


# BURLINGTON CANAL BRIDGE ROOF ANCHOR AND VHF ANTENNA REPLACEMENT PROJECT



PROJECT NO: R.089504.080

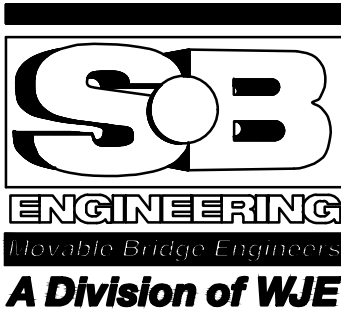
LIST OF DRAWINGS	
DRAWING NUMBER	DRAWING TITLE
G-01	COVER SHEET
S-01	GENERAL ARRANGEMENT
S-02	PLAN AND DETAILS
E-01	VHF ANTENNA BLOCK DIAGRAM
E-02	VHF ANTENNA INSTALLATION DETAILS



Public Works and  
Government Services Canada  
Architectural and Engineering Services  
Ontario Region

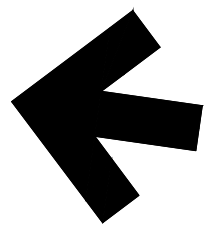
Travaux publics et  
Services gouvernementaux Canada  
Services d'architecture et de génie  
Région de l'Ontario

PARSONS



ENGINEERING  
Playable Bridge Engineers  
A Division of WJE

revision		date		
Do not scale drawings. Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.				
<div><div><div>A</div><div>B</div><div>C</div></div></div> <div><div>A</div><div>B</div><div>C</div></div> <div><div>Detail No. No. du détail</div><div>drawing no. – where detail required dessin no. – où détail exigé</div><div>drawing no. – where detailed dessin no. – où détaillé</div></div>				
<div><div>project title titre du projet</div><div>HAMILTON BURLINGTON CANAL VERTICAL LIFT BRIDGE</div><div>ONTARIO</div></div>				
VHF ANTENNA REPLACEMENT				
<div><div>drawing title titre du dessin</div><div>COVER SHEET</div></div>				
<div><div>drawn by dessiné par</div><div>DATE</div><div>LIN XU 2020-3-31</div></div>				
<div><div>designed by conçu par</div><div>DATE</div><div>LIN XU 2020-3-31</div></div>				
<div><div>approved by approuvé par</div><div>DATE</div><div>GARETH REES 2020-3-31</div></div>				
<div><div>bid offre</div><div>ELISABETH OHI</div><div>project manager administrateur de projets</div></div>				
<div><div>project date date du projet</div><div>2020-03-31</div></div>				
<div><div>project no. no. du projet</div><div>R.089504.080</div></div>				
<div><div>drawing no. dessiné no.</div><div>G-01</div></div>				



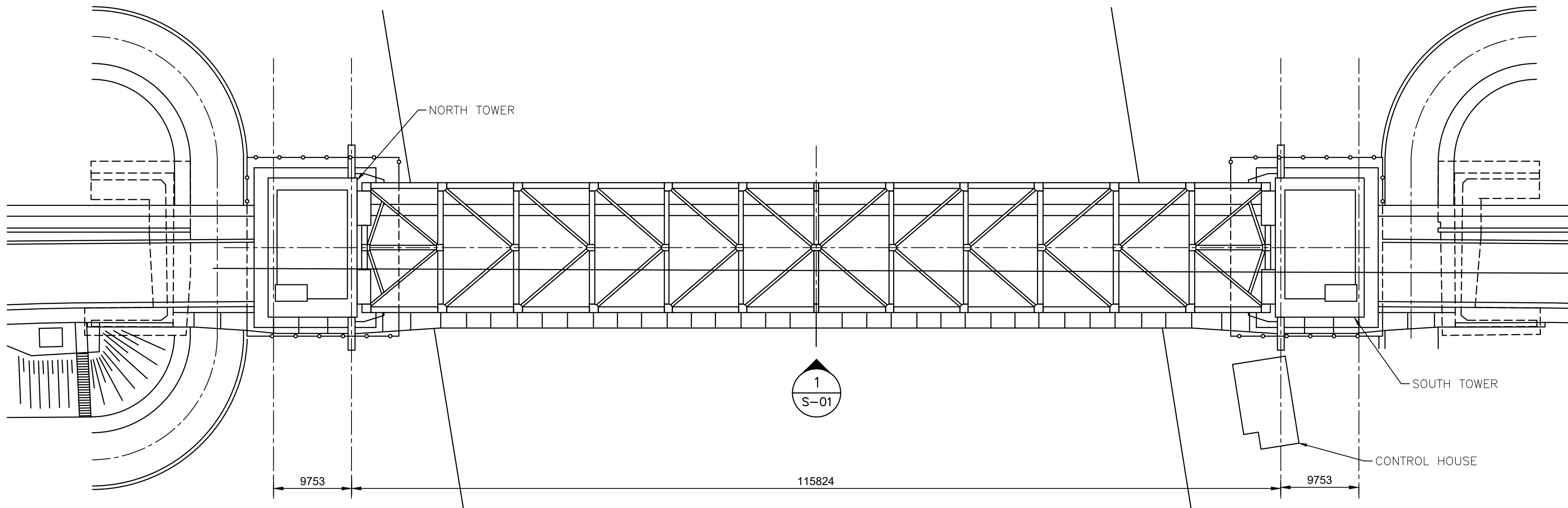
PARSONS

GENERAL NOTES

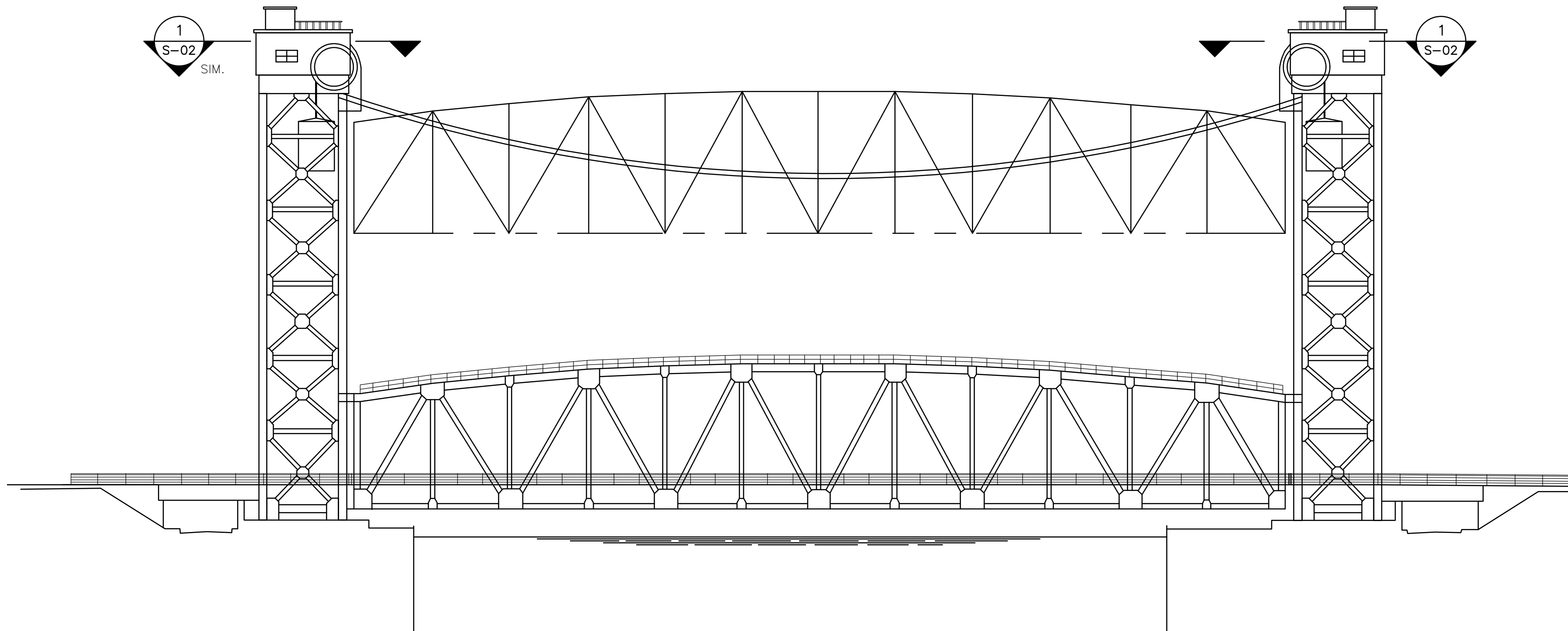
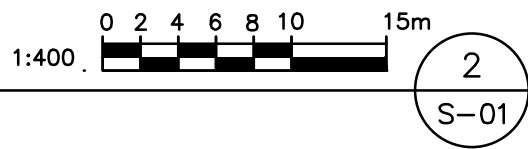
1. THE GENERAL NOTES AND STRUCTURAL STANDARD DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS TO THE CONTRARY.
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE. ALL ELEVATIONS ARE IN METERS AND ARE TO GEODETIC DATUM. THE CONTRACTOR SHALL VERIFY DIMENSIONS BEFORE BEGINNING CONSTRUCTION AND REPORT DISCREPANCIES TO THE CONTRACT ADMINISTRATOR BEFORE PROCEEDING WITH THE WORK. DO NOT SCALE THE DRAWINGS.
3. THE DESIGN AND CONSTRUCTION IS IN ACCORDANCE WITH CAN/CSA S6-14, ITS SUPPLEMENTS AND THE LATEST EDITION (UNLESS OTHERWISE NOTED) OF REFERENCED CODES AND STANDARDS THEREIN.
4. CONTRACTOR TO CONFIRM ALL OCCURRENCES OF INTERFERENCE. REPORT ALL DISCREPANCIES BETWEEN THAT SHOWN ON THE DRAWINGS AND THAT WHICH EXISTS TO THE CONTRACT ADMINISTRATOR, IMMEDIATELY UPON DISCOVERY. KEEP ACCURATE AS-BUILT RECORDS OF ALL NEW WORKS.

STRUCTURAL STEEL

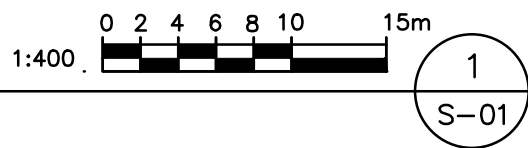
1. FABRICATE AND ERECT STRUCTURAL STEEL TO CSA-S16.1.
2. STRUCTURAL STEEL WIDE FLANGE SECTIONS: CONFIRMING TO CSA G40.21, TYPE W WITH MINIMUM YIELD STRENGTH OF 350 MPa.
3. HOLLOW STRUCTURAL SECTION: CONFIRMING TO CSA G40.21 TYPE W, MINIMUM YIELD STRENGTH OF 350 MPa, CLASS C.
4. BEAM END PLATES, LEDGER ANGLES AND MISCELLANEOUS STEEL: CONFORMING TO CSA G40.21, TYPE W, MINIMUM YIELD STRENGTH OF 300 MPa.
5. ALL EXTERIOR EXPOSED STEEL AND HARDWARE TO BE HOT-DIP GALVANIZED. HOT-DIP GALVANIZING TO CONFORM TO ASTM A123. STRUCTURAL BOLTS, NUTS AND WASHERS SHALL HAVE A MINIMUM COATING OF GRADE 85.
6. STRUCTURAL NUTS SHALL CONFORM TO ASTM A325. WASHERS SHALL CONFORM TO ASTM F426.
7. ALL BOLTS SHALL BE INSTALLED BY TURN-OF-NUT TIGHTENING IN CONFORMANCE WITH CAN/CSA S6-14.
8. NON-DESTRUCTIVE TESTING SHALL BE ACCORDING TO CSA W59. MAGNETIC PARTICLE INSPECTION SHALL BE PERFORMED ON 100% OF LENGTH OF EACH WELD.



PLAN  
OVERALL



ELEVATION  
OVERALL



revision	date
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Do not scale drawings.  
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A	Detail No.
B	drawing no. — where detail required
C	drawing no. — where detailed

project title  
titre du projet

Ontario  
BURLINGTON CANAL LIFT BRIDGE  
MODIFICATIONS  
FALL-ARREST ROOF ANCHOR

drawing title  
titre du dessin

GENERAL ARRANGEMENT

drawn by  
dessiné par ANDREW LUK/2020-02-20

designed by  
conc par ANDREW LUK/2020-02-20

approved by  
approuvé par JACK AJRAB/2020-03-31

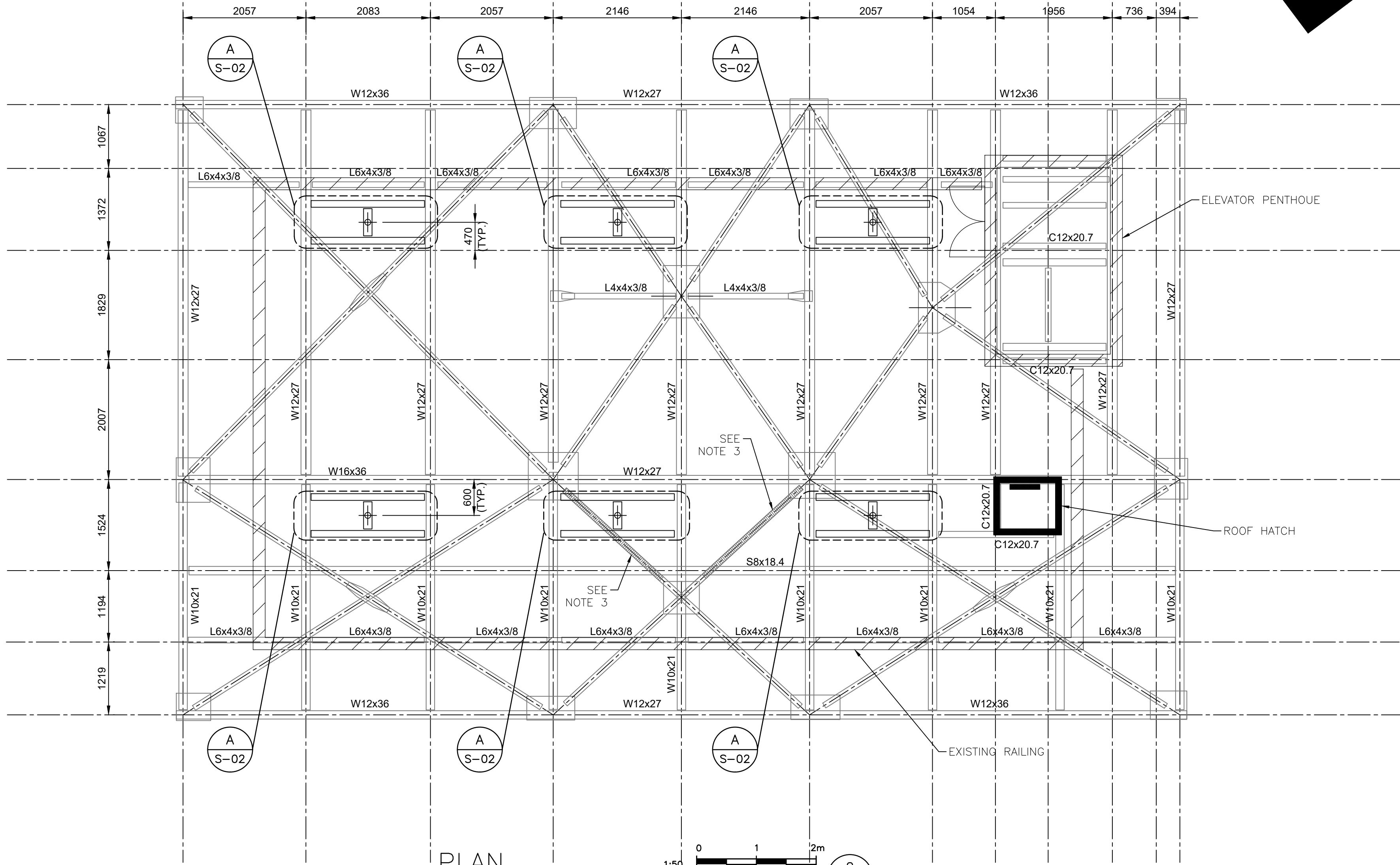
bid  
offre ELISABETH OHI project manager  
administrateur de projets

project date  
date du projet 2020-04-30

project no.  
no. du projet R.089504.080

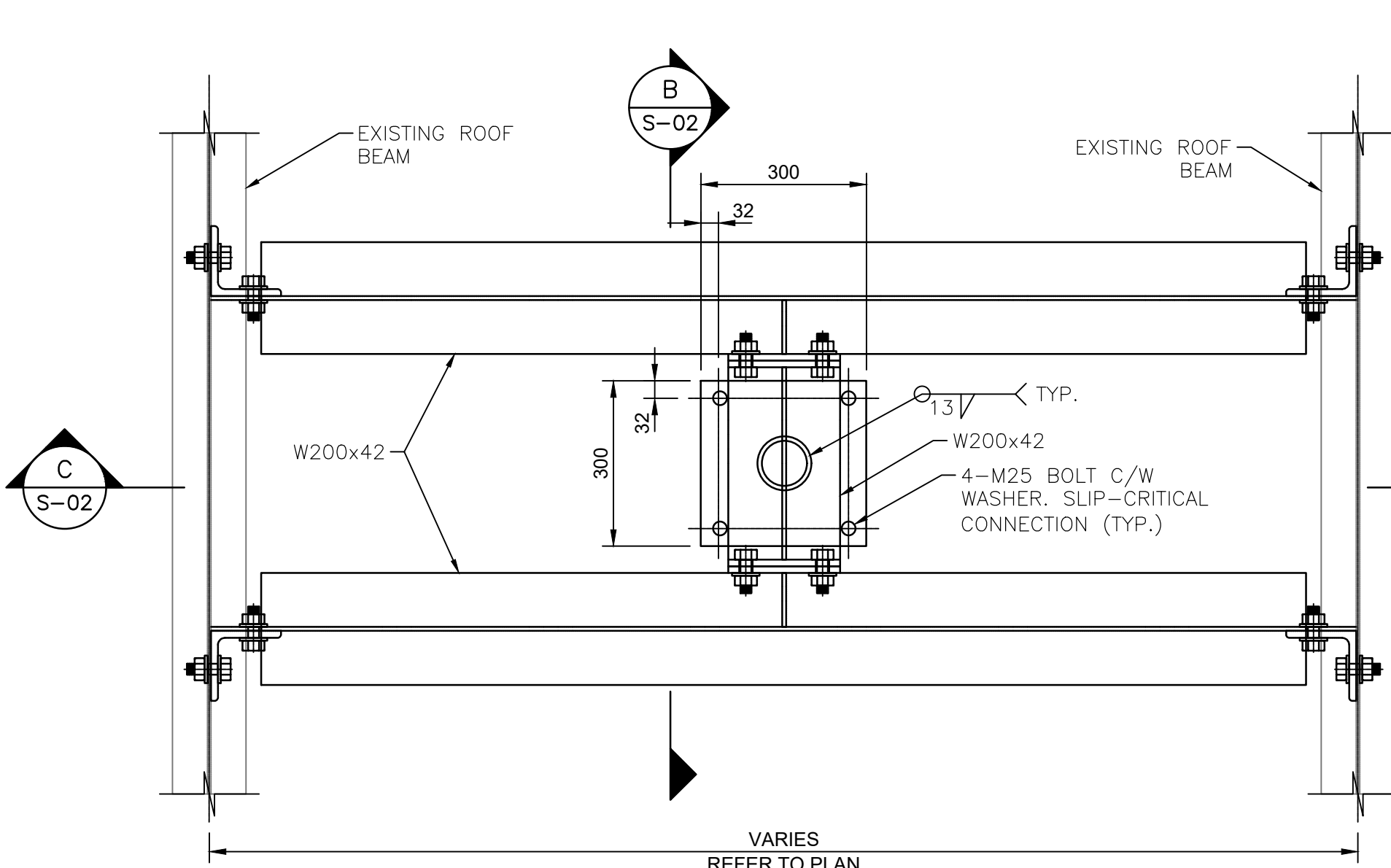
drawing no.  
dessiné no. S-01



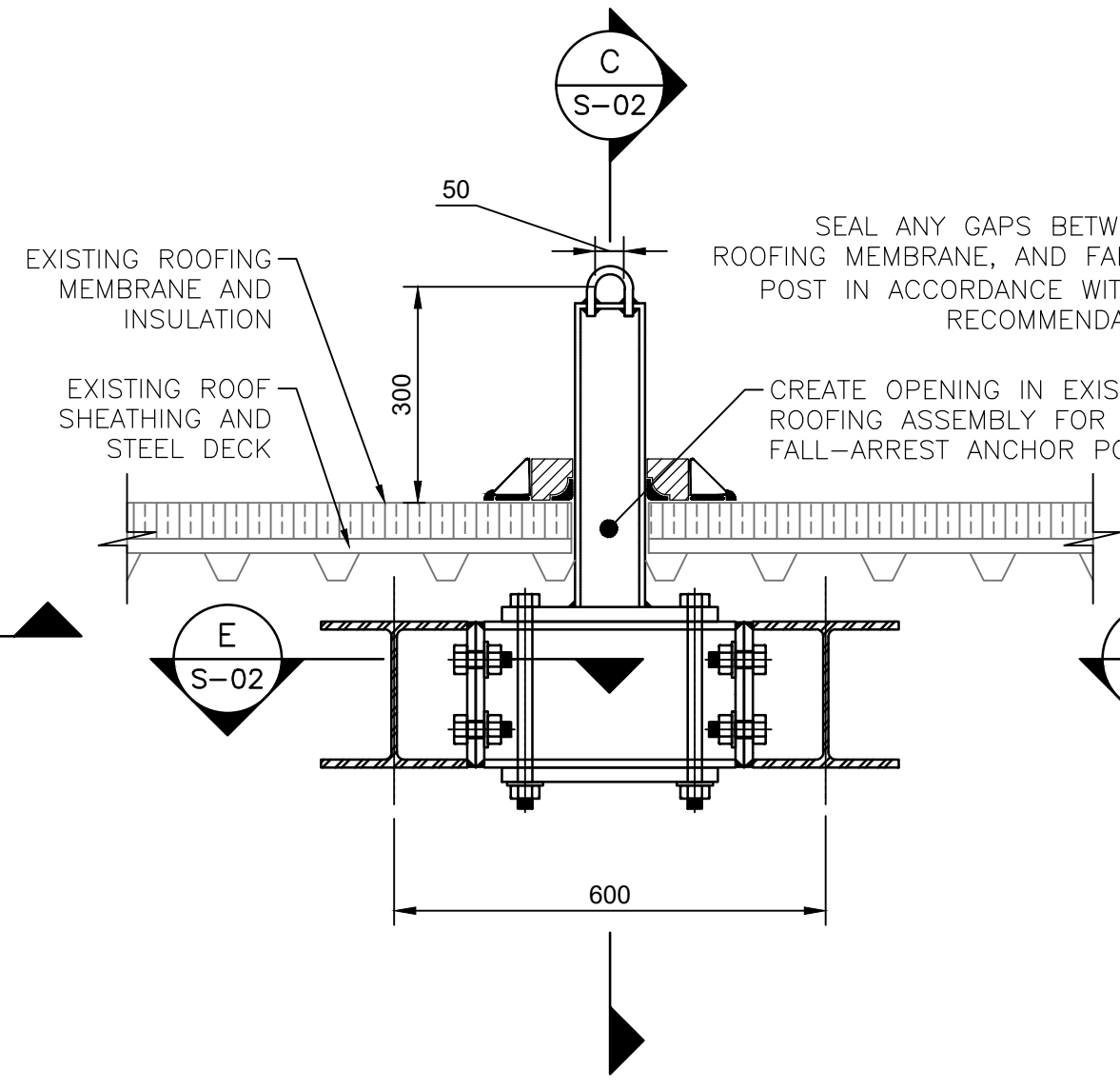


PLAN  
MACHINE HOUSE ROOF FRAMING  
1:50  
2  
S-01

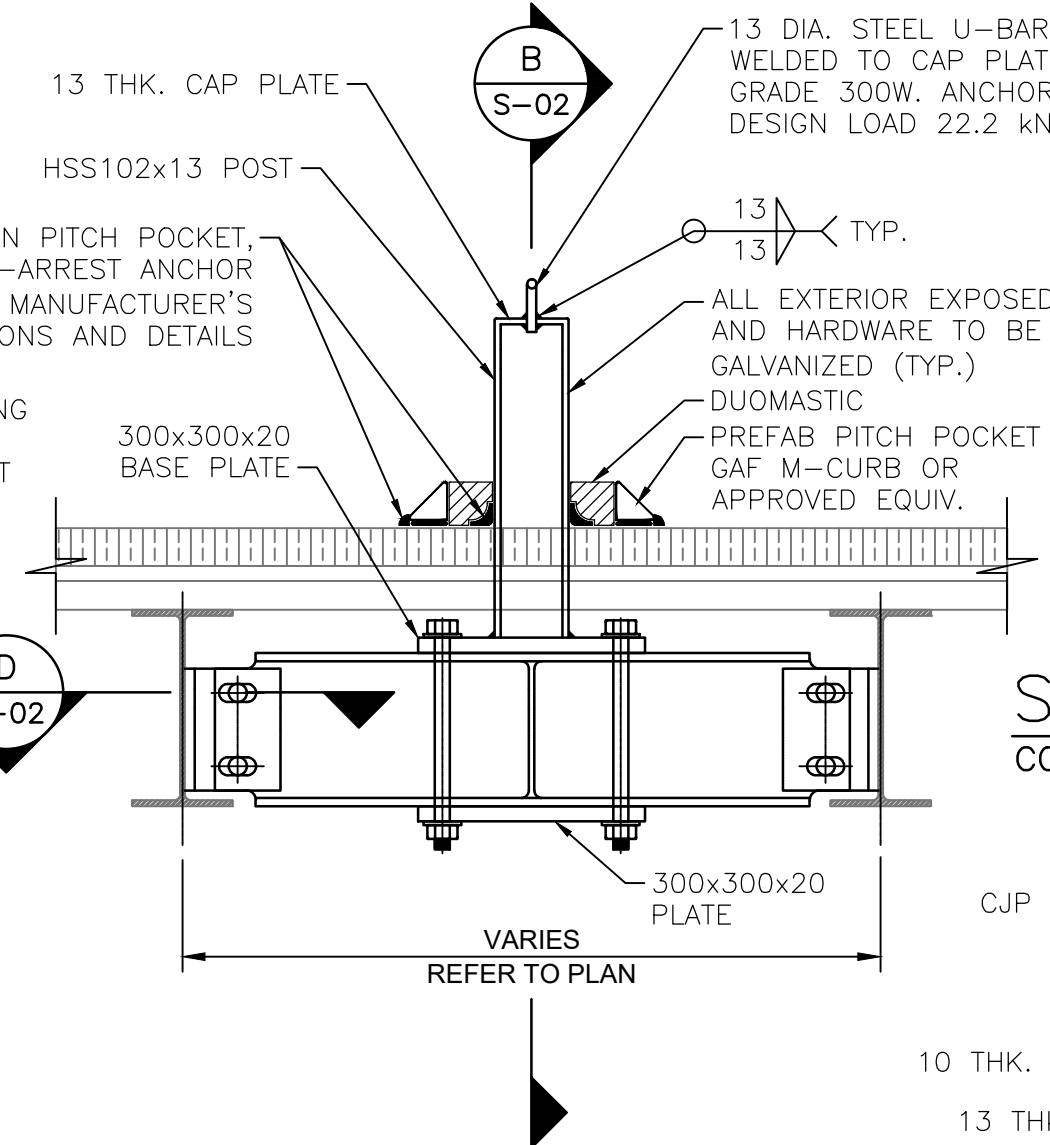
- NOTES:
1. SOUTH TOWER AS SHOWN
  2. NORTH TOWER MIRRORED
  3. EXISTING ROOF BRACING REINFORCED WITH HSS ABOVE



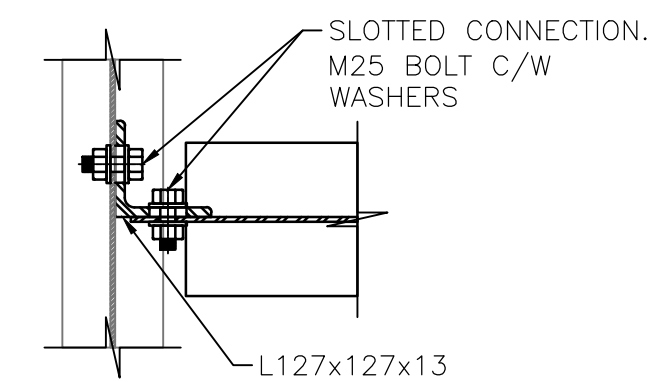
DETAIL  
ENLARGED PLAN  
1:10  
A  
S-02



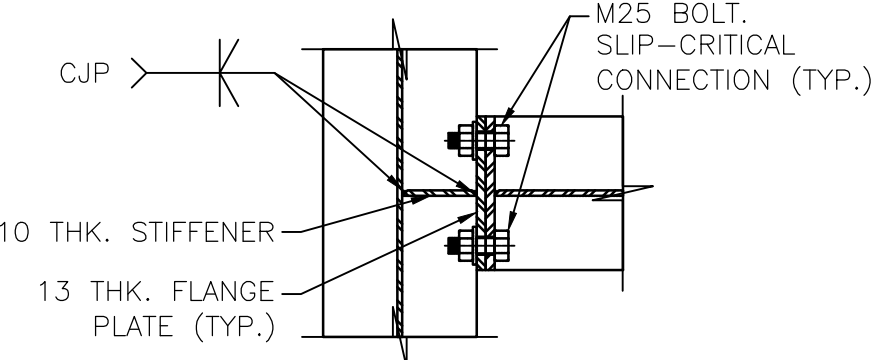
SECTION  
DETAIL  
1:10  
B  
S-02



SECTION  
DETAIL  
1:10  
C  
S-02



SECTION  
CONNECTION WITH EXISTING BEAM  
1:10  
D  
S-02



SECTION  
MOMENT CONNECTION  
1:10  
E  
S-02

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- A Detail No.  
No. du détail  
B drawing no. — where detail required  
dessin no. — où détail exigé  
C drawing no. — where detailed  
dessin no. — où détaillé

project title  
titre du projet

Ontario  
BURLINGTON CANAL LIFT BRIDGE  
MODIFICATIONS  
FALL-ARREST ROOF ANCHOR

drawing title  
titre du dessin

PLAN AND DETAILS

drawn by  
dessiné par ANDREW LUK/2020-02-20

designed by  
conc par ANDREW LUK/2020-02-20

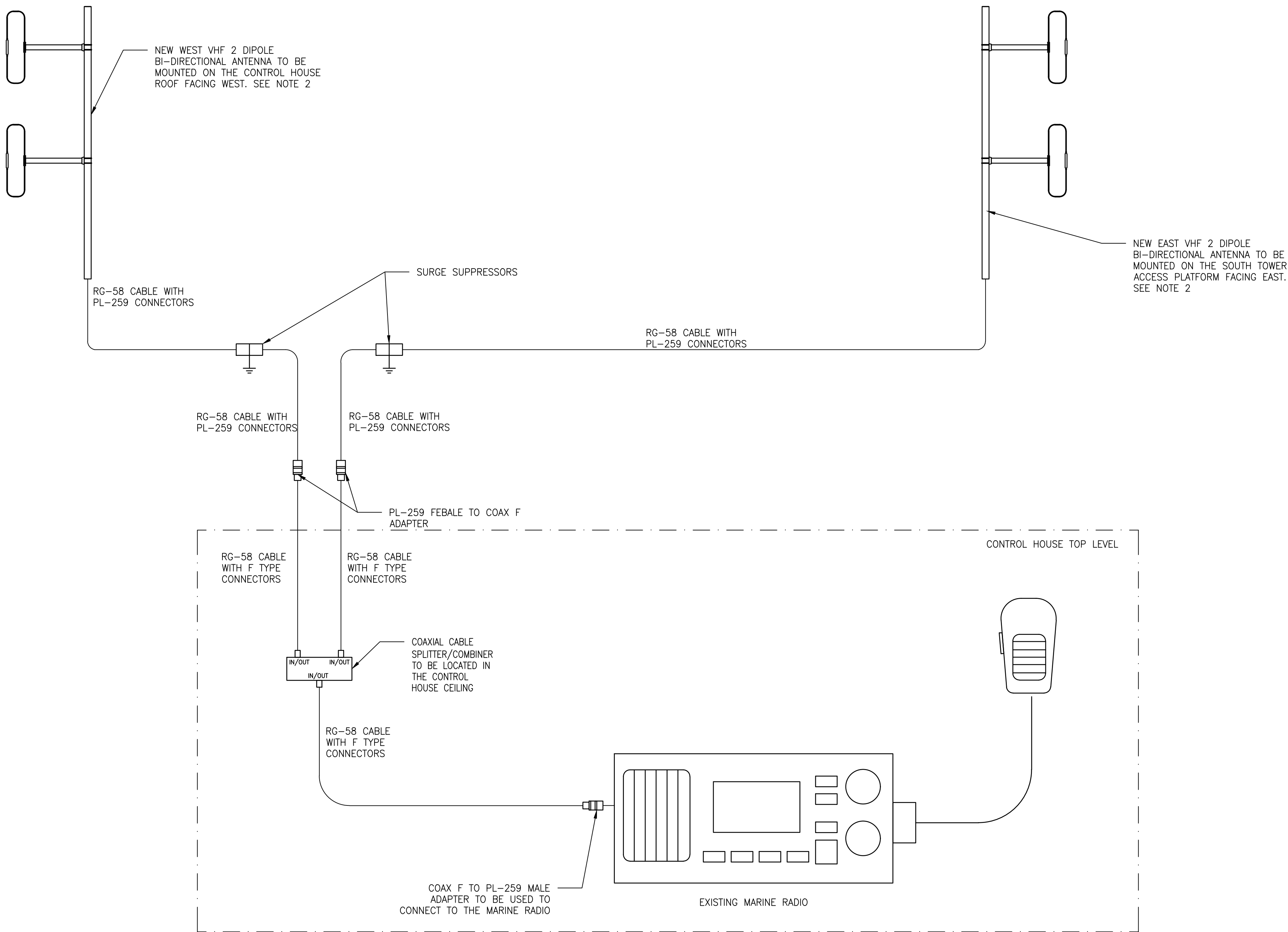
approved by  
approuvé par JACK AJRAB/2020-03-31

bid  
offre ELISABETH OHI project manager  
administrateur de projets

project date  
date du projet 2020-04-30

project no.  
no. du projet R.089504.080

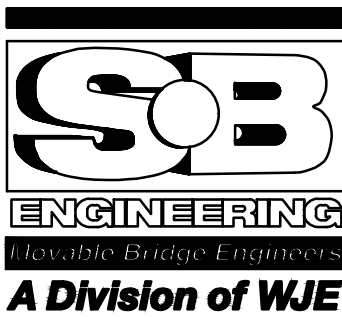
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dessiné no. S-02



NOTES:

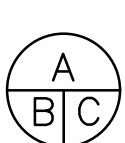

- SEE ANTENNA LOCATIONS AND CABLE ROUTING ON DWG E02. THE ACTUAL MOUNTING LOCATION TO BE DETERMINED IN THE FIELD SUCH THAT THE TWO ANTENNAS CAN RECEIVE AND TRANSMIT OPTIMAL SIGNAL STRENGTH.

**PARSONS**



revision		date

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of all discrepancies.

	A Detail No. No. du détail
	B drawing no. — where detail required dessin no. — où détail exigé
	C drawing no. — where detailed dessin no. — où détaillé

project title  
titre du projet  
**HAMILTON BURLINGTON CANAL VERTICAL LIFT BRIDGE** ONTARIO

**VHF ANTENNA REPLACEMENT**

drawing title  
titre du dessin  
**VHF ANTENNA BLOCK DIAGRAM**

drawn by  
dessiné par  
LIN XU  
DATE 2020-3-31

designed by  
conçu par  
LIN XU  
DATE 2020-3-31

approved by  
approuvé par  
GARETH REES  
DATE 2020-3-31

bid  
offre  
ELISABETH OHI

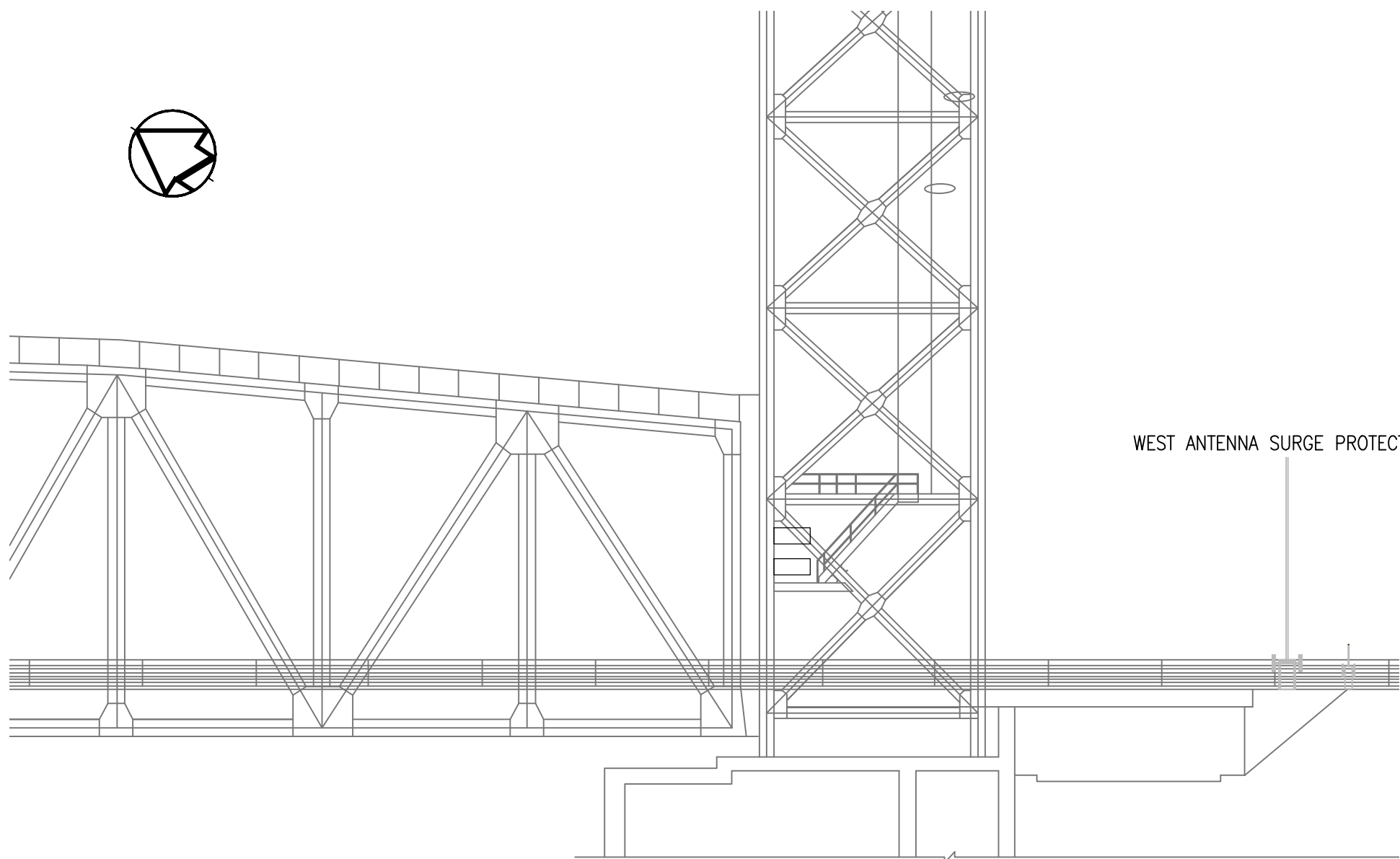
project manager  
administrateur  
de projets

project date  
date du projet  
2020-03-31

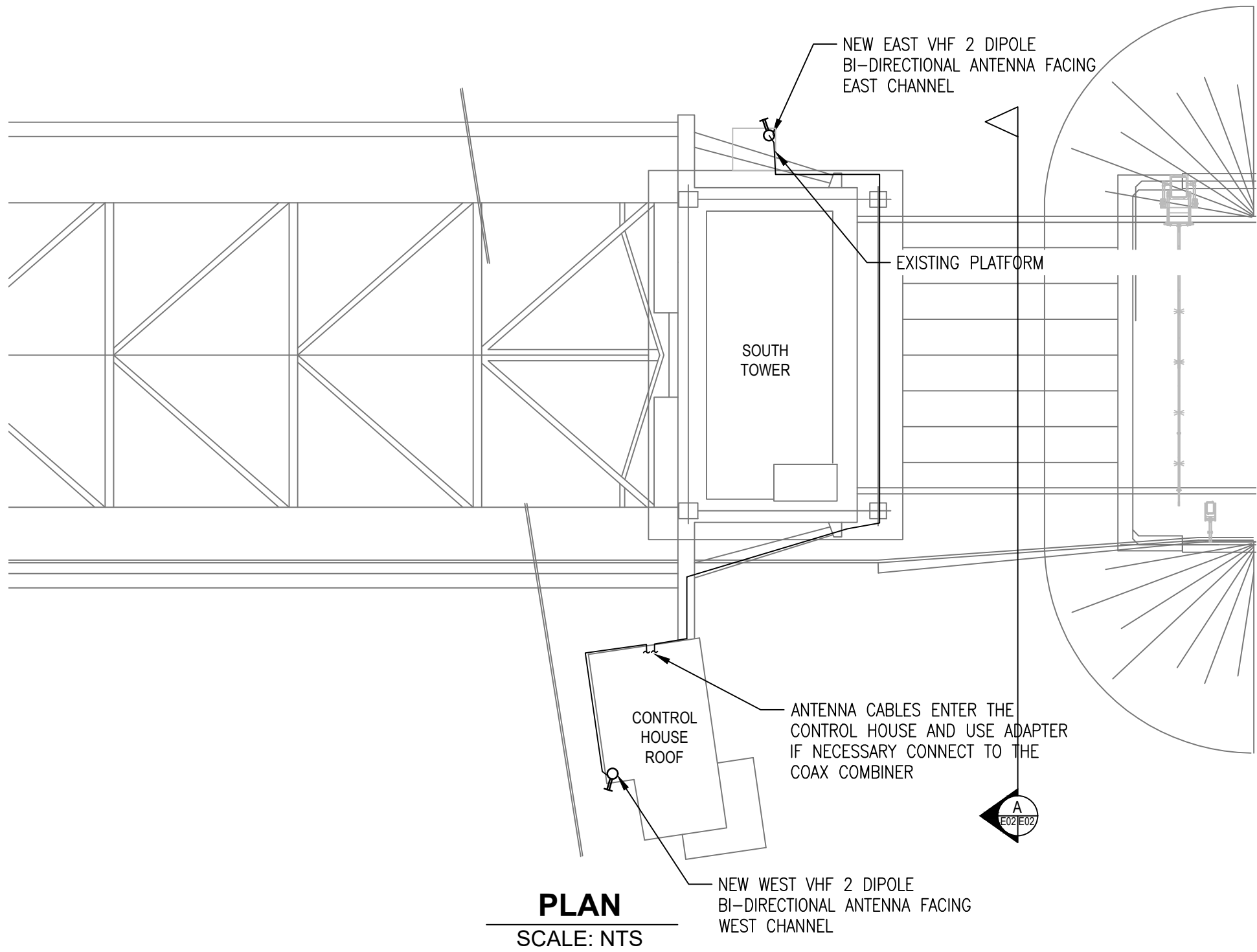
project no.  
no. du projet  
R.089504.080

drawing no.  
dessiné no.  
E-01





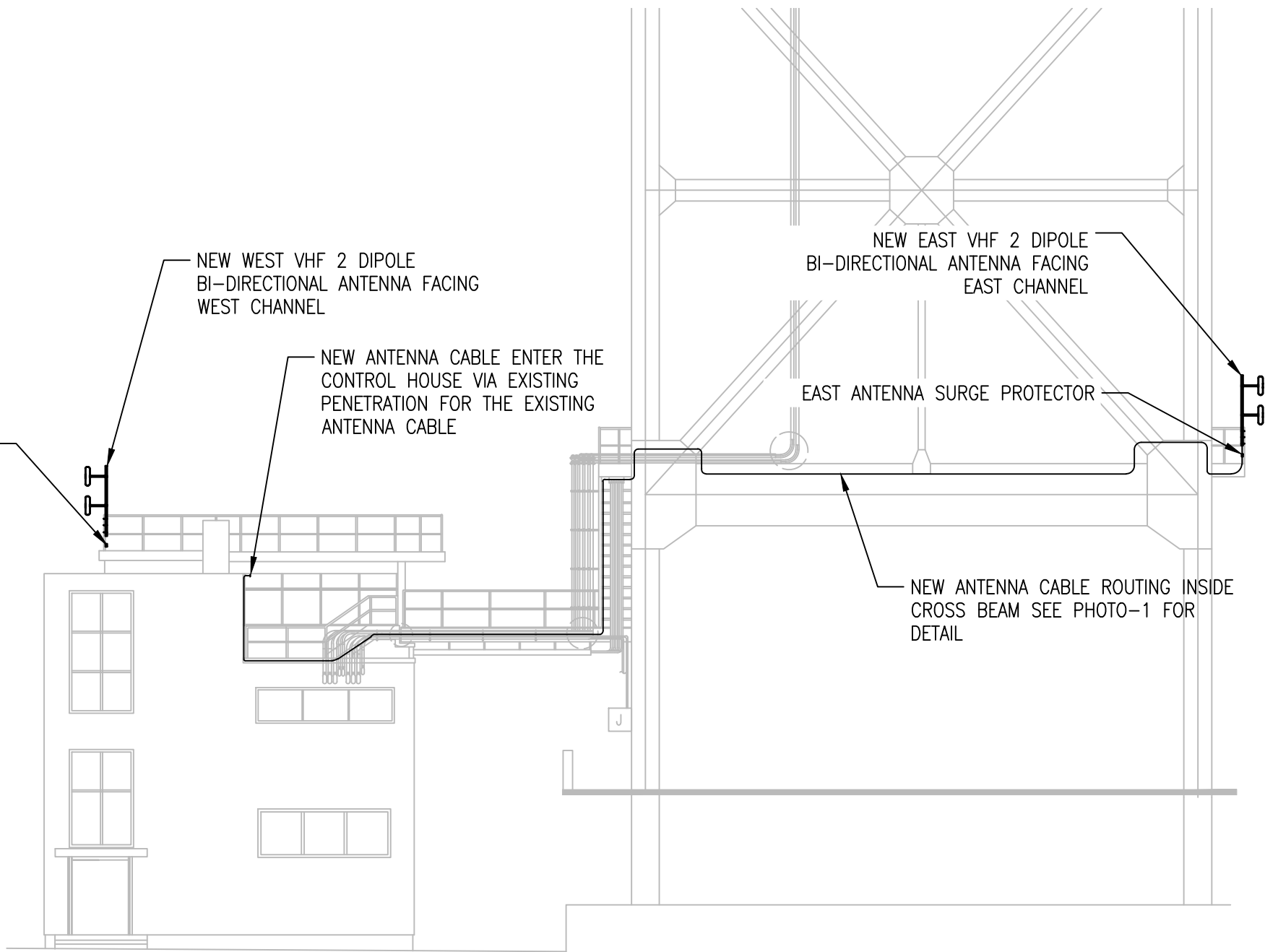
ELEVATION  
SCALE: NTS



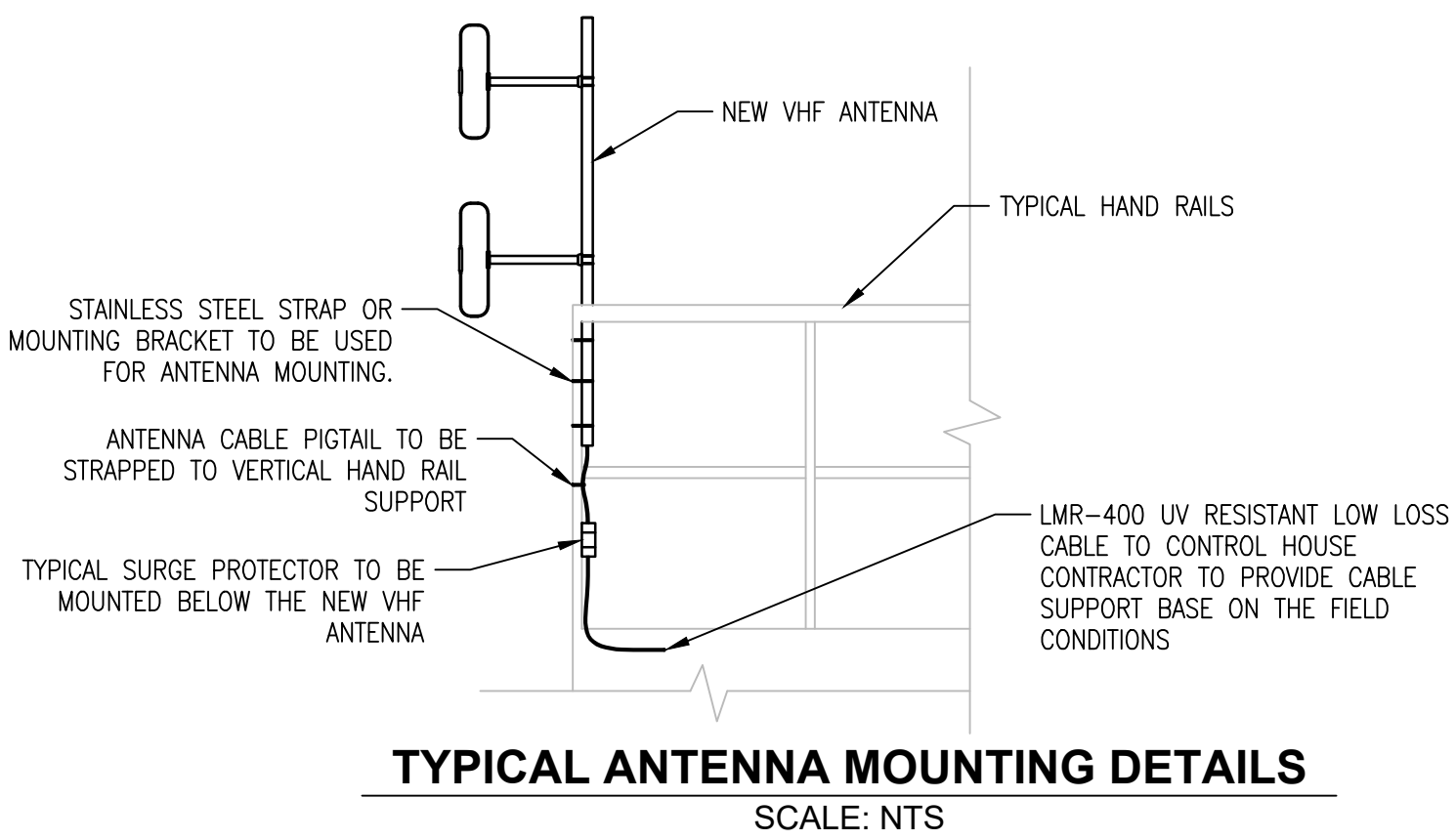
PLAN  
SCALE: NTS

NOTES:

1. NEW EAST VHF ANTENNA CABLES TO FOLLOW THE CCTV CABLE ROUTING (BLUE CORE) AND BE CONNECTED TO THE NEW EAST ANTENNA ON THE PLATFORM AS SHOWN.
2. ANTENNA SURGE PROTECTORS TO BE CONNECTED TO THE STOCK ANTENNA PIGTAIL AND BE MOUNTED TO CLOSEST STRUCTURE.
3. NEW ANTENNA CABLES TO ENTER THE CONTROL HOUSE VIA EXISTING PENETRATION FOR THE EXISTING ANTENNA CABLE.
4. CONTRACTOR TO LOCATE SUITABLE LOCATION FOR THE ANTENNA SURGE SUPPRESSOR UNITS AND MAKE PROPER CONNECTIONS. THE SURGE SUPPRESSORS TO BE AS CLOSE AS POSSIBLE TO THE ANTENNAS.
5. BOTH EAST AND WEST VHF ANTENNA LOCATIONS ARE AS SHOWN, BUT CONTRACTOR TO TEST THE ANTENNA TX/RX SIGNAL STRENGTH. THE LOCATION OF THESE ANTENNAS MIGHT BE SHIFTED TO PROVIDE BEST SIGNAL STRENGTH. THESE BI-DIRECTIONAL ANTENNA FACING DIRECTIONS ARE TO BE FIELD DETERMINED TO PROVIDE BEST COVERAGE FOR THE MARINE TRAFFIC.



SECTION A  
SCALE: NTS



TYPICAL ANTENNA MOUNTING DETAILS  
SCALE: NTS



PHOTO-4: ROOF OF BRIDGE CONTROL HOUSE

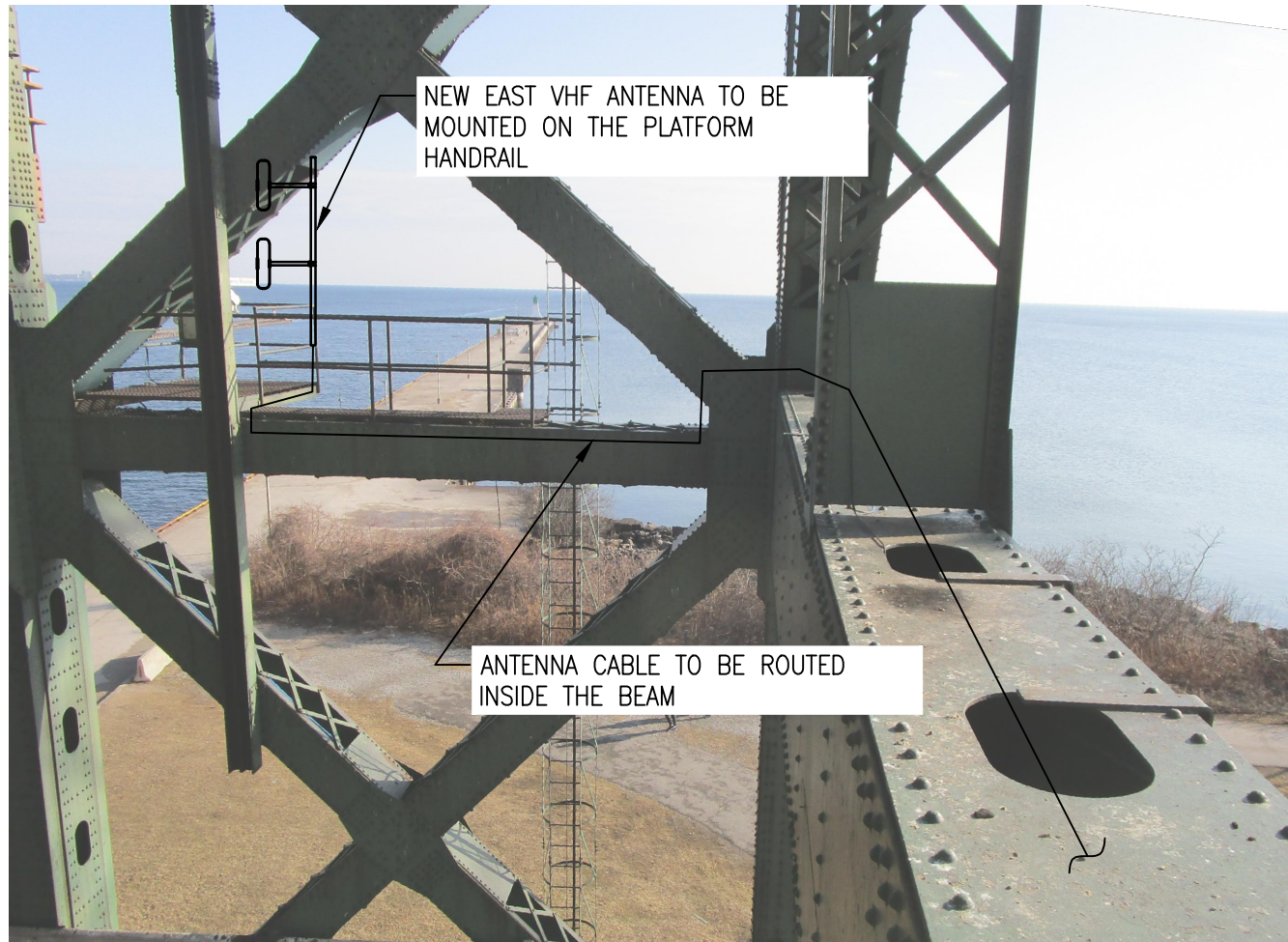


PHOTO-1: EAST ANTENNA MOUNTING AND CABLE ROUTING



PHOTO-2: CABLE ENTERING PORT HOLE AND ROUTE INSIDE THE BEAM



PHOTO-3: VIEW OF THE EAST PLATFORM ON SOUTH TOWER


revision	date

A	Detail No.
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	drawing no. — where detailed dessin no. — où détaillé

project title titre du projet	ONTARIO
HAMILTON BURLINGTON CANAL VERTICAL LIFT BRIDGE	

VHF ANTENNA REPLACEMENT

drawing title titre du dessin	VHF ANTENNA INSTALLATION DETAILS
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drawn by dessiné par	LIN XU DATE 2020-4-6
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designed by conç par	LIN XU DATE 2020-4-6
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approved by approuvé par	GARETH REES DATE 2020-4-6
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bid offre	ELISABETH OHI	project manager administrateur de projets
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project date date du projet	2020-04-6
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project no. no. du projet	R.089504.080
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drawing no. dessiné no.	E-02
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