

Janet T. Mills GOVERNOR STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16 STATE HOUSE STATION AUGUSTA, MAINE 04333-0016

> Bruce A. Van Note COMMISSIONER

January 14, 2025 Subject: Breakwater State WIN: 026824.00 Location: **Lubec Amendment No. 3** 

Dear Sir/Ms.:

Make the following changes to the Bid Book:

**Remove** pages one hundred and nine through one hundred and eleven titled SPECIAL PROVISION SECTION 502 STRUCTURAL CONCRETE (Structural Concrete, Pile Cap) (Structural Concrete, Pile Fill) (Structural Concrete, Roadway – Rubble Mound) (Structural Concrete Parapets) (Structural Concrete, Pier Deck Slab) (Structural Concrete, Approach Slab- Boat Ramp Transition Slab) and **Replace** with the attached SPECIAL PROVISION SECTION 502 STRUCTURAL CONCRETE (Structural Concrete, Pile Cap) (Structural Concrete, Pile Fill) (Structural Concrete, Roadway – Rubble Mound) (Structural Concrete Parapets) (Structural Concrete, Pier Deck Slab) (Structural Concrete, Approach Slab- Boat Ramp Transition Slab)

The following questions have been received:

**Question:** The plans call for GFCI breakers in both panels, however, GFCI breakers are not available in 277/480VAC. How should we proceed?

**Response:** Please follow panelboard note 1 where designated and provide 100mA GFPE protection for those circuits. This can be achieved via an NK Technologies Ground Fault Relay AGL-1-NXXX-120-XXX-100-N (via 120VAC from the convenience receptacle circuit), in conjunction with shunt trip breakers (or approved equal). Coordinate relay aperture size with wire bundle diameter as required. Mount the relays in junction boxes adjacent to the panelboards if required.

**Question:** Bonding on the Aluminum Gangway E-101 under call out Bond Gangway: exothermically weld insulated #1/0 AWG ground wire to nearest 36" diameter steel pipe pile in FRP conduit, via stainless steel strut and hardware. There are no pay items for these procedures and material in this activity, what pay item should the wire and material in this activity? What pay item should the wire and exothermically welds be included under?

**Response:** Bonding on the aluminum gangway is incidental to furnishing and installing the gangway (Pay Item 531.9601).

**Question:** The Rubble Mount Breakwater Monitoring Plan on sheet MN-100 shows 9 EA monitoring points. Bid item 832.05 Survey Monitoring Point is for 10EA. Please indicate the location of the additional Monitoring Point.

**Response:** Bid Item 832.05 Survey Monitoring Point estimated quantity is 9 EA. The correct number of monitoring points is shown on MN-100. The bid quantity will remain as 10 EA.

**Question:** Line #0980, Item 634.2042 – The description calls out T3 lights but none are listed on the prints, in addition to the R1 & R2 lights. Please identify where these lights are to be installed. If this is a typo, does the quantity need to be adjusted from 31 to match the quantity of 18 for the R1 & R2 lights?

**Response:** The quantity of 31 refers to the actual light fixtures mounted on top of the poles and this quantity is correct. The numbers of each type of light pole are separate quantities because some poles have 1 fixture and some poles have 2 fixtures. Types T3 and OC are used to make a distinction between the two different light fixture model numbers (they refer to the light distribution types).

**Question:** Dwg. S-229 calls out an 8" diameter light pole, whereas Dwg. E-120 calls out a 4" in the parapet wall conduit detail. Please confirm which is preferred.

**Response:** Please refer to the pole model numbers listed in the Light Fixture Schedule on E-110 for pole requirements.

**Question:** Please clarify whether or not the State of Maine Prevailing Wage Rates also apply to this contract. Only the federal wage determination was included in the project documents

Response: Only federal wage rates are required to be met on this project.

**Question:** Can funds from the \$19,650,000 that need to be expended by September of 2026 be used to pay for stored material?

Response: Yes.

**Question:** Can precast concrete pieces be manufactured and supplied by companies based in Canada, provided that the reinforcing steel is melted / manufactured in the USA?

**Response:** Under the Buy American requirements, **Yes**; Under the BABA requirements, **No**. Refer to SPECIAL PROVISION, <u>SECTION 105</u>, GENERAL SCOPE OF WORK (Buy American - Build America, Buy America).

**Question:** SP 107 (Contract Time) states that liquidated damages will be assessed to the contractor for every weekday not worked once operations commence. Not having a clearly defined meaning of "inclement weather", a clear understanding of what onsite activities constitute "work", or what will be required by the contractor to receive an "approved absence" exposes the contractor to undue risk and potentially drives up project costs. Can the process for work suspension outlined in MaineDOT's Standard Specification be used for work suspension in lieu of charging supplemental liquidated damages to the contractor?

**Response:** Approved absences will be at the Department's discretion, starting with the project resident and escalating (Construction Manager or Project Manager) as necessary. It is not the Department's intent to direct a contractor to work in un-safe conditions. It will be the contractor's responsibility to notify the resident in writing a minimum of 48 hours in advance of any known absences with the dates and reason(s) clearly stated. In the case of weather delay, notice should be provided as early as possible and should be via direct contact, phone or text message, and followed up via email within 24 hours. Standard processes may be used to attain approval and avoid LD's. The intent of SP 107 is to promote communication and recover staffing costs should the contractor not show at the jobsite as expected.

**Question:** It is assumed that the 6 poles in the parking lot on sheet E-103 will require 24" diameter foundations. Sheet E-120 shows that the 24" foundations are to be 7'-0" long. This means the total length of 24" foundations is 42 liner feet. However, the total estimated quantity for the 24" foundations is 51 linear feet. Are some foundations anticipated to be longer than 7'-0" or are additional foundations anticipated outside of the 6 required for the parking lot lights?

**Response:** The engineer's estimated quantity includes 3 lf of exposed foundation at three of the locations (9 LF total) as noted on the plans, which are not behind guardrail. However, this additional 3 lf is not necessary, so all foundations shall be 7 lf.

**Question:** There is significant speculation that the incoming presidential administration may impose tariffs of up to 25% or more on imported steel products. As a result, domestic steel mills are expected to raise prices to match this increase, capitalizing on the price gap. Will the Department consider adding a steel escalation clause for structural steel, pipe, and reinforcing steel to help contractors and their steel material suppliers mitigate the risks associated with these uncertain market conditions?

**Response:** The Department is not currently including a steel escalation clause in any contracts.

**Question:** The unit of measurement for item 501.236, Protective Species Observer, is hours. Due to the remote location of the project, the third parties providing this service will more than likely only provide a daily rate for their services. Can the unit of measurement for this item be changed to calendar day to account for this?

**Response:** The pay unit for this bid item cannot be changed.

**Question:** Section 502.19 Basis of payment lists concrete items as paid by the Cubic Yard. However, some of the items listed are Lump Sum items on the bid form. Please clarify how these items will be paid.

**Response:** DELETE Special Provision Section 502 Structural Concrete and REPLACE it with the attached Special Provision Section 502 Structural Concrete. The estimated quantity for item 502.263 is 1418 CY. The estimated quantity for item 502.264 is 475 CY. The contractor is responsible for verifying all estimated quantities.

Consider these changes and information prior to submitting your bid on January 29, 2025

Sincerely,

Kinge Wachingell

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

# SPECIAL PROVISION SECTION 502 STRUCTURAL CONCRETE (Structural Concrete, Pile Cap) (Structural Concrete, Pile Fill) (Structural Concrete, Roadway - Rubble Mound) (Structural Concrete, Pier Deck Slab) (Structural Concrete, Approach Slab - Boat Ramp Transition Slab)

All work and materials shall conform to the Contract Drawings and the provisions of the State of Maine Department of Transportation Standard Specifications, March 2020, SECTION 502 – STRUCTURAL CONCRETE, with the following modifications:

### Section 502.01 Description

Add the following after the first paragraph:

This work shall consist of furnishing and placing Portland Cement Concrete for concrete waterfront structures including deck topping at platform, pile cap closure pours, roadway concrete at the rubble mound, approach slab, and tremie concrete pile fill in accordance with these Specifications and in conformity with the lines, grades, and dimensions shown on the Plans.

### Section 502.05 Composition and Proportioning

Modify Table 1 in accordance with the following:

Concrete Class LP shall include Note 2: inclusion of Calcium Nitrite.

Modify Table 1, Note 2, in accordance with the following:

Calcium Nitrite shall be added at a rate of 5.0 gallons per cubic yard except for Structural Concrete, Pile Fill.

Replace Table 1, Note 5 with the following:

Coarse aggregate for concrete with the exception of structural concrete for pile fill shall meet the requirements of Section 703.02 for Class "AA." The maximum coarse aggregate size for structural concrete mix for pile fill shall be 3/8 inches; and fine aggregates shall make up 40 to 50 percent of the total aggregate by weight.

Add the following to the second paragraph:

Concrete mix designs for structural concrete shall meet the following additional requirements:

- 1. Structural Concrete, Fill requires a high range water reducing admixture selected from the QPL.
- 2. Water to cementitious materials ratio (W/Cm) in all structural concrete mix designs shall be limited to a maximum value of 0.40.
- 3. Limit water-soluble, chloride ion content in hardened concrete, percent by mass of cementitious materials to 0.10 for Structural Concrete, Pile Fill and 0.15 for all other concrete. Limits are stated in terms of water-soluble chloride ions (Cl-) in percent by mass of cementitious materials.
- 4. Structural Concrete, Fill (tremie concrete) requires an anti-washout admixture.

Add the following to Section G:

Maximum slump shall be 8 inches (with superplasticizers) per AASHTO M 194.

Add the following to Section I:

Mixes shall include the following additional admixtures:

- 1. Anti-washout admixture for Structural Concrete, Pipe Fill (tremie) mix design only. Provide certification that the anti-washout admixture is compatible with the cementitious materials and other chemical admixtures in the proposed concrete mix.
- 2. Shrinkage-reducing/Compensating Admixture meeting ASTM C494, Type S and the following:
  - a. Designed to expand at a rate that closely compensates for shrinkage of concrete mix and reduces capillary surface tension of concrete pore water.
  - b. Provides at least 80 percent shrinkage reduction as measured and documented by field performance.
  - c. Dosage rate and mixing sequence shall be per manufacturer's recommendations.
  - d. Shall have documented performance of ASTM C1581, run with concrete (maximum aggregate size not to exceed 0.5 inch): No cracking for minimum 120 days.

Add the following new section:

K. Water soluble chloride ion content in hardened concrete. Provide one of the following:

- 1. Test report in accordance with ASTM C1218/C1218M at an age between 28 days and 42 days.
- 2. Calculation of water-soluble chloride content based on certified chloride content of each constituent material and proportion of constituent material in concrete mixture.
- 3. All of the following items:
  - a. Manufacturer's Certificate of Compliance that each admixture does not intentionally add chlorides and/or that chloride content of each admixture does not exceed trace amounts.
  - b. Verification that potable water is used in concrete mix or test data documenting chloride content of water.
  - c. Letter from concrete supplier stating that fine aggregates and coarse aggregates are from sources that are not known to be susceptible to chlorides in aggregates.

Add the following new section:

- L. Shrinkage Test Results for Mix
  - 1. In accordance with ASTM C157, with the following modifications:
    - a. Prisms must be moist cured for 7 days prior to 28 day drying period.
    - b. Comparator reading at end of 7-day moist cure must be used as initial length in length change calculation.

- c. Reported results must be average of three prisms.
- d. If shrinkage of a specimen departs from average of that test age by more than 0.004 percent, disregard results obtained from that specimen.
- e. Only 4-inch prisms shall be used.
- 2. Results at end of 28 day drying period must not exceed 0.035 percent if 4-inch prisms are used.

Add the following new section:

M. Thermal Control Plan for Mass Concrete complying with ACI 301 and requirements described herein. Plan shall be signed and sealed by a Professional Engineer licensed in the State of Maine. Provide documentation that maximum concrete temperature in structure will not exceed 160 degrees F, and maximum temperature differential between center of section and external surfaces of concrete will not exceed 35 degrees F.

Replace the sixth paragraph with the following:

Concrete mix designs shall contain no more than 25 percent fly ash, no more than 10 percent silica fume and no more than 50 percent total of fly ash, slag pozzolan cement and silica fume.

#### Section 502.18 Method of Measurement

Add the following before the first paragraph:

Structural Concrete, Pile Fill for steel pipe piles will be measured separately and shall be covered under Pay Item 502.2354.

## Section 502.19 Basis of Payment

Add the following before the first paragraph:

Structural Concrete will be paid for at the Contract cubic yard or lump sum price for the respective Contract items which shall be full compensation for all labor, materials, falsework, staging, incidentals, and equipment necessary to satisfactorily complete the work in accordance with the Plans and Specifications.

Add the following Pay Items:

Pay Item	Description	Pay U	nit
502.2351	Structural Concrete, Pile Cap	.Cubic	Yard
502.2354	Structural Concrete, Pile Fill.	.Cubic	Yard
502.263	Structural Concrete, Roadway (Rubble Mound)	. Lump	Sum
502.264	Structural Concrete, Parapets	.Lump	Sum
502.411	Structural Concrete, Pier Deck Slab	. Cubic	Yard
502.45	Structural Concrete, Approach Slab (Boat Ramp Transition Slab)	)Cubic	Yard