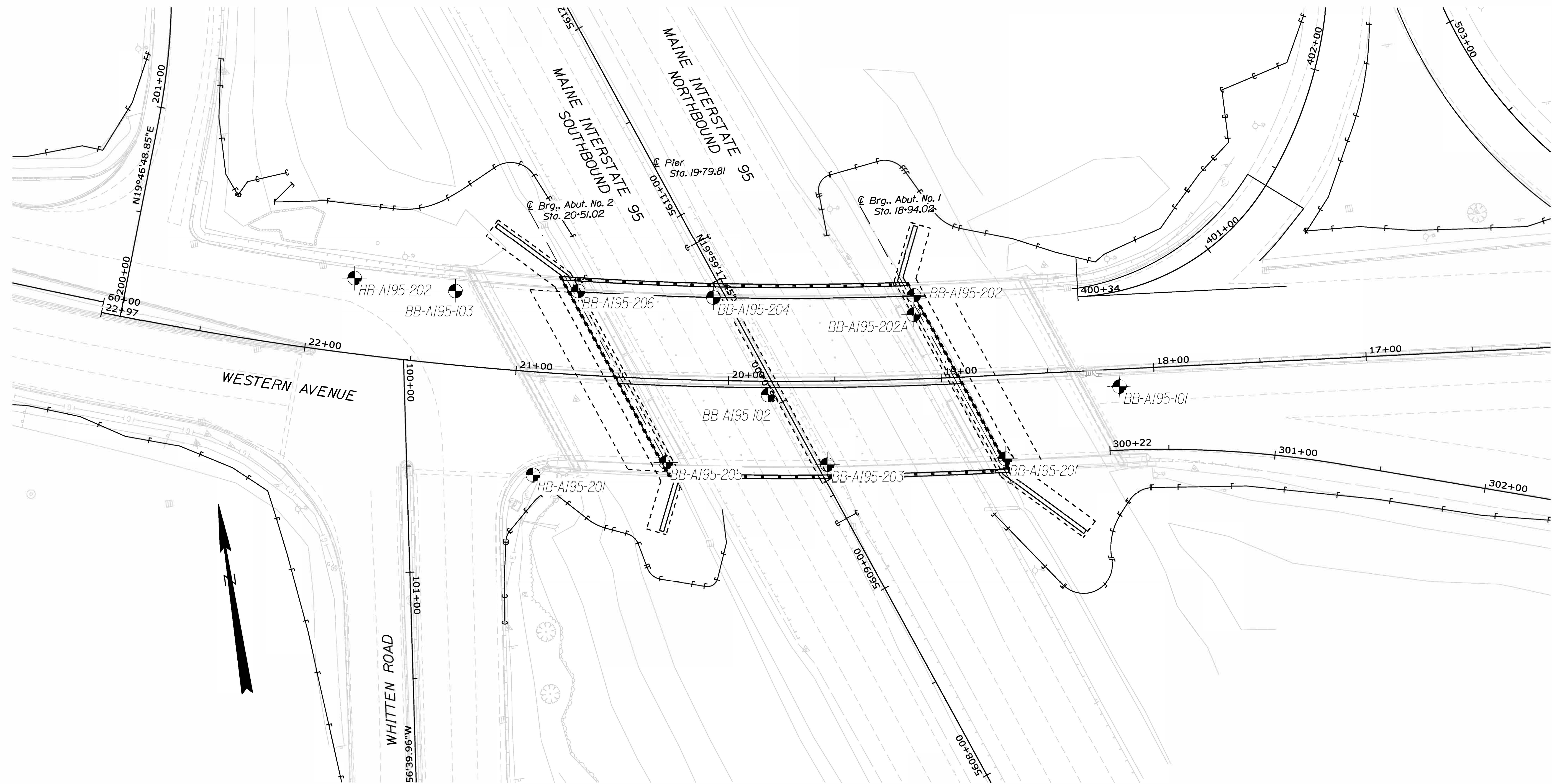
Protective coatings for structural steel will be paid for separately under the appropriate Section 506 items.

Payment will be made under:

<u>Pay Item</u>		<u>Pay Unit</u>
530.04	Prefabricated Bridge Structure and Assembly	Lump Sum

Division: Bridge
 Filename: ...\\00X BLP\014 BLP 6.26.23.dgn

Date: 6/26/2023
 Username: BMC

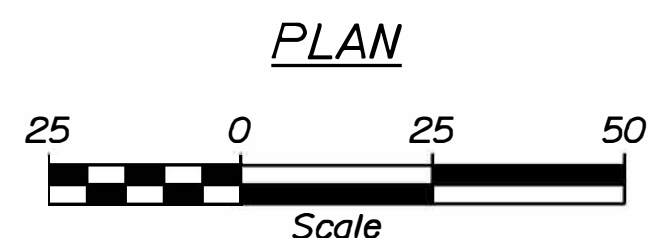


NOTES

- 1) Base map developed from electronic files (alignments.dgn, 3Dcontours.dgn, bridge.dgn, bridge_exisiting.dgn, and BDPLAN.dgn) provided by Stantec on January 31, 2023.
- 2) The as-drilled locations of the test borings were determined by survey conducted by MaineDOT and supplied to GZA. This data should be considered accurate only to the degree implied by the method used.
- 3) The as-drilled locations of the BB-A195-202A test boring was determined by field ties collected by GZA during the field exploration program. This data should be considered accurate only to the degree implied by the method used.

BORING LOCATION PLAN LEGEND

- BB-A195-100 Indicates 100-series bridge borings performed by New England Boring Contractors of Hermon, Maine between July 16, and 18, 2018 and observed by GZA personnel.
- BB-A195-200 Indicates 200-series bridge borings performed by New England Boring Contractors of Hermon, Maine between October 30, 2022 and November 2, 2022 and observed by GZA personnel.
- HB-A195-200 Indicates 200-series highway borings performed by New England Boring Contractors of Hermon, Maine between November 2, and 3, 2022 and observed by GZA personnel.



STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 2167200
 WIN
 21672.00
 Bridge No. 5808
 BRIDGE PLANS

Andrew R. Blaisdell
 10957
 05/19/2023
 PROFESSIONAL ENGINEER
 LICENSE NO. 10957
 DATE

PROJ. MANAGER	D. EATON	DATE
DESIGN-DETAILED	ALM/BMC	MAY 2023
CHECKED-REVIEWED	ARB	MAY 2023
DESIGN2-DETAILED2	CLS	
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

WESTERN AVENUE BRIDGE NO. 5808
 OVER INTERSTATE 95
 AUGUSTA, ME
 KENNEBEC COUNTY
 BORING LOCATION PLAN

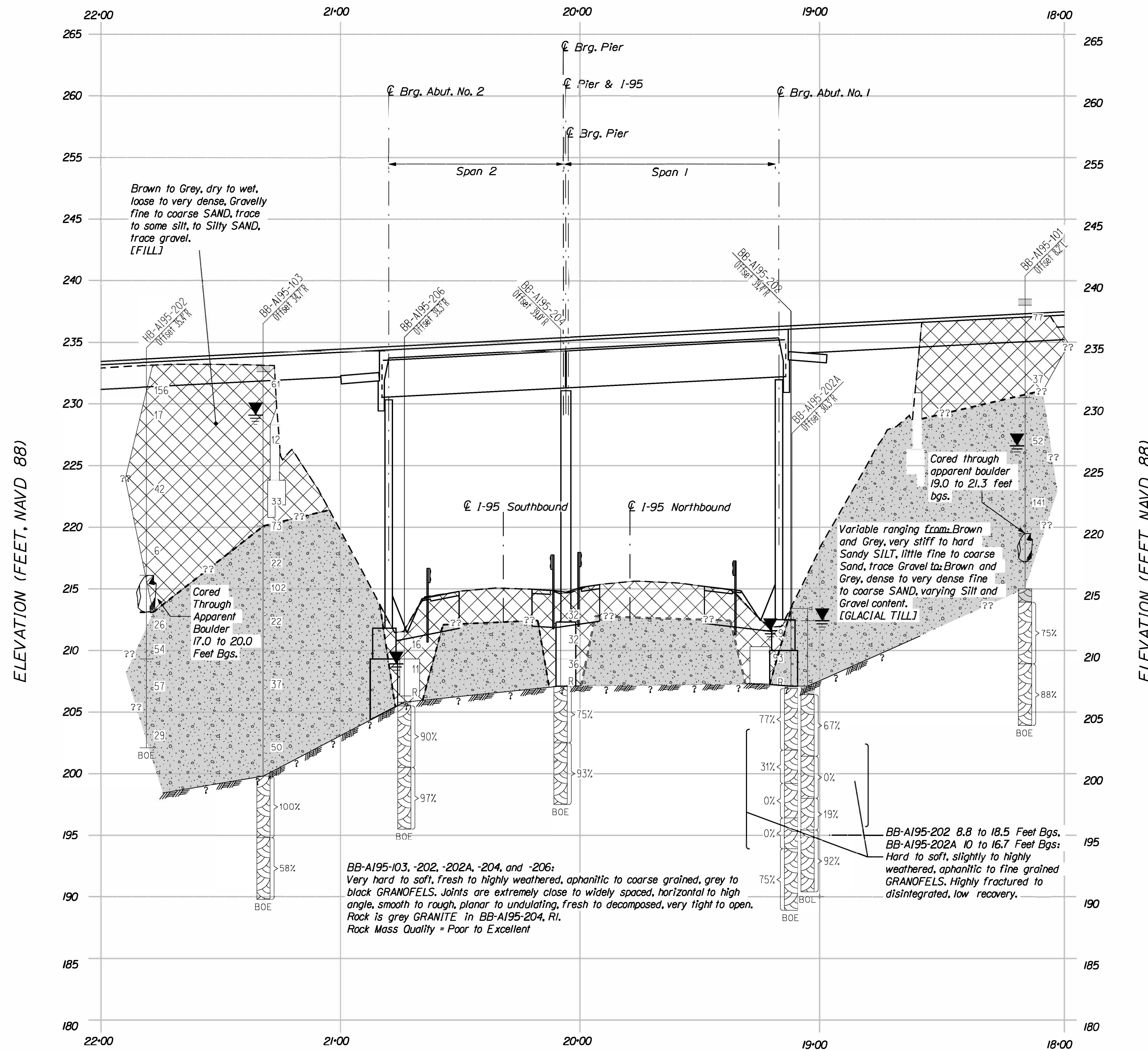
SHEET NUMBER



PREPARED BY:
 14
 of 190

Division: Bridge
 Filename: ... \00X_ISP_north_06.26.2023.dgn

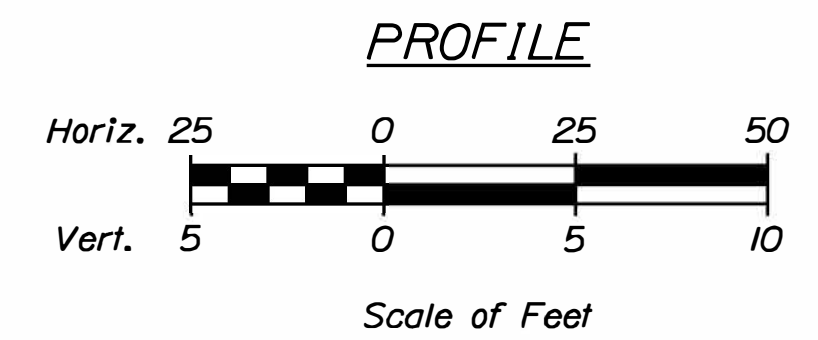
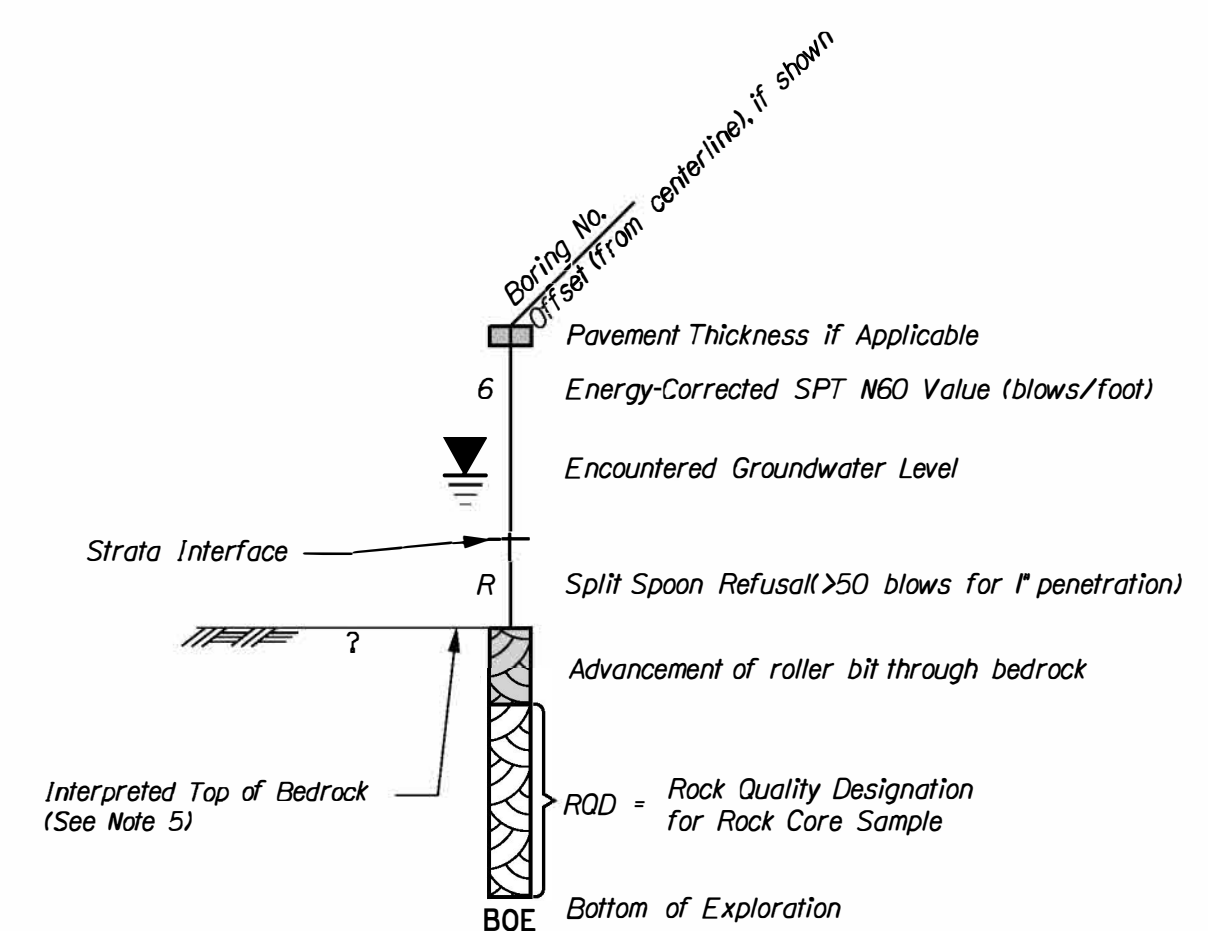
Date: 6/26/2023
 Username: BMC



PROFILE
 Along the North Bridge Fascia
 (Approximately 45.6 Feet Right of Centerline)

NOTES

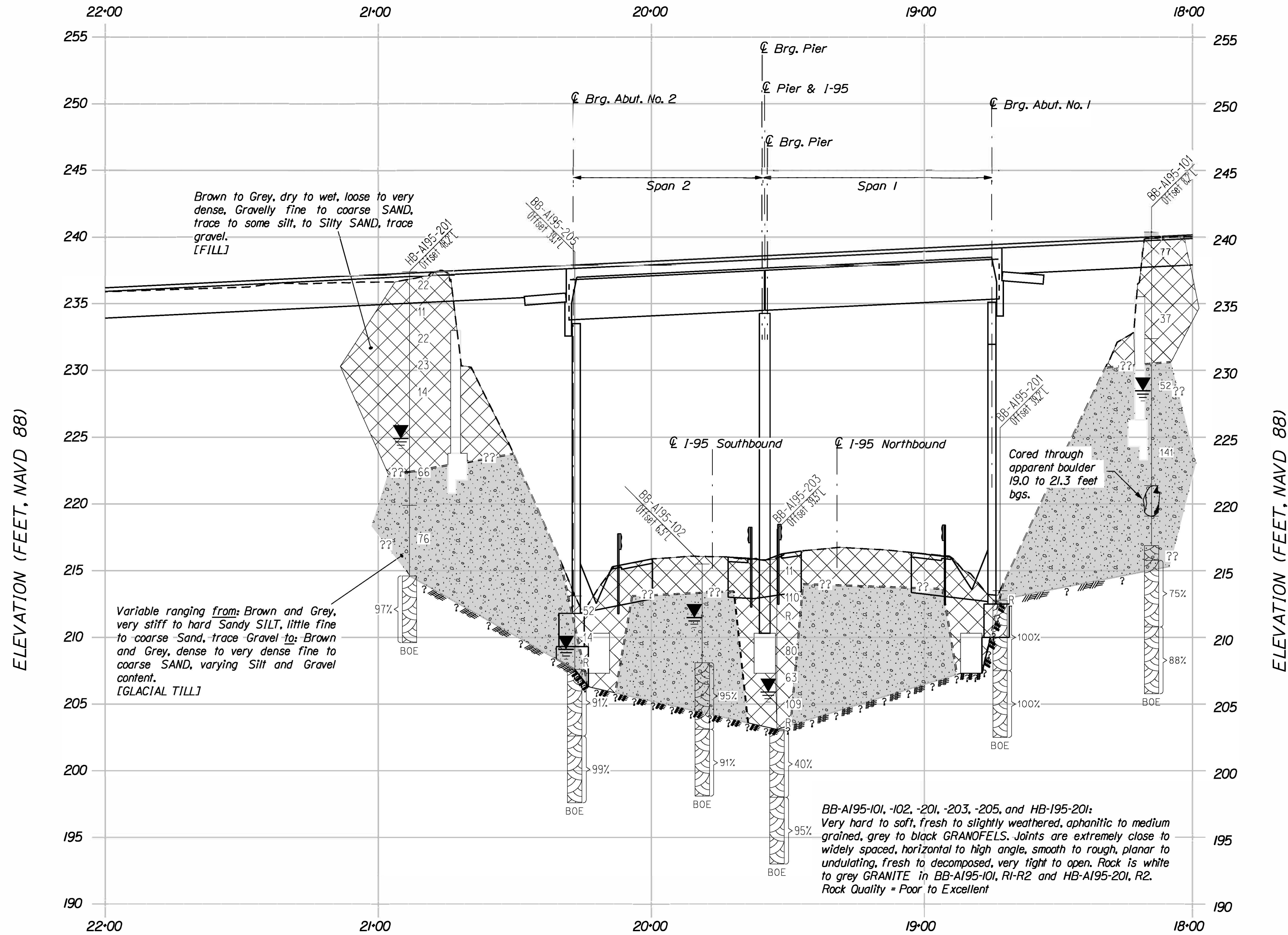
- 1) Base map developed from electronic files provided by Stantec on April 27, 2023 (File included Profile_geotech.dgn)
- 2) The as-drilled locations of the BB-AI95-100 series test borings were determined by survey conducted by MaineDOT and supplied to GZA.
- 3) The as-drilled locations of the BB-AI95-200 and HB-AI95-200 series test borings were determined by survey conducted by MaineDOT and supplied to GZA.
- 4) The as-drilled location of BB-AI95-202A was determined by field ties collected by GZA during the field exploration program. This data should be considered accurate only to the degree implied by the method used.
- 5) This generalized interpretive soil and rock profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.



STATE OF MAINE DEPARTMENT OF TRANSPORTATION	2167200	WIN	21672.00
BRIDGE PLANS	Bridge No. 5808		
DATE	SIGNATURE	P.E. NUMBER	DATE
MAY 2023	[Signature]	10957	05/19/2023
BY	DATE	REVISIONS 1	REVISIONS 2
ALM/BMC	MAY 2023	REVISIONS 3	REVISIONS 4
CLS	MAY 2023	FIELD CHANGES	
DESIGN-DETAILED	DESIGN-REVIEWED	DESIGN-DETAILED	REVISIONS 1
ARB	ARB	DESIGN-DETAILED	REVISIONS 2
ARB	ARB	DESIGN-DETAILED	REVISIONS 3
ARB	ARB	DESIGN-DETAILED	REVISIONS 4
ARB	ARB	DESIGN-DETAILED	FIELD CHANGES
WESTERN AVENUE BRIDGE NO. 5808 OVER INTERSTATE 95 AUGUSTA, ME KENNEBEC COUNTY INTERPRETIVE SUBSURFACE PROFILE NORTH FASCIA			
SHEET NUMBER			
15			
of 190			
PREPARED BY:			

Division: Bridge
 Filename: ... \00X_ISP_south_06.26.2023.dgn

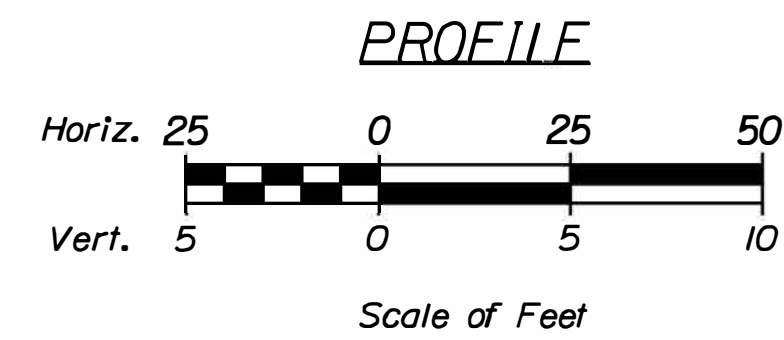
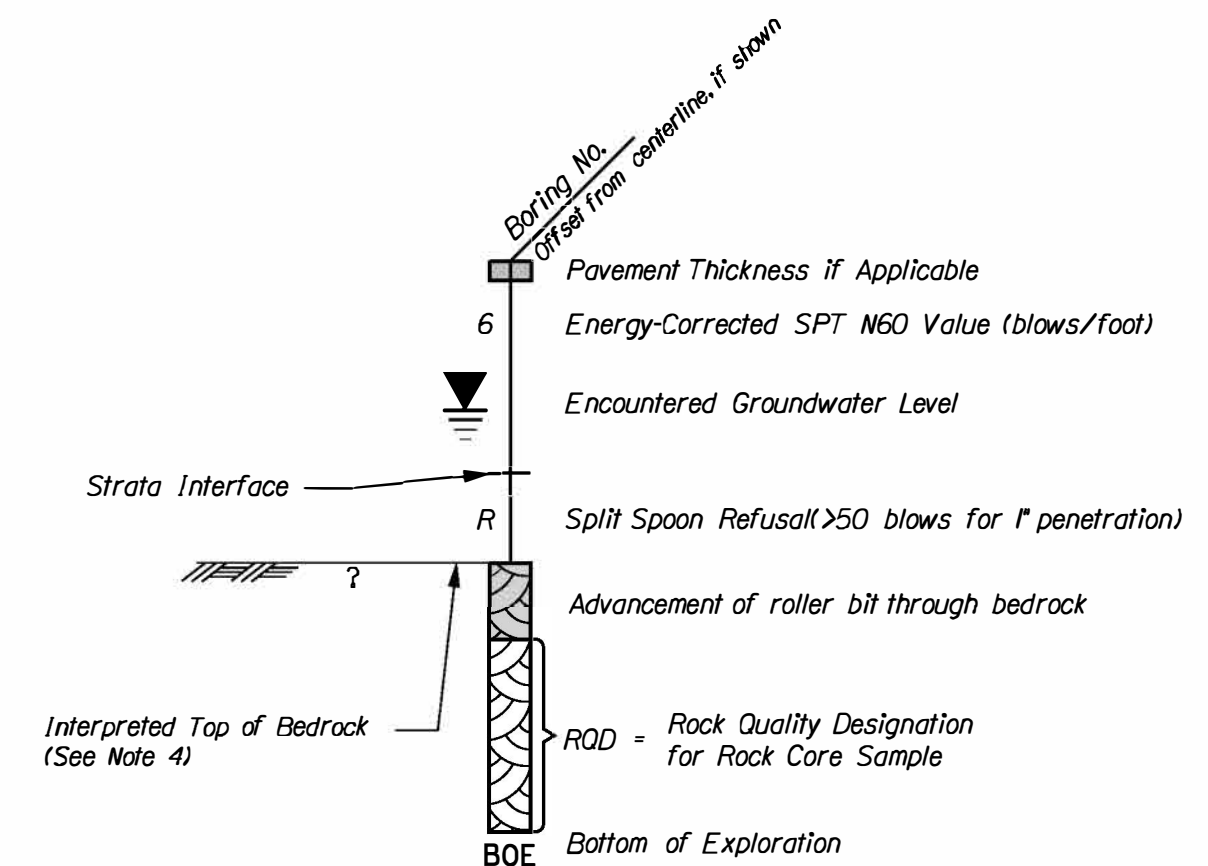
Date: 6/26/2023
 Username: BMC



PROFILE
 Along the South Bridge Fascia
 (Approximately 39.6 feet Left of Centerline)

NOTES

- 1) Base map developed from electronic files provided by Stantec on April 27, 2023 (File included Profile_geotech.dgn)
- 2) The as-drilled locations of the BB-A195-100 series test borings were determined by survey conducted by MaineDOT and supplied to GZA.
- 3) The as-drilled locations of the BB-A195-200 and HB-A195-200 series test borings were determined by survey conducted by MaineDOT and supplied to GZA.
- 4) This generalized interpretive soil and rock profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.



STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 2167200
 WIN
 21672.00
 Bridge No. 5808

Andrew R. Blaisdell
 10957
 05/19/2023
 PROFESSIONAL LICENSE NO. 10957
 DATE

PROJ. MANAGER	D. EATON	DATE	BY	DATE
DESIGN-DETAILED	ALM/BMC	MAY 2023	ALM/BMC	MAY 2023
CHECKED-REVIEWED	ARB		C.S.	
DESIGN-2-DETAILED				
DESIGN-3-DETAILED				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

WESTERN AVENUE BRIDGE NO. 5808
 OVER INTERSTATE 95
 AUGUSTA, ME
 KENNEBEC COUNTY
 INTERPRETIVE SUBSURFACE PROFILE
 SOUTH FASCIA

SHEET NUMBER

PREPARED BY:

16
 of 190