



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

Janet T. Mills
GOVERNOR

Bruce A. Van Note
COMMISSIONER

February 19, 2021
Subject: International Bridge
Rehabilitation
State WIN: 021736.00.00
Location: **Madawaska &
Edmundston, Canada
Amendment No. 7**

Dear Sir/Ms.:

Please make the following changes to the Bid Documents:

In the Bid Book:

In SPECIAL PROVISION – SECTION 108 – PAYMENT – (Steel Cost Adjustment), from Amendment No. 3, under “Basis of Payment”, first paragraph, **CHANGE** “five percent” to read “**one percent**”. Make this change in pen and ink.

In the Plan Set:

REMOVE from Amendment No. 3, SHEET NUMBER 149 OF 160, BRIDGE LIGHTING PLAN-2, dated 1/28/2021, and **REPLACE** with the attached, revised SHEET NUMBER 149 OF 160, BRIDGE LIGHTING PLAN-2, dated 2/18/2021.

REMOVE from Amendment No. 3, SHEET NUMBER 150 OF 160, BRIDGE LIGHTING PLAN-3, dated 1/28/2021, and **REPLACE** with the attached, revised SHEET NUMBER 150 OF 160, BRIDGE LIGHTING PLAN-3, dated 2/18/2021.

The following questions have been received:

Question: An unnumbered question in Addendum #4 states: Note 2. under section 105.03 of the project's special provisions states that "Any trestle support elements positioned beneath elevation 455.00-ft shall be aligned with the flow of the river." Because trestle components located at or above elevation 450.00-ft shall be removed seasonally, would it be possible to waive the alignment requirement outlined under note 2.) of this section? Requiring that the trestle components below elevation 455.00-ft be aligned with the river flow will add significant costs to the project. The Response reads: In order to meet all conditions of the Maine and New Brunswick environmental permits and specifically to meet the requirements of no effect to International boundary waters, the trestles shall be constructed with the piles oriented with the river flow. Please reconsider this response

because as stated in the question, this requirement being imposed by MDOT will add significant money and additional time to an already difficult schedule due to MDOT delays in letting the project while holding the date for opening the bridge to traffic. Also the response eludes to the fact that constructing the trestle with the piles oriented with the river flow will meet the requirements of no effect to International boundary waters. Any object placed in the water will have an effect on International boundary waters, and building the trestle at the required skew will increase the number of pile bents therefore increasing the amount of disturbance.

Response: Amend Special Provision Section 105, General Scope of Work (Temporary Work Trestles) as follows:

Remove note 2. under section 105.03.

Revise note 3. Under section 105.03 as follows: “The minimum marine navigational opening shall be 22 feet measured perpendicular to flow. The minimum marine navigational opening shall be maintained at all times to allow Vessels safe access through the entire Project site, within in the vicinity of Span No. 5 of the new bridge and Span No. 3 of the existing bridge as shown on the plans. Additional markers or signage to designate the navigation opening will be required as directed by the Resident - and as specified in the project permits. Provisions shall be available to assist Vessels as necessary.”

Question: The skew of the crane trestle presents significant stability concerns due to crane loads. Skewed bridges are prone to challenging load distribution between structural elements and behaviors which are not compatible with the crane structure. The chassis of the crane is designed to be very stiff to be able to carry the overturning load in any direction as it rotates in plan while performing a lift. The beams of a work bridge supporting a crane are typically not as stiff as the chassis of the crane and will deflect differently depending on where the crane is located in a span. If the bridge is square to the piers, then both beams will react similarly and the crane will sit nicely on the bridge. If the bridge is skewed to the piers, then the tracks will fall at different locations along the length of the girders supporting the tracks. This will result in differential deflections and slopes of the girders between one track and the other. This will compound in two issues for the crane, one being additional stresses in the chassis the designers may not have considered, and two being that the crane will behave as if the tracks are high centered on opposing diagonals, leading to rocking of the crane when swinging over the “high corner”. The rocking of the crane could produce a significant movement of the tip of the crane once it over centers, creating side load on the crane boom plus uncontrolled movement of the load. Both of these conditions are a significant hazard. Side loading the crane boom can cause structural failure of the crane and uncontrolled movement potentially places workers in a very dangerous position. The ability to precisely control the movement of the load when placing steel girders for the alignment of splices requires millimeter precision. A sudden shift of the load 100mm could have serious consequences to worker safety. The higher the skew angle between the girder and the pier, the worse this effect will be. With the skew angle for the Madawaska bridge being near 45 degrees!, the effects could be quite significant. Can the pile and bents for the erection trestle be installed perpendicular to the center-line of the new bridge?

Response: Amend Special Provision Section 105, General Scope of Work (Temporary Work Trestles) as follows:

Remove note 2. under section 105.03.

Revise note 3. Under section 105.03 as follows: “The minimum marine navigational opening shall be 22 feet measured perpendicular to flow. The minimum marine navigational opening shall be maintained at all times to allow Vessels safe access through the entire Project site, within in the vicinity of Span No. 5 of the new bridge and Span No. 3 of the existing bridge as shown on the plans. Additional markers or signage to designate the navigation opening will be required as directed by the Resident - and as specified in the project permits. Provisions shall be available to assist Vessels as necessary.”

Question: Drilled shafts specifications indicate if the contractor suspects sloping rock then they are to do test borings around the installed permanent casings. We are assuming nothing will preclude the contractor from doing these sloping rock cores prior to shaft installation (and if the confirmatory core borings indicate sloping rock), please confirm.

Response: Confirmed. The Contractor may probe the bedrock surface with cased wash boring procedures and roller cone advancement prior to installation of the permanent casing, provided appropriate survey control is utilized to show evidence the probes occur along the perimeter of the permanent casings as identified in Special Provision 501, Foundation Piles (Drilled Shafts).

Question: The drilled shaft specifications also indicate the requirement for the contractor to provide a drilled shaft inspector, are there any specific qualifications required for this inspector (E.G. NETTCP Northeast Transportation Training and Cert Program). Please confirm

Response: The Contractor’s drilled shaft inspector shall have, and maintain for the duration of drilled shaft construction, a Drilled Shaft Foundation Inspector Certification from the Northeast Transportation Training and Certification Program, or an approved equivalent certification.

Question: In regards to Section 108 (Steel Cost Adjustment) - Basis of Payment: This section states that payment adjustments will not be made unless the percent difference is in excess of five percent. This inflection point still exposes the Contractor to a significant amount of risk based on the total weight of steel involved with this project. Can this inflection point be changed from five percent to one percent?

Response: See above pen and ink changes.

Question: There is no path indicated for the power to get to the Aesthetic lights from the Canada side from Junction box 4 or 7 to the north side of the new bridge, can you please provide this information.

Response: See attached, revised Plan sheets 149 and 150 of 160, Bridge Lighting Plan-2, and Bridge Lighting Plan-3, respectively. The approach conduit routing for aesthetic lighting within the Canadian Port of Entry, beyond that shown on the attached, revised Plans, is beyond the limits of this Contract. Final routing will be determined in the field and will require coordination with the Design Team who is preparing the plans for the modifications to the Canadian Port of Entry.

Question: Typically deep web steel girders have a circular structural steel member attached to the midpoint of the girder's web for use as a tie-off point for personnel performing inspection and maintenance. Should the Madawaska girders have this system installed?

Response: Permanent tie-off points are not required.

Consider these changes and information prior to submitting your bid on **February 24, 2021**.

Sincerely,



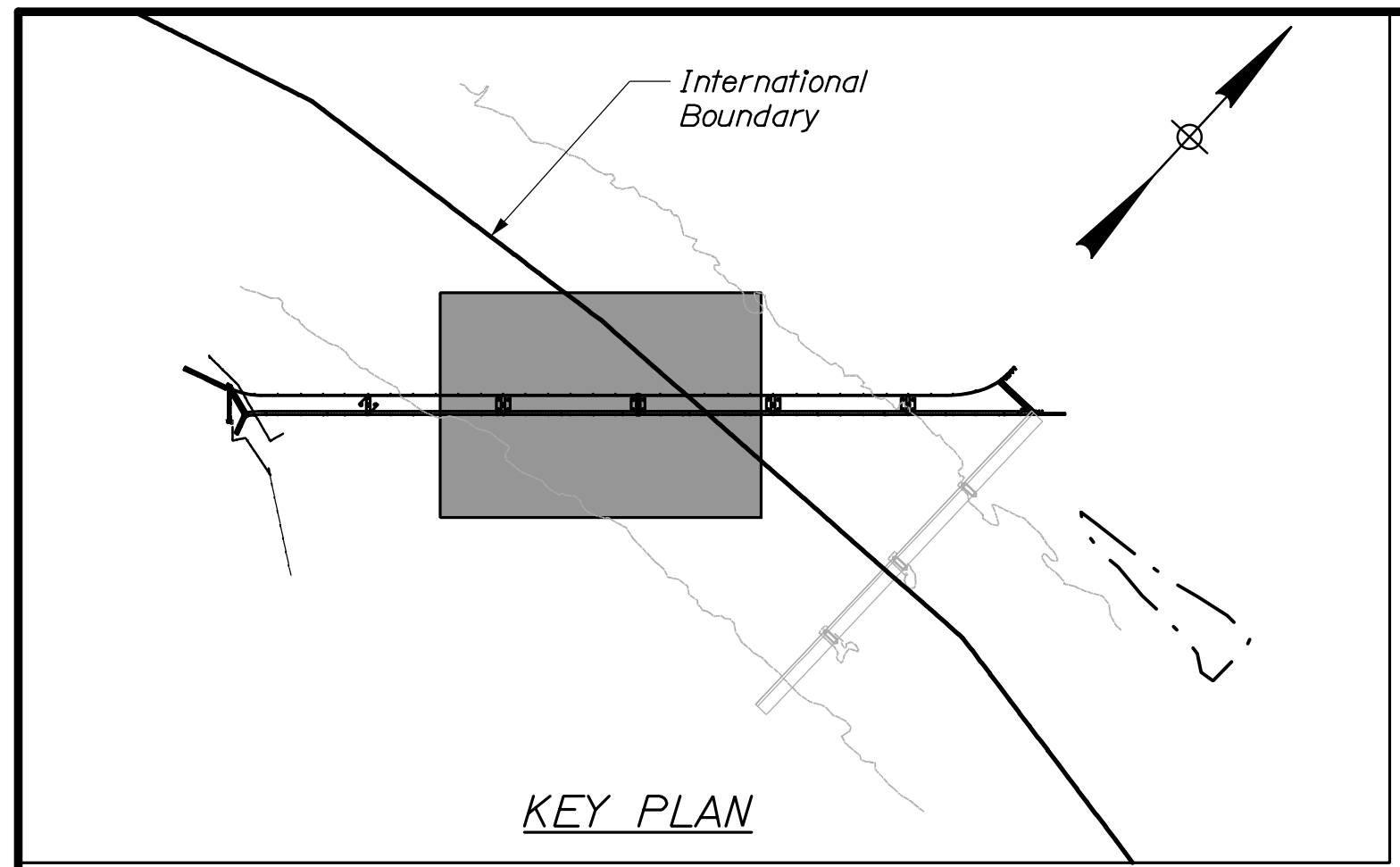
George M. A. Macdougall P.E.
Contracts & Specifications Engineer

Date: 2/18/2021

Username:

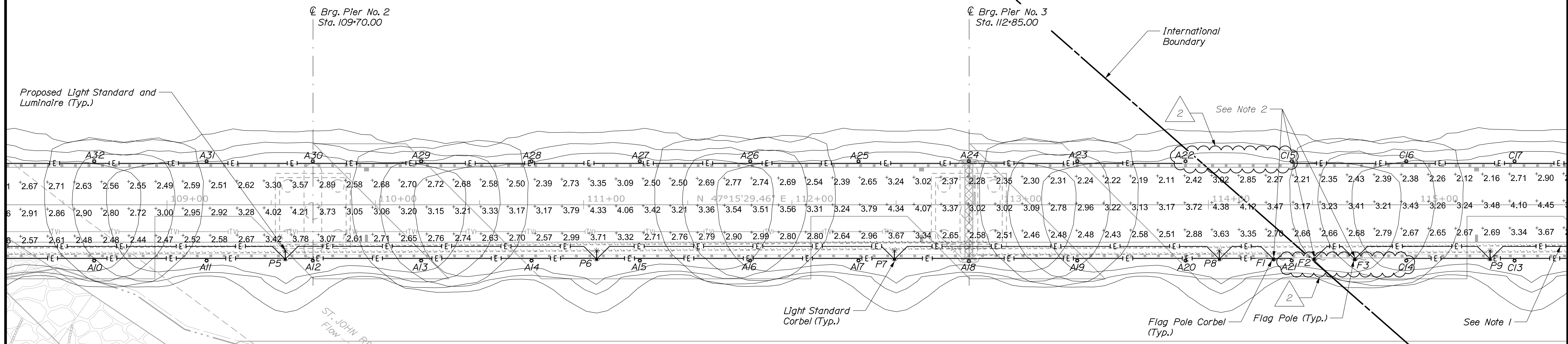
Division:

Filename: 149_02_Bridge Lighting.dgn



NOTES:

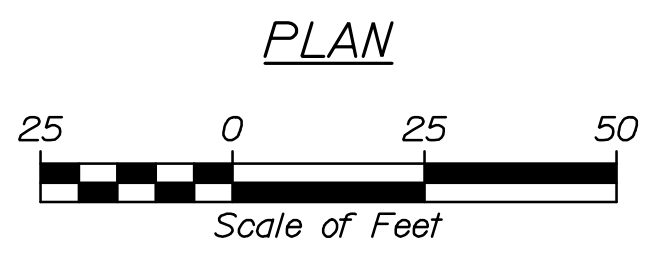
1. Poles P9 to P13 shall be powered from a Canadian POE power source (by Others).
2. Two (2) Flagpoles (F2, F3) installed East of International Boundary shall be powered from a Canadian POE power source (by Others). One (1) Flagpole (F1) installed West of International Boundary shall be powered from the proposed meter cabinet installed in Madawaska. See sheet "Lighting Details - 2".



Proposed Aesthetic Lighting Locations	
Aesthetic Lighting Luminaire Number	Approximate Station Number
A10	108+65
A11	109+19
A12	109+70
A13	110+22
A14	110+75
A15	111+27
A16	111+80
A17	112+32
A18	112+85
A19	113+37
A20	113+89
A21	114+40
A22	113+89
A23	113+37
A24	112+85
A25	112+32
A26	111+80
A27	111+27
A28	110+75
A29	110+22
A30	109+70
A31	109+19
A32	108+65

Proposed Aesthetic Lighting Locations	
Aesthetic Lighting Luminaire Number	Approximate Station Number
C13	115+47
C14	114+95
C15	114+40
C16	114+95
C17	115+47

TABLE-2



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
2173600

MAINEDOT BR. NO. 2399
NB DOT ASSET NO. E320
WIN
021736.00
BRIDGE PLANS

STATE OF MAINE
JOSHUA K. JUNG
No. 12130
LICENSED PROFESSIONAL ENGINEER

2/18/2021

DATE	BY	REVISIONS
09/20	G.S.	DESIGN DETAILED
09/20	J. Olund	CHECKED/REVIEWED
01/21	Removed	REVISIONS 1
01/21	Removed	REVISIONS 2
01/21	Removed	REVISIONS 3
01/21	Removed	REVISIONS 4

INTERNATIONAL BRIDGE
SAINT JOHN RIVER
MADAWASKA, ME
EDMUNDSTON, NB

BRIDGE LIGHTING PLAN - 2

SHEET NUMBER
149
OF 160

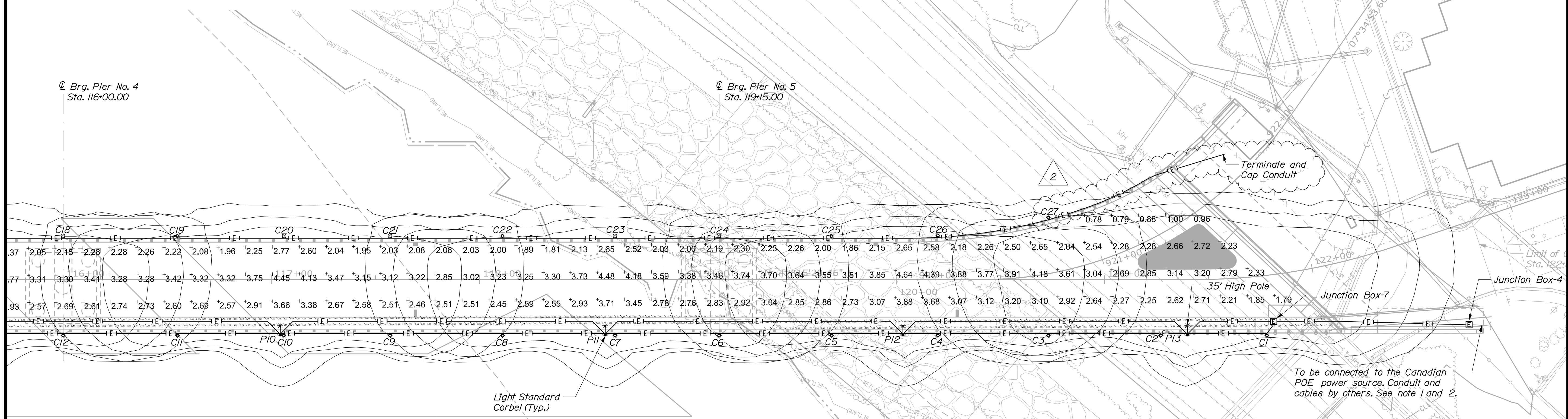
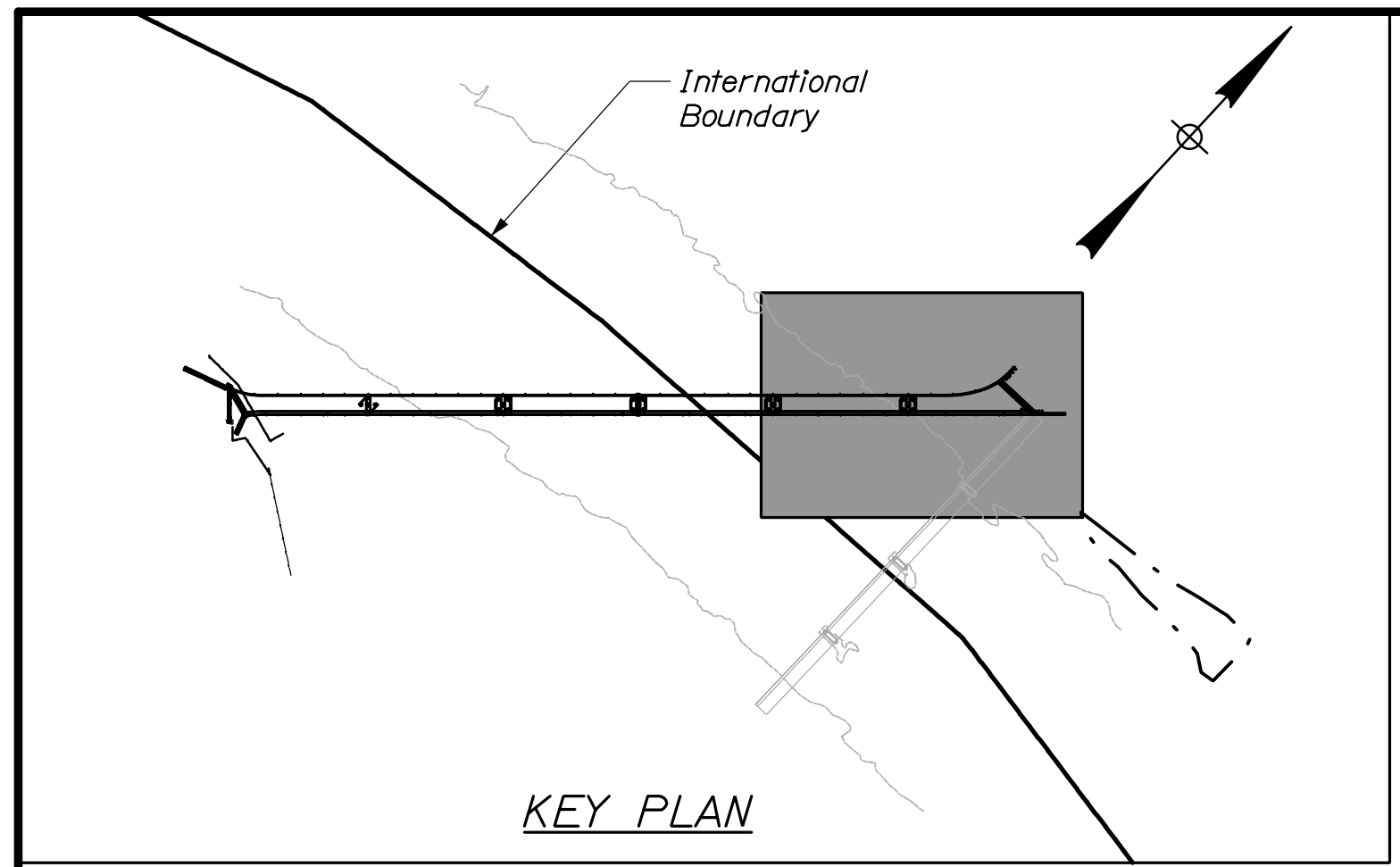
HNTB

Date: 2/18/2021

Username:

Division:

Filename: 150_03_Bridge Lighting-3D.dgn

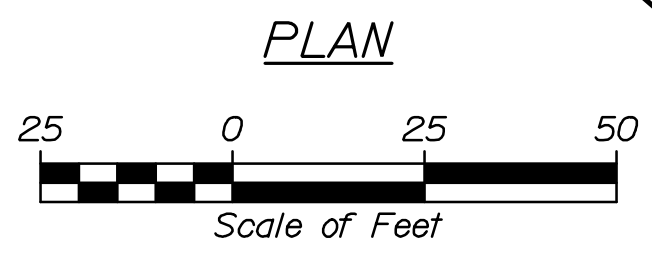


NOTES:

1. Poles P9 to P13 shall be connected to a Canadian POE power source (by Others). One (1) 240V circuit and one (1) 120V circuit shall be provided to power the lighting and pole mounted receptacles, respectively. Conduit and wiring shall be 2 inch conduit with 2*6 AWG type XHHW and 1*6 ground for lighting and two (2)*8 AWG type XHHW and 1*8 ground for pole mounted receptacles. Contractor shall cap the cables and terminate the conduit at Junction Box-4. Installation and connection of cables between Junction Box-4 and Canadian POE power source shall be by others.
2. Aesthetic lighting fixtures C1 to C27 shall be connected to a Canadian POE power source (by Others). One (1) 240V circuit shall be provided to power the Aesthetic Lighting fixtures. Conduit and wiring shall be 2 inch conduit with two (2)*6 AWG type XHHW and one (1)*6 ground. Installation and connection of cables between Junction Box-4 and Canadian POE power source shall be by Others.

Proposed Aesthetic Lighting	
Aesthetic Lighting Luminaire Number	Approximate Station Number
C1	121+78
C2	121+27
C3	120+73
C4	120+20
C5	119+69
C6	119+15
C7	118+65
C8	118+11
C9	117+57
C10	117+06
C11	116+55
C12	116+00
C18	116+00
C19	116+55
C20	117+06
C21	117+57
C22	118+11
C23	118+65
C24	119+15
C25	119+69
C26	120+20
C27	120+73

TABLE 3



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

2173600

WIN
021736.00

PROJ. MANAGER: J. O'Neil

DESIGN: H. Norem

CHECKED: M. Siddiqui

DESIGNED: J. O'Neil

REVISIONS: 1, 2, 3, 4

DATE: 09/20

BY: J. O'Neil

DATE: 01/21

DATE: 2/18/2021

INTERNATIONAL BRIDGE
SAINT JOHN RIVER
EDMUNDSTON, NB
MADAWASKA, ME

BRIDGE LIGHTING PLAN - 3

SHEET NUMBER

150

OF 160