NORTHEAST SITE SOLUTIONS
Turnkey Wireless Development

August 7, 2023

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06501

EM-T-MOBILE-064-200921
T-Mobile Site ID CT11461B
305 West Service Road, Hartford CT
Notice of Compliance with Conditions and Construction Completion

Dear Attorney Bachman:

The T-Mobile site referenced above was approved by The Connecticut Siting Council (Council) on October 13, 2020 as an Exempt Modification. T-Mobile is now requesting the close out of the approval and hereby acknowledges the following conditions were met:

1. Prior to T-Mobile's antenna installation, the antenna mount modifications shall be installed in accordance with the Mount Analysis prepared by American Tower Corporation, dated August 24, 2020 and stamped and signed by Esha Kaushal Modi;

2. Within 45 days following completion of equipment installation, T-Mobile shall provide documentation certified by a Professional Engineer that its installation complied with the recommendations of the Mount Analysis;

3. Any deviation from the proposed modification as specified in this notice and supporting materials with the Council shall render this acknowledgement invalid;

4. Any material changes to this modification as proposed shall require the filing of a new notice with the Council;

5. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;

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6. Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by T-Mobile shall be removed within 60 days of the date the antenna ceased to function;

7. The validity of this action shall expire one year from the date of this letter; and

8. The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

The attached PE Closeout Letter dated June 16, 2023 provides evidence of compliance with the conditions outlined by the Council. In addition, T-Mobile hereby notifies the Council that construction of the acknowledged modifications was completed as of January 15, 2021.

Sincerely,

Victoria Masse

Victoria Masse
Zoning and Permitting
Northeast Site Solutions

AMERICAN TOWER®
CORPORATION

Reviewed by:

June 16, 2023

To: Hartford, CT – Department of Developmental Services
260 CONSTITUTION PLAZA
HARTFORD, CONNECTICUT 06103

Re:

ATC Site Name:	**West Service Road**
ATC Site Number:	**302466**
T-Mobile Site Number:	**CT11491B**
ATC Site Address:	**305 W. Service Road**
	Hartford, CT 06120

To whom it may concern,

T-Mobile installed at the telecommunications facility at the above location. We have reviewed the provided construction photos and As-Built Drawings and have provided comments on the installation in the following summary. The installation was found to be in compliance with the issued construction drawings and applicable building codes.

Equipment Removed:

- CABINET, (3) ANTENNA(s) AND (3) RRH(s)

Equipment Installed:

- MOUNT MODIFICATIONS, (3) MOUNTING PIPES, (6) ANTENNA(s), (6) RRH(s), (2) 1-1/4" HYBRID CABLES, (1) 6160 AC CABINET AND (1) ENCLOSURE B160 BATTERY CABINET

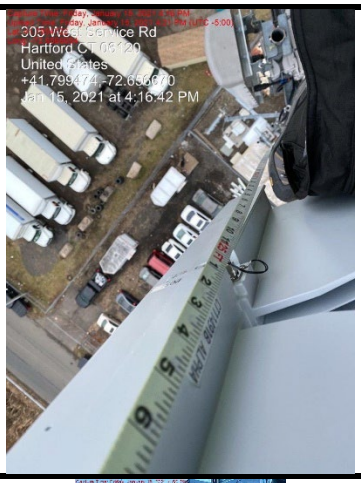
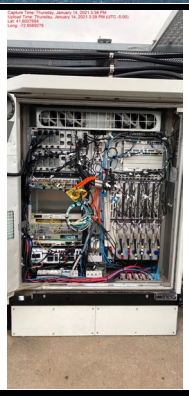
Discrepancy Note:

- None

Please contact the engineer of record at AE@americantower.com with any questions regarding this matter.

Thank you,
American Tower Corporation

AMERICAN TOWER®
CORPORATION

Photo	Description
	**Description:** Antenna Tape Drop: • Installation at RAD 125' **Note:** Construction drawings depict a RAD of 125' **Recommendation:** No Action Required
	**Description:** Installation of Equipment: • 6160 AC Cabniet **Recommendation:** No Action Required
	**Description:** Installation of Equipment: • Cabinet Install **Recommendation:** No Action Required

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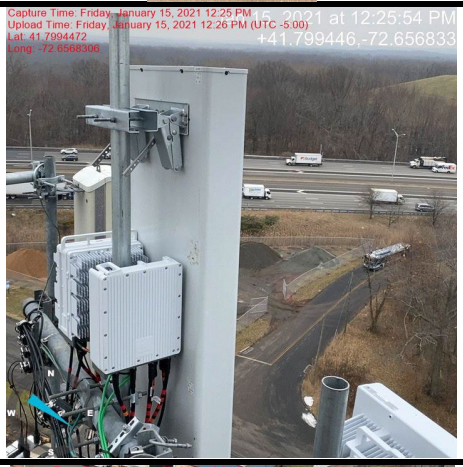
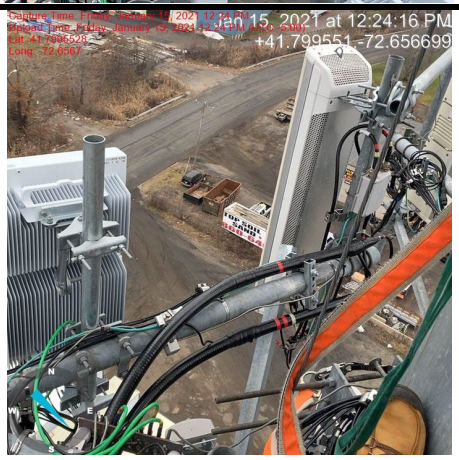
	**<u>Description:</u> Installation of Equipment:** • **Battery Cabinet** **<u>Recommendation:</u>** **No Action Required**
	**<u>Description:</u> Installation of Equipment:** • **Alpha Sector 1 Antenna + 2 RRH units** **<u>Recommendation:</u>** **No Action Required**
	**<u>Description:</u> Installation of Equipment:** • **Alpha Sector additional Antenna** **<u>Recommendation:</u>** **No Action Required**

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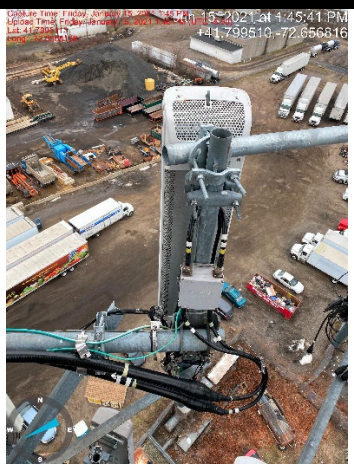
	**Description:** Installation of Equipment: • Hybrid Cable **Recommendation:** No Action Required
	**Description:** Installation of Equipment: • Beta 1 Antenna + 2 RRH units • Bracing Pipe 1ft from CL • 5ft Bracing Pipe **Recommendation:** No Action Required
	**Description:** Installation of Equipment: • Beta Sector – Additional antenna • Bracing Pipe 4ft from CL **Recommendation:** No Action Required

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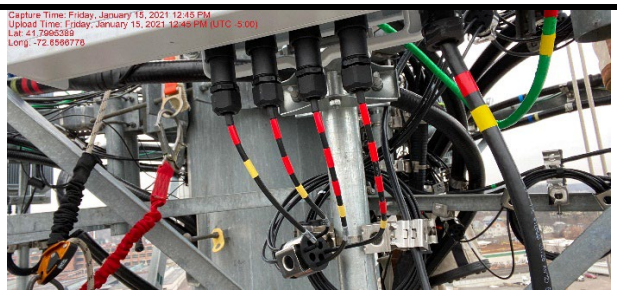
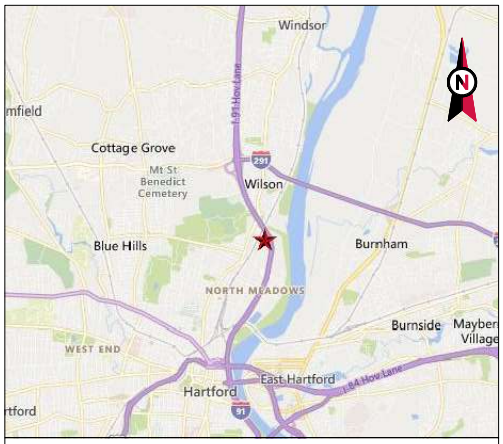
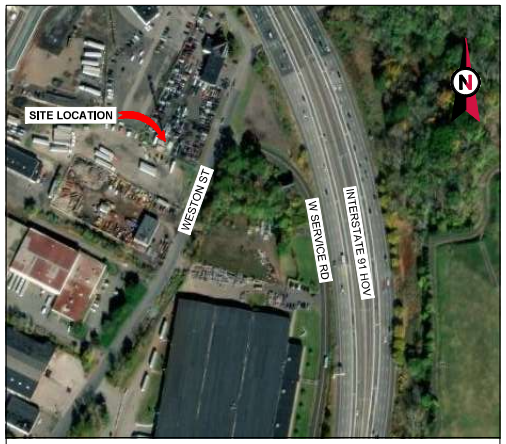
	**<u>Description:</u> Installation of Equipment:** • **Gamma Sector 2 Antennas and 2 RDU units** **<u>Recommendation:</u>** **No Action Required**
	**<u>Description:</u> Installation of Equipment:** • **Mount alteration, additional detail** **<u>Recommendation:</u>** **No Action Required**



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: WEST SERVICE ROAD
ATC SITE NUMBER: 302466
T-MOBILE SITE NAME: CT491/SSITE HARTFORD_MP1
T-MOBILE SITE NUMBER:CT11491B
SITE ADDRESS: 305 W. SERVICE RD.
HARTFORD, CT 06120



LOCATION MAP

T-MOBILE ANCHOR ANTENNA AMENDMENT PLAN
67D5A992DB OUTDOOR CONFIGURATION

COMPLIANCE CODE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

1. INTERNATIONAL BUILDING CODE (IBC)
2. NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: C. L.& P.
PHONE: (800) 286-2000

TELEPHONE COMPANY: AT&T
PHONE: (800) 288-2020

811 Know what's below. Call before you dig.

PROJECT SUMMARY

SITE ADDRESS:

305 W. SERVICE RD.

HARTFORD, CT 06120

COUNTY: HARTFORD

GEOGRAPHIC COORDINATES:

LATITUDE: 41.79953889

LONGITUDE: -72.65669722

GROUND ELEVATION: 20' AMSL

PROJECT TEAM

TOWER OWNER:

AMERICAN TOWER
10 PRESIDENTIAL WAY
WOBURN, MA 01801

APPLICANT:

T-MOBILE NORTHEAST LLC
12050 BALTIMORE AVENUE
BELTSVILLE, MD 20705

ENGINEER:

ATC TOWER SERVICES, LLC
3500 REGENCY PKWY STE 100
CARY, NC 27518

PROPERTY OWNER:

305 WEST SERVICES
RD ASSOC LLC
79 RYE STREET
BROAD BROOK, CT 06016

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:

TOWER WORK:

REMOVE (3) ANTENNA(s) AND (3) RRH(s)

INSTALL MOUNT MODIFICATIONS, (3) MOUNTING PIPES, (6) ANTENNA(s), (6) RRH(s), AND (2) 1-1/4" HYBRID CABLES

EXISTING (6) ANTENNA(s), (3) TTA(s), (12) 1-5/8" COAX CABLE(s), (1) 1-5/8" HYBRID CABLE(s), AND (1) 1-1/4" HYBRID CABLE(s) TO REMAIN

GROUND WORK:

REMOVE (1) CABINET

INSTALL (1) 6160 AC CABINET AND (1) ENCLOSURE B160 BATTERY CABINET

PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

PROJECT LOCATION DIRECTIONS

DIRECTIONS FROM NEXTEL WHITE PLAINS OAK OFC: 5 BROADWAY (HWY 119) NORTH TO WESTCHESTER AVE. TO I-287 EAST (CROSS WESTCHESTER EXPWAY) TO I-684 NORTH APPROX. 28 MILES TO I-84 EAST. TAKE I-84 EAST 63.6 MILES TO HIGH ST./HARTFORD EXIT) BEAR LEFT ONTO MAIN ST. FOR 1.8 MILES THEN TURN RIGHT ONTO FISHFREY ST. FOR .2 MILES TURN LEFT ON WESTON ST. .5 MILES AND THEN LEFT ONTO WEST SERVICE RD. SITE IS SOUTHWEST CORNER OF LARGER VACANT LOT AT CURVE OF RD ADJACENT TO KOHLER EQUIP. DISTRUBUTOR.

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	1	09/03/20	CWB
G-002	GENERAL NOTES	0	08/18/20	CWB
C-101	DETAILED SITE PLAN	0	08/18/20	CWB
C-102	DETAILED GROUND PLAN	0	08/18/20	CWB
C-201	TOWER ELEVATION	1	09/03/20	CWB
C-401	ANTENNA INFORMATION & SCHEDULE	1	09/03/20	CWB
C-501	CONSTRUCTION DETAILS	0	08/18/20	CWB
E-501	GROUNDING DETAILS	0	08/18/20	CWB
R-601	SUPPLEMENTAL			
R-602	SUPPLEMENTAL			
R-603	SUPPLEMENTAL			
R-604	SUPPLEMENTAL			
R-605	SUPPLEMENTAL			
R-606	SUPPLEMENTAL			
R-607	SUPPLEMENTAL			
R-608	SUPPLEMENTAL			
R-609	SUPPLEMENTAL			

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	08/18/20
1	ADDED MOUNT ANALYSIS	CWB	09/03/20
2			
3			
4			

ATC SITE NUMBER:
302466
ATC SITE NAME:
WEST SERVICE ROAD
T-MOBILE SITE NAME:
CT491/SSITE HARTFORD_MP1
SITE ADDRESS:
305 W. SERVICE RD.
HARTFORD, CT 06120

SEAL:

Authorized by "Patrick P. Barry"
04 Sep 2020 04:20:32

T-Mobile cosign

DATE DRAWN:	08/18/20
ATC JOB NO:	13251344_D1
CUSTOMER ID:	CT491/SSITE HARTFORD_MP1
CUSTOMER #:	CT11491B

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	1

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS. T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL

   A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
   B. AC/TELCO INTERFACE BOX (PPC)
   C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
   D. TOWERS, MONOPOLES
   E. TOWER LIGHTING
   F. GENERATORS & LIQUID PROPANE TANK
   G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
   H. ANTENNAS (INSTALLED BY OTHERS)
   I. TRANSMISSION LINE
   J. TRANSMISSION LINE JUMPERS
   K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
   L. TRANSMISSION LINE GROUND KITS
   M. HANGERS
   N. HOISTING GRIPS
   O. BTS EQUIPMENT

2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING.

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HARTFORD, CT 06120

SEAL:

DATE DRAWN:	08/18/20
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CUSTOMER ID:	CT491/SSITE HARTFORD_MP1
CUSTOMER #:	CT11491B

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

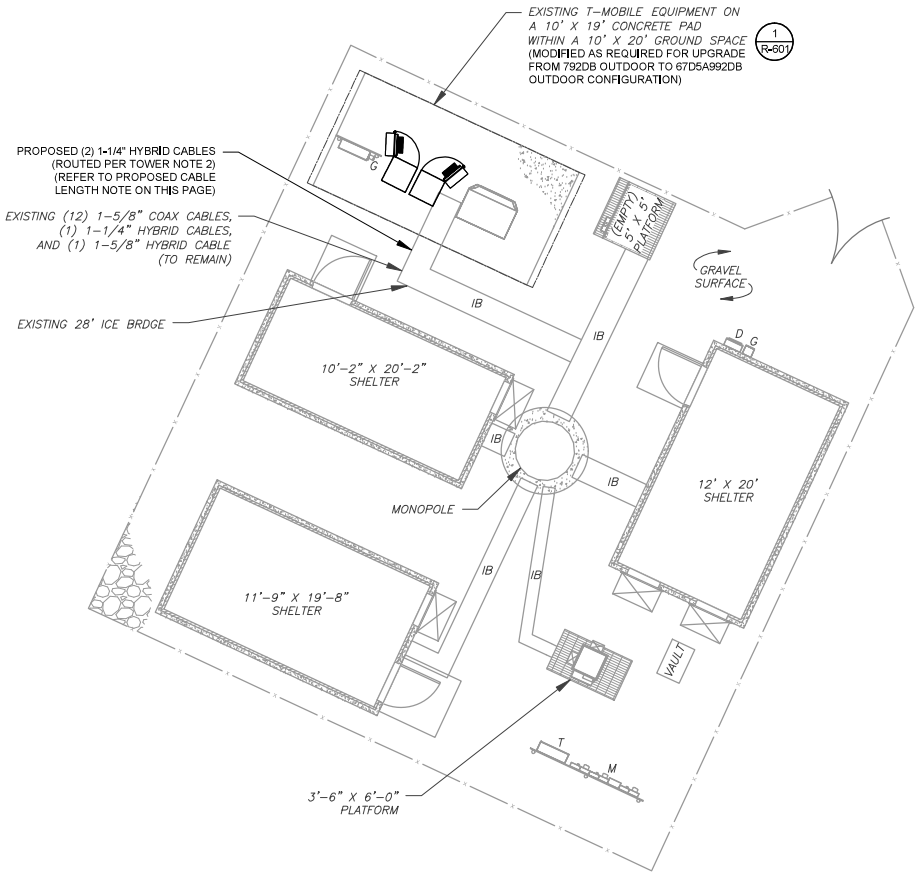
SITE PLAN NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.

LEGEND

⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
———	CHAINLINK FENCE



1 DETAILED SITE PLAN

0 10' 20'

SCALE: 1"=10' (11X17)
1"=5' (22X34)

PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **150'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES. USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).

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ATC SITE NUMBER:
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HARTFORD_MP1
SITE ADDRESS:
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HARTFORD, CT 06120

SEAL:

Authorized by "Patrick P. Barry"
04 Sep 2020 04:20:33

T-Mobile cosign

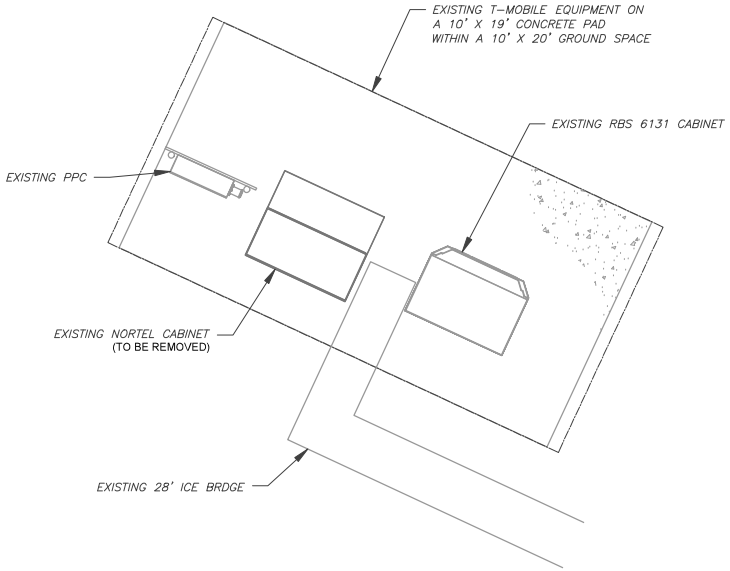
DATE DRAWN:	08/18/20
ATC JOB NO:	13251344_D1
CUSTOMER ID:	CT491/SSITE HARTFORD_MP1
CUSTOMER #:	CT11491B

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

SITE PLAN NOTES:

1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. REMOVE EXISTING 2G CABINETS, AND POWER / TELCO WHIPS ASSOCIATED WITH THE DEAD EQUIPMENT IF APPLICABLE.
3. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
4. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.



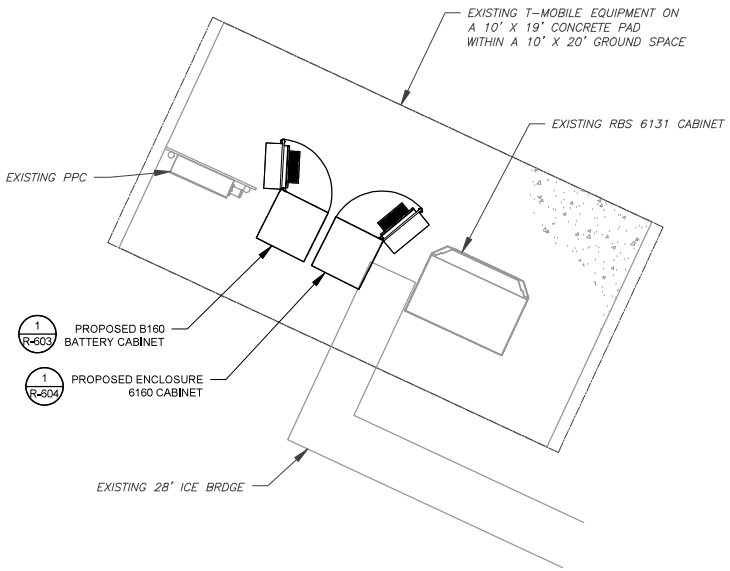
1 EXISTING GROUND EQUIPMENT LAYOUT

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

N

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



2 PROPOSED GROUND EQUIPMENT LAYOUT

0 5' 10'

SCALE: 1"=5' (11X17)
1"=2.5' (22X34)

N

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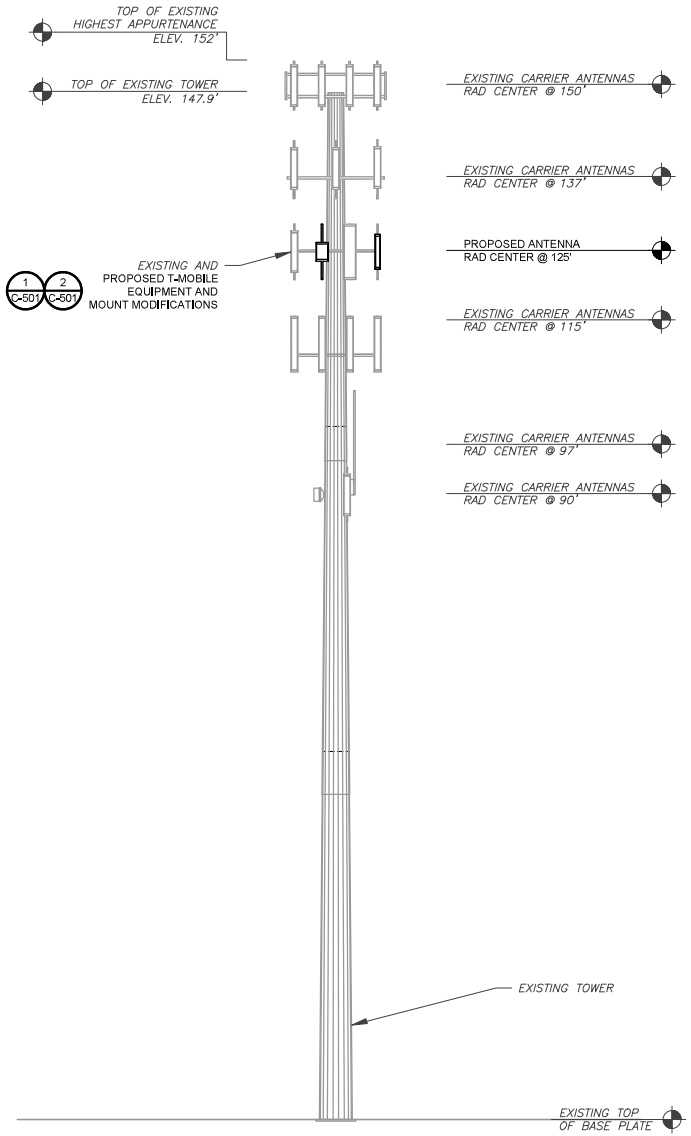
DETAILED GROUND PLAN

SHEET NUMBER:	REVISION:
C-102	0



1 TOWER ELEVATION
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED 08/24/20, AND PER MOUNT ANALYSIS COMPLETED BY CLS ENGINEERING, DATED 09/19/18 THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT

TOWER NOTE:
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
3. TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

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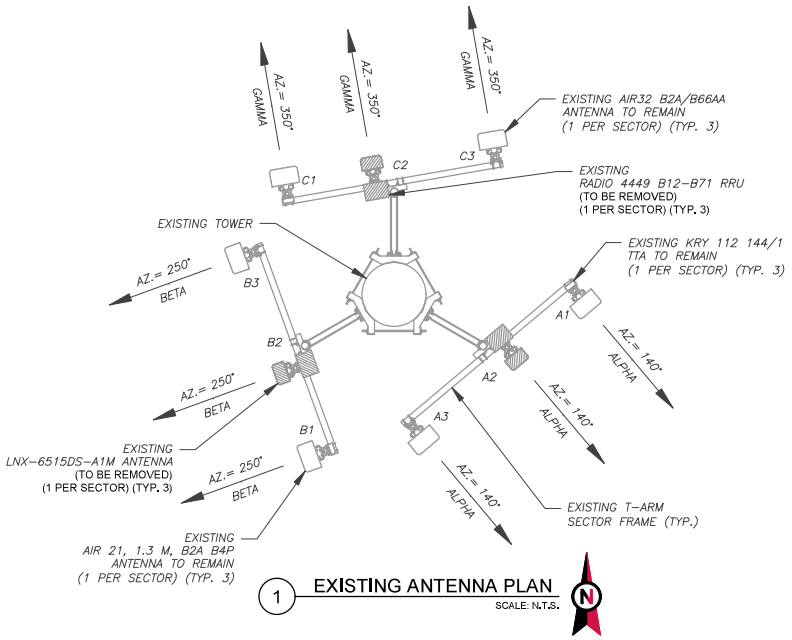
CUSTOMER #:	CT11491B

TOWER ELEVATION

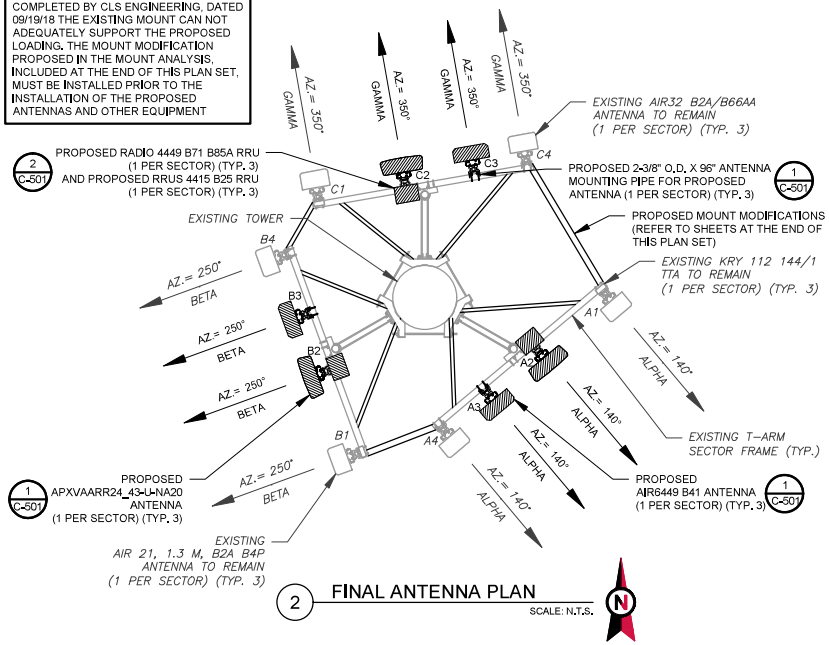
SHEET NUMBER:	REVISION:
C-201	1



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY AMERICAN TOWER CORPORATION, DATED 08/24/20, AND PER MOUNT ANALYSIS COMPLETED BY CLS ENGINEERING, DATED 09/19/18 THE EXISTING MOUNT CAN NOT ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY						NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	125'	140°	A1	AIR 21, 1.3M, B2A B4P	–	0°/4°	RMN	KRY 112 144/1	RMN
			A2	LNX–6515DS–A1M	–	0°/4°	RMV	RADIO 4449 B12–B71	RMV
			A3	AIR32 B2A/B66AA	L2100/L1900	0°/4°	RMN	–	–
BETA	125'	250°	B1	AIR 21, 1.3M, B2A B4P	–	0°/2°	RMN	KRY 112 144/1	RMN
			B2	LNX–6515DS–A1M	–	0°/2°	RMV	RADIO 4449 B12–B71	RMV
			B3	AIR32 B2A/B66AA	L2100/L1900	0°/4°	RMN	–	–
GAMMA	125'	350°	C1	AIR 21, 1.3M, B2A B4P	–	0°/2°	RMN	KRY 112 144/1	RMN
			C2	LNX–6515DS–A1M	–	0°/2°	RMV	RADIO 4449 B12–B71	RMV
			C3	AIR32 B2A/B66AA	L2100/L1900	0°/2°	RMN	–	–

NOTES

1. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
2. CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY						NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	125'	140°	A1	AIR 21, 1.3M, B2A B4P	G1900/U2100	0°	RMN	KRY 112 144/1	RMN
			A2	APXVAARR24_43–U–NA20	-	0°/4°	ADD	RADIO 4449 B71 B85A	ADD
								RRUS 4415 B25	ADD
			A3	AIR6449 B41	L2500/N2500	0°	ADD	-	-
			A4	AIR32 B2A/B66AA	L2100/L1900	0°/4°	RMN	-	-
BETA	125'	250°	B1	AIR 21, 1.3M, B2A B4P	G1900/U2100	0°	RMN	KRY 112 144/1	RMN
			B2	APXVAARR24_43–U–NA20	-	0°/4°	ADD	RADIO 4449 B71 B85A	ADD
								RRUS 4415 B25	ADD
			B3	AIR6449 B41	L2500/N2500	0°	ADD	-	-
			B4	AIR32 B2A/B66AA	L2100/L1900	0°/4°	RMN	-	-
GAMMA	125'	350°	C1	AIR 21, 1.3M, B2A B4P	G1900/U2100	0°	RMN	KRY 112 144/1	RMN
			C2	APXVAARR24_43–U–NA20	-	0°/4°	ADD	RADIO 4449 B71 B85A	ADD
								RRUS 4415 B25	ADD
			C3	AIR6449 B41	L2500/N2500	0°	ADD	-	-
			C4	AIR32 B2A/B66AA	L2100/L1900	0°/4°	RMN	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
–	–	(12) 1–5/8"	1–1/4"	RMN
–	–	–	1–5/8"	RMN

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(12) 1–5/8"	1–1/4"	RMN
-	-	-	1–5/8"	RMN
-	-	-	(2) 1-1/4"	ADD

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	08/18/20
1	ADDED MOUNT ANALYSIS	CWB	09/03/20

ATC SITE NUMBER:
302466
ATC SITE NAME:
WEST SERVICE ROAD
T-MOBILE SITE NAME:
CT491/SSITE HARTFORD_MP1
SITE ADDRESS:
305 W. SERVICE RD.
HARTFORD, CT 06120

SEAL:

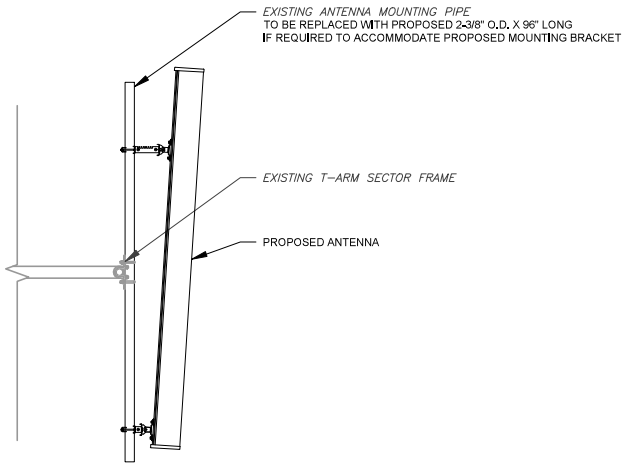
Authorized by "Patrick P. Barry"
04 Sep 2020 04:20:34

T-Mobile cosign

DATE DRAWN:	08/18/20
ATC JOB NO:	13251344_D1
CUSTOMER ID:	CT491/SSITE HARTFORD_MP1
CUSTOMER #:	CT11491B

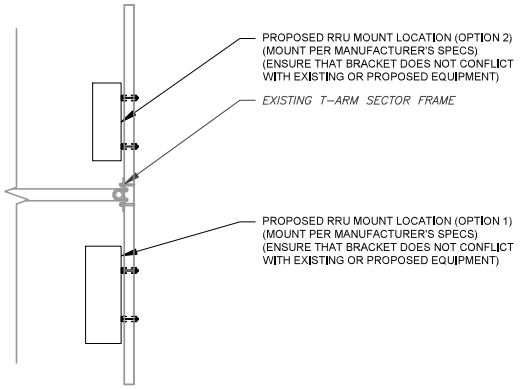
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	1



1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.

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CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	08/18/20
1			
2			
3			
4			

ATC SITE NUMBER:
302466
ATC SITE NAME:
WEST SERVICE ROAD
T-MOBILE SITE NAME:
CT491/SSITE
HARTFORD_MP1
SITE ADDRESS:
305 W. SERVICE RD.
HARTFORD, CT 06120

SEAL:

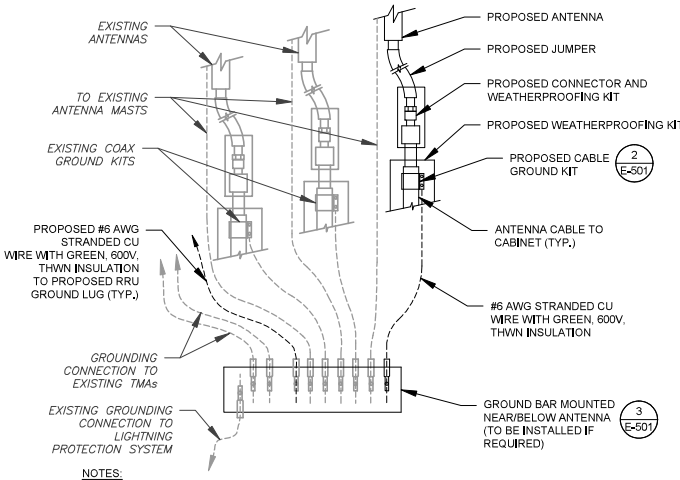
Authorized by "Patrick P. Barry"
04 Sep 2020 04:20:34

T-Mobile cosign

DATE DRAWN:	08/18/20
ATC JOB NO:	13251344_D1
CUSTOMER ID:	CT491/SSITE HARTFORD_MP1
CUSTOMER #:	CT11491B

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

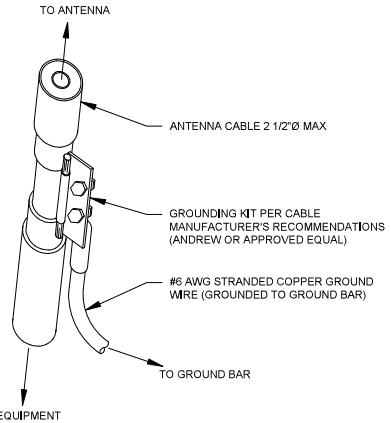


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM

SCALE: N.T.S.

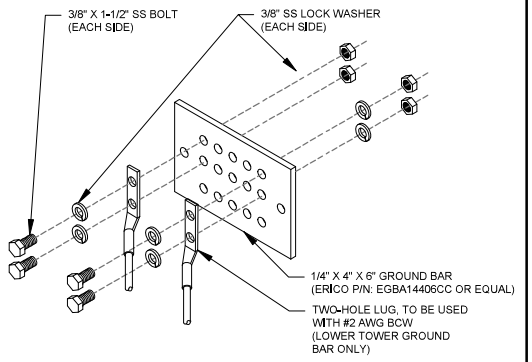


GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL

SCALE: N.T.S.



GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL

SCALE: N.T.S.

ELECTRICAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
2. ATC HAS NOT VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER. PROPOSED CABLE AND CONDUIT SHALL BE MINIMUM SIZE PER BELOW:

OCPD SIZE	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
80A/2P	2#3 AWG	#8 AWG	1-1/4"
100/2P	2#2 AWG	#8 AWG	1-1/4"
125A/2P	2#1 AWG	#8 AWG	1-1/2"
150A/2P	2#1/0 AWG	#8 AWG	1-1/2"

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	CWB	08/18/20

ATC SITE NUMBER:
302466
ATC SITE NAME:
WEST SERVICE ROAD
T-MOBILE SITE NAME:
CT491/SSITE HARTFORD_MP1
SITE ADDRESS:
305 W. SERVICE RD.
HARTFORD, CT 06120

SEAL:

Authorized by "Patrick P. Barry"
04 Sep 2020 04:20:34

T-Mobile cosign

DATE DRAWN:	08/18/20
ATC JOB NO:	13251344_D1
CUSTOMER ID:	CT491/SSITE HARTFORD_MP1
CUSTOMER #:	CT11491B

GROUNDING DETAILS

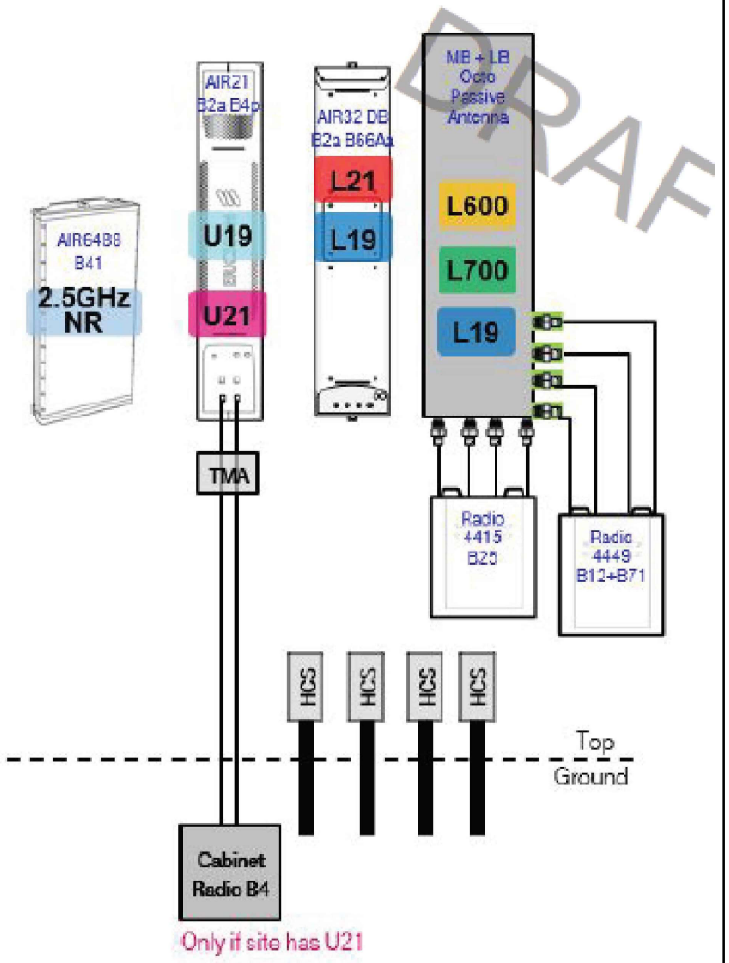
SHEET NUMBER:	REVISION:
E-501	0

Existing RAN Equipment		
Template: 792D8 Outdoor		
Enclosure	1	2
Enclosure Type	RBS 6131	Ancillary Equipment (Ericsson)
Baseband	DUW30 (x 2) DUG20 BB 6630 L700 L2100 L1900	
Hybrid Cable System		Ericsson 9x16 HCS "Select Length" Ericsson 6x12 HCS "Select Length & AWG"
Radio	RU22 (x 6)	

Proposed RAN Equipment				
Template: 67D5A992D8 Outdoor				
Enclosure	1	2	3	4
Enclosure Type	RBS 6131	Ancillary Equipment (Ericsson)	Enclosure 6160	B16D
Baseband	DUW30 DUW30 U2100 DUG20 G1900 BB 6630 L2100 L700 L600 L1900 BB 6630 N600		BB 6630 (x 3) L2500 BB 6648 N2500	
Hybrid Cable System		Ericsson 9x16 HCS "Select Length" Ericsson 6x12 HCS "Select Length & AWG" Ericsson 6x12 HCS "Select AWG & Length"	Ericsson 6x12 HCS "Select AWG & Length"	
Radio	RU22 (x 6) U2100			

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE

67D5992D8_3xAIR+1OP.JPG



2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-601	0

AIR6449 B41

Frequency Range	LTE TDD B41: 2496 – 2690 MHz
Instantaneous BW	DL 194 MHz
Antenna Ports	64T64R
Technology	NR, LTE and NR+LTE MSMM
Antenna Elements	192
Output RF Power	300 W (=64 TRX x 4.6875W)
Data Ports	4 x 25Gb/s CPRI
5G NR Support	YES
DC Feed	-48V DC power connector
Cooling	Passive cooling (vs. active cooling on AIR32 DB)
Dimensions (H x W x D)	33.1" x 20.6" x 8.6" inches (=841 x 524 x 217 mm)
Weight	104 lbs (=47 kg)
Electrical downtilt	-3 to 11 degrees
Horizontal beamwidth	+/- 65 degrees
HW/SW Availability	July 2020
Material SAP #	34105 – AIR 6449 B41

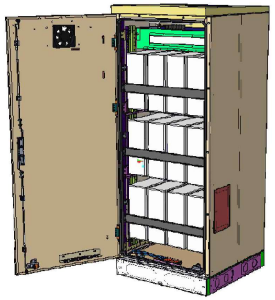
RRUS 4415 B25

- B25
  - TX = 1930 – 1995 MHz
  - RX = 1850 – 1915 MHz
- CPRI 2 ports x 2.5/4.9/9.8/10.1 Gbps. Install 2 SFPs and connect 2 fiber pair to the RRUS 4415 during initial install.
- Only use Ericsson supplied and approved SFPs RDH10265/25
  - Exception: SFP7 RDH 10265/3 for CPRI 1.4km to 10km
  - Exception: SFP7 (pair): RDH 102 70/1 and RDH 102 70/2 for CPRI > 10km
- 2 external alarm inputs
- Max wind load @ 50m/sec = 260N
- Breaker size = 25A, DC Power Consumption = 670 W (for dimensioning)
- 200mm horizontal separation required for side by side mounting
- 200mm separation required from antenna backplane to radio
- 400mm vertical outdoor/indoor separation required between 2 radios
- 500mm vertical separation below antenna
- Min, Max DC cable size from squid to radio = 10,8 AWG
  - Adapter is required for 2-wire connection
  - Shielded DC cable is required
- Ground cable size = 2AWG
- Dimensions (incl. handles, feet and sunshield, w/o fan unit)
  - Height: 16.5" (420 mm)
  - Width: 13.4" (342 mm)
  - Depth: 5.9" (149 mm)
- Weight, excl. mounting hardware = 46 lbs (21 kg)

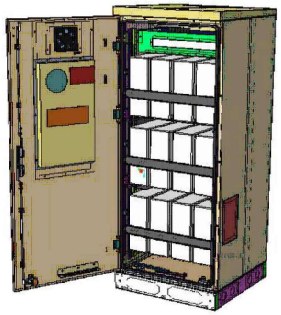
SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-602	0

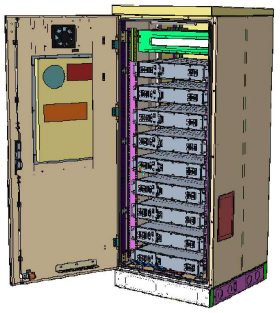
Enclosure B160



Enclosure B160
AirCon + VRLA



Enclosure B160
AirCon + Li-Ion



Enclosure B160
Convection Cooling
+ VRLA

Enclosure B160

Capacity
- VR_A 12V: 100Ah / 150Ah / 170Ah / 190Ah / 210Ah
- Li-Ion: 24U 19" / 23"
- Sodium-Nickel: 3x FIAMM

Electrical specification
- DC Output: -48VDC/200A
- Battery breakers: 2x 125/2p
- Alarms: Door open, Climate failure, MCB Connection

Mechanical specification
- Weight: 134kg
- Dimensions: 63 x 26 x 26 in. (ind. Base frame)
- Base frame height: 6 in.
- Material: Galvanized steel (180g/m²)
- Color: Powder paint NCS 2002-B
- Door: Front access
- Locking type: Pad lock / cylinder

Environmental specification
- Ingress protection: VRLA/Sodium IP44
  Li-Ion IP55
- Relative humidity: 15-100%

Climate system
- Air Conditioner
  - Fan type: DC
  - Cooling capacity: 500W @_35/L35
- Convection cooling
  - Emergency fan

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-603	0

ERICSSON

Enclosure 6160 AC

The Enclosure 6160 is a multi-purpose site cabinet designed to support a multitude of equipment such as ERS Baseband, Transport, Li-Ion battery and 3PP vendor equipment. It also provides a highly capable power system and battery back-up - all in a streamlined design and minimized footprint to support cost efficient expansion of mobile broadband.

Being an all-in-one enclosure, the Enclosure 6160 is a very fitting choice for all types of sites where the capacity need is large or room for future expansion is needed. It is ideally used for modernizing existing sites or in greenfield scenarios to match both current and future needs.

With a robust design, IP65 compliance and a sealed Heat Exchanger (HEX) climate system the Enclosure 6160 ensures optimal environmental protection of the active equipment - enabling them for a long-lasting service. The complete system is also integrated and verified for the entire Ericsson Radio System and ensures best-in-class service.

The power system offers 31,5kW of power in total and provides 24kW of -48V DC power for both internal and external consumers.

The equipment space allows 19U of rack space ensuring well enough capacity for existing need and future expansion.

One of the main advantages of the Enclosure 6160 is its default integration with ENM - allowing for advanced remote monitoring and control such a fault management (alarms), inventory management and performance measurements. The cabinet also provides an open O&M interface for integration to 3PP O&M systems.

Preliminary technical specification for Enclosure 6160 AC

CAPACITY	
Rack space user equipment	19U (19" rack)
Hardware capabilities	Power and CPRI support for multi-standard remote radios (RRU or AIR) ERS Baseband and Transport units Li-Ion batteries 3PP equipment Additional power feed available as option
MECHANICAL SPECIFICATION	
Weight	145 kg (excluding active equipment) 320 lbs (excluding active equipment)
Dimension (H x W x D)	1600 x 650 x 650 mm (incl. Base frame) 63 x 26 x 26 in. (incl. Base frame)
Base frame height	150 mm 6 in.
Mounting position	Ground
Enclosure material	Aluminum
Color	Power paint NCS 2002-B
Door	Front access
Rack type	19" (IEC 60297-3-100)
Locking type	Pad lock or Cylinder
POWER SYSTEM	
Input voltage	3P+N+PE: 346/200-415/240 VAC 2P+N+PE: 208/120-220/127 VAC 1P+N+PE: 200-250 VAC
Input power	<33kW
Output load (-48VDC)	24kW
Total capacity (-48VDC)	31.5kW
AC SPD	Class 2/Type 2
DC SPD	Class 2/Type 2
PSU Slots	9x
Service outlet	Optional
Priority load	8x Circuit Breaker
LLVD 1	6x Circuit Breaker
LLVD 2	6x Circuit Breaker
CB ratings	3A / 5A / 10A / 15A / 20A / 25A / 30A / 40A / 50A / 60A / 80A / 100A
Battery Interface	2x Circuit Breaker
Battery Circuit Breaker rating	125A 2pol (200A)
PSU capacity	3500W

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SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-604	0

AMERICAN TOWER®
CORPORATION

Antenna Mount Analysis Report

ATC Site Name	:	**West Service Road, CT**
ATC Site Number	:	**302466**
Engineering Number	:	**13251344_C8_08**
Mount Elevation	:	**124 ft**
Carrier	:	**T-Mobile**
Carrier Site Name	:	**CT491/SSite Hartford_MP1**
Carrier Site Number	:	**CT11491B**
Site Location	:	**305 W. Service Rd.** **Hartford, CT 06120-0001** **41.79953889 , -72.65669722**
County	:	**Hartford**
Date	:	**August 24, 2020**
Max Usage	:	**60%**
Result	:	**Contingent Pass**

Prepared By:
Max Carter
Structural Engineer

Max Carter

Reviewed By:

STATE OF CONNECTICUT
ESHA KAUSHAL MODI
32593
LICENSED
PROFESSIONAL ENGINEER

Authorized by "EOR"
24 Aug 2020 09:05:57 cosign

COA: PEC.0001553

Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for T-Mobile at 124 ft.

Supporting Documents

Radio Frequency Data Sheet	RFDS ID #CT11491B, dated May 11, 2020
Reference Photos	Site photos from 2020
Previous Mount Analysis*	CLS Engineering Project #41124-12605178-01-MA, dated September 19, 2018

*Modifications proposed in previous mount analysis could not be verified as installed via the most recently available site photos, however they were considered in this analysis. Should these modifications not be installed as specified, ATC Engineering should be contacted, and the mount analysis revised to reflect the as-build condition(s).

Analysis

This antenna mount was analyzed using American Tower Corporation's Mount Analysis Program and RISA-3D

Basic Wind Speed:	117 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1 1/2" radial ice concurrent
Codes:	ANSI/TIA-222-H
Exposure Category:	C
Risk Category:	II
Topographic Factor Procedure:	Method 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	Ss = 0.18, S1 = 0.06
Site Class:	D - Stiff Soil
Live Loads:	Lm = 500 lbs, Lv = 250 lbs

Conclusion

Based on the analysis results, the antenna mount does not meet the requirements per the applicable codes listed above. The mount can support the equipment as described in this report after the below listed modifications are completed:

- Install Site Pro 1 P296 antenna mounting pipe – 2-3/8" x 96" (Mount Pipe C, G and K) with Site Pro 1 SCX3-K crossover plate kits.
- Replace existing mount pipe B with Site Pro 1 P30120 antenna mounting pipe – 2-7/8" x 120" (Mount Pipe B, F, and J) with Site Pro 1 SCX3-K crossover plate kits.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.

A.T. Engineering Service, PLLC - 3500 Regency Parkway, Suite 100 - Cary, NC 27518 - 919.468.0112 Office - 919.466.5414 Fax - www.americantower.com

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-605	0

Mount Analysis of Existing T-Arms for American Tower on behalf of T-Mobile
302466 - West Service Road, CT
Project #: 12605178
T-Mobile Site ID: CT11491B
Program: L700

CLS Engineering PLLC Project #41124-12605178-01-MA
September 19, 2018

MOUNT DESCRIPTION	Existing T-Arms at 125 ft AGL
ANTENNA ELEVATION	Nominal Rad. Elevation of 125 ft AGL
SITE DESCRIPTION	147.9 ft Monopole
SITE ADDRESS	305 W. Service Rd., Hartford, CT 06120-0001, Hartford County
GPS COORDINATES	41.79953889, -72.65669722
ANALYSIS STANDARD	2012 IBC / 2016 Connecticut State Building Code / TIA-222-G
LOADING CRITERIA	125 mph, V_{ult} / 97 mph, V_{asd} (3-Second Gust) w/o ice & 50 mph (3-Second Gust) w/ 1" Ice

■ **ANALYSIS RESULT:** **Pass (Conditional)**

MEMBER USAGE	97%	Pass

Modifications are proposed to bring mounts into compliance; see conclusion for details.

Prepared by:
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COA # PEC.0001833 Exp. 8/14/2019

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Date: 2018.09.20 08:31:20 -04'00'

■ **RESULTS SUMMARY**

Existing Mount Usages:

COMPONENT	PEAK USAGE	RESULT
Collar Reactions	141%	Fail
Mount Pipes	118%	Fail
Stand-Off Horizontals	106%	Fail
Face Horizontals	74%	Pass

Mount Usage after Modifications:

COMPONENT	PEAK USAGE	RESULT
Mount Pipes	97%	Pass
Collar Reactions	70%	Pass
Face Horizontals	51%	Pass
Stand-Off Horizontals	41%	Pass
Bracing Members	20%	Pass

■ **CONCLUSION AND RECOMMENDATIONS**

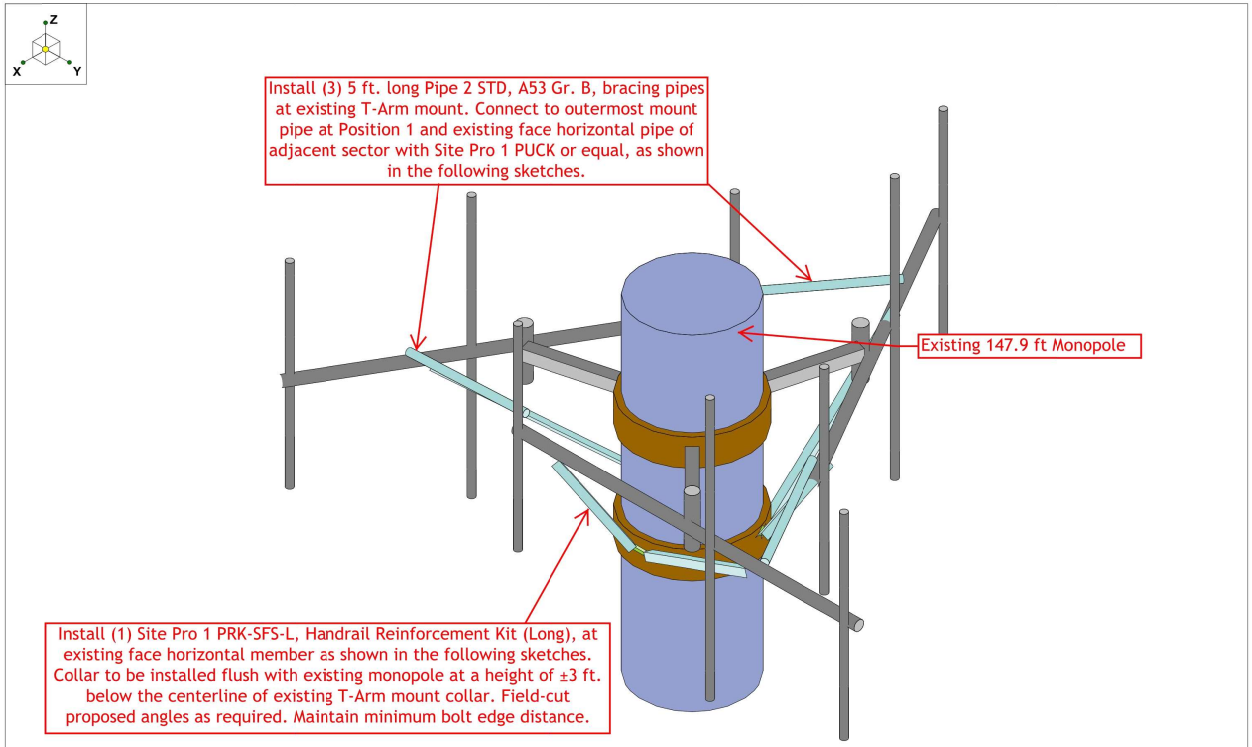
According to our structural analysis, the mounts have been found to **CONDITIONALLY PASS.** The mounting configuration considered in this analysis will be capable of supporting the referenced loading pursuant to referenced standards once the following scope is executed:

- Remove existing pipe and kicker angles assembly connected to outermost mount pipes at each sector.
- Install (1) Site Pro 1 PRK-SFS-L, Handrail Reinforcement Kit (Long), at existing face horizontal member as shown in the following sketches. Collar to be installed flush with existing monopole at a height of ±3 ft. below the centerline of existing T-Arm mount collar.
- Install (3) 5 ft. long Pipe 2 STD, A53 Gr. B, bracing pipes at existing T-Arm mount. Connect to outermost mount pipe at Position 1 and existing face horizontal pipe of adjacent sector with Site Pro 1 PUCK or equal, as shown in the following sketches.

See following sketches and Site Pro 1 assembly drawings for additional details.

SUPPLEMENTAL

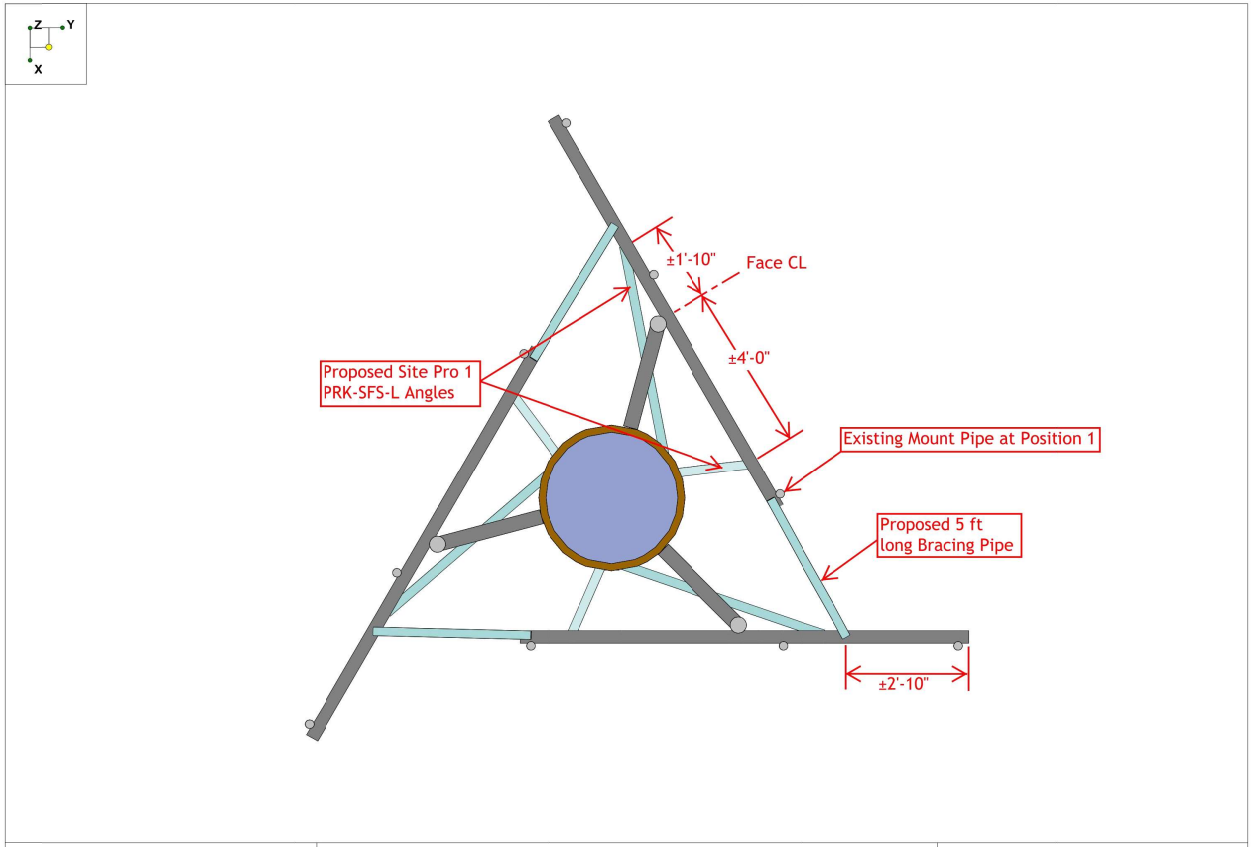
SHEET NUMBER:	REVISION:
R-606	0



CLS		IN - 1
BP	41124-12605178-West Service Road, CT	Sept 19, 2018 at 6:26 PM
41124-12605178-01-MA	Proposed Modification - Rendered	41124-12605178-01-MA.r3d

SUPPLEMENTAL

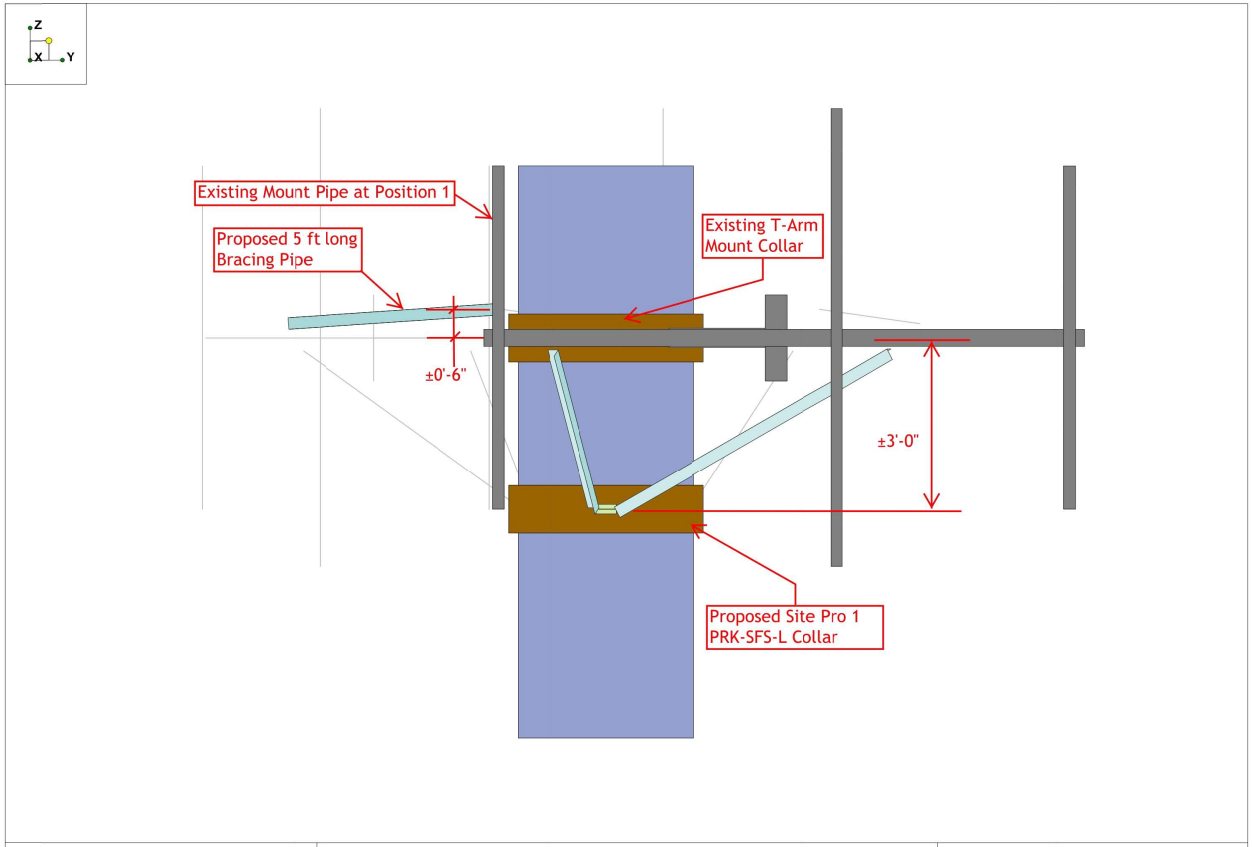
SHEET NUMBER:	REVISION:
R-607	0



CLS	41124-12605178-West Service Road, CT	IN - 2
BP		Sept 19, 2018 at 6:26 PM
41124-12605178-01-MA	Proposed Modification - Plan	41124-12605178-01-MA.r3d

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-608	0



CLS		IN - 3
BP	41124-12605178-West Service Road, CT	Sept 19, 2018 at 6:27 PM
41124-12605178-01-MA	Proposed Modification - Front Elevation	41124-12605178-01-MA.r3d

SUPPLEMENTAL

SHEET NUMBER:	REVISION:
R-609	0