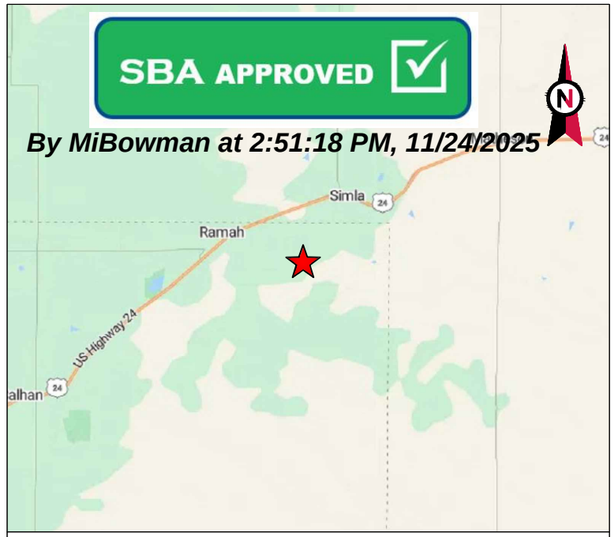

VICINITY MAP

SBA

SBA 2012 TC ASSETS, LLC
A DELAWARE LIMITED LIABILITY COMPANY
8051 CONGRESS AVENUE
BOCA RATON, FL 33487
PHONE: 1-800-487-7483

SBA SITE NAME: SIMLA
SBA SITE NUMBER: CO46078-A
T-MOBILE SITE NAME: DN06268A
T-MOBILE SITE NUMBER: DN06268A
SITE ADDRESS: 18604 OIL WELL ROAD
RAMAH, CO 80832

T-MOBILE
MW ADDING DRAWING

LOCATION MAP

Approved
By: Justin Kilgore
Planning Manager
Date:12/05/2025
El Paso County Planning & Community Development

PCD File No. TWR2525
Property address:
18620 Oil Well Rd.

T-Mobile address:
18604 Oil Well Rd.

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. 2018 INTERNATIONAL BUILDING CODE (IBC)
2. 2017 NATIONAL ELECTRIC CODE (NEC)
3. LOCAL BUILDING CODE
4. CITY/COUNTY ORDINANCES

UTILITY COMPANIES

POWER COMPANY: TBD
PHONE: TBD

TELEPHONE COMPANY: TBD
PHONE: TBD

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

PROJECT SUMMARY

SITE ADDRESS:

18604 OIL WELL ROAD

RAMAH, CO 80832

COUNTY: EL PASO

GEOGRAPHIC COORDINATES:

LATITUDE: 39.107056°

LONGITUDE: -104.108139°

GROUND ELEVATION: 6227.03' (SE)

PROJECT TEAM

TOWER OWNER:

SBA 2012 TC ASSETS, LLC
8051 CONGRESS AVENUE
BOCA RATON, FL 33487

APPLICANT:

T-MOBILE

ARCHITECT (COORDINATING PROFESSIONAL:

PETER LICHOMSKI, AIA
49030 PONTIAC TRAIL, SUITE 100,
WIXOM, MI 48393
PH: (248) 705-9212

PROPERTY OWNER:

TBD

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:
TOWER WORK:
REMOVED (1) DISH ANTENNA AND (1) ODU

INSTALL (1) DISH ANTENNA, (1) STIFF ARM AND (1) ODU

EXISTING (6) ANTENNA(S), (6) RRH(S), (2) FIBER JUNCTION BREAKOUT BOX, (3) 1.25" HYBRID TRUNK CABLES, (2) 1.8" HCS 2.0 HYBRID CABLES, (1) 5/8" COAX CABLE AND (1) 3/8" COAX CABLE TO REMAIN

GROUND WORK:
EXISTING (1) LARGE HPL3 SSC CABINET, (1) LARGE LB3 BATTERY CABINET, (3) CABINET AND (2) HCS 2.0 BOX TO REMAIN

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.
6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

PROJECT LOCATION DIRECTIONS

FROM CITY OF COLORADO SPRINGS MUNICIPAL AIRPORT:
LEAVE FROM MILTON E PROBY PKWY 0.7 MI, KEEP RIGHT AT MILTON E PROBY PKWY TOWARD AIRPORT EXIT 1.3 MI, BEAR RIGHT AT S POWERS BLVD/CO-21 TOWARD GENERAL AVIATION 1.5 MI, KEEP RIGHT AT S POWERS BLVD/CO-21 0.5 MI, KEEP RIGHT AT S POWERS BLVD/US-24 E/CO-21 2.3 MI, KEEP RIGHT AT E PLATTE AVE/US-24 E 0.2 MI, FOLLOW E PLATTE AVE/US-24 E 42.4 MI, TURN RIGHT ONTO WASHINGTON AVE, TURN RIGHT ONTO RAMAH RD E 1.0 MI, TURN LEFT ONTO OIL WELL RD, ARRIVE AT 18604 OIL WELL ROAD, RAMAH, CO 80832

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	1	11/18/25	RC
G-002	GENERAL NOTES	1	11/18/25	RC
C-101	OVERALL COMPOUND PLAN	1	11/18/25	RC
C-102	DETAILED EQUIPMENT PLAN	1	11/18/25	RC
C-201	TOWER ELEVATION	1	11/18/25	RC
C-401	EXISTING & PROPOSED ANTENNA INFORMATION & SCHEDULE	1	11/18/25	RC
C-501	CONSTRUCTION DETAILS	1	11/18/25	RC
C-502	EQUIPMENT DETAILS	1	11/18/25	RC
C-503	EQUIPMENT DETAILS	1	11/18/25	RC
E-501	GROUNDING DETAILS	1	11/18/25	RC
	MOUNT ANALYSIS (45 PAGES)			

SBA

LAB
49030 Pontiac Trail, Suite 100
Wixom, Michigan 48393
PHONE: (248) 705-9212

REV.	DESCRIPTION	BY	DATE
A	90% CD	RC	08/08/25
0	FINAL CD	DP	08/18/25
1	REVISED FINAL CD	RC	11/18/25

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SBA SITE NAME:
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T-MOBILE SITE NAME:
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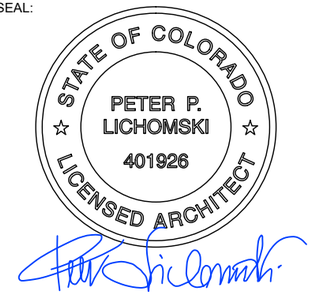

T-Mobile

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

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, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH SBA CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH SBA AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND SBA WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
   - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OD COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL.
   - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
   - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
   - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
   - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
   - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
   - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS).

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO SBA ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH SBA ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM SBA ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

SBA

LAB
49030 Pontiac Trail, Suite 100
Wixom, Michigan 48393
PHONE: (248) 705-9212

REV.	DESCRIPTION	BY	DATE
A	90% CD	RC	08/08/25
0	FINAL CD	DP	08/18/25
1	REVISED FINAL CD	RC	11/18/25

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SBA SITE NAME:
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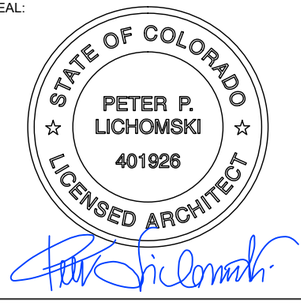
DN06268A

SITE ADDRESS:
18604 OIL WELL ROAD
RAMAH, CO 80832

SEAL:



T-Mobile

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	1

SITE PLAN NOTES:

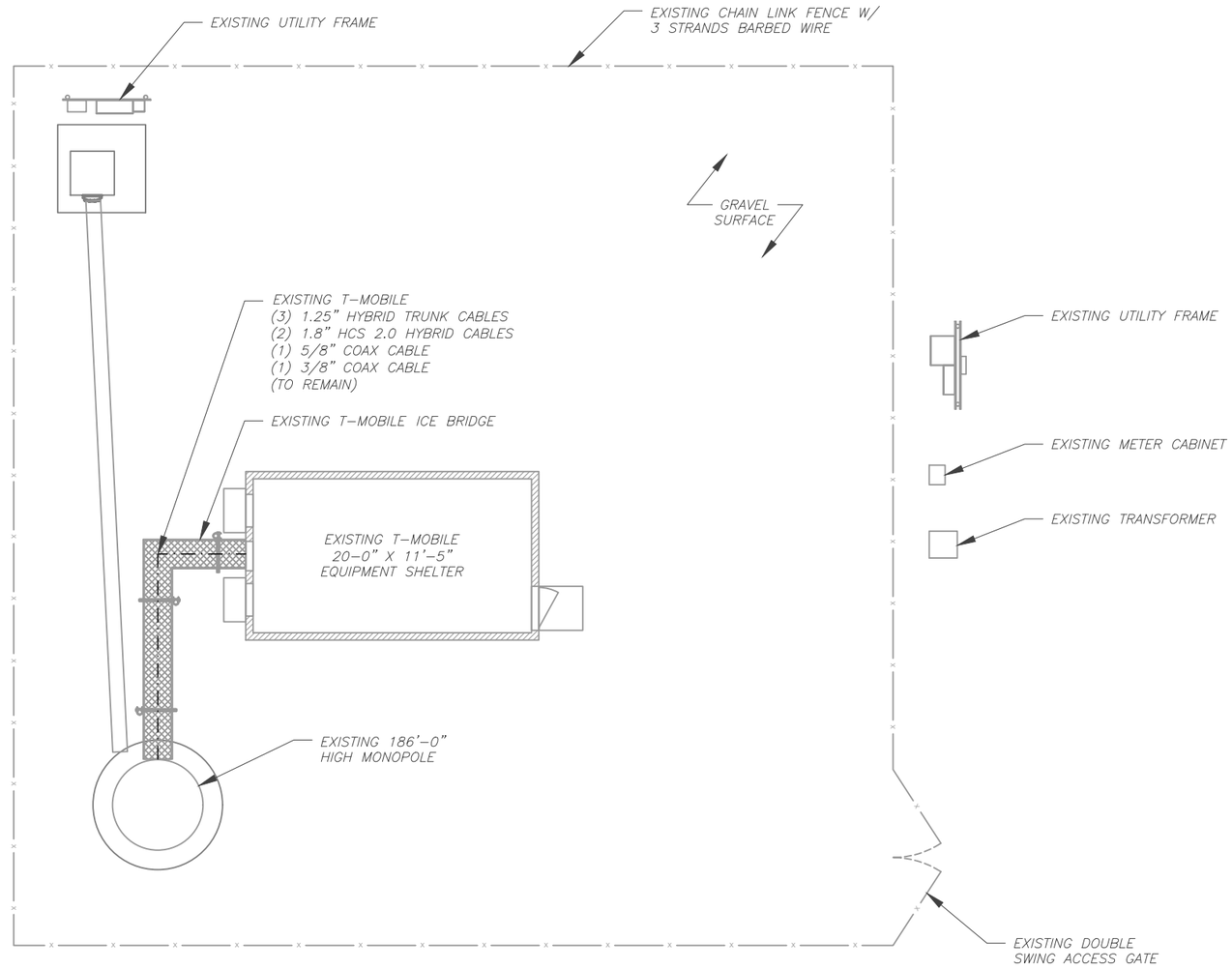
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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 SBA SPECIFICATIONS.

3. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

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
x x	CHAINLINK FENCE



1 OVERALL COMPOUND PLAN

0 10' 20'

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

49030 Pontiac Trail, Suite 100
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SITE ADDRESS:
18604 OIL WELL ROAD
RAMAH, CO 80832

SEAL:

STATE OF COLORADO
PETER P. LICHOMSKI
401926
LICENSED ARCHITECT

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

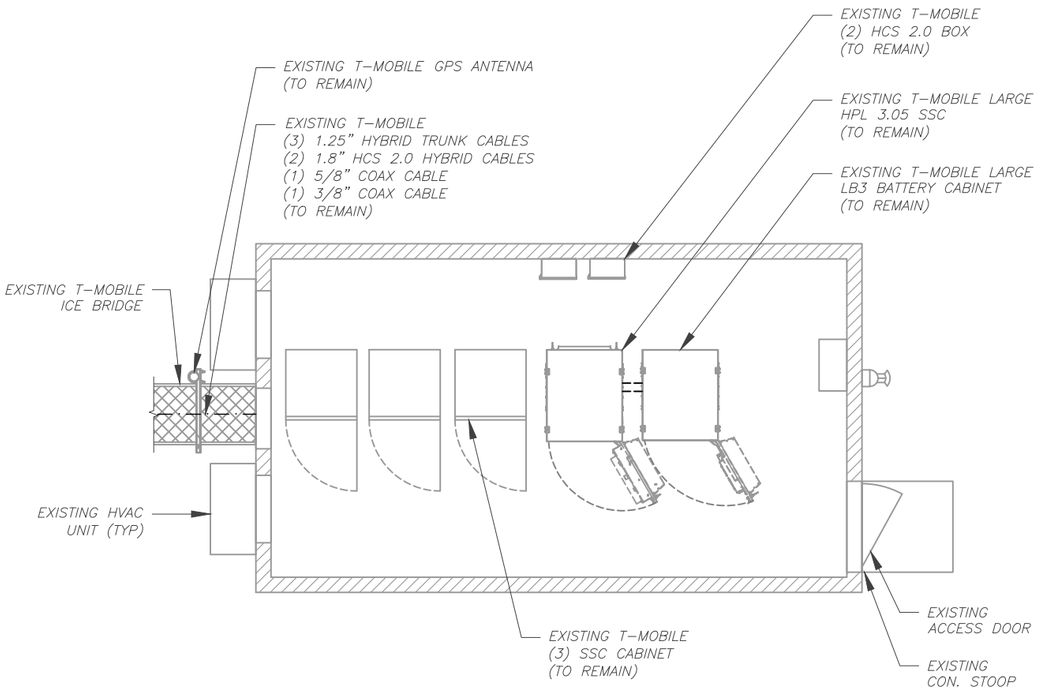
OVERALL COMPOUND PLAN

SHEET NUMBER: C-101

REVISION: 1

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

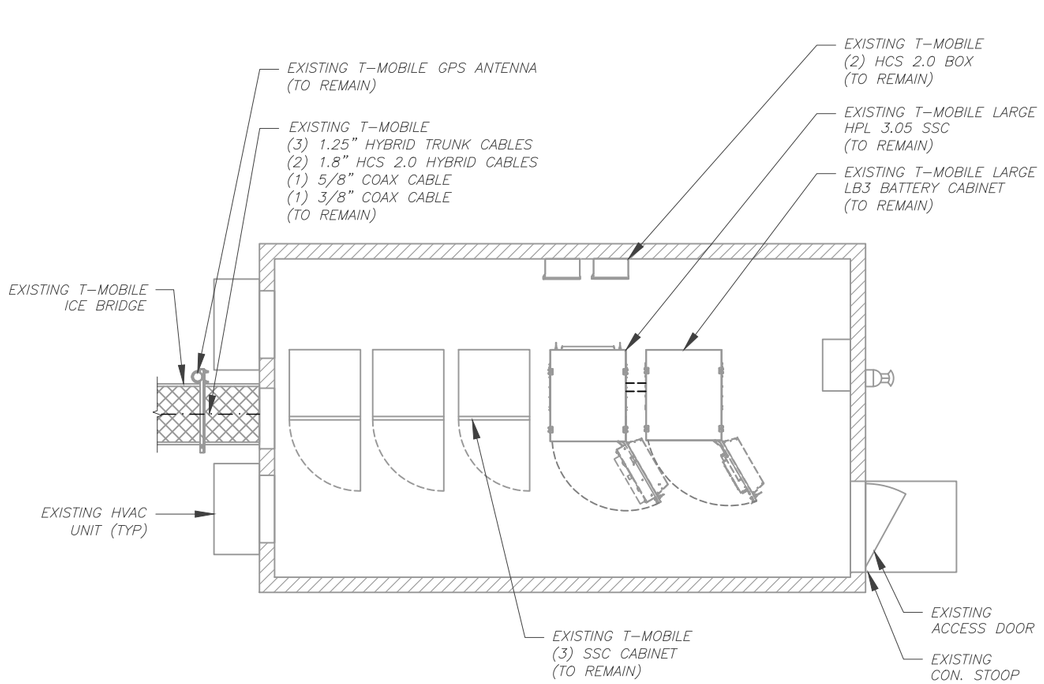
0 5' 10'

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

LEGEND

EXISTING EQUIPMENT TO BE REMOVED

T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



2 PROPOSED GROUND EQUIPMENT LAYOUT

0 5' 10'

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

LEGEND

PROPOSED EQUIPMENT TO BE INSTALLED

SBA

LAB

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Wixom, Michigan 48393
PHONE: (248) 705-9212

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STATE OF COLORADO
PETER P. LICHOMSKI
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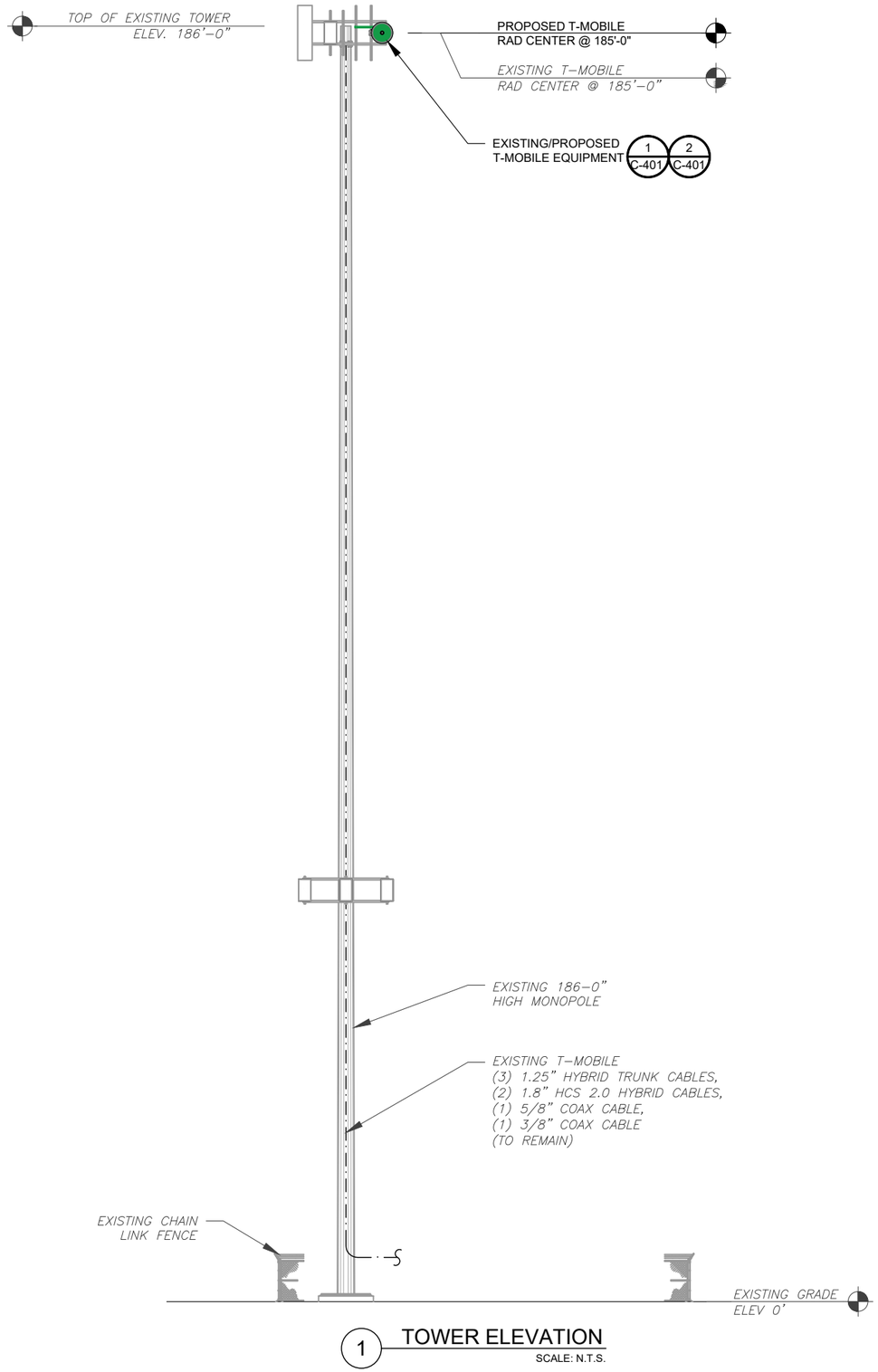
T-Mobile

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

DETAILED EQUIPMENT PLAN

SHEET NUMBER:	REVISION:
C-102	1



1 TOWER ELEVATION

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY TOWER ENGINEERING SOLUTIONS, DATED 07/15/25, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.

ALL ELEVATIONS REFLECT ABOVE GROUND LEVEL (A.G.L.)

TOWER NOTE:

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT 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. WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
3. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

LAB
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Wixom, Michigan 48393
PHONE: (248) 705-9212

REV.	DESCRIPTION	BY	DATE
A	90% CD	RC	08/08/25
0	FINAL CD	DP	08/18/25
1	REVISED FINAL CD	RC	11/18/25

SBA SITE NUMBER:
CO46078-A

SBA SITE NAME:
SIMLA

T-MOBILE SITE NAME:
DN06268A

SITE ADDRESS:
18604 OIL WELL ROAD
RAMAH, CO 80832

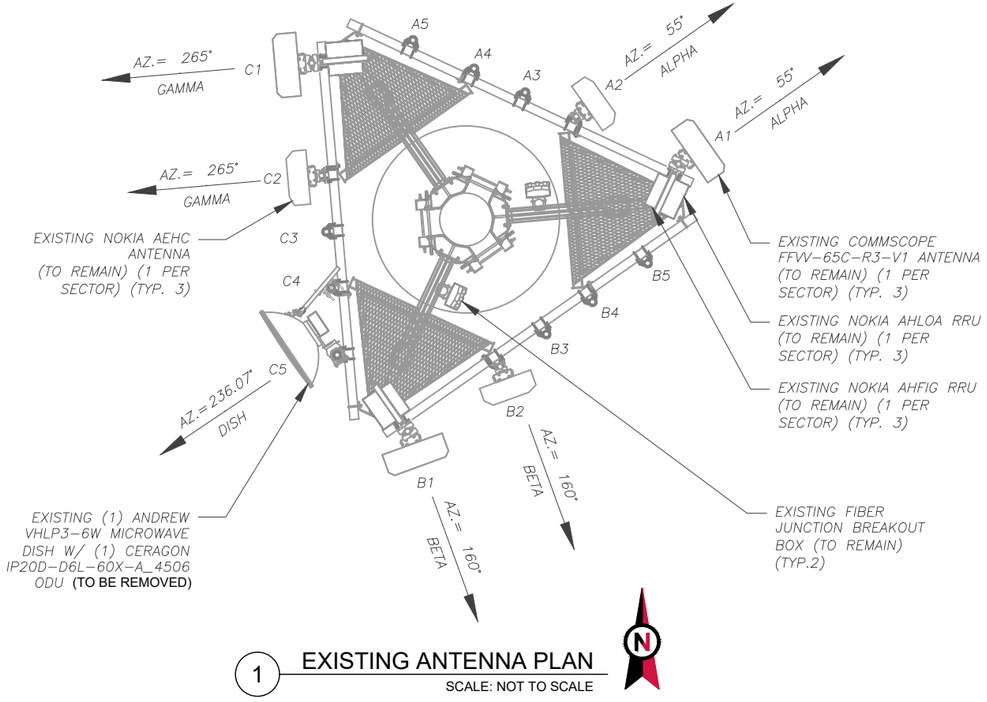
SEAL:

STATE OF COLORADO
PETER P. LICHOMSKI
401926
LICENSED ARCHITECT

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

TOWER ELEVATION

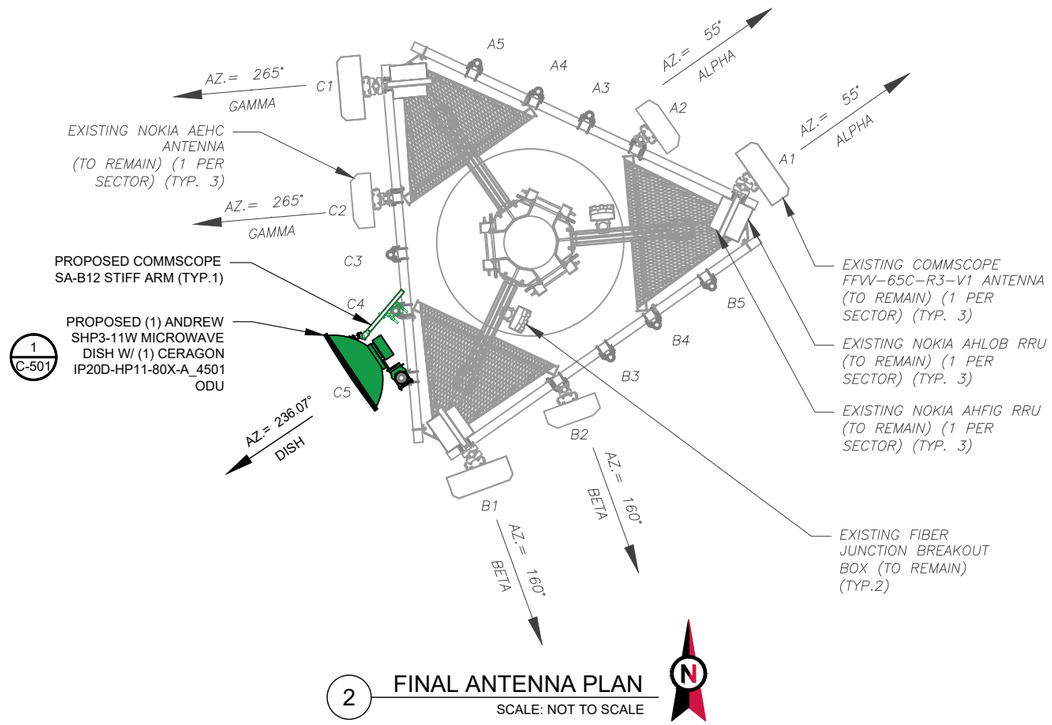
SHEET NUMBER:	REVISION:
C-201	1



1 EXISTING ANTENNA PLAN

SCALE: NOT TO SCALE

PER MOUNT ANALYSIS COMPLETED BY TOWER ENGINEERING SOLUTIONS, DATED 07/15/25, THE EXISTING MOUNT CAN ADEQUATELY SUPPORT THE PROPOSED LOADING.



2 FINAL ANTENNA PLAN

SCALE: NOT TO SCALE

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	-	55°	A5	–	–	–	–	–	–
			A4	–	–	–	–	–	–
			A3	–	–	–	–	–	–
	187'-6"		A2	NOKIA AEHC	L2500/N2500	0/–	RMN	–	–
	185'-0"		A1	COMMSCOPE FFVV-65C-R3-V1	L700/L600/N600/L2100/ L1900/G1900	0/–	RMN	NOKIA–AHLOA, NOKIA–AHFIG	RMN
BETA	-	160°	B4	–	–	–	–	–	–
				–	–	–	–	–	–
			B3	–	–	–	–	–	–
	187'-6"		B2	NOKIA AEHC	L2500/N2500	0/–	RMN	–	–
	185'-0"		B1	COMMSCOPE FFVV-65C-R3-V1	L700/L600/N600/L2100/ L1900/G1900	0/–	RMN	NOKIA–AHLOA, NOKIA–AHFIG	RMN
GAMMA	185'-0"	236.07°	C5	ANDREW SHP3-11W	-	-	ADD	(1) CERAGON IP20D-HP11-80X-A_4501	P
	-	265°	C4	–	–	–	–	–	–
			C3	–	–	–	–	–	–
	187'-6"		C2	NOKIA AEHC	L2500/N2500	0/–	RMN	–	–
	185'-0"		C1	COMMSCOPE FFVV-65C-R3-V1	L700/L600/N600/L2100/ L1900/G1900	0/–	RMN	NOKIA–AHLOA, NOKIA–AHFIG	RMN

3 FINAL ANTENNA SCHEDULE

PROPOSED ANTENNA AND RF EQUIPMENT SCHEDULE

LOCATION			ANTENNA SUMMARY			NON ANTENNA SUMMARY			PROPOSED CABLING SUMMARY	
SECTOR	RAD	AZ	POS	MODEL NUMBER	STATUS	POS	MODEL NUMBER	STATUS	COAX/ELLIPTICAL	STATUS
C	185'	236.07°	5	ANDREW SHP3-11W	P	5	(1) CERAGON IP20D-HP11-80X-A_4501	P	(1) 5/8" COAX CABLE, (1) 3/8" COAX CABLE	E

NOTES

1. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS.
2. SBA HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIGURATION OR MOUNT CONFIGURATION. CONTRACTOR TO VERIFY MOUNT CONFIGURATION HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (I.E. CLEARANCES, MOUNT PIPE OR SUFFICIENT LENGTH, ETC.) SBA DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.
3. ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH THE SBA CM.
4. CONFIRM SPACING OF PROPOSED EQUIPMENT DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
5. CABLE LENGTHS SHOWN ESTIMATE MAXIMUM TYPICAL RUN AND INCORPORATE A 15% SAFETY FACTOR.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
RMN: TO REMAIN
REL: TO BE RELOCATED
DSC: TO BE DISCONNECTED AND TO REMAIN
P: TO BE ADDED

PROPOSED FIBER DISTRIBUTION/OVP BOX		PROPOSED CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
–	–	(1) 5/8", (1) 3/8"	(3) 1.25", (2) 1.8" HCS 2.0	RMN

SBA

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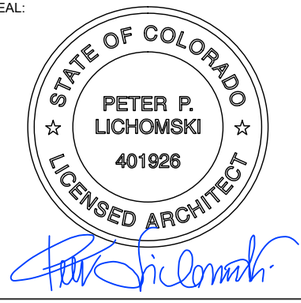
SITE ADDRESS:
18604 OIL WELL ROAD
RAMAH, CO 80832

SEAL:

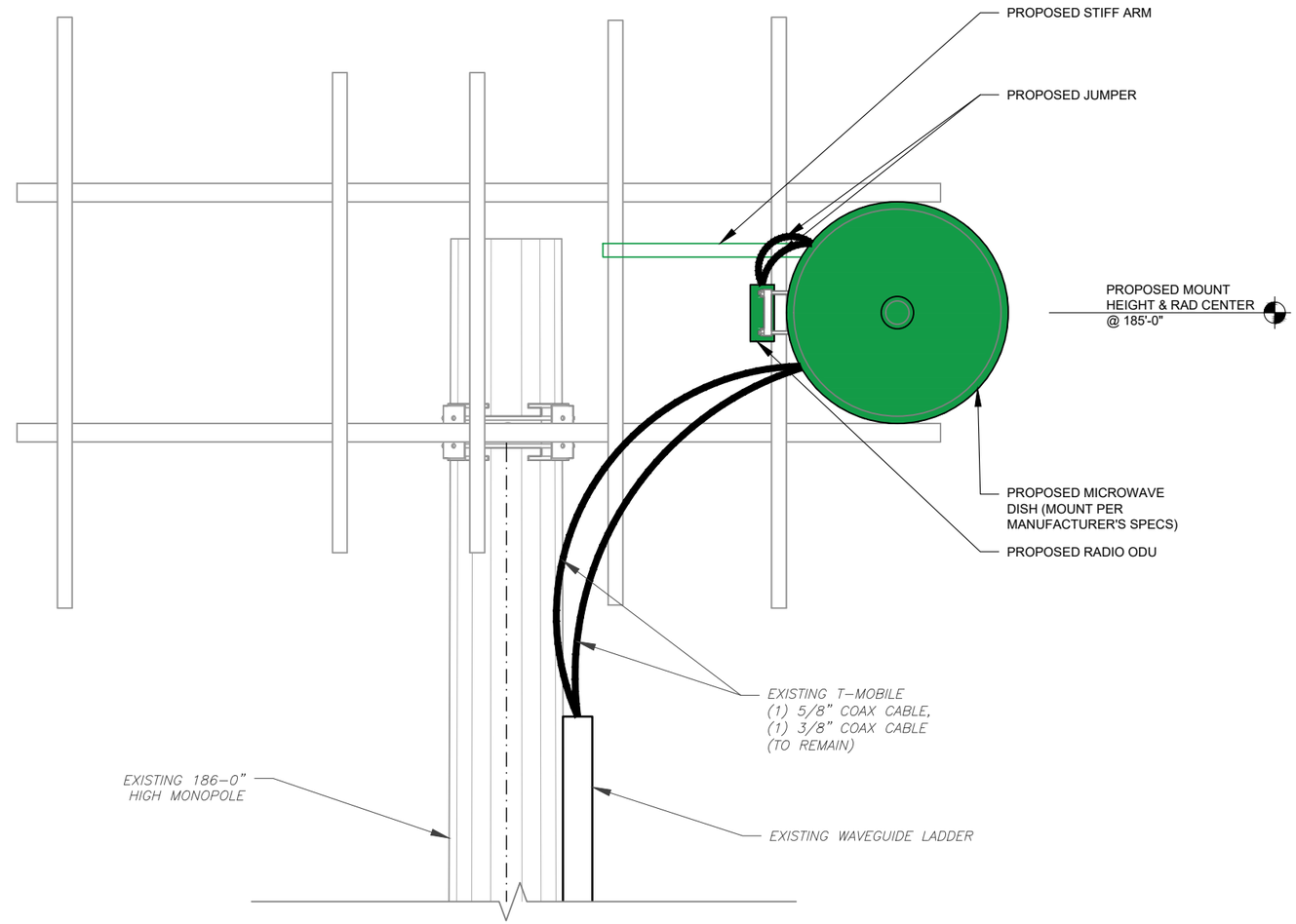


T-Mobile

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

EXISTING & PROPOSED ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	1



1 PROPOSED MICROWAVE MOUNTING DETAIL (ELEVATION)

SCALE: N.T.S.

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A	90% CD	RC	08/08/25
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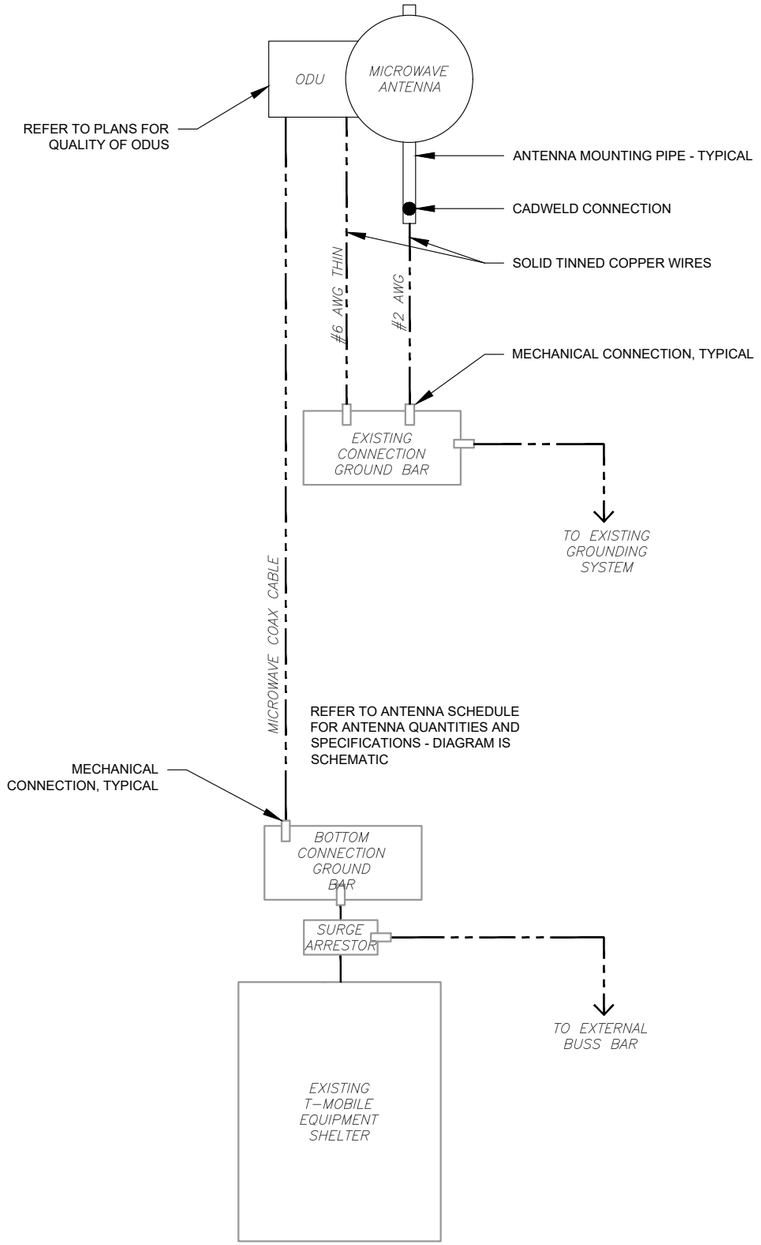
STATE OF COLORADO
PETER P. LICHOMSKI
401926
LICENSED ARCHITECT

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	1



1 MICROWAVE GROUNDING DIAGRAM
SCALE: N.T.S.

CERAGON

Technical Description

FibeAir® IP-20D

January 2020 | Rev A
CeraOS: 11.0

CERAGON

Table 172: RFU-E Mechanical Specifications

RFU-E Dimensions	Height: 8.66 inches Width: 7.8 inches Depth: 3 inches Weight: 6.6 lbs.

Table 173: RFU-S Mechanical Specifications

RFU-D Dimensions	Height: 8.54 inches Width: 8.27 inches Depth: 3.35 inches Weight: 8.82 lbs.

Table 174: RFU-D Mechanical Specifications

RFU-C Dimensions	Height: 7.87 inches Width: 7.87 inches Depth: 3.35 inches Weight: 9 lbs.
RFU- Standard Mounting OD Pole	50 mm-120 mm/2"-4.5" (subject to vendor and antenna size)

Table 175: RFU-A Mechanical Specifications

RFU-A Dimensions (1+1 configuration)	Height: 1.8 inches (1RU) Width: 19 inches Depth: 13.18 inches Weight: 26.45 pounds

2 ODU (CERAGON IP20D)
SCALE: N.T.S.

SHP3-11W/B

Base Product

0.9m | 3 ft Sentinel® High Performance Antenna, single-polarized, 10.125 - 11.700 GHz

Product Classification

Product Type	Microwave antenna
Product Brand	Sentinel®

General Specifications

Antenna Type	SHP - Sentinel® High Performance Antenna, single-polarized
Polarization	Single
Side Struts, Included	0
Side Struts, Optional	1

Dimensions

Diameter, nominal	0.9 m | 3 ft

Electrical Specifications

Operating Frequency Band	10.125 – 11.700 GHz
Gain, Low Band	37.2 dBi
Gain, Mid Band	38.4 dBi
Gain, Top Band	39 dBi
Boresite Cross Polarization Discrimination (XPD)	30 dB
Front-to-Back Ratio	69 dB
Beamwidth, Horizontal	2 °
Return Loss	17.7 dB
VSWR	1.3
Radiation Pattern Envelope Reference (RPE)	7291B | 7293B
Electrical Compliance	Brazil Anatel Class 2 | Canada SRSP 310.5 | ETSI 302 217 Class 3 | US FCC Part 101A

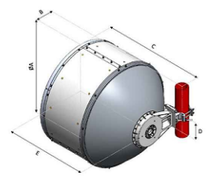
SHP3-11W/B

Cross Polarization Discrimination (XPD) Electrical Compliance	ETSI EN 302217 XPD Category 3

Mechanical Specifications

Compatible Mounting Pipe Diameter	90 mm– 120 mm | 3.5 in–4.7 in
Fine Azimuth Adjustment Range	±15°
Fine Elevation Adjustment Range	±15°
Wind Speed, operational	201 km/h | 124.896 mph
Wind Speed, survival	250 km/h | 155.343 mph

Antenna Dimensions and Mounting Information



Dimensions in inches [mm]					
Antenna Size, ft (m)	A	B	C	D	E
3 (0.9)	38.9 (987)	35 (887)	33.7 (855)	7.2 (183)	34.9 (887)

Wind Forces at Wind Velocity Survival Rating

Axial Force (FA)	3353 N | 753.785 lbf
Angle α for MT Max	-30 °
Side Force (FS)	-1680 N | -377.679 lbf
Twisting Moment (MT)	1605 N·m | 14,205.447 in·lb
Zcg without Ice	310 mm | 12.205 in

3 MICROWAVE ANTENNA (ANDREW SHP3-11W)
SCALE: N.T.S.

SBA

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0	FINAL CD	DP	08/18/25
1	REVISED FINAL CD	RC	11/18/25

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CO46078-A
SBA SITE NAME:
SIMLA
T-MOBILE SITE NAME:
DN06268A
SITE ADDRESS:
18604 OIL WELL ROAD
RAMAH, CO 80832

SEAL:

T-Mobile

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

EQUIPMENT DETAILS

SHEET NUMBER:	REVISION:
C-502	1

Product Specifications

COMMSCOPE®

POWERED BY ANDREW.

SA-B12

Stiff Arm Bracket, includes pipe

Dimensions

Pipe Outer Diameter	60.3 mm | 2 3/8 in
Height	3810.0 mm | 150.0 in
Length	203.2 mm | 8.0 in
Weight	27.1 kg | 59.7 lb
Width	203.2 mm | 8.0 in

General Specifications

Product Type	Stand-off mount
Pipe Length	3.8 m | 12.5 ft
Pipe, quantity	1
Includes	Attachment hardware
Material Type	Hot dip galvanized steel
Mounting	Round and angle legs
Package Quantity	1

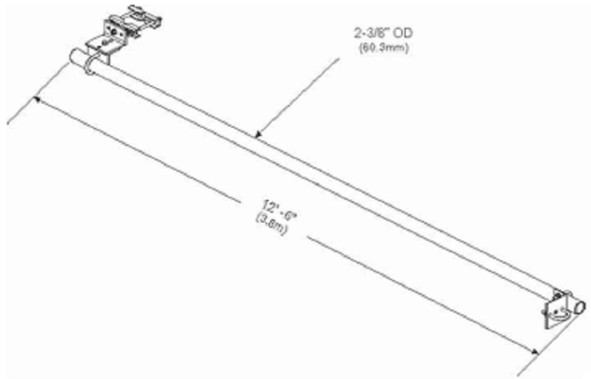
Product Specifications

COMMSCOPE®

POWERED BY ANDREW.

SA-B12

Outline Drawing



Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

Included Products

MT-537 — Plain End Pipe, 2-3/8 in OD x 126 in

SA-B — Stiff Arm Mount Bracket for 2-3/8 in OD pipe

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All specifications are subject to change without notice. See www.commscope.com for the most current information. Revised: July 26, 2013

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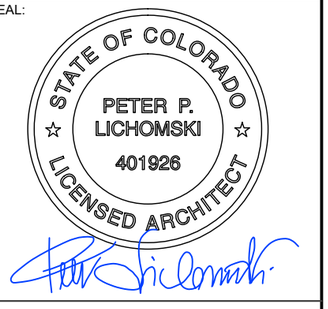
RAMAH, CO 80832

SEAL:

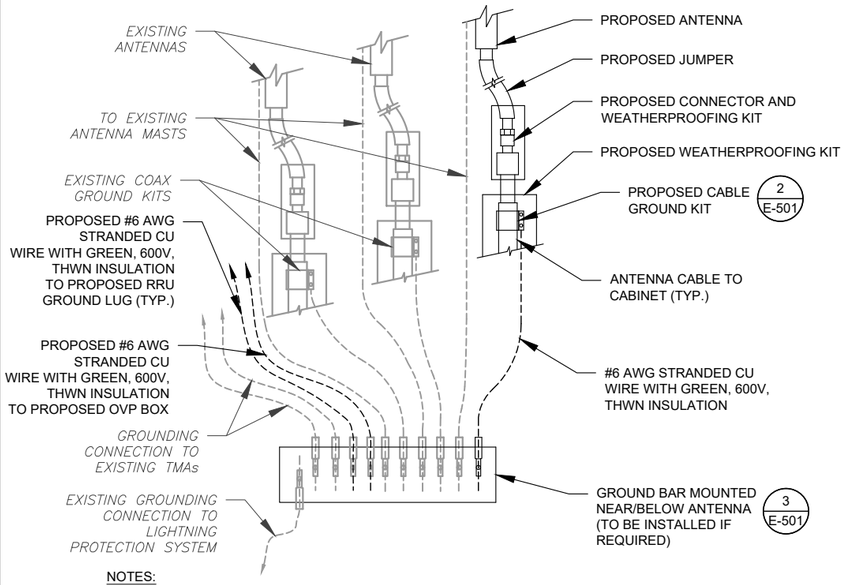


T-Mobile

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

EQUIPMENT DETAILS

SHEET NUMBER:	REVISION:
C-503	1

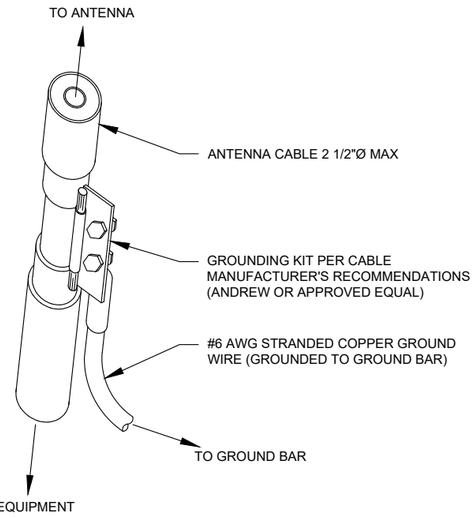


NOTES:

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.

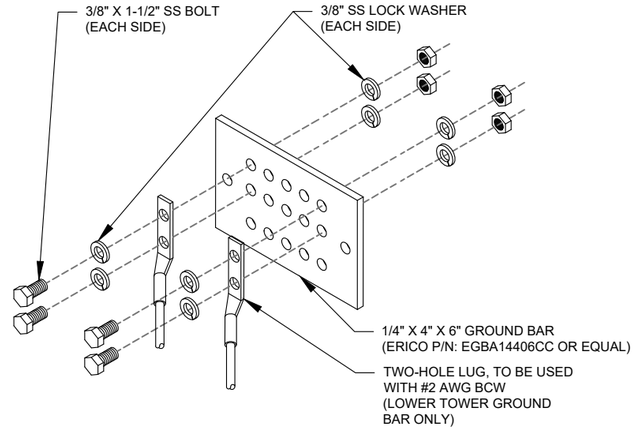


GROUND KIT NOTES:

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.

SBA

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Wixom, Michigan 48393
PHONE: (248) 705-9212

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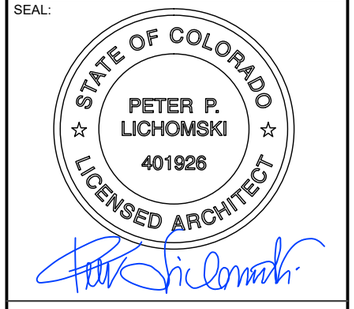


T-Mobile

DATE DRAWN:	08/08/25
SBA JOB NO:	289155
CUSTOMER ID:	DN06268A
CUSTOMER NAME:	DN06268A

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	1

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Antenna Mount Analysis Report

Existing Monopole Tower

Customer Name: SBA Communications Corp

Customer Site Number: CO46078-A-SBA

Customer Site Name: Simla

Carrier Name: T-Mobile Sprint (App: 289155-v1)

Carrier Site ID / Name: DN06268A / DN06268A

Site Location: 18620 Oil Well Road

Ramah, Colorado

El Paso County

Latitude: 39.107056

Longitude: -104.108139

COLORADO LICENSED
KYLE WYANT
52310
PROFESSIONAL ENGINEER

Kyle Wyant
7/16/25

Analysis Result:

Max Structural Usage: 72.4% [Pass]

Report Prepared By: Siddartha Kokkula

Introduction

The purpose of this report is to summarize the analysis results on the (1) Modified Platform w/ Support Rail at 185.00' elevation to support the proposed antenna configuration. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Mount Drawings	Mount mapping by TEP dated 03/09/2021
Antenna Loading	SBA Application #: 1289155, v1 dated 07/14/2025
Modification Drawings	Provided by TES, dated 03/09/2022

Analysis Criteria

Wind Speed Used in the Analysis: 130 mph (3-Sec. Gust) (Ultimate Wind Speed)
Wind Speed with Ice: 50 mph (3-Sec. Gust) with 0.25" radial ice concurrent
Service Load Wind Speed: 30 mph +0" Radial ice
Standard/Codes: ANSI/TIA/EIA 222-H/IBC 2021
Exposure Category: C
Risk Category: II
Topographic Category: 1
Crest Height (Ft): 0
Ground Elevation Factor: 1.000

The site is a Risk Category II structure per IBC Table 1604.5. This site does not support emergency communication equipment for first responders such as fire departments, police, hospitals, ambulance services or any of the facilities listed for Risk Categories III and IV. The scope of work detailed in this structural analysis does not include items that are a part of emergency service as the 911 or essential facility service of an emergency response system.

Mount Information

(1) Modified Platform w/ Support Rail at 185.00' elevation

Final Antenna Configuration

3 Commscope FFVV-65C-R3-V1
3 Nokia AEHC
1 Andrew Microwaves SHP3-11W
1 Ceragon IP20D-HP11-80X-A_4501
3 Nokia AHLOA
3 Nokia AHFIG
3 Samsung 310 RRHP4 RRUs
2 Alliance Corp High Cap Hybrid Breakout CRS Box*

* Equipment to be flush mounted directly to the Standoff arm. They are not shown in the placement diagrams.

In addition to the proposed equipment loading, a 500 lb serviceability load was also considered in this analysis in accordance with TIA requirements.

Analysis Results

Our calculations have determined that under design wind load the existing mounts will be structurally adequate to support the proposed antenna configuration. The maximum structural usage is 72.4%, which occurs in the Flange connection. The proposed equipment must be installed as stipulated in the Final Antenna Configuration section of this report. The analysis results are void if the proposed equipment is not installed in accordance with this report.

Attachments

1. Mount Photos
2. Antenna Placement Diagram
3. Mount Mapping Information
4. Analysis Calculations

Standard Conditions

1. The loading configuration as analyzed in this report is as provided from the customer. Any deviation from this design shall be communicated to TES to verify deviation will not adversely impact the analysis.

2. The analysis is based on the presumption that the antenna mount members and components along with any existing reinforcement items have been correctly and properly designed, manufactured, installed and maintained.

3. All the existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion. The mount analysis is not a condition assessment of the mount.

4. The mount analysis was performed in accordance with the loading provided, and if applicable the modification required to support the additional loading.

5. If the mount is modified, installation must adhere to the configuration communicated in the modification drawings.

6. The modification drawings are not intended to convey means or methods. These are the responsibility of the installing contractor.

7. Rigging plan review is available if the contractor requires for a construction class IV or other if required. Review fee would apply.

8. The mount modification package was created based upon information provided for the mount loading. The underlying tower is assumed to provide support and sufficient rigidity to support the mount loads as a tower analysis was not part of the mount analysis.

9. TES is not responsible for modifications to climbing facilities unless communicated to TES in writing.


02/06/2024

Structure: CO46078-A-SBA - Simla

Sector: A

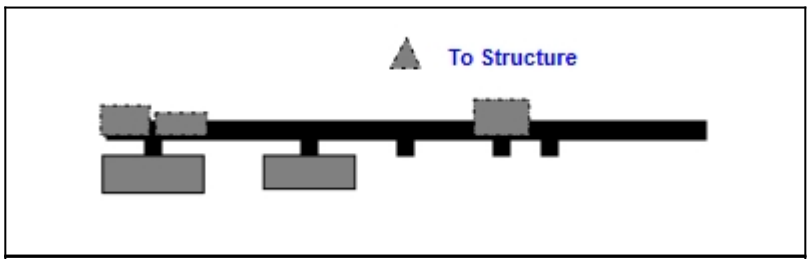
Structure Type: Monopole

Mount Elev: 185.00

7/16/2025

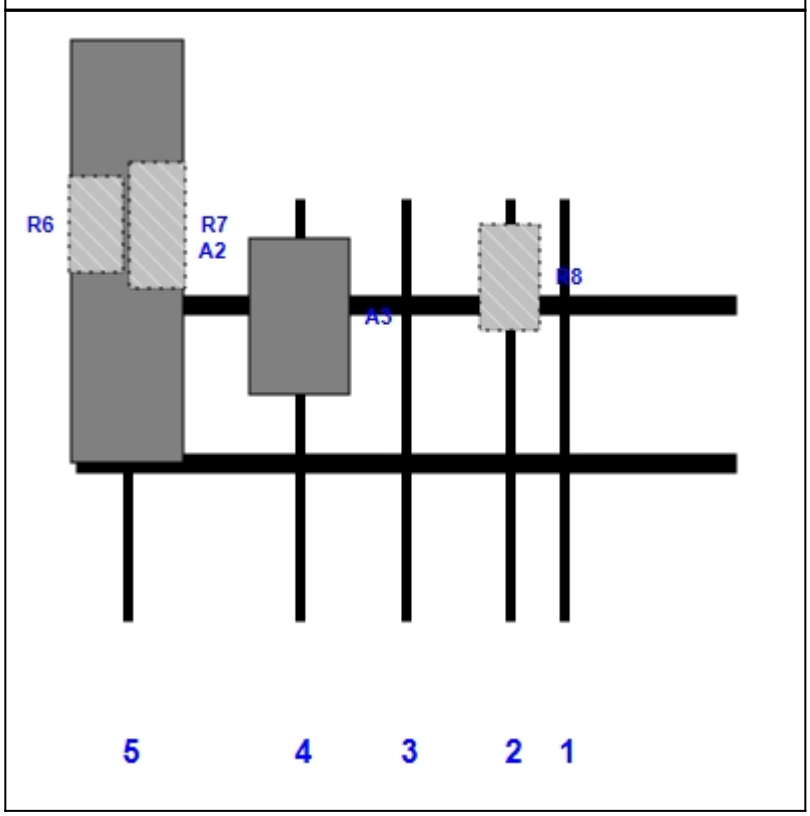
Tower Engineering Solutions

Plan View



Front View

Looking Toward Structure



Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
R8	RRHP4 RRUs	23.80	13.80	99.00	2	a	Behind	18.00			
A3	AEHC	35.40	22.80	51.00	4	a	Front	27.00			
A2	FFVV-65C-R3-V1	95.90	25.20	12.00	5	a	Front	12.00			
R6	AHLOA	22.05	12.13	12.00	5	a	Behind	6.00	-7.00		
R7	AHFIG	28.70	12.90	12.00	5	a	Behind	6.00	7.00		

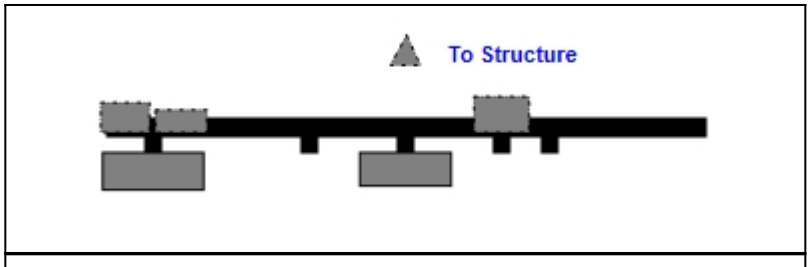
Structure: CO46078-A-SBA - Simla

Sector: B
Structure Type: Monopole
Mount Elev: 185.00

7/16/2025

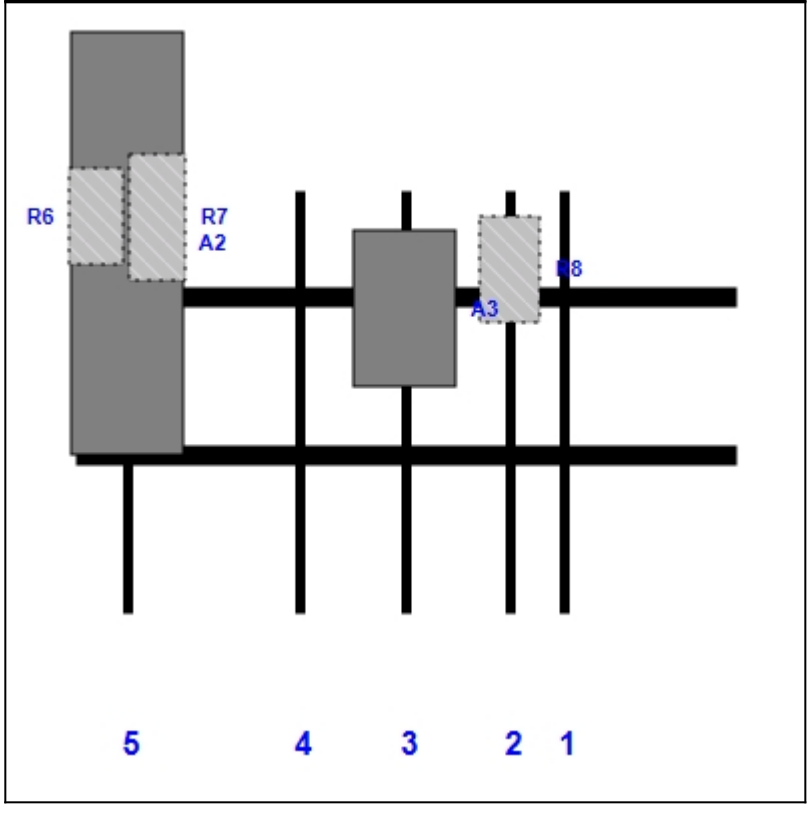
Tower Engineering Solutions

Plan View



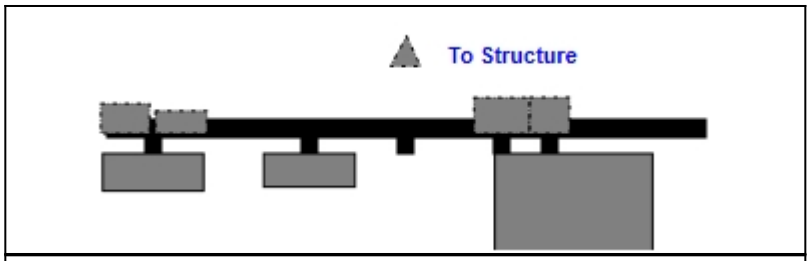
Front View

Looking Toward Structure



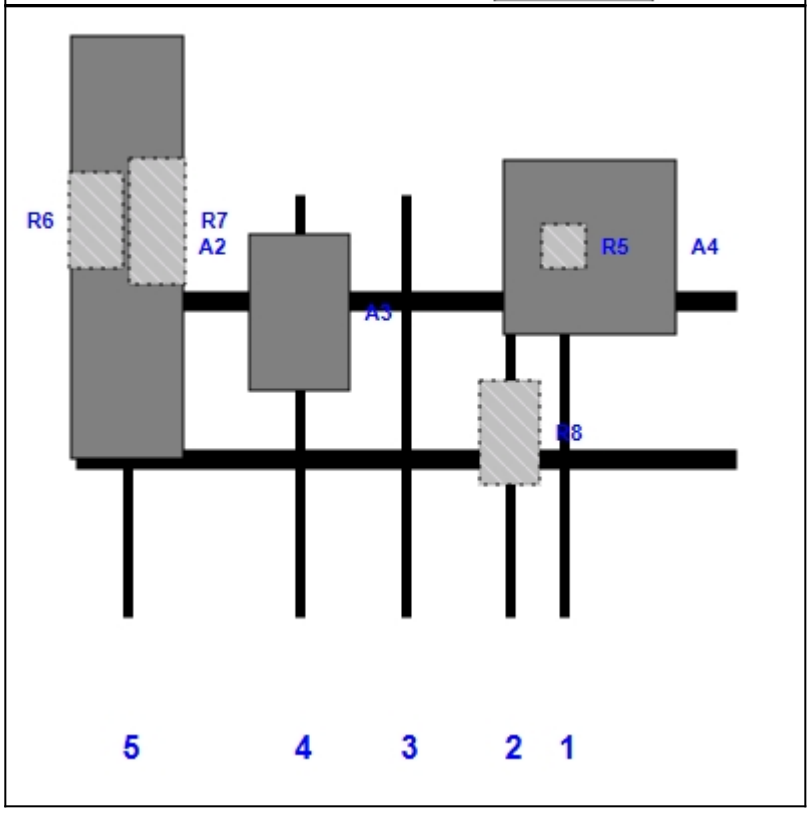
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
R8	RRHP4 RRUs	23.80	13.80	99.00	2	a	Behind	18.00			
A3	AEHC	35.40	22.80	75.00	3	a	Front	27.00			
A2	FFVV-65C-R3-V1	95.90	25.20	12.00	5	a	Front	12.00			
R6	AHLOA	22.05	12.13	12.00	5	a	Behind	6.00	-7.00		
R7	AHFIG	28.70	12.90	12.00	5	a	Behind	6.00	7.00		

Plan View



Front View

Looking Toward Structure



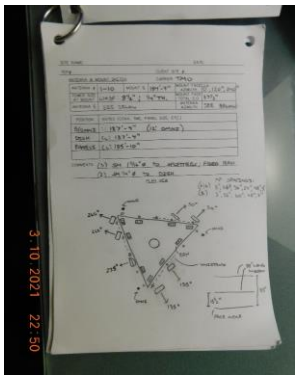
Ref #	Model	Height (in)	Width (in)	H Dist Left	Pipe #	Pipe Pos V	Pos	From Top	H Offset	Status	Validation
A4	SHP3-11W	39.40	39.40	99.00	2	a	Front	12.00	18.00		
R5	IP20D-HP11-80X-A_4501	10.00	10.00	99.00	2	a	Behind	12.00	12.00		
R8	RRHP4 RRUs	23.80	13.80	99.00	2	a	Behind	54.00			
A3	AEHC	35.40	22.80	51.00	4	a	Front	27.00			
A2	FFVV-65C-R3-V1	95.90	25.20	12.00	5	a	Front	12.00			
R6	AHLOA	22.05	12.13	12.00	5	a	Behind	6.00	-7.00		
R7	AHFIG	28.70	12.90	12.00	5	a	Behind	6.00	7.00		

V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1269536

Tower Owner:	SIMLA	**Mapping Date:**	3/9/2021
Site Name:	SBA	**Tower Type:**	Monopole
Site Number or ID:	CO46078	**Tower Height (Ft.):**	187
Mapping Contractor:	TEP	**Mount Elevation (Ft.):**	185



Mount Pipe Configuration and Geometries [Unit = Inches]

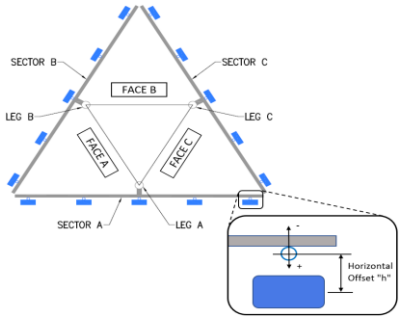
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2.4"Øx1/8"x4'-0"	33.00	3.00	C1	2.4"Øx1/8"x4'-0"	33.00	3.00
A2	2.4"Øx1/8"x4'-0"	33.00	39.00	C2	2.4"Øx1/8"x4'-0"	33.00	39.00
A3	2.4"Øx1/8"x4'-0"	33.00	75.00	C3	2.4"Øx1/8"x4'-0"	33.00	75.00
A4	2.9"Øx3/16"x8'-0"	44.00	99.00	C4	2.9"Øx3/16"x8'-0"	44.00	99.00
A5	2.4"Øx1/8"x8'-0"	60.00	147.00	C5	2.4"Øx1/8"x8'-0"	60.00	147.00
A6				C6			
B1	2.4"Øx1/8"x4'-0"	33.00	3.00	D1			
B2	2.4"Øx1/8"x4'-0"	33.00	39.00	D2			
B3	2.9"Øx3/16"x8'-0"	44.00	99.00	D3			
B4	2.4"Øx1/8"x4'-0"	60.00	147.00	D4			
B5				D5			
B6				D6			

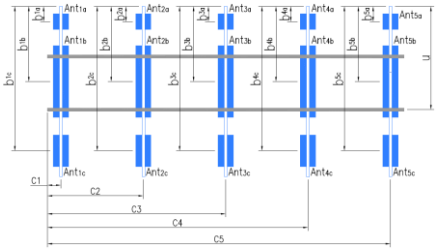
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	0.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	

Please enter additional infomation or comments below.

WA3F: 8.5", 1/4" TH.

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	



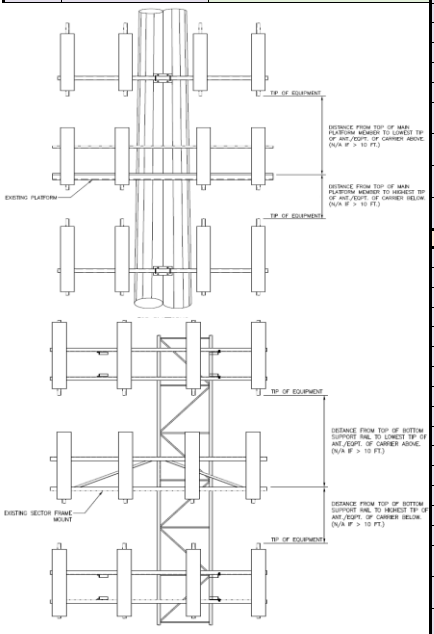


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b},..." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	12' Omni					186.417	16.00	5.00		40
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	KMW ET-X-WM-18-65-8P	12.00	4.30	61.00		186.125	30.50	8.00	30.00	52
Ant_{4c}										
Ant_{5a}										
Ant_{5b}	KMW ET-X-WM-18-65-8P	12.00	4.30	61.00		185.458	54.50	8.00	30.00	56
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	0.00	Deg	Leg A:		Deg
Sector B:	120.00	Deg	Leg B:		Deg
Sector C:	240.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information		
Location:	Deg	Sector C
Climbing Facility	Corrosion Type:	Good condition.
	Access:	Climbing path was obstructed.
	Condition:	Good condition.



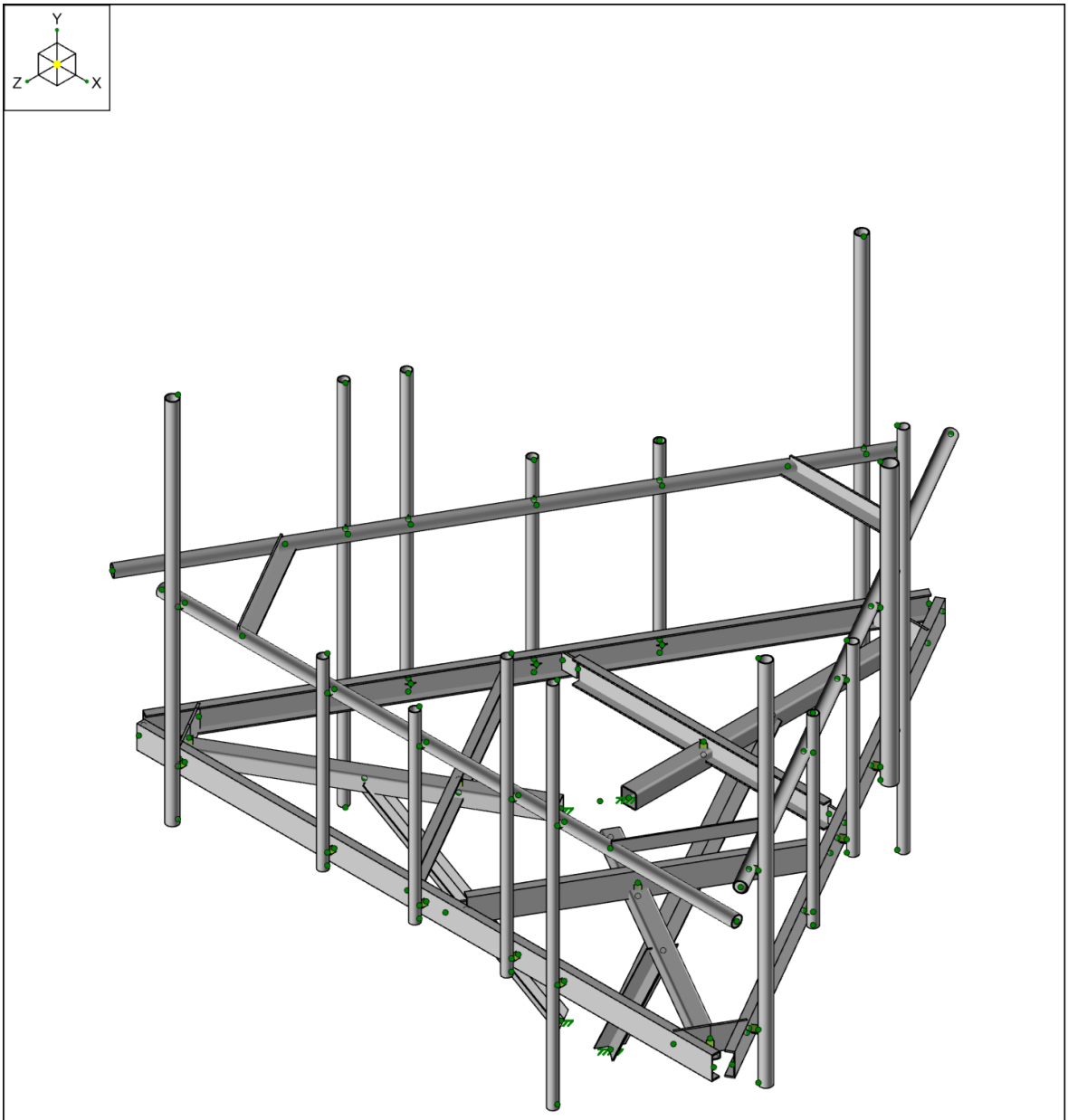
Sector B											
Ant_{1a}											
Ant_{1b}	12' Omni						186.417	16.00	5.00		59
Ant_{1c}											
Ant_{2a}											
Ant_{2b}											
Ant_{2c}											
Ant_{3a}											
Ant_{3b}	KMW ET-X-WM-18-65-8P	12.00	4.30	61.00			186.125	30.50	8.00	135.00	64
Ant_{3c}											
Ant_{4a}											
Ant_{4b}	KMW ET-X-WM-18-65-8P	12.00	4.30	61.00			185.458	54.50	8.00	135.00	69
Ant_{4c}											
Ant_{5a}											
Ant_{5b}											
Ant_{5c}											
Ant on Standoff											
Ant on Standoff											
Ant on Tower											
Ant on Tower											
Sector C											
Ant_{1a}											
Ant_{1b}	12' Omni						186.417	16.00	5.00		72
Ant_{1c}											
Ant_{2a}											
Ant_{2b}											
Ant_{2c}											
Ant_{3a}											
Ant_{3b}	VHLP3-18-DW1	39.40	24.30	39.40			186.458	15.50	14.00	235.00	76
Ant_{3c}											
Ant_{4a}											
Ant_{4b}	KMW ET-X-WM-18-65-8P	12.00	4.30	61.00			186.125	30.50	8.00	260.00	77
Ant_{4c}											
Ant_{5a}											
Ant_{5b}	KMW ET-X-WM-18-65-8P	12.00	4.30	61.00			185.458	54.50	8.00	260.00	81
Ant_{5c}											
Ant on Standoff											
Ant on Standoff											
Ant on Tower											
Ant on Tower											
Sector D											
Ant_{1a}											
Ant_{1b}											
Ant_{1c}											
Ant_{2a}											
Ant_{2b}											
Ant_{2c}											
Ant_{3a}											
Ant_{3b}											
Ant_{3c}											
Ant_{4a}											
Ant_{4b}											
Ant_{4c}											
Ant_{5a}											
Ant_{5b}											
Ant_{5c}											
Ant on Standoff											
Ant on Standoff											
Ant on Tower											
Ant on Tower											

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #

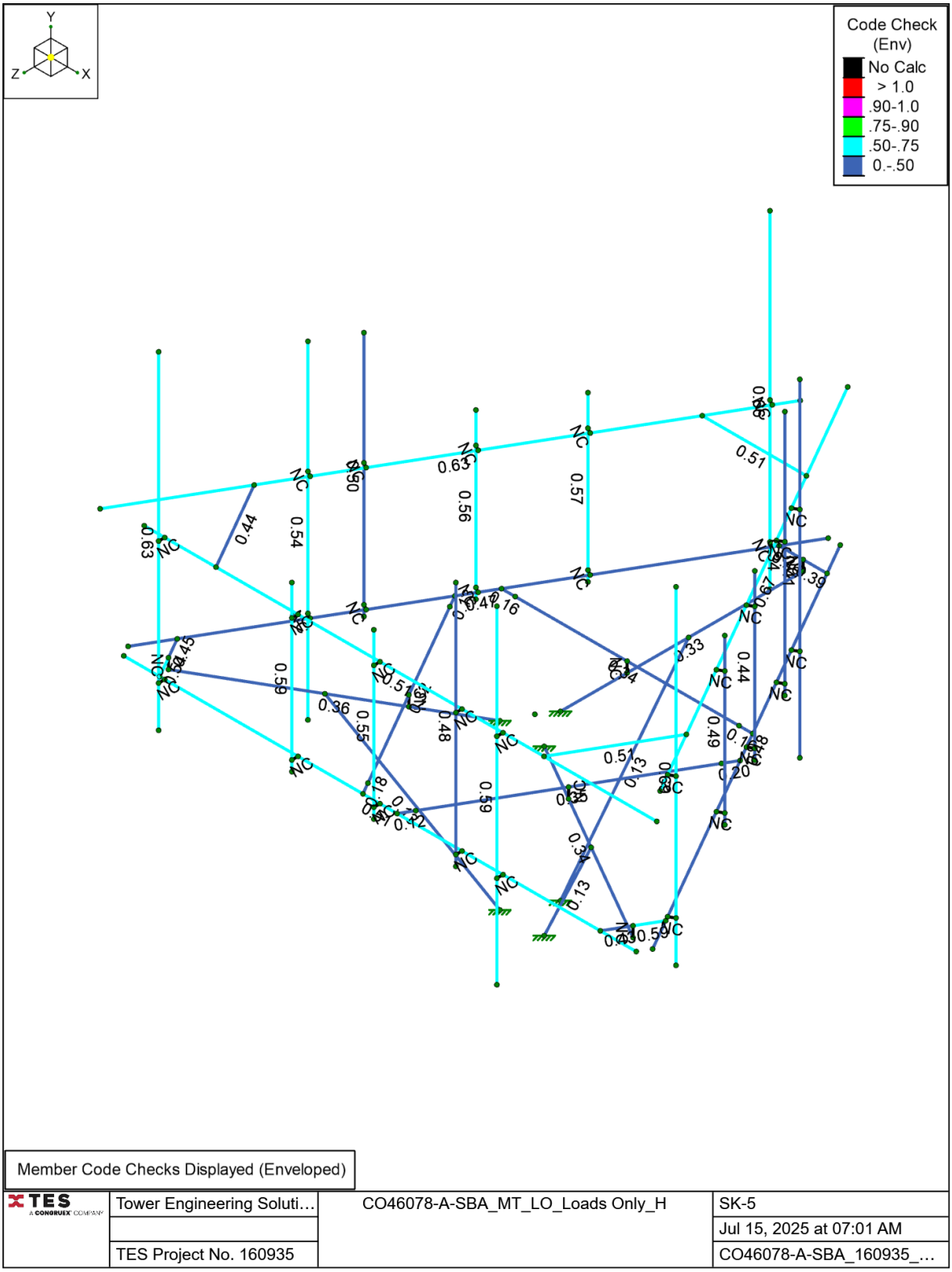
1		
2		
3		
4		
5		
6		
7		
8		

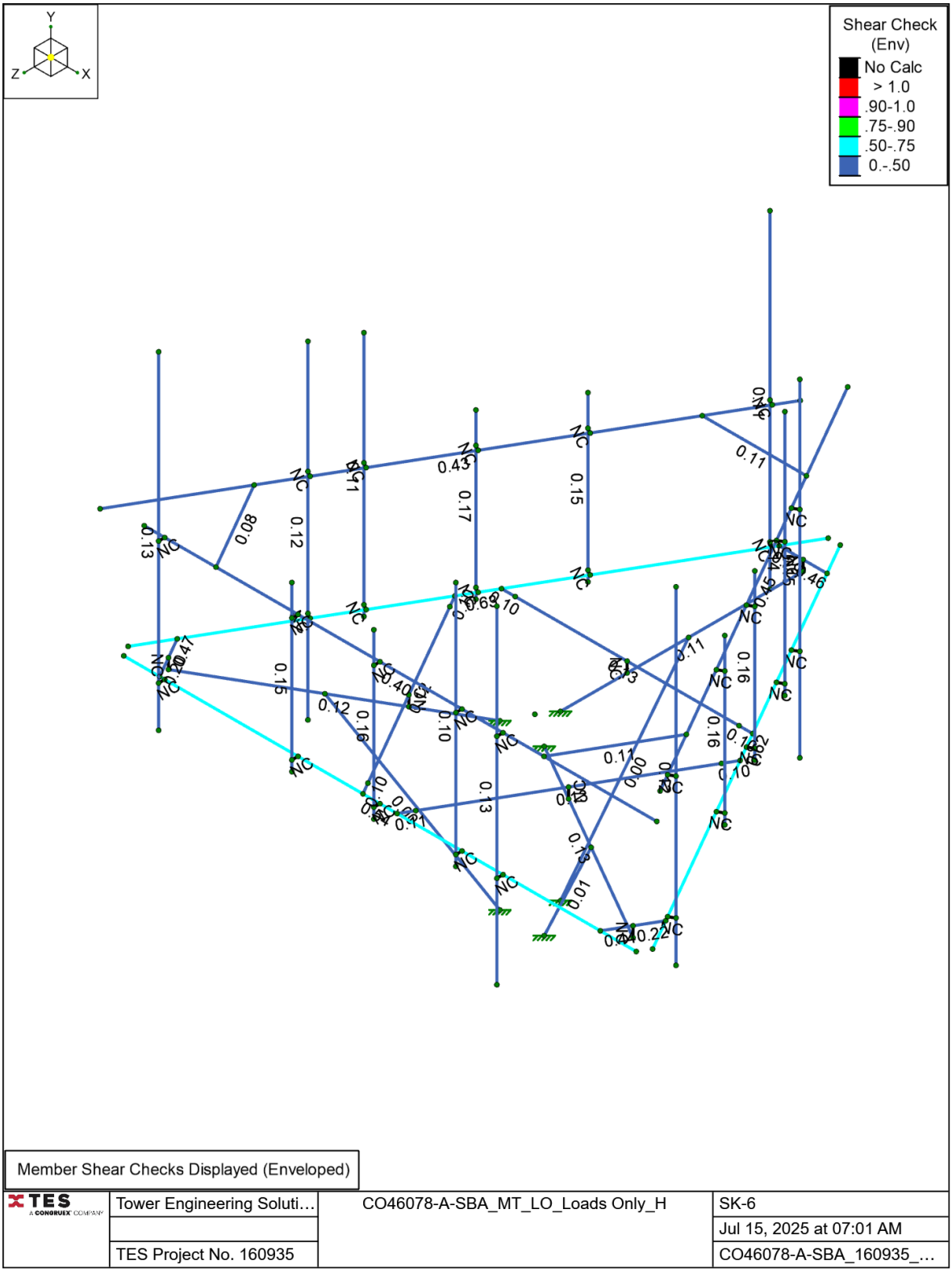
Mapping Notes
1. Please report any visible structural or safety issues observed on the antenna mounts (Damaged members, loose connections, tilting mounts, safety climb issues, etc.)
2. If the thickness of the existing pipes or tubing can't be obtained from a general tool (such as Caliper), please use an ultrasonic measurement tool (thickness gauge) to measure the thickness.
3. Please create all required detail sketches of the mounts and insert them into the "Sketches" tab.
4. Please measure and enter the bolt sizes and types under the Members Box in the spreadsheet of the mount type.
5. Take and label the photos of the tower, mounts, connections, antennas and all measurements. Minimum 50 photos are required.
6. Please measure and report the size and length of all existing antenna mounting pipes.
7. Please measure and report the antenna information for all sectors.
8. Don't delete or rearrange any sheet or contents of any sheet from this mapping form.

Standard Conditions
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.



TES A CONGRUEX COMPANY	Tower Engineering Soluti…	CO46078-A-SBA_MT_LO_Loads Only_H	SK-4
			Jul 15, 2025 at 07:01 AM
	TES Project No. 160935		CO46078-A-SBA_160935_…


Y
Z
X
Code Check
(Env)
No Calc
> 1.0
.90-1.0
.75-.90
.50-.75
0.-.50
Member Code Checks Displayed (Enveloped)
TES
Tower Engineering Soluti…
TES Project No. 160935
CO46078-A-SBA_MT_LO_Loads Only_H
SK-5
Jul 15, 2025 at 07:01 AM
CO46078-A-SBA_160935_…


Y
Z
X
Shear Check
(Env)
No Calc
> 1.0
.90-1.0
.75-.90
.50-.75
0.-.50
Member Shear Checks Displayed (Enveloped)
TES
Tower Engineering Soluti…
TES Project No. 160935
CO46078-A-SBA_MT_LO_Loads Only_H
SK-6
Jul 15, 2025 at 07:01 AM
CO46078-A-SBA_160935_…

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Ry	Fu [ksi]	Rt
1	A992	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	0.3	0.65	0.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	0.3	0.65	0.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	0.3	0.65	0.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	0.3	0.65	0.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	0.3	0.65	0.49	35	1.6	60	1.2
7	A1085	29000	11154	0.3	0.65	0.49	50	1.4	65	1.3

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Yield [ksi]	Fu [ksi]
1	A570 Gr.33	29500	11346	0.3	0.65	0.49	33	52
2	A607 C1 Gr.55	29500	11346	0.3	0.65	0.49	55	70

Aluminum Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	Table B.4	kt	Ftu [ksi]	Fty [ksi]	Fcy [ksi]	Fsu [ksi]	Ct
1	3003-H14	10100	3787.5	0.33	1.3	0.173	Table B.4-1	1	19	16	13	12	141
2	6061-T6	10100	3787.5	0.33	1.3	0.173	Table B.4-2	1	38	35	35	24	141
3	6063-T5	10100	3787.5	0.33	1.3	0.173	Table B.4-2	1	22	16	16	13	141
4	6063-T6	10100	3787.5	0.33	1.3	0.173	Table B.4-2	1	30	25	25	19	141
5	5052-H34	10200	3787.5	0.33	1.3	0.173	Table B.4-1	1	34	26	24	20	141
6	6061-T6 W	10100	3787.5	0.33	1.3	0.173	Table B.4-1	1	24	15	15	15	141

Stainless Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm. Coeff. [1e⁵°F⁻¹]	Density [k/ft³]	n	Yield [ksi]	Fu [ksi]
1	A276 S316	28000	10780	0.3	0.93	0.5	5.6	30	75
2	A276 S321	29000	11165	0.3	0.73	0.48	5.6	65	94
3	A276 S304	28000	10780	0.3	0.93	0.49	5.6	30	75

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	Mount Pipe1	PIPE_2.0	Beam	Pipe	A53 Gr.B	Typical	1.02	0.627	0.627	1.25
2	Pipe 3	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	Pipe 2.5	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
4	Front Face Horizontal	C6X8.2	Beam	Channel	A36 Gr.36	Typical	2.39	0.687	13.1	0.074
5	Inner Brace	C6X8.2	Beam	Channel	A36 Gr.36	Typical	2.39	0.687	13.1	0.074
6	Standoff Arm	HSS4X4X4	Beam	Tube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
7	Connection Plate	PL1/2X4	Beam	RECT	A36 Gr.36	Typical	2	0.042	2.667	0.154
8	L336	L3X3X6	Beam	Single Angle	A36 Gr.36	Typical	2.11	1.75	1.75	0.101
9	Kicker	LL3X3X3X0	Beam	Single Angle	A36 Gr.36	Typical	2.18	3.35	1.9	0.027
10	Dummy	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	CF	4CU5.25X0375	Beam	CU	A570 Gr.33	Typical	4.854	13.238	12.817	0.228

Aluminum Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	OMNI	3.000ODX0.125	Beam	Pipe	3003-H14	Typical	1.13	1.17	1.17	2.33

Stainless Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rule	Area [in²]	Iyy [in⁴]	Izz [in⁴]	J [in⁴]
1	SS1	W10X33_SS	Beam	None	A276 S316	Typical	9.71	36.6	171	0.583

Member Primary Data

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
1	M1	N4	N5	180	Front Face Horizontal	Beam	Channel	A36 Gr.36	Typical
2	M2	N6	N7	180	Front Face Horizontal	Beam	Channel	A36 Gr.36	Typical
3	M3	N8	N9	180	Front Face Horizontal	Beam	Channel	A36 Gr.36	Typical
4	M7	N23	N31		Connection Plate	Beam	RECT	A36 Gr.36	Typical
5	M8	N15	N32		Connection Plate	Beam	RECT	A36 Gr.36	Typical
6	M9	N19	N33		Connection Plate	Beam	RECT	A36 Gr.36	Typical
7	M12	N20	N12		PL1/2X6	Beam	BAR	A36 Gr.36	DR1
8	MP3A	NP5	NP6		Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
9	M22	N55	N52		Standoff Arm	Beam	Tube	A500 Gr.B Rect	Typical
10	M23	N56	N53		Standoff Arm	Beam	Tube	A500 Gr.B Rect	Typical
11	MP8B	N57	N54		Standoff Arm	Beam	Tube	A500 Gr.B Rect	Typical
12	M22A	N10	N52		RIGID	Beam	None	RIGID	DR1
13	M23A	N12	N54		RIGID	Beam	None	RIGID	DR1
14	M24A	N11	N53		RIGID	Beam	None	RIGID	DR1
15	M17	N31	N34	180	Inner Brace	Beam	Channel	A36 Gr.36	Typical
16	M18	N32	N35	180	Inner Brace	Beam	Channel	A36 Gr.36	Typical
17	M19	N33	N36	180	Inner Brace	Beam	Channel	A36 Gr.36	Typical
18	M20	N34	N14		Connection Plate	Beam	RECT	A36 Gr.36	Typical
19	M21	N35	N18		Connection Plate	Beam	RECT	A36 Gr.36	Typical
20	M22B	N36	N22		Connection Plate	Beam	RECT	A36 Gr.36	Typical
21	M23B	N45	N37		RIGID	Beam	None	RIGID	DR1
22	MP2A	N38	N39		Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
23	M25	N40	N41		RIGID	Beam	None	RIGID	DR1
24	M27	N44	N45A		RIGID	Beam	None	RIGID	DR1
25	MP5A	N46	N47		Pipe 2.5	Beam	Pipe	A53 Gr.B	Typical
26	M29	N48	N49		RIGID	Beam	None	RIGID	DR1
27	MP1A	N150	N51		Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
28	M31	N52A	N53A		RIGID	Beam	None	RIGID	DR1
29	M56	N96A	N97A		RIGID	Beam	None	RIGID	DR1
30	M57	N98	N99		RIGID	Beam	None	RIGID	DR1
31	M58	N100	N101		RIGID	Beam	None	RIGID	DR1
32	M60	N106	N107		RIGID	Beam	None	RIGID	DR1
33	M61	N108	N109		RIGID	Beam	None	RIGID	DR1
34	M62	N110	N111		RIGID	Beam	None	RIGID	DR1
35	M63	N112	N113		RIGID	Beam	None	RIGID	DR1
36	M64	N102	N103		Pipe 2.5	Beam	Pipe	A53 Gr.B	Typical
37	M80	N144	N145		Kicker	Beam	Single Angle	A36 Gr.36	Typical
38	M81	N146	N147		Kicker	Beam	Single Angle	A36 Gr.36	Typical
39	M82	N148	N149		Kicker	Beam	Single Angle	A36 Gr.36	Typical
40	M78A	N143A	N144A		Pipe 2.5	Beam	Pipe	A53 Gr.B	Typical
41	M79A	N145A	N146A		Pipe 2.5	Beam	Pipe	A53 Gr.B	Typical
42	M78B	N21	N12		PL1/2X6	Beam	BAR	A36 Gr.36	DR1
43	M79B	N24	N10		PL1/2X6	Beam	BAR	A36 Gr.36	DR1
44	M80A	N13	N10		PL1/2X6	Beam	BAR	A36 Gr.36	DR1

Member Primary Data (Continued)

	Label	I Node	J Node	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rule
45	M81A	N16	N11		PL1/2X6	Beam	BAR	A36 Gr.36	DR1
46	M82A	N17	N11		PL1/2X6	Beam	BAR	A36 Gr.36	DR1
47	M80B	N145B	N144B		L336	Beam	Single Angle	A36 Gr.36	Typical
48	M81B	N141	N146B		L336	Beam	Single Angle	A36 Gr.36	Typical
49	M82B	N143	N142		L336	Beam	Single Angle	A36 Gr.36	Typical
50	M83	N154	N155		RIGID	Beam	None	RIGID	DR1
51	MP4A	N157	N156		Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
52	M88	N179	N180		RIGID	Beam	None	RIGID	DR1
53	M89	N174	N175		RIGID	Beam	None	RIGID	DR1
54	MP1B	N159	N173	120	Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
55	M99	N171	N172		RIGID	Beam	None	RIGID	DR1
56	M100	N177	N178		RIGID	Beam	None	RIGID	DR1
57	MP2B	N160	N161	120	Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
58	M114	N162	N163		RIGID	Beam	None	RIGID	DR1
59	M115	N164	N165		RIGID	Beam	None	RIGID	DR1
60	M75	N176	N181		RIGID	Beam	None	RIGID	DR1
61	MP1C	N129	N138	240	Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
62	M77	N166	N167		RIGID	Beam	None	RIGID	DR1
63	M78	N139	N140		RIGID	Beam	None	RIGID	DR1
64	M84	N137	N132		RIGID	Beam	None	RIGID	DR1
65	M85	N152	N158		RIGID	Beam	None	RIGID	DR1
66	MP2C	N168	N128	240	Pipe 3	Beam	Pipe	A53 Gr.B	Typical
67	M92	N131	N130		RIGID	Beam	None	RIGID	DR1
68	M93	N127	N126		RIGID	Beam	None	RIGID	DR1
69	M96	N134	N135		RIGID	Beam	None	RIGID	DR1
70	MP5B	N125	N151	120	Pipe 2.5	Beam	Pipe	A53 Gr.B	Typical
71	MP5C	N185	N183	240	Pipe 2.5	Beam	Pipe	A53 Gr.B	Typical
72	M101	N184	N186		RIGID	Beam	None	RIGID	DR1
73	M102	N182	N187		RIGID	Beam	None	RIGID	DR1
74	MP4B	N169	N170		Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
75	MP4C	N133	N136		Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
76	MP3B	N188	N189	120	Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
77	M91	N190	N191		RIGID	Beam	None	RIGID	DR1
78	M94	N193	N192		RIGID	Beam	None	RIGID	DR1
79	MP3C	N196	N197	240	Mount Pipe1	Beam	Pipe	A53 Gr.B	Typical
80	M97	N194	N198		RIGID	Beam	None	RIGID	DR1
81	M98	N195	N199		RIGID	Beam	None	RIGID	DR1

Member Advanced Data

	Label	I Release	J Release	Col-Wall Vert Release	I Offset [in]	J Offset [in]	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
1	M1						Yes	N/A		None
2	M2						Yes	N/A		None
3	M3						Yes	N/A		None
4	M7						Yes	N/A		None
5	M8						Yes	N/A		None
6	M9						Yes	N/A		None
7	M12				1	2	Yes	N/A		None
8	MP3A						Yes	N/A	-z	None
9	M22						Yes	N/A		None
10	M23						Yes	N/A		None
11	MP8B						Yes	N/A		None
12	M22A						Yes	N/A		None
13	M23A						Yes	N/A		None
14	M24A						Yes	N/A		None
15	M17						Yes	N/A		None

Member Advanced Data (Continued)

	Label	I Release	J Release	Col-Wall Vert Release	I Offset [in]	J Offset [in]	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
16	M18						Yes	N/A		None
17	M19						Yes	N/A		None
18	M20						Yes	N/A		None
19	M21						Yes	N/A		None
20	M22B						Yes	N/A		None
21	M23B						Yes	N/A		None
22	MP2A						Yes	N/A	-z	None
23	M25						Yes	N/A		None
24	M27						Yes	N/A		None
25	MP5A						Yes	N/A	-z	None
26	M29						Yes	N/A		None
27	MP1A						Yes	N/A	-z	None
28	M31						Yes	N/A		None
29	M56		BenPIN				Yes	N/A		None
30	M57		BenPIN				Yes	N/A		None
31	M58		BenPIN				Yes	N/A		None
32	M60						Yes	N/A		None
33	M61						Yes	N/A		None
34	M62						Yes	N/A		None
35	M63						Yes	N/A		None
36	M64						Yes	N/A		None
37	M80	BenPIN	BenPIN				Yes	N/A		None
38	M81	BenPIN	BenPIN				Yes	N/A		None
39	M82	BenPIN	BenPIN				Yes	N/A		None
40	M78A						Yes	N/A		None
41	M79A						Yes	N/A		None
42	M78B				1	2	Yes	N/A		None
43	M79B				1	2	Yes	N/A		None
44	M80A				1	2	Yes	N/A		None
45	M81A				1	2	Yes	N/A		None
46	M82A				1	2	Yes	N/A		None
47	M80B						Yes	N/A		None
48	M81B						Yes	N/A		None
49	M82B						Yes	N/A		None
50	M83						Yes	N/A		None
51	MP4A						Yes	N/A	-z	None
52	M88						Yes	N/A		None
53	M89						Yes	N/A		None
54	MP1B						Yes	N/A	-z	None
55	M99						Yes	N/A		None
56	M100						Yes	N/A		None
57	MP2B						Yes	N/A	-z	None
58	M114						Yes	N/A		None
59	M115						Yes	N/A		None
60	M75						Yes	N/A		None
61	MP1C						Yes	N/A	-z	None
62	M77						Yes	N/A		None
63	M78						Yes	N/A		None
64	M84						Yes	N/A		None
65	M85						Yes	N/A		None
66	MP2C						Yes	Default	-z	None
67	M92						Yes	N/A		None
68	M93						Yes	N/A		None
69	M96						Yes	N/A		None
70	MP5B						Yes	N/A	-z	None

Member Advanced Data (Continued)

	Label	I Release	J Release	Col-Wall Vert Release	I Offset [in]	J Offset [in]	Physical	Deflection Ratio Options	Analysis Offset [in]	Seismic DR
71	MP5C						Yes	N/A	-z	None
72	M101						Yes	N/A		None
73	M102						Yes	N/A		None
74	MP4B						Yes	N/A		None
75	MP4C						Yes	N/A		None
76	MP3B						Yes	N/A	-z	None
77	M91						Yes	N/A		None
78	M94						Yes	N/A		None
79	MP3C						Yes	N/A	-z	None
80	M97						Yes	N/A		None
81	M98						Yes	N/A		None

Node Coordinates

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
1	N4	-6.25	0	3.776833	
2	N5	6.25	0	3.776833	
3	N6	6.395833	0	3.524242	
4	N7	0.145833	0	-7.301075	
5	N8	-0.145833	0	-7.301075	
6	N9	-6.395833	0	3.524242	
7	N10	-5.66525	0	3.270833	
8	N11	5.66525	0	3.270833	
9	N12	0	0	-6.541667	
10	N13	-5.37311	0	3.776833	
11	N14	-0.4166	0	3.776833	
12	N15	0.41666	0	3.776833	
13	N16	5.37311	0	3.776833	
14	N17	5.957389	0	2.764834	
15	N18	3.479163	0	-1.527578	
16	N19	3.062503	0	-2.249255	
17	N20	0.584278	0	-6.541667	
18	N21	-0.584278	0	-6.541667	
19	N22	-3.062503	0	-2.249255	
20	N23	-3.479163	0	-1.527578	
21	N24	-5.957389	0	2.764834	
22	NP5	0	3.75	3.926833	
23	NP6	0	-0.25	3.926833	
24	N45	0	0	3.776833	
25	N52	-5.66525	-0.25	3.270833	
26	N53	5.66525	-0.25	3.270833	
27	N54	0	-0.25	-6.541667	
28	N55	-0.541266	-0.25	0.3125	
29	N56	0.541266	-0.25	0.3125	
30	N57	0	-0.25	-0.625	
31	N31	-3.312496	0	-1.238908	
32	N32	0.583325	0	3.488161	
33	N33	2.729173	0	-2.249255	
34	N34	-0.583256	0	3.488182	
35	N35	3.312525	0	-1.238952	
36	N36	-2.729227	0	-2.249255	
37	N37	0	0	3.926833	
38	N38	2	5.75	3.926833	
39	N39	2	-0.25	3.926833	
40	N40	2	0	3.776833	
41	N41	2	0	3.926833	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
42	N44	-2	0	3.776833	
43	N45A	-2	0	3.926833	
44	N46	-5.25	7	3.926833	
45	N47	-5.25	-1	3.926833	
46	N48	-5.25	0	3.776833	
47	N49	-5.25	0	3.926833	
48	N51	3	-2.25	3.926833	
49	N52A	3	0	3.776833	
50	N53A	3	0	3.926833	
51	N96A	-0.000027	0	-2.249255	
52	N97A	-0.000027	-0.25	-2.249255	
53	N98	-1.947868	0	1.12465	
54	N99	-1.947952	-0.25	1.12465	
55	N100	1.947925	0	1.124604	
56	N101	1.947872	-0.25	1.124604	
57	N102	-5.75	3	3.776833	
58	N103	6.75	3	3.776833	
59	N106	2	3	3.776833	
60	N107	2	3	3.926833	
61	N108	-2	3	3.776833	
62	N109	-2	3	3.926833	
63	N110	-5.25	3	3.776833	
64	N111	-5.25	3	3.926833	
65	N112	3	3	3.776833	
66	N113	3	3	3.926833	
67	N144	0	-0.25	-3.749255	
68	N145	0	-4.25	-0.625	
69	N146	-3.24699	-0.25	1.87465	
70	N147	-0.541266	-4.25	0.3125	
71	N148	3.24691	-0.25	1.874604	
72	N149	0.541266	-4.25	0.3125	
73	N150	3	5.75	3.926833	
74	N143A	6.145833	3	3.09123	
75	N144A	-0.104167	3	-7.734088	
76	N145A	-0.395833	3	-6.868063	
77	N146A	-6.645833	3	3.957255	
78	N141	-4	3	3.776833	
79	N142	4	3	3.776833	
80	N143	5.270833	3	1.575685	
81	N144B	1.270833	3	-5.352518	
82	N145B	-1.270833	3	-5.352518	
83	N146B	-5.270833	3	1.575685	
84	N153	0	0	0	
85	N154	0	3	3.776833	
86	N155	0	3	3.926833	
87	N156	-2	-0.25	3.926833	
88	N157	-2	3.75	3.926833	
89	N159	-4.900737	5.75	0.63466	
90	N169	-2.400737	3.75	-3.695467	
91	N170	-2.400737	-0.25	-3.695467	
92	N171	-2.270833	0	-3.620467	
93	N172	-2.400737	0	-3.695467	
94	N173	-4.900737	-2.25	0.63466	
95	N174	-4.770833	0	0.70966	
96	N175	-4.900737	0	0.63466	

Node Coordinates (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Detach From Diaphragm
97	N177	-2.270833	3	-3.620467	
98	N178	-2.400737	3	-3.695467	
99	N179	-4.770833	3	0.70966	
100	N180	-4.900737	3	0.63466	
101	N160	-4.400737	5.75	-0.231366	
102	N161	-4.400737	-0.25	-0.231366	
103	N162	-4.270833	0	-0.156366	
104	N163	-4.400737	0	-0.231366	
105	N164	-4.270833	3	-0.156366	
106	N165	-4.400737	3	-0.231366	
107	N128	2.400737	-0.25	-3.695467	
108	N129	1.900737	5.75	-4.561493	
109	N130	2.400737	0	-3.695467	
110	N131	2.270833	0	-3.620467	
111	N132	4.400737	0	-0.231366	
112	N133	4.400737	3.75	-0.231366	
113	N136	4.400737	-0.25	-0.231366	
114	N137	4.270833	0	-0.156366	
115	N138	1.900737	-2.25	-4.561493	
116	N139	1.770833	0	-4.486493	
117	N140	1.900737	0	-4.561493	
118	N152	4.270833	3	-0.156366	
119	N158	4.400737	3	-0.231366	
120	N166	1.770833	3	-4.486493	
121	N167	1.900737	3	-4.561493	
122	N168	2.400737	5.75	-3.695467	
123	N176	2.270833	3	-3.620467	
124	N181	2.400737	3	-3.695467	
125	N125	-0.775737	7	-6.51005	
126	N126	-0.775737	0	-6.51005	
127	N127	-0.645833	0	-6.43505	
128	N134	-0.645833	3	-6.43505	
129	N135	-0.775737	3	-6.51005	
130	N151	-0.775737	-1	-6.51005	
131	N182	5.895833	3	2.658217	
132	N183	6.025737	-1	2.583217	
133	N184	5.895833	0	2.658217	
134	N185	6.025737	7	2.583217	
135	N186	6.025737	0	2.583217	
136	N187	6.025737	3	2.583217	
137	N188	-3.400737	3.75	-1.963417	
138	N189	-3.400737	-0.25	-1.963417	
139	N190	-3.270833	0	-1.888417	
140	N191	-3.400737	0	-1.963417	
141	N192	-3.400737	3	-1.963417	
142	N193	-3.270833	3	-1.888417	
143	N194	3.270833	0	-1.888417	
144	N195	3.270833	3	-1.888417	
145	N196	3.400737	3.75	-1.963417	
146	N197	3.400737	-0.25	-1.963417	
147	N198	3.400737	0	-1.963417	
148	N199	3.400737	3	-1.963417	

Hot Rolled Steel Design Parameters

	Label	Shape	Length [ft]	Lcomp top [ft]	Channel Conn.	a [ft]	Function
1	M1	Front Face Horizontal	12.5	Lbyy	N/A	N/A	Lateral
2	M2	Front Face Horizontal	12.5	Lbyy	N/A	N/A	Lateral
3	M3	Front Face Horizontal	12.5	Lbyy	N/A	N/A	Lateral
4	M7	Connection Plate	0.333	Lbyy	N/A	N/A	Lateral
5	M8	Connection Plate	0.333	Lbyy	N/A	N/A	Lateral
6	M9	Connection Plate	0.333	Lbyy	N/A	N/A	Lateral
7	M12	PL1/2X6	0.584	Lbyy	N/A	N/A	Lateral
8	MP3A	Mount Pipe1	4	Lbyy	N/A	N/A	Lateral
9	M22	Standoff Arm	5.917	Lbyy	N/A	N/A	Gravity
10	M23	Standoff Arm	5.917	Lbyy	N/A	N/A	Gravity
11	MP8B	Standoff Arm	5.917	Lbyy	N/A	N/A	Lateral
12	M17	Inner Brace	5.458	Lbyy	N/A	N/A	Lateral
13	M18	Inner Brace	5.458	Lbyy	N/A	N/A	Lateral
14	M19	Inner Brace	5.458	Lbyy	N/A	N/A	Lateral
15	M20	Connection Plate	0.333	Lbyy	N/A	N/A	Lateral
16	M21	Connection Plate	0.333	Lbyy	N/A	N/A	Lateral
17	M22B	Connection Plate	0.333	Lbyy	N/A	N/A	Lateral
18	MP2A	Mount Pipe1	6	Lbyy	N/A	N/A	Lateral
19	MP5A	Pipe 2.5	8	Lbyy	N/A	N/A	Lateral
20	MP1A	Mount Pipe1	8	Lbyy	N/A	N/A	Lateral
21	M64	Pipe 2.5	12.5	Lbyy	N/A	N/A	Lateral
22	M80	Kicker	5.076	Lbyy	N/A	N/A	Lateral
23	M81	Kicker	5.076	Lbyy	N/A	N/A	Lateral
24	M82	Kicker	5.075	Lbyy	N/A	N/A	Lateral
25	M78A	Pipe 2.5	12.5	Lbyy	N/A	N/A	Lateral
26	M79A	Pipe 2.5	12.5	Lbyy	N/A	N/A	Lateral
27	M78B	PL1/2X6	0.584	Lbyy	N/A	N/A	Lateral
28	M79B	PL1/2X6	0.584	Lbyy	N/A	N/A	Lateral
29	M80A	PL1/2X6	0.584	Lbyy	N/A	N/A	Lateral
30	M81A	PL1/2X6	0.584	Lbyy	N/A	N/A	Lateral
31	M82A	PL1/2X6	0.584	Lbyy	N/A	N/A	Lateral
32	M80B	L336	2.542	Lbyy	N/A	N/A	Lateral
33	M81B	L336	2.542	Lbyy	N/A	N/A	Lateral
34	M82B	L336	2.542	Lbyy	N/A	N/A	Lateral
35	MP4A	Mount Pipe1	4	Lbyy	N/A	N/A	Lateral
36	MP1B	Mount Pipe1	8	Lbyy	N/A	N/A	Lateral
37	MP2B	Mount Pipe1	6	Lbyy	N/A	N/A	Lateral
38	MP1C	Mount Pipe1	8	Lbyy	N/A	N/A	Lateral
39	MP2C	Pipe 3	6	Lbyy	N/A	N/A	Lateral
40	MP5B	Pipe 2.5	8	Lbyy	N/A	N/A	Lateral
41	MP5C	Pipe 2.5	8	Lbyy	N/A	N/A	Lateral
42	MP4B	Mount Pipe1	4	Lbyy	N/A	N/A	Lateral
43	MP4C	Mount Pipe1	4	Lbyy	N/A	N/A	Lateral
44	MP3B	Mount Pipe1	4	Lbyy	N/A	N/A	Lateral
45	MP3C	Mount Pipe1	4	Lbyy	N/A	N/A	Lateral

Cold Formed Steel Design Parameters

No Data to Print...

Aluminum Design Parameters

No Data to Print...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed	Area(Member)
1	Antenna D	None				75		
2	Antenna Di	None				75		
3	Antenna Wo (0 Deg)	None				75		
4	Antenna Wo (30 Deg)	None				75		
5	Antenna Wo (60 Deg)	None				75		
6	Antenna Wo (90 Deg)	None				75		
7	Antenna Wo (120 Deg)	None				75		
8	Antenna Wo (150 Deg)	None				75		
9	Antenna Wo (180 Deg)	None				75		
10	Antenna Wo (210 Deg)	None				75		
11	Antenna Wo (240 Deg)	None				75		
12	Antenna Wo (270 Deg)	None				75		
13	Antenna Wo (300 Deg)	None				75		
14	Antenna Wo (330 Deg)	None				75		
15	Antenna Wi (0 Deg)	None				75		
16	Antenna Wi (30 Deg)	None				75		
17	Antenna Wi (60 Deg)	None				75		
18	Antenna Wi (90 Deg)	None				75		
19	Antenna Wi (120 Deg)	None				75		
20	Antenna Wi (150 Deg)	None				75		
21	Antenna Wi (180 Deg)	None				75		
22	Antenna Wi (210 Deg)	None				75		
23	Antenna Wi (240 Deg)	None				75		
24	Antenna Wi (270 Deg)	None				75		
25	Antenna Wi (300 Deg)	None				75		
26	Antenna Wi (330 Deg)	None				75		
27	Antenna Wm (0 Deg)	None				75		
28	Antenna Wm (30 Deg)	None				75		
29	Antenna Wm (60 Deg)	None				75		
30	Antenna Wm (90 Deg)	None				75		
31	Antenna Wm (120 Deg)	None				75		
32	Antenna Wm (150 Deg)	None				75		
33	Antenna Wm (180 Deg)	None				75		
34	Antenna Wm (210 Deg)	None				75		
35	Antenna Wm (240 Deg)	None				75		
36	Antenna Wm (270 Deg)	None				75		
37	Antenna Wm (300 Deg)	None				75		
38	Antenna Wm (330 Deg)	None				75		
39	Structure D	None		-1				3
40	Structure Di	None					45	3
41	Structure Wo (0 Deg)	None					90	
42	Structure Wo (30 Deg)	None					90	
43	Structure Wo (60 Deg)	None					90	
44	Structure Wo (90 Deg)	None					90	
45	Structure Wo (120 Deg)	None					90	
46	Structure Wo (150 Deg)	None					90	
47	Structure Wo (180 Deg)	None					90	
48	Structure Wo (210 Deg)	None					90	
49	Structure Wo (240 Deg)	None					90	
50	Structure Wo (270 Deg)	None					90	
51	Structure Wo (300 Deg)	None					90	
52	Structure Wo (330 Deg)	None					90	
53	Structure Wi (0 Deg)	None					90	
54	Structure Wi (30 Deg)	None					90	
55	Structure Wi (60 Deg)	None					90	

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Point	Distributed	Area(Member)
56	Structure Wi (90 Deg)	None					90	
57	Structure Wi (120 Deg)	None					90	
58	Structure Wi (150 Deg)	None					90	
59	Structure Wi (180 Deg)	None					90	
60	Structure Wi (210 Deg)	None					90	
61	Structure Wi (240 Deg)	None					90	
62	Structure Wi (270 Deg)	None					90	
63	Structure Wi (300 Deg)	None					90	
64	Structure Wi (330 Deg)	None					90	
65	Structure Wm (0 Deg)	None					90	
66	Structure Wm (30 Deg)	None					90	
67	Structure Wm (60 Deg)	None					90	
68	Structure Wm (90 Deg)	None					90	
69	Structure Wm (120 Deg)	None					90	
70	Structure Wm (150 Deg)	None					90	
71	Structure Wm (180 Deg)	None					90	
72	Structure Wm (210 Deg)	None					90	
73	Structure Wm (240 Deg)	None					90	
74	Structure Wm (270 Deg)	None					90	
75	Structure Wm (300 Deg)	None					90	
76	Structure Wm (330 Deg)	None					90	
77	Lm1	None				1		
78	Lm2	None				1		
79	Lv1	None				1		
80	Lv2	None				1		
81	Antenna Ev	None				75		
82	Antenna Eh (0 Deg)	None				50		
83	Antenna Eh (90 Deg)	None				50		
84	Structure Ev	ELY		-0.039				3
85	Structure Eh (0 Deg)	ELZ			-0.099			3
86	Structure Eh (90 Deg)	ELX	0.099					3
87	BLC 39 Transient Area Loads	None					57	
88	BLC 40 Transient Area Loads	None					57	
89	BLC 84 Transient Area Loads	None					57	
90	BLC 85 Transient Area Loads	None					57	
91	BLC 86 Transient Area Loads	None					57	

Load Combinations

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
1	1.2D+1.0Wo (0 Deg)	Yes	Y	1	1.2	39	1.2	3	1	41	1								
2	1.2D+1.0Wo (30 Deg)	Yes	Y	1	1.2	39	1.2	4	1	42	1								
3	1.2D+1.0Wo (60 Deg)	Yes	Y	1	1.2	39	1.2	5	1	43	1								
4	1.2D+1.0Wo (90 Deg)	Yes	Y	1	1.2	39	1.2	6	1	44	1								
5	1.2D+1.0Wo (120 Deg)	Yes	Y	1	1.2	39	1.2	7	1	45	1								
6	1.2D+1.0Wo (150 Deg)	Yes	Y	1	1.2	39	1.2	8	1	46	1								
7	1.2D+1.0Wo (180 Deg)	Yes	Y	1	1.2	39	1.2	9	1	47	1								
8	1.2D+1.0Wo (210 Deg)	Yes	Y	1	1.2	39	1.2	10	1	48	1								
9	1.2D+1.0Wo (240 Deg)	Yes	Y	1	1.2	39	1.2	11	1	49	1								
10	1.2D+1.0Wo (270 Deg)	Yes	Y	1	1.2	39	1.2	12	1	50	1								
11	1.2D+1.0Wo (300 Deg)	Yes	Y	1	1.2	39	1.2	13	1	51	1								
12	1.2D+1.0Wo (330 Deg)	Yes	Y	1	1.2	39	1.2	14	1	52	1								
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	15	1	53	1				
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	16	1	54	1				
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	17	1	55	1				
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	18	1	56	1				

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	19	1	57	1				
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	20	1	58	1				
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	21	1	59	1				
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	22	1	60	1				
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	23	1	61	1				
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	24	1	62	1				
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	25	1	63	1				
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Yes	Y	1	1.2	39	1.2	2	1	40	1	26	1	64	1				
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	27	1	65	1						
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	28	1	66	1						
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	29	1	67	1						
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	30	1	68	1						
29	1.2D + 1.5Lm1 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	31	1	69	1						
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	32	1	70	1						
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	33	1	71	1						
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	34	1	72	1						
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	35	1	73	1						
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	36	1	74	1						
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	37	1	75	1						
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	Yes	Y	1	1.2	39	1.2	77	1.5	38	1	76	1						
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	27	1	65	1						
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	28	1	66	1						
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	29	1	67	1						
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	30	1	68	1						
41	1.2D + 1.5Lm2 + 1.0Wm (120 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	31	1	69	1						
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	32	1	70	1						
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	33	1	71	1						
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	34	1	72	1						
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	35	1	73	1						
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	36	1	74	1						
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	37	1	75	1						
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	Yes	Y	1	1.2	39	1.2	78	1.5	38	1	76	1						
49	1.2D + 1.5Lv1	Yes	Y	1	1.2	39	1.2	79	1.5										
50	1.2D + 1.5Lv2	Yes	Y	1	1.2	39	1.2	80	1.5										
51	1.4D	Yes	Y	1	1.4	39	1.4												
52	1.2D + 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	1	83		ELZ	1	ELX	
53	1.2D + 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
54	1.2D + 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
55	1.2D + 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	1	ELZ		ELX	1
56	1.2D + 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
57	1.2D + 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
58	1.2D + 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-1	83		ELZ	-1	ELX	
59	1.2D + 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5
60	1.2D + 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
61	1.2D + 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82		83	-1	ELZ		ELX	-1
62	1.2D + 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
63	1.2D + 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	1.2	39	1.2	81	1	ELY	1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5
64	0.9D - 1.0Ev + 1.0Eh (0 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	1	83		ELZ	1	ELX	
65	0.9D - 1.0Ev + 1.0Eh (30 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	0.5	ELZ	0.866	ELX	0.5
66	0.9D - 1.0Ev + 1.0Eh (60 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	0.866	ELZ	0.5	ELX	0.866
67	0.9D - 1.0Ev + 1.0Eh (90 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	1	ELZ		ELX	1
68	0.9D - 1.0Ev + 1.0Eh (120 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	0.866	ELZ	-0.5	ELX	0.866
69	0.9D - 1.0Ev + 1.0Eh (150 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	0.5	ELZ	-0.866	ELX	0.5
70	0.9D - 1.0Ev + 1.0Eh (180 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-1	83		ELZ	-1	ELX	
71	0.9D - 1.0Ev + 1.0Eh (210 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.866	83	-0.5	ELZ	-0.866	ELX	-0.5

Load Combinations (Continued)

	Description	Solve	P-Delta	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor	BLC	Factor
72	0.9D - 1.0Ev + 1.0Eh (240 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	-0.5	83	-0.866	ELZ	-0.5	ELX	-0.866
73	0.9D - 1.0Ev + 1.0Eh (270 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82		83	-1	ELZ		ELX	-1
74	0.9D - 1.0Ev + 1.0Eh (300 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.5	83	-0.866	ELZ	0.5	ELX	-0.866
75	0.9D - 1.0Ev + 1.0Eh (330 Deg)	Yes	Y	1	0.9	39	0.9	81	-1	ELY	-1	82	0.866	83	-0.5	ELZ	0.866	ELX	-0.5

Node Reactions

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N55	-1818.183	620.846	3466.177	-0.003	2.865	-0.607
2	2		-4441.361	876.744	3791.499	-0.081	1.344	-0.813
3	3		-5736.616	906.454	3093.493	-0.203	-0.415	-0.77
4	4		-4898.699	644.216	2223.481	-0.32	-0.643	-0.44
5	5		-2782.554	225.402	687.83	-0.348	-0.833	-0.007
6	6		-412.6	-177.999	-1768.172	-0.297	-2.224	0.361
7	7		2210.746	-522.783	-3763.533	-0.234	-2.891	0.662
8	8		4844.643	-774.023	-4092.836	-0.162	-1.368	0.865
9	9		6144.327	-801.025	-3384.107	-0.041	0.391	0.819
10	10		5300.432	-543.491	-2500.697	0.083	0.624	0.491
11	11		3175.856	-132.403	-965.739	0.117	0.808	0.064
12	12		801.777	271.005	1480.86	0.065	2.193	-0.303
13	13		-106.712	148.222	410.47	-0.13	0.438	-0.06
14	14		-535.545	188.913	476.233	-0.145	0.207	-0.091
15	15		-741.944	193.114	388.575	-0.166	-0.037	-0.083
16	16		-602.605	151.927	240.854	-0.183	-0.081	-0.032
17	17		-264.621	86.825	-31.519	-0.186	-0.15	0.035
18	18		113.417	23.057	-425.493	-0.178	-0.376	0.092
19	19		540.144	-32.707	-731.389	-0.166	-0.46	0.14
20	20		969.292	-73.262	-797.217	-0.151	-0.23	0.171
21	21		1175.808	-77.378	-709.294	-0.131	0.015	0.163
22	22		1036.263	-36.332	-561.279	-0.113	0.058	0.112
23	23		698.062	28.566	-288.923	-0.109	0.127	0.045
24	24		319.921	92.334	104.81	-0.118	0.353	-0.012
25	25		730.528	-271.668	-315.963	-0.15	0.178	0.371
26	26		590.542	-258.183	-298.576	-0.154	0.097	0.36
27	27		521.415	-256.674	-336.057	-0.161	0.003	0.363
28	28		566.179	-270.512	-382.746	-0.167	-0.009	0.38
29	29		679.097	-292.602	-464.528	-0.169	-0.019	0.403
30	30		805.412	-314.058	-595.108	-0.166	-0.093	0.423
31	31		945.025	-332.513	-701.111	-0.163	-0.128	0.439
32	32		1085.042	-345.986	-718.509	-0.159	-0.047	0.449
33	33		1154.181	-347.486	-680.998	-0.152	0.046	0.447
34	34		1109.4	-333.662	-634.271	-0.146	0.059	0.43
35	35		996.458	-311.594	-552.492	-0.144	0.069	0.407
36	36		870.132	-290.138	-421.937	-0.147	0.143	0.387
37	37		-213.475	164.994	121.581	-0.138	0.01	-0.077
38	38		-353.418	178.522	139.025	-0.142	-0.071	-0.088
39	39		-422.508	180.046	101.614	-0.148	-0.164	-0.086
40	40		-377.761	166.19	54.969	-0.154	-0.177	-0.068
41	41		-264.888	144.07	-26.785	-0.156	-0.187	-0.045
42	42		-138.595	122.581	-157.343	-0.153	-0.26	-0.026
43	43		1.002	104.084	-263.354	-0.15	-0.296	-0.009
44	44		140.975	90.568	-280.81	-0.146	-0.215	0.002
45	45		210.078	89.052	-243.368	-0.139	-0.121	-0.001
46	46		165.314	102.895	-196.684	-0.133	-0.109	-0.018
47	47		52.416	124.994	-114.932	-0.131	-0.099	-0.041
48	48		-73.888	146.482	15.598	-0.134	-0.025	-0.061

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
49	49		230.28	141.466	-161.047	-0.181	-0.012	-0.03
50	50		237.617	140.689	-168.46	-0.181	-0.013	-0.029
51	51		233.474	54.251	-164.569	-0.136	-0.01	0.034
52	52		124.22	68.768	-24.945	-0.117	0.072	0.008
53	53		39.384	76.683	4.035	-0.122	0.051	0.003
54	54		-0.601	76.921	-7.113	-0.126	0.014	0.005
55	55		14.969	69.418	-55.408	-0.129	-0.028	0.015
56	56		81.941	56.184	-127.921	-0.13	-0.066	0.028
57	57		182.354	40.77	-205.21	-0.128	-0.088	0.042
58	58		289.322	27.305	-266.576	-0.124	-0.089	0.053
59	59		374.168	19.396	-295.557	-0.119	-0.068	0.058
60	60		414.156	19.16	-284.397	-0.115	-0.032	0.056
61	61		398.58	26.658	-236.088	-0.112	0.011	0.046
62	62		331.597	39.885	-163.574	-0.111	0.049	0.033
63	63		231.181	55.297	-86.297	-0.113	0.071	0.019
64	64		61.193	54.06	19.475	-0.08	0.074	-0.001
65	65		-23.601	61.968	48.425	-0.085	0.054	-0.006
66	66		-63.575	62.21	37.269	-0.089	0.017	-0.004
67	67		-48.026	54.718	-11.01	-0.092	-0.026	0.005
68	68		18.898	41.502	-83.486	-0.093	-0.063	0.019
69	69		119.247	26.108	-160.728	-0.091	-0.086	0.033
70	70		226.154	12.657	-222.05	-0.087	-0.086	0.044
71	71		310.958	4.756	-251.002	-0.082	-0.066	0.049
72	72		350.935	4.516	-239.834	-0.078	-0.029	0.046
73	73		335.379	12.002	-191.542	-0.075	0.014	0.037
74	74		268.446	25.211	-119.064	-0.074	0.051	0.024
75	75		168.093	40.604	-41.834	-0.076	0.074	0.01
76	1	N56	1813.932	406.657	2538.911	0.072	-1.636	0.434
77	2		-1391.629	51.376	1634.001	0.42	-2.849	0.286
78	3		-4606.05	-343.085	39.759	0.743	-3.188	0.086
79	4		-6060.238	-568.332	-2359.55	0.847	-1.145	-0.072
80	5		-5644.209	-533.736	-3968.613	0.673	1.118	-0.136
81	6		-4377.104	-353.896	-3812.824	0.374	1.576	-0.131
82	7		-2319.187	-106.633	-2881.664	0.063	1.714	-0.068
83	8		879.241	249.772	-1967.077	-0.286	2.921	0.08
84	9		4078.729	649.386	-365.62	-0.609	3.257	0.286
85	10		5527.318	877.293	2031.498	-0.712	1.207	0.45
86	11		5122.823	842.148	3630.981	-0.537	-1.055	0.513
87	12		3868.469	658.558	3466.882	-0.239	-1.499	0.502
88	13		28.346	285.539	243.949	0.066	-0.244	0.314
89	14		-485.912	231.591	95.677	0.121	-0.432	0.293
90	15		-999.453	167.591	-192.935	0.174	-0.441	0.261
91	16		-1229.273	128.521	-585.311	0.19	-0.104	0.232
92	17		-1161.072	132.913	-817.014	0.16	0.222	0.219
93	18		-958.487	161.693	-785.158	0.112	0.287	0.22
94	19		-628.565	199.108	-657.541	0.064	0.337	0.229
95	20		-114.552	253.088	-509.094	0.009	0.525	0.25
96	21		398.569	317.208	-220.304	-0.044	0.534	0.282
97	22		628.32	356.341	172.097	-0.06	0.197	0.311
98	23		560.459	351.94	403.579	-0.03	-0.129	0.324
99	24		358.187	323.065	371.524	0.018	-0.193	0.323
100	25		143.558	268.367	42.525	0.024	0.075	0.276
101	26		-26.931	249.395	-5.924	0.042	0.011	0.268
102	27		-197.69	228.232	-91.007	0.059	-0.007	0.257
103	28		-274.966	216.168	-218.698	0.065	0.102	0.248

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
104	29		-253.116	218.035	-304.117	0.056	0.222	0.245
105	30		-185.971	227.709	-295.592	0.04	0.246	0.245
106	31		-76.484	240.997	-246.074	0.023	0.253	0.249
107	32		93.984	259.972	-197.598	0.005	0.318	0.257
108	33		264.702	281.15	-112.494	-0.013	0.336	0.268
109	34		341.962	293.221	15.191	-0.018	0.227	0.276
110	35		320.144	291.352	100.583	-0.009	0.106	0.28
111	36		253.036	281.668	92.034	0.007	0.082	0.279
112	37		-770.224	-208.936	-398.457	0.008	-0.071	-0.215
113	38		-940.769	-227.866	-446.877	0.027	-0.136	-0.223
114	39		-1111.566	-248.978	-531.97	0.044	-0.154	-0.234
115	40		-1188.842	-261.029	-659.743	0.05	-0.044	-0.243
116	41		-1166.977	-259.182	-745.25	0.04	0.076	-0.246
117	42		-1099.812	-249.523	-736.761	0.024	0.1	-0.246
118	43		-990.283	-236.247	-687.259	0.008	0.107	-0.242
119	44		-819.758	-217.313	-638.811	-0.011	0.172	-0.234
120	45		-649.004	-196.187	-553.698	-0.028	0.19	-0.224
121	46		-571.744	-184.129	-425.931	-0.033	0.081	-0.215
122	47		-593.576	-185.977	-340.451	-0.024	-0.04	-0.212
123	48		-660.705	-195.647	-348.964	-0.008	-0.064	-0.212
124	49		-446.908	183.326	-268.809	-0.006	0.019	0.175
125	50		-450.559	181.841	-266.704	-0.008	0.016	0.172
126	51		-297.358	175.204	-199.112	0.08	0.048	0.214
127	52		-191.057	166.446	-48.287	0.071	-0.06	0.2
128	53		-302.17	153.268	-108.877	0.083	-0.06	0.194
129	54		-402.878	140.593	-187.531	0.092	-0.033	0.187
130	55		-466.209	131.812	-263.191	0.095	0.015	0.181
131	56		-475.172	129.28	-315.573	0.092	0.069	0.176
132	57		-427.386	133.673	-330.643	0.083	0.117	0.176
133	58		-335.653	143.815	-304.363	0.071	0.144	0.179
134	59		-224.551	156.992	-243.764	0.059	0.144	0.184
135	60		-123.858	169.671	-165.102	0.05	0.117	0.192
136	61		-60.529	178.456	-89.442	0.047	0.07	0.198
137	62		-51.555	180.989	-37.069	0.05	0.015	0.202
138	63		-99.326	176.593	-22.007	0.059	-0.032	0.203
139	64		-110.736	119.035	5.514	0.049	-0.073	0.142
140	65		-221.778	105.873	-55.035	0.061	-0.073	0.136
141	66		-322.425	93.211	-133.65	0.07	-0.046	0.129
142	67		-385.721	84.44	-209.282	0.074	0.002	0.123
143	68		-394.684	81.91	-261.656	0.07	0.056	0.118
144	69		-346.936	86.297	-276.74	0.062	0.104	0.118
145	70		-255.265	96.427	-250.491	0.05	0.131	0.121
146	71		-144.235	109.589	-189.933	0.037	0.131	0.127
147	72		-43.603	122.254	-111.31	0.028	0.104	0.134
148	73		19.69	131.03	-35.678	0.025	0.057	0.14
149	74		28.666	133.561	16.687	0.028	0.002	0.144
150	75		-19.068	129.17	31.762	0.037	-0.045	0.145
151	1	N57	-181.869	-617.123	6412.397	-0.597	0.279	-0.229
152	2		-675.6	-375.716	5616.456	-0.379	0.812	0.055
153	3		-1070.457	-5.526	3336.981	-0.039	1.302	0.252
154	4		-2018.023	417.603	37.676	0.352	2.739	0.362
155	5		-2327.279	797.646	-3070.709	0.706	3.257	0.413
156	6		-1161.607	1010.261	-5008.874	0.906	1.591	0.34
157	7		224.731	980.784	-5584.288	0.884	-0.324	0.106
158	8		708.125	735.828	-4789.645	0.661	-0.85	-0.174

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
159	9		1109.619	360.133	-2517.018	0.315	-1.348	-0.37
160	10		2073.671	-61.544	776.304	-0.076	-2.797	-0.48
161	11		2389.649	-436.239	3889.281	-0.423	-3.309	-0.533
162	12		1217.307	-646.789	5835.724	-0.62	-1.637	-0.463
163	13		-8.881	115.968	1559.707	0.072	0.015	-0.082
164	14		-101.04	151.634	1452.453	0.104	0.118	-0.028
165	15		-194.246	214.063	1081.611	0.162	0.241	0.006
166	16		-341.461	284.738	536.395	0.227	0.466	0.015
167	17		-359.139	342.94	38.644	0.281	0.503	0.015
168	18		-164.681	374.898	-268.157	0.311	0.225	0.002
169	19		45.55	373.816	-377.53	0.311	-0.061	-0.039
170	20		137.444	338.056	-270.251	0.279	-0.164	-0.092
171	21		230.842	275.483	100.463	0.221	-0.287	-0.127
172	22		378.49	204.854	645.467	0.156	-0.512	-0.136
173	23		396.301	146.782	1143.287	0.102	-0.548	-0.136
174	24		201.676	114.872	1450.294	0.072	-0.271	-0.123
175	25		111.573	171.093	428.298	0.132	-0.148	-0.052
176	26		85.542	184.045	385.967	0.144	-0.12	-0.037
177	27		64.345	203.912	264.773	0.162	-0.093	-0.026
178	28		13.47	226.415	89.241	0.183	-0.017	-0.021
179	29		-3.167	246.525	-76.409	0.202	0.011	-0.018
180	30		59.073	257.811	-179.847	0.212	-0.078	-0.022
181	31		133.213	256.246	-210.54	0.211	-0.18	-0.034
182	32		159.215	243.284	-168.212	0.199	-0.208	-0.049
183	33		180.43	223.402	-47.037	0.181	-0.235	-0.06
184	34		231.352	200.903	128.477	0.16	-0.311	-0.065
185	35		248.009	180.808	294.141	0.141	-0.339	-0.068
186	36		185.75	169.528	397.602	0.131	-0.25	-0.064
187	37		-94.531	180.023	426.96	0.14	0.142	-0.078
188	38		-120.569	192.965	384.599	0.152	0.17	-0.063
189	39		-141.766	212.82	263.387	0.17	0.196	-0.053
190	40		-192.624	235.334	87.851	0.191	0.273	-0.047
191	41		-209.242	255.455	-77.79	0.209	0.3	-0.044
192	42		-146.995	266.726	-181.202	0.22	0.211	-0.048
193	43		-72.853	265.147	-211.86	0.219	0.109	-0.061
194	44		-46.845	252.195	-169.503	0.207	0.081	-0.076
195	45		-25.629	232.324	-48.31	0.189	0.055	-0.086
196	46		25.276	209.815	127.209	0.168	-0.022	-0.092
197	47		41.913	189.709	292.862	0.149	-0.049	-0.095
198	48		-20.352	178.443	396.298	0.139	0.04	-0.091
199	49		3.128	145.504	279.668	0.111	0.005	-0.063
200	50		-1.109	146.206	277.49	0.111	0.011	-0.063
201	51		22.571	207.76	479.294	0.161	-0.022	-0.07
202	52		26.151	153.755	664.044	0.115	-0.031	-0.064
203	53		-19.418	161.811	627.263	0.122	0.03	-0.056
204	54		-54.415	175.796	536.14	0.135	0.077	-0.049
205	55		-69.473	191.967	415.075	0.15	0.099	-0.045
206	56		-60.554	205.989	296.516	0.163	0.089	-0.046
207	57		-30.062	214.103	212.235	0.171	0.049	-0.052
208	58		13.841	214.136	184.799	0.171	-0.008	-0.059
209	59		59.398	206.076	221.578	0.163	-0.069	-0.068
210	60		94.401	192.087	312.695	0.151	-0.117	-0.075
211	61		109.478	175.916	433.757	0.136	-0.138	-0.079
212	62		100.572	161.899	552.317	0.123	-0.128	-0.078
213	63		70.073	153.788	636.603	0.115	-0.089	-0.072

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
214	64		20.049	97.563	534.31	0.071	-0.025	-0.045
215	65		-25.523	105.607	497.543	0.079	0.036	-0.037
216	66		-60.521	119.574	406.461	0.091	0.083	-0.03
217	67		-75.576	135.725	285.454	0.106	0.105	-0.026
218	68		-66.652	149.732	166.954	0.119	0.095	-0.027
219	69		-36.153	157.84	82.718	0.127	0.055	-0.033
220	70		7.757	157.876	55.298	0.127	-0.002	-0.041
221	71		53.316	149.828	92.063	0.12	-0.063	-0.049
222	72		88.32	135.857	183.139	0.107	-0.111	-0.056
223	73		103.394	119.705	304.143	0.092	-0.132	-0.06
224	74		94.482	105.703	422.644	0.079	-0.122	-0.059
225	75		63.977	97.599	506.886	0.071	-0.083	-0.053
226	1	N145	0.548	5057.405	-3870.615	0	0	0
227	2		-30.502	4527.1	-3464.803	0	0	0
228	3		-53.046	3070.905	-2350.11	0	0	0
229	4		-61.364	1049.17	-801.858	0	0	0
230	5		-55.199	-869.949	665.789	0	0	0
231	6		-32.683	-2142.025	1635.835	0	0	0
232	7		0.287	-2551.893	1947.192	0	0	0
233	8		31.949	-2019.954	1540.523	0	0	0
234	9		54.382	-559.51	423.351	0	0	0
235	10		60.961	1469.139	-1129.931	0	0	0
236	11		50.259	3387.734	-2597.685	0	0	0
237	12		28.945	4651.579	-3562.092	0	0	0
238	13		0.021	2343.782	-1798.607	0	0	0
239	14		-5.011	2273.881	-1745.277	0	0	0
240	15		-8.797	2033.6	-1561.195	0	0	0
241	16		-10.135	1694.041	-1301.082	0	0	0
242	17		-8.697	1387.716	-1066.943	0	0	0
243	18		-4.99	1189.988	-916.126	0	0	0
244	19		-0.017	1112.312	-856.732	0	0	0
245	20		5.039	1182.267	-910.095	0	0	0
246	21		8.832	1422.699	-1094.272	0	0	0
247	22		10.112	1762.421	-1354.502	0	0	0
248	23		8.559	2068.696	-1588.614	0	0	0
249	24		4.888	2266.217	-1739.29	0	0	0
250	25		-0.057	1267.473	-969.024	0	0	0
251	26		-1.726	1239.207	-947.404	0	0	0
252	27		-2.921	1161.574	-887.999	0	0	0
253	28		-3.321	1053.746	-805.434	0	0	0
254	29		-2.875	951.552	-727.27	0	0	0
255	30		-1.697	884.008	-675.748	0	0	0
256	31		-0.049	862.279	-659.236	0	0	0
257	32		1.622	890.551	-680.859	0	0	0
258	33		2.817	968.195	-740.271	0	0	0
259	34		3.212	1076.043	-822.85	0	0	0
260	35		2.753	1178.236	-901.015	0	0	0
261	36		1.578	1245.756	-952.52	0	0	0
262	37		0.071	1274.011	-974.131	0	0	0
263	38		-1.6	1245.718	-952.49	0	0	0
264	39		-2.804	1168.068	-893.072	0	0	0
265	40		-3.214	1060.245	-810.51	0	0	0
266	41		-2.779	958.061	-732.354	0	0	0
267	42		-1.607	890.524	-680.838	0	0	0
268	43		0.038	868.809	-664.337	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
269	44		1.711	897.107	-685.98	0	0	0
270	45		2.914	974.77	-745.406	0	0	0
271	46		3.32	1082.612	-827.982	0	0	0
272	47		2.872	1184.794	-906.138	0	0	0
273	48		1.704	1252.307	-957.638	0	0	0
274	49		0.01	1138.29	-871.477	0	0	0
275	50		0.012	1132.42	-866.891	0	0	0
276	51		0	1467.537	-1125.731	0	0	0
277	52		-0.008	1446.911	-1110.127	0	0	0
278	53		-0.908	1423.602	-1092.167	0	0	0
279	54		-1.567	1366.979	-1048.613	0	0	0
280	55		-1.808	1292.199	-991.124	0	0	0
281	56		-1.565	1219.301	-935.107	0	0	0
282	57		-0.901	1167.823	-895.573	0	0	0
283	58		0.006	1151.552	-883.111	0	0	0
284	59		0.911	1174.864	-901.073	0	0	0
285	60		1.571	1231.497	-944.634	0	0	0
286	61		1.807	1306.285	-1002.128	0	0	0
287	62		1.559	1379.179	-1058.143	0	0	0
288	63		0.894	1430.647	-1097.67	0	0	0
289	64		-0.006	1049.526	-805.278	0	0	0
290	65		-0.914	1026.236	-787.335	0	0	0
291	66		-1.579	969.669	-743.826	0	0	0
292	67		-1.823	894.965	-686.4	0	0	0
293	68		-1.579	822.145	-630.446	0	0	0
294	69		-0.911	770.723	-590.959	0	0	0
295	70		0.004	754.473	-578.514	0	0	0
296	71		0.917	777.766	-596.46	0	0	0
297	72		1.583	834.344	-639.975	0	0	0
298	73		1.822	909.054	-697.406	0	0	0
299	74		1.573	981.872	-753.359	0	0	0
300	75		0.904	1033.283	-792.839	0	0	0
301	1	N147	640.302	-923.515	-306.244	0	0	0
302	2		1605.139	-2396.78	-889.424	0	0	0
303	3		1961.754	-2959.55	-1133.23	0	0	0
304	4		1504.16	-2294.871	-905.195	0	0	0
305	5		428.461	-691.023	-310.028	0	0	0
306	6		-865.953	1257.15	428.807	0	0	0
307	7		-2103.872	3134.095	1154.989	0	0	0
308	8		-3065.212	4600.359	1735.008	0	0	0
309	9		-3419.862	5156.871	1973.303	0	0	0
310	10		-2961.244	4491.677	1745.186	0	0	0
311	11		-1887.71	2892.559	1151.922	0	0	0
312	12		-597.768	951.931	416.459	0	0	0
313	13		-702.448	1066.707	415.721	0	0	0
314	14		-537.995	816.162	316.422	0	0	0
315	15		-475.441	718.333	274.499	0	0	0
316	16		-556.585	836.166	315.474	0	0	0
317	17		-737.385	1105.244	415.416	0	0	0
318	18		-944.338	1416.756	533.329	0	0	0
319	19		-1144.248	1719.988	650.523	0	0	0
320	20		-1308.595	1970.33	749.737	0	0	0
321	21		-1371.079	2067.979	791.525	0	0	0
322	22		-1289.927	1950.158	750.552	0	0	0
323	23		-1109.207	1681.23	650.658	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
324	24		-902.367	1369.908	532.831	0	0	0
325	25		-1563.115	2333.037	905.586	0	0	0
326	26		-1511.825	2254.799	874.652	0	0	0
327	27		-1492.874	2225.006	861.845	0	0	0
328	28		-1517.271	2260.412	873.989	0	0	0
329	29		-1574.501	2345.687	905.632	0	0	0
330	30		-1643.303	2449.223	944.915	0	0	0
331	31		-1709.206	2549.097	983.5	0	0	0
332	32		-1760.486	2627.315	1014.425	0	0	0
333	33		-1779.431	2657.091	1027.216	0	0	0
334	34		-1755.031	2621.683	1015.072	0	0	0
335	35		-1697.808	2536.421	983.435	0	0	0
336	36		-1629.018	2432.907	944.161	0	0	0
337	37		-539.723	820.46	314.93	0	0	0
338	38		-488.436	742.18	283.947	0	0	0
339	39		-469.491	712.359	271.094	0	0	0
340	40		-493.868	747.745	283.232	0	0	0
341	41		-551.078	833.011	314.871	0	0	0
342	42		-619.894	936.565	354.13	0	0	0
343	43		-685.82	1036.482	392.715	0	0	0
344	44		-737.097	1114.742	423.688	0	0	0
345	45		-756.036	1144.546	436.526	0	0	0
346	46		-731.656	1109.158	424.388	0	0	0
347	47		-674.452	1023.905	392.754	0	0	0
348	48		-605.649	920.372	353.505	0	0	0
349	49		-778.037	1172.734	449.19	0	0	0
350	50		-780.275	1176.042	450.481	0	0	0
351	51		-854.116	1288.955	493.108	0	0	0
352	52		-703.543	1063.345	408.012	0	0	0
353	53		-669.328	1011.402	387.481	0	0	0
354	54		-658.38	994.22	380.098	0	0	0
355	55		-673.631	1016.404	387.842	0	0	0
356	56		-711.001	1072.019	408.644	0	0	0
357	57		-760.466	1146.146	436.924	0	0	0
358	58		-808.78	1218.935	465.106	0	0	0
359	59		-842.99	1270.871	485.636	0	0	0
360	60		-853.933	1288.044	493.014	0	0	0
361	61		-838.683	1265.86	485.267	0	0	0
362	62		-801.318	1210.253	464.467	0	0	0
363	63		-751.857	1136.134	436.192	0	0	0
364	64		-472.414	714.558	274.584	0	0	0
365	65		-438.246	662.679	254.077	0	0	0
366	66		-427.313	645.518	246.7	0	0	0
367	67		-442.546	667.672	254.43	0	0	0
368	68		-479.868	723.216	275.2	0	0	0
369	69		-529.268	797.249	303.44	0	0	0
370	70		-577.517	869.946	331.586	0	0	0
371	71		-611.681	921.816	352.091	0	0	0
372	72		-622.609	938.969	359.463	0	0	0
373	73		-607.377	916.814	351.731	0	0	0
374	74		-570.06	861.279	330.962	0	0	0
375	75		-520.664	787.254	302.727	0	0	0
376	1	N149	-454.756	-649.56	-199.687	0	0	0
377	2		773.875	1211.988	517.673	0	0	0
378	3		2114.177	3225.51	1279.857	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
379	4		3066.41	4646.91	1805.496	0	0	0
380	5		3289.243	4966.341	1901.502	0	0.001	0
381	6		2862.345	4301.177	1618.544	0	0	0
382	7		1987.316	2961.089	1086.365	0	0	0
383	8		761.329	1102.675	368.624	0	0	0
384	9		-576.963	-911.194	-396.659	0	0	0
385	10		-1533.39	-2338.401	-922.412	0	0	0
386	11		-1759.344	-2659.11	-1014.532	0	0	0
387	12		-1331.133	-1991.583	-731.15	0	0	0
388	13		789.667	1195.724	466.166	0	0	0
389	14		986.138	1493.761	581.172	0	0	0
390	15		1209.382	1829.24	708.325	0	0	0
391	16		1364.556	2060.546	793.678	0	0	0
392	17		1392.787	2100.3	804.33	0	0	0
393	18		1321.505	1989.542	757.302	0	0	0
394	19		1187.138	1783.417	675.259	0	0	0
395	20		990.731	1485.454	560.238	0	0	0
396	21		767.521	1149.943	432.999	0	0	0
397	22		612.24	918.494	347.654	0	0	0
398	23		583.947	878.725	337.096	0	0	0
399	24		655.263	989.542	384.131	0	0	0
400	25		577.514	876.375	336.792	0	0	0
401	26		642.86	975.414	375.003	0	0	0
402	27		714.166	1082.629	415.665	0	0	0
403	28		764.968	1158.448	443.648	0	0	0
404	29		776.907	1175.48	448.653	0	0	0
405	30		754.133	1139.984	433.567	0	0	0
406	31		707.502	1068.57	405.243	0	0	0
407	32		642.164	969.54	367.031	0	0	0
408	33		570.863	862.324	326.36	0	0	0
409	34		520.05	786.488	298.377	0	0	0
410	35		508.101	769.453	293.383	0	0	0
411	36		530.88	804.956	308.47	0	0	0
412	37		1617.877	2414.129	937.333	0	0	0
413	38		1683.249	2513.161	975.516	0	0	0
414	39		1754.57	2620.365	1016.169	0	0	0
415	40		1805.362	2696.195	1044.204	0	0	0
416	41		1817.303	2713.264	1049.271	0	0	0
417	42		1794.545	2677.803	1034.201	0	0	0
418	43		1747.913	2606.402	1005.879	0	0	0
419	44		1682.548	2507.378	967.695	0	0	0
420	45		1611.233	2400.173	927.033	0	0	0
421	46		1560.428	2324.327	898.998	0	0	0
422	47		1548.479	2307.254	893.942	0	0	0
423	48		1571.241	2342.722	909.013	0	0	0
424	49		991.524	1488.362	572.474	0	0	0
425	50		994.313	1492.484	574.083	0	0	0
426	51		895.427	1350.09	517.01	0	0	0
427	52		744.233	1123.542	431.53	0	0	0
428	53		792.322	1196.001	459.583	0	0	0
429	54		840.519	1268.258	487.135	0	0	0
430	55		875.92	1320.967	506.809	0	0	0
431	56		889.03	1339.993	513.329	0	0	0
432	57		876.345	1320.249	504.95	0	0	0
433	58		841.262	1267.022	483.916	0	0	0

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
434	59		793.177	1194.566	455.86	0	0	0
435	60		744.98	1122.306	428.306	0	0	0
436	61		709.576	1069.591	408.631	0	0	0
437	62		696.462	1050.561	402.114	0	0	0
438	63		709.146	1070.308	410.495	0	0	0
439	64		501.912	758.191	291.624	0	0	0
440	65		549.945	830.569	319.643	0	0	0
441	66		598.092	902.751	347.161	0	0	0
442	67		633.46	955.411	366.811	0	0	0
443	68		646.565	974.427	373.322	0	0	0
444	69		633.904	954.714	364.952	0	0	0
445	70		598.867	901.551	343.943	0	0	0
446	71		550.838	829.176	315.921	0	0	0
447	72		502.692	756.991	288.399	0	0	0
448	73		467.32	704.325	268.749	0	0	0
449	74		454.21	685.306	262.241	0	0	0
450	75		466.871	705.021	270.614	0	0	0
451	1	Totals:	-0.026	3894.709	8040.938			
452	2		-4160.079	3894.712	7205.401			
453	3		-7390.237	3894.708	4266.749			
454	4		-8467.753	3894.696	0.05			
455	5		-7091.536	3894.681	-4094.229			
456	6		-3987.602	3894.668	-6906.683			
457	7		0.021	3894.659	-8040.939			
458	8		4160.075	3894.656	-7205.402			
459	9		7390.232	3894.661	-4266.75			
460	10		8467.749	3894.673	-0.051			
461	11		7091.532	3894.688	4094.228			
462	12		3987.597	3894.701	6906.683			
463	13		-0.007	5155.942	1297.406			
464	14		-679.364	5155.942	1176.68			
465	15		-1210.499	5155.941	698.88			
466	16		-1375.504	5155.939	0.008			
467	17		-1138.126	5155.937	-657.086			
468	18		-637.575	5155.935	-1104.303			
469	19		0.001	5155.933	-1297.409			
470	20		679.359	5155.933	-1176.682			
471	21		1210.493	5155.933	-698.883			
472	22		1375.498	5155.936	-0.011			
473	23		1138.121	5155.938	657.083			
474	24		637.569	5155.94	1104.3			
475	25		0	4644.678	428.214			
476	26		-221.538	4644.678	383.718			
477	27		-393.559	4644.678	227.22			
478	28		-450.942	4644.677	0.001			
479	29		-377.655	4644.677	-218.039			
480	30		-212.353	4644.676	-367.814			
481	31		0.003	4644.675	-428.218			
482	32		221.541	4644.675	-383.722			
483	33		393.562	4644.676	-227.224			
484	34		450.945	4644.676	-0.005			
485	35		377.658	4644.677	218.035			
486	36		212.356	4644.678	367.81			
487	37		-0.006	4644.68	428.215			
488	38		-221.544	4644.68	383.72			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
489	39		-393.565	4644.68	227.222			
490	40		-450.948	4644.679	0.002			
491	41		-377.661	4644.679	-218.037			
492	42		-212.359	4644.678	-367.812			
493	43		-0.003	4644.677	-428.216			
494	44		221.535	4644.677	-383.72			
495	45		393.556	4644.678	-227.223			
496	46		450.939	4644.678	-0.003			
497	47		377.652	4644.679	218.036			
498	48		212.35	4644.68	367.812			
499	49		-0.002	4269.682	0			
500	50		-0.002	4269.682	0			
501	51		-0.003	4543.798	-0.001			
502	52		-0.003	4022.767	320.228			
503	53		-160.118	4022.767	277.318			
504	54		-277.322	4022.767	160.116			
505	55		-320.232	4022.766	0.002			
506	56		-277.321	4022.766	-160.113			
507	57		-160.116	4022.765	-277.317			
508	58		-0.001	4022.765	-320.229			
509	59		160.114	4022.765	-277.319			
510	60		277.317	4022.765	-160.117			
511	61		320.228	4022.766	-0.003			
512	62		277.316	4022.766	160.112			
513	63		160.112	4022.767	277.316			
514	64		-0.003	2792.933	320.228			
515	65		-160.117	2792.933	277.319			
516	66		-277.321	2792.932	160.116			
517	67		-320.231	2792.932	0.002			
518	68		-277.32	2792.931	-160.113			
519	69		-160.116	2792.931	-277.317			
520	70		-0.001	2792.931	-320.229			
521	71		160.114	2792.93	-277.319			
522	72		277.318	2792.931	-160.117			
523	73		320.228	2792.931	-0.003			
524	74		277.317	2792.932	160.112			
525	75		160.112	2792.932	277.316			
526	1	COG (ft):	X: 0.14	Y: 2.109	Z: -0.207			
527	2		X: 0.14	Y: 2.109	Z: -0.207			
528	3		X: 0.14	Y: 2.109	Z: -0.207			
529	4		X: 0.14	Y: 2.109	Z: -0.207			
530	5		X: 0.14	Y: 2.109	Z: -0.207			
531	6		X: 0.14	Y: 2.109	Z: -0.207			
532	7		X: 0.14	Y: 2.109	Z: -0.207			
533	8		X: 0.14	Y: 2.109	Z: -0.207			
534	9		X: 0.14	Y: 2.109	Z: -0.207			
535	10		X: 0.14	Y: 2.109	Z: -0.207			
536	11		X: 0.14	Y: 2.109	Z: -0.207			
537	12		X: 0.14	Y: 2.109	Z: -0.207			
538	13		X: 0.202	Y: 2.078	Z: -0.302			
539	14		X: 0.202	Y: 2.078	Z: -0.302			
540	15		X: 0.202	Y: 2.078	Z: -0.302			
541	16		X: 0.202	Y: 2.078	Z: -0.302			
542	17		X: 0.202	Y: 2.078	Z: -0.302			
543	18		X: 0.202	Y: 2.078	Z: -0.302			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
544	19		X: 0.202	Y: 2.078	Z: -0.302			
545	20		X: 0.202	Y: 2.078	Z: -0.302			
546	21		X: 0.202	Y: 2.078	Z: -0.302			
547	22		X: 0.202	Y: 2.078	Z: -0.302			
548	23		X: 0.202	Y: 2.078	Z: -0.302			
549	24		X: 0.202	Y: 2.078	Z: -0.302			
550	25		X: -0.79	Y: 1.768	Z: 0.436			
551	26		X: -0.79	Y: 1.768	Z: 0.436			
552	27		X: -0.79	Y: 1.768	Z: 0.436			
553	28		X: -0.79	Y: 1.768	Z: 0.436			
554	29		X: -0.79	Y: 1.768	Z: 0.436			
555	30		X: -0.79	Y: 1.768	Z: 0.436			
556	31		X: -0.79	Y: 1.768	Z: 0.436			
557	32		X: -0.79	Y: 1.768	Z: 0.436			
558	33		X: -0.79	Y: 1.768	Z: 0.436			
559	34		X: -0.79	Y: 1.768	Z: 0.436			
560	35		X: -0.79	Y: 1.768	Z: 0.436			
561	36		X: -0.79	Y: 1.768	Z: 0.436			
562	37		X: 1.026	Y: 1.768	Z: 0.436			
563	38		X: 1.026	Y: 1.768	Z: 0.436			
564	39		X: 1.026	Y: 1.768	Z: 0.436			
565	40		X: 1.026	Y: 1.768	Z: 0.436			
566	41		X: 1.026	Y: 1.768	Z: 0.436			
567	42		X: 1.026	Y: 1.768	Z: 0.436			
568	43		X: 1.026	Y: 1.768	Z: 0.436			
569	44		X: 1.026	Y: 1.768	Z: 0.436			
570	45		X: 1.026	Y: 1.768	Z: 0.436			
571	46		X: 1.026	Y: 1.768	Z: 0.436			
572	47		X: 1.026	Y: 1.768	Z: 0.436			
573	48		X: 1.026	Y: 1.768	Z: 0.436			
574	49		X: 0.304	Y: 1.923	Z: 0.144			
575	50		X: 0.304	Y: 1.923	Z: 0.152			
576	51		X: 0.14	Y: 2.109	Z: -0.207			
577	52		X: 0.14	Y: 2.109	Z: -0.207			
578	53		X: 0.14	Y: 2.109	Z: -0.207			
579	54		X: 0.14	Y: 2.109	Z: -0.207			
580	55		X: 0.14	Y: 2.109	Z: -0.207			
581	56		X: 0.14	Y: 2.109	Z: -0.207			
582	57		X: 0.14	Y: 2.109	Z: -0.207			
583	58		X: 0.14	Y: 2.109	Z: -0.207			
584	59		X: 0.14	Y: 2.109	Z: -0.207			
585	60		X: 0.14	Y: 2.109	Z: -0.207			
586	61		X: 0.14	Y: 2.109	Z: -0.207			
587	62		X: 0.14	Y: 2.109	Z: -0.207			
588	63		X: 0.14	Y: 2.109	Z: -0.207			
589	64		X: 0.14	Y: 2.109	Z: -0.207			
590	65		X: 0.14	Y: 2.109	Z: -0.207			
591	66		X: 0.14	Y: 2.109	Z: -0.207			
592	67		X: 0.14	Y: 2.109	Z: -0.207			
593	68		X: 0.14	Y: 2.109	Z: -0.207			
594	69		X: 0.14	Y: 2.109	Z: -0.207			
595	70		X: 0.14	Y: 2.109	Z: -0.207			
596	71		X: 0.14	Y: 2.109	Z: -0.207			
597	72		X: 0.14	Y: 2.109	Z: -0.207			
598	73		X: 0.14	Y: 2.109	Z: -0.207			

Node Reactions (Continued)

	LC	Node Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
599	74		X: 0.14	Y: 2.109	Z: -0.207			
600	75		X: 0.14	Y: 2.109	Z: -0.207			

Envelope Node Reactions

	Node Label		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N55	max	6144.327	9	906.454	3	3791.499	2	0.117	11	2.865	1	0.865	8
2		min	-5736.616	3	-801.025	9	-4092.836	8	-0.348	5	-2.891	7	-0.813	2
3	N56	max	5527.318	10	877.293	10	3630.981	11	0.847	4	3.257	9	0.513	11
4		min	-6060.238	4	-568.332	4	-3968.613	5	-0.712	10	-3.188	3	-0.246	41
5	N57	max	2389.649	11	1010.261	6	6412.397	1	0.906	6	3.257	5	0.413	5
6		min	-2327.279	5	-646.789	12	-5584.288	7	-0.62	12	-3.309	11	-0.533	11
7	N145	max	60.961	10	5057.405	1	1947.192	7	0	75	0	1	0	3
8		min	-61.364	4	-2551.893	7	-3870.615	1	0	1	0	3	0	1
9	N147	max	1961.754	3	5156.871	9	1973.303	9	0	3	0	9	0	9
10		min	-3419.862	9	-2959.55	3	-1133.23	3	0	9	0	3	0	3
11	N149	max	3289.243	5	4966.341	5	1901.502	5	0	5	0.001	5	0	5
12		min	-1759.344	11	-2659.11	11	-1014.532	11	0	11	0	11	0	11
13	Totals:	max	8467.749	10	5155.942	14	8040.938	1						
14		min	-8467.753	4	2792.93	71	-8040.939	7						

Envelope AISC 14TH (360-10): LRFD Member Steel Code Checks

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
1	MP5C	PIPE_2.5	0.691	4	4	0.117	4		10	30038.461	50715	3.596	3.596	1	H1-1b
2	M78A	PIPE_2.5	0.67	1.693	3	0.45	1.693		3	14558.792	50715	3.596	3.596	1	H3-6
3	MP5B	PIPE_2.5	0.66	4	6	0.113	4		6	30038.461	50715	3.596	3.596	1	H1-1b
4	MP5A	PIPE_2.5	0.63	4	9	0.126	4		2	30038.461	50715	3.596	3.596	1	H1-1b
5	M79A	PIPE_2.5	0.627	1.693	11	0.43	1.693		11	14558.792	50715	3.596	3.596	1	H3-6
6	MP1A	PIPE_2.0	0.59	2.75	9	0.128	5.75		9	14916.096	32130	1.872	1.872	1	H1-1b
7	M82A	PL1/2X6	0.59	0.334	10	0.222	0.334	y	5	93357.198	97200	1.012	12.15	1.201	H1-1b
8	MP4A	PIPE_2.0	0.586	3.75	4	0.153	3.75		3	26521.424	32130	1.872	1.872	1	H1-1b
9	MP4B	PIPE_2.0	0.574	0.75	8	0.146	3.75		8	26521.424	32130	1.872	1.872	1	H1-1b
10	MP3B	PIPE_2.0	0.557	3.75	8	0.173	3.75		8	26521.424	32130	1.872	1.872	1	H1-1b
11	MP3A	PIPE_2.0	0.546	3.75	4	0.163	3.75		4	26521.424	32130	1.872	1.872	1	H1-1b
12	MP1B	PIPE_2.0	0.54	2.75	2	0.124	5.75		12	14916.096	32130	1.872	1.872	1	H1-1b
13	M80A	PL1/2X6	0.536	0.334	3	0.203	0.334	y	9	93357.198	97200	1.012	12.15	1.364	H1-1b
14	M82B	L3X3X6	0.513	0	9	0.108	2.542	z	3	59131.805	68364	2.307	5.322	1.5	H2-1
15	M1	C6X8.2	0.513	0.911	8	0.539	0.911	z	12	6897.855	77436	2.108	10.647	1.618	H1-1a
16	M80B	L3X3X6	0.511	0	11	0.112	2.542	z	11	59131.805	68364	2.307	5.322	1.5	H2-1
17	M64	PIPE_2.5	0.509	1.693	7	0.401	1.693		1	14558.792	50715	3.596	3.596	1	H3-6
18	MP2B	PIPE_2.0	0.504	5.75	2	0.113	5.75		4	20866.733	32130	1.872	1.872	1	H1-1b
19	MP4C	PIPE_2.0	0.489	3.75	12	0.157	3.75		11	26521.424	32130	1.872	1.872	1	H1-1b
20	MP2A	PIPE_2.0	0.485	5.75	10	0.098	2.75		10	20866.733	32130	1.872	1.872	1	H1-1b
21	M2	C6X8.2	0.477	0.911	9	0.624	6.25	y	10	6897.855	77436	2.108	7.806	1.186	H1-1b
22	M3	C6X8.2	0.471	0.911	5	0.634	0.911	z	4	6897.855	77436	2.108	8.321	1.264	H1-1b
23	M78B	PL1/2X6	0.464	0.334	6	0.293	0.334	y	1	93357.198	97200	1.012	12.15	1.195	H1-1b
24	M79B	PL1/2X6	0.45	0.334	4	0.468	0.334	y	9	93357.198	97200	1.012	12.15	1.192	H1-1b
25	M81B	L3X3X6	0.445	0	1	0.082	2.542	z	7	59131.805	68364	2.307	5.322	1.5	H2-1
26	MP3C	PIPE_2.0	0.436	3.75	6	0.157	3.75		11	26521.424	32130	1.872	1.872	1	H1-1b
27	M81A	PL1/2X6	0.432	0.334	12	0.442	0.334	y	5	93357.198	97200	1.012	12.15	1.183	H1-1b
28	MP1C	PIPE_2.0	0.41	2.75	5	0.147	5.75		10	14916.096	32130	1.872	1.872	1	H1-1b
29	M12	PL1/2X6	0.392	0.334	8	0.464	0.334	y	1	93357.198	97200	1.012	12.15	1.215	H1-1b
30	M22	HSS4X4X4	0.358	3.082	9	0.116	3.082	y	9	120504.386	139518	16.181	16.181	1.55	H1-1b
31	M18	C6X8.2	0.346	2.729	5	0.133	2.672	y	5	35293.449	77436	2.108	13.932	1.279	H1-1b

Envelope AISC 14TH (360-10): LRFD Member Steel Code Checks (Continued)

	Member	Shape	Code Check	Loc[ft]	LC	Shear Check	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-y [k-ft]	phi*Mn z-z [k-ft]	Cb	Eqn
32	MP2C	PIPE_3.0	0.337	5.75	6	0.143	2.75		5	53775.839	65205	5.749	5.749	1	H1-1b
33	M19	C6X8.2	0.336	2.729	2	0.126	2.786	y	1	35293.449	77436	2.108	13.932	1.281	H1-1b
34	M23	HSS4X4X4	0.336	3.082	5	0.127	3.082	y	4	120504.386	139518	16.181	16.181	1.567	H1-1b
35	MP8B	HSS4X4X4	0.331	3.082	1	0.109	3.082	y	12	120504.386	139518	16.181	16.181	1.581	H1-1b
36	M17	C6X8.2	0.317	2.729	9	0.124	2.729	y	9	35293.449	77436	2.108	13.932	1.271	H1-1b
37	M21	PL1/2X4	0.205	0	5	0.102	0	y	5	62233.208	64800	0.675	5.4	1.456	H1-1b
38	M20	PL1/2X4	0.182	0	9	0.098	0	y	9	62232.755	64800	0.675	5.4	1.443	H1-1b
39	M22B	PL1/2X4	0.162	0	1	0.104	0	y	1	62233.208	64800	0.675	5.4	1.533	H1-1b
40	M9	PL1/2X4	0.156	0.333	2	0.103	0.333	y	1	62232.403	64800	0.675	5.4	1.392	H1-1b
41	M7	PL1/2X4	0.133	0.333	10	0.102	0.333	y	9	62232.403	64800	0.675	5.4	1.401	H1-1b
42	M81	LL3X3X3X0	0.131	0	9	0.005	5.076	y	9	49771.472	70632	4.823	3.751	1	H1-1b*
43	M80	LL3X3X3X0	0.129	0	1	0.004	5.076	y	1	49771.497	70632	4.823	3.751	1	H1-1b*
44	M82	LL3X3X3X0	0.126	0	5	0.005	5.075	y	5	49771.521	70632	4.823	3.751	1	H1-1b*
45	M8	PL1/2X4	0.118	0.333	6	0.109	0.333	y	5	62232.403	64800	0.675	5.4	1.432	H1-1b

Envelope AISI S100-10: LRFD Member Cold Formed Steel Code Checks

No Data to Print...

Envelope AA ADM1-10: ASD - BUILDING Member Aluminum Code Checks

No Data to Print...

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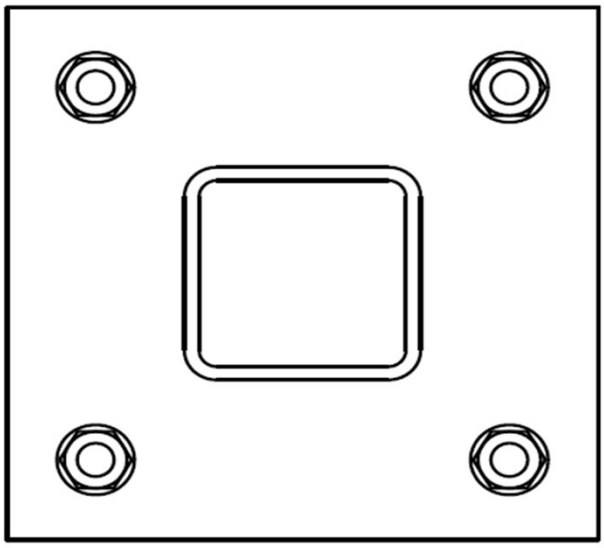
Standoff Arm Flange Connection Check

			Date: 7/15/2025
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile sprint	Mount Elev. [ft]:	185
Site Name:	simla	Engineer Name:	
Site Number:	CO46078-A-SBA	Project #:	160935

NOTE: The calculations shown below are for a single representative load combination for example purposes. The results for all load combinations are presented in the Results Summary Table.

RISA Member Label =	MP8B	
I or J End?	I	
Load Combination # =	11	
Plate Width, Wp =	11.5	[In]
Plate Height, Hp =	11.5	[In]
Plate Thickness, tp =	0.5	[In]
Plate Fy =	36	[KSI]
Bolt Diameter, db =	0.625	[In]
Bolt Fu =	120	[KSI]
Bolt Horizontal Spacing, Sbh =	9.5	[In]
Bolt Vertical Spacing, Sbv =	9.5	[In]
Standoff Member Shape =	Rect Tube	
Member Width, Wm =	4	[In]
Member Depth, Dm =	4	[In]
Member Thickness, tm =	0.25	[In]
Standoff Weld Size =	0.1875	[In]
# Standoff Welds =	2	
Length of Stiffener, Ls =		[In]
Width of Stiffener, Ws =		[In]
Width of Notch, Wn =		[In]
Stiffener Dim 1, ds1 =		[In]
Stiffener Dim 2, ds2 =		[In]
Stiffener Fy =		[KSI]
Stiffener Weld Size =		[In]
# Stiffener Welds =		



Typical Connection Detail

NOTES

Capacity Checks:

Max Bolt Shear =	0.813	[Kips]
Bolt Shear Capacity =	13.81	[Kips]
Max Bolt Shear Usage =	5.9%	PASS
Max Bolt Tension =	3.33	[Kips]
Bolt Tension Capacity =	20.34	[Kips]
Max Bolt Tension Usage =	16.4%	PASS
Max Bolt Interaction =	16.8%	PASS
Max Plate Bending Moment =	16.83	[Kip-In]
Length of Yield Line =	9.35	[In]
Plate Moment Capacity =	18.93	[Kip-In]
Max Plate Usage =	72.4%	PASS
Max Weld Usage =	31.5%	PASS

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Standoff Arm Flange Connection Check			Date
			7/15/2025
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile sprint	Mount Elev. [ft]:	185
Site Name:	simla	Engineer Name:	
Site Number:	CO46078-A-SBA	Project #:	160935

Results Summary Table

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
M22	I	1	0.6676	1.3131	4.8%	6.5%	7.9%	28.6%	28.2%
M22	I	2	0.4945	0.0000	3.6%	0.0%	3.6%	0.0%	23.0%
M22	I	3	0.3141	0.0000	2.3%	0.0%	2.3%	0.0%	12.3%
M22	I	4	0.2332	0.0000	1.7%	0.0%	1.7%	0.0%	8.8%
M22	I	5	0.3294	0.0000	2.4%	0.0%	2.4%	0.0%	8.9%
M22	I	6	0.6005	1.6383	4.3%	8.1%	8.4%	36.2%	17.4%
M22	I	7	0.7667	3.0607	5.6%	15.0%	15.4%	66.6%	28.8%
M22	I	8	0.5929	2.8450	4.3%	14.0%	14.3%	61.9%	23.5%
M22	I	9	0.3825	2.4347	2.8%	12.0%	12.0%	53.0%	12.9%
M22	I	10	0.2592	2.1478	1.9%	10.6%	10.7%	46.8%	10.0%
M22	I	11	0.2165	1.3900	1.6%	6.8%	6.9%	31.1%	9.6%
M22	I	12	0.5040	1.5171	3.7%	7.5%	8.2%	33.0%	16.7%
M22	I	13	0.1193	0.2757	0.9%	1.4%	1.5%	6.0%	4.3%
M22	I	14	0.0950	0.0510	0.7%	0.3%	0.7%	1.1%	3.5%
M22	I	15	0.0902	0.0000	0.7%	0.0%	0.7%	0.0%	2.2%
M22	I	16	0.1076	0.0000	0.8%	0.0%	0.8%	0.0%	1.5%
M22	I	17	0.1241	0.0810	0.9%	0.4%	0.9%	1.8%	1.4%
M22	I	18	0.1569	0.3206	1.1%	1.6%	1.9%	7.4%	3.2%
M22	I	19	0.1755	0.5226	1.3%	2.6%	2.7%	11.8%	4.8%
M22	I	20	0.1480	0.5007	1.1%	2.5%	2.5%	10.9%	4.1%
M22	I	21	0.1053	0.4006	0.8%	2.0%	2.0%	9.2%	2.7%
M22	I	22	0.0803	0.3563	0.6%	1.8%	1.8%	7.8%	2.0%
M22	I	23	0.0757	0.2768	0.5%	1.4%	1.4%	6.3%	2.2%
M22	I	24	0.1072	0.3230	0.8%	1.6%	1.7%	7.0%	3.3%
M22	I	25	0.2076	0.4652	1.5%	2.3%	2.5%	10.1%	2.5%
M22	I	26	0.1961	0.3746	1.4%	1.8%	2.0%	8.2%	2.6%
M22	I	27	0.1976	0.3044	1.4%	1.5%	2.0%	7.1%	3.1%
M22	I	28	0.2095	0.3313	1.5%	1.6%	2.2%	7.7%	3.4%
M22	I	29	0.2218	0.3843	1.6%	1.9%	2.4%	8.8%	3.7%
M22	I	30	0.2365	0.4860	1.7%	2.4%	2.8%	10.6%	4.6%
M22	I	31	0.2457	0.5610	1.8%	2.8%	3.2%	12.2%	5.1%
M22	I	32	0.2414	0.5500	1.7%	2.7%	3.1%	12.3%	4.9%
M22	I	33	0.2298	0.5602	1.7%	2.8%	3.0%	12.5%	4.3%
M22	I	34	0.2198	0.5453	1.6%	2.7%	2.8%	12.0%	4.1%
M22	I	35	0.2113	0.5050	1.5%	2.5%	2.6%	11.0%	3.7%
M22	I	36	0.2104	0.4966	1.5%	2.4%	2.6%	10.8%	3.0%
M22	I	37	0.0717	0.0301	0.5%	0.1%	0.5%	0.7%	1.5%
M22	I	38	0.0797	0.0436	0.6%	0.2%	0.6%	1.0%	1.2%
M22	I	39	0.0921	0.0927	0.7%	0.5%	0.7%	2.0%	1.0%
M22	I	40	0.0991	0.1088	0.7%	0.5%	0.7%	2.4%	1.1%
M22	I	41	0.1034	0.1378	0.7%	0.7%	0.9%	3.0%	1.2%
M22	I	42	0.1125	0.2162	0.8%	1.1%	1.2%	4.7%	1.5%

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Standoff Arm Flange Connection Check			Date
			7/15/2025
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile sprint	Mount Elev. [ft]:	185
Site Name:	simla	Engineer Name:	
Site Number:	CO46078-A-SBA	Project #:	160935

Results Summary Table (Continued)

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
M22	I	43	0.1165	0.2722	0.8%	1.3%	1.5%	5.9%	1.9%
M22	I	44	0.1042	0.2467	0.8%	1.2%	1.4%	5.4%	1.6%
M22	I	45	0.0880	0.1964	0.6%	1.0%	1.1%	4.3%	1.1%
M22	I	46	0.0810	0.1809	0.6%	0.9%	1.0%	3.9%	0.9%
M22	I	47	0.0771	0.1519	0.6%	0.7%	0.8%	3.3%	0.7%
M22	I	48	0.0718	0.0735	0.5%	0.4%	0.6%	1.6%	1.0%
M22	I	49	0.0945	0.1514	0.7%	0.7%	1.0%	3.4%	1.4%
M22	I	50	0.0951	0.1539	0.7%	0.8%	1.0%	3.4%	1.4%
M22	I	51	0.0745	0.1014	0.5%	0.5%	0.7%	2.2%	1.0%
M22	I	52	0.0663	0.1082	0.5%	0.5%	0.7%	2.4%	1.2%
M22	I	53	0.0661	0.0768	0.5%	0.4%	0.6%	1.7%	1.0%
M22	I	54	0.0659	0.0462	0.5%	0.2%	0.5%	1.0%	0.8%
M22	I	55	0.0727	0.0606	0.5%	0.3%	0.5%	1.3%	0.7%
M22	I	56	0.0785	0.1012	0.6%	0.5%	0.7%	2.2%	0.8%
M22	I	57	0.0818	0.1377	0.6%	0.7%	0.8%	3.0%	1.1%
M22	I	58	0.0805	0.1622	0.6%	0.8%	1.0%	3.6%	1.3%
M22	I	59	0.0750	0.1665	0.5%	0.8%	1.0%	3.8%	1.3%
M22	I	60	0.0671	0.1511	0.5%	0.7%	0.9%	3.4%	1.1%
M22	I	61	0.0593	0.1328	0.4%	0.7%	0.8%	3.0%	1.1%
M22	I	62	0.0618	0.1402	0.4%	0.7%	0.8%	3.1%	1.2%
M22	I	63	0.0648	0.1309	0.5%	0.6%	0.7%	2.8%	1.3%
M22	I	64	0.0487	0.0834	0.4%	0.4%	0.5%	1.8%	0.9%
M22	I	65	0.0478	0.0532	0.3%	0.3%	0.4%	1.2%	0.9%
M22	I	66	0.0459	0.0226	0.3%	0.1%	0.3%	0.5%	0.7%
M22	I	67	0.0528	0.0339	0.4%	0.2%	0.4%	0.7%	0.5%
M22	I	68	0.0587	0.0732	0.4%	0.4%	0.5%	1.6%	0.6%
M22	I	69	0.0618	0.1109	0.4%	0.5%	0.7%	2.4%	0.9%
M22	I	70	0.0607	0.1348	0.4%	0.7%	0.8%	3.1%	1.1%
M22	I	71	0.0555	0.1410	0.4%	0.7%	0.8%	3.3%	1.2%
M22	I	72	0.0473	0.1249	0.3%	0.6%	0.7%	2.9%	1.0%
M22	I	73	0.0400	0.1085	0.3%	0.5%	0.6%	2.5%	0.8%
M22	I	74	0.0439	0.1159	0.3%	0.6%	0.6%	2.5%	1.0%
M22	I	75	0.0473	0.1072	0.3%	0.5%	0.6%	2.3%	1.0%
M23	I	1	0.4530	0.5359	3.3%	2.6%	4.0%	11.7%	13.4%
M23	I	2	0.7086	1.9178	5.1%	9.4%	10.7%	44.7%	20.2%
M23	I	3	0.8548	3.1909	6.2%	15.7%	16.1%	70.9%	30.1%
M23	I	4	0.5903	2.6360	4.3%	13.0%	13.2%	57.4%	21.2%
M23	I	5	0.4323	2.7099	3.1%	13.3%	13.5%	59.0%	15.2%
M23	I	6	0.3971	2.6078	2.9%	12.8%	13.1%	57.1%	17.4%
M23	I	7	0.3414	2.0005	2.5%	9.8%	10.1%	45.9%	16.2%
M23	I	8	0.6148	2.0321	4.5%	10.0%	10.9%	44.8%	21.8%
M23	I	9	0.7660	1.5657	5.5%	7.7%	9.3%	34.1%	31.1%

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Standoff Arm Flange Connection Check			Date
			7/15/2025
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile sprint	Mount Elev. [ft]:	185
Site Name:	simla	Engineer Name:	
Site Number:	CO46078-A-SBA	Project #:	160935

Results Summary Table (Continued)

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
M23	I	10	0.5086	0.0000	3.7%	0.0%	3.7%	0.0%	22.2%
M23	I	11	0.3488	0.0000	2.5%	0.0%	2.5%	0.0%	11.9%
M23	I	12	0.3335	0.0243	2.4%	0.1%	2.4%	0.5%	14.1%
M23	I	13	0.1815	0.2681	1.3%	1.3%	1.6%	5.8%	1.6%
M23	I	14	0.2112	0.4876	1.5%	2.4%	2.7%	10.6%	2.8%
M23	I	15	0.2157	0.6064	1.6%	3.0%	3.2%	13.2%	3.9%
M23	I	16	0.1671	0.4718	1.2%	2.3%	2.5%	10.3%	2.6%
M23	I	17	0.1570	0.5630	1.1%	2.8%	2.9%	12.3%	4.6%
M23	I	18	0.1565	0.5713	1.1%	2.8%	2.9%	12.4%	4.9%
M23	I	19	0.1564	0.5356	1.1%	2.6%	2.7%	11.7%	4.9%
M23	I	20	0.1734	0.5534	1.3%	2.7%	2.9%	12.0%	5.6%
M23	I	21	0.1715	0.4460	1.2%	2.2%	2.4%	9.7%	5.9%
M23	I	22	0.1422	0.1560	1.0%	0.8%	1.2%	3.4%	4.4%
M23	I	23	0.1441	0.0957	1.0%	0.5%	1.0%	2.1%	2.4%
M23	I	24	0.1644	0.1687	1.2%	0.8%	1.2%	3.7%	1.9%
M23	I	25	0.1308	0.1541	0.9%	0.8%	1.2%	3.4%	2.5%
M23	I	26	0.1287	0.1466	0.9%	0.7%	1.2%	3.3%	1.9%
M23	I	27	0.1295	0.1804	0.9%	0.9%	1.3%	4.2%	1.9%
M23	I	28	0.1309	0.2667	0.9%	1.3%	1.6%	5.8%	2.7%
M23	I	29	0.1397	0.3490	1.0%	1.7%	1.9%	7.6%	3.5%
M23	I	30	0.1396	0.3542	1.0%	1.7%	1.9%	7.7%	3.6%
M23	I	31	0.1387	0.3356	1.0%	1.7%	1.8%	7.3%	3.5%
M23	I	32	0.1436	0.3438	1.0%	1.7%	1.9%	7.5%	3.8%
M23	I	33	0.1455	0.3189	1.1%	1.6%	1.8%	6.9%	4.3%
M23	I	34	0.1363	0.2237	1.0%	1.1%	1.4%	4.9%	3.8%
M23	I	35	0.1292	0.1408	0.9%	0.7%	1.1%	3.1%	3.1%
M23	I	36	0.1300	0.1356	0.9%	0.7%	1.1%	3.0%	2.8%
M23	I	37	0.0935	0.3819	0.7%	1.9%	1.9%	8.3%	3.2%
M23	I	38	0.0977	0.4759	0.7%	2.3%	2.4%	10.4%	3.9%
M23	I	39	0.0998	0.5463	0.7%	2.7%	2.7%	11.9%	4.5%
M23	I	40	0.0948	0.5159	0.7%	2.5%	2.6%	11.5%	4.0%
M23	I	41	0.1021	0.5408	0.7%	2.7%	2.7%	11.8%	3.2%
M23	I	42	0.1090	0.5353	0.8%	2.6%	2.7%	11.7%	2.9%
M23	I	43	0.1129	0.5028	0.8%	2.5%	2.6%	10.9%	2.7%
M23	I	44	0.1207	0.4908	0.9%	2.4%	2.5%	10.7%	2.0%
M23	I	45	0.1230	0.4432	0.9%	2.2%	2.3%	9.6%	1.7%
M23	I	46	0.1094	0.3348	0.8%	1.6%	1.8%	7.3%	1.9%
M23	I	47	0.0956	0.3042	0.7%	1.5%	1.5%	6.6%	2.6%
M23	I	48	0.0947	0.3406	0.7%	1.7%	1.7%	7.4%	2.9%
M23	I	49	0.0774	0.2401	0.6%	1.2%	1.3%	5.4%	2.1%
M23	I	50	0.0751	0.2375	0.5%	1.2%	1.3%	5.4%	2.0%
M23	I	51	0.1168	0.2110	0.8%	1.0%	1.3%	4.6%	2.1%

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Standoff Arm Flange Connection Check			Date
			7/15/2025
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile sprint	Mount Elev. [ft]:	185
Site Name:	simla	Engineer Name:	
Site Number:	CO46078-A-SBA	Project #:	160935

Results Summary Table (Continued)

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
M23	I	52	0.1125	0.1723	0.8%	0.8%	1.0%	3.8%	1.3%
M23	I	53	0.1138	0.1970	0.8%	1.0%	1.1%	4.3%	1.4%
M23	I	54	0.1104	0.2047	0.8%	1.0%	1.1%	4.5%	1.6%
M23	I	55	0.1038	0.2121	0.8%	1.0%	1.3%	4.8%	1.9%
M23	I	56	0.1054	0.2534	0.8%	1.2%	1.4%	5.5%	2.3%
M23	I	57	0.1084	0.2771	0.8%	1.4%	1.5%	6.0%	2.5%
M23	I	58	0.1100	0.2766	0.8%	1.4%	1.5%	6.0%	2.6%
M23	I	59	0.1095	0.2520	0.8%	1.2%	1.4%	5.5%	2.5%
M23	I	60	0.1075	0.2102	0.8%	1.0%	1.2%	4.6%	2.2%
M23	I	61	0.1049	0.1618	0.8%	0.8%	1.0%	3.5%	1.9%
M23	I	62	0.1021	0.1199	0.7%	0.6%	0.9%	2.6%	1.5%
M23	I	63	0.1076	0.1372	0.8%	0.7%	0.9%	3.0%	1.3%
M23	I	64	0.0827	0.1318	0.6%	0.6%	0.7%	2.9%	0.8%
M23	I	65	0.0842	0.1565	0.6%	0.8%	0.9%	3.4%	0.9%
M23	I	66	0.0807	0.1641	0.6%	0.8%	0.9%	3.6%	1.0%
M23	I	67	0.0739	0.1545	0.5%	0.8%	0.9%	3.6%	1.3%
M23	I	68	0.0738	0.1958	0.5%	1.0%	1.1%	4.3%	1.7%
M23	I	69	0.0770	0.2201	0.6%	1.1%	1.2%	4.8%	2.0%
M23	I	70	0.0788	0.2197	0.6%	1.1%	1.2%	4.8%	2.1%
M23	I	71	0.0786	0.1950	0.6%	1.0%	1.0%	4.2%	1.9%
M23	I	72	0.0759	0.1533	0.5%	0.8%	0.9%	3.3%	1.7%
M23	I	73	0.0732	0.1049	0.5%	0.5%	0.7%	2.3%	1.3%
M23	I	74	0.0709	0.0630	0.5%	0.3%	0.6%	1.5%	1.0%
M23	I	75	0.0775	0.0961	0.6%	0.5%	0.6%	2.1%	0.8%
MP8B	I	1	0.2549	2.1558	1.8%	10.6%	10.6%	46.9%	11.9%
MP8B	I	2	0.2165	2.1555	1.6%	10.6%	10.7%	46.9%	11.4%
MP8B	I	3	0.3560	1.6803	2.6%	8.3%	8.4%	39.1%	13.7%
MP8B	I	4	0.6562	1.9595	4.8%	9.6%	10.6%	42.7%	21.4%
MP8B	I	5	0.7858	1.7326	5.7%	8.5%	10.0%	37.7%	31.8%
MP8B	I	6	0.5372	0.3231	3.9%	1.6%	3.9%	7.0%	24.6%
MP8B	I	7	0.2931	0.0000	2.1%	0.0%	2.1%	0.0%	12.3%
MP8B	I	8	0.3334	0.0000	2.4%	0.0%	2.4%	0.0%	8.8%
MP8B	I	9	0.4454	0.4199	3.2%	2.1%	3.5%	9.1%	11.3%
MP8B	I	10	0.6901	2.0066	5.0%	9.9%	10.6%	46.3%	21.1%
MP8B	I	11	0.8128	3.3268	5.9%	16.4%	16.8%	72.4%	31.5%
MP8B	I	12	0.5445	2.8829	3.9%	14.2%	14.4%	62.8%	24.3%
MP8B	I	13	0.0616	0.4448	0.4%	2.2%	2.2%	10.3%	3.0%
MP8B	I	14	0.0578	0.5032	0.4%	2.5%	2.5%	11.0%	3.7%
MP8B	I	15	0.0749	0.5247	0.5%	2.6%	2.6%	11.4%	4.4%
MP8B	I	16	0.1178	0.5713	0.9%	2.8%	2.9%	12.4%	5.5%
MP8B	I	17	0.1308	0.5043	0.9%	2.5%	2.6%	11.0%	5.4%
MP8B	I	18	0.1032	0.2711	0.7%	1.3%	1.5%	5.9%	4.1%

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Standoff Arm Flange Connection Check			Date
			7/15/2025
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile sprint	Mount Elev. [ft]:	185
Site Name:	simla	Engineer Name:	
Site Number:	CO46078-A-SBA	Project #:	160935

Results Summary Table (Continued)

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
MP8B	I	19	0.1084	0.1403	0.8%	0.7%	0.9%	3.1%	2.4%
MP8B	I	20	0.1300	0.2119	0.9%	1.0%	1.2%	4.6%	1.5%
MP8B	I	21	0.1464	0.3456	1.1%	1.7%	1.9%	7.5%	1.3%
MP8B	I	22	0.1666	0.5828	1.2%	2.9%	3.0%	12.7%	3.6%
MP8B	I	23	0.1627	0.6959	1.2%	3.4%	3.6%	15.2%	4.9%
MP8B	I	24	0.1119	0.5790	0.8%	2.8%	2.9%	12.6%	3.6%
MP8B	I	25	0.0739	0.2837	0.5%	1.4%	1.4%	6.2%	0.9%
MP8B	I	26	0.0665	0.2630	0.5%	1.3%	1.3%	5.7%	0.9%
MP8B	I	27	0.0640	0.2271	0.5%	1.1%	1.2%	4.9%	1.0%
MP8B	I	28	0.0640	0.1485	0.5%	0.7%	0.8%	3.3%	1.3%
MP8B	I	29	0.0676	0.1153	0.5%	0.6%	0.7%	2.6%	1.6%
MP8B	I	30	0.0746	0.1380	0.5%	0.7%	0.8%	3.0%	1.3%
MP8B	I	31	0.0868	0.1940	0.6%	1.0%	1.1%	4.2%	0.8%
MP8B	I	32	0.0942	0.2147	0.7%	1.1%	1.2%	4.7%	0.7%
MP8B	I	33	0.0984	0.2507	0.7%	1.2%	1.3%	5.5%	0.8%
MP8B	I	34	0.1055	0.3293	0.8%	1.6%	1.7%	7.2%	1.4%
MP8B	I	35	0.1068	0.3764	0.8%	1.9%	2.0%	8.2%	1.9%
MP8B	I	36	0.0914	0.3398	0.7%	1.7%	1.7%	7.4%	1.6%
MP8B	I	37	0.0847	0.2847	0.6%	1.4%	1.5%	6.2%	2.6%
MP8B	I	38	0.0845	0.2993	0.6%	1.5%	1.6%	6.5%	2.8%
MP8B	I	39	0.0872	0.2968	0.6%	1.5%	1.6%	6.5%	2.9%
MP8B	I	40	0.0969	0.3147	0.7%	1.5%	1.7%	6.9%	3.3%
MP8B	I	41	0.1021	0.3017	0.7%	1.5%	1.6%	6.6%	3.6%
MP8B	I	42	0.0969	0.2266	0.7%	1.1%	1.3%	4.9%	3.2%
MP8B	I	43	0.0934	0.1540	0.7%	0.8%	1.0%	3.4%	2.6%
MP8B	I	44	0.0941	0.1393	0.7%	0.7%	0.9%	3.0%	2.3%
MP8B	I	45	0.0916	0.1419	0.7%	0.7%	0.9%	3.1%	1.9%
MP8B	I	46	0.0888	0.1517	0.6%	0.7%	0.9%	3.3%	1.4%
MP8B	I	47	0.0873	0.1981	0.6%	1.0%	1.0%	4.3%	1.3%
MP8B	I	48	0.0807	0.2120	0.6%	1.0%	1.2%	4.6%	1.9%
MP8B	I	49	0.0599	0.1431	0.4%	0.7%	0.8%	3.3%	1.3%
MP8B	I	50	0.0599	0.1463	0.4%	0.7%	0.8%	3.3%	1.3%
MP8B	I	51	0.0790	0.2353	0.6%	1.2%	1.2%	5.2%	1.8%
MP8B	I	52	0.0644	0.2581	0.5%	1.3%	1.3%	5.6%	1.6%
MP8B	I	53	0.0623	0.2527	0.5%	1.2%	1.3%	5.5%	2.0%
MP8B	I	54	0.0661	0.2678	0.5%	1.3%	1.4%	5.8%	2.3%
MP8B	I	55	0.0697	0.2609	0.5%	1.3%	1.4%	5.7%	2.4%
MP8B	I	56	0.0724	0.2331	0.5%	1.1%	1.2%	5.1%	2.2%
MP8B	I	57	0.0739	0.1919	0.5%	0.9%	1.1%	4.2%	1.9%
MP8B	I	58	0.0754	0.1591	0.5%	0.8%	0.9%	3.6%	1.5%
MP8B	I	59	0.0815	0.2018	0.6%	1.0%	1.0%	4.4%	1.1%
MP8B	I	60	0.0859	0.2473	0.6%	1.2%	1.3%	5.4%	1.0%

TES A CONGRUEX COMPANY	Standoff Arm Flange Connection Check		Date
			7/15/2025
Customer:	SBA	TIA Standard:	ANSI/TIA-222-H
Carrier:	T-Mobile sprint	Mount Elev. [ft]:	185
Site Name:	simla	Engineer Name:	
Site Number:	CO46078-A-SBA	Project #:	160935

Results Summary Table (Continued)

Member Label	Member End	Load Combo #	Max Bolt Shear [K]	Max Bolt Tension [K]	Bolt Shear Check	Bolt Tension Check	Bolt Interaction Check	Plate Bending Check	Weld Check
MP8B	I	61	0.0865	0.2813	0.6%	1.4%	1.4%	6.1%	1.0%
MP8B	I	62	0.0819	0.2964	0.6%	1.5%	1.5%	6.5%	1.1%
MP8B	I	63	0.0732	0.2879	0.5%	1.4%	1.4%	6.3%	1.3%
MP8B	I	64	0.0431	0.1941	0.3%	1.0%	1.0%	4.2%	1.2%
MP8B	I	65	0.0421	0.1969	0.3%	1.0%	1.0%	4.3%	1.6%
MP8B	I	66	0.0464	0.2114	0.3%	1.0%	1.1%	4.6%	1.8%
MP8B	I	67	0.0501	0.2045	0.4%	1.0%	1.1%	4.5%	1.9%
MP8B	I	68	0.0524	0.1768	0.4%	0.9%	0.9%	3.8%	1.7%
MP8B	I	69	0.0535	0.1355	0.4%	0.7%	0.8%	3.0%	1.4%
MP8B	I	70	0.0545	0.0952	0.4%	0.5%	0.6%	2.2%	1.0%
MP8B	I	71	0.0602	0.1385	0.4%	0.7%	0.7%	3.0%	0.7%
MP8B	I	72	0.0652	0.1833	0.5%	0.9%	1.0%	4.0%	0.6%
MP8B	I	73	0.0663	0.2174	0.5%	1.1%	1.1%	4.7%	0.9%
MP8B	I	74	0.0617	0.2325	0.4%	1.1%	1.2%	5.1%	1.0%
MP8B	I	75	0.0525	0.2239	0.4%	1.1%	1.1%	4.9%	0.9%