



**Addendum / Addenda**

No./N<sup>o</sup>  
2

Project Description / Description de projet <b>M-7 Cooling Tower Replacement</b>		
Solicitation No./ No de sollicitation <b>13-22085</b>	Project No./N <sup>o</sup> de projet <b>3861</b>	W.O. No./N <sup>o</sup> d'ordre de travail <b>A1-004116-01-03-02</b>
Departmental Representative / représentant ministériel <b>Chris Day</b>		Date <b>Dec 5<sup>th</sup>, 2013</b>
<b>Notice:</b> This addendum shall form part of the tender documents and all conditions shall apply and be read in conjunction with the original plans and specifications.		<b>Nota:</b> Cet addenda fait partie intégrale des dossiers d'appel d'offres; toutes les conditions énoncées doivent être lues et appliquées en conjonction avec les plans et les devis originaux.

**Mechanical**

Drawing "3861-M01"

1. Drawing Notes  
Change

13. PROVIDE A 5' (1.5 METER) LONG 10 NPS HEADER, C/W CARBON STEEL SADDLES (ASTM A-234). SADDLES SIZE AND LOCATION TO SUIT COOLING TOWER DRAIN CONNECTING AND EXISTING TWO 8 NPS DRAIN PIPES

To

13. PROVIDE A 5' (1.5 METER) LONG **12** NPS HEADER, C/W CARBON STEEL SADDLES (ASTM A-234). SADDLES SIZE AND LOCATION TO SUIT COOLING TOWER DRAIN CONNECTING AND EXISTING TWO 8 NPS DRAIN PIPES

Drawing "3861-M02"

1. Delete Detail 4: Piping Support Detail (PS-2) on drawing "3861-M02" and replace with drawing "3861-ADD2-MSK-1"
2. Delete Detail 5: Piping Support Detail (PS-1 and 4) on drawing "3861-M02" and replace with drawing "3861-ADD2-MSK-2"
3. Cooling Tower Schedule

a. Model:

Change  
NC8407UAS 1 CELL  
To  
NC8409UAS 1 CELL.

b. Nominal Operating Weight

Change  
32,000 LBS  
To  
32,790lbs

c. Nominal Size

Change  
20' L x 22.5' W x 16.5' H  
To  
19'-3/4" L x 22'-5" W x 16'-5 3/4" H

d. Inlet Connection :

Change  
2 - 8 NPS CLASS 125 ANSI B16.1 FLANGE CONNECTION C/W HORIZONTAL FLOW CONTROL VALVES  
To  
2 - **10** NPS CLASS 125 ANSI B16.1 FLANGE CONNECTION C/W HORIZONTAL FLOW CONTROL VALVES

e. Outlet Connection

Change  
1 - 10 NPS CLASS 125 ANSI B16.1 FLANGE CONNECTION C/W TRASH SCREEN  
To  
1 - **12** NPS CLASS 125 ANSI B16.1 FLANGE CONNECTION C/W TRASH SCREEN

f. Remarks

Change  
GALVANIZED PLENUM WALKWAY C/W INTERIOR MECHANICAL ACCESS PLATFORM  
To  
INTERIOR STAINLESS STEEL PLENUM WALKWAY AND INTERIOR MECHANICAL ACCESS PLATFORM AND AN EXTERIOR GALVANIZED ACCESS DOOR PLATFORM

g. Add "Nominal Shipping Weight : 15,838 Lbs"

## Specifications

### 1. Section 23 65 10 – Cooling Tower

#### a. Article 8.0.2

Change

Each cell of the tower shall include a single hot-water flanged inlet connection (ASME Class 150) located as shown on the plans. An internal system of PVC piping shall deliver water equally to the distribution basins without the need for balancing valves. This internal piping system shall require no scheduled maintenance, and shall be located such that it does not interfere with normal maintenance access. The internal piping shall extend to the exterior surface of the tower.

To  
Tower to be complete with two 10 NPS inlet flanged connections and horizontal flow control valves.

b. Article 8.0.4

Change

The water distribution system shall be equipped with a method to operate under variable flow conditions while maintaining a uniform air-side pressure drop through the fill to maximize cooling efficiency and minimize the risk of ice and scale formation in the fill.

To

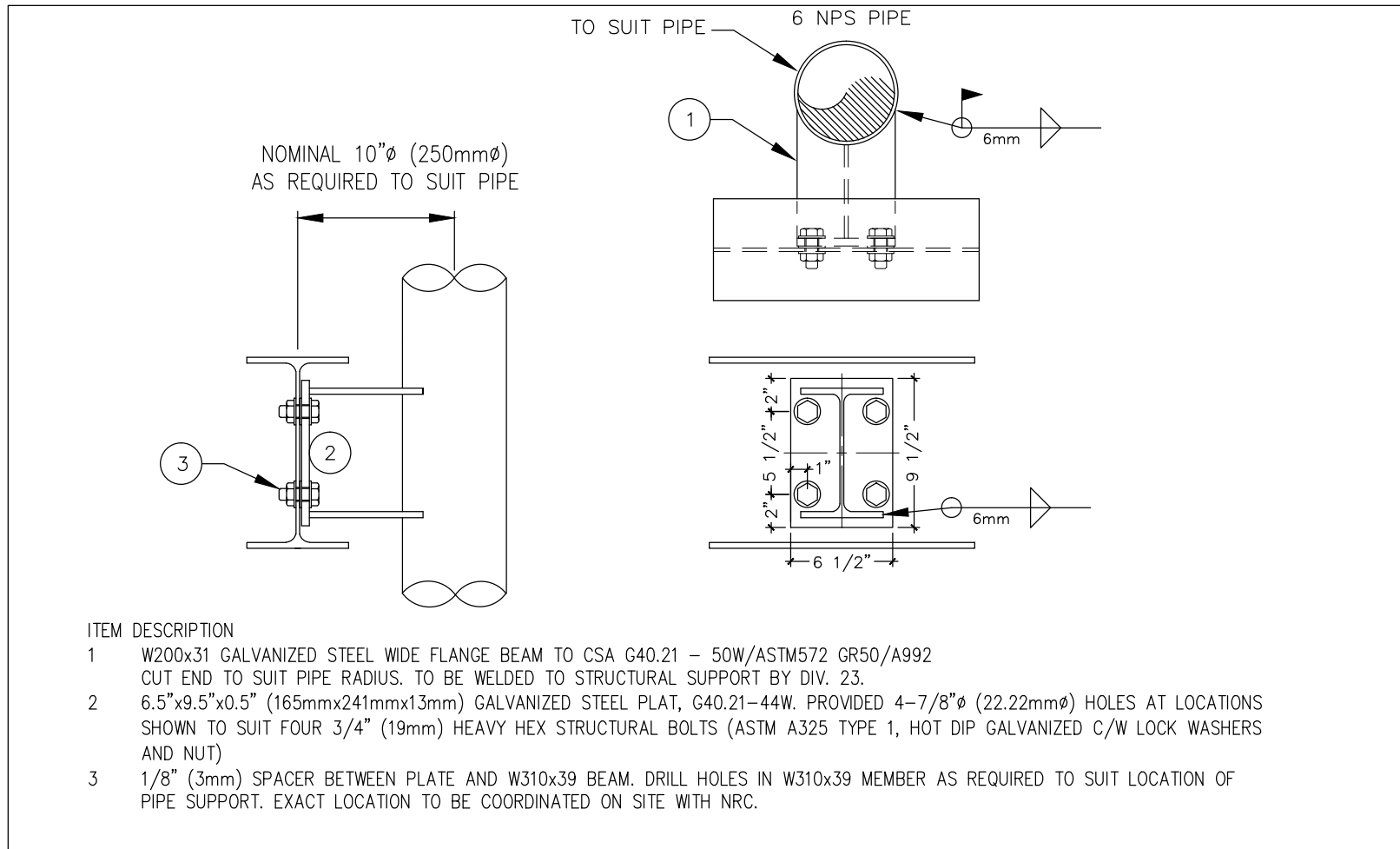
Tower shall maintain a uniform air-side pressure drop through the fill to maximize cooling efficiency and minimize the risk of ice and scale formation in the fill.

### **Structural**

1. Delete drawing "3861-S02" and replace with drawing "3861-S01-Revised" included in Addendum 2.

### **Electrical**

1. Refer to drawing 3861-E01 note #3.  
Purpose of this receptacle is to satisfy Electrical Safety Code 26-704. Make sure the receptacle has CSA 5-20R configuration and mounted 750mm above finished roof.



4  
M02

## PIPE SUPPORT DETAIL (PS-2)

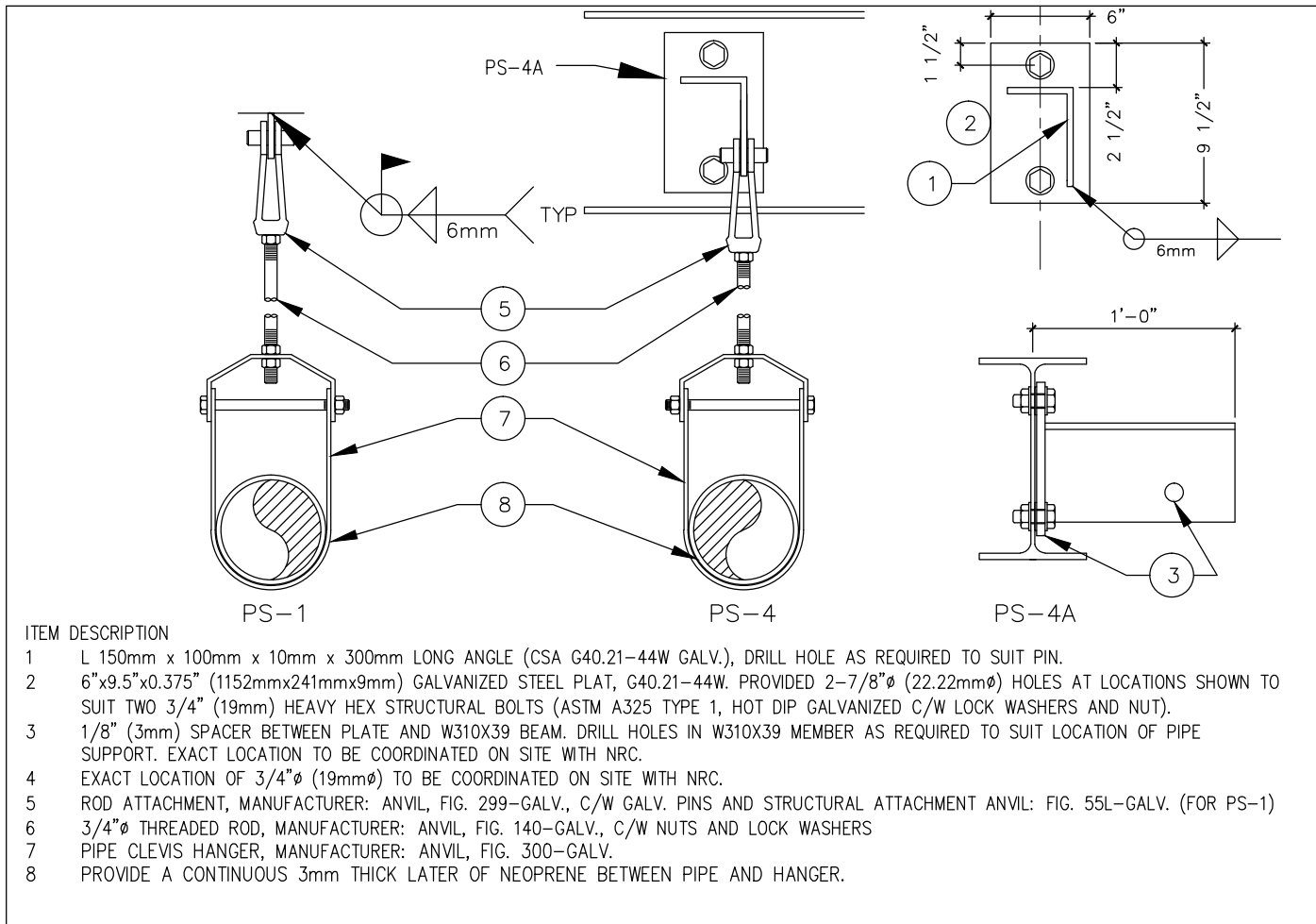
SCALE = NA

ASPM 8.5x11

**NRC - CNRC**  
National Research Council Canada  
Conseil national de recherches Canada  
Administrative Services and Property Management Branch  
Division des services administratifs et gestion de l'immobilier

**NRC - CNRC**

project	projet	drawing	dessin	designed	conçu	checked	vérifié
<b>M07 ROOF TOP COOLING TOWER REPLACEMENT</b>		<b>PIPE SUPPORT DETAIL (PS-2)</b>		<b>RQC</b>			
				drawn	dessiné	approved	approuvé
				<b>RQC</b>			
				W.O.no.	D.T.no.	sheet	feuille
						<b>1</b>	<b>of/de 2</b>
date	date	scale	échelle	dwg.no.	dessin no.		
<b>11/12</b>		<b>NA</b>		<b>3861-ADD2-MSK-1</b>			
<b>MONTREAL ROAD CAMPUS M07</b>							



ITEM DESCRIPTION

- 1 L 150mm x 100mm x 10mm x 300mm LONG ANGLE (CSA G40.21-44W GALV.), DRILL HOLE AS REQUIRED TO SUIT PIN.
- 2 6"x9.5"x0.375" (1152mmx241mmx9mm) GALVANIZED STEEL PLAT, G40.21-44W. PROVIDED 2-7/8"Ø (22.22mmØ) HOLES AT LOCATIONS SHOWN TO SUIT TWO 3/4" (19mm) HEAVY HEX STRUCTURAL BOLTS (ASTM A325 TYPE 1, HOT DIP GALVANIZED C/W LOCK WASHERS AND NUT).
- 3 1/8" (3mm) SPACER BETWEEN PLATE AND W310X39 BEAM. DRILL HOLES IN W310X39 MEMBER AS REQUIRED TO SUIT LOCATION OF PIPE SUPPORT. EXACT LOCATION TO BE COORDINATED ON SITE WITH NRC.
- 4 EXACT LOCATION OF 3/4"Ø (19mmØ) TO BE COORDINATED ON SITE WITH NRC.
- 5 ROD ATTACHMENT, MANUFACTURER: ANVIL, FIG. 299-GALV., C/W GALV. PINS AND STRUCTURAL ATTACHMENT ANVIL: FIG. 55L-GALV. (FOR PS-1)
- 6 3/4"Ø THREADED ROD, MANUFACTURER: ANVIL, FIG. 140-GALV., C/W NUTS AND LOCK WASHERS
- 7 PIPE CLEVIS HANGER, MANUFACTURER: ANVIL, FIG. 300-GALV.
- 8 PROVIDE A CONTINUOUS 3mm THICK LATER OF NEOPRENE BETWEEN PIPE AND HANGER.

5
M02
PIPE SUPPORT DETAIL (PS-1, 4, 4A)  
 SCALE = NA

ASPM 8.5x11

<p style="font-size: 0.8em; margin: 0;">National Research Council Canada Conseil national de recherches Canada</p> <p style="font-size: 0.7em; margin: 0;">Administrative Services and Property Management Branch Division des services administratifs et gestion de l'immobilier</p>	<p>project</p> <p><b>M07 ROOF TOP COOLING TOWER REPLACEMENT</b></p>	<p>projet</p> <p><b>PIPE SUPPORT DETAIL (PS-1, 4, 4A)</b></p>	<p>designed</p> <p><b>RQC</b></p>	<p>conçu</p>	<p>checked</p>	<p>vérifié</p>
	<p>drawn</p> <p><b>RQC</b></p>	<p>dessiné</p>	<p>approved</p>	<p>approuvé</p>		
	<p>W.O.no.</p>	<p>D.T.no.</p>	<p>sheet</p>	<p>feuille</p>	<p><b>2 of/de 2</b></p>	
	<p>date</p> <p><b>11/12</b></p>	<p>date</p>	<p>scale</p> <p><b>NA</b></p>	<p>échelle</p>	<p>dwg.no.</p> <p><b>3861-ADD2-MSK-2</b></p>	<p>dessin no.</p>

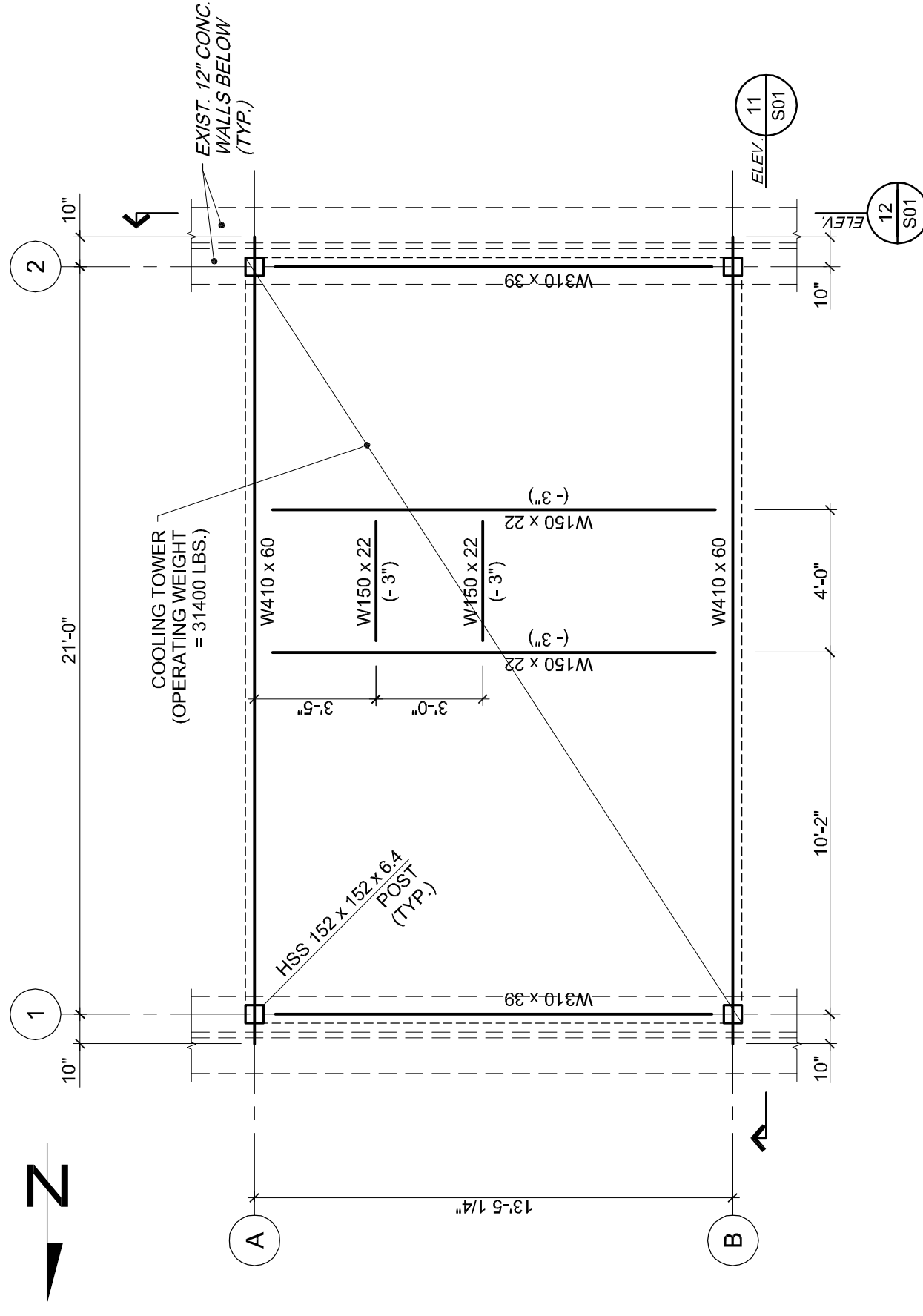
NRC · CNRC

MONTREAL ROAD CAMPUS M07

## GENERAL NOTES

### STRUCTURAL STEEL:

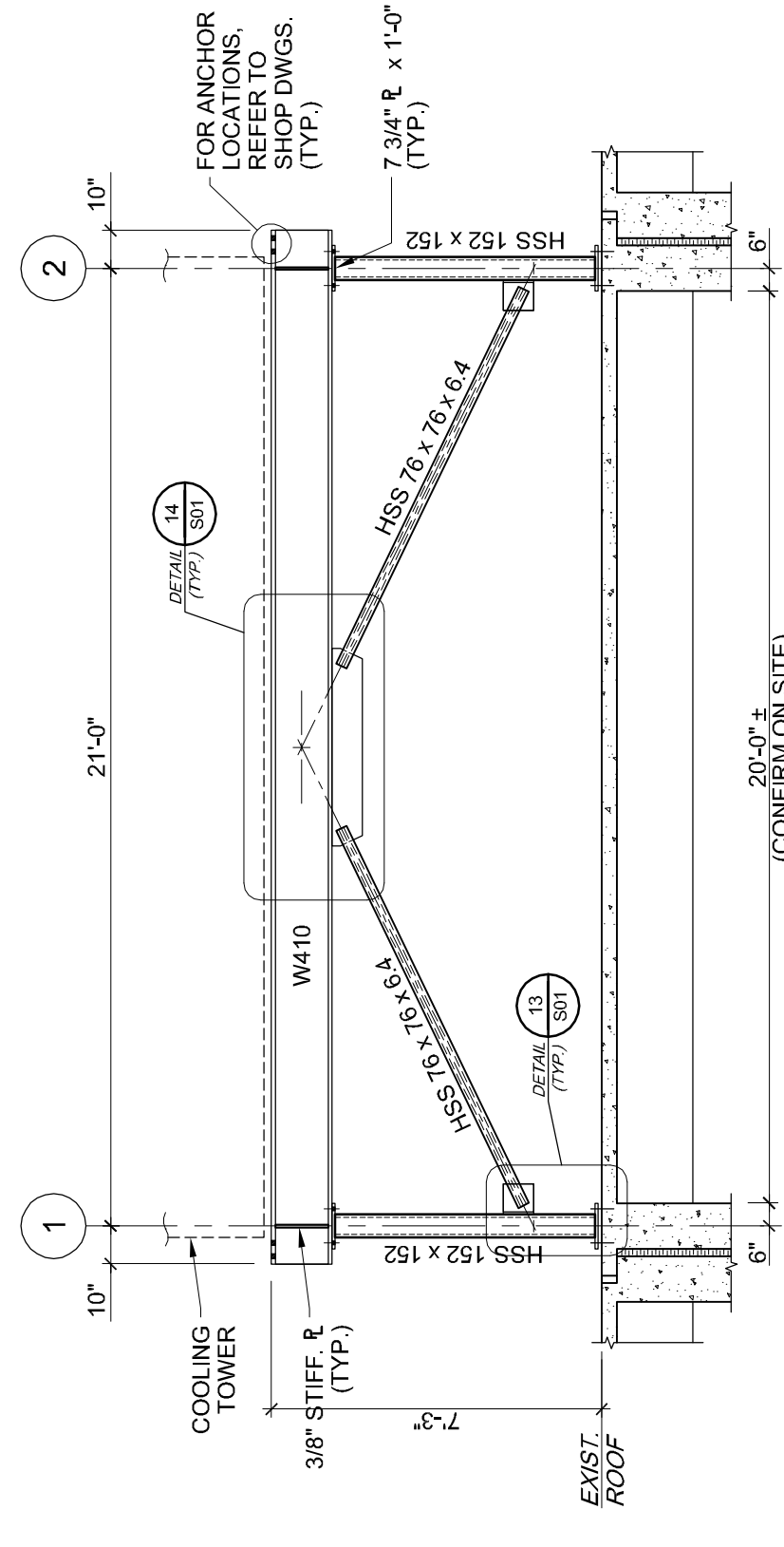
- ALL STRUCTURAL STEEL SHALL CONFORM TO CSA G40.20-04 AND CSA G40.21-04, GRADE 350W.
- ALL WELDING MATERIALS SHALL CONFORM TO CSA W48.06. WELDING SHALL CONFORM TO CSA W59.03 AND SHALL BE CARRIED OUT BY WELDERS QUALIFIED BY THE CANADIAN WELDING BUREAU.
- ALL FIELD WELDS SHALL BE TOUCHED UP WITH "ANTI-CORROSIVE ZINC-RICH PAINT FOR STRUCTURAL STEEL".
- ALL BOLTS SHALL BE GALVANIZED 3/4" DIAMETER HIGH TENSILE BOLTS CONFORMING TO ASTM A325.
- ALL STRUCTURAL STEEL SHALL BE HOT-DIPPED GALVANIZED, CONFORMING TO ASTM A123-08. COATING TO BE 600 g/m<sup>2</sup>.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS ON SITE BEFORE THE START OF FABRICATION.
- ALL STRUCTURAL STEEL WORK SHALL CONFORM TO CAN/CSA S16-01.



## PLAN OF COOLING TOWER SUPPORT STRUCTURE

SCALE: 1/4" = 1'-0"

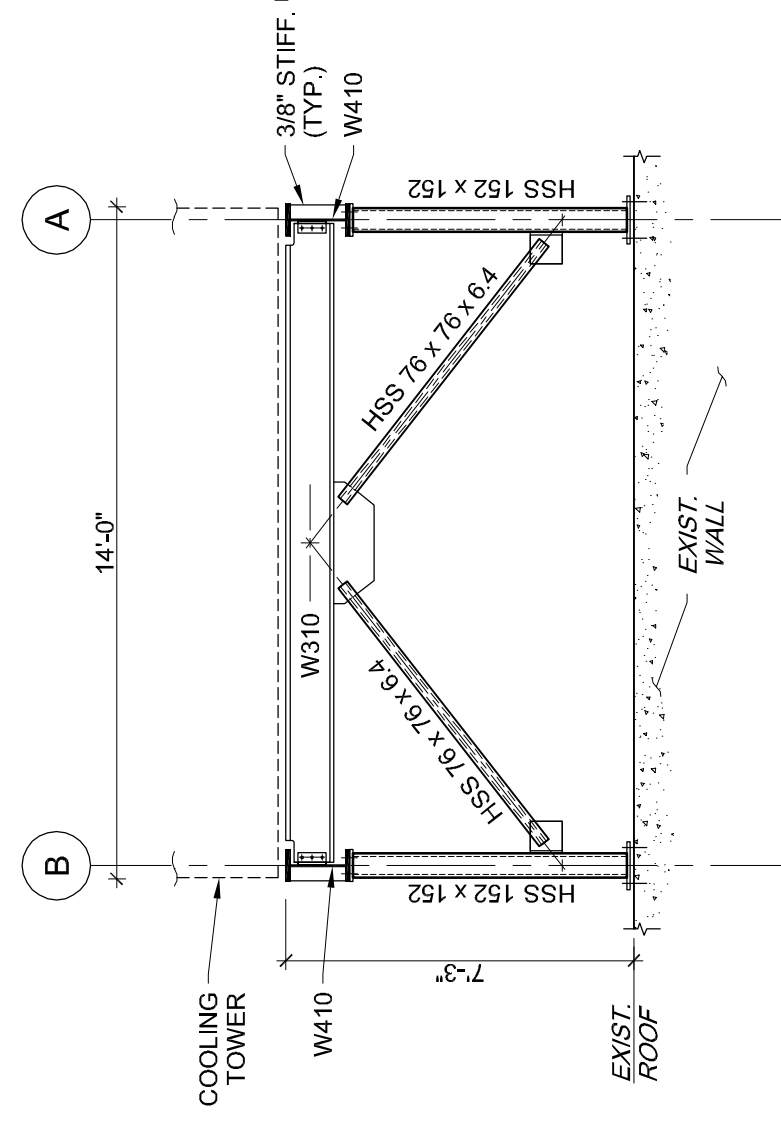
- TOP OF STEEL (T.O.S.) ELEVATION = + 7'-3" (U/M)
- THE CONTRACTOR SHALL COORDINATE COOLING TOWER ANCHOR LOCATIONS WITH COOLING TOWER SHOP DRAWINGS.
- PROVIDE BOLT HOLES IN STEEL BEAMS BEFORE GALVANIZING.
- COOLING TOWER SUPPORT STRUCTURE IS DESIGNED WITH W410 BEAMS SUPPORTING COOLING TOWER LOADS.



## 11 ELEVATION

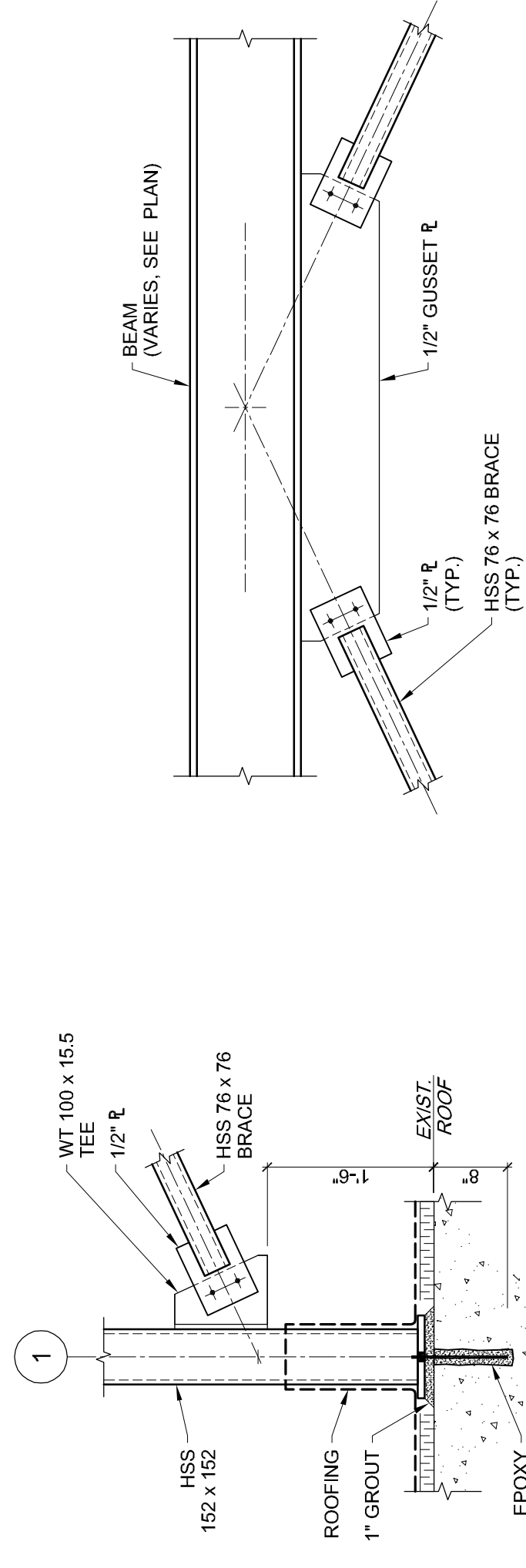
SCALE: 1/4" = 1'-0"

- CONTRACTOR SHALL CONFIRM ROOF ELEVATION AT EACH COLUMN.



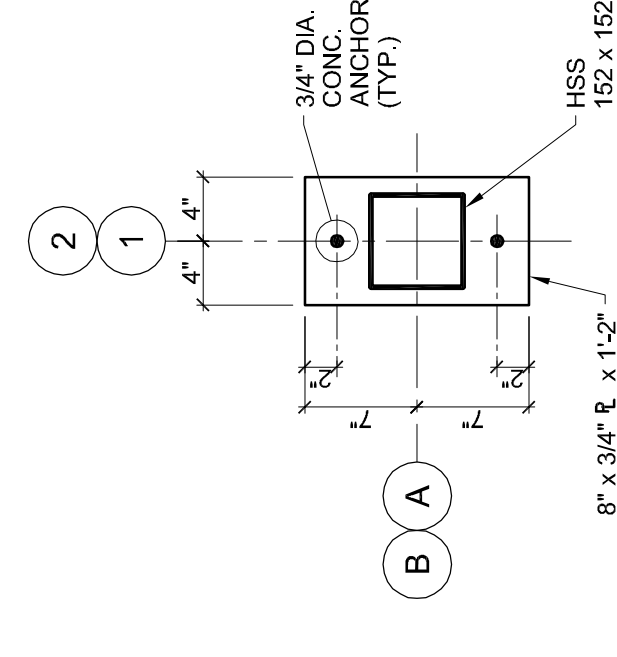
## 12 ELEVATION

SCALE: 1/4" = 1'-0"



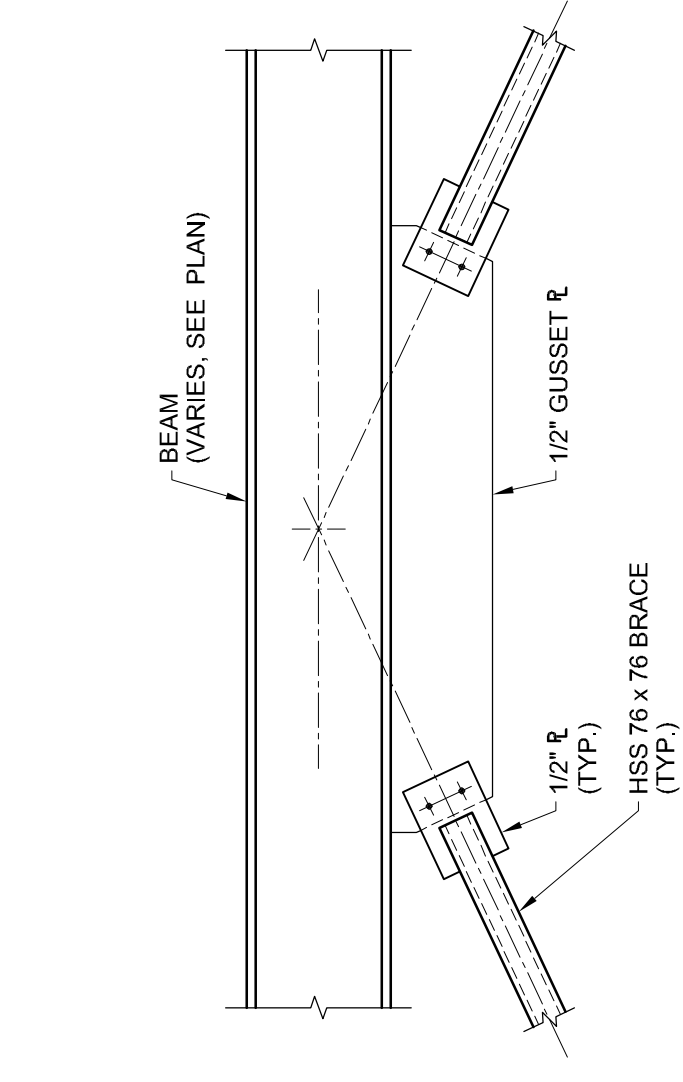
## 13 DETAIL (TYPICAL)

SCALE: 3/4" = 1'-0"



## 15 DETAIL (TYPICAL BASE)

SCALE: 1" = 1'-0"



## 14 DETAIL (TYPICAL)

SCALE: 3/4" = 1'-0"

No.	Date	Revision	By:	For:
1	NOV 26/13	ADDENDUM	RL	
0	NOV 22/13	ISSUED FOR TENDER	RL	

- Verify all dimensions and site conditions and be responsible for same.
- Vérifier toutes les dimensions et l'état des lieux et en assumer la responsabilité.

Detail no.	Detail no.
A	A
B	B
C	C

Project: BUILDING M-7 COOLING TOWER REPLACEMENT MONTREAL ROAD CAMPUS

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designed	checked	approved	date	scale	sheet	of/du	total
P.M.	D.M.D.	R.L.	NOVEMBER, 2013	AS SHOWN	S01	S01	S01

Project no. 3861-S01 - Revised