

Appendix B

Construction Installation Package

SCOPE OF WORK AND INSTALLATION PACKAGE

THE CONTRACTOR SHALL SUPPLY (IF APPLICABLE) AND INSTALL THE FOLLOWING ITEMS:

- REPLACE EXISTING MILLER FALL ARREST SAFETY RAIL WITH NEW TRYLON SAFETY RAIL
- TOWER, WAVEGUIDE BRIDGE AND GUY ANCHOR FOUNDATIONS.
- ALL REQUIRED GROUNDING MATERIALS. (INCLUDING LIGHTNING ROD AND GUY ANCHOR GROUNDING)
- ALL REQUIRED MATERIALS AND TOOLS REQUIRED TO RESTACK/REINSTALL THE DESTACKED TOWER FROM PEARCE PEAK.
- ALL GUYWIRE MATERIAL AND GUY HARDWARE ASSEMBLY.
- ANTI-CLIMB ASSEMBLY C/W ALL MOUNTING HARDWARE (SUPPLIED - INSTALL ONLY)
- WAVEGUIDE BRIDGE AND ALL ASSOCIATED MATERIALS.
- TOWER LIGHTING SYSTEM C/W ALL MATERIALS, CABLING, BEACON MOUNT AND MOUNTING HARDWARE (BEACON SYSTEM SUPPLIED).
- ALL ANTENNAS AND ALL REQUIRED ANTENNA MOUNTING HARDWARE.
- ALL Tx-LINES, CABLING AND REQUIRED MOUNTING HARDWARE AND GROUNDING MATERIALS.
- ALL REQUIRED MOUNTING HARDWARE.
- ALL REQUIRED CABLING AND GROUNDING MATERIALS.
- ALL MATERIALS REQUIRED TO DEMOLISH/DESTACK EXISTING 39.6m GUYED TOWER AT CUSLETT INCLUDING REMOVING EXISTING ANTENNAS, MOUNTS, CABLING, TOWER AND GUY ANCHOR FOUNDATIONS AND RESTORATION OF SITE.

CANADIAN COAST GUARD SUPPLIED EQUIPMENT:

- LIGHTING SYSTEM (BEACON ONLY - CONTRACTOR TO SUPPLY AND INSTALL REMAINING HARDWARE, BEACON MOUNT AND CABLING)
- EXISTING DESTACKED TOWER C/W LADDER AND ANTI-CLIMB ASSEMBLY (CURRENTLY DE-STACKED IN CAHILL STORAGE YARD ON TORBAY ROAD, ST. JOHN'S)

THE CONTRACTOR SHALL CARRY OUT THE FOLLOWING ITEMS:

- TRANSPORTATION TO SITE OF ALL REQUIRED MATERIALS AND EQUIPMENT.
- CONTRACTOR TO STORE OR DISPOSE OF ALL MATERIALS OTHER THAN THOSE TO BE RE USED UNDER THE DIRECTION OF THE OWNER.
- CONTRACTOR TO SUPPLY AND INSTALL TRYLON FALL ARREST SAFETY RAIL TO REPLACE EXISTING MILLER FALL ARREST SAFETY RAIL. INSTALL AS PER TRYLON INSTALLATION DRAWINGS.
- CONTRACTOR TO DESIGN, SUPPLY AND INSTALL TOWER, WAVEGUIDE BRIDGE AND GUY ANCHOR FOUNDATIONS. ALL FOUNDATIONS TO BE DESIGNED BY CONTRACTOR AND ANY DESIGN DRAWINGS ARE TO BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE PROVINCE OF NEWFOUNDLAND AND LABRADOR.
- CONTRACTOR TO SUPPLY AND INSTALL GROUNDING DETAILS AROUND TOWER, WAVEGUIDE BRIDGE AND GUY ANCHORS AS SHOWN ON DWG T3404-09 (OR ENGINEERED APPROVED EQUIVALENT).
- CONTRACTOR TO INSTALL/RESTACK THE DESTACKED TOWER C/W LADDER SUPPLIED BY CCG.
- CONTRACTOR TO SUPPLY AND INSTALL ALL GUYWIRE MATERIAL AND GUY HARDWARE ASSEMBLY.
- CONTRACTOR TO SUPPLY AND INSTALL LIGHTING ROD AT TOWER TOP C/W ASSOCIATED MOUNTS, MOUNTING HARDWARE, CABLING AND GROUNDING MATERIALS.
- CONTRACTOR TO INSTALL ANTI-CLIMB ASSEMBLY C/W ALL MOUNTING HARDWARE SUPPLIED BY CCG.
- CONTRACTOR TO SUPPLY AND INSTALL WAVEGUIDE BRIDGE (APPROX. WAVEGUIDE BRIDGE LENGTH = 6.0m±).
- CONTRACTOR TO SUPPLY AND INSTALL TOWER LIGHTING SYSTEM C/W ALL MATERIALS, CABLING, BEACON MOUNT AND MOUNTING HARDWARE. CANADIAN COAST GUARD TO SUPPLY TOWER BEACON ONLY.
- CONTRACTOR TO SUPPLY AND INSTALL ALL ANTENNAS AND ALL REQUIRED ANTENNA MOUNTING HARDWARE.
- CONTRACTOR TO SUPPLY AND INSTALL ALL Tx-LINES, CABLING AND REQUIRED MOUNTING HARDWARE AND GROUNDING MATERIALS FOR ANTENNA INSTALLATIONS.
- CONTRACTOR TO COMPLETE A Tx-LINE SWEEP AND REPORTING FOR EACH INSTALLED ANTENNA.
- CONTRACTOR TO SUPPLY ALL MATERIALS REQUIRED TO DEMOLISH/DESTACK EXISTING 39.6m GUYED TOWER AT CUSLETT INCLUDING REMOVING EXISTING ANTENNAS, MOUNTS, CABLING, TOWER AND GUY ANCHOR FOUNDATIONS AND RESTORATION OF SITE. CONTRACTOR TO STORE OR DISPOSE OF ALL MATERIALS OTHER THAN THOSE TO BE RE USED UNDER THE DIRECTION OF THE OWNER.

CONTRACTOR TO TAKE NOTE OF THE FOLLOWING ITEMS:

- IT IS RECOMMENDED A SITE VISIT SHALL BE CARRIED OUT BY THE BIDDER BEFORE PREPARING THEIR BID IN ORDER TO CONSIDER AND ACCOUNT FOR EXISTING SITE CONDITIONS.
- NEW TRANSMISSION LINES MUST BE INSTALLED AS SHOWN ON DRAWING T3404-02.
- THE CONTRACTOR SHALL DESIGN, FURNISH AND INSTALL STEEL ELEMENTS IN ORDER TO PROTECT THE NON VERTICAL PORTION OF THE TRANSMISSION LINES BETWEEN THE ANTENNA AND THE WAVEGUIDE SUPPORT ON THE TOWER AGAINST ANY FALLING ICE.
- CONTRACTOR TO MAINTAIN PROPER HOUSEKEEPING AND TO ENSURE THE SITE IS CLEAN UPON COMPLETION OF ALL WORK.
- CONTRACTOR SHALL BE RESPONSIBLE TO CHECK ALL MATERIALS AGAINST THE MATERIAL LIST AND PROTECT THE MATERIALS UNTIL INSTALLED AND ACCEPTED BY THE OWNER.
- GROUNDING SYSTEM MUST BE INSTALLED AS PER CANADIAN COAST GUARD NATIONAL GROUNDING STANDARDS.

GENERAL TOWER NOTES:

- ALL STEEL FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE CSA STANDARDS CSA S16.1 AND CSA S37.
- ALL WELDING SHALL BE DONE IN ACCORDANCE WITH STANDARD CSA W59 AND USING E49R.N. (Fu=450 MPa) ELECTRODES. ALL WELDING TO BE PREFORMED IN A CWB REGISTERED SHOP. FIELD-WELDING IS NOT PERMITTED UNLESS NOTED OTHERWISE.
- ALL NEW STEEL SHALL CONFORM TO CSA G40.20/G40.21 300W (PLATE AND ANGLES EQUAL TO OR SMALLER THAN 51X51) AND 350W (HSS SECTIONS AND ANGLES LARGER THAN 51X51).
- ALL NEW BOLTS, WASHERS AND NUTS SHALL CONFORM TO ASTM 325 UNLESS NOTED OTHERWISE. ALL CONNECTIONS TO BE BEARING WITH THE BOLT THREADS OUTSIDE POSSIBLE SHEAR PLANES. ALL BOLTS SHALL BE TIGHTENED USING THE TURN-OF-THE-NUT METHOD AS DESCRIBED IN THE SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. DO NOT RE-USE EXISTING BOLTS ONCE REMOVED. THREADED CONNECTIONS OTHER THAN HIGH STRENGTH BOLTS SHALL HAVE A MEANS TO PREVENT LOOSENING. ACCEPTABLE METHODS ARE LOCK WASHER OR LOCK NUTS.
- ALL U-BOLTS HAVE TO BE MINIMUM SAE J429 GRADE 2 OR EQUIVALENT WITH ROLLED THREADS. CUT THREADS ARE NOT ACCEPTABLE. EACH THREADED PART OF THE U-BOLT SHALL HAVE A ROUND FLAT WASHER ASTM F436, A SPRING LOCK WASHER EXTRA DUTY TYPE CONFORMING TO ANSI B27.1 AND A SAE GRADE 2 HEX NUT.
- THE FINISHED DIAMETER OF BOLT HOLES SHALL NOT BE MORE THAN 2mm LARGER THAN THE NOMINAL BOLT DIAMETER UNLESS NOTED OTHERWISE.
- CUT EDGES SHALL BE TRUE, SMOOTH AND FREE FROM EXCESSIVE BURRS AND RAGGED BREAKS. SHEAR EDGES OF THICK PLATES SHALL BE PLANNED TO A DEPTH OF 6mm. RE-ENTRANT CUTS SHALL BE AVOIDED; IF USED, THEY SHALL BE FILLETED BY DRILLING PRIOR TO CUTTING.
- TOLERANCES AS INDICATED IN CSA S16.1 SHALL BE CAREFULLY FOLLOWED DURING FABRICATION.
- PRIOR TO GALVANIZING, ALL FABRICATED STEEL SHALL BE THOROUGHLY SHOP INSPECTED.
- EXCEPT WHERE NOTED OTHERWISE, ALL NEW STEEL MEMBERS, BOLTS AND HARDWARE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH STANDARD CSA G164. DOUBLE-DIPPING IN GALVANIZING BATHS IS NOT PERMITTED.
- ANY DAMAGES TO GALVANIZED SURFACES AND AROUND FIELD-DRILLED HOLES SHALL BE CLEANED AND TOUCHED-UP WITH TWO COATS OF ZINC-RICH PAINT IN ACCORDANCE WITH STANDARD CSA G189.
- ALL STEEL FABRICATION AND INSTALLATION SHALL USE THE GAUGE LINES AND END DISTANCES FROM THE TABLES BELOW UNLESS NOTED OTHERWISE ON DETAIL DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL PART DIMENSIONS, SIZES AND LOCATIONS THROUGH EITHER MOCKUP OR TRIAL FIT, PRIOR TO FABRICATION.
- THE PROVISION ON THE PART OF THE CONSULTANT TO PROVIDE PART DRAWINGS DOES NOT ABSOLVE THE CONTRACTOR THE RESPONSIBILITY FOR CONFIRMING ALL DIMENSIONS. CONTRACTOR TO PRODUCE THEIR OWN SHOP DRAWINGS.
- ALL WORK TO BE DONE BY A QUALIFIED AERIAL CONTRACTOR TRAINED TO PERFORM TOWER TELECOM WORK. ALL WORK TO BE DONE IN ACCORDANCE WITH CSA S37-13 "ANTENNAS, TOWERS, AND ANTENNA-SUPPORTING STRUCTURES", ALL MUNICIPAL, FEDERAL AND PROVINCIAL SAFETY REGULATIONS.
- CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING.

PROVINCE OF NEWFOUNDLAND AND LABRADOR



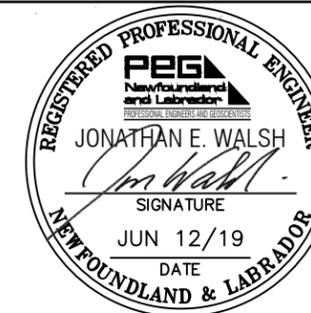
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MIRC #02255

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SITE : CUSLETT VHF, NL

CODE : T3404

DRAWING TITLE :

**SCOPE OF WORK: 45.72m MTG362KD
TOWER INSTALLATION PACKAGE**

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.
REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
SCALE :		AS SHOWN			
DATE :		2018-JUL-30			
DRAWN BY :		J. DOYLE			
APPROVED BY :		J. WALSH			
FILE No :		2018-44			
DRAWING No :		T3404-01			

LAST UPDATE: 12-Jun-19

TELECOMS SITE OWNERS GENERAL INFO & STANDARDS\CGG\CUSLETT\2018-44-TC-COG-ENGINEERING SERVICES\CUSLETT NL TOWER INSTALLATION\DRAWINGS\T3404-CUSLETT\WHF-2018-44-COG-IFTR1

LOADING	
DESIGN SPECIFICATION:	CSA S37-13/REF #3
WIND/SOURCE:	Q _n =866 Pa/REF #3
ICE/SOURCE:	35mm/REF #3
ANTENNA LIST DATED:	2018-JUL-30
LAST SITE VISIT BY:	UNKNOWN

STRUCTURAL STEEL	
LEG MEMBERS	GRADE 40.21-300W/REF #2
DIAG. AND HORIZ.	GRADE 40.21-300W/REF #2
BOLTS	ASTM A325/REF #2

GUY TERMINATION		
GUY	TOWER	ANCHOR
G-1	PREFORM	PREFORM
G-2	PREFORM	PREFORM
G-3	PREFORM	PREFORM

GUY ANCHOR INFORMATION		
AZIMUTH (°)	RADIUS (m)	ELEVATION (m)
1A-3°	42.694±	+ 2.802±
2A-123°	41.056±	+ 1.119±
3A-243°	43.266±	+ 3.405±

NOTES:

- NUMBER OF PLATES AND BOLTS GIVEN FOR LEG SPLICE IS THE TOTAL NUMBER OF ELEMENTS FORMING THE SPLICE (2 LEGS INCLUDED TOP AND BOTTOM).
- TOWER ORIGINALLY DESIGNED BY: MAXTOWER
YEAR OF ORIGINAL CONSTRUCTION: 2002
YEAR OF RELOCATION FROM PEARCE PEAK: 2018
DRAWING NO: M2007
MODEL: 45.72m MTG362KD TOWER
- TEI STRUCTURAL ANALYSIS DATED: 2018-JUL-30.

LEGEND:

S1: (28) 16mm ϕ x 70mm \pm A325 BOLTS
C/W SPLICE PLATES

S2: (16) 16mm ϕ x 64mm \pm A325 BOLTS
C/W SPLICE PLATES

D1: L44x44x4.8
H1: L51x51x4.8

EXISTING ANTENNA
THIS PROJECT ANTENNA



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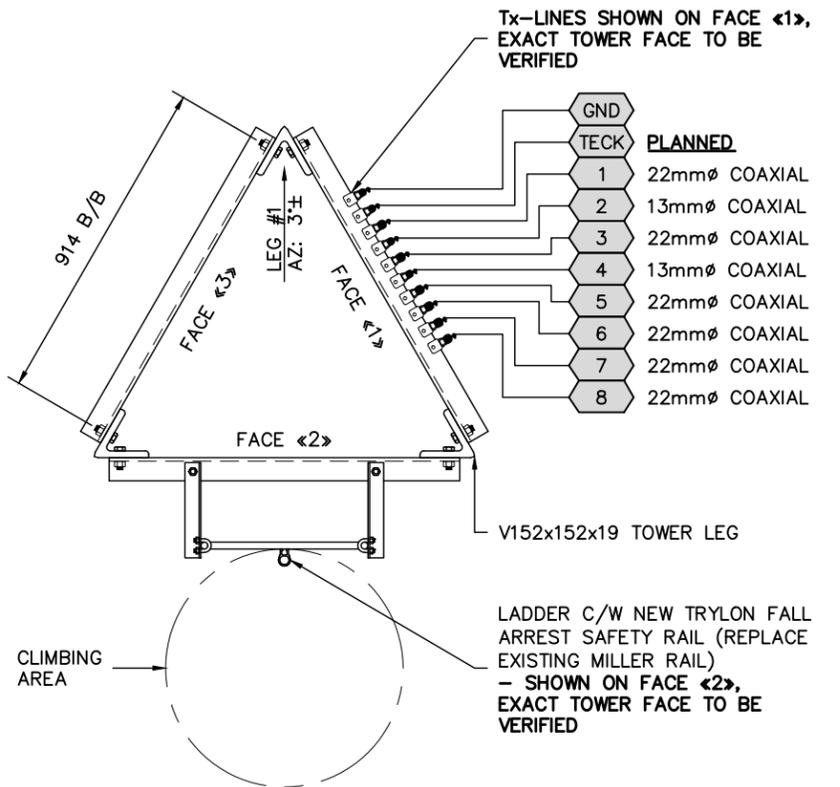
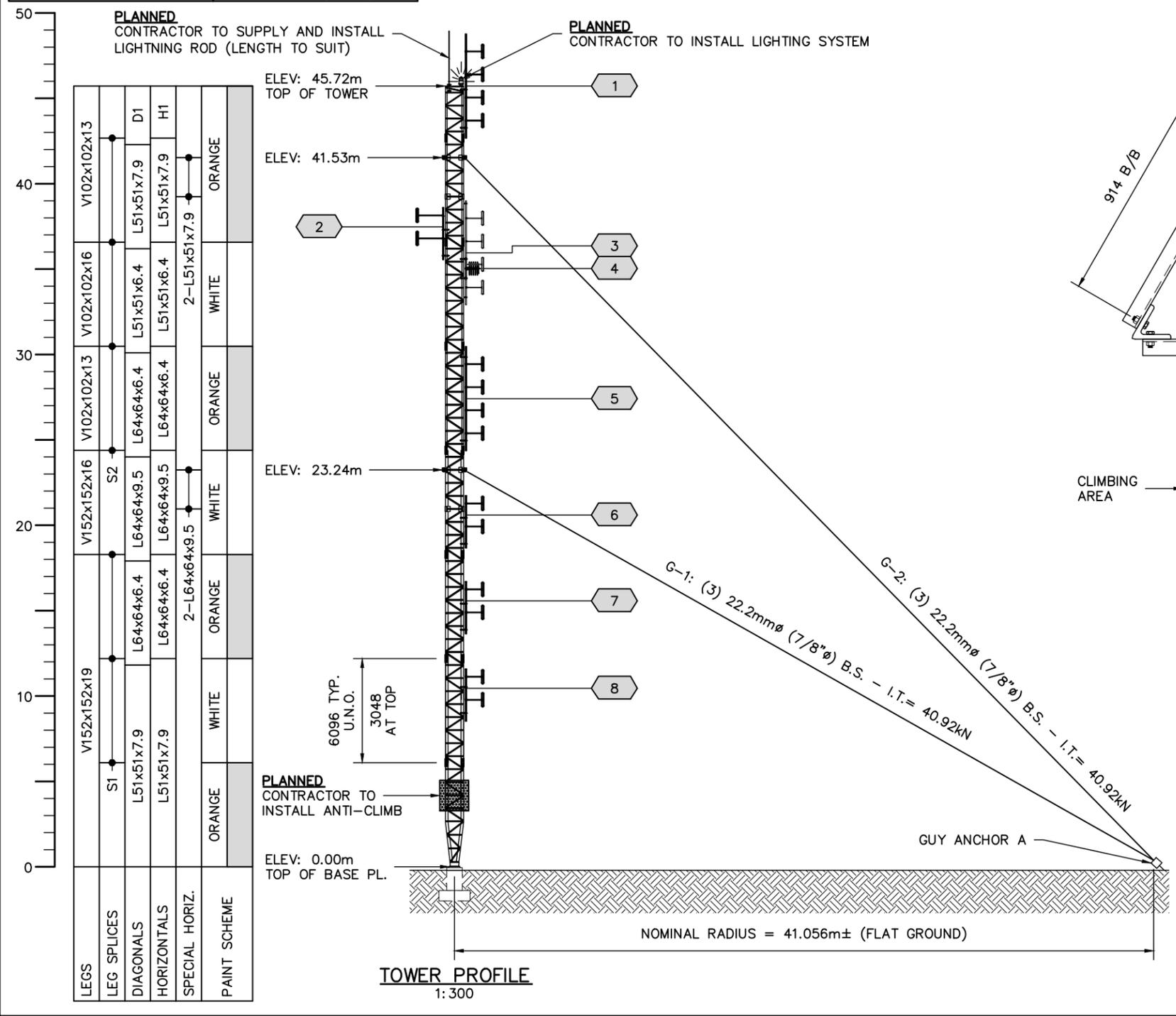
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SITE: CUSLETT VHF, NL

CODE: T3404

DRAWING TITLE:
TOWER PROFILE, Tx ARRANGEMENT
AND WAVEGUIDE PORT INFORMATION

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.
REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
SCALE: AS SHOWN					
DATE: 2018-JUL-30					
DRAWN BY: J. DOYLE					
APPROVED BY: J. WALSH					
FILE No: 2018-44					
DRAWING No: T3404-02					



Tx-ARRANGEMENT
(CROSS SECTION ABOVE WAVEGUIDE BRIDGE)
1:20

T.B.D.
CONTRACTOR TO MAP/LABEL ON SITE

WAVEGUIDE PORT INFORMATION
(VIEW FROM INSIDE OF THE SHELTER)
N.T.S.

ANTENNA LIST								
ANTENNA NO.	ANTENNA TYPE	ELEVATION (m)	AZIMUTH (°)	MAIN TX-LINE	EQUIPMENT AT ANTENNA ELEVATION LEVEL	ANTENNA OWNER	ANTENNA IDENTIFIER	STATUS
1	«SINCLAIR» SRL-210C-4	45.70	275	PLANNED (1) 22mm∅ COAXIAL	-	CCG	-	PLANNED
2	«SINCLAIR» SRL-210C-2	37.47	150	PLANNED (1) 13mm∅ COAXIAL	-	CCG	-	PLANNED
3	«SINCLAIR» SRL-210C-4	35.95	275	PLANNED (1) 22mm∅ COAXIAL	-	RCMP	-	PLANNED
4	«SINCLAIR» SRL-227	35.03	36	PLANNED (1) 13mm∅ COAXIAL	-	CCG	-	PLANNED
5	«SINCLAIR» SRL-210C-4	27.41	275	PLANNED (1) 22mm∅ COAXIAL	-	CCG	-	PLANNED
6	«SINCLAIR» SRL-210C-2	20.56	275	PLANNED (1) 22mm∅ COAXIAL	-	CCG	-	PLANNED
7	«SINCLAIR» SRL-210C-2	15.57	275	PLANNED (1) 22mm∅ COAXIAL	-	RCMP	-	PLANNED
8	«SINCLAIR» SRL-210C-2	10.45	275	PLANNED (1) 22mm∅ COAXIAL	-	RCMP	-	PLANNED

NOTES:

1-THE ELEVATIONS OF THE ANTENNAS ARE GIVEN TO THE CENTER OF THE ANTENNA (ANTENNA MIDPOINT) WITH RESPECT TO ELEVATION 0.0m ON THE TOWER (TOP OF THE BASE PLATE).

LEGEND:

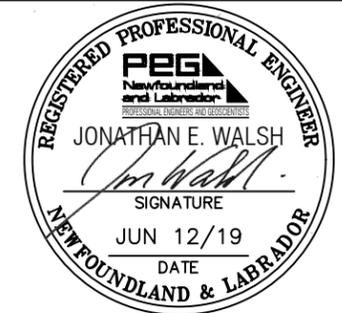
- CCG = CANADIAN COAST GUARD
- RCMP = ROYAL CANADIAN MOUNTED POLICE

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CODE : T3404

DRAWING TITLE :

ANTENNA LIST

REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.

SCALE : AS SHOWN
DATE : 2018-JUL-30
DRAWN BY : J. DOYLE
APPROVED BY : J. WALSH
FILE No : 2018-44
DRAWING No : T3404-03



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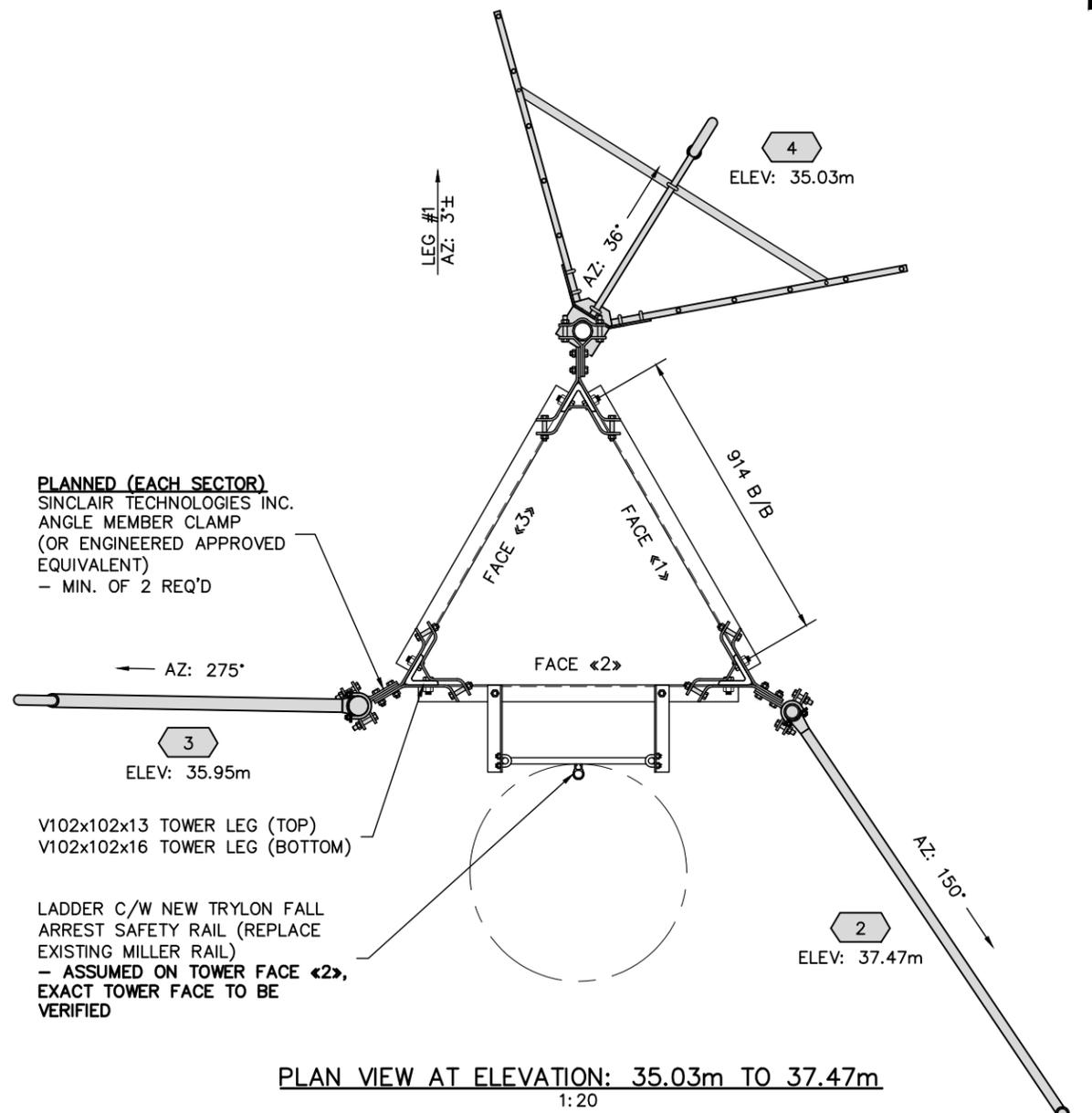
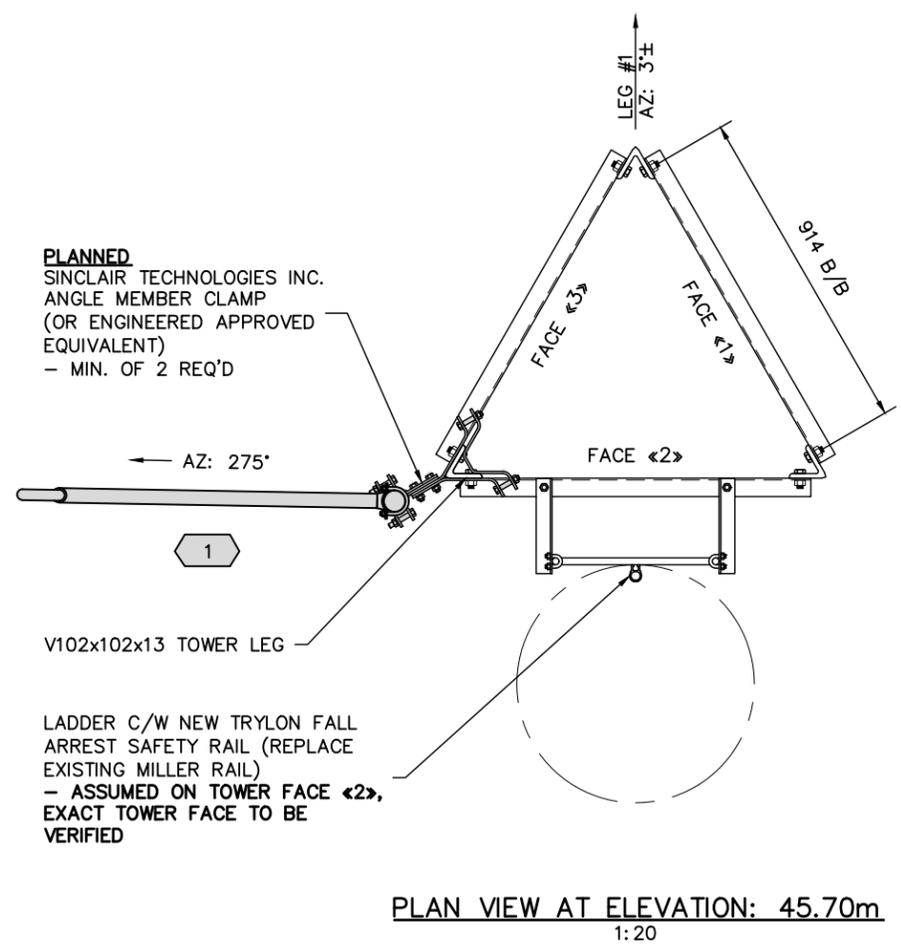
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DRAWING TITLE:
ANTENNA LAYOUT
 (PAGE 1 OF 3)

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
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DRAWN BY :					J. DOYLE
APPROVED BY :					J. WALSH
FILE No :					2018-44
DRAWING No :					T3404-04A

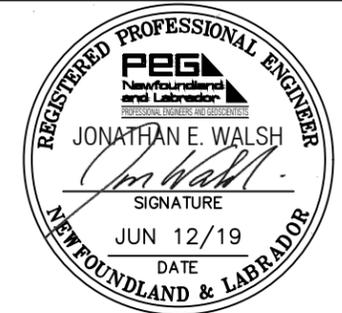


LAST UPDATE: 12-Jun-19

T:\TELECOMS SITE OWNERS-GENERAL INFO & STANDARDS\CCG CUSLETT\2018-44\T-CCG-ENGINEERING SERVICES\CUSLETT\NL TOWER INSTALLATION\DRAWINGS\T3404-CUSLETT\WF-2018-44-CCG-FTFR1



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ANTENNA LAYOUT
 (PAGE 2 OF 3)

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REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
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SCALE: AS SHOWN

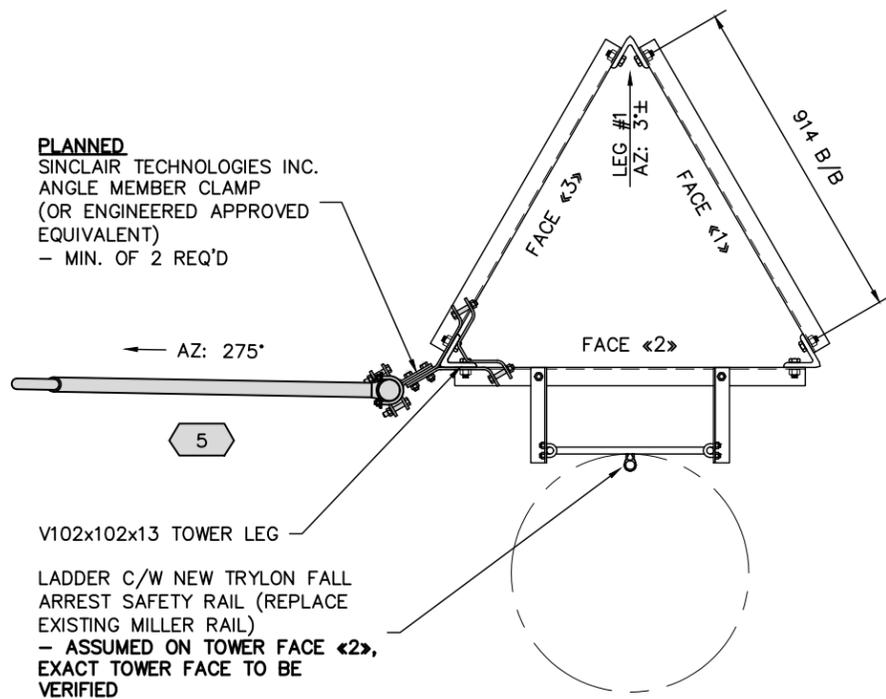
DATE: 2018-JUL-30

DRAWN BY: J. DOYLE

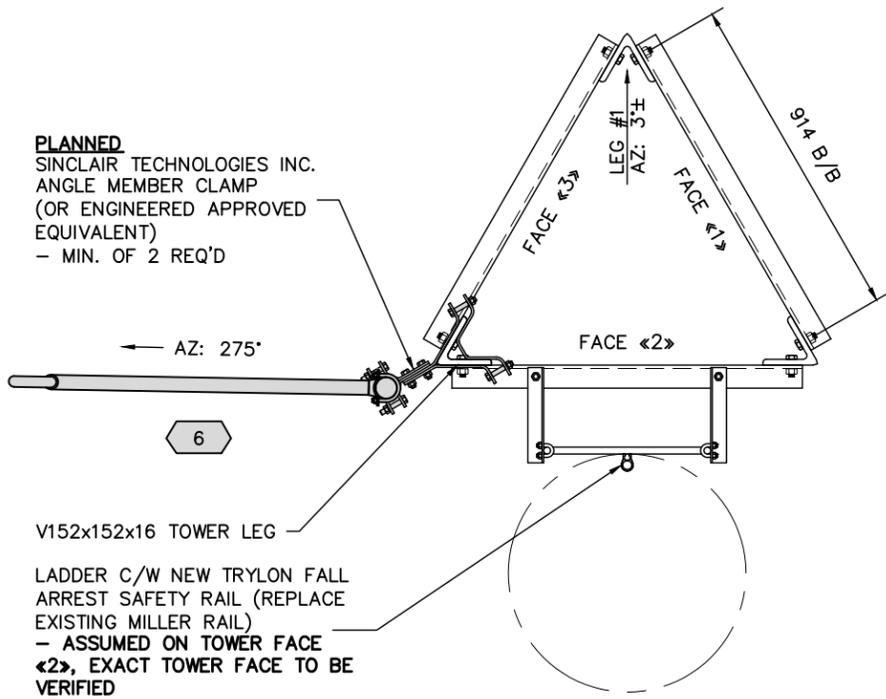
APPROVED BY: J. WALSH

FILE No: 2018-44

DRAWING No: T3404-04B



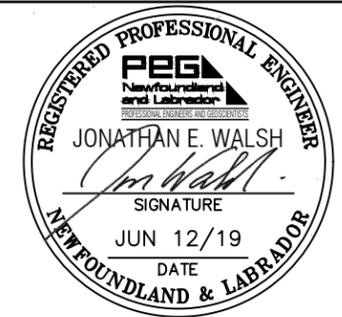
PLAN VIEW AT ELEVATION: 27.41m
 1: 20



PLAN VIEW AT ELEVATION: 20.56m
 1: 20



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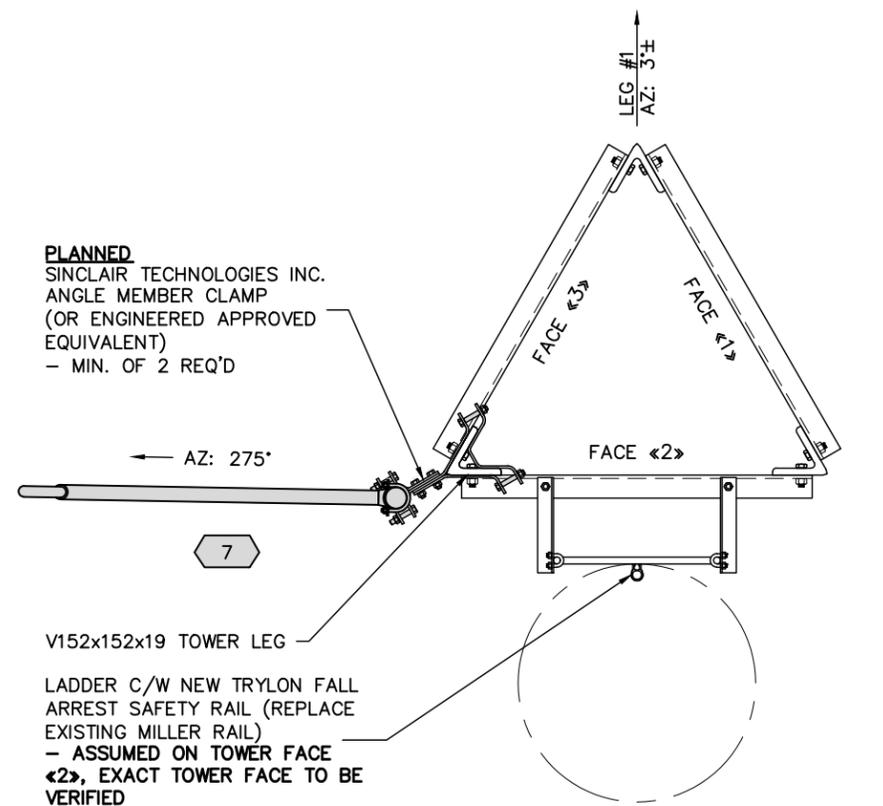
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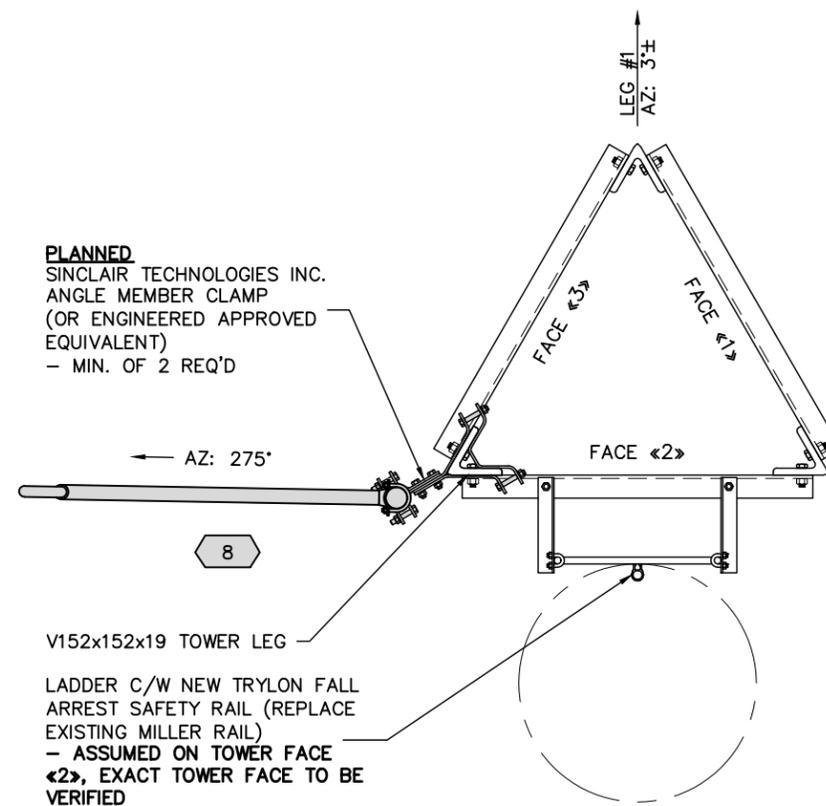
CODE : T3404

DRAWING TITLE :

ANTENNA LAYOUT
 (PAGE 3 OF 3)



PLAN VIEW AT ELEVATION: 15.57m
 1:20

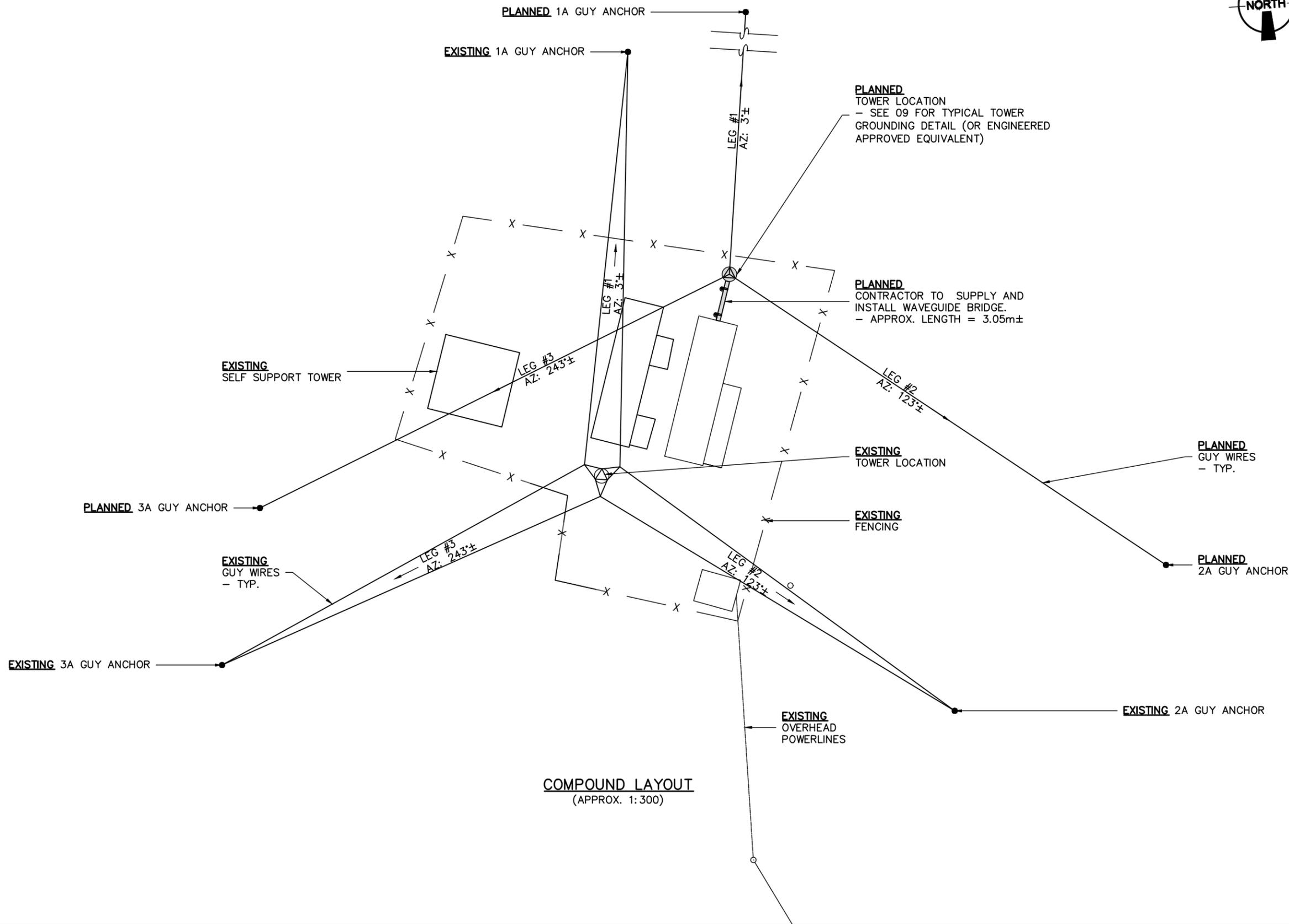


PLAN VIEW AT ELEVATION: 10.45m
 1:20

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.
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APPROVED BY :					J. WALSH
FILE No :					2018-44
DRAWING No :					T3404-04C

LAST UPDATE: 12-Jun-19

T:\TELECOMS SITE OWNERS-GENERAL INFO & STANDARDS\CCG\CUSLETT\2018-44-TC-CCG-ENGINEERING SERVICES-CUSLETT NL TOWER INSTALLATION\DRAWINGS\NET\T3404-CUSLETTVHF-2018-44-CCG-IT-R1



COMPOUND LAYOUT
(APPROX. 1:300)



PROVINCE OF NEWFOUNDLAND AND LABRADOR
PEG PERMIT HOLDER
Newfoundland and Labrador PROFESSIONAL ENGINEERS ASSOCIATION
 This Permit Allows
TILLER ENGINEERING INC.
 MIRC #02255
 To practice Professional Engineering
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 which is valid for the year 2019



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 Canadian Coast Guard
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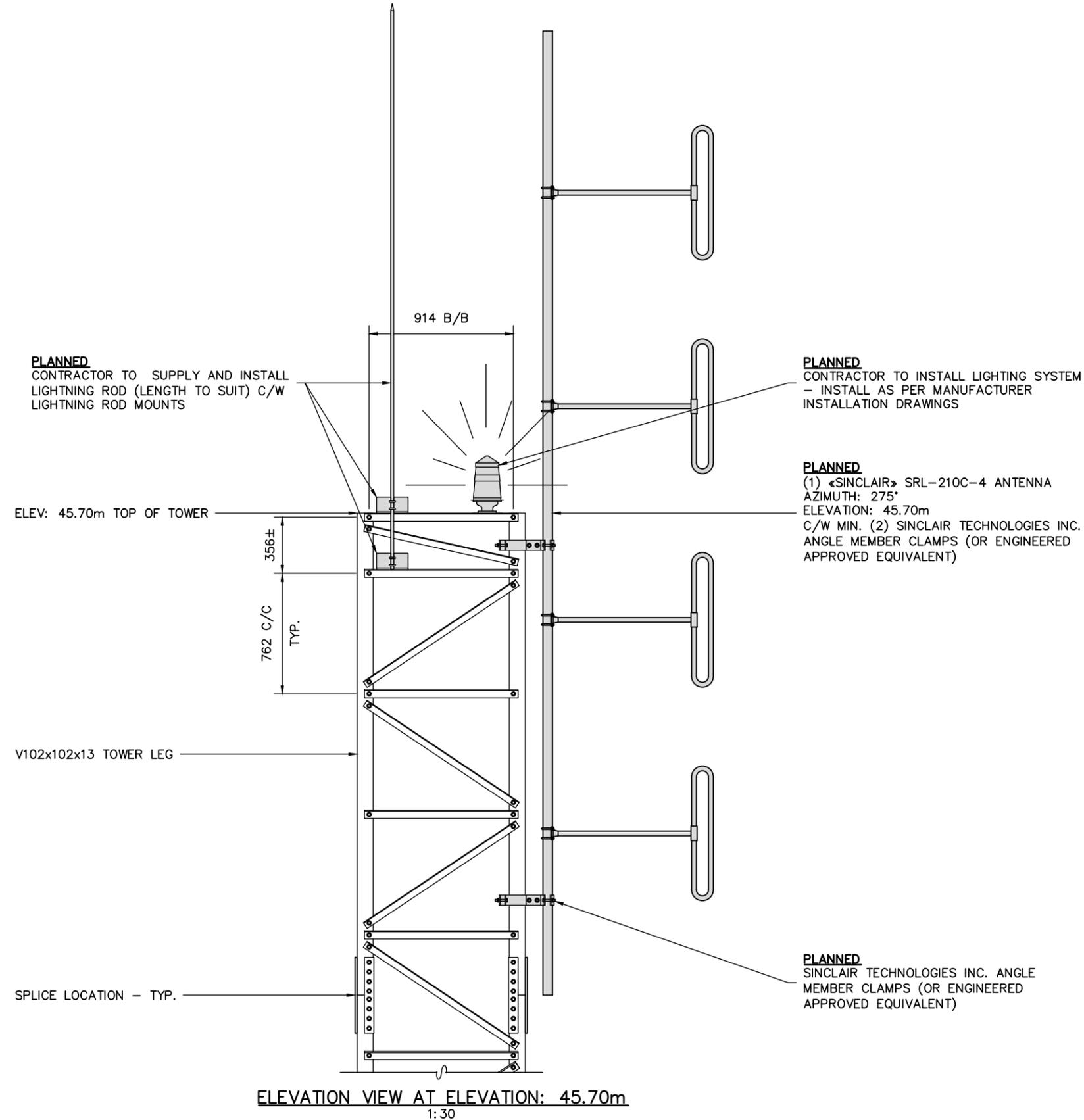
SITE : CUSLETT VHF, NL

CODE : T3404

DRAWING TITLE :

COMPOUND LAYOUT

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.
REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
SCALE :		AS SHOWN			
DATE :		2018-JUL-30			
DRAWN BY :		J. DOYLE			
APPROVED BY :		J. WALSH			
FILE No :		2018-44			
DRAWING No :		T3404-05			



PLANNED
CONTRACTOR TO SUPPLY AND INSTALL LIGHTNING ROD (LENGTH TO SUIT) C/W LIGHTNING ROD MOUNTS

PLANNED
CONTRACTOR TO INSTALL LIGHTING SYSTEM - INSTALL AS PER MANUFACTURER INSTALLATION DRAWINGS

PLANNED
(1) «SINCLAIR» SRL-210C-4 ANTENNA
AZIMUTH: 275°
ELEVATION: 45.70m
C/W MIN. (2) SINCLAIR TECHNOLOGIES INC. ANGLE MEMBER CLAMPS (OR ENGINEERED APPROVED EQUIVALENT)

PLANNED
SINCLAIR TECHNOLOGIES INC. ANGLE MEMBER CLAMPS (OR ENGINEERED APPROVED EQUIVALENT)

ELEVATION VIEW AT ELEVATION: 45.70m
1:30

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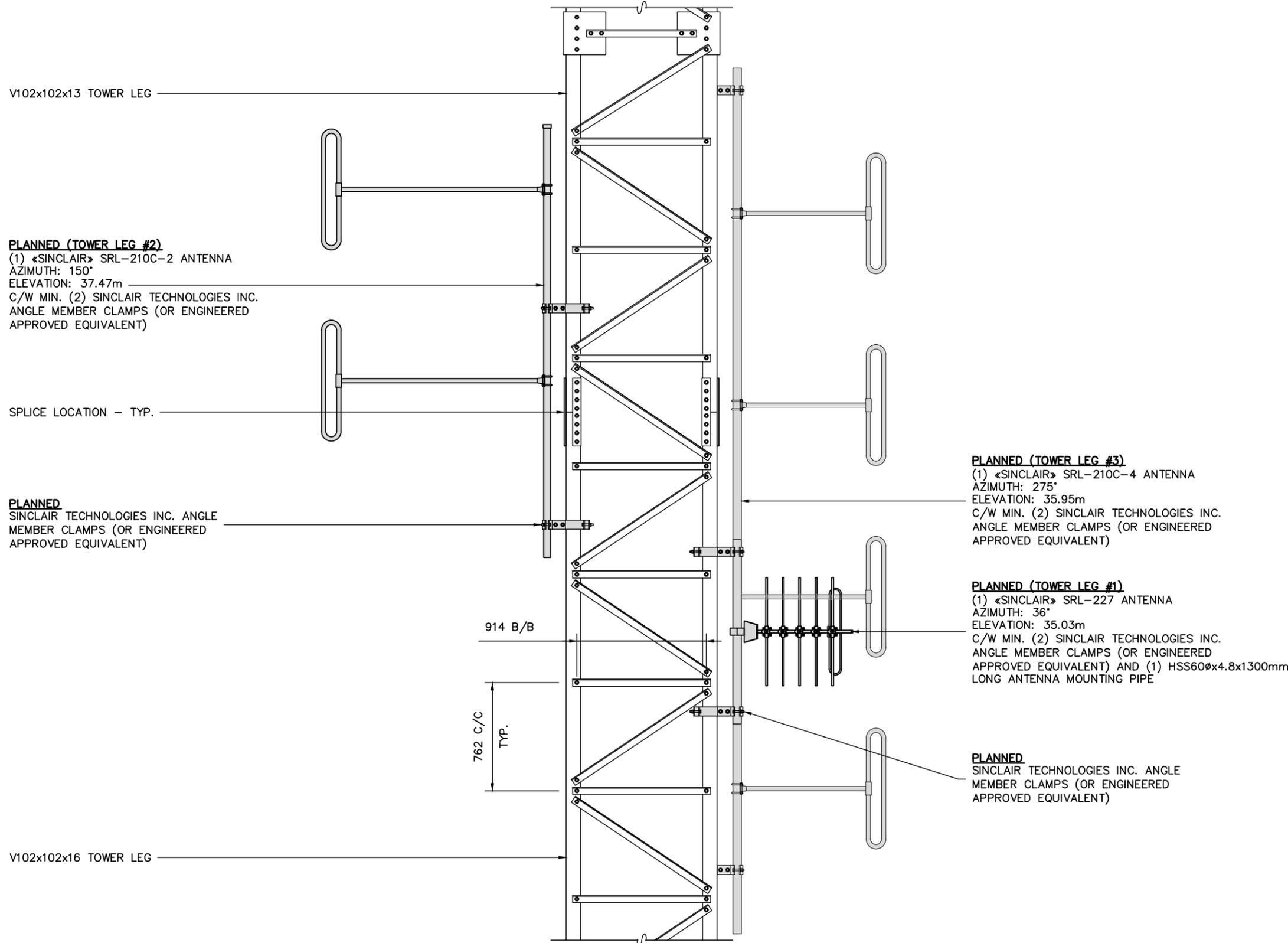
CODE : T3404

DRAWING TITLE :
**SUPPORT FOR ANTENNAS AT
ELEVATION 45.70m
(ELEVATION VIEW)
(PAGE 1 OF 6)**

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.
REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
SCALE :					AS SHOWN
DATE :					2018-JUL-30
DRAWN BY :					J. DOYLE
APPROVED BY :					J. WALSH
FILE No :					2018-44
DRAWING No :					T3404-06A

LAST UPDATE: 12-Jun-19

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PLANNED (TOWER LEG #2)
 (1) «SINCLAIR» SRL-210C-2 ANTENNA
 AZIMUTH: 150°
 ELEVATION: 37.47m
 C/W MIN. (2) SINCLAIR TECHNOLOGIES INC.
 ANGLE MEMBER CLAMPS (OR ENGINEERED
 APPROVED EQUIVALENT)

SPLICE LOCATION - TYP.

PLANNED
 SINCLAIR TECHNOLOGIES INC. ANGLE
 MEMBER CLAMPS (OR ENGINEERED
 APPROVED EQUIVALENT)

PLANNED (TOWER LEG #3)
 (1) «SINCLAIR» SRL-210C-4 ANTENNA
 AZIMUTH: 275°
 ELEVATION: 35.95m
 C/W MIN. (2) SINCLAIR TECHNOLOGIES INC.
 ANGLE MEMBER CLAMPS (OR ENGINEERED
 APPROVED EQUIVALENT)

PLANNED (TOWER LEG #1)
 (1) «SINCLAIR» SRL-227 ANTENNA
 AZIMUTH: 36°
 ELEVATION: 35.03m
 C/W MIN. (2) SINCLAIR TECHNOLOGIES INC.
 ANGLE MEMBER CLAMPS (OR ENGINEERED
 APPROVED EQUIVALENT) AND (1) HSS60x4.8x1300mm
 LONG ANTENNA MOUNTING PIPE

PLANNED
 SINCLAIR TECHNOLOGIES INC. ANGLE
 MEMBER CLAMPS (OR ENGINEERED
 APPROVED EQUIVALENT)

ELEVATION VIEW AT ELEVATION: 35.03m TO 37.47m

1:30

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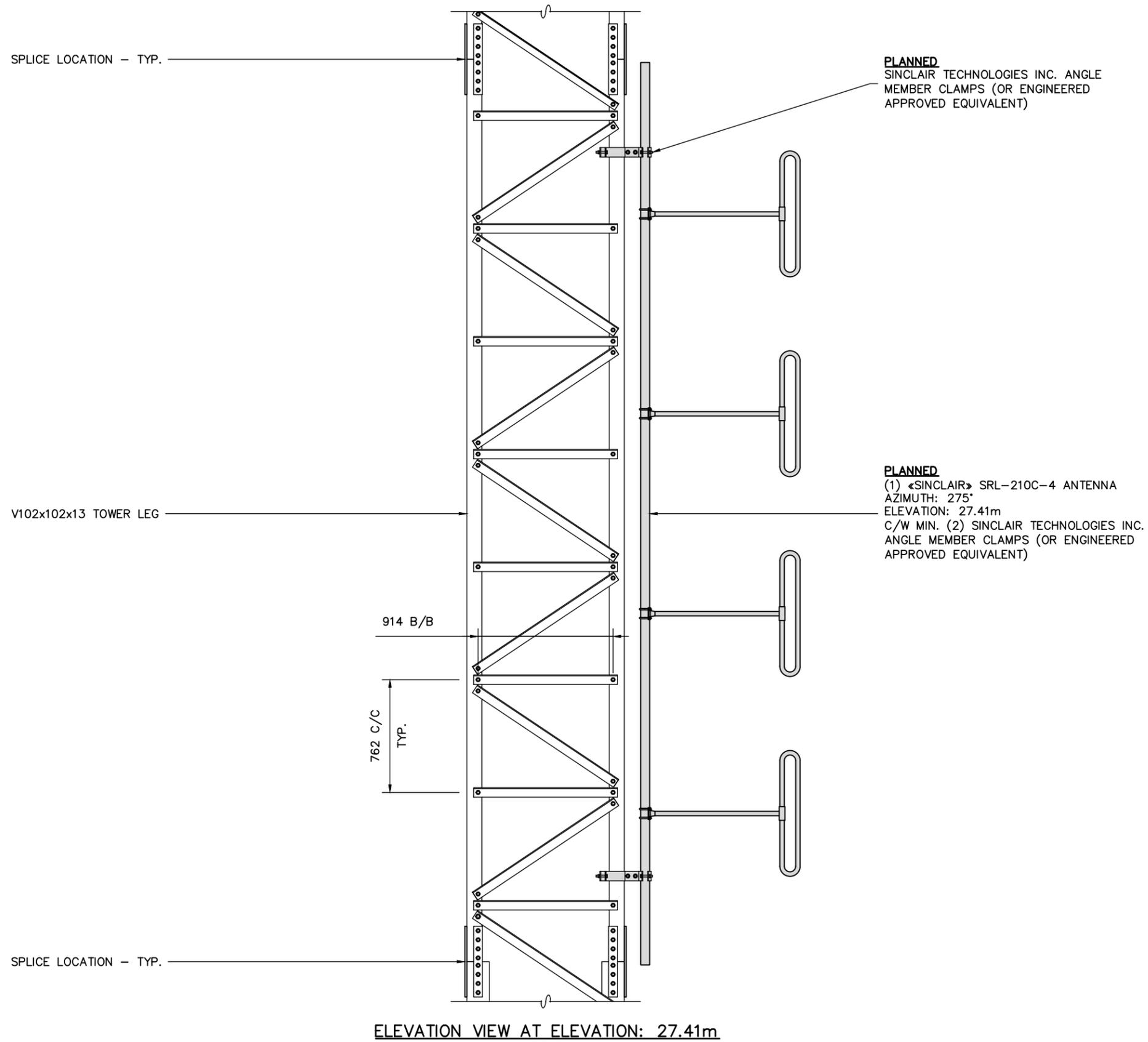
CODE: T3404

DRAWING TITLE:
**SUPPORT FOR ANTENNAS AT
 ELEVATION 35.03m TO 37.47m
 (ELEVATION VIEW)
 (PAGE 2 OF 6)**

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.
REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
SCALE:			AS SHOWN		
DATE:			2018-JUL-30		
DRAWN BY:			J. DOYLE		
APPROVED BY:			J. WALSH		
FILE No:			2018-44		
DRAWING No:			T3404-06B		

LAST UPDATE: 12-Jun-19

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ELEVATION VIEW AT ELEVATION: 27.41m
1:30

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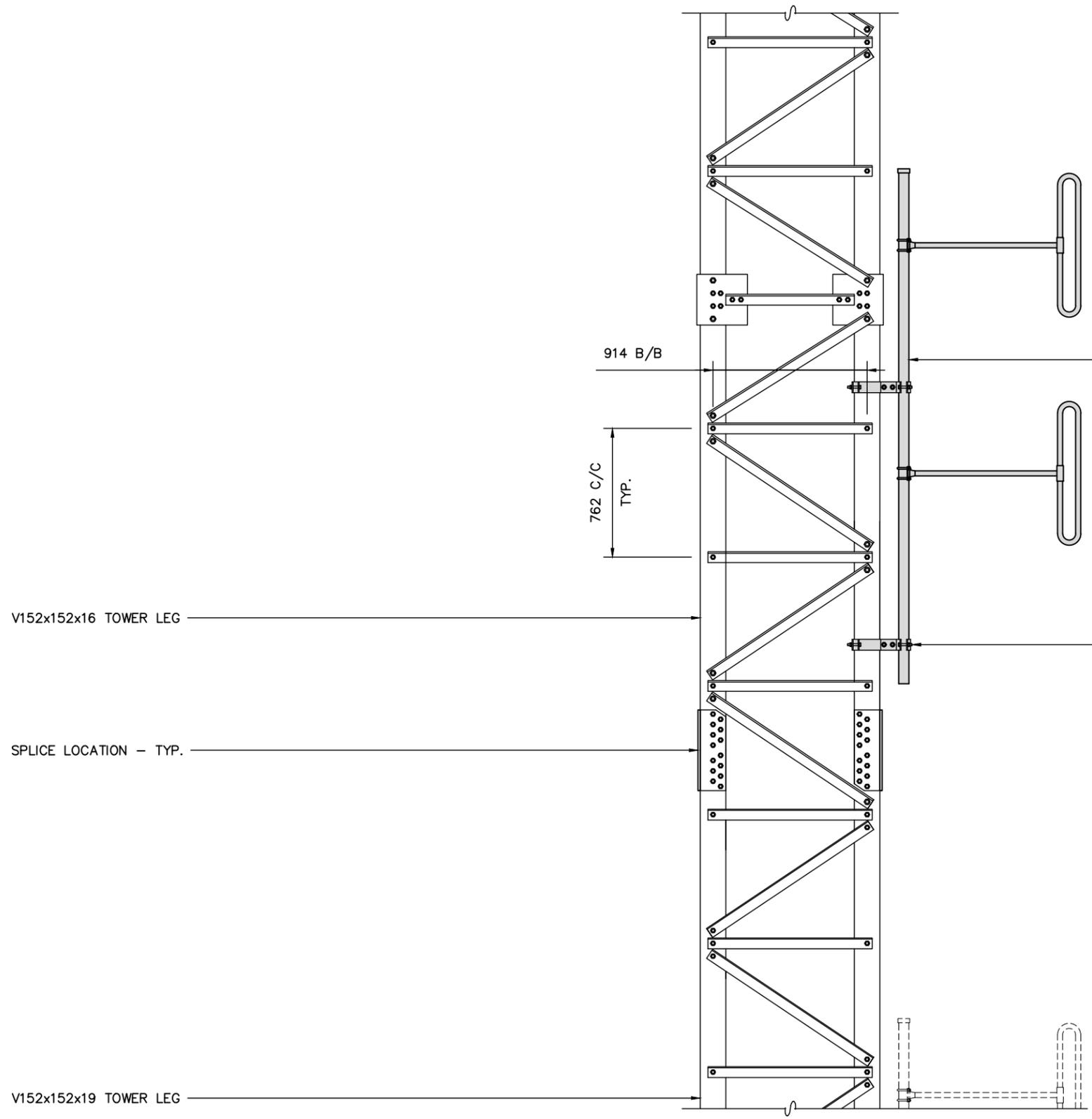
CODE : T3404

DRAWING TITLE :
 SUPPORT FOR ANTENNAS AT
 ELEVATION 27.41m
 (ELEVATION VIEW)
 (PAGE 3 OF 6)

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.
REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
SCALE :			AS SHOWN		
DATE :			2018-JUL-30		
DRAWN BY :			J. DOYLE		
APPROVED BY :			J. WALSH		
FILE No :			2018-44		
DRAWING No :			T3404-06C		

LAST UPDATE: 12-Jun-19

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ELEVATION VIEW AT ELEVATION: 17.35m TO 20.56m
1:30

PLANNED
(1) «SINCLAIR» SRL-210C-2 ANTENNA
AZIMUTH: 275°
ELEVATION: 20.56m
C/W MIN. (2) SINCLAIR TECHNOLOGIES INC.
ANGLE MEMBER CLAMPS (OR ENGINEERED
APPROVED EQUIVALENT)

PLANNED
SINCLAIR TECHNOLOGIES INC. ANGLE
MEMBER CLAMPS (OR ENGINEERED
APPROVED EQUIVALENT)

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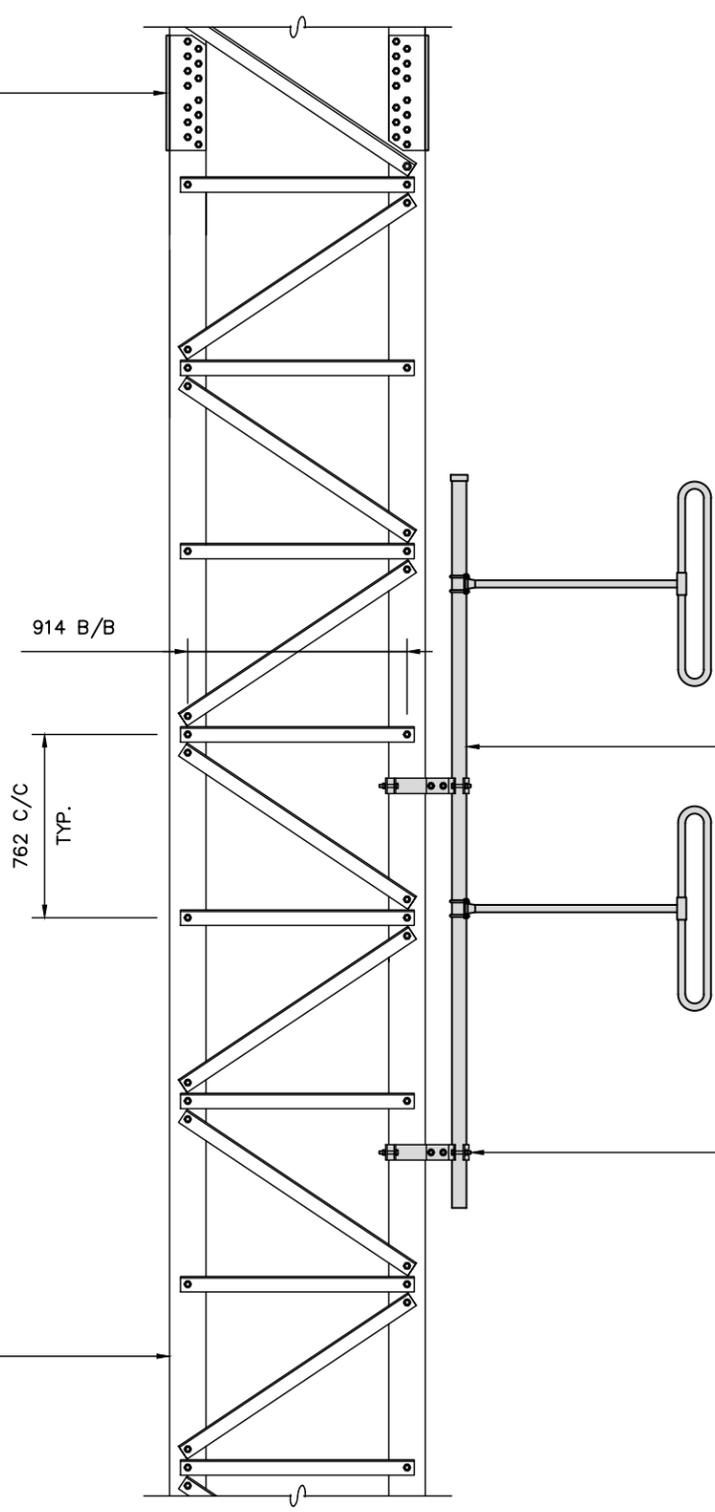
DRAWING TITLE :
**SUPPORT FOR ANTENNAS AT
ELEVATION 17.35m TO 20.56m
(ELEVATION VIEW)
(PAGE 4 OF 6)**

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.
REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
SCALE :					AS SHOWN
DATE :					2018-JUL-30
DRAWN BY :					J. DOYLE
APPROVED BY :					J. WALSH
FILE No :					2018-44
DRAWING No :					T3404-06D

LAST UPDATE: 12-Jun-19

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SPLICE LOCATION - TYP.



ELEVATION VIEW AT ELEVATION: 15.57m
1:30

PLANNED
 (1) «SINCLAIR» SRL-210C-2 ANTENNA
 AZIMUTH: 275°
 ELEVATION: 15.57m
 C/W MIN. (2) SINCLAIR TECHNOLOGIES INC.
 ANGLE MEMBER CLAMPS (OR ENGINEERED
 APPROVED EQUIVALENT)
 - RCMP SUPPLIED (ANTENNA/CABLING) TO BE
 CONTRACTOR INSTALL ONLY WITH CABLES
 TERMINATED WITHIN SHELTER.
 - OWNER TO PROVIDE ANTENNA/CABLING
 UPON CONTRACT AWARD

PLANNED
 SINCLAIR TECHNOLOGIES INC. ANGLE
 MEMBER CLAMPS (OR ENGINEERED
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DRAWING TITLE :
**SUPPORT FOR ANTENNAS AT
 ELEVATION 15.57m
 (ELEVATION VIEW)
 (PAGE 5 OF 6)**

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.

REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
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SCALE : AS SHOWN

DATE : 2018-JUL-30

DRAWN BY : J. DOYLE

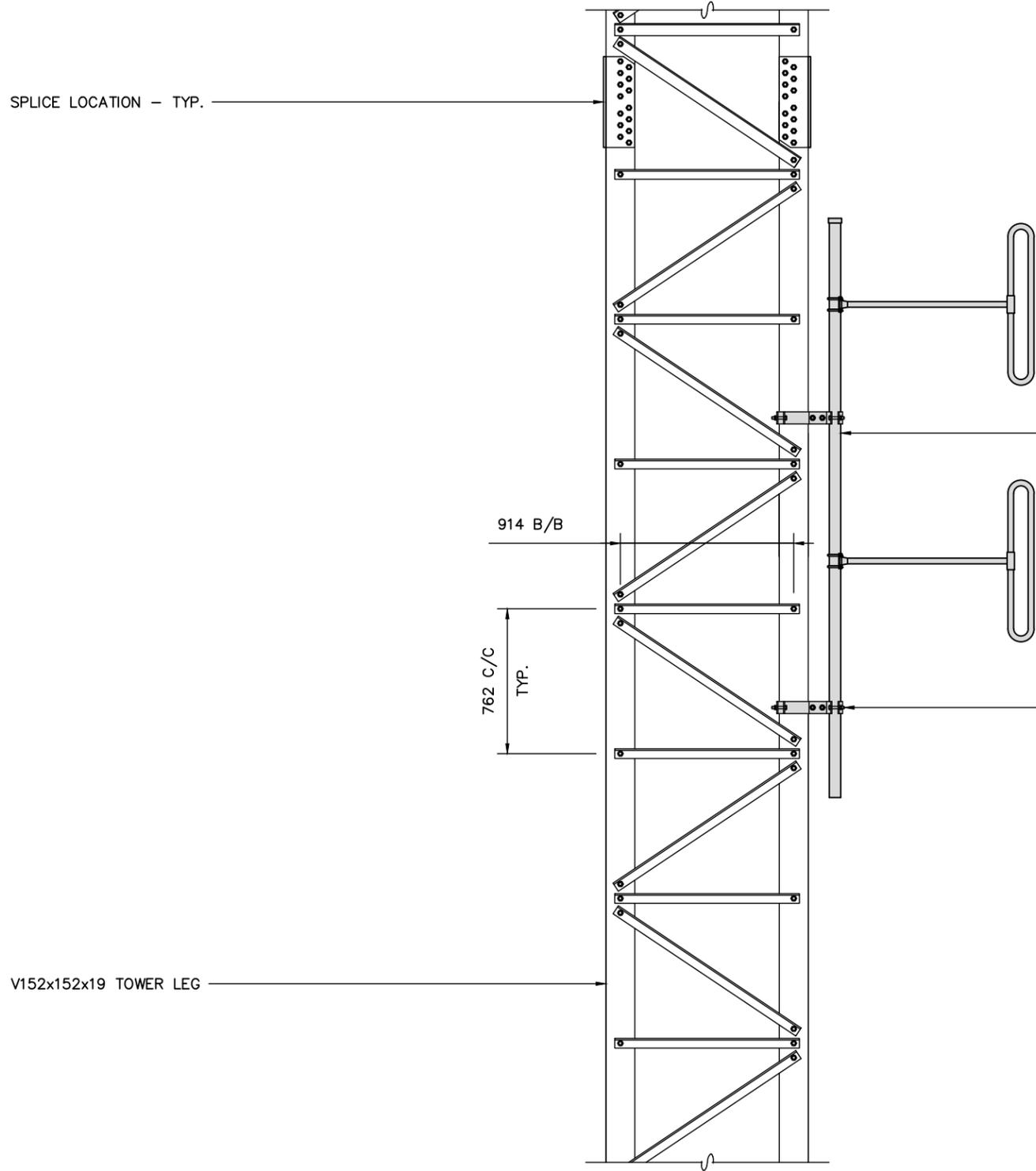
APPROVED BY : J. WALSH

FILE No : 2018-44

DRAWING No : T3404-06E

LAST UPDATE: 12-Jun-19

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ELEVATION VIEW AT ELEVATION: 10.45m
1:30

PLANNED
 (1) «SINCLAIR» SRL-210C-2 ANTENNA
 AZIMUTH: 275°
 ELEVATION: 10.45m
 C/W MIN. (2) SINCLAIR TECHNOLOGIES INC.
 ANGLE MEMBER CLAMPS (OR ENGINEERED
 APPROVED EQUIVALENT)
 - RCMP SUPPLIED (ANTENNA/CABLING) TO
 BE CONTRACTOR INSTALL ONLY WITH
 CABLES TERMINATED WITHIN SHELTER.
 - OWNER TO PROVIDE ANTENNA/CABLING
 UPON CONTRACT AWARD

PLANNED
 SINCLAIR TECHNOLOGIES INC. ANGLE
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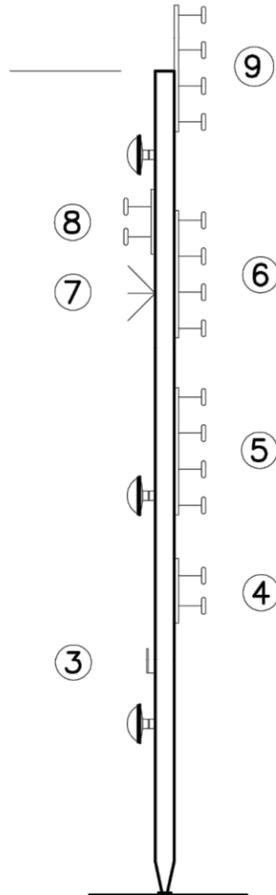
CODE : T3404

DRAWING TITLE :
**SUPPORT FOR ANTENNAS AT
 ELEVATION 10.45m
 (ELEVATION VIEW)
 (PAGE 6 OF 6)**

R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.
REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
SCALE :			AS SHOWN		
DATE :			2018-JUL-30		
DRAWN BY :			J. DOYLE		
APPROVED BY :			J. WALSH		
FILE No :			2018-44		
DRAWING No :			T3404-06F		

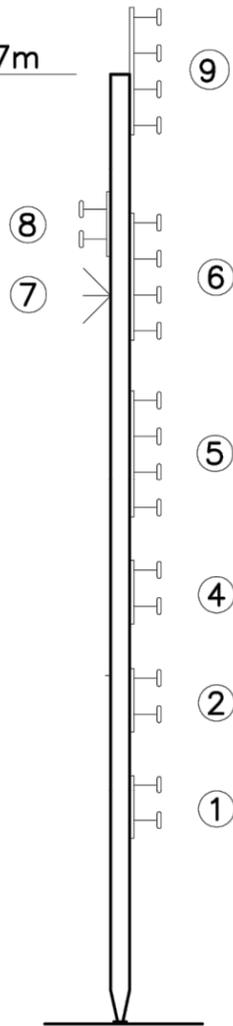
EXISTING

39.6m



PROPOSED

45.7m



ANTENNA SYSTEMS					
ITEM	TYPE	ELEV. (ANTENNA MID POINT)	AZ.	LOCATION	TX LINE
1	SRL-210C-2	10.45M	275°	LEG 3	22mm COAXIAL
2	SRL-210C-2	15.57M	275°	LEG 3	22mm COAXIAL
3	BLUEWAVE (V) (BWY 146Y-4)	17.35M	44°	LEG 1	13mm COAXIAL
4	SRL-210C-2	20.56M	275°	LEG 3	22mm COAXIAL
5	SRL-210C-4	27.41M	275°	LEG 3	22mm COAXIAL
6	SRL-210C-4	35.95M	275°	LEG 3	22mm COAXIAL
7	SRL-227	35.03	36°	LEG 1	13mm COAXIAL
8	SRL-210C-2	37.47	150°	LEG 2	13mm COAXIAL
9	SRL-210C-4	45.70M	275°	LEG 3	22mm COAXIAL

PROVINCE OF NEWFOUNDLAND AND LABRADOR



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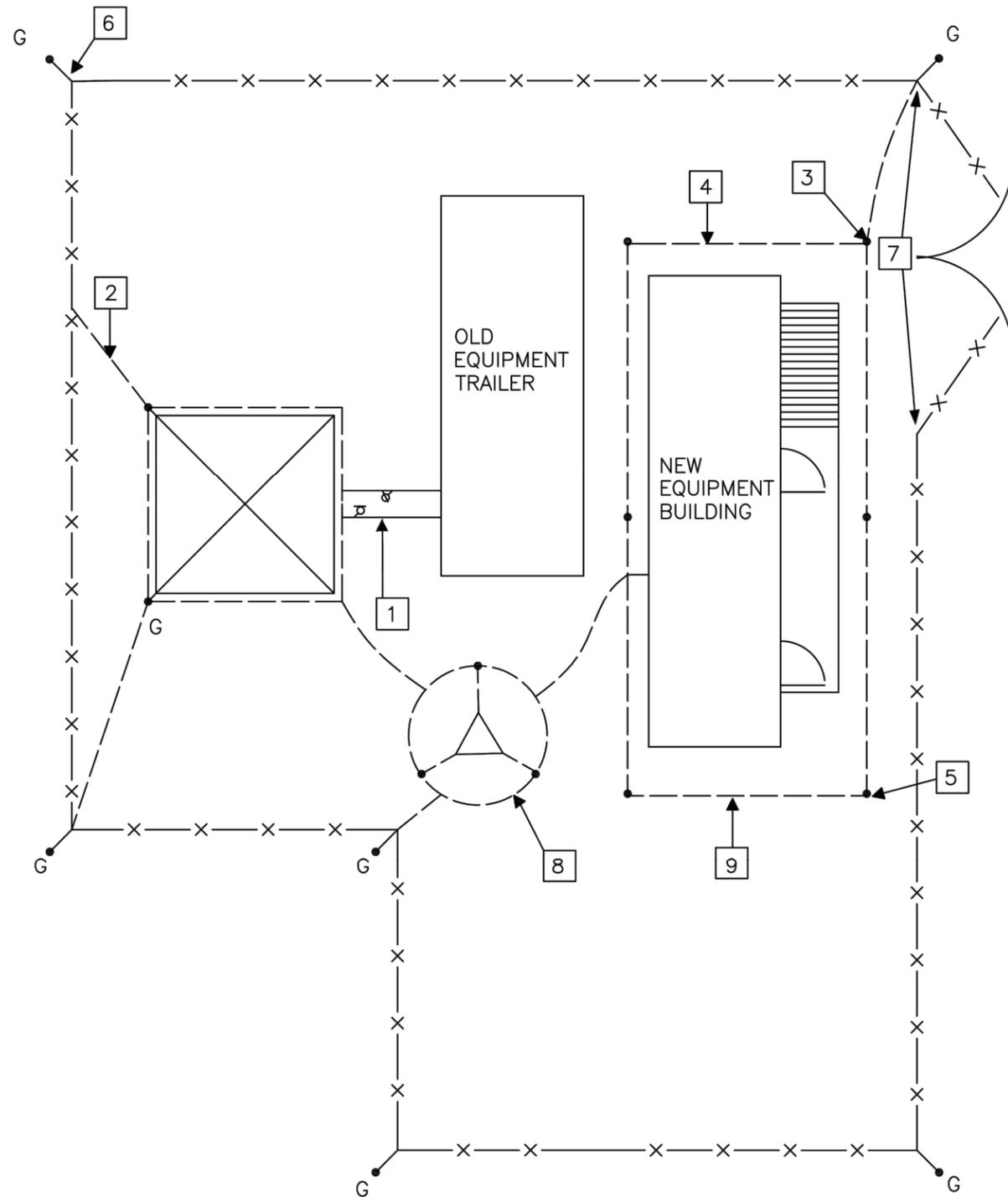
CODE : T3404

DRAWING TITLE :

CANADIAN COAST GUARD
RF SPECIFICATION

REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.

SCALE : AS SHOWN
DATE : 2018-JUL-30
DRAWN BY : J. DOYLE
APPROVED BY : J. WALSH
FILE No : 2018-44
DRAWING No : T3404-07



DRAWING NOTES:

- 1 WAVE GUIDE BRIDGE SUPPORTS TO BE EXOTHERMICALLY CONNECTED TO GROUND LOOP UPON REMOVAL OF OLD EQUIPMENT TRAILER
- 2 CONFIRMED FENCE GROUNDING TO BE TIED INTO EXTERNAL GROUND LOOP USING 2/0 BARE COPPER WIRE AND EXOTHERMIC CONNECTIONS
- 3 CONFIRMED EXOTHERMIC WELDED CONNECTION TYP
- 4 CONFIRMED 2/0 BARE COPPER WIRE
- 5 CONFIRMED 3/4" COPPER GROUND ROD TYP 4 CORNER POSTS
- 6 BONDED CORNERS OF FENCE AND GATE POSTS TO PERIMETER OR RADIAL GROUND USING AWG #2/0 TINNED STRANDED COPPER.
- 7 FENCE GATE WAS GROUNDED TO GATE POST USING 2/0 COPPER WIRE
- 8 CONFIRM INSTALLATION OF TOP AND BOTTOM GROUNDING FOR THE 7/8"Ø COAXIAL TX LINE TO THE SRL 227 ANTENNA
- 9 INSTALLED EXTERNAL GROUND LOOP AROUND NEW EQUIPMENT BUILDING USING 2/0 BARE COPPER WIRE..

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SITE : CUSLETT VHF, NL

CODE : T3404

DRAWING TITLE :

EXISTING SITE GROUNDING DETAILS

REV.	DESCRIPTION	DATE	DWN BY	CHK BY	APP BY
R1	ISSUED FOR TENDER	2019-JUN-12	J.D.	J.W.	J.W.
R0	ISSUED FOR TENDER	2018-JUL-30	J.D.	J.W.	J.W.

SCALE : AS SHOWN
DATE : 2018-JUL-30
DRAWN BY : J. DOYLE
APPROVED BY : J. WALSH
FILE No : 2018-44
DRAWING No : T3404-08