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

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

November 10, 2022
Subject: Bridge Rehabilitation
State WIN: 021751.01
Location: **Southport & Boothbay Harbor**
Amendment No. 3

Dear Sir/Ms.:

Please make the following changes to the bid documents:

In the bid book:

REMOVE pages Seventeen to twenty-five titled Proposal Schedule of items, nine pages in total, dated September 26, 2022, and **REPLACE** with the attached Proposal Schedule of Items, dated November 8, 2022, totaling nine pages.

ADD the attached SPECIAL PROVISION 105 GENERAL SCOPE OF WORK, totaling one page, dated October 24, 2022.

ADD SPECIAL PROVISION 524 TEMPORARY STRUCTURAL SUPPORT, three pages in total, dated October 31, 2022.

In the Plan set

***R*EMOVE** Page 2, ESTIMATED QUANTITIES & GENERAL NOTES, totaling one page and **REPLACE** with the attached ESTIMATED QUANTITIES & GENERAL NOTES. dated 9/22/2022.

REMOVE Page 45 of 48, titled "ADVANCED WARNING BEACON PLAN," and **REPLACE** with the attached new page 45 of 48, titled "ADVANCED WARNING BEACON PLAN" dated 8/19/2022.

REMOVE Page 47 of 48, titled "NORTH CRASH BARRIER AND MAST ARM FOUNDATION DESIGN" and **REPLACE** with the attached new page 47 of 48, titled "NORTH CRASH BARRIER AND MAST ARM FOUNDATION DESIGN" dated 8/19/2022.

REMOVE Page 48 of 48, titled "SOUTH CRASH BARRIER AND MAST ARM FOUNDATION DESIGN" and **REPLACE** with the attached new page 48 of 48, titled "NORTH CRASH BARRIER AND MAST ARM FOUNDATION DESIGN" dated 8/19/2022.

REMOVE Page M7 of M24 titled NEW SPAN DRIVE MACHINERY ARRANGEMENT totaling one page and **REPLACE** with the attached new M7 of M24 titled NEW SPAN DRIVE MACHINERY AND ARRANGEMENT dated 08/19/2022, totaling one page.

REMOVE page M11 of M24 titled NEW END SEAT AND END JACK MACHINERY SCHEDULE AND ARRANGEMENT and **REPLACE** with the attached page M11 of M24 titled NEW END SEAT AND END JACK MACHINERY SCHEDULE AND ARANGEMENT dated 08/19/2022, totaling one page.

REMOVE Page M15 of M24 titled NEW END JACK MACHINERY DETAILS totaling one page and **REPLACE** with the attached new M15 of M24 titled NEW END JACK MACHINERY DETAILS dated 08/19/2022, totaling one page.

The following questions have been received:

Question: Sheet M16, Miscellaneous Mechanical Repairs calls for several items to be lubricated using lubricants specified in the O&M Manual. Please provide specified lubricants for the following items:

- Rack & Pinion Open Gearing
- Balance Wheel Bushings
- Center Pivot Bearing
- Enclosed Gear Reducers

Response:
- Rack & Pinion Open Gearing: GulfELITE HT Red High Temp EP-2
- Balance Wheel Bushings: GulfELITE HT Red High Temp EP-2
- Center Pivot Bearing: Mobil SAE #90
- Enclosed Gear Reducers: Shell Morlina B-68

Question: Is the contractor required to operate the bridge outside the closure window or will MaineDot continue to operate? Section 860.7.10 states the Contractor is to lubricate for the duration of the project.

Response: Special Provision 105 General Scope of Work (Bridge Operation During Construction) has been added to the Contract book with this bid amendment. It describes the operation requirements during the project.

Question: Sheet M7 shows the machinery and motor brakes mounted to the rear shafts of the span drive motors. A statement at the beginning of Specification 860.9.3 states "Each thrustor brake shall be mounted on their support channels at the rear shaft of their respective motors." Another statement midway through 860.9.3 states, "The thrustor brake wheel shall be mounted on the reducer input shaft..." Please clarify.

Response: In pen and ink strike through the last bullet point of section 860.9.3 and replace with “The thruster brake wheel shall be mounted on the span drive motor rear shaft with an FN2 fit and key.”

Question: Drawing E-39 indicates that Conduit #2 is an Existing Submarine Cable; however, Conduit #'s 9 & 14 do not have the "Existing " Designation. Please confirm that these Submarine cables are existing to remain.

Response: Conduits #9 and #14 are existing submarine cables to remain.

Question: We are requesting that the department supply the timber schedule for the pier fenders for reference purposes.

Response: Please reference note 1 on sheets 11 and 20. Contractor shall field verify existing fender system dimensions and existing timber schedules.

Question: There is no drawing or pay item for temporary support of the swing span during demo of the wedge system and construction of the new bridge seat system while the bridge is open to traffic. We are requesting plans, blocking locations that facilitate the construction and instillation of the new equipment and minimum requirements for construction.

Response: Special Provision 524 Temporary Structural Support has been added to the Contract Book along with associated pay item 524.301.

Question: Please provide additional information for the 2'X8' Concrete Wall Receiver on Drilled Shaft Foundation referenced on sheet 3 of the plans.

Response: The precise details of the 2’x8’ concrete wall receiver depends on the locking mechanism and arm locking height of the barrier gate per the supplier. The wall needs to have mounts for both the locking mechanism and the two guardrail terminal end connectors. The wall also needs to be reinforced and have a reinforcement connection to the concrete shaft foundation designed to meet AASHTO TL-2 vehicular impact loading criteria. The design must be stamped and signed by a Professional Engineer registered in the State of Maine and submitted to the Department for review and approval.

Question: Drawing 45 "Advance Warning Beacon Plan" list of work items indicates 7 feet of 24" foundation associated with the 15-foot Pedestal Pole Structure "SB-P1" Where is this foundation to be paid under?

Response: Per Special Provision Section 643, Traffic Signals (Flashing Beacon) 643.19, the foundations for the Advance Warning Beacons shall be paid for under the 626 items.

Question: Please confirm there are four drilled shaft foundations required for the New Crash Barrier Gates. Should the drilled shaft tables on sheet 47 and 48 of the plans be revised to reflect this?

Response: It is correct that there are four drilled shaft foundations required for the new crash barrier gates. The tables on sheets 47 and 48 indicate foundation designs. There are two acceptable crash barrier foundation designed presented on sheet 47, depending on contractor preference for shaft diameter. On sheet 48 there are two acceptable mast arm foundation designs depending on whether the contractor encounters rock during installation. See sheet 2 for estimated quantities.

Question: Drawing 44 indicates that the 35' Steel Mast Arms are to also support a 12' Lighting Bracket Arm and Type 3 LED Luminaire. Where will the Lighting Bracket and Luminaire be paid under?

Response: The 35’ steel mast arm poles with the lighting bracket and luminaire are to be paid for under Item 643.94 Dual Use Pole. This item includes the mast arm upright, the mast arm, the luminaire bracket arm, and the luminaire.

Question: Note 3 on Sheet M16 references End Jack Support, EJ1, details on the Structural Sheet titled "Jacking Support Details". Sheet 32 shows the End Jack Support detail but does not reference detail EJ1. Please clarify.

Response: Sheet M15 Note 3 was meant to be referenced in the question. Sheet M15 has been revised for Note 3 and callouts for EJ1 to be EJ1N & EJ1S to distinguish between north and south end jack supports. Also see revised sheet M11. Sheet 32 shows the structural details for EJ1N and EJ1S.

Question: Sheet M7 contains the Span Drive Machinery Schedule. Mark No. SD6 requires a quantity of 8 Motor supports. Based on the quantity of Span Drive motors and the details on the drawing it appears only 2 are required. Please clarify.

Response: Sheet M7 is revised to indicate an SD6 quantity of 2 instead of 8, one (1) Motor Support for Southport side and one (1) Motor Support for Boothbay side.

Question: Sheet M7 contains the Span Drive Machinery Schedule. Mark No. SD7 requires a quantity of 8 Brake supports. Based on the quantity of Brakes and the details on the drawing it appears only 2 are required. Please clarify.

Response: Sheet M7 is revised to indicate an SD7 quantity of 2 instead of 8, one (1) Brake Support for Southport side and one (1) Brake Support for Boothbay side.

Question: Sheet M7 contains the Span Drive Machinery Schedule. Mark No. SD6 requires a quantity of 8 Motor supports. Based on the quantity of Span Drive motors and the details on the drawing it appears only 2 are required. Please clarify.
Response: Sheet M7 is revised to indicate an SD6 quantity of 2 instead of 8, one (1) Motor Support for Southport side and one (1) Motor Support for Boothbay side.

Consider these changes and information prior to submitting your bid on **November 16, 2022.**

Sincerely,

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

SPECIAL PROVISION
SECTION 105
GENERAL SCOPE OF WORK
(Bridge Operation During Construction)

Description

The Contractor shall supply sufficient personnel during the duration of the project whose sole responsibility will be to operate the bridge during construction, as required by 33 CFR 117.537, outside of any U.S. Coast Guard approved deviations to bridge operations.

> *33 CFR 117.537*
> *The draw of the Southport (SR27) Bridge, at mile 0.7, across Townsend Gut between Boothbay Harbor and Southport, Maine shall open on signal; except that, from April 29 through September 30, between 6 a.m. and 6 p.m., the draw shall open on signal on the hour and half hour only, after an opening request is given.*

The bridge will be operated by MaineDOT Bridge Operators until the Contractor starts physical work on the bridge or is working on the water in the vicinity of the bridge. At which time the operation of the bridge shall be handed over to the Contractor for the remaining duration of the project. The bridge shall not be handed back over to MaineDOT until all mechanical and electric work has been fully tested, commissioned, and operator training is completed and other physical work on the project is complete. MaineDOT Bridge Operators will be onsite for all work outside of the (2) allowable bridge operations closure periods as defined in Special Provision Section 107 Time (Scheduling of Work, Disincentives) and will maintain the required documentation of bridge openings and provide assistance, as needed, to the Contractor's operator in case of an issue with bridge operations.

Method of Measurement

This work will not be measured for payment

Basis of Payment

The cost of this work shall be incidental to the various related items in the Contract.

SPECIAL PROVISION
SECTION 524
TEMPORARY STRUCTURAL SUPPORT
(Temporary Structural Support – Bridge)

524.01 Description

The following paragraphs are added:

The work shall consist of furnishing all labor, tools, and equipment for jacking and temporarily supporting the existing truss superstructure at the piers for bearing modifications. This work shall also consist of designing, fabricating, erecting, operating, maintaining, and dismantling the temporary structural supports and jacking systems required to perform the work.

At each pier both truss bearing lines shall be jacked and temporarily supported simultaneously. The bridge shall remain open to vehicular traffic during all jacking and bearing replacement procedures. All temporary structural supports shall be dismantled prior to the recommissioning of the truss span.

524.02 Materials

This subsection is replaced in its entirety with the following:

Materials used as temporary structural supports shall be structural grade sawn timber, structural steel, or a combination of both, at the Contractor's option. All temporary structural support materials, whether new or used, shall be sound and of adequate strength and cross section for the intended loads. All structural steel shall have a minimum yield strength of 36,000 psi.

Blocking and/or pads required to accommodate differences in elevation and/or to distribute loads may additionally incorporate plain and reinforced concrete as approved by the Resident.

524.03 Design

This subsection is replaced in its entirety with the following:

The Contractor shall submit a Temporary Support Plan to the Resident at least 30 business days prior to the start of the rehabilitation work. The plan shall outline the methods and equipment to be used to support the bridge during bearing modification work.

The Contractor is responsible for the complete design of the bridge jacking procedures and the materials used. The Contractor shall furnish and place all bracing, shoring,

blocking, cribbing, temporary structural steel, timber, shims, wedges, hydraulic jacks, and any other materials and equipment necessary for safe and proper execution of the work.

The unfactored bearing loads are as follows:

Truss Bearings:
Dead Load: 60 kips/bearing per inch of jacking deflection per end of truss
Live Load: 100 kips/bearing
Temperature: 15 kips/bearing

The Contractor shall provide a jacking system and a temporary support system with a capacity of at least 150% of the unfactored jacking loads. If loads exceed these limits, the jacking operations shall cease, and the Resident shall be notified. Jacking operations may not resume until the Resident provides guidance.

The Contractor shall jack the truss span structure not more than 1.5 inches above the free position at both ends of the truss simultaneously and not more than 1 inch above the normal operating elevation in the proposed condition at both ends of the truss simultaneously, whichever is the smaller distance. The free position of the truss is defined as the natural position of the truss when the truss is completely unsupported at both ends.

The Contractor shall make provisions to prevent longitudinal and transverse moment of the superstructure and twisting of the beams during the jacking operations and while the beams are temporarily supported. These provisions shall be submitted to the Resident for approval.

The jacking system and temporary structural support shall be designed and sealed by a Professional Engineer licensed in the State of Maine. Design computations, plans, details, working drawings, and other documentation necessary to complete the work and certify conformance with these provisions shall be approved by the Department prior to beginning this work.

524.04 Erection and Removal

The following paragraphs are added:

It shall be the Contractor's responsibility to prevent any damage to the structure. Should any damage result from this work, the Contractor shall make repairs at no additional cost to the Department. Any such repair work is subject to the approval of and acceptance by the Resident.

The Contractor may support the jacking systems and temporary structural support systems off the bearing seats, face of the pier cap, or end floorbeam. Bracing shall be provided to maintain the superstructure in a stable condition during the jacking operations and while temporarily supported.

The jacking shall be synchronized so that all portions of the trusses are raised by approximately equal amounts simultaneously. A maximum of 1/8 inch differential movement between trusses will be permitted during jacking operations. The process of temporary structural supports removal and the jacking operation to lower the bridge back onto the bearings shall be completed in a manner similar to that of the erection process.

Drawings showing the proposed method to raise, temporarily support, and brace the superstructure shall be stamped by a Licensed Professional Engineer licensed in the State of Maine, and shall be submitted to the Resident for review and approval prior to starting work.

All fabrication of structural steel shall be done in conformance with the latest AASHTO American Welding Society and MaineDOT specifications.

The Contractor shall ensure that the bridge is not left in the jacked position when snow is forecast or when Plow trucks are operating on Western Ave.

524.05 Method of Measurement

This section is removed and replaced with the following:

Temporary Structural Supports will be measured by the lump sum, satisfactorily designed, erected, and dismantled. Temporary supports used by the Contractor for their convenience will not be measured for payment. The work associated with removal and reinstallation of the existing highway appurtenances (e.g. access platforms, guardrails, sign supports, etc.) to facilitate the erection of temporary supports will not be measured for payment, but will be considered incidental to the Temporary Structural Support pay item.

524.06 Basis of Payment

The following sentence is added:

Temporary structural supports will be paid for at the Contract lump sum price, which shall be full compensation for all material, equipment, labor and incidentals necessary to design, erect, maintain, and dismantle the jacking and temporary support of the existing superstructure.

Payment will be made under:

Pay Item		Pay Unit
524.301	Temporary Structural Support - Bridge	Lump Sum

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 021751.01 **Project(s):** 021751.01

SECTION: 1 INITIAL GROUP

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID / Description	Approximate Quantity and Units	Unit Price Dollars	Unit Price Cents	Bid Amount Dollars	Bid Amount Cents
0010	202.01 REMOVING STRUCTURES AND OBSTRUCTIONS EXIST FENDER SYSTEM	LUMP SUM	LUMP SUM		_____	_____
0020	202.01 REMOVING STRUCTURES AND OBSTRUCTIONS EXIST STL GRID DECK	LUMP SUM	LUMP SUM		_____	_____
0030	202.08 REMOVING BUILDING NO.: 1, CONTROL HOUSE	LUMP SUM	LUMP SUM		_____	_____
0040	202.12 REMOVING EXISTING STRUCTURAL CONCRETE	5.000 CY	_____	_____	_____	_____
0050	202.27 EXISTING MACHINERY REMOVAL AND DEMOLITION	LUMP SUM	LUMP SUM		_____	_____
0060	202.56 REMOVE EXISTING ADVANCE WARNING BEACON	2.000 EA	_____	_____	_____	_____
0070	202.57 REMOVE EXISTING WARNING GATE BRIDGE MOUNTED	2.000 EA	_____	_____	_____	_____
0080	202.57 REMOVE EXISTING WARNING GATE FOUNDATION MOUNTED	2.000 EA	_____	_____	_____	_____
0090	203.20 COMMON EXCAVATION	270.000 CY	_____	_____	_____	_____
0100	203.35 CRUSHED STONE 3/4 INCH	5.000 CY	_____	_____	_____	_____

Proposal ID: 021751.01 **Project(s):** 021751.01

SECTION: 1 INITIAL GROUP

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars	 Cents	Bid Amount Dollars	 Cents
0110	206.082 STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES	20.000 CY				
0120	304.10 AGGREGATE SUBBASE COURSE - GRAVEL	110.000 CY				
0130	403.208 HOT MIX ASPHALT 12.5 MM HMA SURFACE	30.000 T				
0140	403.213 HOT MIX ASPHALT 12.5 MM BASE	90.000 T				
0150	409.15 BITUMINOUS TACK COAT - APPLIED	32.000 G				
0160	501.239 DYNAMIC LOADING TESTS - PROVIDING FOR	4.000 EA				
0170	501.48 STEEL H-BEAM PILES 74 LBS/FT, DELIVERED	4,750.000 LF				
0180	501.481 STEEL H-BEAM PILES 74 LBS/FT, IN PLACE	4,750.000 LF				
0190	501.90 PILE TIPS	50.000 EA				
0200	501.91 PILE SPLICES	50.000 EA				
0210	501.92 PILE DRIVING EQUIPMENT MOBILIZATION	LUMP SUM	LUMP SUM			

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 021751.01 **Project(s):** 021751.01

SECTION: 1 INITIAL GROUP

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars Cents	Bid Amount Dollars Cents
0220	502.219 STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	LUMP SUM	LUMP SUM	_____.____
0230	502.26 STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLABS ON STEEL BRIDGES	LUMP SUM	LUMP SUM	_____.____
0240	502.291 SAW CUT GROOVING	LUMP SUM	LUMP SUM	_____.____
0250	502.49 STRUCTURAL CONCRETE CURBS AND SIDEWALKS	LUMP SUM	LUMP SUM	_____.____
0260	503.12 REINFORCING STEEL, FABRICATED AND DELIVERED	34,600.000 LB	_____.____	_____.____
0270	503.13 REINFORCING STEEL, PLACING	34,600.000 LB	_____.____	_____.____
0280	503.17 MECHANICAL WELDED SPLICE	685.000 EA	_____.____	_____.____
0290	504.70 STRUCTURAL STEEL FABRICATED AND DELIVERED	LUMP SUM	LUMP SUM	_____.____
0300	504.71 STRUCTURAL STEEL ERECTION	LUMP SUM	LUMP SUM	_____.____
0310	505.08 SHEAR CONNECTORS	LUMP SUM	LUMP SUM	_____.____
0320	506.1705 SURFACE PREP. OF EXISTING STRUCTURAL STEEL	LUMP SUM	LUMP SUM	_____.____

Proposal ID: 021751.01 **Project(s):** 021751.01

SECTION: 1 INITIAL GROUP

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars Cents	Bid Amount Dollars Cents
0330	506.1775 FIELD PAINTING NEW STL W/ ZINC RICH PAINT	LUMP SUM	LUMP SUM	_____.____
0340	507.0841 STEEL PIPE HAND RAILING	LUMP SUM	LUMP SUM	_____.____
0350	507.13 TEMPORARY BRIDGE RAILING	370.000 LF	_____.____	_____.____
0360	515.21 PROTECTIVE COATING FOR CONCRETE SURFACES	LUMP SUM	LUMP SUM	_____.____
0370	518.50 REPAIR OF UPWARD FACING SURFACES - TO REINFORCING STEEL < 8 IN.	50.000 SF	_____.____	_____.____
0380	518.60 REPAIR OF VERTICAL SURFACES < 8 IN.	250.000 SF	_____.____	_____.____
0390	518.70 REPAIR OF OVERHEAD SURFACES < 8 IN.	50.000 SF	_____.____	_____.____
0400	524.301 TEMPORARY STRUCTURAL SUPPORT BRIDGE	LUMP SUM	LUMP SUM	_____.____
0410	526.301 PORTABLE CONCRETE BARRIER TYPE I	LUMP SUM	LUMP SUM	_____.____
0420	526.305 PORTABLE CONCRETE BARRIER, BRACED TYPE 1	LUMP SUM	LUMP SUM	_____.____
0430	526.34 PERMANENT CONCRETE TRANSITION BARRIER	4.000 EA	_____.____	_____.____

Proposal ID: 021751.01 **Project(s):** 021751.01

SECTION: 1 INITIAL GROUP

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars	 Cents	Bid Amount Dollars	 Cents
0440	528.01 STRUCTURAL TIMBER, FABRICATED AND DELIVERED	LUMP SUM	LUMP SUM		_____	_____
0450	528.02 STRUCT TIMBER, ERECTION	LUMP SUM	LUMP SUM		_____	_____
0460	530.02 PREFAB DECK PANEL	4,900.000 SF	_____	_____	_____	_____
0470	606.1722 BRIDGE TRANSITION - TYPE 2	6.000 EA	_____	_____	_____	_____
0480	606.25 TERMINAL CONNECTOR	2.000 EA	_____	_____	_____	_____
0490	606.55 GUARDRAIL TYPE 3 - SINGLE RAIL	210.000 LF	_____	_____	_____	_____
0500	609.11 VERTICAL CURB TYPE 1	40.000 LF	_____	_____	_____	_____
0510	610.08 PLAIN RIPRAP	115.000 CY	_____	_____	_____	_____
0520	626.11 PRECAST CONCRETE JUNCTION BOX	2.000 EA	_____	_____	_____	_____
0530	626.22 NON-METALLIC CONDUIT	450.000 LF	_____	_____	_____	_____
0540	626.221 NON-METALLIC CONDUIT CONCRETE ENCASED	125.000 LF	_____	_____	_____	_____
0550	626.251 NON-METALLIC UNDER PAVEMENT CONDUIT (SCHEDULE 80 OR GREATER RATING)	40.000 LF	_____	_____	_____	_____

Proposal ID: 021751.01 **Project(s):** 021751.01

SECTION: 1 INITIAL GROUP

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars	 Cents	Bid Amount Dollars	 Cents
0560	626.44 36 INCH DIAMETER FOUNDATION	28.000 LF				
0570	626.451 42 INCH DIAMETER FOUNDATION	47.000 LF				
0580	627.733 4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE	650.000 LF				
0590	627.75 WHITE OR YELLOW PAVEMENT & CURB MARKING	50.000 SF				
0600	629.05 HAND LABOR, STRAIGHT TIME	20.000 HR				
0610	631.10 AIR COMPRESSOR (INCLUDING OPERATOR)	12.000 HR				
0620	631.11 AIR TOOL (INCLUDING OPERATOR)	12.000 HR				
0630	631.12 ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	12.000 HR				
0640	631.172 TRUCK - LARGE (INCLUDING OPERATOR)	12.000 HR				
0650	639.18 FIELD OFFICE TYPE A	1.000 EA				
0660	643.01 TRAFFIC SIGNALS AND GATES MOVABLE BR HYBRID WARN AND RESIST GATE	LUMP SUM	LUMP SUM			

Proposal ID: 021751.01 **Project(s):** 021751.01

SECTION: 1 INITIAL GROUP

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars Cents	Bid Amount Dollars Cents
0670	643.60 FLASHING BEACON AT: EASTBOUND APPR	LUMP SUM	LUMP SUM	_____.____
0680	643.60 FLASHING BEACON AT: WESTBOUND APPR	LUMP SUM	LUMP SUM	_____.____
0690	643.72 TEMPORARY TRAFFIC SIGNAL	LUMP SUM	LUMP SUM	_____.____
0700	643.80 TRAFFIC SIGNALS AT SOUTHPORT BR RT 27 OVER TOWNSEND GUT	LUMP SUM	LUMP SUM	_____.____
0710	643.92 PEDESTAL POLE	1.000 EA	_____.____	_____.____
0720	643.94 DUAL PURPOSE POLE W/ 35' WARNING BEACON	2.000 EA	_____.____	_____.____
0730	643.97 WOOD POLES WITH GUYS AND SPAN WIRE	1.000 EA	_____.____	_____.____
0740	652.33 DRUM	20.000 EA	_____.____	_____.____
0750	652.34 CONE	20.000 EA	_____.____	_____.____
0760	652.35 CONSTRUCTION SIGNS	300.000 SF	_____.____	_____.____
0770	652.361 MAINTENANCE OF TRAFFIC CONTROL DEVICES	LUMP SUM	LUMP SUM	_____.____
0780	652.38 FLAGGER	560.000 HR	_____.____	_____.____

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 021751.01 **Project(s):** 021751.01

SECTION: 1 INITIAL GROUP

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars Cents	Bid Amount Dollars Cents
0790	655.3002 BRIDGE CONTROL SYSTEM	LUMP SUM	LUMP SUM	_____.____
0800	659.10 MOBILIZATION	LUMP SUM	LUMP SUM	_____.____
0810	660.21 ON-THE-JOB TRAINING (BID)	1,000.000 HR	_____.____	_____.____
0820	815.00 BUILDING CONTROL HOUSE	LUMP SUM	LUMP SUM	_____.____
0830	860.1851 LIVE LOAD ROLLERS	LUMP SUM	LUMP SUM	_____.____
0840	860.1863 END JACK ASSEMBLIES	LUMP SUM	LUMP SUM	_____.____
0850	860.1864 END SEAT ASSEMBLIES	LUMP SUM	LUMP SUM	_____.____
0860	860.1865 FULLY CLOSED STOPS	LUMP SUM	LUMP SUM	_____.____
0870	860.187 MISCELLANEOUS MECHANICAL REPAIRS	LUMP SUM	LUMP SUM	_____.____
0880	860.231 SPAN DRIVE MACHINERY	LUMP SUM	LUMP SUM	_____.____
0890	860.30 FUNCTIONAL TESTING	LUMP SUM	LUMP SUM	_____.____
0900	880.02 BRIDGE BALANCING	LUMP SUM	LUMP SUM	_____.____
0910	880.031 BALANCE BLOCK STEEL	LUMP SUM	LUMP SUM	_____.____

Maine Department of Transportation

Proposal Schedule of Items

Proposal ID: 021751.01 **Project(s):** 021751.01

SECTION: 1 INITIAL GROUP

Alt Set ID: **Alt Mbr ID:**

Contractor: _____

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price Dollars	 Cents	Bid Amount Dollars	 Cents
0920	910.301 SPECIAL WORK STAFF GAUGES	LUMP SUM	LUMP SUM		_____	. ____

Section: 1 **Total:** _____ . ____

Total Bid: _____ . ____

Filename: ...\BRIDGE\MSTA\002_Notes_01.dgn Division: HIGHWAY Username: Date:9/22/2022

ESTIMATED QUANTITIES				
ITEM NO.	DESCRIPTION		QUANTITY	UNIT
202.01	Removing Structures and Obstructions, Existing Fender System		1	LS
202.01	Removing Structures and Obstructions, Existing Steel Grid Deck		1	LS
202.08	Removing Building No. 1 - Control House		1	LS
202.12	Removing Existing Structural Concrete		5	CY
202.27	Existing Machinery Removal and Demolition		1	LS
202.56	Remove Existing Advance Warning Beacon		2	EA
202.57	Removing Existing Warning Gate, Bridge Mounted		2	EA
202.57	Removing Existing Warning Gate, Foundation Mounted		2	EA
203.20	Common Excavation		270	CY
203.35	Crushed Stone 3/4-inch		5	CY
206.082	Structural Earth Excavation - Major Structures, Plan Quantity		20	CY
304.10	Aggregate Subbase Course - Gravel		110	CY
403.208	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size		30	TON
403.213	Hot Mix Asphalt, 12.5 mm Nominal Maximum Size (Base and Intermediate Base Course)		90	TON
409.15	Bituminous Tack Coat, Applied		32	Gal
501.239	Dynamic Loading Tests - Providing For		4	EA
501.48	Steel H-beam Piles 74 lb/ft, Delivered		4750	LF
501.481	Steel H-beam Piles 74 lb/ft, In Place		4750	LF
501.90	Pile Tips		50	EA
501.91	Pile Splices		50	EA
501.92	Pile Driving Equipment Mobilization		1	LS
502.219	Structural Concrete, Abutments and Retaining Walls	5 CY	1	LS
502.26	Structural Concrete Roadway and Sidewalk Slab on Steel Bridges	130 CY	1	LS
502.291	Saw Cut Grooving	5,100 SF	1	LS
502.49	Structural Concrete Curbs and Sidewalks	3 CY	1	LS
503.12	Reinforcing Steel, Fabricated and Delivered		34600	LB
503.13	Reinforcing Steel, Placing		34600	LB
503.17	Mechanical/Welded Splice		685	EA
504.70	Structural Steel Fabricated and Delivered	90,000 LB	1	LS
504.71	Structural Steel Erection	90,000 LB	1	LS
505.08	Shear Connectors	3,700 EA	1	LS
506.1705	Surface Preparation of Existing Structural Steel	1,500 SF	1	LS
506.1775	Field Painting, New and Existing Steel with Zinc Rich Paint		1	LS
507.0841	Steel Pipe Hand Railing	300 LF	1	LS
507.13	Temporary Bridge Rail		370	LF
515.21	Protective Coating for Concrete Surfaces	1,150 SY	1	LS
518.50	Repair of Upward Facing Surfaces - to Reinforcing Steel < 8 inches		50	SF
518.60	Repair of Vertical Surfaces < 8 inches		250	SF
518.70	Repair of Overhead Surfaces < 8 inches		50	SF
526.301	Temporary Concrete Barrier, Type 1	610 LF	1	LS
526.305	Temporary Concrete Barrier, Braced Type 1	370 LF	1	LS
526.34	Permanent Concrete Transition Barrier		4	EA
528.01	Structural Timber, Fabrication and Delivery	89,100 BF	1	LS
528.02	Structural Timber, Erection	89,100 BF	1	LS
530.02	Prefabricated Deck Panels		4900	SF
606.1722	Bridge Transition - Type II		6	EA
606.25	Terminal Connector		2	EA
606.55	Guardrail Type 3 - Single Rail		210	LF
609.11	Vertical Curb Type 1		40	LF
610.08	Plain Riprap		115	CY
626.11	Precast Concrete Junction Box		2	EA
626.22	Non-Metallic Conduit		450	LF
626.2211	Non-Metallic Conduit Concrete Encased		125	LF
626.2511	Non-Metallic Under Pavement Conduit (Sch. 80 or Greater)		40	LF
~~626.43~~	~~30-inch Diameter Foundation~~ 626.44 36-inch Diameter Foundation		28	LF
626.4511	42-inch Diameter Foundation		47	LF
627.7333	4" White or Yellow Painted Painted Pavement Marking Line		650	LF
627.75	White or Yellow Pavement & Curb Marking		50	SF
629.05	Hand Labor, Straight Time		20	HR
631.10	Air Compressor (Including Operator)		12	HR
631.11	Air Tool (Including Operator)		12	HR
631.12	All-Purpose Excavator (Including Operator)		12	HR
631.172	Truck-Large (Including Operator)		12	HR
639.18	Field Office Type A		1	EA
643.01	Traffic Signals and Gates, Movable Bridge Hybrid Warning and Resistance Gate		1	LS
643.60	Flashing Beacon at Eastbound Approach		1	LS
643.60	Flashing Beacon at Westbound Approach		1	LS
643.72	Temporary Traffic Signal		1	LS
643.80	Traffic Signals at Southport Bridge Route 27 over Townsend Gut		1	LS
643.92	Pedestal Pole		1	EA
643.94	Dual Purpose Pole with 35' Warning Beacon		2	EA
643.97	Wood Poles with Guys and Span Wire		1	EA
652.33	Drum		20	EA
652.34	Cone		20	EA
652.35	Construction Signs		300	SF
652.361	Maintenance of Traffic Control Devices	200 CD	1	LS
652.38	Flaggers		560	HR
655.3002	Bridge Control System		1	LS
659.10	Mobilization		1	LS
660.21	On-The-Job Training		1000	HR
815.00	Building: Control House		1	LS
860.1851	Live Load Rollers		1	LS
860.1863	End Jack Assemblies		1	LS
860.1864	End Seat Assemblies		1	LS
860.1865	Fully Closed Stops		1	LS
860.187	Miscellaneous Mechanical Repairs		1	LS

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
860.2311	Span Drive Machinery	1	LS
860.30	Functional Testing	1	LS
880.02	Bridge Balancing	1	LS
880.0311	Balance Block - Steel	1	LS
910.301	Special Work - Staff Gauges	1	LS
524.301	Temporary Structural Support - Bridge	1	LS

GENERAL BRIDGE CONSTRUCTION NOTES

1. For easements, construction limits and right of way lines, refer to the Right of Way Plans.
2. All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
3. Protective Coating for Concrete Surfaces shall be applied to the following areas:

   All exposed surfaces of existing and proposed concrete above the waterline.

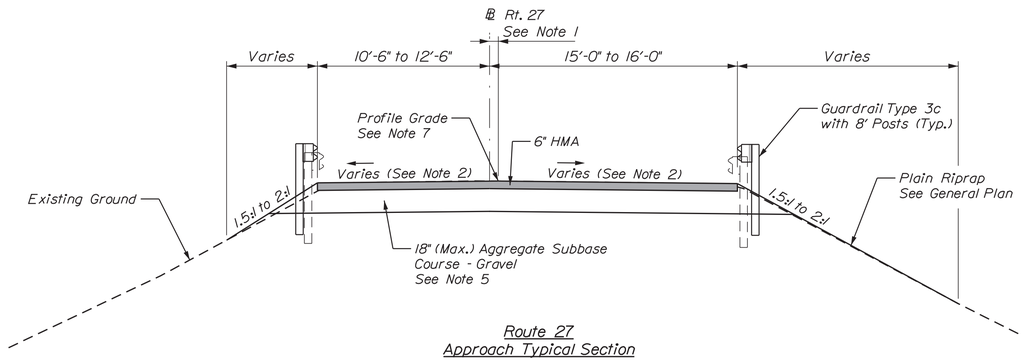
4. Project information referred to below may be accessed at the following MaineDOT web address: https://www.maine.gov/mdot/contractors/
5. Bidders and Contractors may access the existing bridge plans at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.
6. Bidders and Contractors may access a copy of the project geotechnical report at the MaineDOT web address.
7. 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. MaineDOT will not be responsible for the Bidders' 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 the boring locations.
8. Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:

   a. If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.

   b. If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.

   c. If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation.

9. All existing bridge materials and fender system timbers to be removed shall be removed by, and become the property of, the Contractor. The steel portions of the existing bridge may be coated with a lead-based paint system. The existing fender system timbers are creosote treated. The Contractor is responsible for the containment, proper management, and disposal of all lead contaminated hazardous waste and creosote contaminated hazardous waste generated by the process of demolishing the bridge components and existing fender systems. The Contractor is responsible for implementing appropriate OSHA mandated personal protection standards related to this process. Once the existing bridge and fender system materials are removed, the Contractor is solely responsible for the care, custody, and control of the components of the existing bridge and fender system materials and any hazardous waste generated as a result of storage, recycling, or disposal of the bridge and fender system components. The Contractor shall recycle or reuse the steel in accordance with Maine Department of Environmental Protection's "Maine Hazardous Waste Management Regulations," Chapter 850. A copy of this regulation is available at the MaineDOT's offices on Child Street in Augusta. Payment for all labor, materials, equipment, and other costs required to remove and dispose of the existing bridge materials and fender system will be considered incidental to the respective bridge and fender system removal pay items. The existing bridge and fender system materials shall be removed by and become the property of the Contractor.
10. The Contractor shall submit Fender Demolition Plans and Existing Grid Deck Demolition Plans to the Resident at least 10 business days prior to the start of demolition work. The plans shall outline the methods, equipment, and sequencing to be used to remove and dispose of all materials. No work related to the removal of the bridge materials shall be undertaken by the Contractor until MaineDOT has reviewed the plans for appropriateness and completeness. Payment for all work necessary for developing, submitting, and finalizing the Demolition Plans will be considered incidental to the respective removal pay items.
11. All new structural steel, excluding the fender system, shall be field painted with a minimum 10mil DFT of a Zinc Rich Paint and compatible topcoat sealer. Unless noted otherwise, the finish topcoat color of all steel shall be green and match the following Federal Standard 595C, light green, color number: 14272. This work shall conform to section 506 of the MaineDOT Standard Specification and shall be paid for under Item 506.1775, Field Paint New and Existing Steel with Zinc Rich Paint. The Contractor shall provide a sample of the coating for field verification of existing bridge color match.
12. The Contractor shall plan and conduct work so that upon completion of the project there is no drop-off from the edge of the shoulder pavement.
13. Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
14. In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.



Route 27
Approach Typical Section
Sta. 5+80.00 to 6+40.00
Sta. 10+16.50 to 10+76.50

NOTES:

1. The proposed geometric layout shifts 1'-9" to the right from start of transition near Sta. 5+80.00 to start of bridge deck near Sta. 6+40.00. This proposed geometric layout shifts 1'-9" back to the left from end of bridge deck near Sta. 10+16.50 to end of approach near Sta. 10+76.50.
2. Cross slope shall transition from existing cross slopes at approach ends to -1.0% at bridge deck.
3. The pavement and subbase depths as shown on the plans are intended to be nominal.
4. See Sheet 35 for sidewalk details.
5. See Deck Over Backwall Detail on Sheet 23 for aggregate subbase transition.
6. Stationing is approximate.
7. The proposed profile shall match existing elevations at the start of each approach, and match proposed elevations of the top of bridge deck at the end of each approach. The Contractor shall lay out the profile and it will be accepted by the Resident.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2309401

WIN
21751.01

BRIDGE PLANS

BRIDGE NO. 2789

STATE OF MAINE ★ ROBERT S. BLUNT ★ 11158 ★ REGISTERED PROFESSIONAL ENGINEER

SIGNATURE	11158	
P.E. NUMBER		
August 19, 2022		
DATE		

PROJ. MANAGER	J. STETSON, PE	
DESIGN-DETAILED	BGP	8/19/22
CHECKED-REVIEWED	CTA	8/19/22
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SOUTHPORT BRIDGE ROUTE 27
OVER TOWNSEND GUT
SOUTHPORT & BOOTHBAY HARBOR ME LINCOLN COUNTY

ESTIMATED QUANTITIES & GENERAL NOTES

SHEET NUMBER
2
OF 48

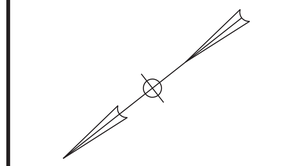
Filename: ...\BRIDGE\MSTA\045_Traffic_02.dgn Division: BRIDGE Username: Date:8/19/2022

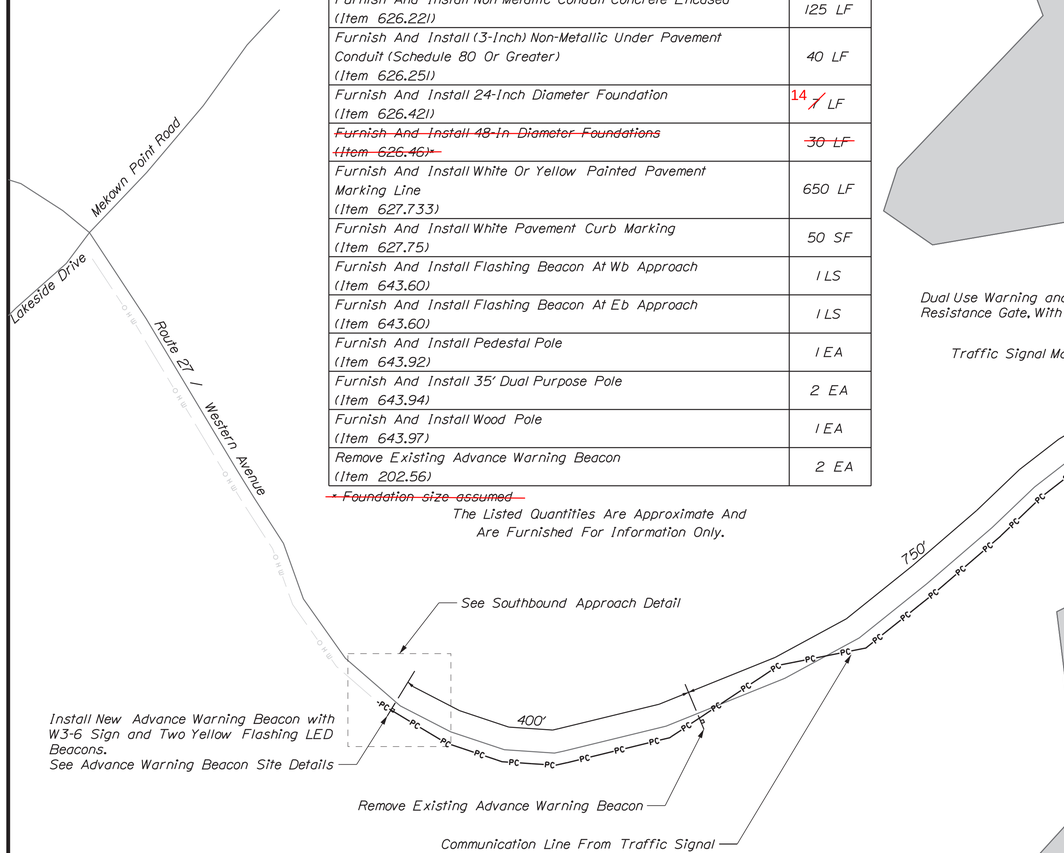
LIST OF WORK ITEMS

EQUIPMENT AND WORK ITEMS	QUANTITY
Furnish And Install Movable Bridge Hybrid Warning And Resistance Gate (Item 527.90)	2 LS
Furnish And Install Precast Concrete Junction Box (Item 626.11)	2 EA
Furnish And Install (3-Inch) Non-Metallic Conduit (Item 626.22)	450 LF
Furnish And Install Non-Metallic Conduit Concrete Encased (Item 626.221)	125 LF
Furnish And Install (3-Inch) Non-Metallic Under Pavement Conduit (Schedule 80 Or Greater) (Item 626.251)	40 LF
Furnish And Install 24-Inch Diameter Foundation (Item 626.421)	14 ~~7~~ LF
~~Furnish And Install 48-In Diameter Foundations (Item 626.46)*~~	~~30 LF~~
Furnish And Install White Or Yellow Painted Pavement Marking Line (Item 627.733)	650 LF
Furnish And Install White Pavement Curb Marking (Item 627.75)	50 SF
Furnish And Install Flashing Beacon At Wb Approach (Item 643.60)	1 LS
Furnish And Install Flashing Beacon At Eb Approach (Item 643.60)	1 LS
Furnish And Install Pedestal Pole (Item 643.92)	1 EA
Furnish And Install 35' Dual Purpose Pole (Item 643.94)	2 EA
Furnish And Install Wood Pole (Item 643.97)	1 EA
Remove Existing Advance Warning Beacon (Item 202.56)	2 EA

~~* Foundation size assumed~~

The Listed Quantities Are Approximate And Are Furnished For Information Only.



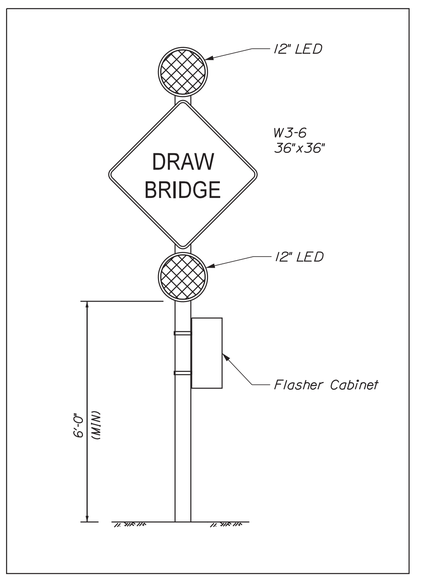


PLAN

100 0 100 200

Scale of Feet

ADVANCE WARNING BEACON TYPICAL



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2309401

WIN 21751.01

BRIDGE NO. 2789

BRIDGE PLANS

STATE OF MAINE ROBERT S. BLUNT 11158 REGISTERED PROFESSIONAL ENGINEER

SIGNATURE 11158

P.E. NUMBER

August 19, 2022

DATE

PROJ. MANAGER	J. STETSON, PE
DESIGN-DETAILED	MDS
CHECKED-REVIEWED	CTA
DESIGN2-DETAILED2	
DESIGN3-DETAILED3	

	BY	DATE
REVISIONS 1	JAR	8/19/22
REVISIONS 2	RSBLUNT	8/19/22
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

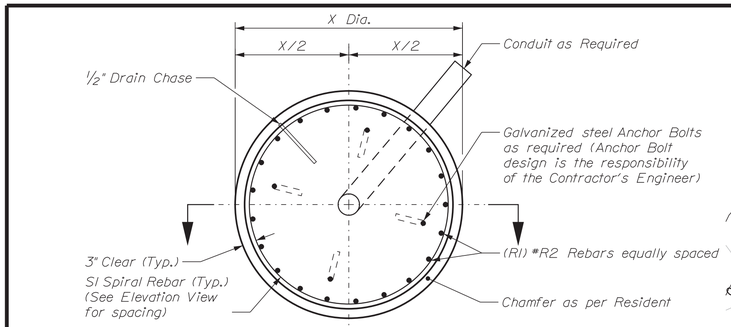
SOUTHPORT BRIDGE ROUTE 27
OVER TOWNSEND GUT
SOUTHPORT & BOOTHBAY HARBOR ME LINCOLN COUNTY

ADVANCE WARNING BEACON PLAN

SHEET NUMBER

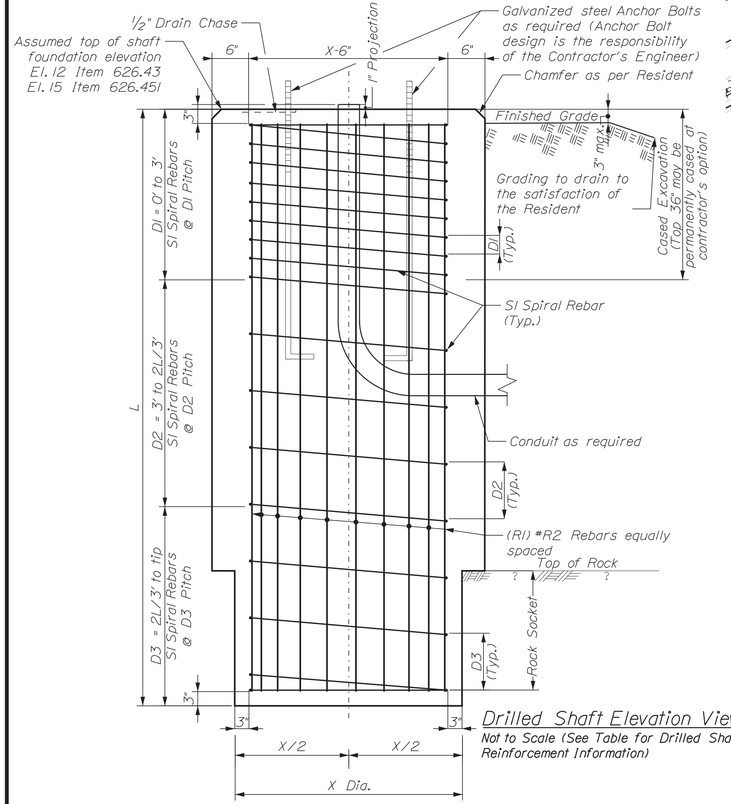
45

OF 48



Drilled Shaft Plan View

Not to Scale (See Table for Drilled Shaft & Reinforcement Information)

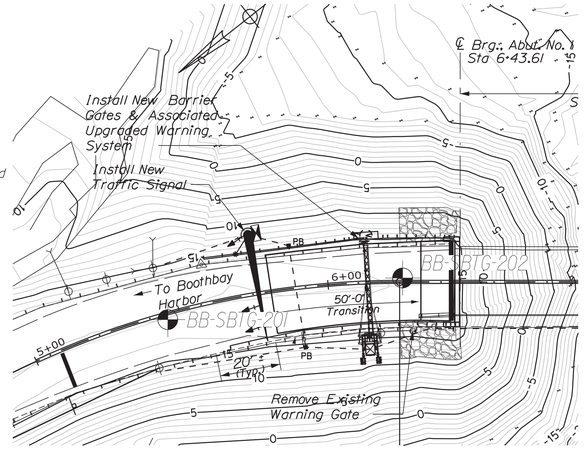


Drilled Shaft Elevation View

Not to Scale (See Table for Drilled Shaft & Reinforcement Information)

CRASH BARRIER/MAST ARM

North of Abutment 1



PLAN

25 0 25 50

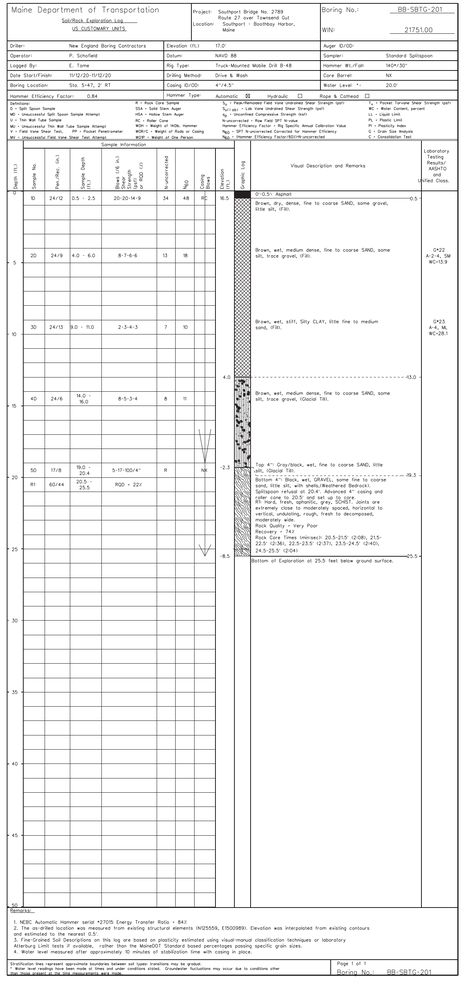
Scale of Feet

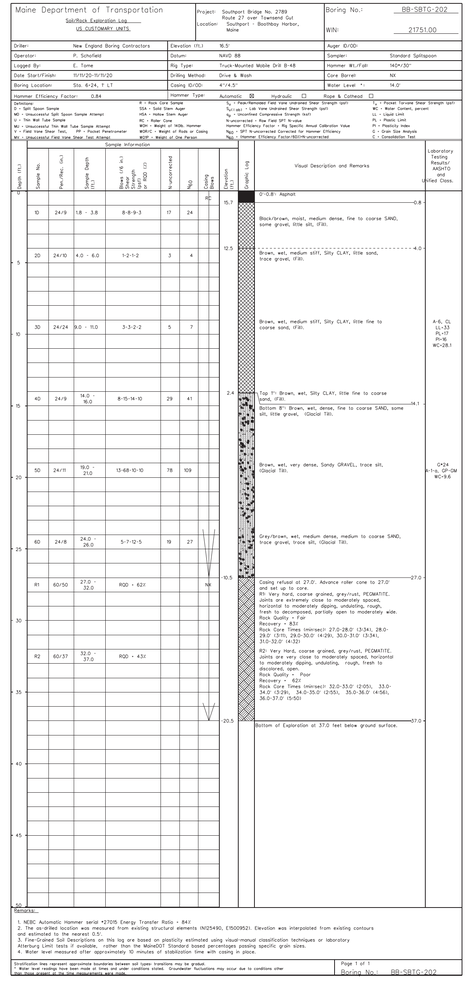
BORING LOCATION PLAN LEGEND

BB-SBTG-202 — Approximate location and designation of 200-Series cased wash borings by GZA

NOTES:

1. All reinforcing steel is to be grade 60 and conform to MaineDOT Standard Specification requirements along with any project specific Supplementals or Special Provisions.
2. All rebar shall have 3" cover unless otherwise noted.
3. Should there be a discrepancy between these Details and actual observed field conditions report it to the Resident immediately.
4. Do not proceed with dependent work until any such discrepancy is resolved to the satisfaction of the Resident.
5. Concrete to be Class LP with f'c = 5,000 PSI.
6. Item 626.451 (Crash Barrier) provides alternate designs including a smaller diameter rock-socketed shaft, or a larger diameter shaft without a rock socket, in accordance with the dimensions provided in the summary table.





Foundation Type	Item No.	Drilled Shaft Dimenstions				Reinforcing Steel			Spiral Bar Spacing		
		X_{ob}	X_{rs}	L_{ob}	L_{rs}	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
		Diameter Overburden (feet)	Diameter Rock Socket (feet)	Length Overburden (feet)	Length Rock Socket (feet)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
Mast Arm	~~626.43~~	3	N/A	14	0	12	#9	#5	4	8	12
Crash Barrier	626.451	3.5	3	Estimate 22	5	15	#9	#5	4	8	10
		5	N/A	22	0	28	#9	#5	4	8	12

626.44

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2175(100)

WIN
21751.00

STATE OF MAINE — Andrew Blaisdell — 10957 — REGISTERED PROFESSIONAL ENGINEER — 8/19/2022

P.E. NUMBER

SIGNATURE

DATE

	BY	DATE
PROJ. MANAGER	J. STEFSON	
DESIGN-DETAILED	N.WILLIAMS	AUG 2022
CHECKED-REVIEWED	A.BLASDELL	AUG 2022
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

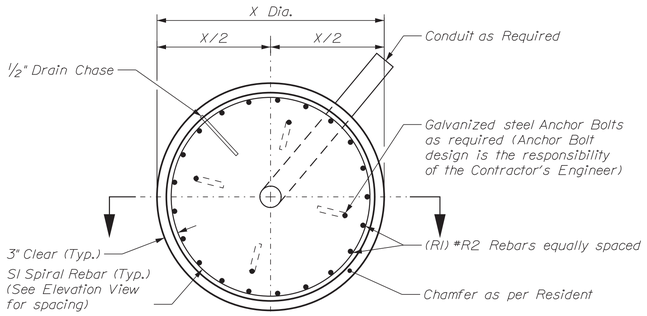
SOUTHPORT BRIDGE ROUTE 27
OVER TOWNSEND GUT
SOUTHPORT & BOOTHBAY HARBOR ME LINCOLN COUNTY

NORTH CRASH BARRIER AND
MAST ARM FOUNDATION DESIGN

PREPARED BY: GZA

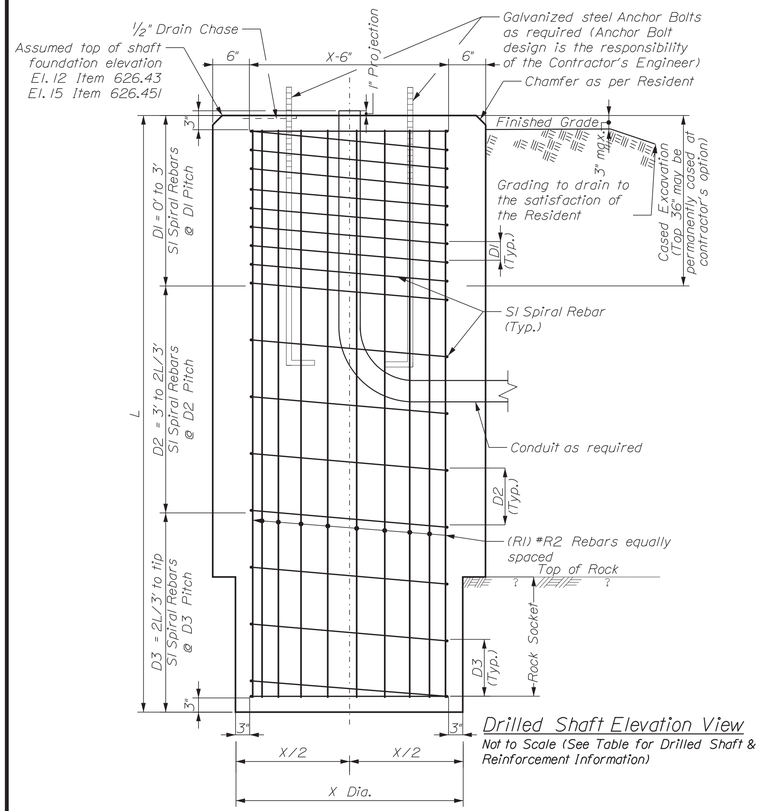
SHEET NUMBER
47
OF 48

Filename: ...\0XX_CB&MA_North_AU.dgn Division: HIGHWAY Username: common Date:8/19/2022



Drilled Shaft Plan View

Not to Scale (See Table for Drilled Shaft & Reinforcement Information)

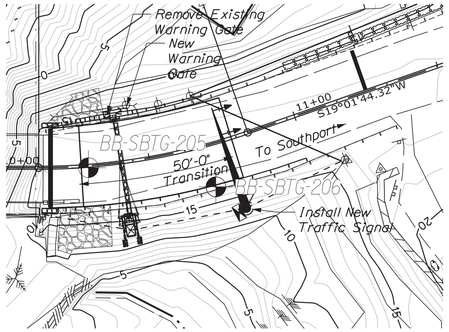


Drilled Shaft Elevation View

Not to Scale (See Table for Drilled Shaft & Reinforcement Information)

CRASH BARRIER/MAST ARM

South of Abutment 2



BORING LOCATION PLAN LEGEND

BB-SBTG-206 — *Approximate location and designation of 200-Series cased wash borings by GZA*

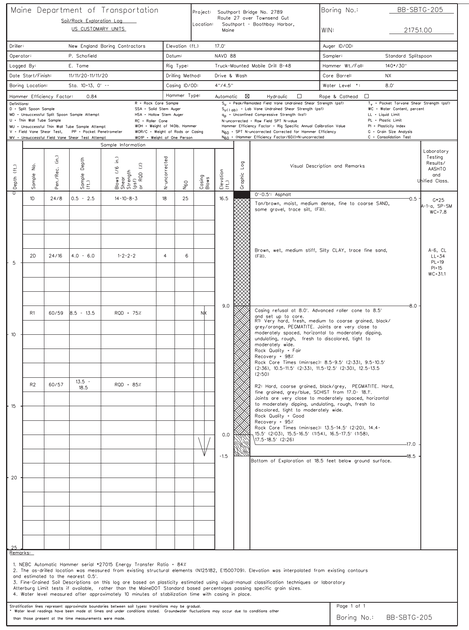
PLAN

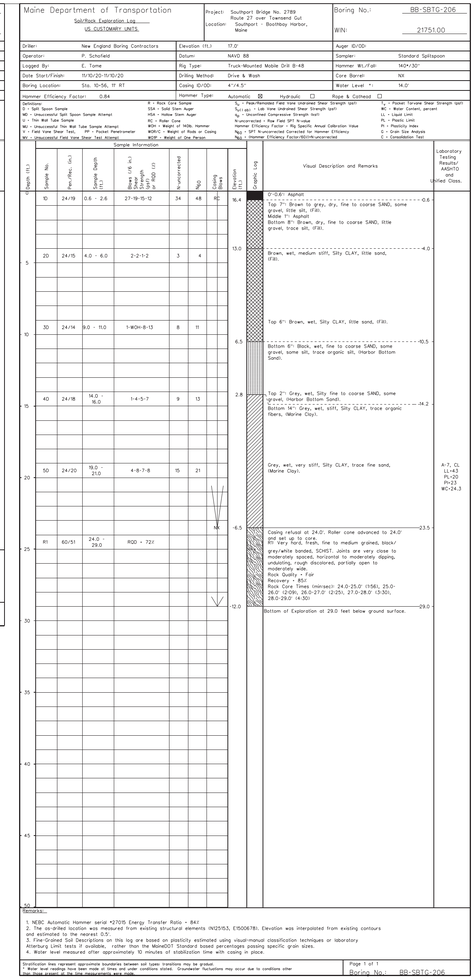
25 0 25 50

Scale of Feet

NOTES:

1. All reinforcing steel is to be grade 60 and conform to MaineDOT Standard Specification requirements along with any project specific Supplementals or Special Provisions.
2. All rebar shall have 3" cover unless otherwise noted.
3. Should there be a discrepancy between these Details and actual observed field conditions report it to the Resident immediately.
4. Do not proceed with dependent work until any such discrepancy is resolved to the satisfaction of the Resident.
5. Concrete to be Class LP with f'c = 5,000 PSI.
6. Item 626.43 (Mast Arm) shall be 14' long, unless competent rock is encountered at 11' below top of shaft or less, in which case a rock socket shall be provided in accordance with the dimensions provided in the summary table.





Foundation Type	Item No.	Drilled Shaft Dimenstions				Reinforcing Steel			Spiral Bar Spacing		
		X_{ob}	X_{rs}	L_{ob}	L_{rs}	R1	R2	S1	D1 (in)	D2 (in)	D3 (in)
		Diameter Overburden (feet)	Diameter Rock Socket (feet)	Length Overburden (feet)	Length Rock Socket (feet)	Longitudinal Rebars Quantity	Longitudinal Rebars Size	Spiral Rebars Size	0 to 3 ft	3 ft to 2L/3 ft	2L/3 ft to tip
Mast Arm	~~626.43~~	3	N/A	14	0	12	#9	#5	4	8	12
		3	2.5	Less than 11	3	12	#9	#5	4	8	12
Crash Barrier	626.451	3.5	3	Varies	5	15	#9	#5	4	8	10

626.44

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2175(100)

WIN
21751.00

STATE OF MAINE
Andrew Blaisdell
10957
REGISTERED PROFESSIONAL ENGINEER
8/19/2022

P.E. NUMBER

SIGNATURE

DATE

PROJ. MANAGER	J. SETSON
DESIGN-DETAILED	N. WILLIAMS
CHECKED-REVIEWED	A.BLAISDELL
DESIGN2-DETAILED2	C.SNOW
DESIGN3-DETAILED3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BY	DATE
N.WILLIAMS	AUG 2022
C.SNOW	AUG 2022

SOUTHPORT BRIDGE ROUTE 27
OVER TOWNSEND GUT
SOUTHPORT & BOOTHBAY HARBOR ME LINCOLN COUNTY

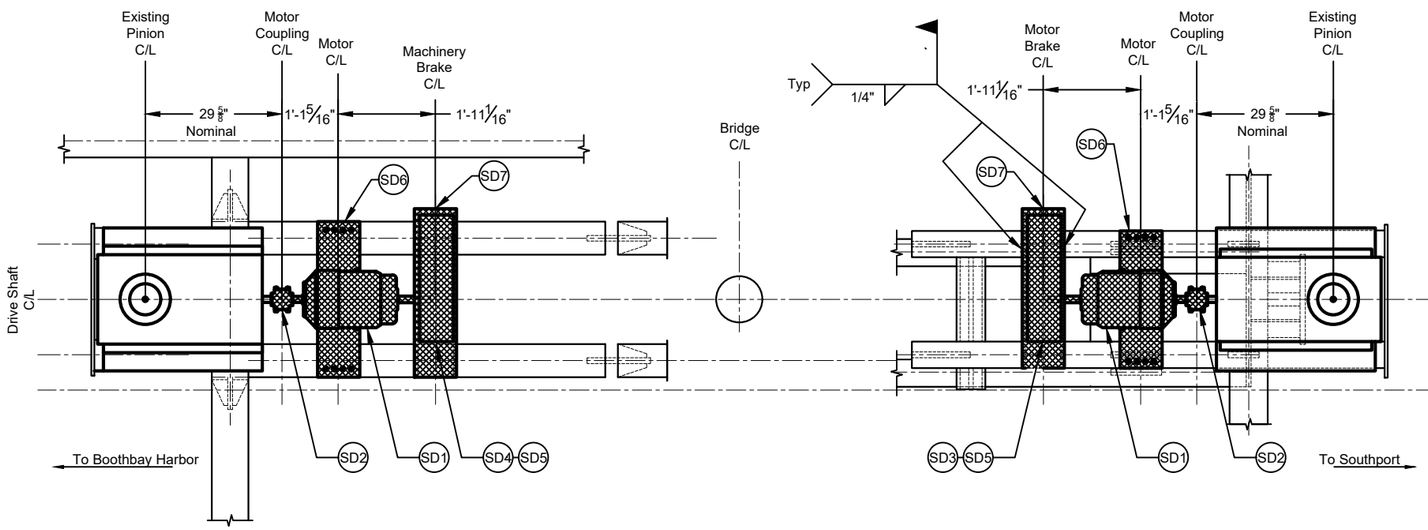
SOUTH CRASH BARRIER AND
MAST ARM FOUNDATION DESIGN

PREPARED BY:

GZA

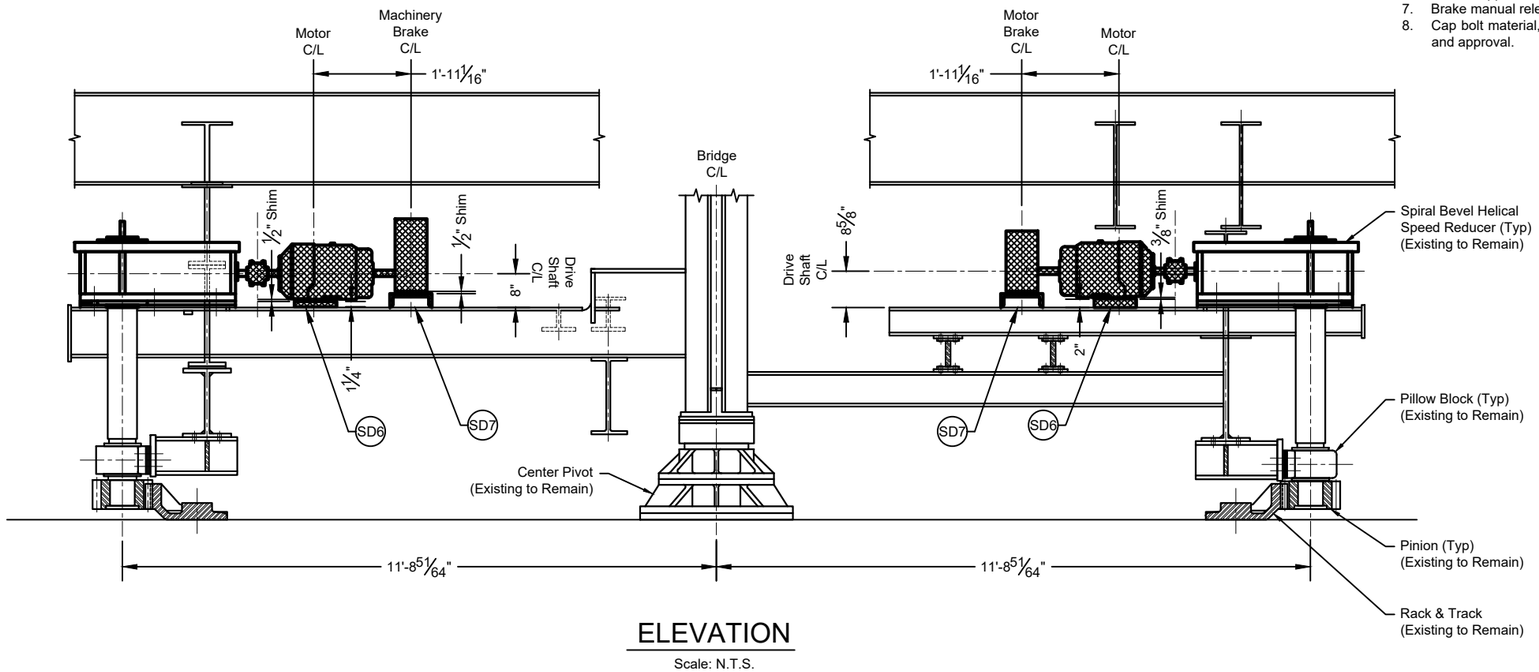
SHEET NUMBER
48
OF 48

Filename: ...\OXX_CB&MA_South_AU.dgn Division: HIGHWAY Username: common Date:8/19/2022



PLAN

Scale: N.T.S.



ELEVATION

Scale: N.T.S.

= To Be Installed

SPAN DRIVE MACHINERY SCHEDULE

MARK NO.	QTY REQ'D	COMPONENT	DESCRIPTIONS (SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)	REFERENCE SHEETS
SD1	2	Span Drive Motor	7.5 hp @ 900 rpm electric motor, 256T frame, NEMA D design. Rear motor shaft to extend through 5" brakewheel to provide hex shaped lug for manual operation.	M7, M8
SD2	2	Motor Coupling	Double engsagement grid coupling with horizontally split cover. Minimum rating 3,850 lb-in.	M7, M8
SD3	1	Motor Brake	Thrustor operated, spring set drum brake. 5" brakewheel. Set torque to 30 ft-lb. 0.75 to 1.5 second time delay on set.	M7, M8
SD4	1	Machinery Brake	Thrustor operated, spring set drum brake. 5" brakewheel. Set torque to 40 ft-lb. 2.25 to 3 second time delay on set.	M7, M8
SD5	2	Brake Cover	NEMA 3R stainless steel removable enclosure with vertical split.	M7, M8
SD6	2	Motor Support	Steel Plate: ASTM A709 Grade 50. (Boothbay = 1-14" Southport = 2")	M7, M8
SD7	2	Brake Support	Steel Channel: MC13x50 ASTM A36 (cut flanges per Sheet M8)	M7, M8
RP	8	Cap Bolt	Per manufacturer recommendation (See Note 8)	M7, M16

R1

SHEET NOTES

1. See Sheet M2 for General Notes applicable to work.
2. Distance from centerline of existing pinion to centerline of Motor Coupling SD2 based on available existing drawings. Contractor to confirm dimensions and provide adjustments to locations of components and their supports to suit.
3. Provide nominal shims as called for under Items SD1, SD3 and SD4.
4. All fasteners, hardware shims, etc. which are not explicitly identified in the schedule but are required to produce completed assemblies and provide a functional system are incidental to this work and shall be provided as past of this work at no additional cost.
5. Motor rear shaft extension is special order. See Sheet M8 for details.
6. Brake Supports SD7 to have flanges cut. See Sheet M8 for details.
7. Brake manual release handles shall be located on the side of the brake away from the span drive motor.
8. Cap bolt material, size and tolerances to be per bearing manufacturer recommendation. Submit to Department for review and approval.

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

STP-2175(100)

WIN 21751.00

BRIDGE PLANS

BRIDGE NO. 2789

STATE OF MAINE TIMOTHY C. GRESHAM 16735 REGISTERED PROFESSIONAL ENGINEER

	DESIGNED	DRAWN	CHECKED	PROJ. MANAGER
	J. SUPLINAS	TCG	J. STETSON, PE	J. STETSON, PE
DESIGN-DETAILED	07-04-22	10/24/22		
CHECKED-REVIEWED				
DESIGN-DETAILED2				
DESIGN-DETAILED3				
REVISIONS 1	Revised quantity			
REVISIONS 2				
REVISIONS 3				
FEAD CHANGES				

DESIGNED-DETAILED2 | P.E. NUMBER 16735 | DATE 08-19-2022

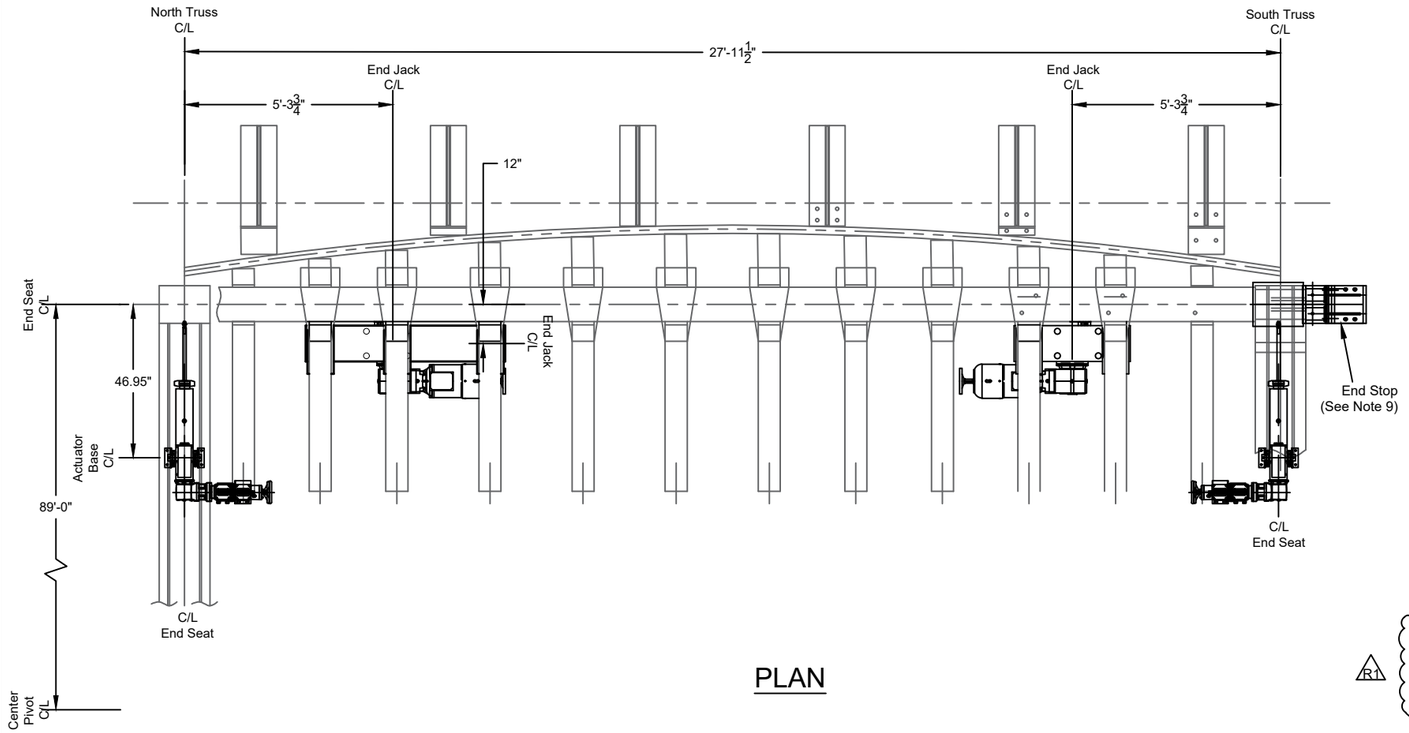
SOUTHPORT BRIDGE ROUTE 27
OVER TOWNSEND GUT
SOUTHPORT & BOOTHBAY HARBOR ME LINCOLN COUNTY

NEW SPAN DRIVE
MACHINERY ARRANGEMENT

SHEET NUMBER

M7

M7 OF M24



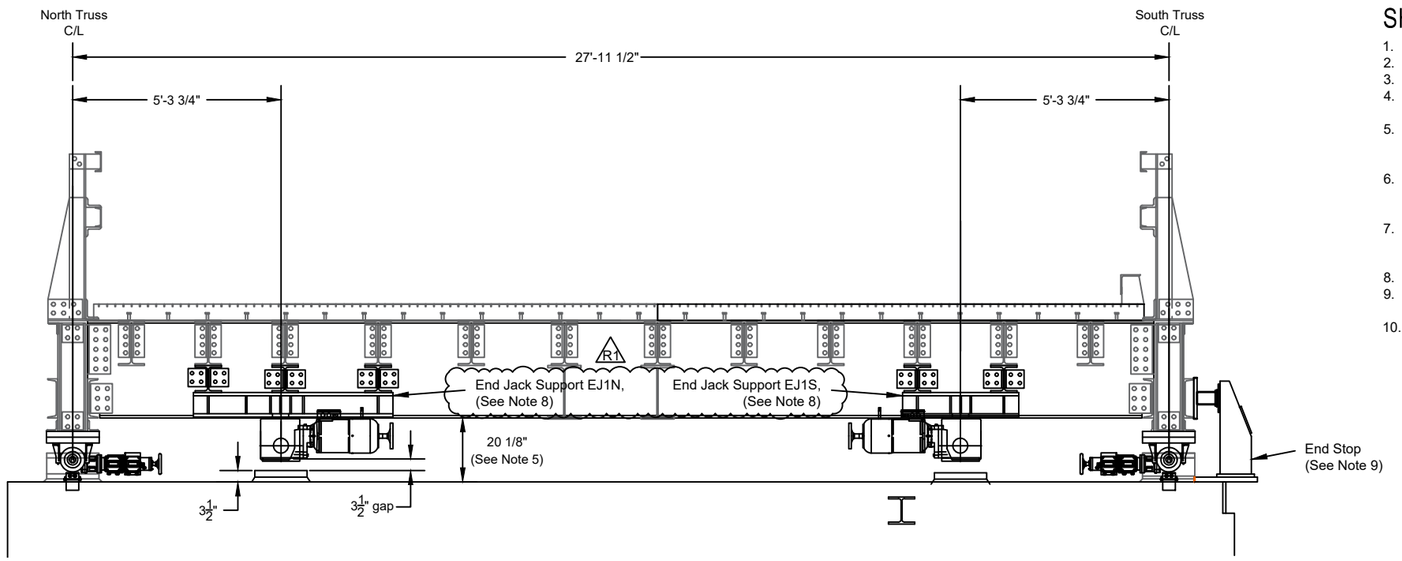
PLAN

END SEAT MACHINERY SCHEDULE

MARK NO.	QTY. REQ'D	COMPONENT	DESCRIPTION (SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)	REFERENCE SHEETS
ES1	4	End Seat Support	Steel Weldment. Material: ASTM A709 Grade 50 U.O.N. Top Plate. Material: ASTM A276 Type 316 Stainless Steel.	M10, M11, M11A
ES2	4	End Seat Actuator	Linear Actuator: 2,200 lb., Thrust Force, 14" Stroke.	M10, M11
ES3	4	End Seat Shoe	Bronze. Material: ASTM B22 Alloy C91100.	M10, M11, M11A
ES4	4	End Seat Shoe Guide	Steel Weldment. Material: ASTM A276 Type 316 Stainless Steel.	M10, M11, M11A
ES5	4	Actuator Cover Plate	1/2" Steel Plate. Material: ASTM A709 Grade 50.	M10, M11, M12
ES6	4	Actuator Mounting Plate	2" Steel Plate. Material: ASTM A709 Grade 50.	M10, M11, M12

END JACK MACHINERY SCHEDULE

MARK NO.	QTY. REQ'D	COMPONENT	DESCRIPTION (SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION)	REFERENCE SHEETS
EJ1N	2	End Jack Support	Steel Weldment. Material: ASTM A709 Grade 50.	M10, M13
EJ1S	2	End Jack Support	Steel Weldment. Material: ASTM A709 Grade 50.	M10, M13
EJ2	4	End Jack	35 Ton Screw Jack with 6" Stroke.	M10
EJ3	4	End Jack Shoe	1" Steel Plate. Material: ASTM A709 Grade 50.	M10, M13
EJ4	4	End Jack Strike Plate	Bronze, Material: ASTM B22 Alloy C93700.	M10, M13



ELEVATION

SHEET NOTES

1. See Sheet M2 for general notes applicable to work.
2. Span shall be properly balanced prior to final alignment and shimming of End Jacks EJ2 and End Jack Shoes EJ3.
3. Adjust shims at each End Jack Shoe EJ3 location to achieve the reactions provided in the Special Provisions.
4. Adjust shims at each End Jack EJ2 location to provide indicated gap between Strike Plate EJ4 and Shoe EJ3 with the span supported on the End Seats.
5. Elevation View shows position of end floor beam relative to top of pier with span in supported position. Free position of span (End Jacks and End Seats retracted) will result in the end floor beam being approximately 1/2" lower than indicated. See Note 8 on Sheet M12 for additional information.
6. The distance from the underside of the End Jack Shoe EJ3 at its fully retracted position to the contact surface of the End Jack Strike Plate EJ4 shall not vary by more than 1/16" When the swing span is closed and fully seated on its End Seats.
7. Coordinate mounting of limit switches provided under electrical work to indicate limits of travel for End Jacks EJ2 and End Seat Actuators ES2. Limit switch mounting shall be durable, weatherproof and located so as not to obstruct span travel.
8. See Structural Drawings Sheet 32 for End Jack Support EJ1N and EJ1S details.
9. See Structural Drawings Sheet 25 for End Stop Details. All work for procurement, fabrication, installation, hardware, shims and other incidentals for the End Stops shall be paid under Pay Item 860.1862 Fully Closed Stops.
10. The Contractor is alerted to the need to order End Seat Actuator ES2 and End Jack EJ2 with specific orientations for their intended locations. This includes left-hand and right-hand configurations. It also includes specifically locating all accessory items such as electrical conduit and junction boxes so that they are accessible for maintenance while still providing a minimum of 2" clearance with all fixed structural, electrical and mechanical components during operation of the swing span. The weatherproof accessory housing on the End Seat Actuator requires particular attention during ordering, fabrication and installation to achieve proper clearance.

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DEPARTMENT OF TRANSPORTATION

STP-2175(100)

WIN 21751.00

BRIDGE PLANS

BRIDGE NO. 2789

STATE OF MAINE TIMOTHY C. GRESHAM 16735 PROFESSIONAL ENGINEER

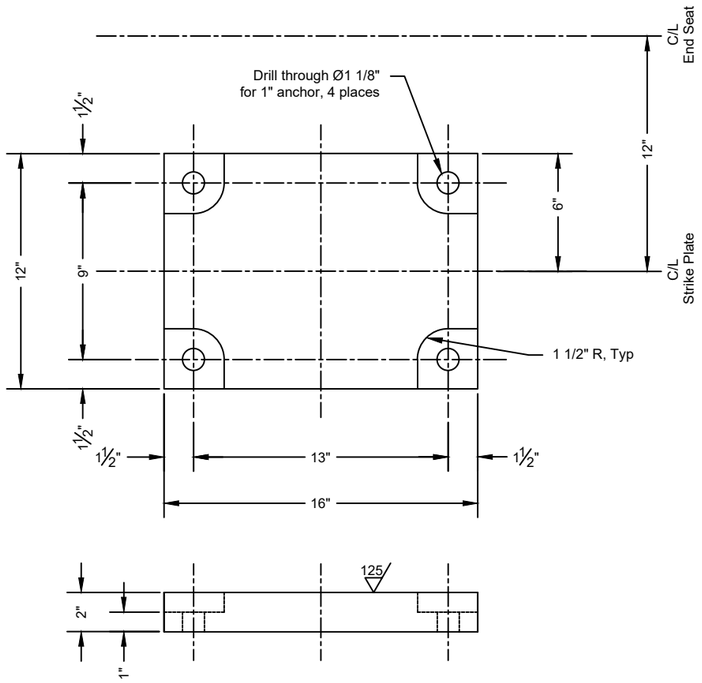
	BY	DATE
PROJ. MANAGER J. STETSON, PE		
DESIGN-DETAILED	J.M. RAMSO	06-29-22
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3	Callout EJ1N & EJ1S TCG	10/24/22
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FEAD CHANGES		

DESIGNED-DETAILED2 | 16735 P.E. NUMBER | 08-19-2022 DATE

SOUTHPORT BRIDGE ROUTE 27
OVER TOWNSEND GUT
SOUTHPORT & BOOTHBAY HARBOR ME LINCOLN COUNTY

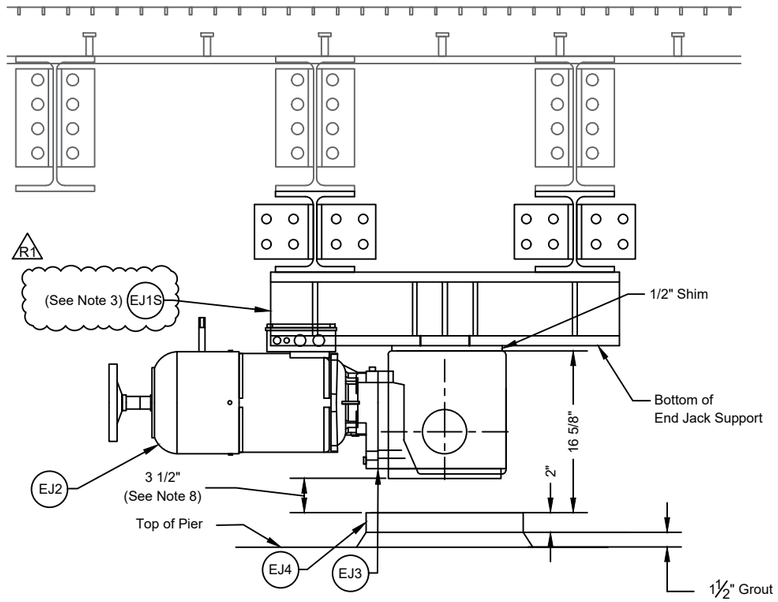
NEW END SEAT AND END JACK
MACHINERY SCHEDULE AND ARRANGEMENT

SHEET NUMBER
M11
M11 OF M24



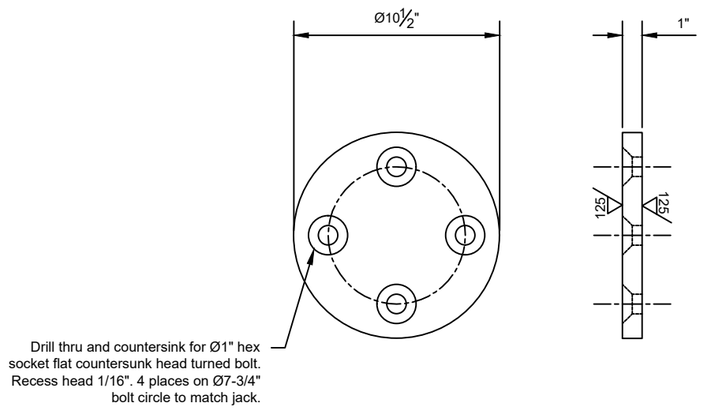
EJ4 END JACK STRIKE PLATE

Scale: 3" = 1'-0"



END JACK ELEVATION

Scale: 1-1/2" = 1'-0"



EJ3 END JACK SHOE

Scale: 3" = 1'-0"

SHEET NOTES

1. See Sheet M2 for General Notes applicable to work.
2. See End Jack Assembly Schedule on Sheet M11 for materials and quantities.
3. End Jack Support EJ1S shown is for the end jacks adjacent to the south truss. The End Jack Supports EJ1N for the end jacks adjacent to the north truss are similar, but longer in length and span 3 stringers. See Structural sheet titled "Jacking Support Details" for End Jack Support EJ1 details.
4. All dimensions are finished dimensions unless otherwise noted. Add stock for fabrication as necessary to ensure complete cleanup of machined surfaces.
5. Spot face all bolt holes as necessary to ensure full bearing of bolt head and nut on surface.
6. Span shall be properly balanced prior to final alignment and shimming of End Jack EJ2. The span shall also be properly balanced prior to final grouting of End Jack Strike Plate EJ4.
7. Stress relieve weldment prior to machining.
8. Adjust shims at each End Jack EJ2 location to provide indicated gap between Strike Plate EJ4 and Shoe EJ3 with the span supported on the End Seats. Set stroke of End Jacks for additional 1/4" to 5/16" for pulling and driving of End Seat Shoes.
9. End Jack Elevation view shows position of End Jack relative to top of pier with span in supported position. Free position of span (End Jacks and End Seats retracted) will result in the end floor beam being approximately 1/2" lower than indicated.
10. Coordinate mounting of limit switches provided under electrical work to indicate limits of travel for End Jack Shoes EJ3. Limit switch mounting shall be durable, weatherproof and located so as not to obstruct span travel.
11. Provide limit switch to prevent power to End Jack EJ2 when handwheel is installed and ready for use in providing manual operation.

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BRIDGE NO. 2789

WIN
21751.00

BRIDGE PLANS

STATE OF MAINE TIMOTHY C. GRESHAM 16735 REGISTERED PROFESSIONAL ENGINEER

	BY	DATE
PROJ. MANAGER J. STETSON, PE		
DESIGN-DETAILED	J. SALVALEON	05-26-22
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1	Revised Note 3	TCG 10/24/22
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FEAD CHANGES		

DESIGNED-DETAILED2 | P.E. NUMBER 16735 | DATE 08-19-2022

SOUTHPORT BRIDGE ROUTE 27
OVER TOWNSEND GUT
SOUTHPORT & BOOTHBAY HARBOR ME LINCOLN COUNTY

NEW END JACK
MACHINERY DETAILS

SHEET NUMBER

M15

M15 OF M24