



161 INVERNESS DR W, 2ND FLOOR
ENGLEWOOD, CO 80112

AT&T SITE NAME: WIDFIELD HIGH SCHOOL CO
AT&T SITE ID: COL02205
AT&T PACE NUMBER: MRUTH042458
AT&T FA CODE: 15312479
USID: 295097
NSB - MONOPOLE
LTE 1C/2C/3C/4C/5G NR 1SR



AMERICAN TOWER®

ATC SITE NAME: WIDFIELD HIGH SCHOOL II
ATC SITE NUMBER: 370609
SITE ADDRESS: 523 WIDFIELD ROAD
COLORADO SPRINGS, CO 80911
(EL PASO COUNTY)



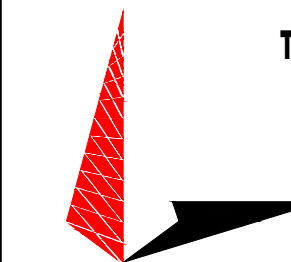
LOCATION MAP



161 INVERNESS DR W, 2ND FLOOR
ENGLEWOOD, CO 80112



AMERICAN TOWER®
19100 VON KARMAN AVE
SUITE 200
IRVINE, CA 92612



TOWER ENGINEERING PROFESSIONALS
4710 E ELWOOD ST, STE 9
PHOENIX, AZ 85040
OFFICE: (480) 285-0036
www.tepgroup.net

*LATITUDE N 38° 45' 17.39" (38.75483°)
*LONGITUDE W 104° 43' 50.02" (-104.73056°)
*GROUND ELEV. (AMSL) = 5,795'±
*INFORMATION PROVIDED BY ATC

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

1. INTERNATIONAL BUILDING CODE (2018 EDITION)	4. NATIONAL ELECTRIC CODE (2020 EDITION)
2. INTERNATIONAL CODE COUNCIL	5. LOCAL BUILDING CODE
3. ANSI/TIA/EIA-222-H	6. CITY/COUNTY ORDINANCES

POWER COMPANY: COLORADO SPRINGS UTILITIES
CONTACT: CUSTOMER SERVICE
PHONE: (719) 448-4800
METER # NEAR SITE: UNKNOWN
TELEPHONE COMPANY: CENTURY LINK
CONTACT: CUSTOMER SERVICE
PHONE: (866) 915-7181
PHONE # NEAR SITE: (719) 494-7942
PEDESTAL # NEAR SITE: UNKNOWN

FROM COLORADO SPRINGS DOWNTOWN HEAD SOUTH ON I-25, TAKE EXIT 135 AND TURN LEFT ONTO S ACADEMY BLVD FOR .8 MILES, TAKE US 85 RAMP TO FOUNTAIN AND TAKE US 85 SOUTH FOR 1.4 MILES, TURN LEFT ONTO MAIN ST FOR .4 MILES, TURN RIGHT ONTO NORMAN DR. FOR .1 MILES, CONTINUE ONTO WIDFIELD DR. FOR .3 MILES, TURN LEFT ONTO HACKBERRY DR. FOLLOW THE ROAD TOWARDS THE BACK ENTRANCE OF THE FOOTFIELD FIELD SITE WILL BE ON THE RIGHT.

please add the following to the site plan:
Owner email for responsible party
Applicant email for responsible party
Property address
Property tax schedule number
Legal description
Lot/parcel size
Lot area coverage calculation
Existing/proposed land use
Date, north arrow, and a graphic scale
Dimension of the property lines
The footprint of all existing and proposed buildings and the setback distances from each existing and proposed structure to the property lines

TOWER COORDINATES

CODE COMPLIANCE

AT&T SITE NAME:	WIDFIELD HIGH SCHOOL CO	PROJECT DESCRIPTION:	COLLOCATION
AT&T SITE ID:	COL02205	TOWER TYPE:	119' MONOPOLE
FA:	15312479	JURISDICTION:	EL PASO COUNTY
PACE NUMBER:	MRUTH042458	LEASE AREA:	300 SQ FT
ATC SITE NAME:	WIDFIELD HIGH SCHOOL II	CURRENT ZONING:	A-5
ATC SITE NUMBER:	370609		

UTILITY INFORMATION

DESIGN PACKAGE BASED ON RF DATA SHEET
RFDS NAME: COL02205
REVISION: 1.00
ISSUED: 09/21/2020 5:43:37 P.M.
DATE UPDATED: 10/14/2020 11:33:08 A.M.

NUMBER OF SECTORS: 3
NUMBER OF ANTENNAS: 6
NUMBER OF TMAs: 0
NUMBER OF RRHS: 9
NUMBER OF FIBER/DC SQUIDS: 0
NUMBER OF DC SQUIDS: 3
NUMBER OF FIBER TRUNK CABLES: 3
NUMBER OF DC TRUNK CABLES: 6
NUMBER OF RF CABLES: 0

RFDS DATA

THE PURPOSE OF THIS PROJECT IS AS FOLLOWS:

- TOWER SCOPE OF WORK:
- INSTALL (3) SECTOR FRAMES
 - INSTALL (6) ANTENNAS
 - INSTALL (9) RRHS
 - INSTALL (3) SQUIDS
 - INSTALL (3) FIBER TRUNKS
 - INSTALL (6) DC TRUNKS

- GROUND SCOPE OF WORK:
- INSTALL (1) W.I.C. SHELTER PAD
 - INSTALL (1) GENERATOR PAD
 - INSTALL (1) W.I.C. SHELTER
 - INSTALL (1) GENERATOR
 - INSTALL (1) H-FRAME
 - INSTALL METER AND DISCONNECT
 - INSTALL FIBER BOX

NSB - MONOPOLE
LTE - 1C/2C/3C/4C/5G NR 1SR

SCOPE OF WORK

JURISDICTIONAL APPROVAL

DO NOT SCALE DRAWINGS.
CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

PROJECT INFORMATION

SITE CONSTRUCTION MANAGER:
NAME: AT&T
ADDRESS: 161 INVERNESS DR W, 2ND FLOOR
CITY, STATE, ZIP: ENGLEWOOD, CO 80112
CONTACT: REID POST
PHONE: (720) 838-4228

SITE APPLICANT:
NAME: AT&T
ADDRESS: 4393 S RIVERBOAT RD, 4TH FLOOR
CITY, STATE, ZIP: SALT LAKE CITY, UT 84123
CONTACT: JAN ROBINETTE
PHONE: (801) 201-4173

CIVIL ENGINEER:
NAME: TOWER ENGINEERING PROFESSIONALS
ADDRESS: 326 TRYON ROAD
CITY, STATE, ZIP: RALEIGH, NC 27803
CONTACT: GRAHAM M. ANDRES, P.E.
PHONE: (919) 661-6351

ELECTRICAL ENGINEER:
NAME: TOWER ENGINEERING PROFESSIONALS
ADDRESS: 326 TRYON ROAD
CITY, STATE, ZIP: RALEIGH, NC 27803
CONTACT: GRAHAM M. ANDRES, P.E.
PHONE: (919) 661-6351

PROPERTY OWNER:
NAME: WIDFIELD SCHOOL DISTRICT NO 3
ADDRESS: 1820 MAIN ST
CITY, STATE, ZIP: COLORADO SPRINGS, CO 80911

SHEET:	DESCRIPTION:	REV
T-1	TITLE SHEET	C
T-2	GENERAL NOTES	C
C-1.1	SITE SURVEY	C
C-1.2	COMPOUND DETAIL	C
C-2	EQUIPMENT & ANTENNA LAYOUTS	C
C-3	EXISTING AND FINAL ELEVATIONS	C
C-4	EQUIPMENT DETAILS	C
C-5	EQUIPMENT DETAILS	C
C-6	WIC SHELTER DETAILS	C
C-7	GENERATOR DETAILS	C
C-8	FOUNDATION DETAILS	C
E-1	ELECTRICAL PANEL & GROUNDING PLANS	C
E-2	ONE-LINE DIAGRAM	C
E-3	DC SYSTEM DETAILS	C
G-1	GROUNDING DETAILS	C
G-2	GROUNDING DETAILS	C

PROJECT TEAM

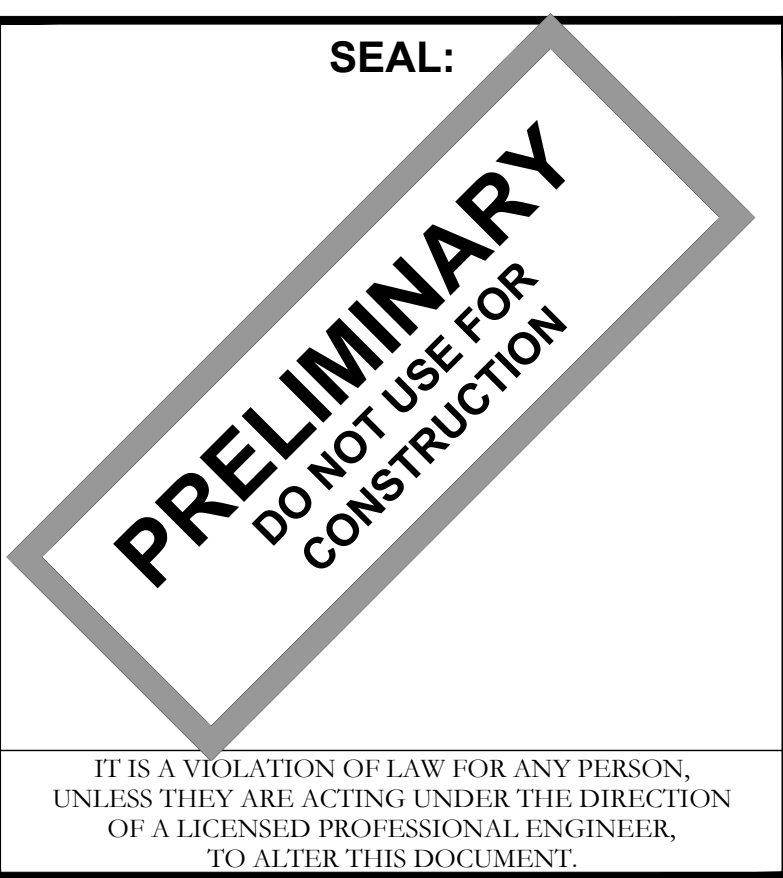
SHEET INDEX

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EXISTING 119'-0"
MONOPOLE TOWER
NSB - LTE - 1C/2C/3C/4C/
5G NR 1SR

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	QA
A	11-23-20	KT	PRELIMINARY	EGG
B	12-14-20	SDD	90% CONSTRUCTION	EGG
C	02-18-21	CAK	90% CONSTRUCTION	EGG



SHEET TITLE:
TITLE SHEET

SHEET NUMBER: T-1
REVISION: C

TEP #: 177861.243634

Please add "PCD File No. PPR-21-034"

NOTE:

SITE SURVEY PERFORMED BY MILLMAN, NATIONAL LAND SERVICES DATED APRIL 15, 2013 WAS PROVIDED BY AMERICAN TOWER ENGINEERING.

**FIDELITY NATIONAL TITLE INSURANCE COMPANY
COMMITMENT NO. 16085920 - SCHEDULE A:**

An interest in land, said interest being over a portion of the following described parcel:
A portion of the East half of the Southwest quarter of Section 12 in Township 15 South, Range 66 West of the 6th P. M., El Paso County, Colorado, being more particularly described as follows: Beginning at a point on the East line of a tract described in a deed to El Paso County School District No. 3 and recorded in Book 1884 of Page 382 of the El Paso County records, said point being 5.00 feet Northwest of the Easternmost corner of the aforesaid tract; thence along and identified with the Northwest boundary of said tract, N 31°34'15"W a distance of 45.00 feet; thence along a curve to the right whose radius is 803.18 feet and whose central angle is 31°34'15"; an arc distance of 442.58 feet; thence along the tangent produced, N 0°00'00"E a distance of 106.00 feet; thence N 90°00'00"E a distance of 310.00 feet; thence S 0°00'00"E a distance of 461.88 feet; thence S 58°25'45"W a distance of 196.07 feet to the point of beginning, containing an area of 3,329 acres more or less.

AND BEING the same property conveyed to Widefield School District No. 3 from Fred C. Spaul Homes, Inc., a Colorado corporation by Warranty Deed dated September 24, 1965 and recorded October 21, 1965 in Deed Book 2099, Page 682.

A portion of Tax Parcel No. 6512300001
Said interest being over land more particularly described by the following description:
Situated in the City of Colorado Springs, County of El Paso and State of Colorado, known as being a 2,500 square foot Lease Area over and upon a parcel of land now or formerly conveyed to Widefield School District No. 3 as recorded in Book 2099 Page 682 of El Paso County records and situated in the East half of the Southwest Quarter of Section 12, Township 15 South, Range 66 West of the 6th principal Meridian and being more particularly described as follows:
Commencing at a found and used iron pipe situated on the prolongation of the terminus line of Hackberry Drive (a 50' public right of way) (for reference see only: travel along the aforesaid prolonged line South 31°31'02" East a distance of 5.00 feet to a point situated on the northern margin of the aforesaid Hackberry Drive); thence North 02°55'26" East a distance of 125.96 feet to a point; 2) North 03°24'00" West a distance of 50.00 feet to a point; 3) South 86°36'00" East a distance of 50.00 feet to a point; 4) North 86°36'00" West a distance of 50.00 feet to a point; 5) South 03°24'00" West a distance of 50.00 feet to a point; 6) North 86°36'00" East a distance of 50.00 feet to a point; 7) South 03°24'00" West a distance of 50.00 feet to a point; 8) North 86°36'00" West a distance of 50.00 feet to the Point of Beginning; Containing 2,500 square feet or 0.0574 acres, more or less.

**FIDELITY NATIONAL TITLE INSURANCE COMPANY
COMMITMENT NO. 16085920 - SCHEDULE B, SECTION II:**

11. Right-of-Way and Utility Easement in favor of Clear Wireless LLC, a Nevada limited liability company set forth in instrument recorded on 07/20/2011 in instrument No. 211069796. (DOES NOT AFFECT THE SUBJECT PROPERTY OR LEASE AREA.)

LEASE AREA

Situated in the City of Colorado Springs, County of El Paso and State of Colorado, known as being a 2,500 square foot Lease Area over and upon a parcel of land now or formerly conveyed to Widefield School District No. 3 as recorded in Book 2099 Page 682 of El Paso County records and situated in the East half of the Southwest Quarter of Section 12, Township 15 South, Range 66 West of the 6th principal Meridian and being more particularly described as follows:
Commencing at a found and used iron pipe situated on the prolongation of the terminus line of Hackberry Drive (a 50' public right of way) (for reference see only: travel along the aforesaid prolonged line South 31°31'02" East a distance of 5.00 feet to a point situated on the northern margin of the aforesaid Hackberry Drive); thence North 02°55'26" East a distance of 125.96 feet to a point; 2) North 03°24'00" West a distance of 50.00 feet to a point; 3) South 86°36'00" East a distance of 50.00 feet to a point; 4) North 86°36'00" West a distance of 50.00 feet to a point; 5) South 03°24'00" West a distance of 50.00 feet to a point; 6) North 86°36'00" East a distance of 50.00 feet to a point; 7) South 03°24'00" West a distance of 50.00 feet to a point; 8) North 86°36'00" West a distance of 50.00 feet to the Point of Beginning; Containing 2,500 square feet or 0.0574 acres, more or less.

12' ACCESS EASEMENT

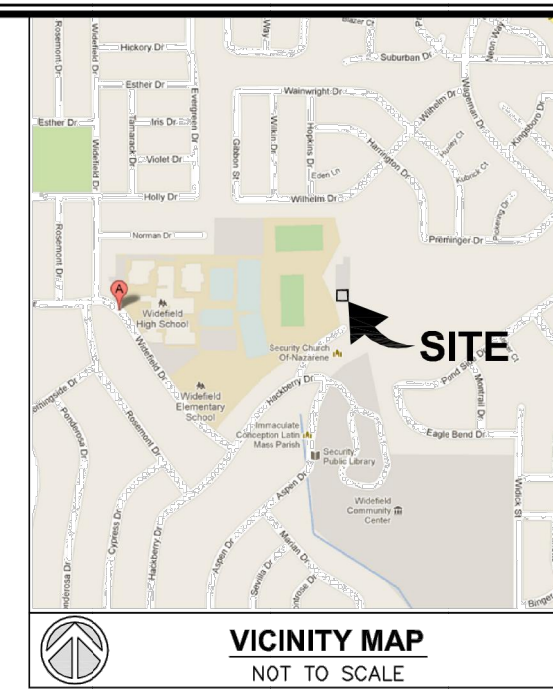
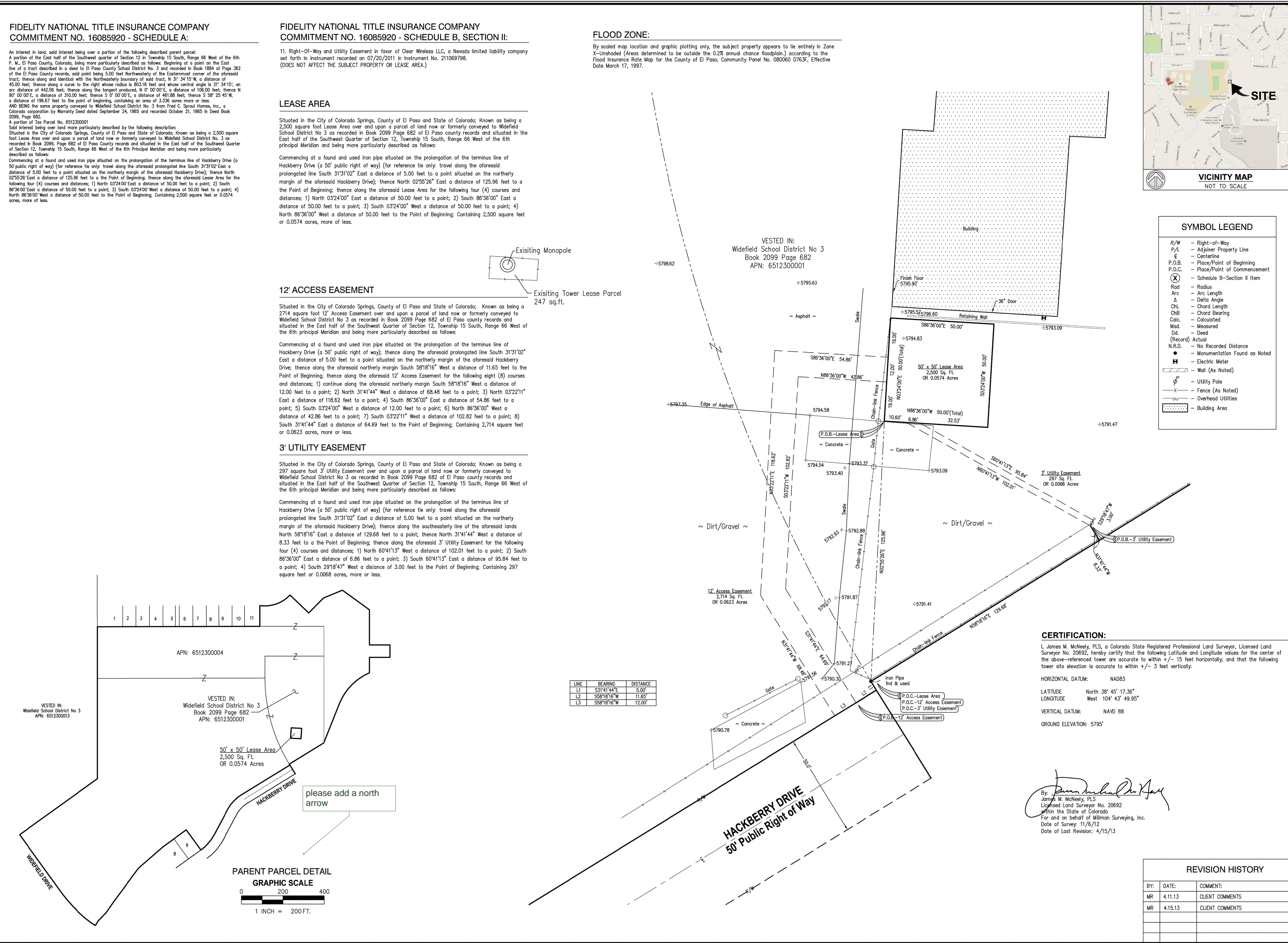
Situated in the City of Colorado Springs, County of El Paso and State of Colorado, known as being a 2714 square foot 12' Access Easement over and upon a parcel of land now or formerly conveyed to Widefield School District No. 3 as recorded in Book 2099 Page 682 of El Paso County records and situated in the East half of the Southwest Quarter of Section 12, Township 15 South, Range 66 West of the 6th principal Meridian and being more particularly described as follows:
Commencing at a found and used iron pipe situated on the prolongation of the terminus line of Hackberry Drive (a 50' public right of way) (for reference see only: travel along the aforesaid prolonged line South 31°31'02" East a distance of 5.00 feet to a point situated on the northern margin of the aforesaid Hackberry Drive); thence along the aforesaid northern margin South 58°18'16" West a distance of 12.00 feet to a point; 2) North 31°41'44" West a distance of 68.48 feet to a point; 3) North 03°22'11" East a distance of 118.62 feet to a point; 4) South 86°36'00" East a distance of 54.86 feet to a point; 5) South 03°24'00" West a distance of 12.00 feet to a point; 6) North 86°36'00" West a distance of 42.86 feet to a point; 7) South 03°22'11" West a distance of 102.82 feet to a point; 8) South 31°41'44" East a distance of 64.69 feet to the Point of Beginning; Containing 2,714 square feet or 0.0623 acres, more or less.

3' UTILITY EASEMENT

Situated in the City of Colorado Springs, County of El Paso and State of Colorado, known as being a 297 square foot 3' Utility Easement over and upon a parcel of land now or formerly conveyed to Widefield School District No. 3 as recorded in Book 2099 Page 682 of El Paso County records and situated in the East half of the Southwest Quarter of Section 12, Township 15 South, Range 66 West of the 6th principal Meridian and being more particularly described as follows:
Commencing at a found and used iron pipe situated on the prolongation of the terminus line of Hackberry Drive (a 50' public right of way) (for reference see only: travel along the aforesaid prolonged line South 31°31'02" East a distance of 5.00 feet to a point situated on the northern margin of the aforesaid Hackberry Drive); thence along the southeasterly line of the aforesaid lands North 58°18'16" East a distance of 129.68 feet to a point; thence North 31°41'44" West a distance of 8.33 feet to the Point of Beginning; thence along the aforesaid 3' Utility Easement for the following four (4) courses and distances: 1) North 60°41'13" West a distance of 102.01 feet to a point; 2) South 86°36'00" East a distance of 8.86 feet to a point; 3) South 60°41'13" East a distance of 95.84 feet to a point; 4) South 28°18'17" West a distance of 3.00 feet to the Point of Beginning; Containing 297 square feet or 0.0068 acres, more or less.

FLOOD ZONE:

By scaled map location and graphic plotting only, the subject property appears to lie entirely in Zone X-Unshaded (Areas determined to be outside the 0.2% annual chance floodplain) according to the Flood Insurance Rate Map for the County of El Paso, Community Panel No. 080600 0763F, Effective Date March 17, 1997.



SYMBOL LEGEND table with various symbols and their corresponding descriptions like Right-of-Way, Easement, etc.

CERTIFICATION: I, James M. McNeely, PLS, a Colorado State Registered Professional Land Surveyor, Licensed Land Surveyor No. 20692, hereby certify that the following Latitude and Longitude values for the center of the above-referenced tower are accurate to within +/- 15 feet horizontally, and that the following tower site elevation is accurate to within +/- 3 feet vertically.

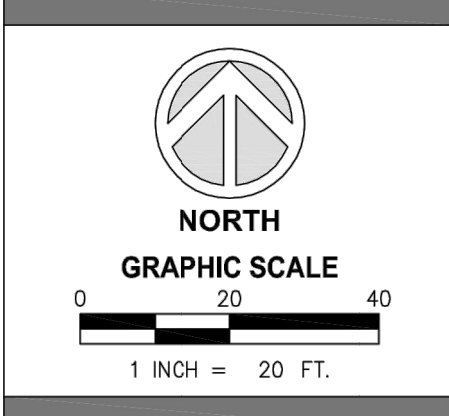
REVISION HISTORY table with columns for BY, DATE, COMMENT, and CLIENT COMMENTS.

millman National Land Services Transforming the Industry. Surveying, Zoning, Environmental, Real Support - Title Review. Millman Surveying, Inc. Corporate Headquarters 1742 Georgetown Road, Suite H Hudson, OH 44236 Phone: 800-520-1010 Fax: 330-342-0834 www.millmansurveying.com

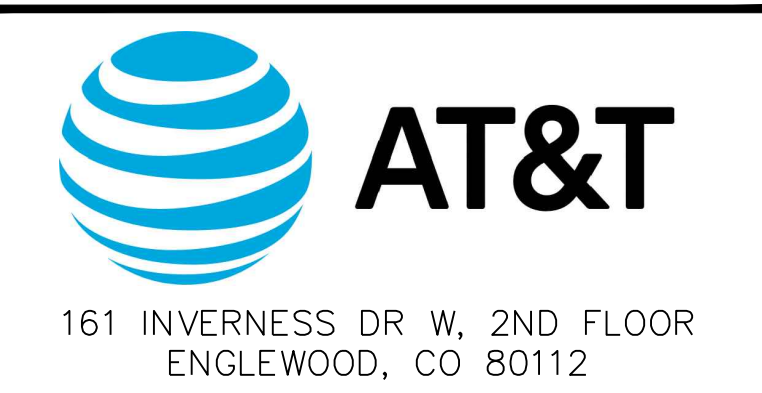
ALTA/ACSM LAND TITLE SURVEY PREPARED FOR: PDC CORPORATION 13225 Danielson Street Suite 200 Poway, CA, 92064 Phone: 658-668-2828

virtuasurveyor for more information visit http://vimeo.com/25774136

CO-5100 Widefield High School 645 Widefield Drive City of Colorado Springs County of El Paso State of Colorado



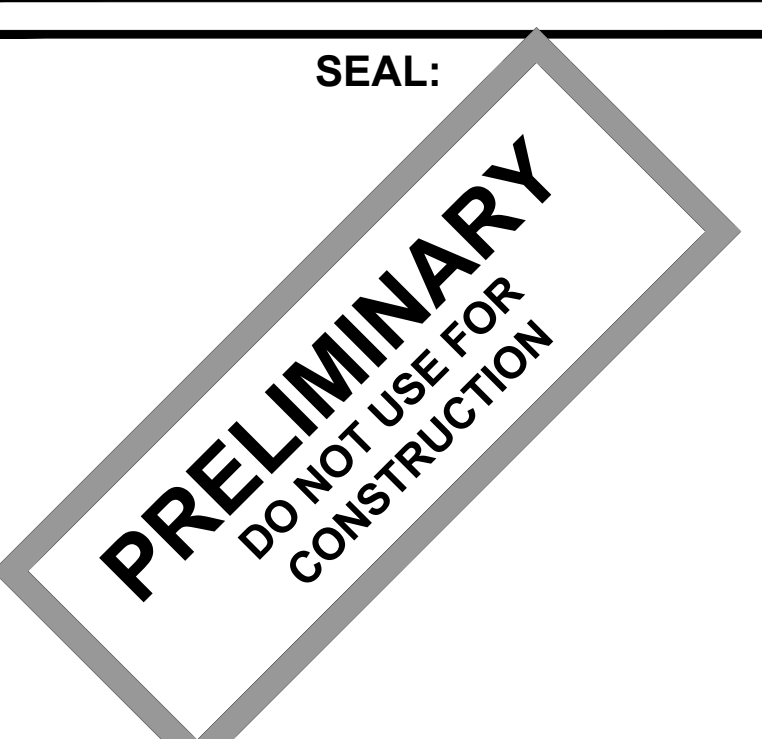
Surveyor's Seal Sheet No. 1 of 1 MSJ Project No. 28074 PM: MR Drafter: MR



AT&T SITE ID: COL02205 AT&T FA CODE: 15312479 AT&T PACE #: MRUTH042548 ATC #: 370609 WIDEFIELD HIGH SCHOOL II

523 WIDEFIELD ROAD COLORADO SPRINGS, CO 80911 (EL PASO COUNTY) EXISTING 119'-0" MONOPOLE TOWER NSB - LTE - 1C/2C/3C/4C/ 5G NR 1SR

ISSUED FOR table with columns for REV, DATE, DRWN, DESCRIPTION, and QA.



IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET TITLE: SITE SURVEY

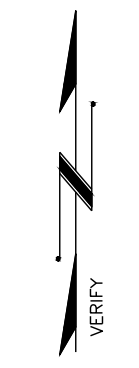
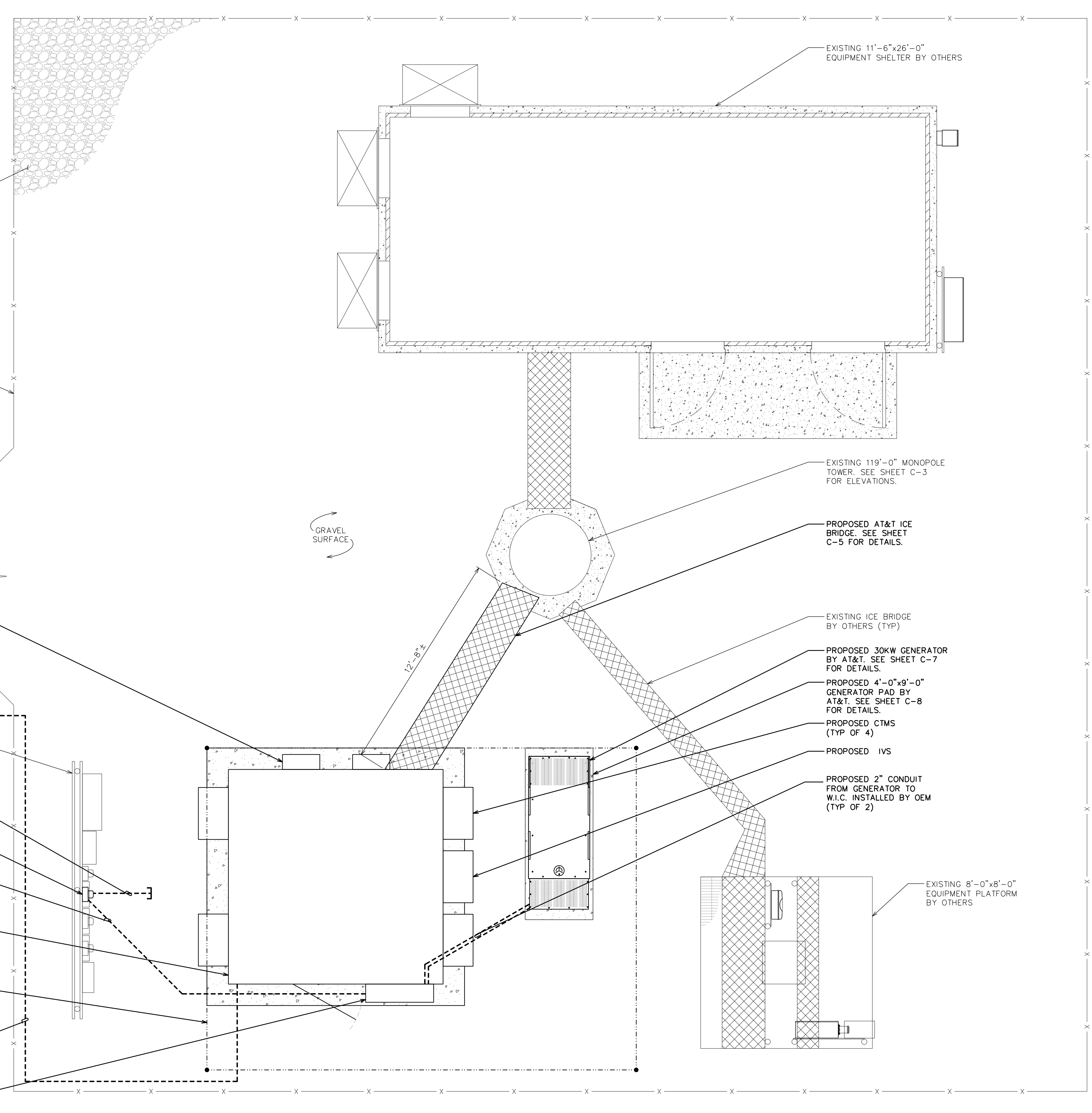
SHEET NUMBER: C-1.1 REVISION: C

TEP #: 177861.243634

NOTES:

1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE AT&T REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
4. UTILITY COORDINATION PENDING.

- EXISTING GRAVEL WITHIN COMPOUND
- EXISTING CHAIN-LINK FENCED COMPOUND
- EXISTING 12'-0" WIDE ACCESS GATE
- PROPOSED DC-12 (TYP OF 2)
- PROPOSED HANDHOLE BY AT&T
- PROPOSED FIBER ROUTE BY AT&T TO EXISTING TELCO SERVICE. SEE SHEET E-4 FOR DETAILS.
- EXISTING UTILITY RACK
- PROPOSED UNDERGROUND ROUTING TO EXISTING TRANSFORMER. SEE NOTES, THIS SHEET.
- PROPOSED METER TO BE INSTALLED IN EMPTY SOCKET ON EXISTING METER BANK
- PROPOSED 2 1/2" CONDUIT WITH (3) 3/0 AND (1) #6 GND FROM METER TO W.I.C.
- PROPOSED 10'-0"x10'-0" W.I.C. ON A PROPOSED 12'-0"x12'-0" EQUIPMENT PAD BY AT&T. SEE SHEETS C-6 & C-9 FOR DETAILS.
- PROPOSED 15'-0"x20'-0" LEASE AREA BY AT&T
- PROPOSED (1) 4" TELCO CONDUIT W/ (3) 1-1/4" FLEX INTERDUCT & PULL STRING FOR FIBER STUBBED UP IN FIBER HANDHOLE. CONTRACTOR TO COORDINATE SERVICE WITH LOCAL TELEPHONE COMPANY
- PROPOSED AC POWER PANEL BY AT&T



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SEAL:

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

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SHEET TITLE:
COMPOUND DETAIL

SHEET NUMBER:
C-1.2

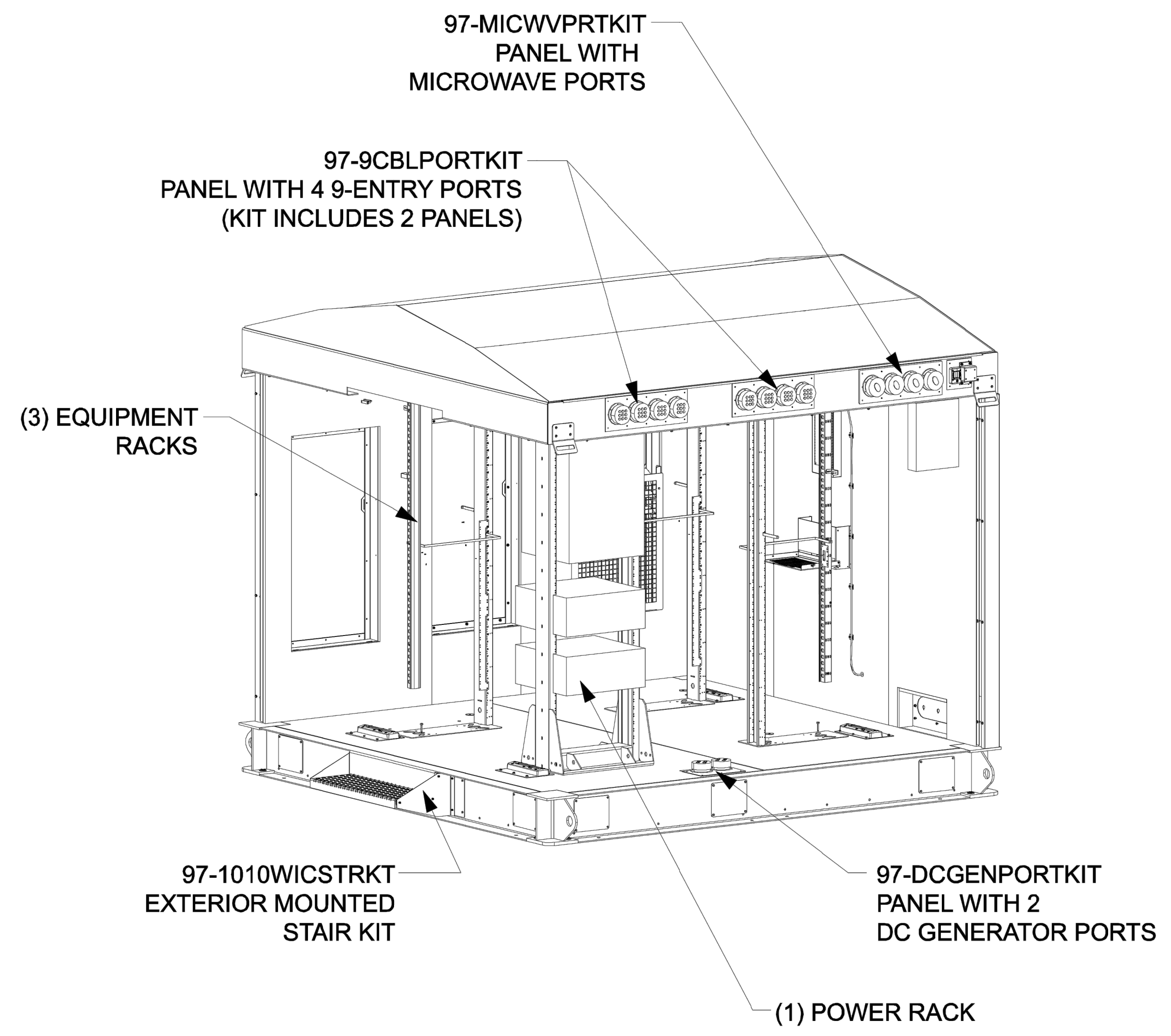
REVISION:
C

TEP #: 177861.243634

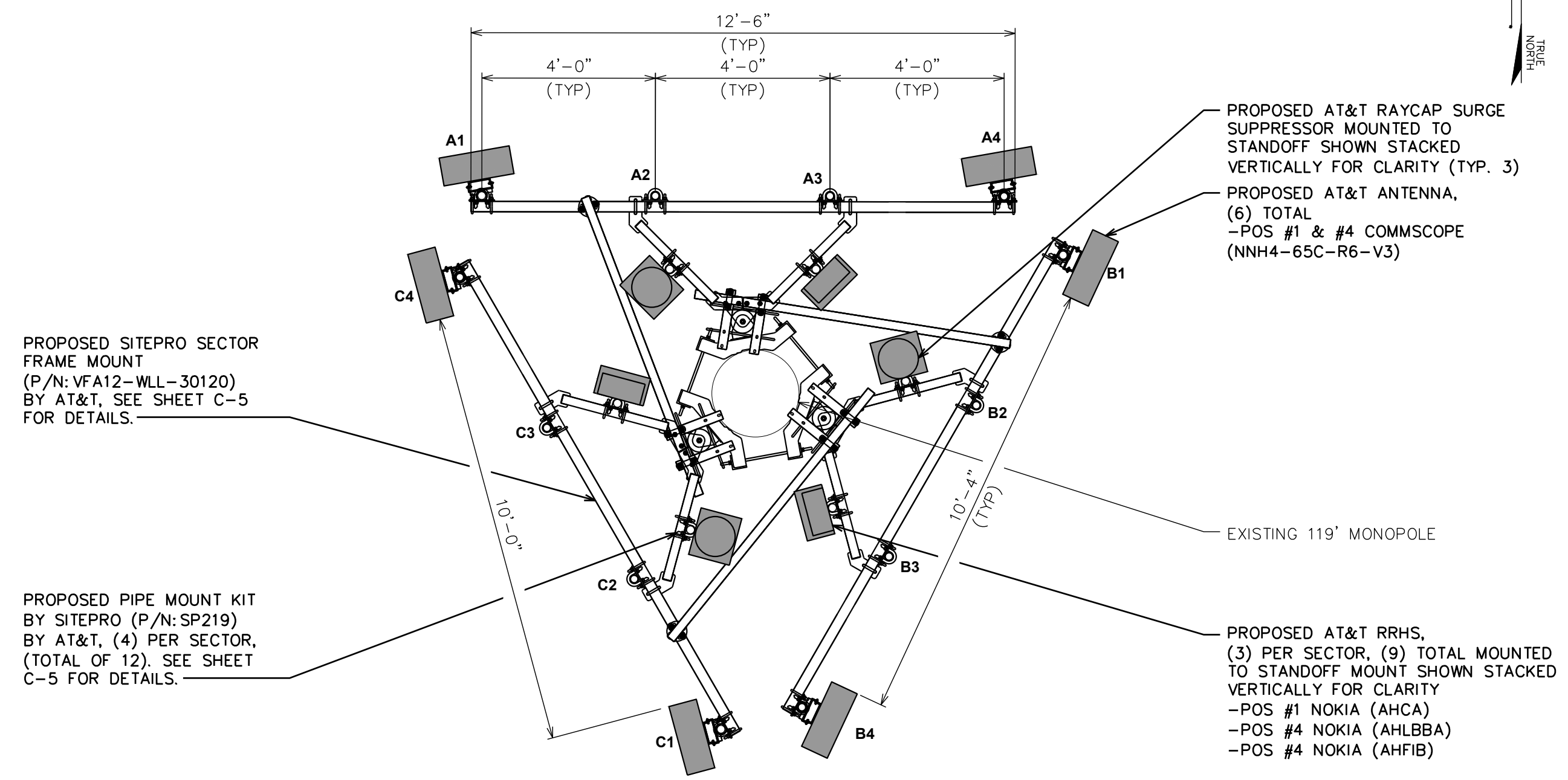
COMPOUND DETAIL

SCALE: 3/16" = 1'-0" (24x36)
SCALE: 3/32" = 1'-0" (11x17)

0 4 8
SCALE IN FEET



FINAL EQUIPMENT LAYOUT
SCALE: N.T.S.



FINAL ANTENNA LAYOUT

SCALE: 3/8" = 1'-0" (24x36)
SCALE: 3/16" = 1'-0" (11x17)
SCALE IN FEET

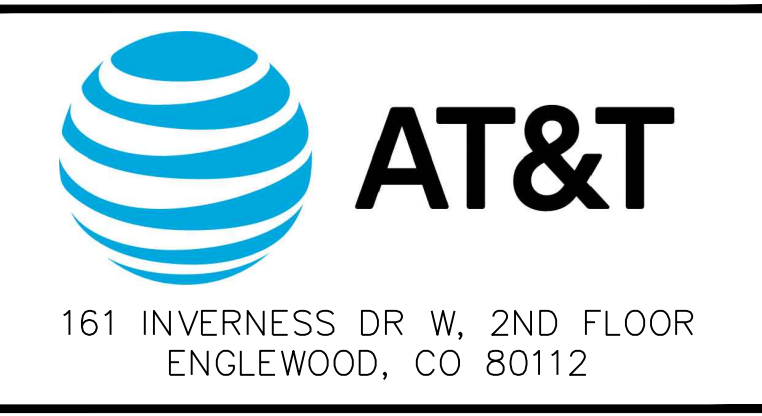
NOTE:
SCHEDULE EQUIPMENT SHOULD BE REFERENCED OFF RFDS LISTED ON SHEET T-1.

PROPOSED EQUIPMENT IN BOLD

FINAL ANTENNA/FEEDLINE SCHEDULE							
SECTOR	POS.	MANUFACTURER (MODEL #)	ANTENNA TIP HEIGHT	ANTENNA POSITION SEPARATION	CABLE SIZE	CABLE LENGTH	SQUID/RRH/TMA/DIPLEXER [MODEL #]
ALPHA	1	*COMMSCOPE (NNH4-65C-R6-V3)	⊙ 100'-0"±	4'-0"	(6) 0.92" DC TRUNKS 6 AWG 6 (3) 0.39" FIBER TRUNKS (6) 2" CONDUITS	150'±	*(1) RAYCAP SQUID [DC9-48-60-24-BC-EV] *(1) NOKIA RRH [AIRSCALE TRI RRH 4T4R B12/14/29 370W AHLBBA] *(1) NOKIA RRH [AIRSCALE DUAL RRH 4T4R B25/66 320W AHFIB] *(1) NOKIA RRH [AIRSCALE RRH 4T4R B5 160W AHCA]
ALPHA	2	-	-				
ALPHA	3	-	-				
ALPHA	4	*COMMSCOPE (NNH4-65C-R6-V3)	⊙ 100'-0"±				
BETA	1	*COMMSCOPE (NNH4-65C-R6-V3)	⊙ 100'-0"±				
BETA	2	-	-				
BETA	3	-	-				
BETA	4	*COMMSCOPE (NNH4-65C-R6-V3)	⊙ 100'-0"±				
GAMMA	1	*COMMSCOPE (NNH4-65C-R6-V3)	⊙ 100'-0"±				
GAMMA	2	-	-				
GAMMA	3	-	-				
GAMMA	4	*COMMSCOPE (NNH4-65C-R6-V3)	⊙ 100'-0"±				

*OR SIMILAR
**CONTRACTOR TO REFER TO THE LATEST RFDS FOR FINAL CONFIGURATION

FINAL ANTENNA SCHEDULE
SCALE: N.T.S.

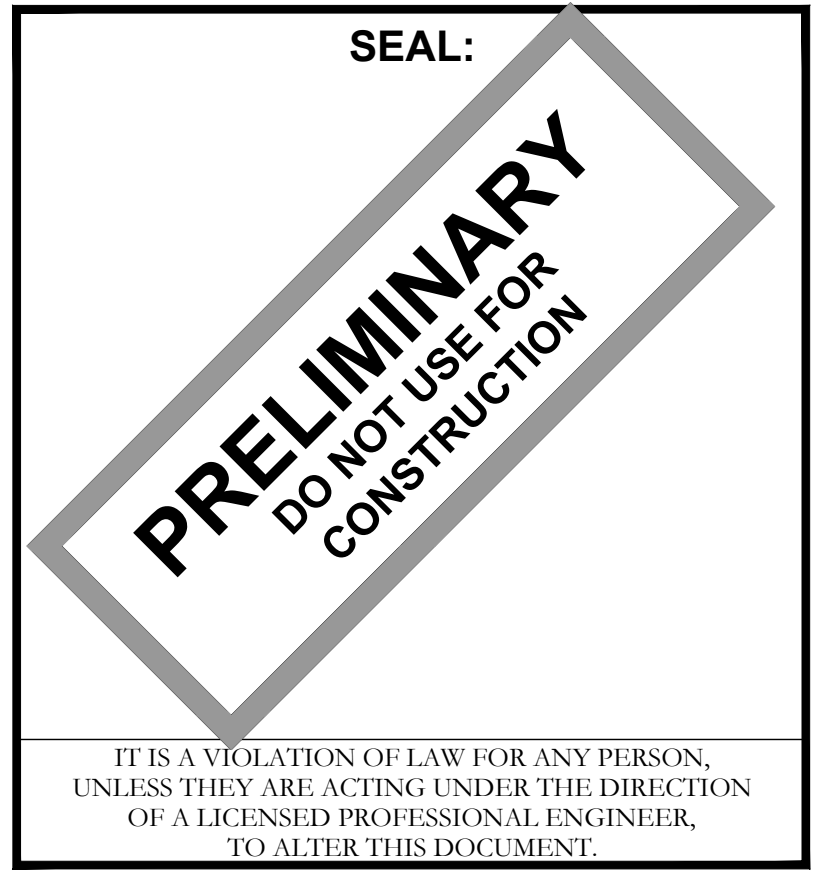


AT&T SITE ID: COL02205
AT&T FA CODE: 15312479
AT&T PACE #: MRUTH042458
ATC #: 370609
WIDFIELD HIGH SCHOOL II

523 WIDFIELD ROAD
COLORADO SPRINGS,
CO 80911
(EL PASO COUNTY)
EXISTING 119'-0"
MONOPOLE TOWER
NSB - LTE - 1C/2C/3C/4C/
5G NR 1SR

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	QA
A	11-23-20	KT	PRELIMINARY	EGG
B	12-14-20	SDD	90% CONSTRUCTION	EGG
C	02-18-21	CAK	90% CONSTRUCTION	EGG



SHEET TITLE:
FINAL EQUIPMENT & ANTENNA LAYOUTS

SHEET NUMBER: C-2
REVISION: C

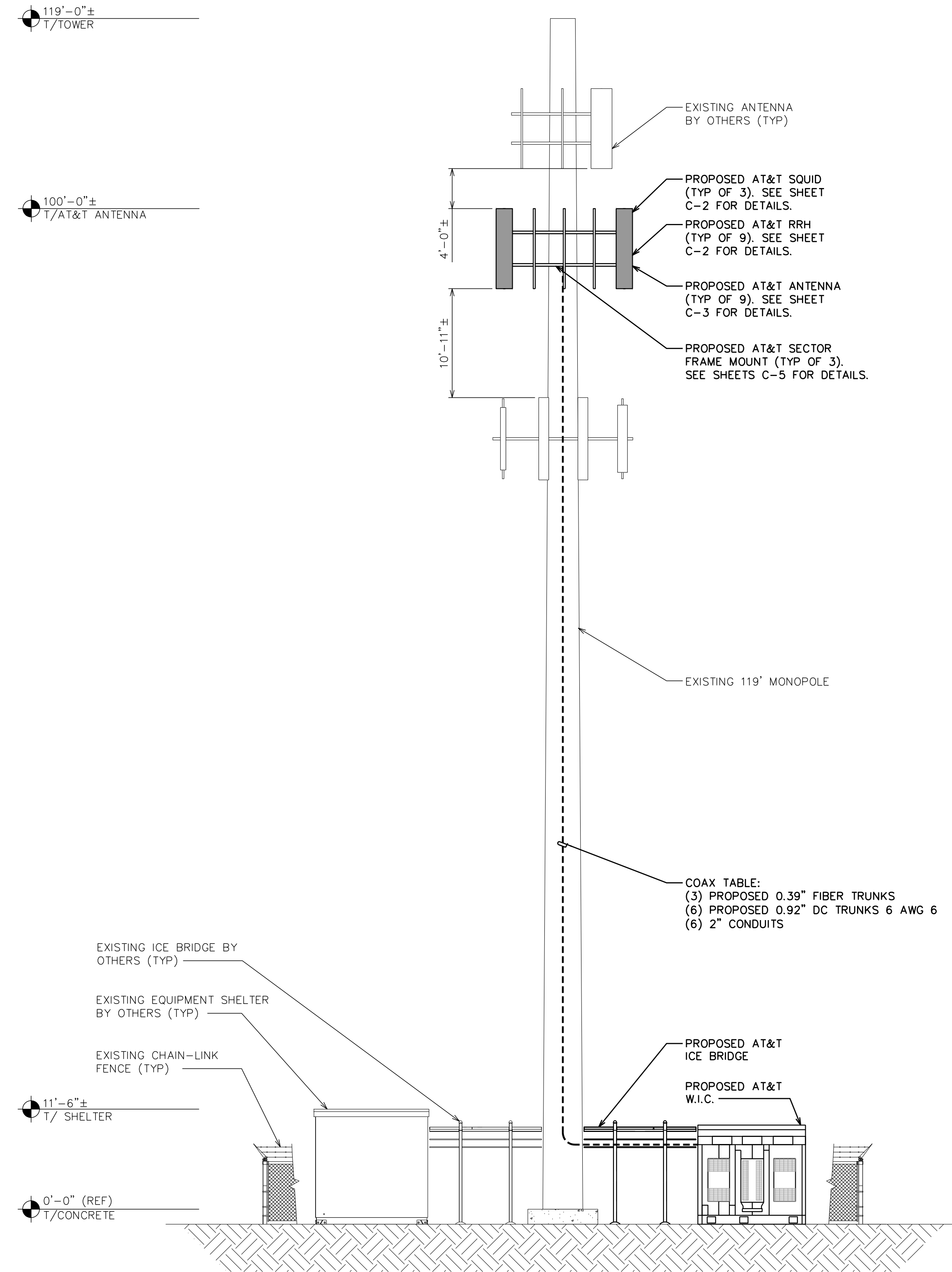
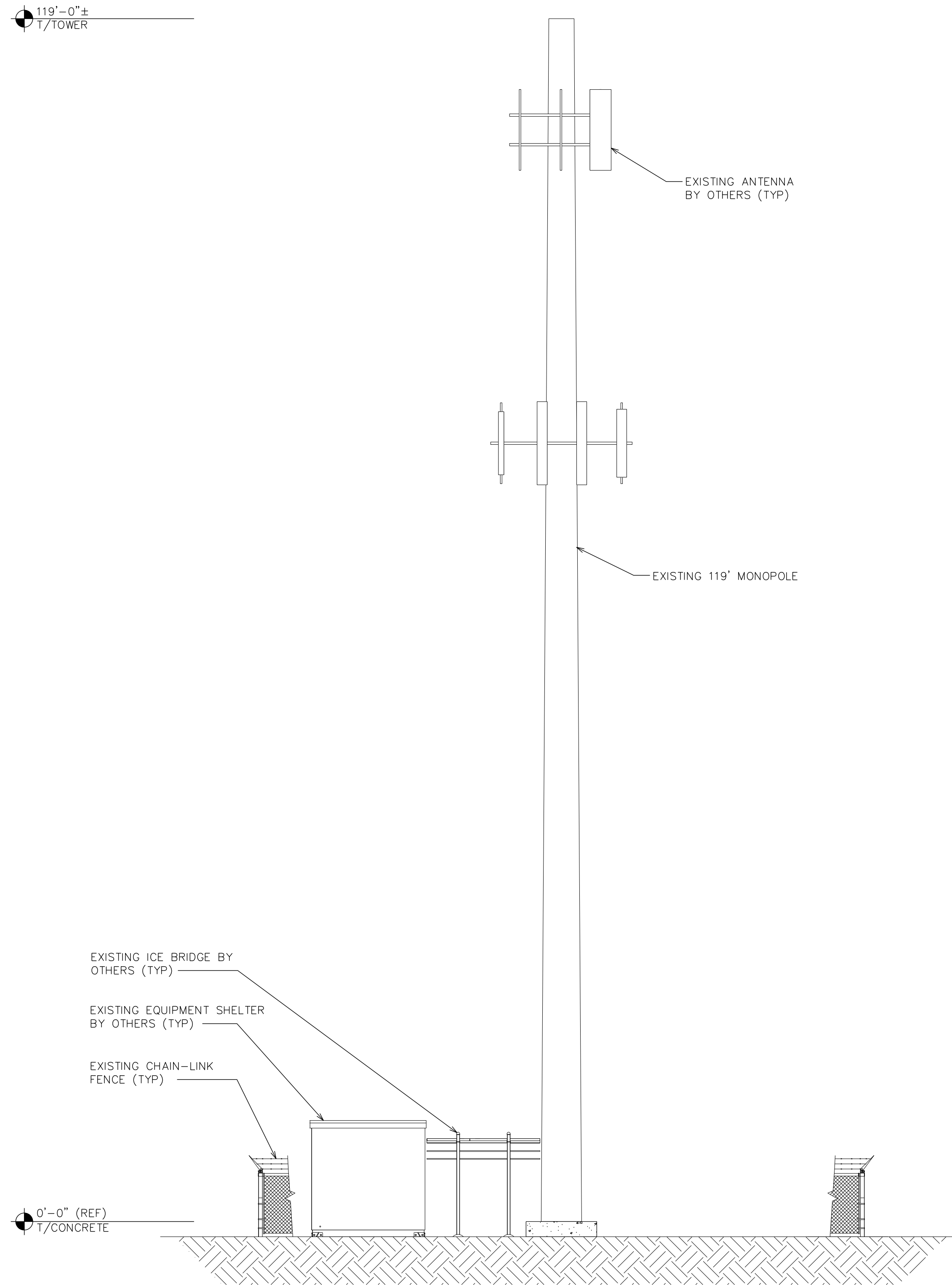
TEP #: 177861.243634

NOTE:

TOWER ELEVATION IS FOR SCHEMATIC PURPOSES ONLY. TEP DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO ANTENNA HEIGHTS, ANTENNA AZIMUTHS, AND MOUNT CONFIGURATIONS.

NOTES:

1. PROPOSED CABLES TO BE ROUTED PER SPECIFICATIONS OF PASSING STRUCTURAL ANALYSIS.
2. TOWER ELEVATION IS FOR SCHEMATIC PURPOSES ONLY. TEP DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO ANTENNA HEIGHTS, ANTENNA AZIMUTHS, AND MOUNT CONFIGURATIONS.
3. CONTRACTOR TO VERIFY PROPOSED LOADING WITH PASSING STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION. CONTRACTOR TO CONTACT AT&T OR AMERICAN TOWER CORPORATION IMMEDIATELY IN THE EVENT OF ANY DISCREPANCIES.



AT&T SITE ID: COL02205
AT&T FA CODE: 15312479
AT&T PACE #: MRUTH042458
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WIDEFIELD HIGH SCHOOL II

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5G NR 1SR

ISSUED FOR:

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B	12-14-20	SDD	90% CONSTRUCTION	EGG
C	02-18-21	CAK	90% CONSTRUCTION	EGG

SEAL:

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

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SHEET TITLE:
EXISTING AND FINAL ELEVATIONS

SHEET NUMBER: **C-3** **REVISION:** **C**

TEP #: 177861.243634

EXISTING TOWER ELEVATION

SCALE: 1/8" = 1'-0" (24x36)
 SCALE: 1/6" = 1'-0" (11x17)

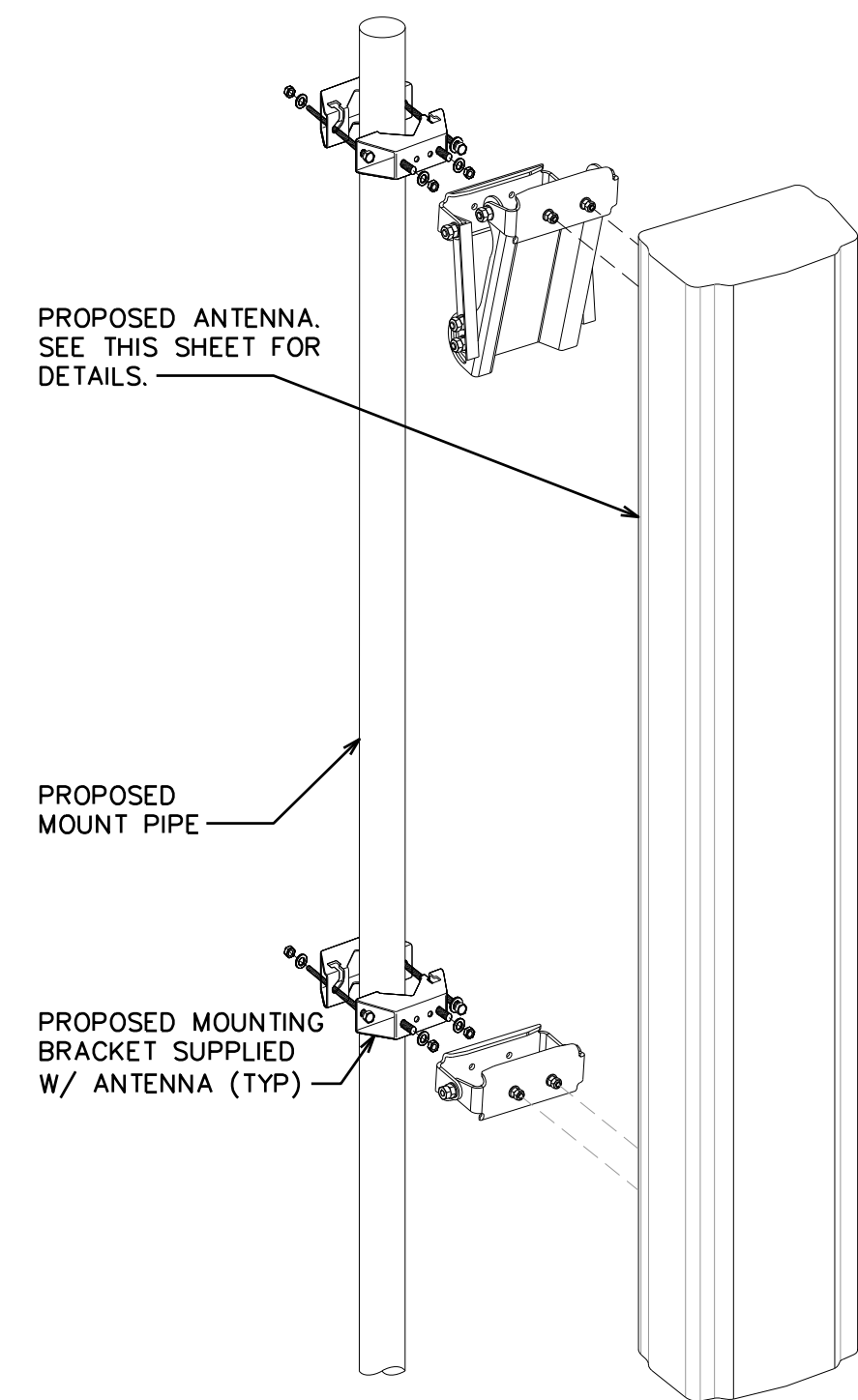


FINAL TOWER ELEVATION

SCALE: 1/8" = 1'-0" (24x36)
 SCALE: 1/6" = 1'-0" (11x17)



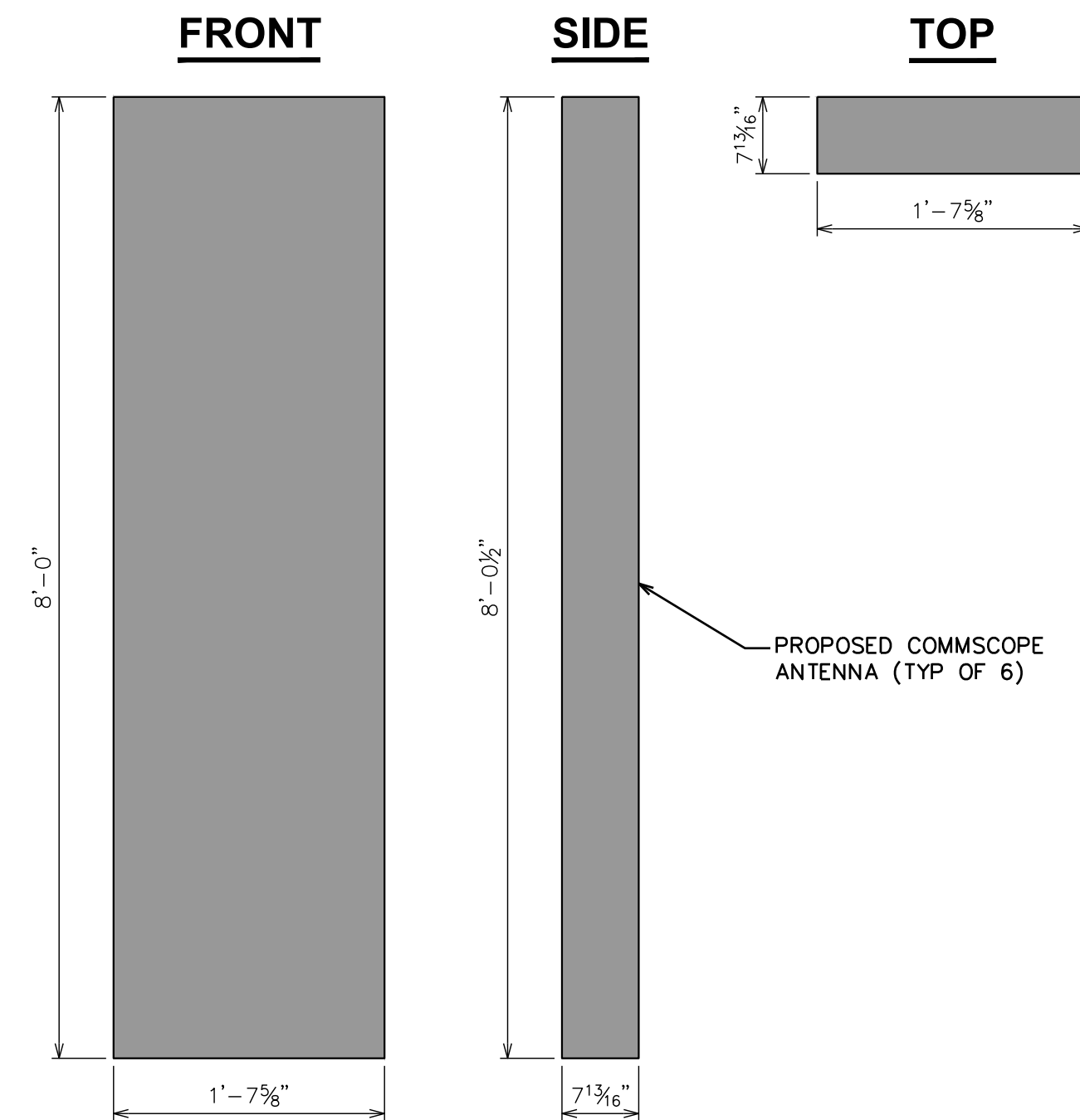
ANTENNA



**CELLMAX
CMA-UBTULBULBHH/6517/17/21/21**

DIMENSIONS, HxWxD: 96" x 19.6" x 7.8"

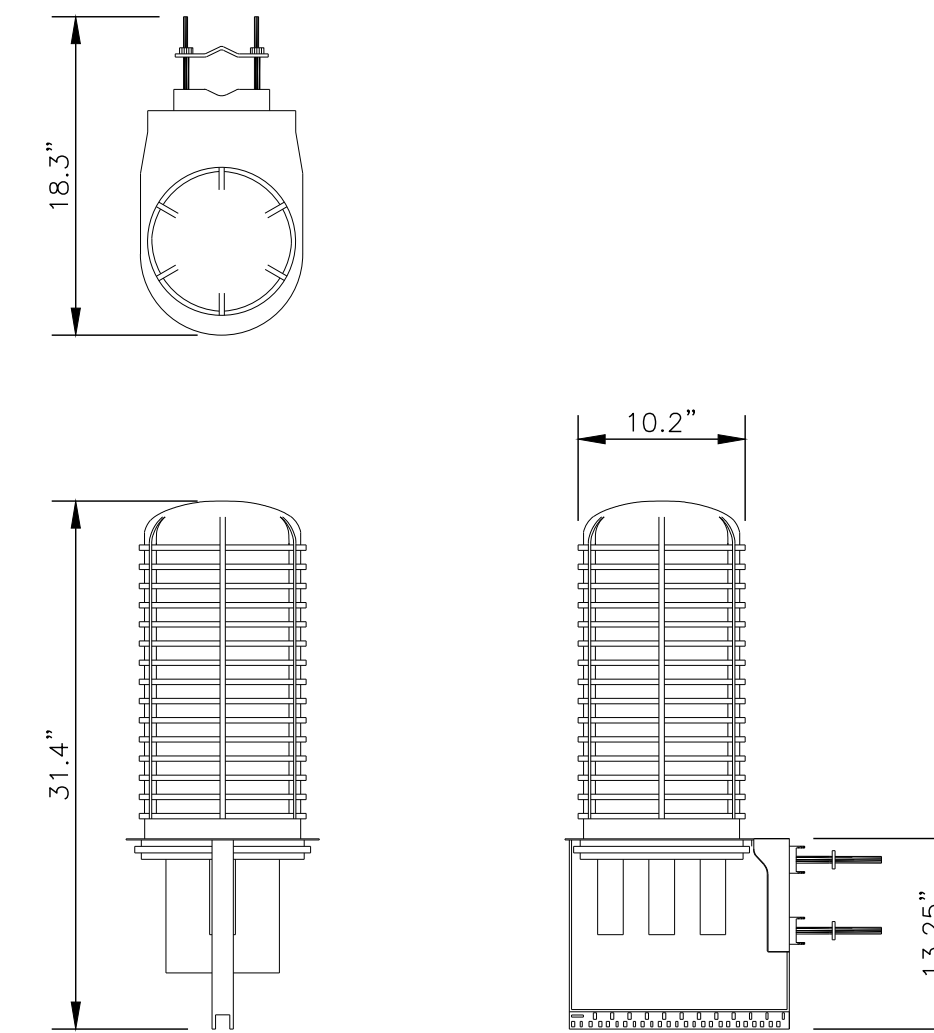
WEIGHT, W/O PRE-MOUNTED BRACKETS: 102.5 lbs



**RAYCAP
DC9-48-60-24-8C-EV**

RAYCAP - DC9-48-60-24-8C-EV
SIZE: 31.4x18.3x10.2 IN.
WEIGHT: 16.0 LBS
NOMINAL OPERATING VOLTAGE: 48 VDC
VOLTAGE PROTECTION RATING: 400 V
WIND LOADING: 150 MPH SUSTAINED (105.7 LBS)
WIND LOADING: 195 MPH GUST (213.6 LBS)

CONTRACTOR TO USE "THREAD LUBRICANT" ON MOUNTING BOLTS DURING INSTALLATION



EQUIPMENT MOUNTING DETAIL

SCALE: N.T.S.

PROPOSED COMMSCOPE ANTENNA DETAIL

SCALE: N.T.S.

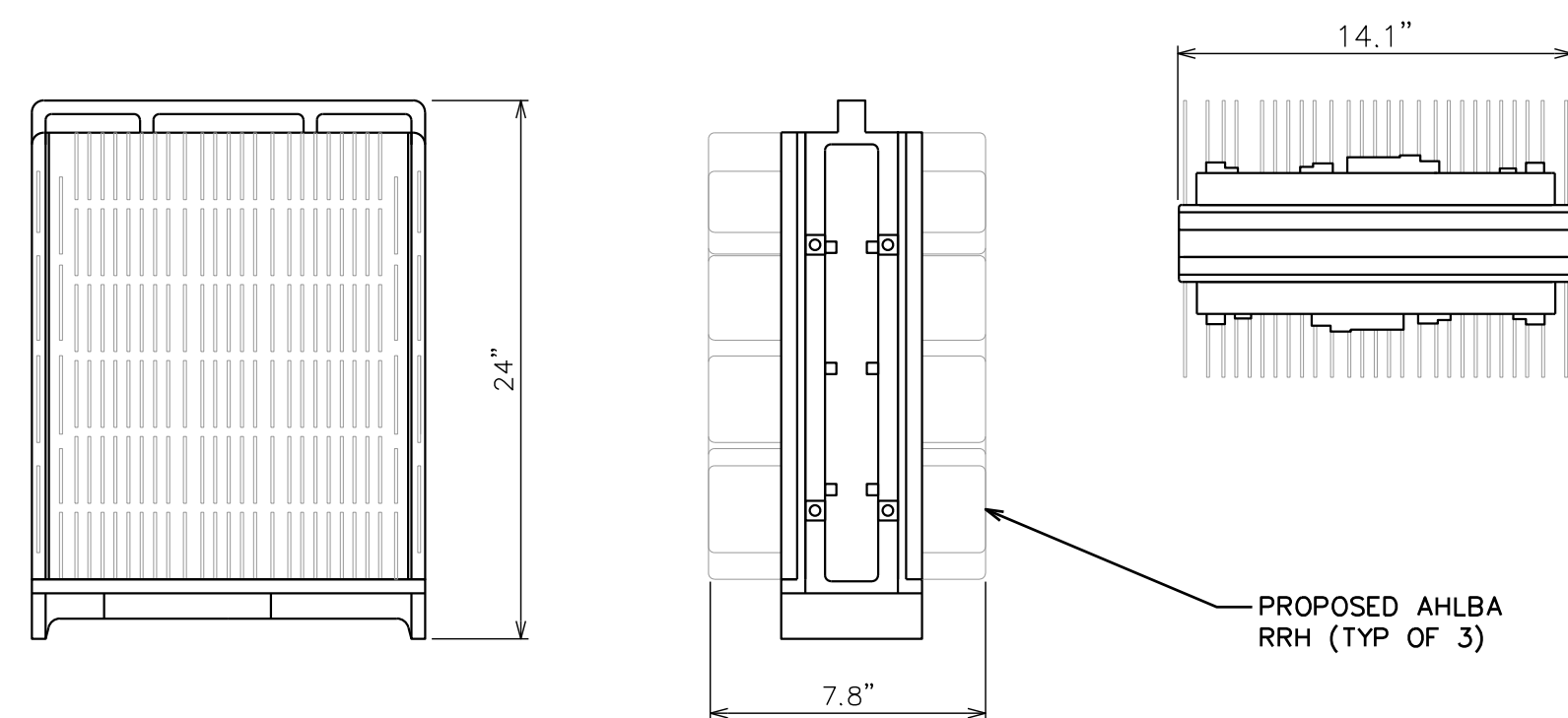
PROPOSED RAYCAP OVP DETAIL

SCALE: N.T.S.

FRONT

SIDE

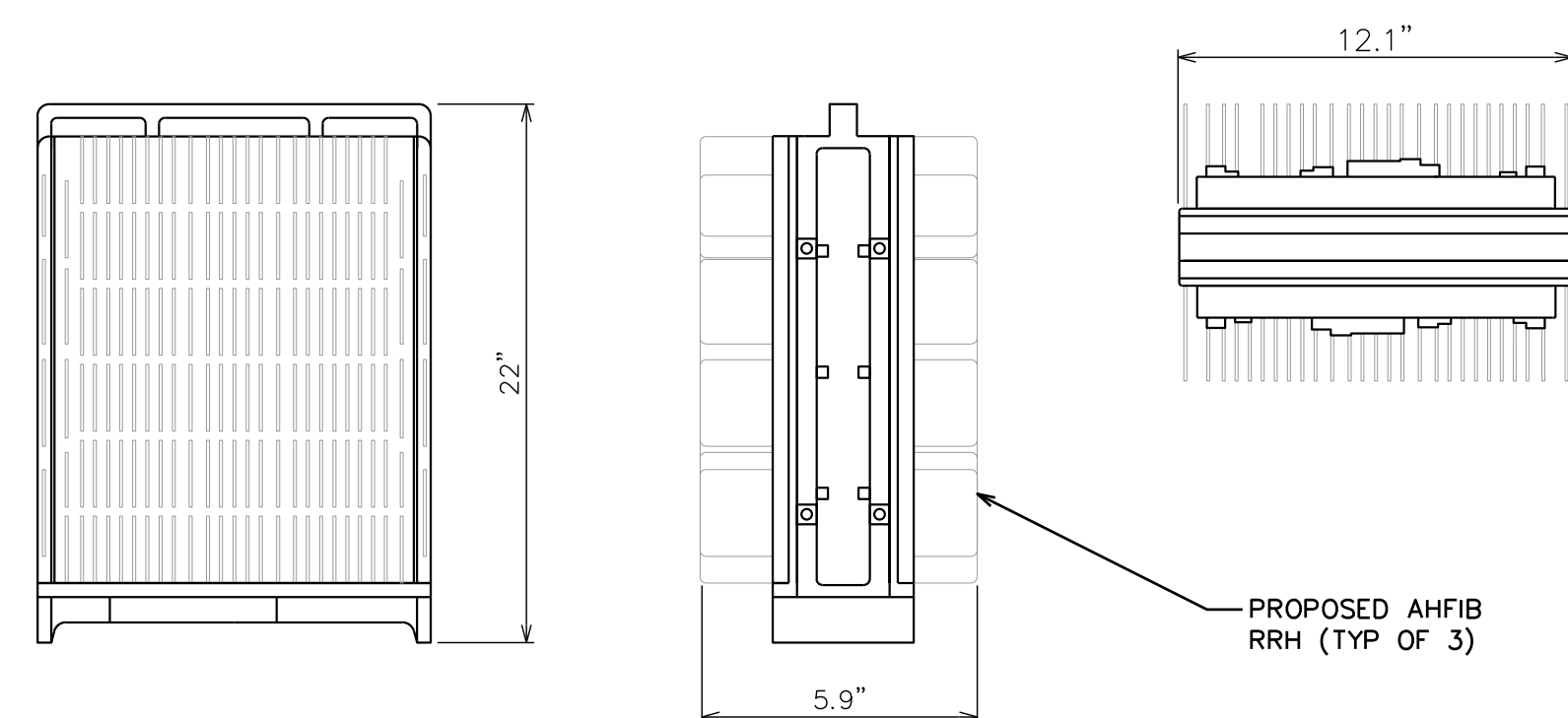
TOP



FRONT

SIDE

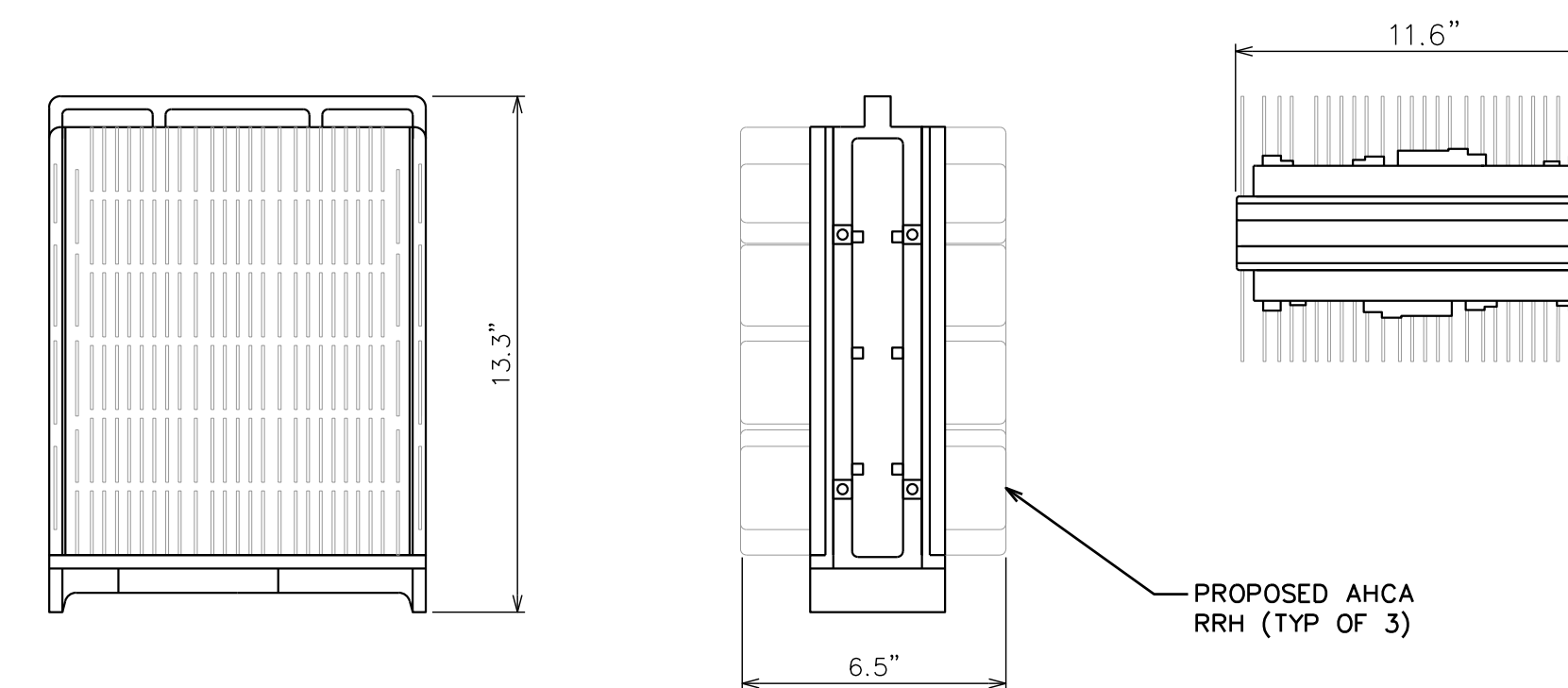
TOP



FRONT

SIDE

TOP



PROPOSED AHLBA RRH DETAIL

SCALE: N.T.S.

PROPOSED AHFIB RRH DETAIL

SCALE: N.T.S.

PROPOSED AHCA RRH DETAIL

SCALE: N.T.S.



161 INVERNESS DR W, 2ND FLOOR
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IRVINE, CA 92612



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4710 E ELWOOD ST, STE 9
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OFFICE: (480) 285-0036
www.tepgroup.net

AT&T SITE ID: COL02205
AT&T FA CODE: 15312479
AT&T PACE #: MRUTH042458
ATC #: 370609
WIDEFIELD HIGH SCHOOL II

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5G NR 1SR

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	QA
A	11-23-20	KT	PRELIMINARY	EGG
B	12-14-20	SDD	90% CONSTRUCTION	EGG
C	02-18-21	CAK	90% CONSTRUCTION	EGG

SEAL:



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SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER: **C-4** **REVISION:** **C**

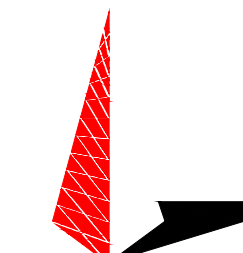
TEP #: 177861.243634



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SEAL:

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CONSTRUCTION

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SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER: **C-5** REVISION: **C**

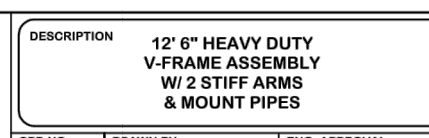
TEP #: 177861.243634

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-VFAW	SUPPORT ARM		71.41	142.81
2	1	X-HDCAMTBW	CLAMP WELDMENT FOR BCAM-HD		33.88	33.88
3	1	X-HDCAMTB	MULTI-HOLE TAPER PLATE WELDMENT		38.24	38.24
4	1	X-HDCAMBS	ANGLE ADJUSTMENT WELDMENT FOR BCAM-HD		16.39	16.39
5	2	X-VFAPIA4	VFA-HD PIVOT PLATE	12 in	15.88	31.77
6	2	X-HDCBPA	BENT BACKING PLATE	13 in	19.00	38.01
7	4	X-SP7B	SLIDING PIPE TIE BACK PLATE	5 1/2 in	5.87	23.48
8	1	X-HDCAMSP	POSITIONING PLATE WELDMENT FOR BCAM-HD		2.58	2.58
9	4	X-TBCA	TIE BACK CLIP ANGLE		2.91	9.92
10	10	SC42	CROSSOVER PLATE	7 in	4.80	47.96
11	4	MSP	CLAMP HALF 1/2" THICK, 11-5/8" LONG	12 1/16 in	3.59	14.37
12	8	DCP	1/2" THICK, 5-3/4" CENTER TO CENTER CLAMP HALF	8 1/8 in	2.36	18.90
13	2	P2126	2-3/8" X 120" (2" BCR, 40) GALVANIZED PIPE	128 in	40.75	81.50
14	2	P30150	2-7/8" X 150" (2-1/2" BCR, 40) GALVANIZED PIPE	150 in	75.94	151.87
15	4	A34212	3/4" X 2-1/2" UNC HEX BOLT (A325)	2 1/2 in	0.48	1.92
16	4	G34FW	3/4" HDG USS FLATWASHER		0.06	0.24
17	4	G34LW	3/4" HDG LOCKWASHER		0.04	0.17
18	4	G34NUT	3/4" HDG HEAVY 2H HEX NUT		0.21	0.85
19	8	G58R-18	5/8" X 18" THREADED ROD (HDG.)		1.57	12.54
20	4	G58R-12	5/8" X 12" THREADED ROD (HDG.)		1.05	4.18
21	4	G58R-8	5/8" X 8" THREADED ROD (HDG.)		0.70	2.79
22	4	X-UBS300	5/8" X 3" X 5-1/4" X 2-1/2" U-BOLT (HDG.)		1.15	4.60
23	8	X-UBS258	5/8" X 2-5/8" X 4-1/2" X 2" U-BOLT (HDG.)		1.00	8.00
24	2	G5807	5/8" X 7" HDG HEX BOLT GR5 FULL THREAD	7 in	0.79	1.41
25	1	G5806	5/8" X 6" HDG HEX BOLT GR5 FULL THREAD	6 in	0.62	0.62
26	8	G5804	5/8" X 4" HDG HEX BOLT GR5		0.44	3.55
27	4	G5802	5/8" X 2" HDG HEX BOLT GR5		0.27	1.08
28	8	A582114	5/8" X 3-1/4" HDG ANCHOR BOLT	2 1/4 in	0.31	2.50
29	25	G58FW	5/8" HDG USS FLATWASHER	1 1/8 in	0.07	1.76
30	86	G58LW	5/8" HDG LOCKWASHER		0.03	1.72
31	71	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	9.22
32	48	X-UB1300	1/2" X 3" X 3" X 2" GALV U-BOLT		0.74	35.45
33	20	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" GALV U-BOLT		0.66	13.13
34	80	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	2.73
35	80	G12LW	1/2" HDG LOCKWASHER	1 1/8 in	0.01	1.11
36	80	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	5.73
37	5	P30150	2-7/8" X 150" (2-1/2" BCR, 40) GALVANIZED PIPE	120 in	58.07	290.33
					TOTAL WT. #	1055.41

PROPOSED SITEPRO SECTOR FRAME MOUNT
(P/N: VFA12-WLL-30120) BY AT&T

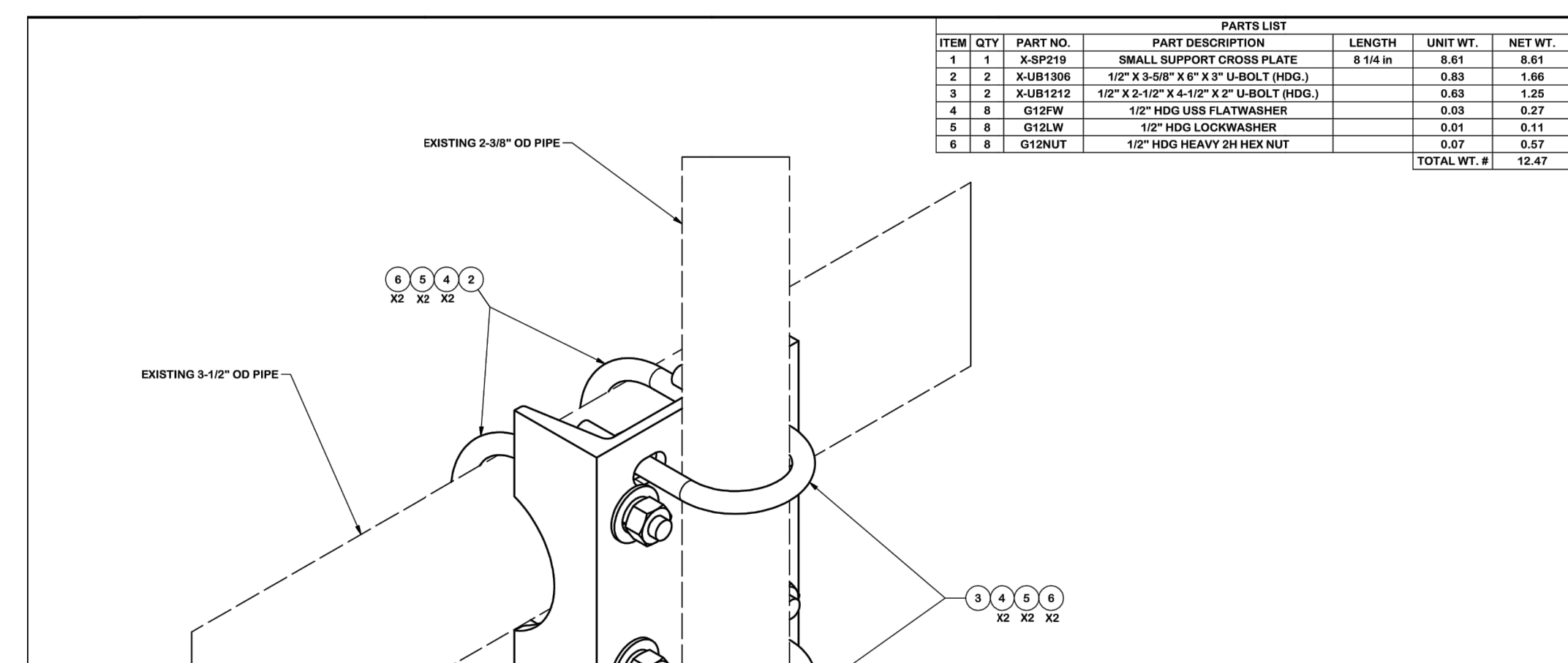
TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
DIMENSIONS AND GAS CUT EDGES (± 0.007")
DRILLED AND GAS CUT HOLES (± 0.007") NO CORING OF HOLES
LASER CUT EDGES AND HOLES (± 0.015") NO CORING OF HOLES
BENDS ARE ± 1/8 DEGREE
ALL OTHER MACHINING (± 0.007")



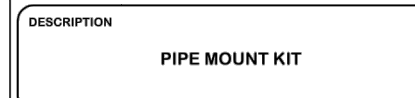
DESCRIPTION: 1/2" 6" HEAVY DUTY V-FRAME ASSEMBLY W/ 2 STIFF ARMS & MOUNT PIPES
DRAWN BY: CSJ 1/25/2017
CHECKED BY: BMC 5/3/2018
PART NO: VFA12-WLL-30120
REV: 02 CUSTOMER

REV	DATE	DESCRIPTION	BY	DATE
A	1/25/2018	UPDATED BCAM VERSION 1 TO BCAM VERSION 2	CSJ	1/25/2018



TOLERANCE NOTES

TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE:
DIMENSIONS AND GAS CUT EDGES (± 0.007")
DRILLED AND GAS CUT HOLES (± 0.007") NO CORING OF HOLES
LASER CUT EDGES AND HOLES (± 0.015") NO CORING OF HOLES
BENDS ARE ± 1/8 DEGREE
ALL OTHER MACHINING (± 0.007")

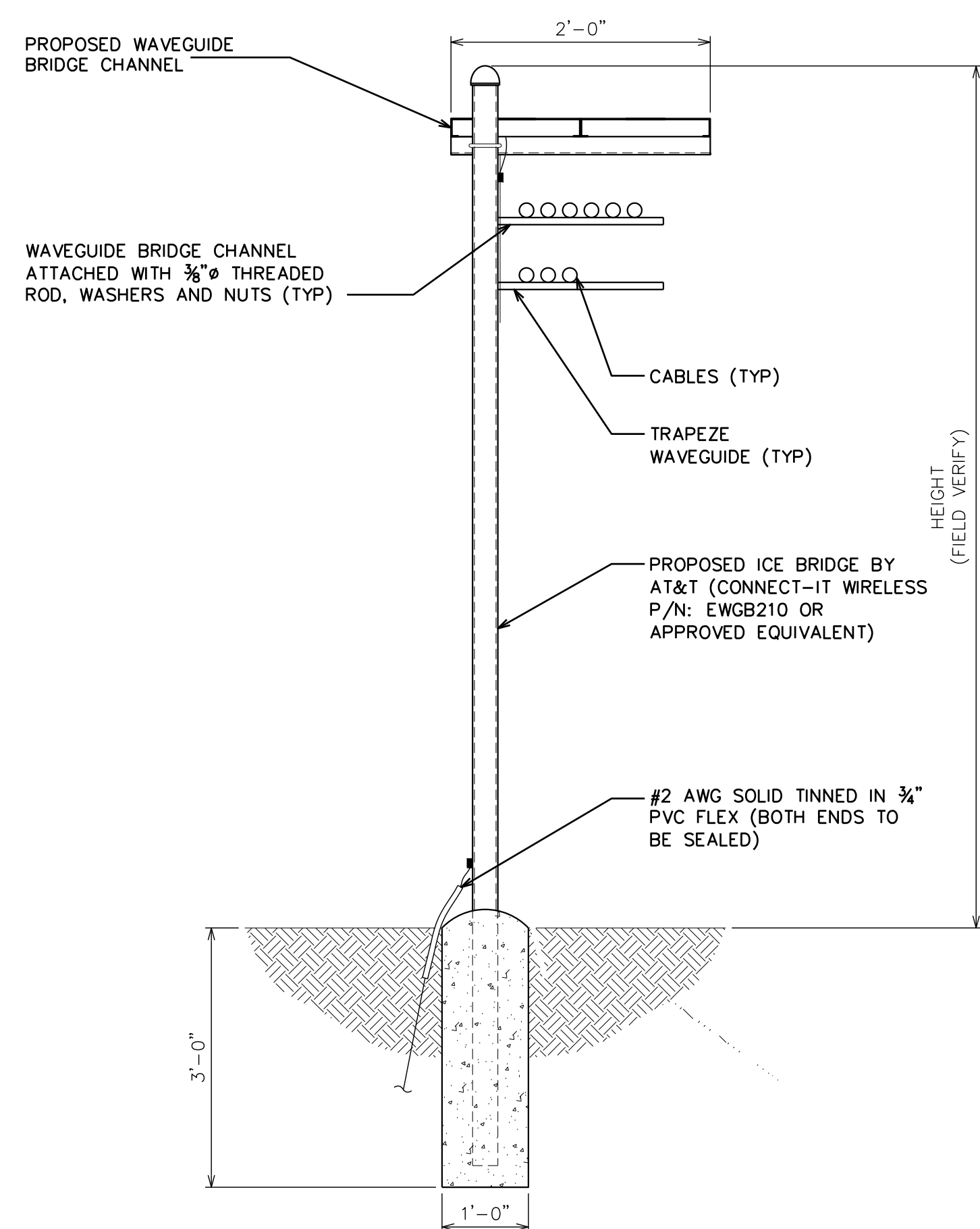


DESCRIPTION: PIPE MOUNT KIT
DRAWN BY: KCB 6/26/2012
CHECKED BY: CEK 1/23/2013
PART NO: SP219
REV: 01 CUSTOMER

REV	DATE	DESCRIPTION	BY	DATE
A	6/26/2012	PIPE MOUNT KIT	KCB	6/26/2012

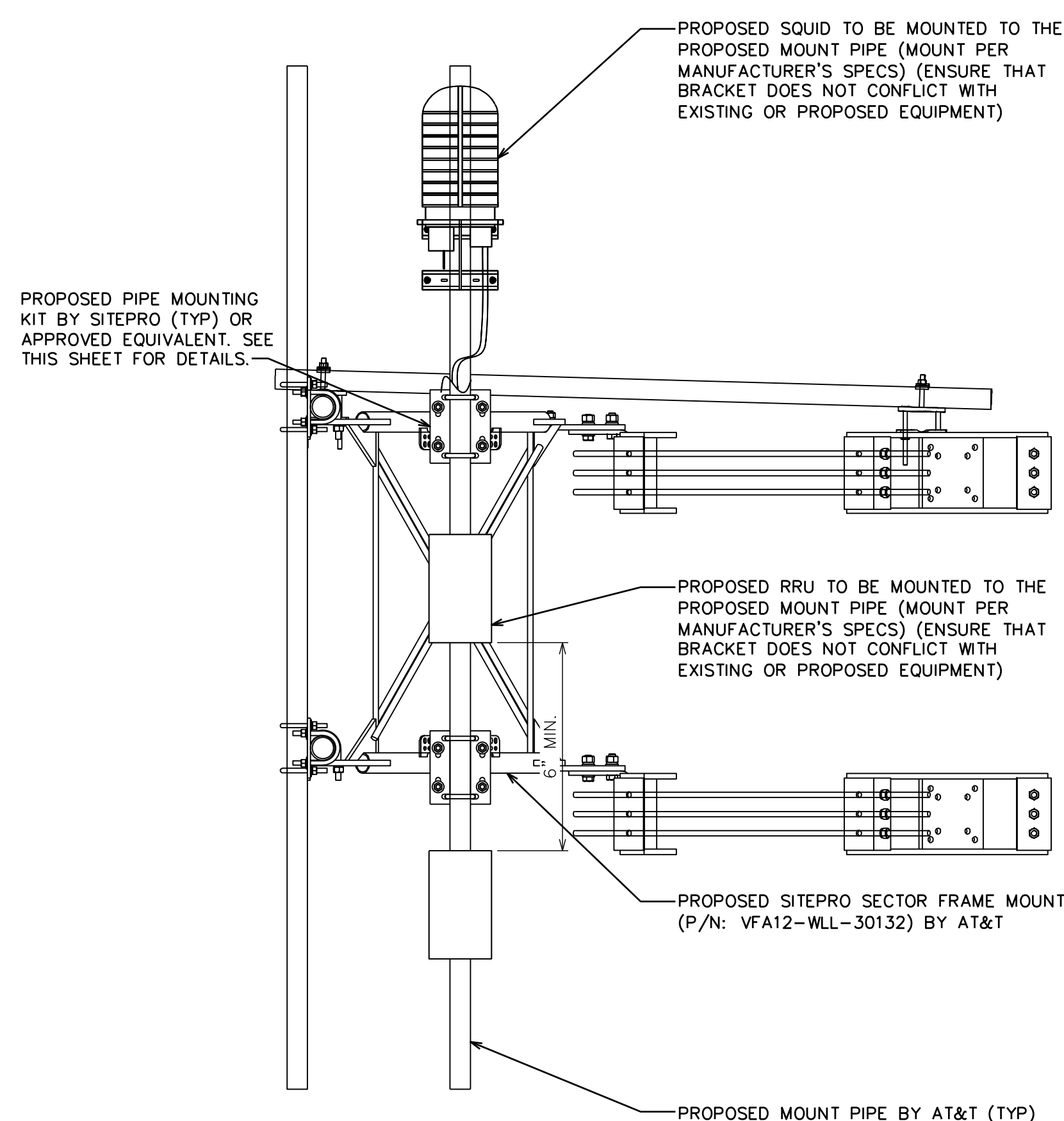
PROPOSED V-FRAME MOUNT DETAIL

SCALE: N.T.S.



PROPOSED ICE BRIDGE DETAIL

SCALE: N.T.S.



PROPOSED H-FRAME DETAIL

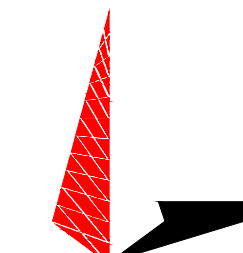
SCALE: N.T.S.



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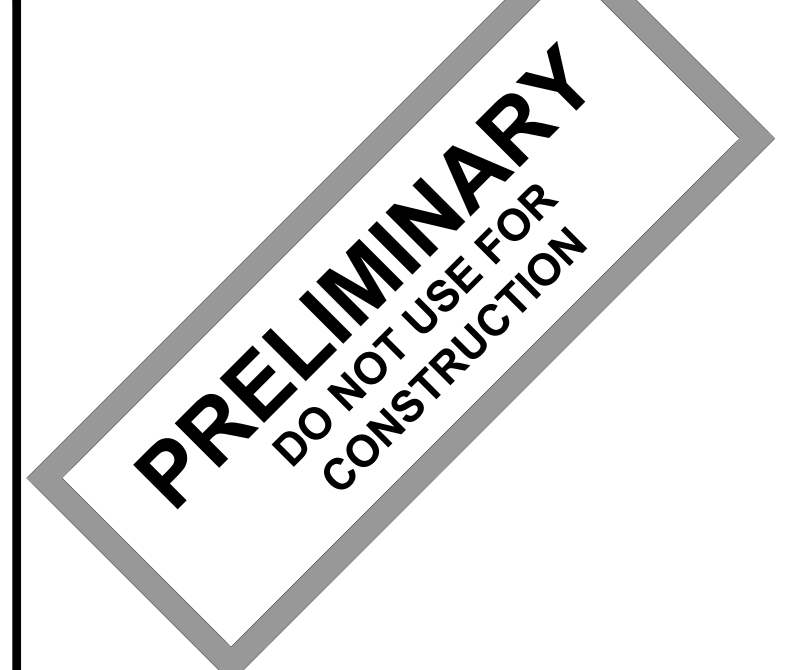
AT&T SITE ID: COL02205
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WIDEFIELD HIGH SCHOOL II

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ISSUED FOR:

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C	02-18-21	CAK	90% CONSTRUCTION	EGG

SEAL:



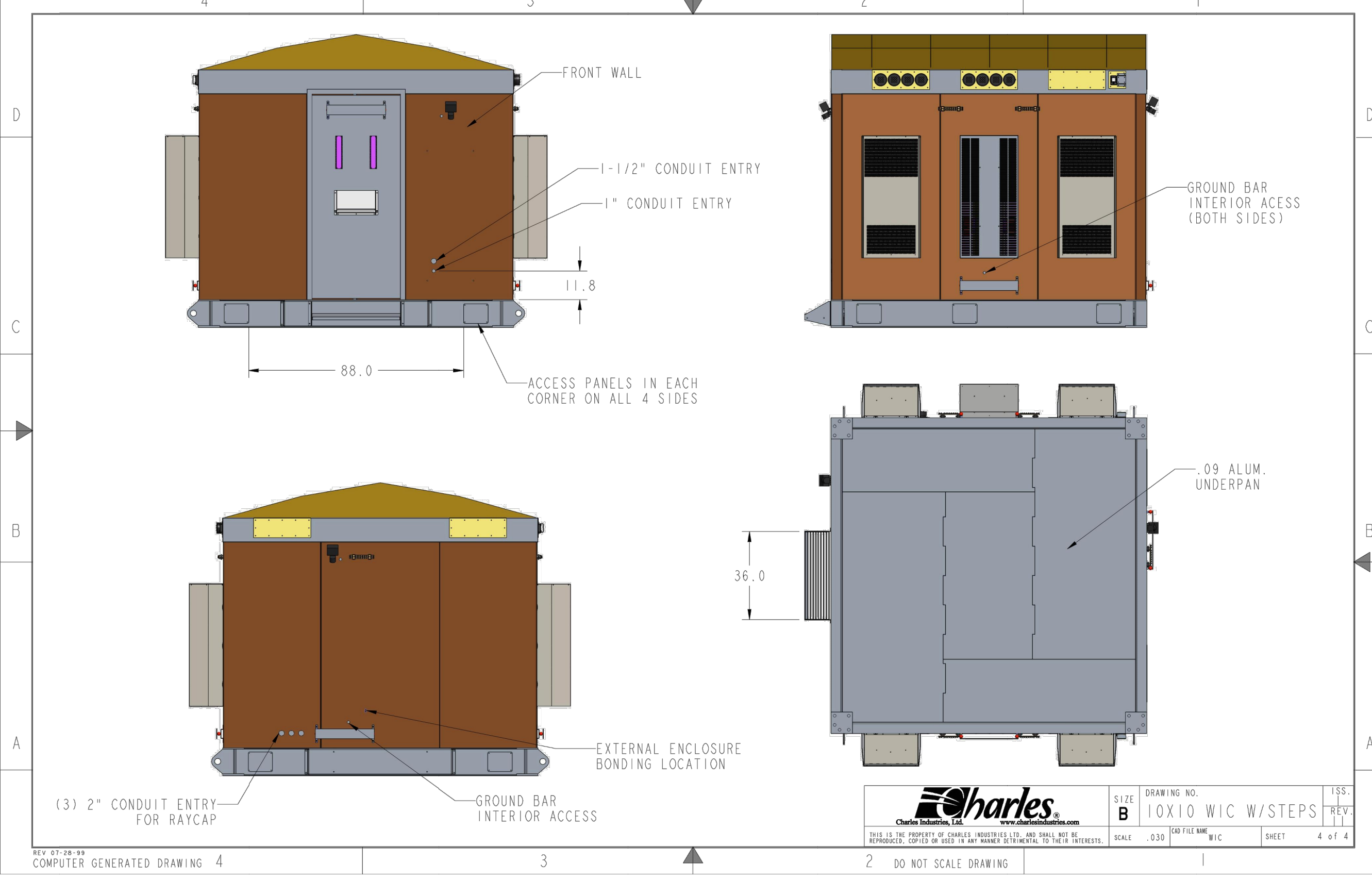
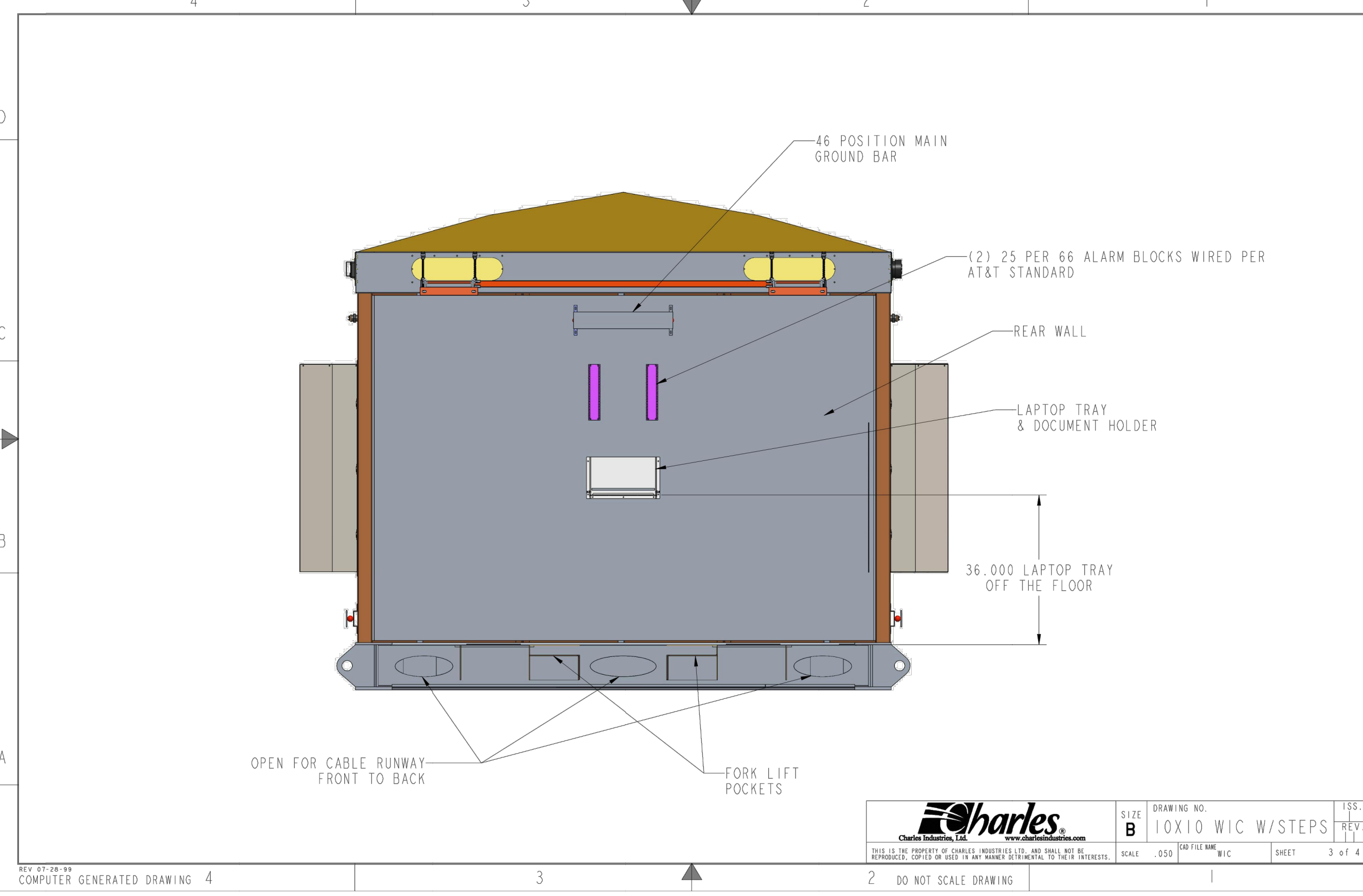
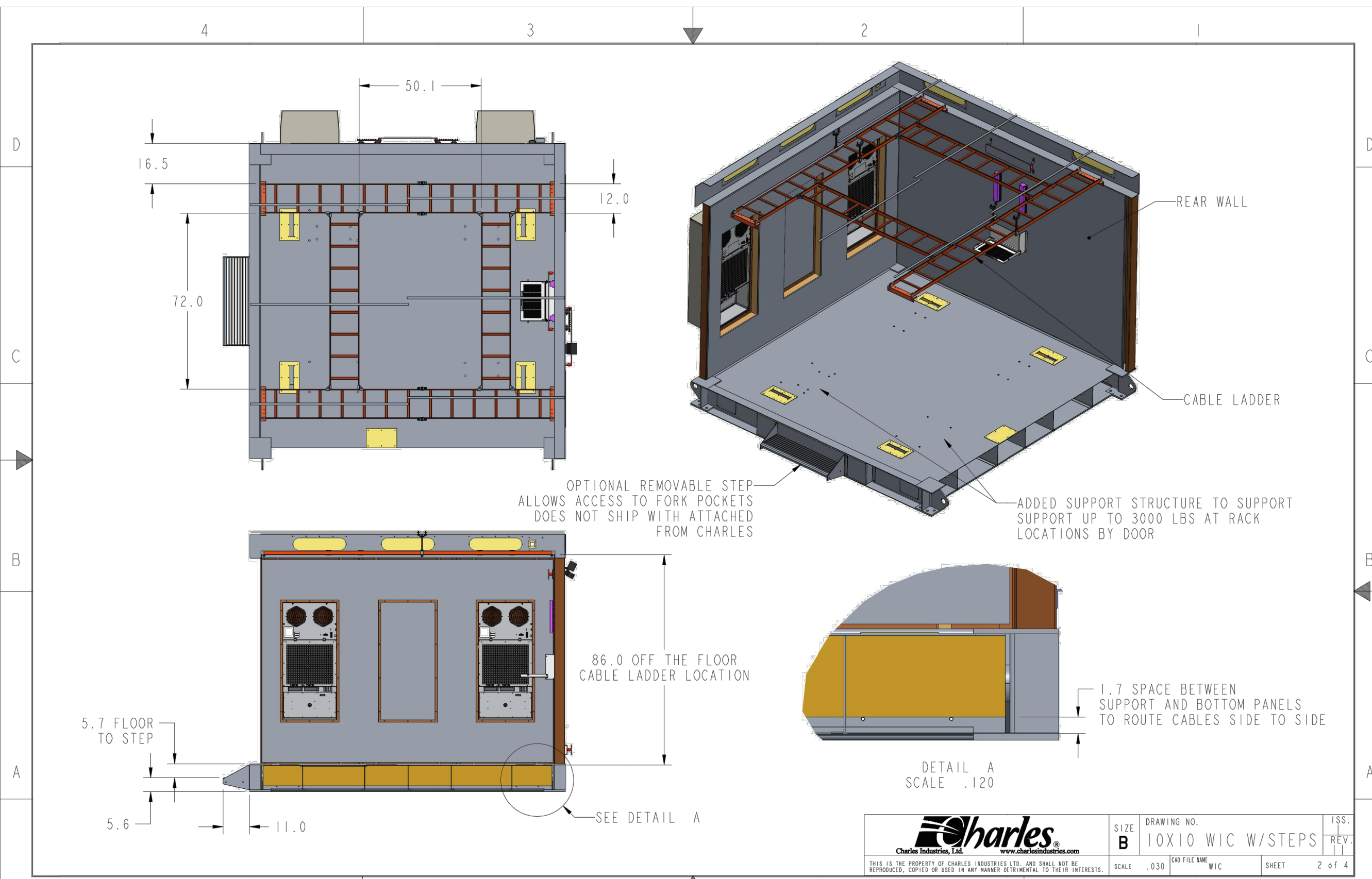
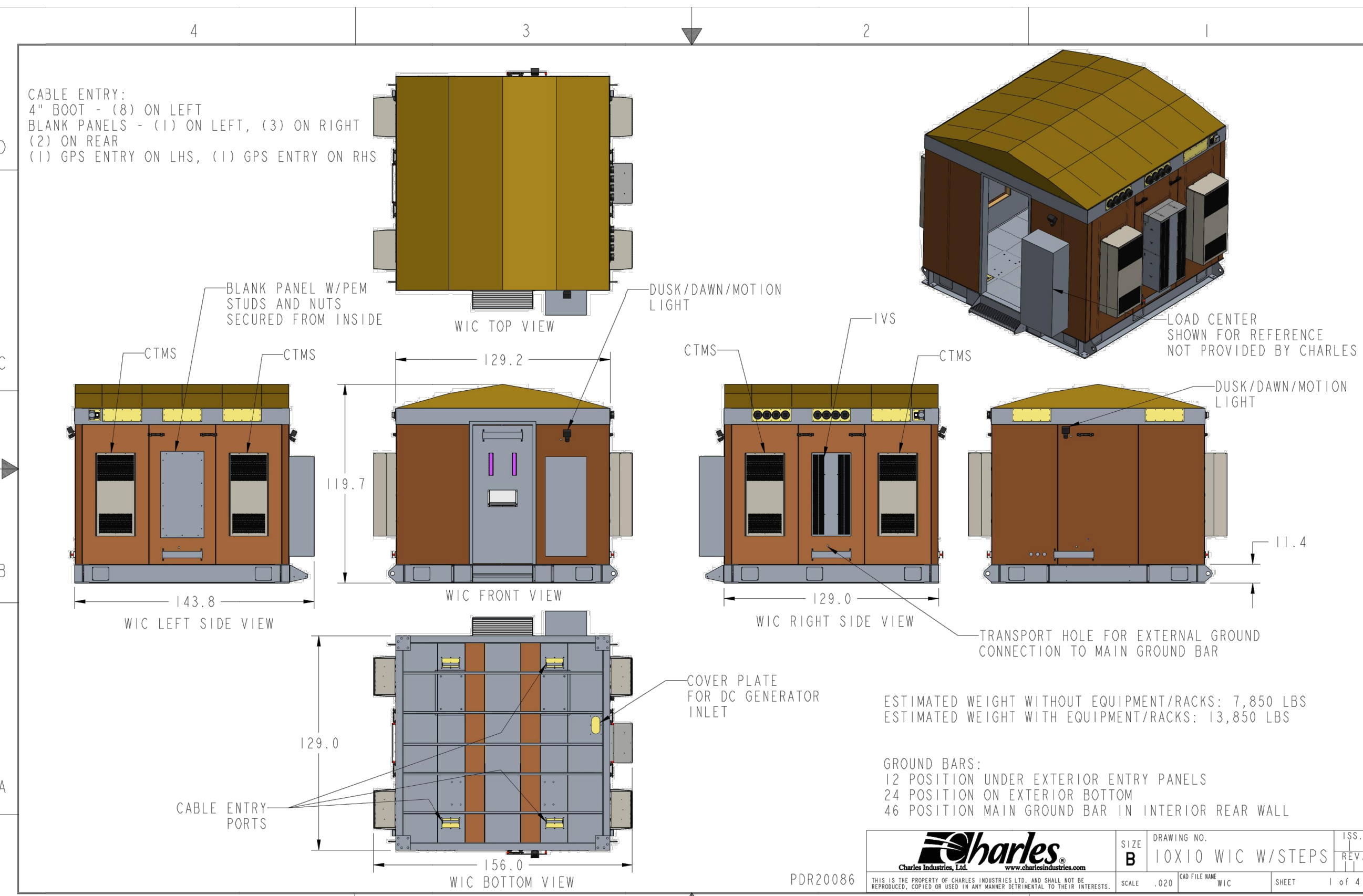
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SHEET TITLE:
WIC SHELTER DETAILS

SHEET NUMBER:
C-6

REVISION:
C

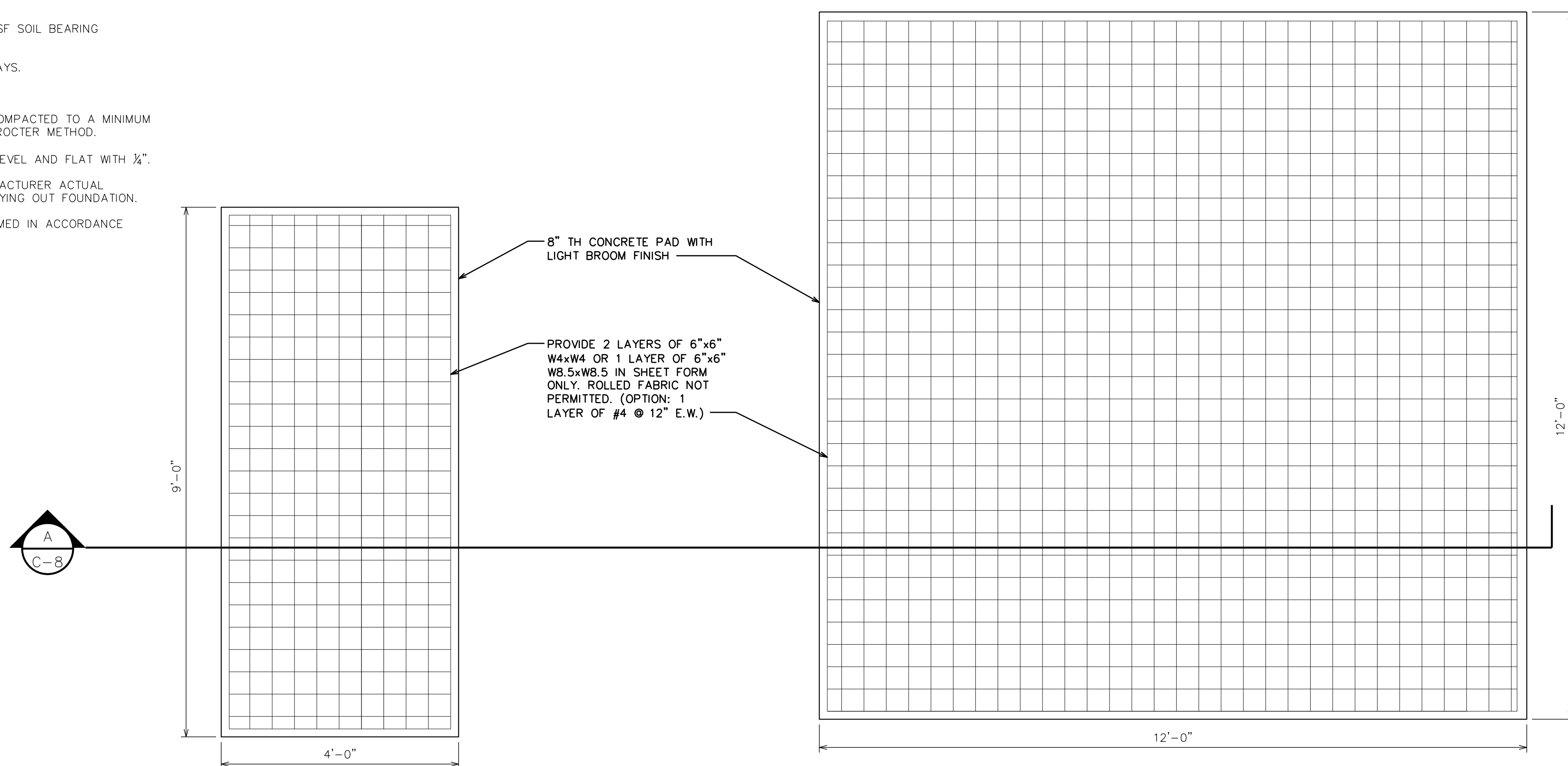
TEP #: 177861.243634



WIC SHELTER DETAIL
SCALE: N.T.S

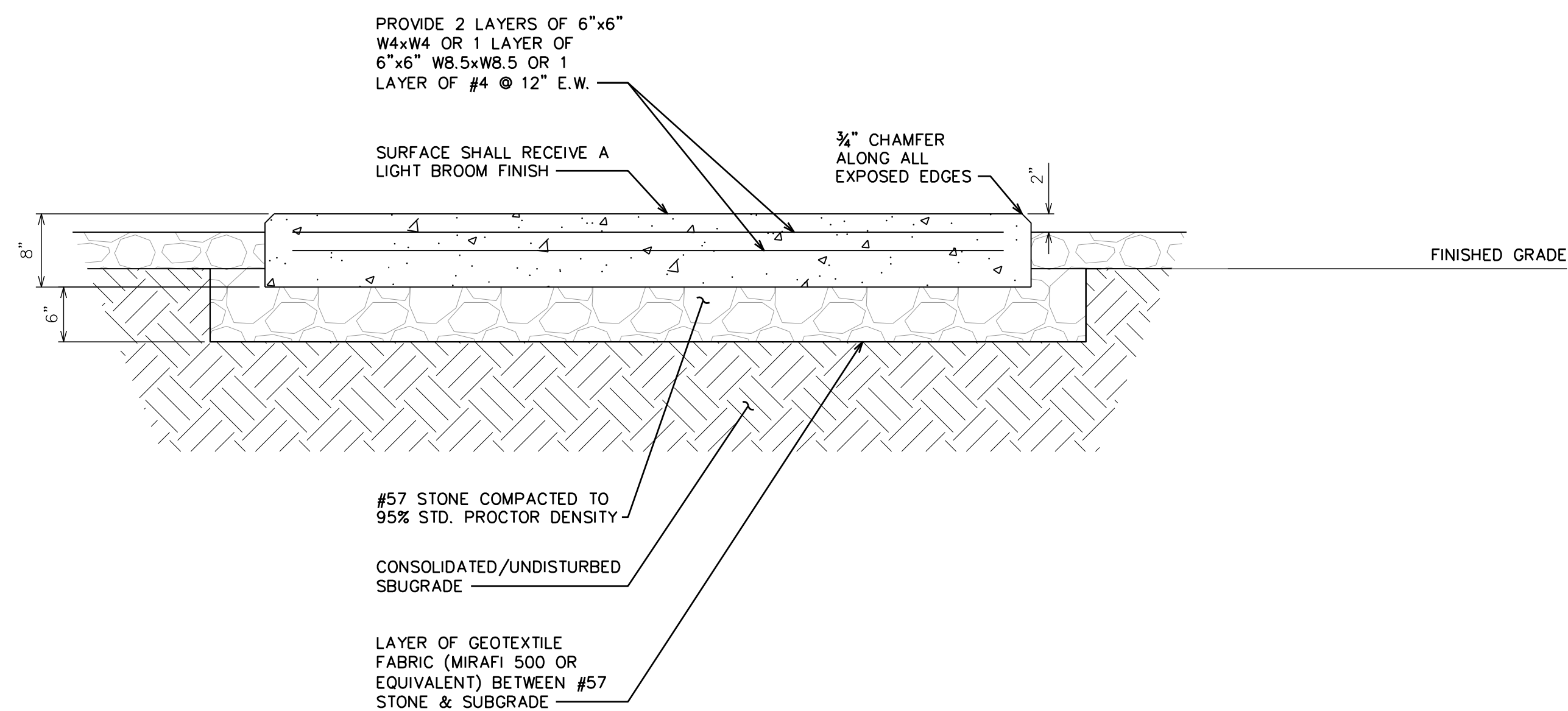
FOUNDATION NOTES:

1. FOUNDATION DESIGN BASED ON 2,000 PSF SOIL BEARING CAPACITY.
2. CONCRETE SHALL BE 4,000 PSI @ 28 DAYS.
3. REINFORCING STEEL $F_y = 60,000$ PSI.
4. ALL BACKFILL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM OF 95% DENSITY USING THE MODIFIED PROCTER METHOD.
5. SURFACE OF FINISHED SLAB SHALL BE LEVEL AND FLAT WITH $\frac{1}{4}$ ".
6. CONTRACTOR SHALL VERIFY WITH MANUFACTURER ACTUAL DIMENSIONS OF EQUIPMENT PRIOR TO LAYING OUT FOUNDATION.
7. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318-11.



WIC & GENERATOR FOUNDATION PLAN

SCALE: N.T.S



PAD SECTION

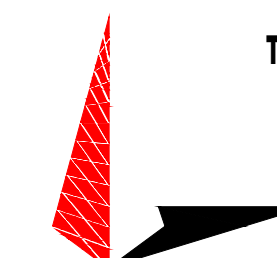
SCALE: N.T.S



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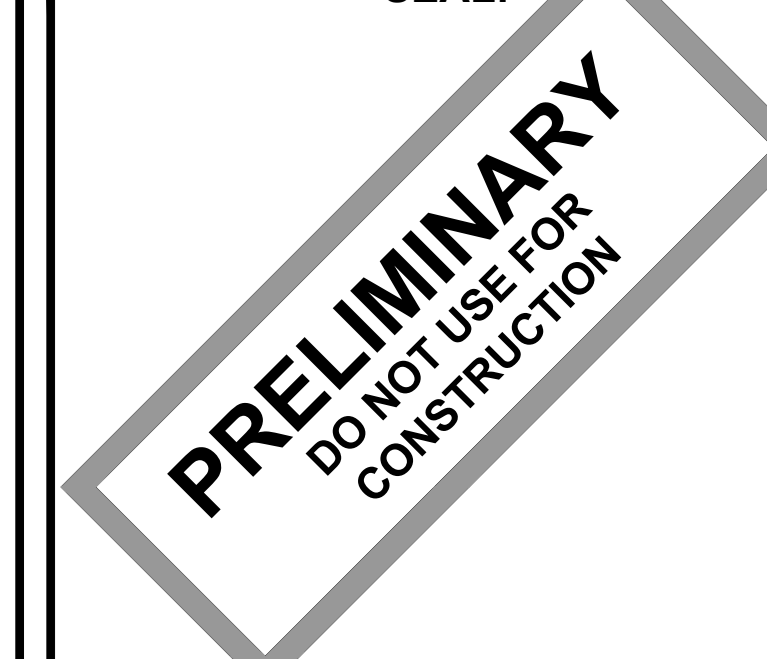
AT&T SITE ID: COL02205
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ATC #: 370609
WIDEFIELD HIGH SCHOOL II

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ISSUED FOR:

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SEAL:



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SHEET TITLE:

FOUNDATION DETAILS

SHEET NUMBER:

C-8

REVISION:

C

TEP #:

177861.243634



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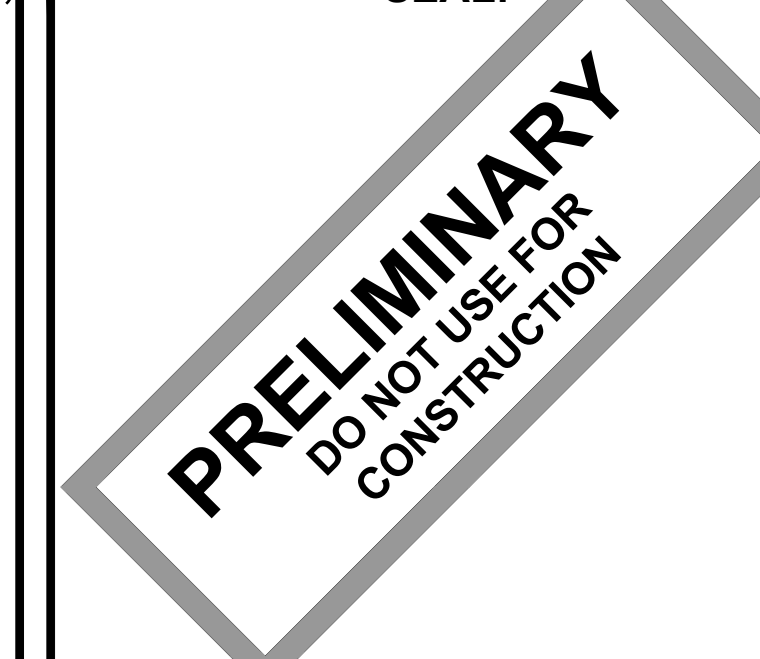
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HEET TITLE:

ELECTRICAL PANEL & GROUNDING PLANS

SHEET NUMBER:

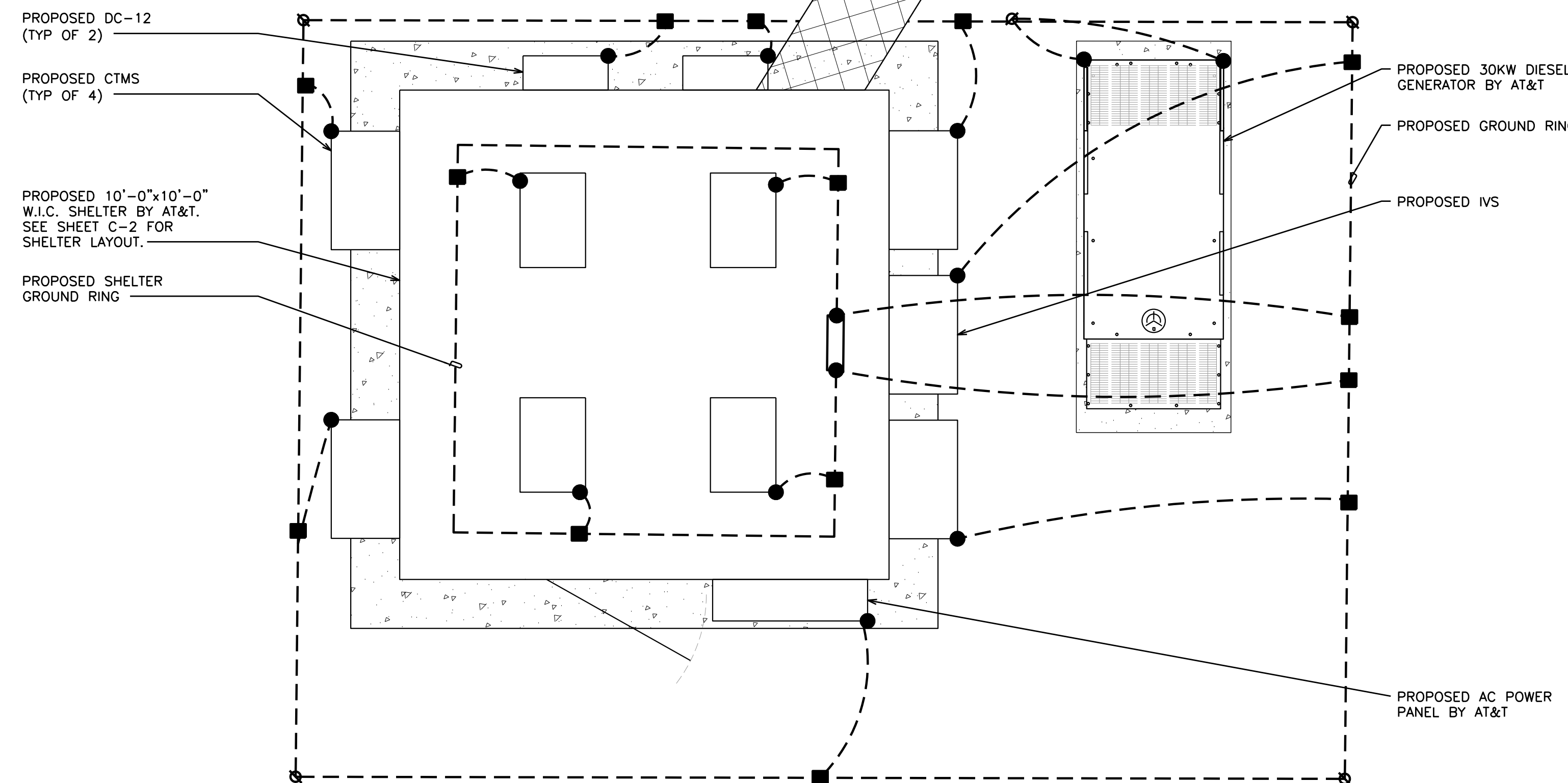
E-1

REVISION:

C

TEP #:

177861.243634

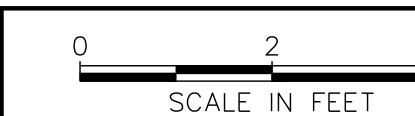


LEGEND

- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- ANTENNA GROUND BAR
- ▣ MASTER GROUND BAR

EQUIPMENT GROUNDING PLAN

SCALE: 1/2" = 1'-0" (24x36)
SCALE: 3/4" = 1'-0" (11x17)



NOTE:

PROPOSED PANEL SCHEDULE VALUES WERE CALCULATED BASED ON MAXIMUM PULL FROM EACH CONNECTED BREAKER. ACTUAL VALUES WILL VARY BASED ON SITE CONDITIONS.

PROPOSED PANEL SCHEDULE											
120/240 VOLTS 1 PHASE				3 WIRE SURFACE MOUNTED				225A, 2 POLE MAIN BREAKER			
NO.	LOAD SERVED	ØA VA	ØB VA	AMP/ POLE	L1	L2	AMP/ POLE	ØA VA	ØB VA	LOAD SERVED	NO.
1	RECTIFIERS #1 & #2	2880	-	30/2	5760	-	30/2	2880	-	RECTIFIERS #3 & 4	2
3		-	2880	-	-	5760	-	-	2880		4
5	RECTIFIERS #5 & 6	2880	-	30/2	2880	-	30/2	0	-	SPARE/OFF	6
7		-	2880	-	-	2880	-	-	0		8
9	SPARE/OFF	0	-	30/2	0	-	30/2	0	-	SPARE/OFF	10
11		-	0	-	-	0	-	-	0		12
13	SPARE/OFF	0	-	30/2	0	-	30/2	0	-	SPARE/OFF	14
15		-	0	-	-	0	-	-	0		16
17	SPARE/OFF	0	-	30/2	0	-	30/2	0	-	SPARE/OFF	18
19		-	0	-	-	0	-	-	0		20
21	SPARE/OFF	0	-	30/2	0	-	30/2	0	-	SPARE/OFF	22
23		-	0	-	-	0	-	-	0		24
25	AC UNIT #1	1920	-	20/1	1920	-	-	-	-	BLANK	26
27	BLANK	-	-	-	-	0	-	-	-	BLANK	28
29	BLANK	-	-	-	-	0	-	-	-	BLANK	30
31	BLANK	-	-	-	-	0	-	-	-	BLANK	32
33	BLANK	-	-	-	-	0	-	-	-	BLANK	34
35	BLANK	-	-	-	-	0	-	-	-	BLANK	36
37	BLANK	-	-	-	-	0	-	-	-	BLANK	38
39	BLANK	-	-	-	-	0	-	-	-	BLANK	40
PHASE TOTALS (VA)					10560	8640					
CURRENT PER PHASE (A)					88	72					
PEAK TOTAL (VA)					10560	88	PEAK TOTAL (A)				
125% DEMAND (VA)					13200	110	125% DEMAND (A)				

PROPOSED A/C PANEL

SCALE: N.T.S.

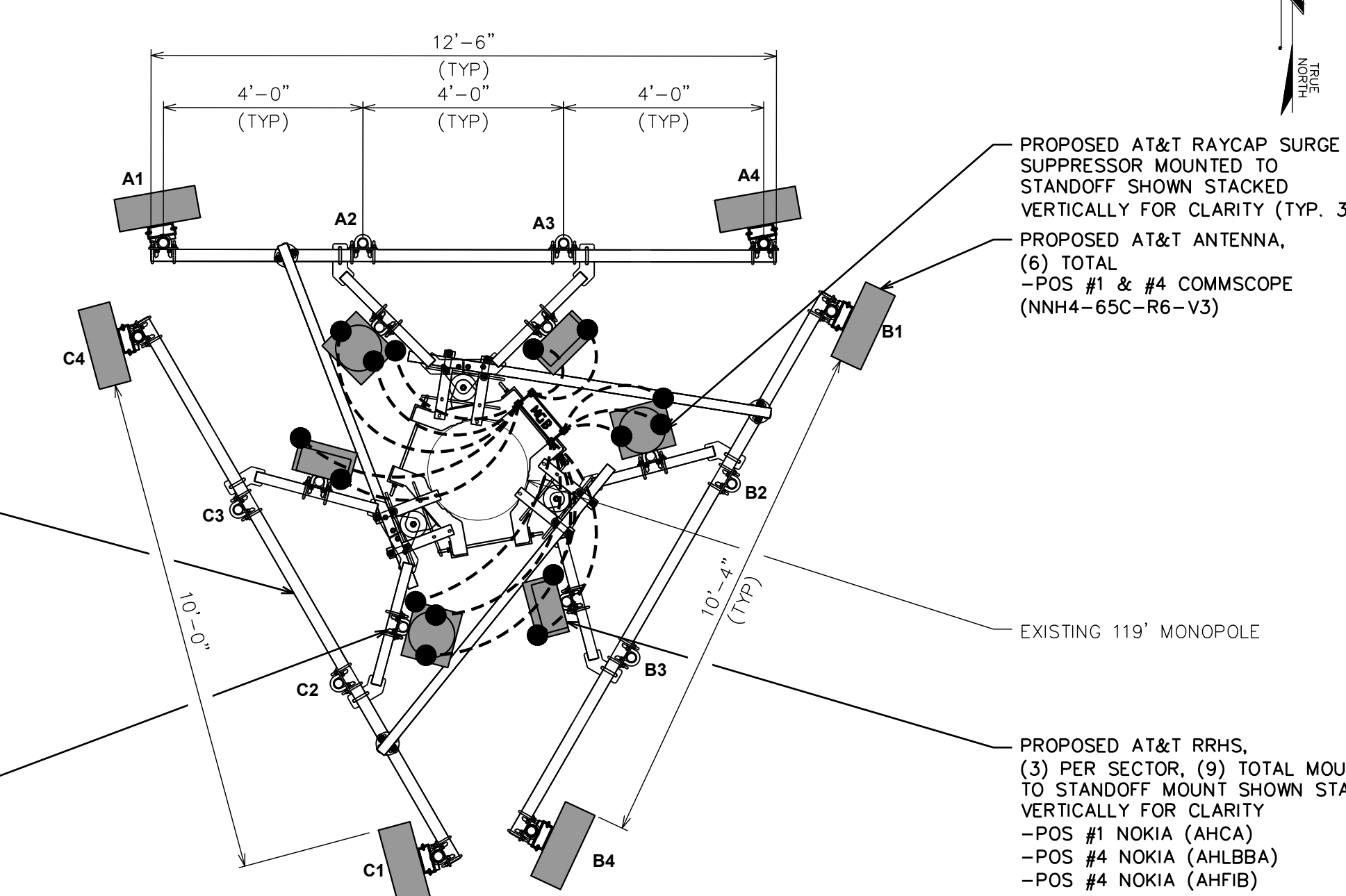
PROPOSED SITEPRO SECTOR FRAME MOUNT (P/N:VFA12-WLL-30120) BY AT&T, SEE SHEET C-5 FOR DETAILS.

PROPOSED PIPE MOUNT KIT BY SITEPRO (P/N:SP219) BY AT&T, (4) PER SECTOR, (TOTAL OF 12). SEE SHEET C-5 FOR DETAILS.

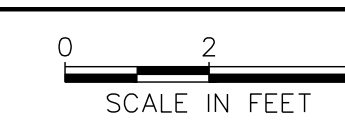
LEGEND

- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- ANTENNA GROUND BAR
- ▣ MASTER GROUND BAR

ANTENNA GROUNDING PLAN



SCALE: 3/8" = 1'-0" (24x36)
SCALE: 1/2" = 1'-0" (11x17)

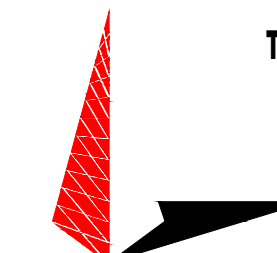




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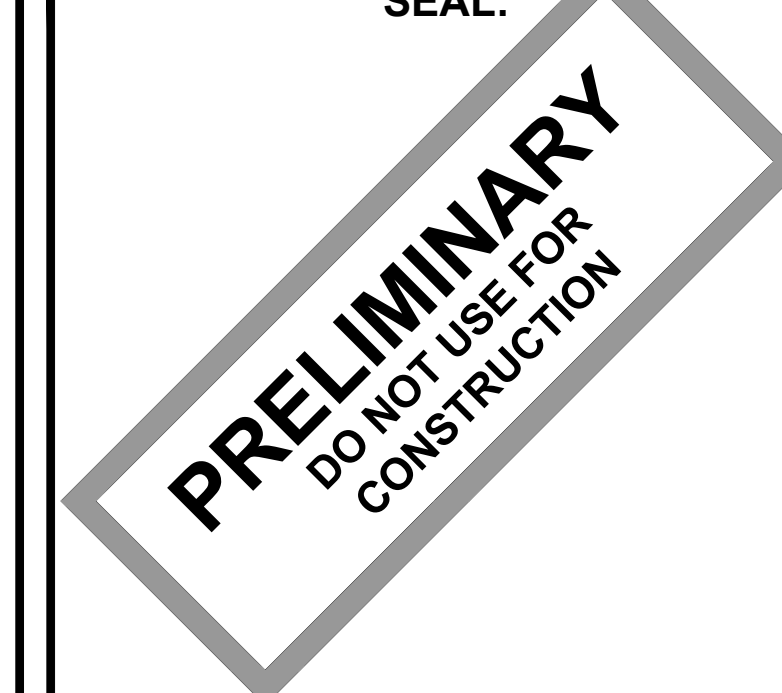
AT&T SITE ID: COL02205
AT&T FA CODE: 15312479
AT&T PACE #: MRUTH042458
ATC #: 370609
WIDEFIELD HIGH SCHOOL II

523 WIDEFIELD ROAD
COLORADO SPRINGS,
CO 80911
(EL PASO COUNTY)
EXISTING 119'-0"
MONOPOLE TOWER
NSB - LTE - 1C/2C/3C/4C/
5G NR 1SR

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	QA
A	11-23-20	KT	PRELIMINARY	EGG
B	12-14-20	SDD	90% CONSTRUCTION	EGG
C	02-18-21	CAK	90% CONSTRUCTION	EGG

SEAL:



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SHEET TITLE:
ONE-LINE DIAGRAM

SHEET NUMBER: REVISION:

E-2

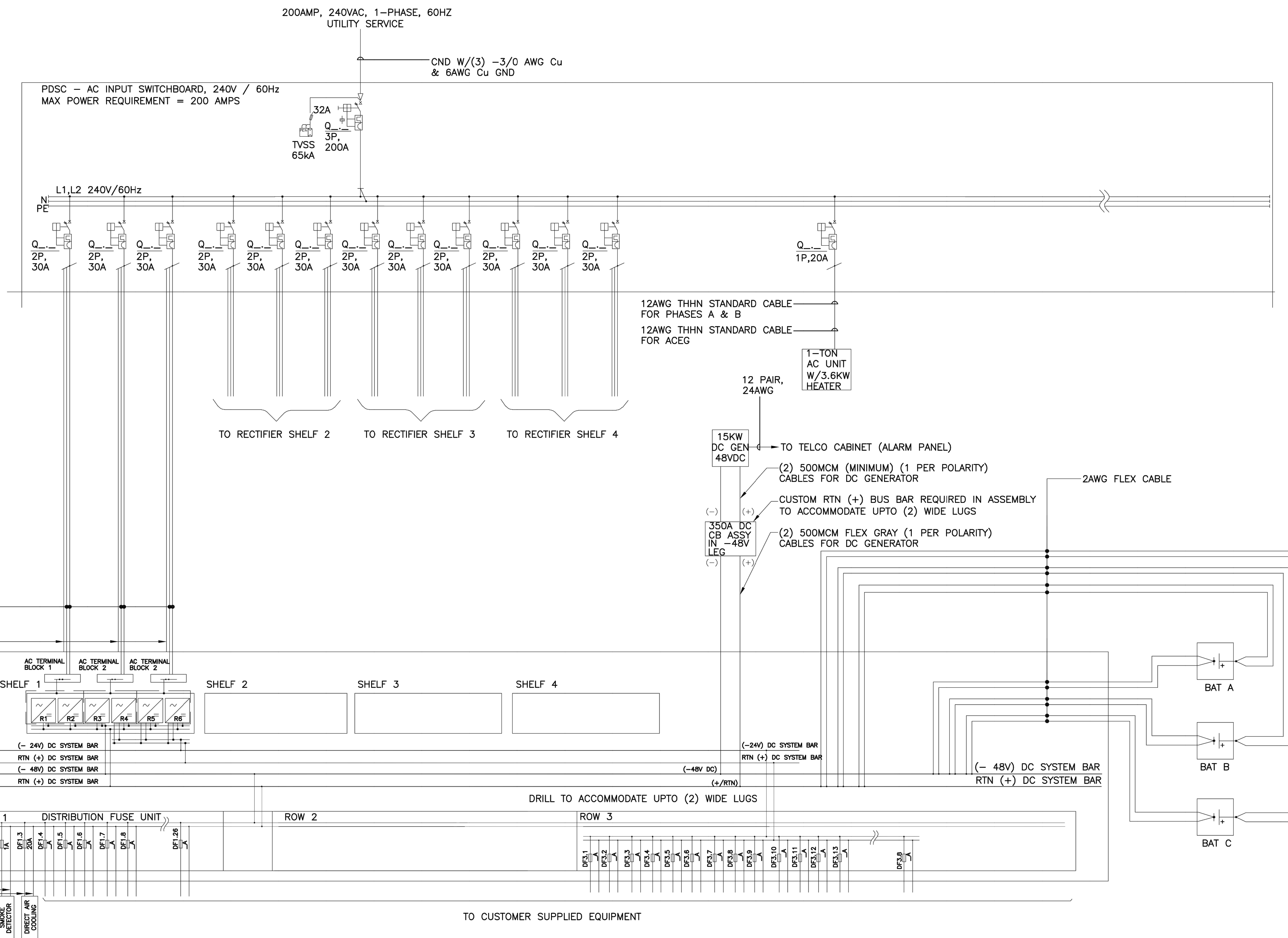
C

TEP #: 177861.243634

SYMBOLS

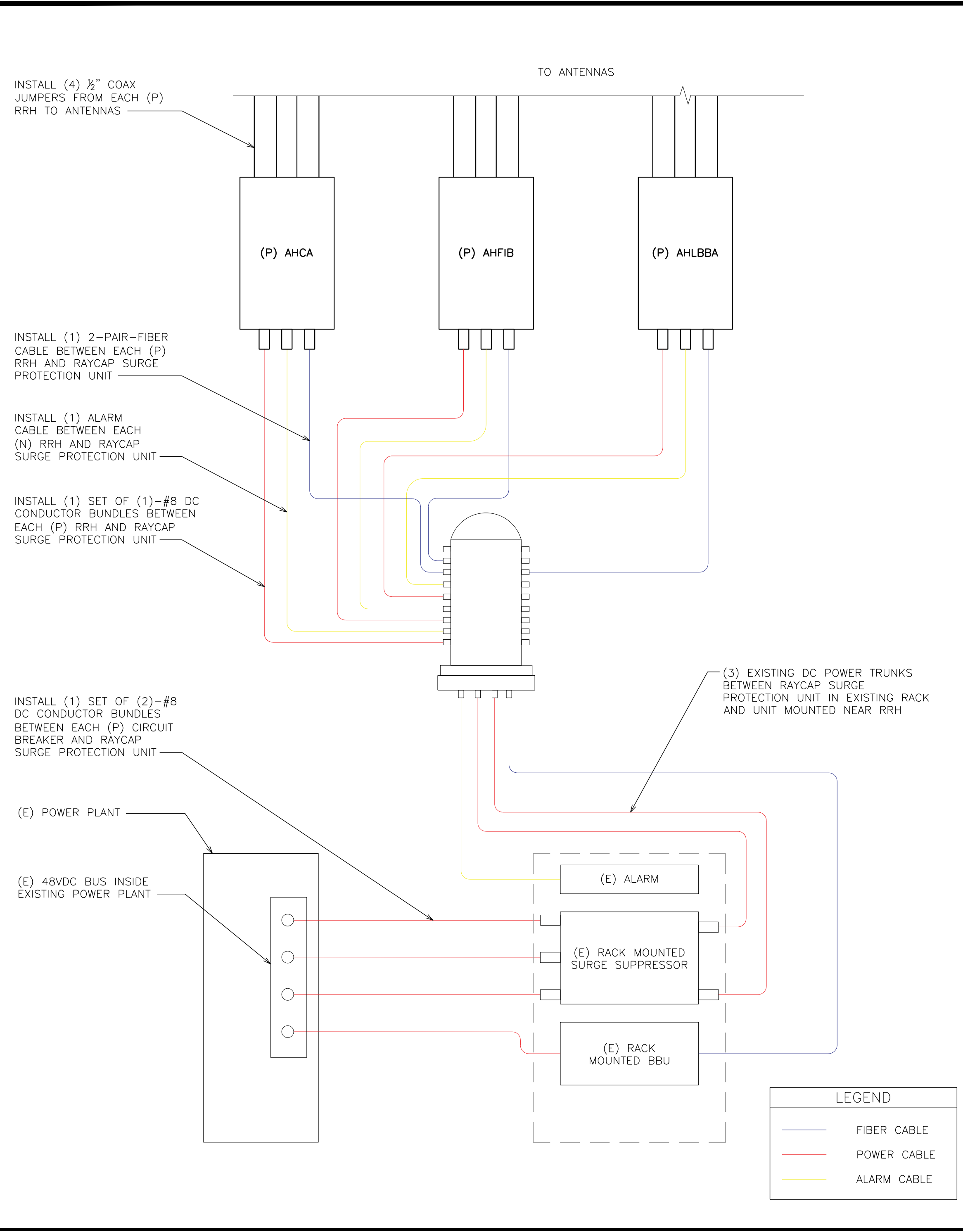
	MOTOR CIRCUIT BREAKERS WITH MECHANICAL INTERLOCK
	MINIATURE CIRCUIT BREAKER (MCB)
	MOLDED CASE CIRCUIT BREAKER (MCCB)
	CIRCUIT BREAKER WITH RESIDUAL CURRENT DEVICE COMBINATION (RCD)
	CONTACTOR WITH AUXILIARY CONTACTS
	SHUNT TRIP RELAY
	AUXILIARY CONTACT 1A&1B (N.O.&N.C.)
	LIGHT SWITCH-3 WAY (MULTIPLE LAMPS ON/OFF)

NOTE:
L1,L2,L3 - PHASES 1, 2 & 3 (LIVE)
N - NEUTRAL
PE - PROTECTIVE EARTH (EQUIPMENT GROUNDING CONDUCTOR)



ELECTRICAL AC/DC SINGLE LINE DIAGRAM

SCALE: N.T.S.



DC AND FIBER SYSTEM SCHEMATIC

SCALE: N.T.S.

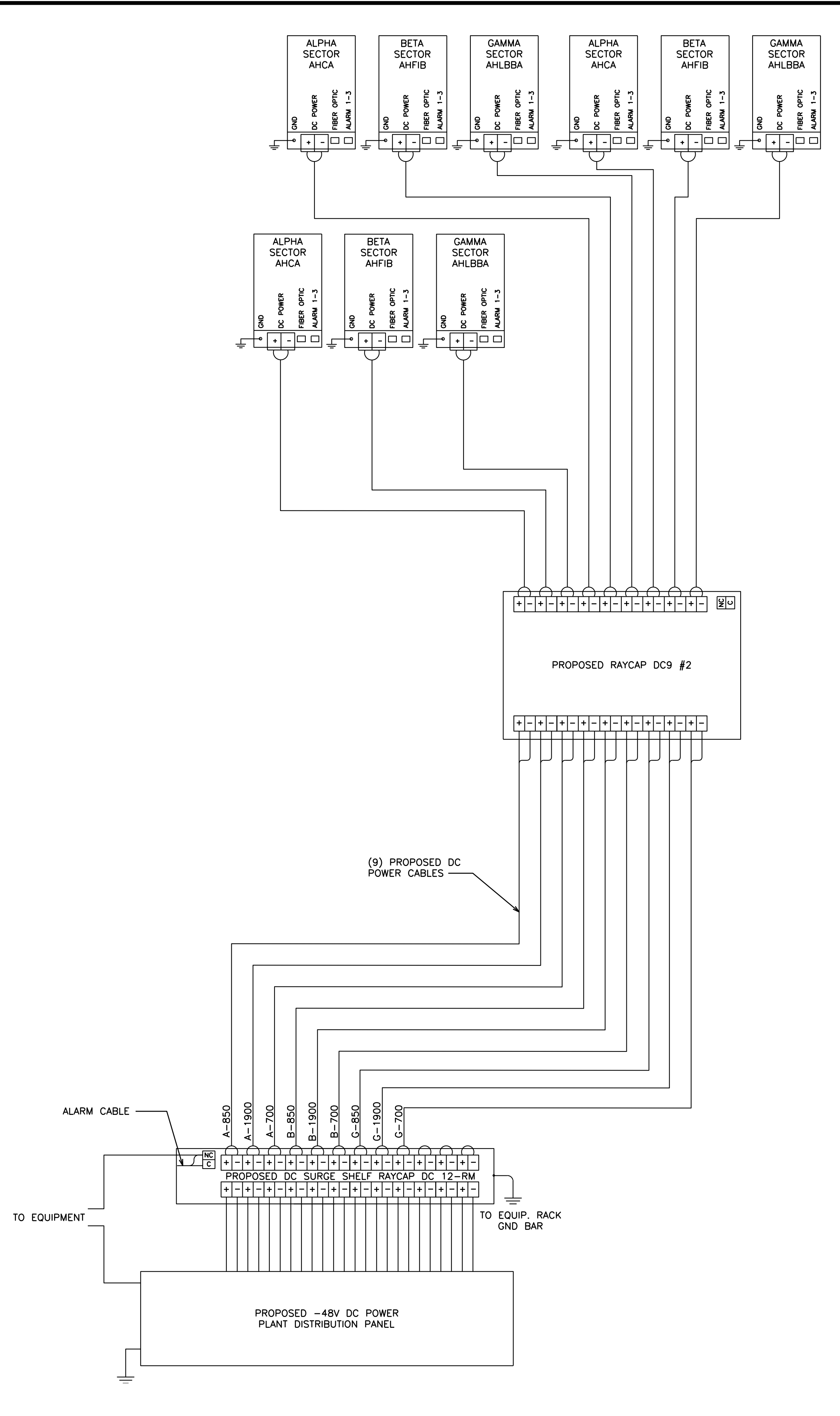
PDF JUMPER DC-6 TRUNK SQUID JUMPER RRH

CABLE LENGTH TABLE												
SECTOR	PDF	DISTANCE & CABLE TYPE		DISTANCE & CABLE TYPE		DISTANCE & CABLE TYPE		TOTAL CABLE LENGTH	FINAL VOLTAGE			
ALPHA	PDF	20'	#8 AWG	DC-6	145'	(2) #8 AWG	SQUID	15'	#8 AWG	RRH	180'	40.6
BETA		20'	#8 AWG		145'	(2) #8 AWG		15'	#8 AWG		180'	40.6
GAMMA		20'	#8 AWG		145'	(2) #8 AWG		15'	#8 AWG		180'	40.6

CABLE COUNT	
QTY	CABLE TYPE
1	FIBER TRUNKS
3	DC TRUNKS

LTE CONDUCTOR SIZES

SCALE: N.T.S.



DC WIRING DIAGRAM

SCALE: N.T.S.

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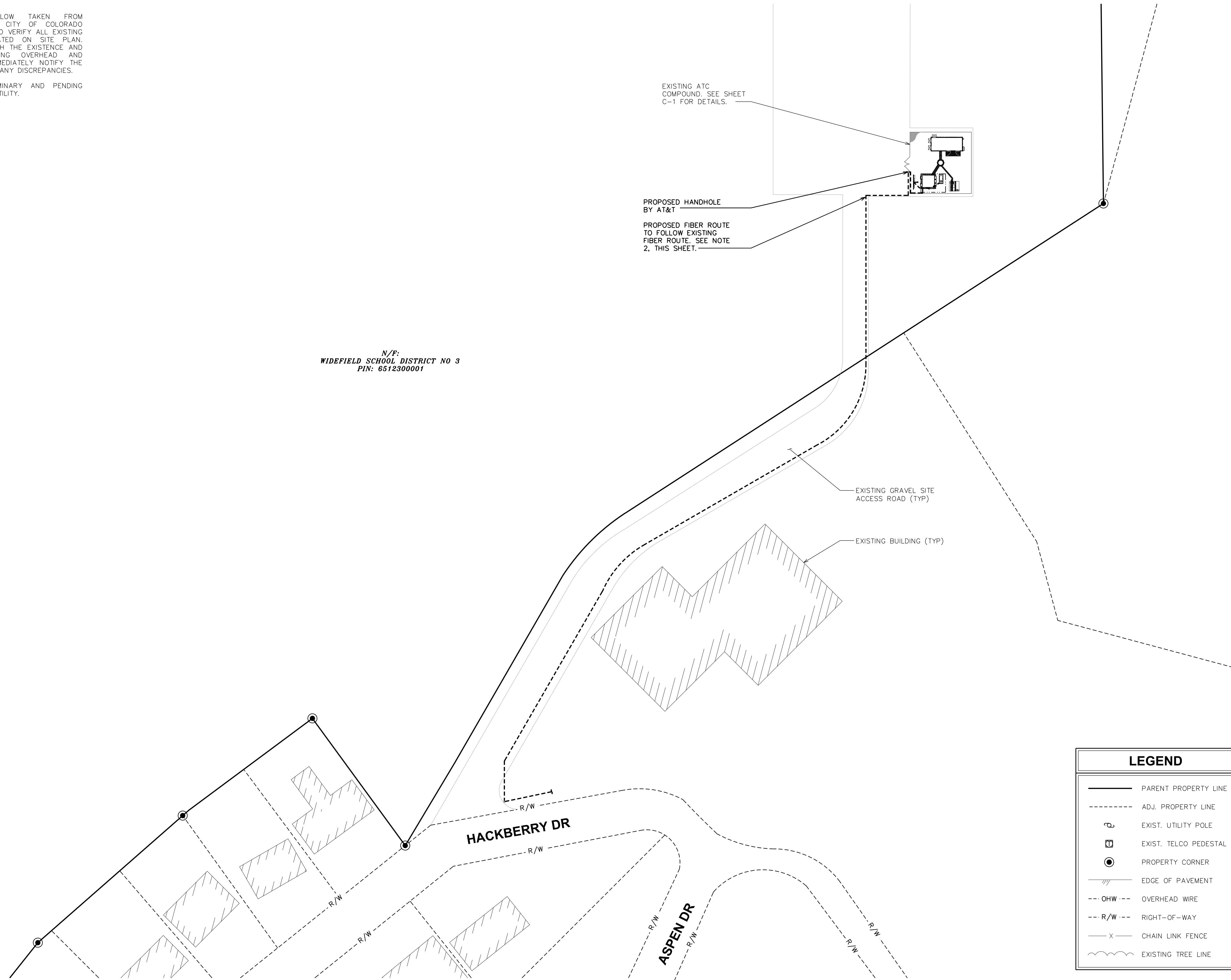
SHEET TITLE:
DC SYSTEM DETAILS

SHEET NUMBER: E-3 **REVISION:** C

TEP #: 177861.243634

NOTES:

1. SITE PLAN SHOWN BELOW TAKEN FROM INFORMATION PROVIDED BY CITY OF COLORADO SPRINGS GIS. CONTRACTOR TO VERIFY ALL EXISTING INFORMATION IS AS INDICATED ON SITE PLAN. CONTRACTOR IS TO ESTABLISH THE EXISTENCE AND LOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES. IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES.
2. UTILITY ROUTING IS PRELIMINARY AND PENDING COORDINATION WITH LOCAL UTILITY.



N/F:
WIDEFIELD SCHOOL DISTRICT NO 3
PIN: 6512300001

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SHEET TITLE:
FIBER ROUTING PLAN

SHEET NUMBER:
E-4

REVISION:
C

TEP #: 177861.243634

LEGEND

	PARENT PROPERTY LINE
	ADJ. PROPERTY LINE
	EXIST. UTILITY POLE
	EXIST. TELCO PEDESTAL
	PROPERTY CORNER
	EDGE OF PAVEMENT
	OHW --- OVERHEAD WIRE
	--- R/W --- RIGHT-OF-WAY
	--- x --- CHAIN LINK FENCE
	EXISTING TREE LINE

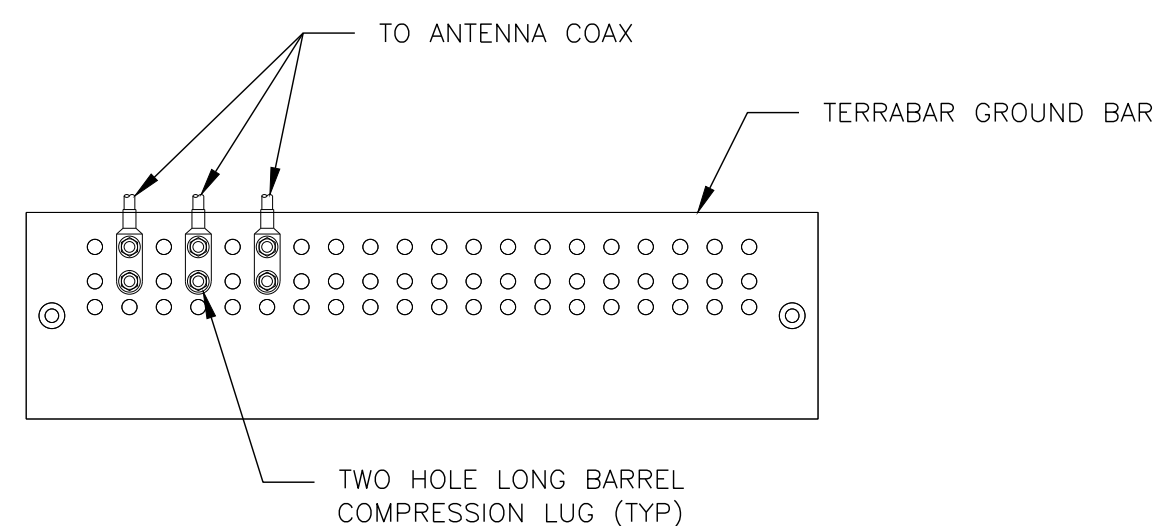
FIBER ROUTING PLAN
SCALE: 1" = 40'

SCALE: 1" = 40' (24x36)
SCALE: 1" = 80' (11x17)

SCALE IN FEET

NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL.

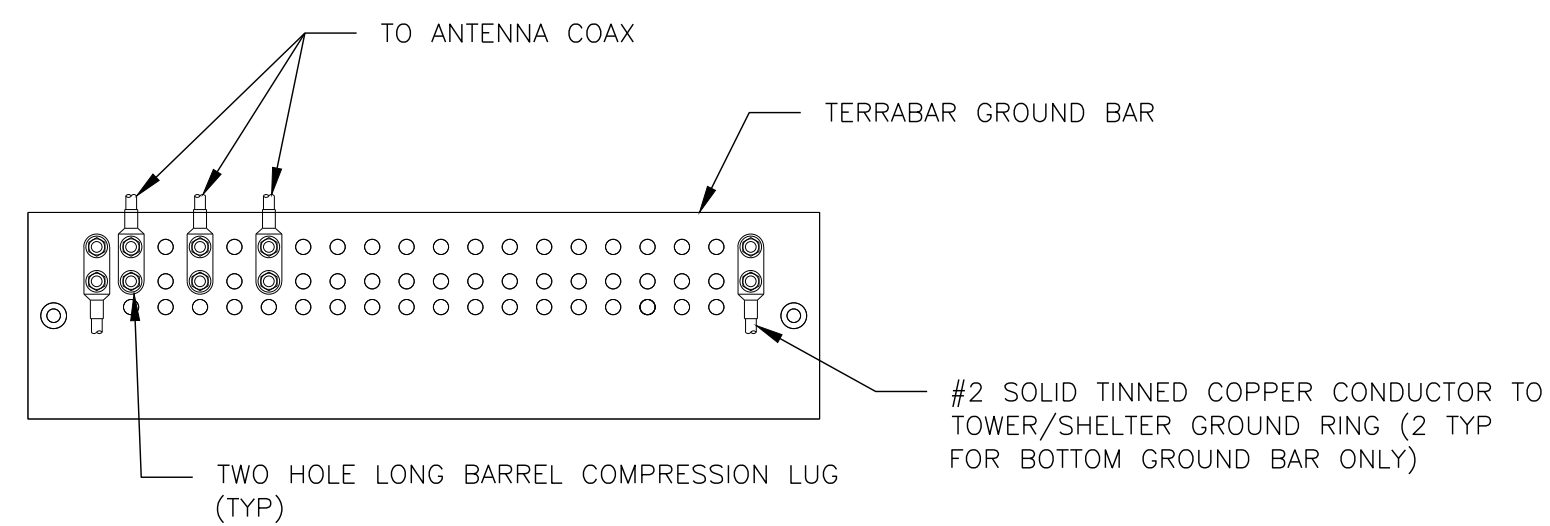


ANTENNA GROUND BAR DETAIL

SCALE: N.T.S.

NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. INSTALL GROUND BARS AT 75 FT. INTERVAL MAXIMUM.
4. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

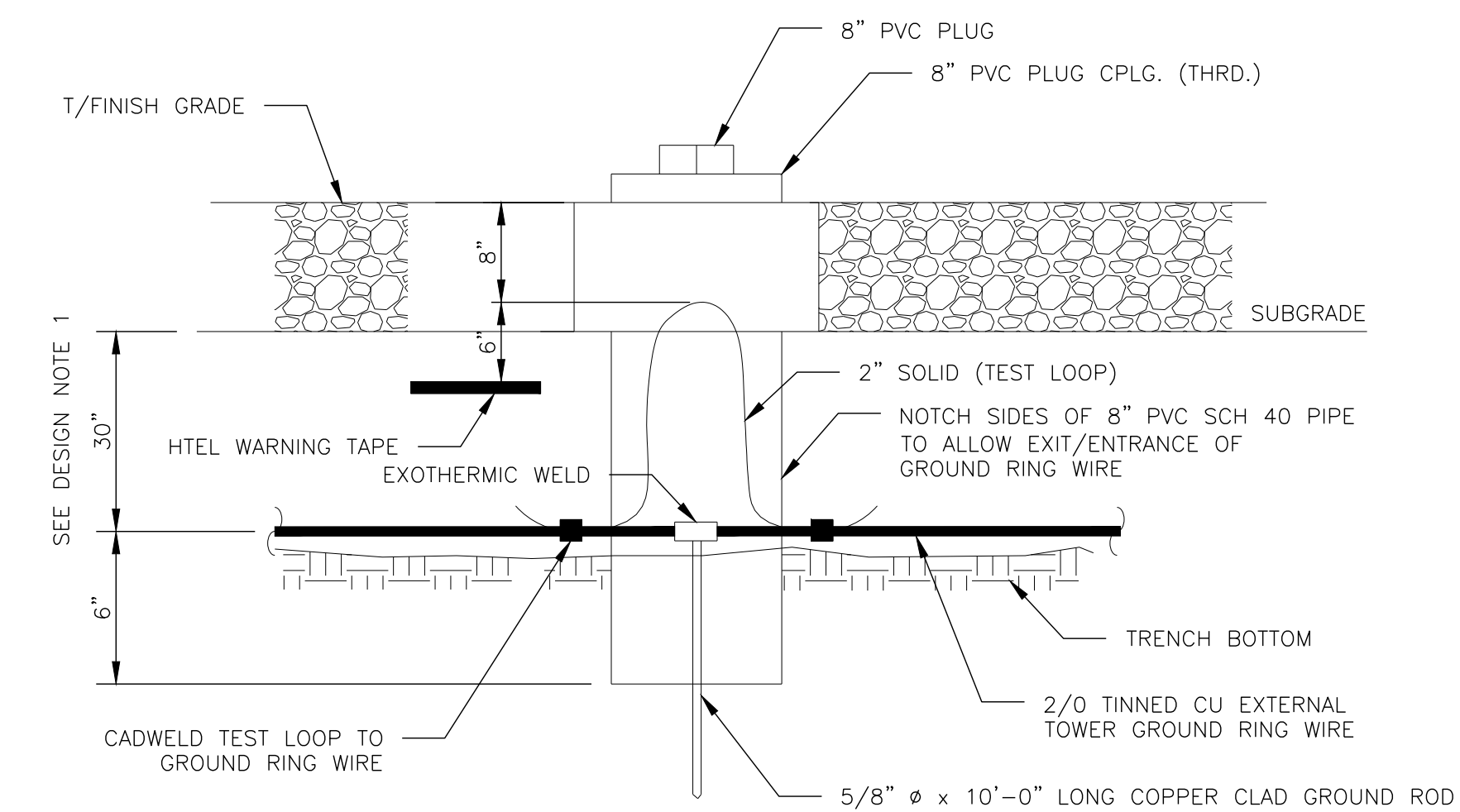


TOWER/SHELTER GROUND BAR DETAIL

SCALE: N.T.S.

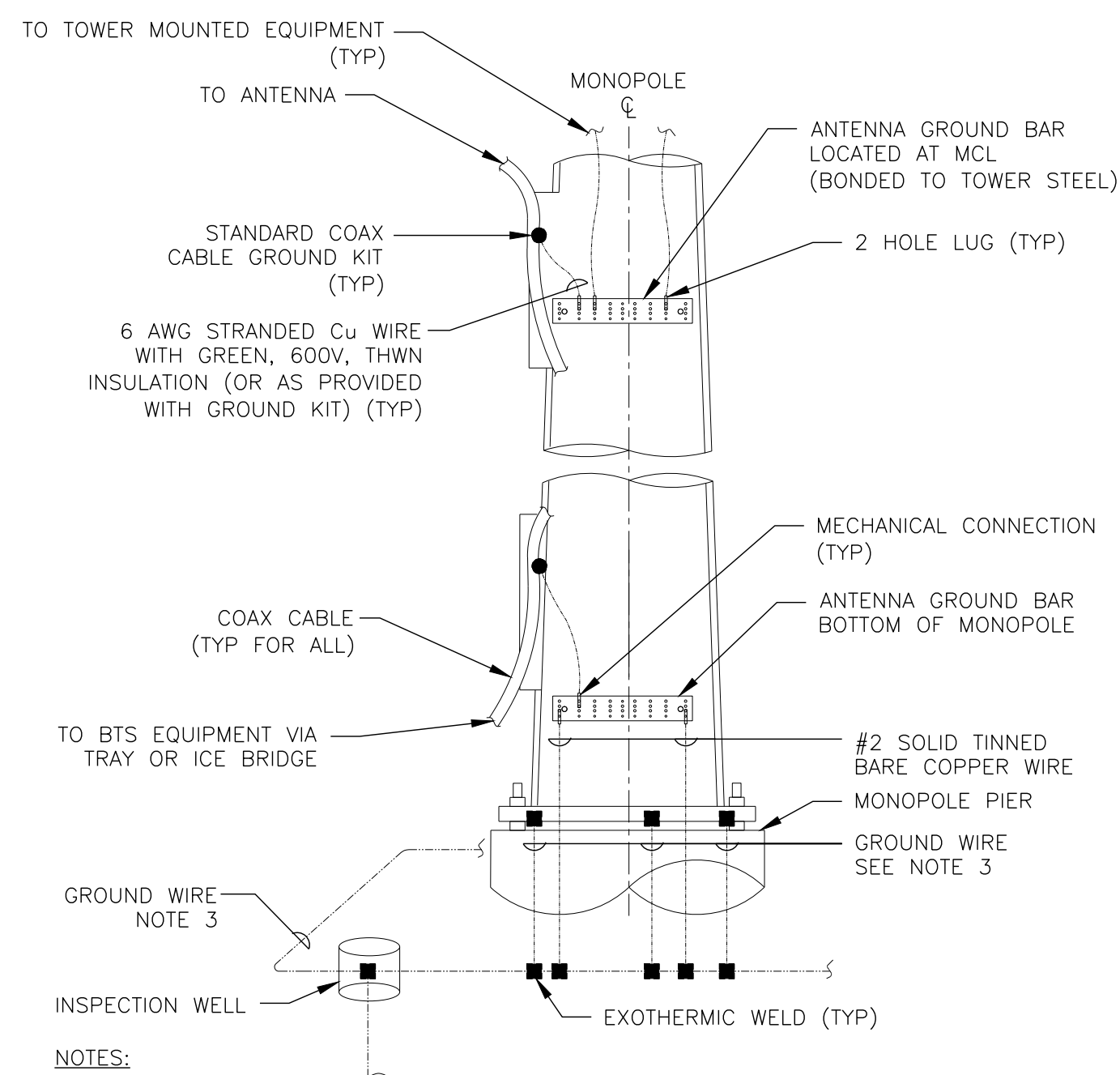
NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)



TEST WELL DETAIL

SCALE: N.T.S.

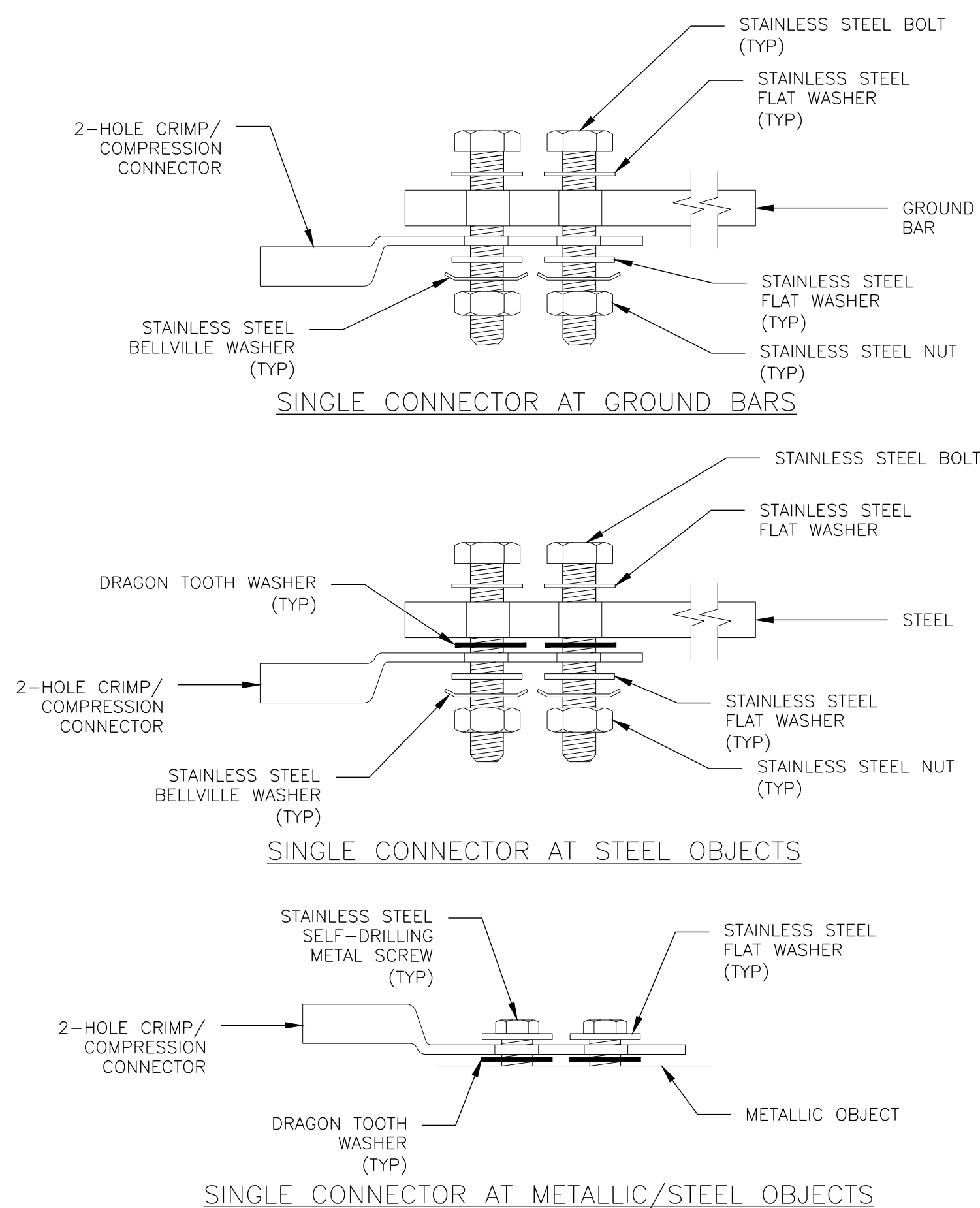


NOTES:

1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF MONOPOLE, ANTENNA LOCATION AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET IN/ON THE POLE SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/TIA 222 AND NFPA 780. FOR TOWERS BEING BUILT TO REV G OF THE STANDARD, THE WIRE SIZE OF THE BURIED GROUND RING AND CONNECTIONS BETWEEN THE TOWER AND THE BURIED GROUND RING SHALL BE 2/0 AWG. STRANDED IN ADDITION, THE MINIMUM LENGTH OF THE GROUND RODS SHALL BE INCREASED FROM 8 FEET TO 10 FEET.

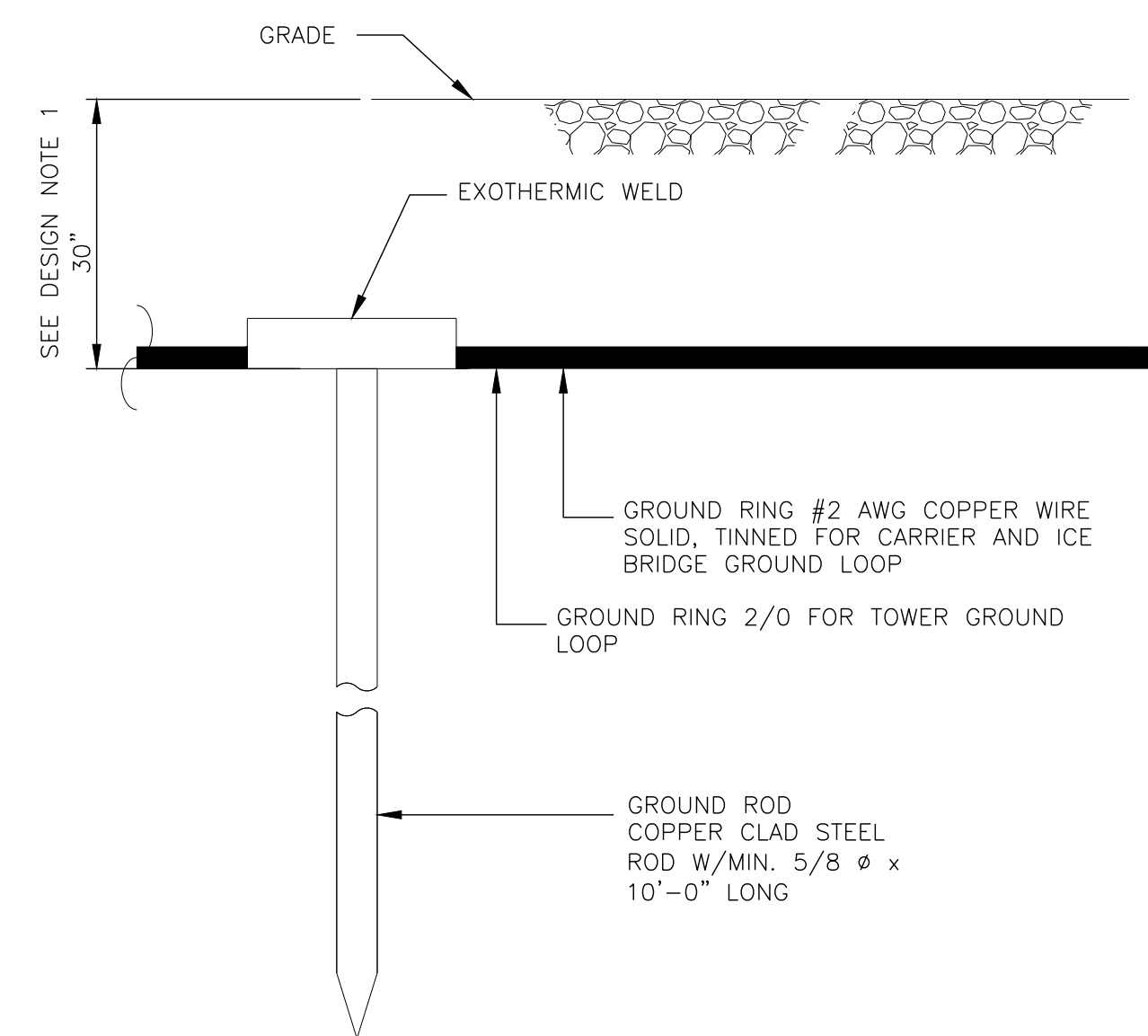
TYPICAL ANTENNA CABLE GROUNDING

SCALE: N.T.S.



HARDWARE DETAIL FOR EXTERIOR CONNECTIONS

SCALE: N.T.S.



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

GROUND ROD

SCALE: N.T.S.



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EXISTING 119'-0"
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SHEET TITLE:

GROUNDING DETAILS

SHEET NUMBER:

G-1

REVISION:

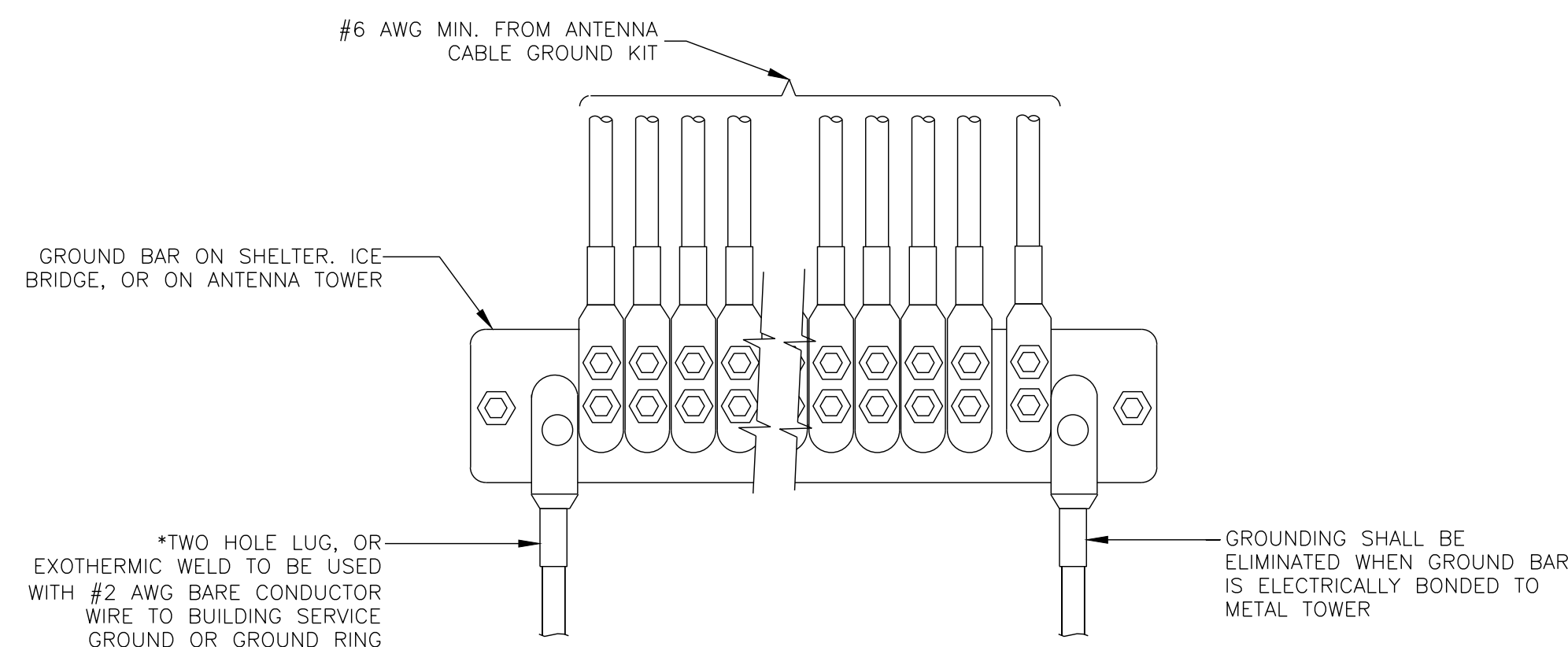
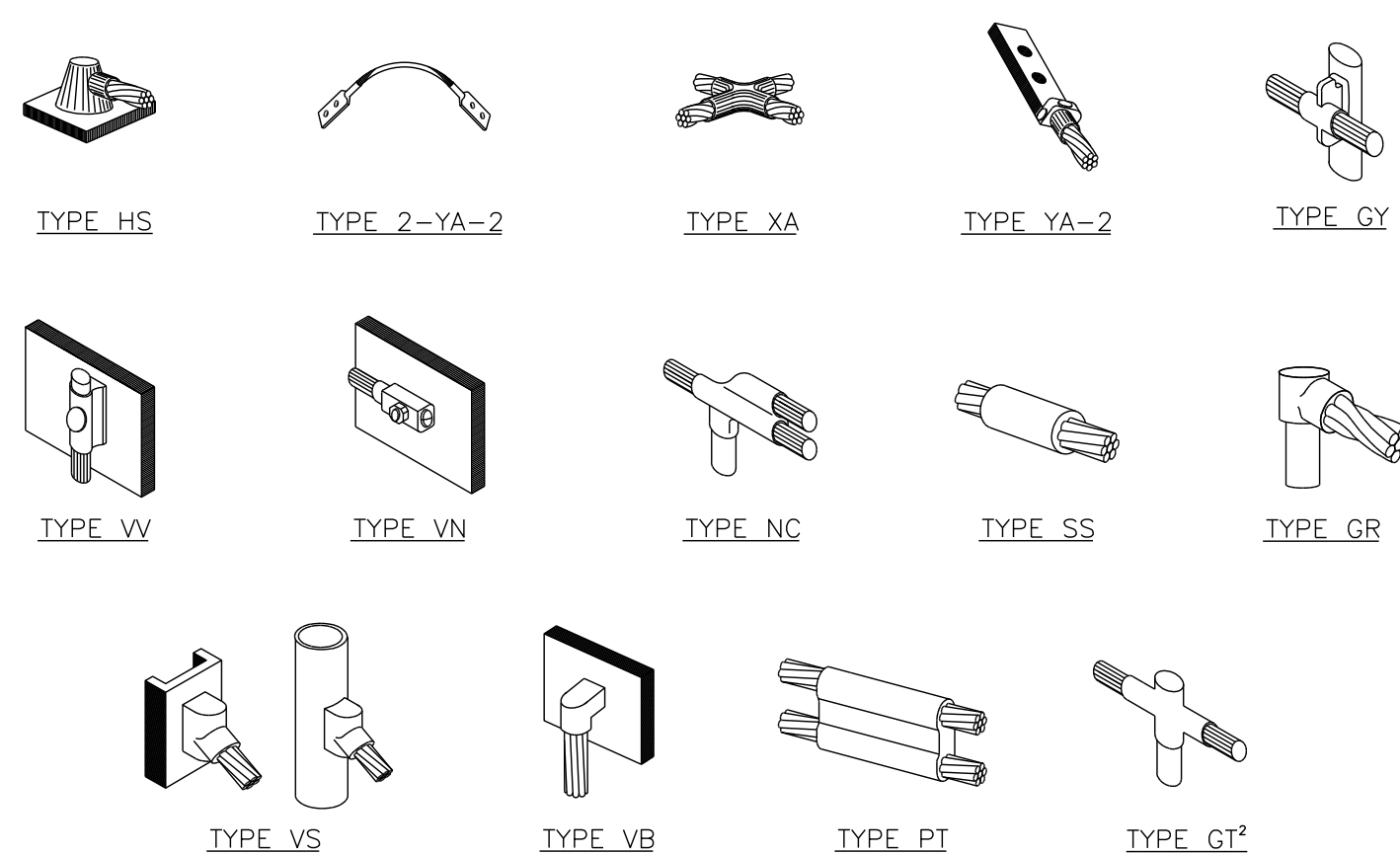
C

TEP #:

177861.243634

NOTE:

1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

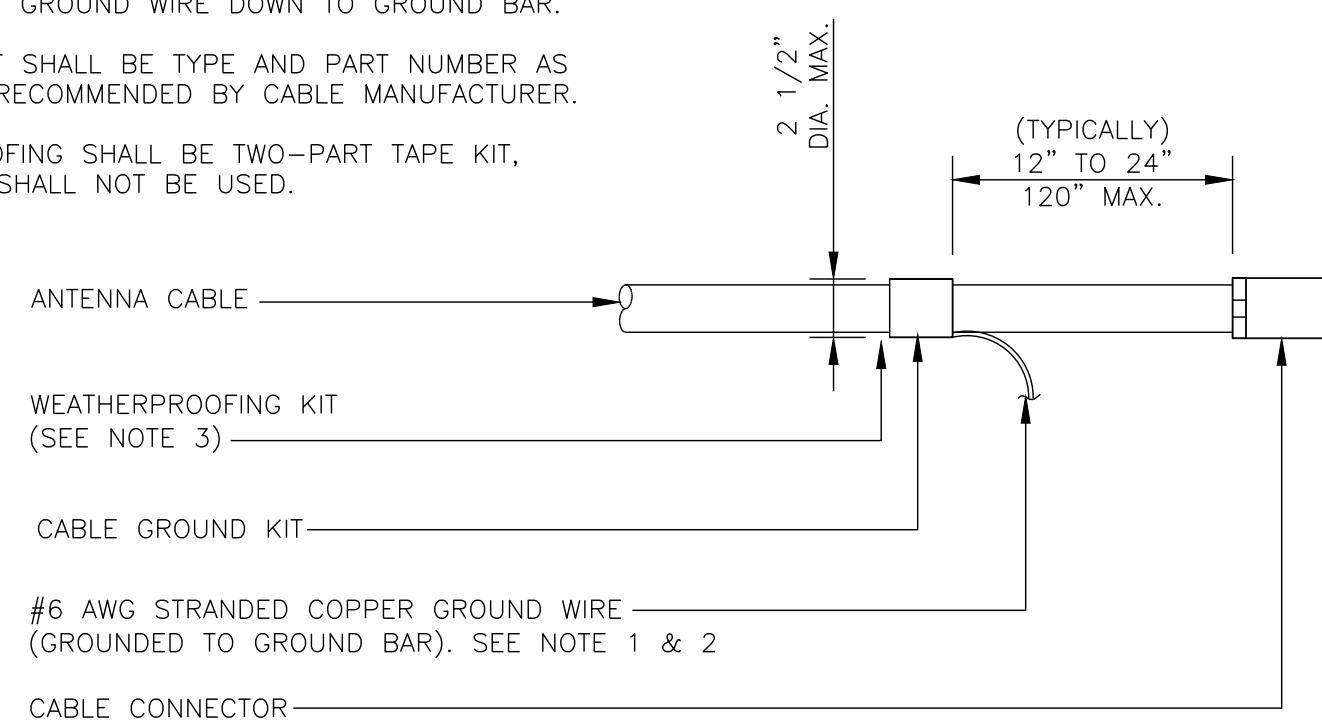


GROUNDWIRE INSTALLATION

SCALE: N.T.S.

NOTES:

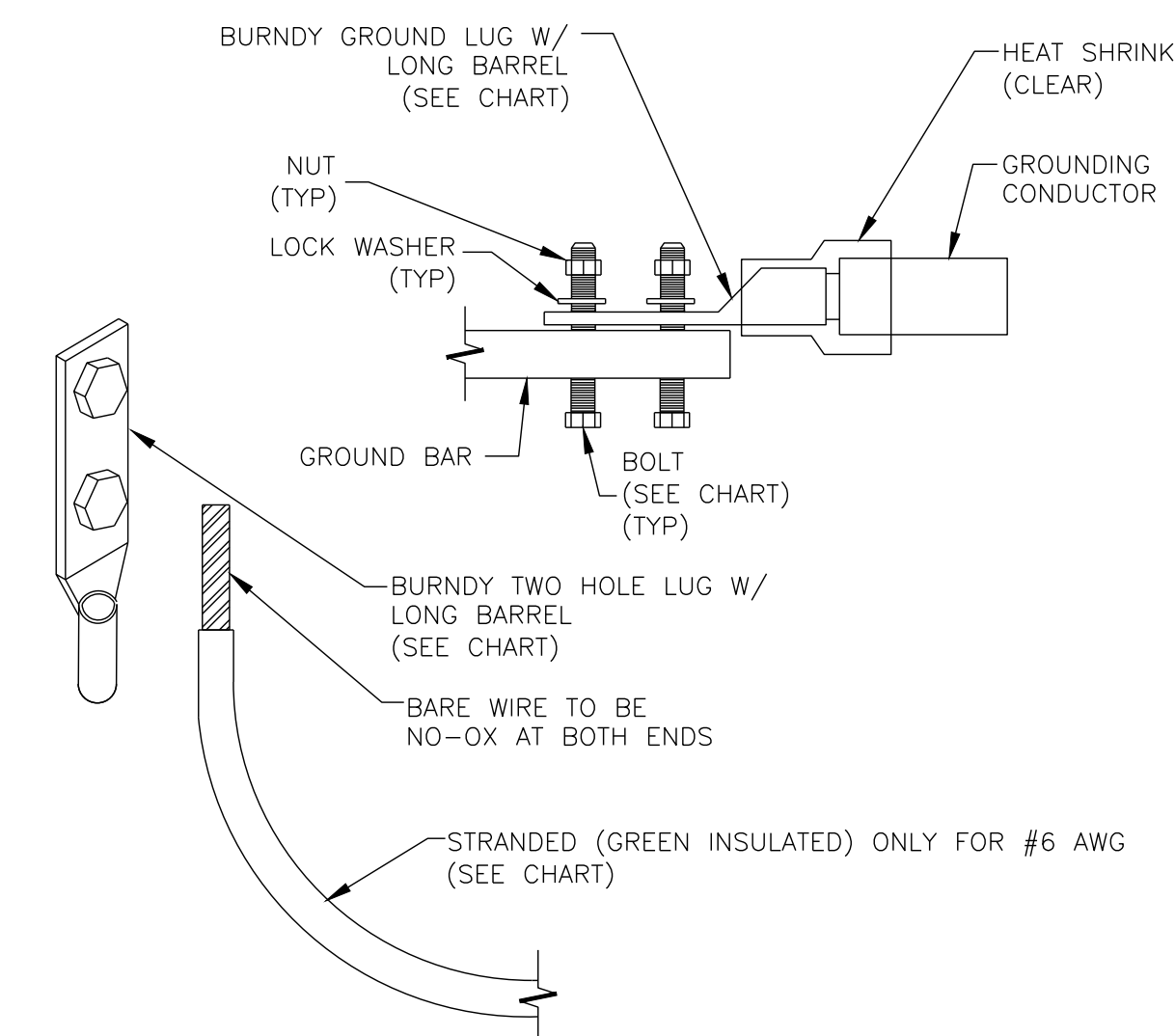
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.



NOTES:

1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT

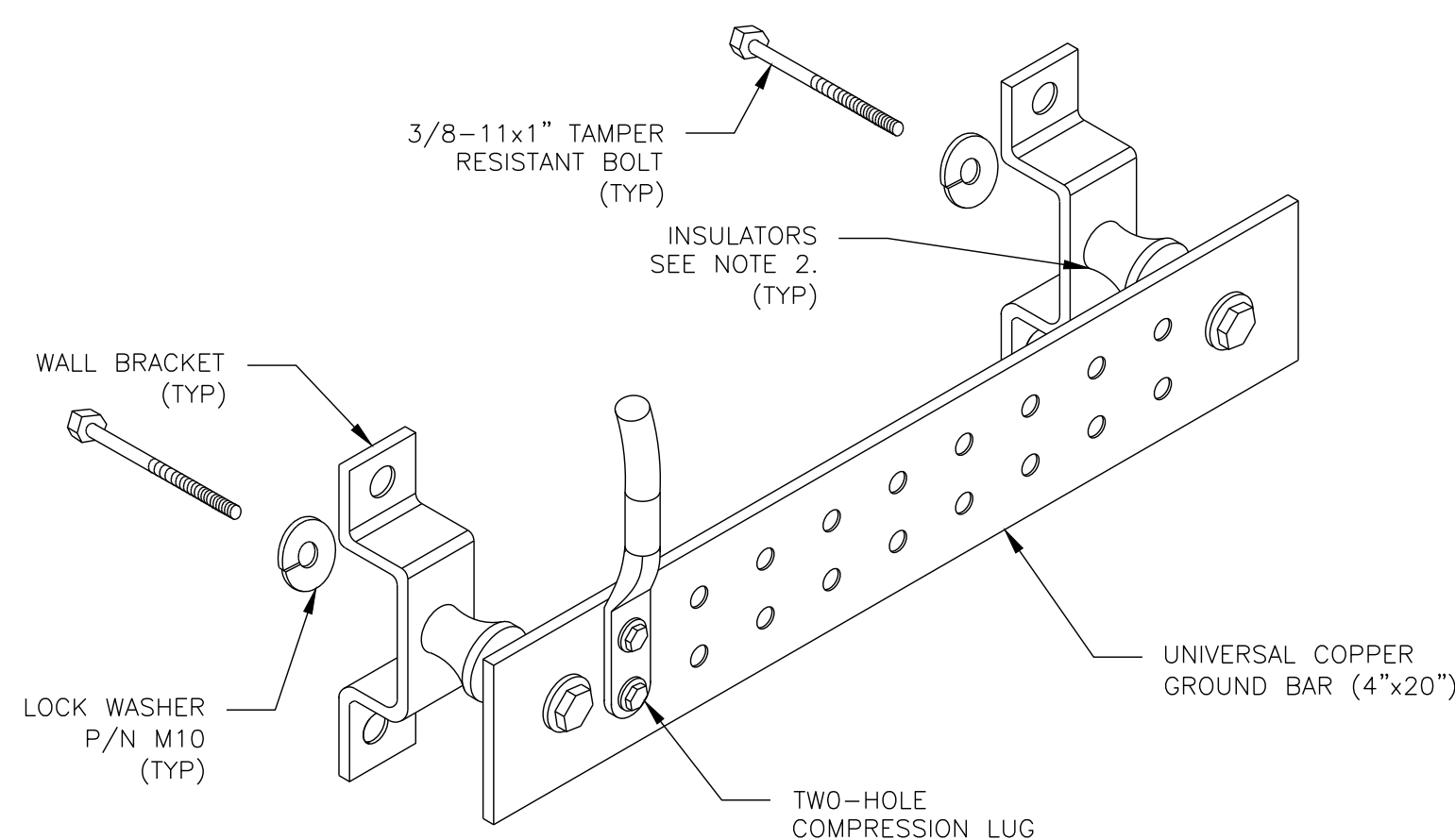


CADWELD GROUNDING CONNECTIONS

SCALE: N.T.S.

NOTES:

1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STO-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL. USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.



GROUND BAR DETAIL

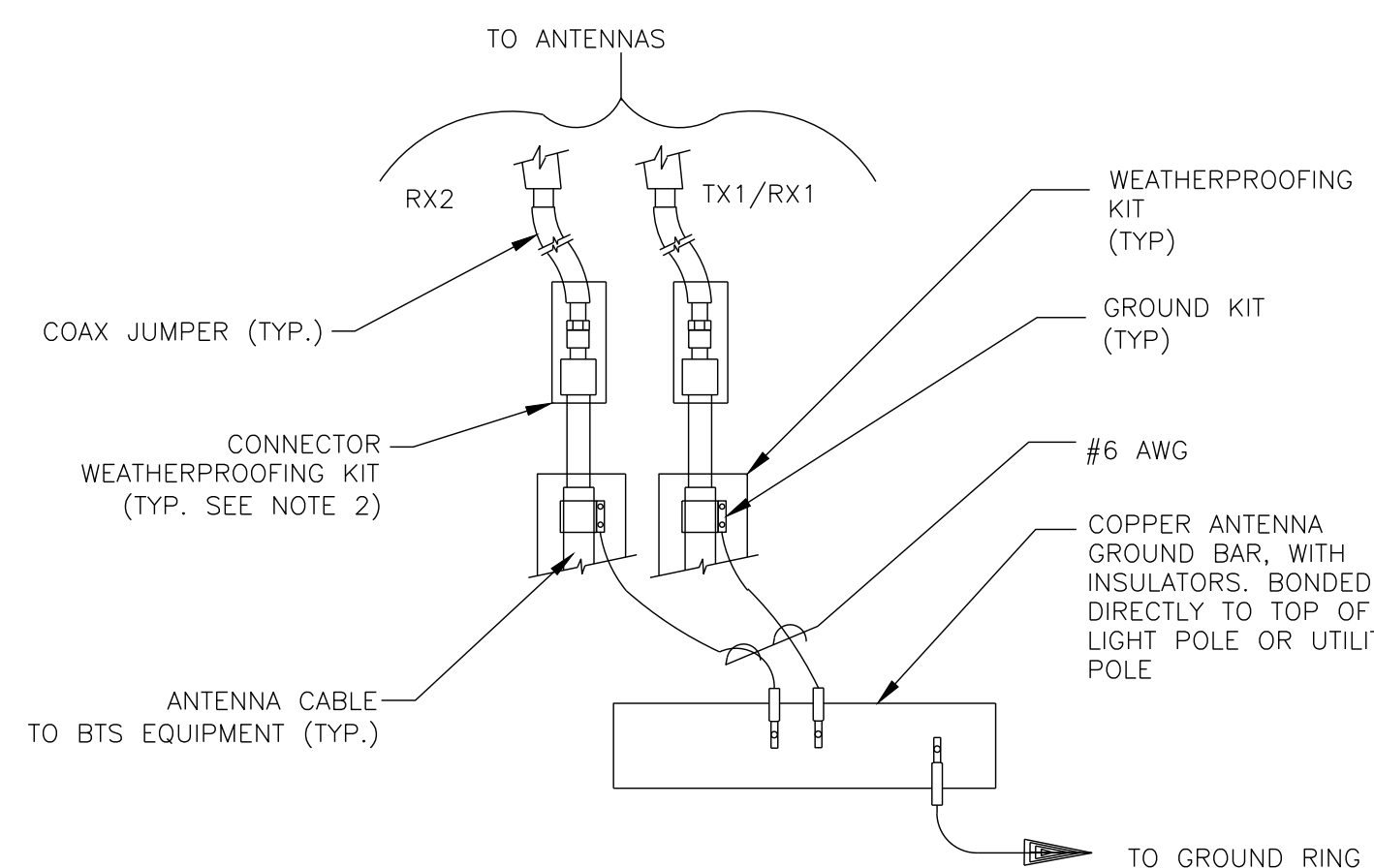
SCALE: N.T.S.

CABLE GROUND KIT CONNECTION

SCALE: N.T.S.

NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

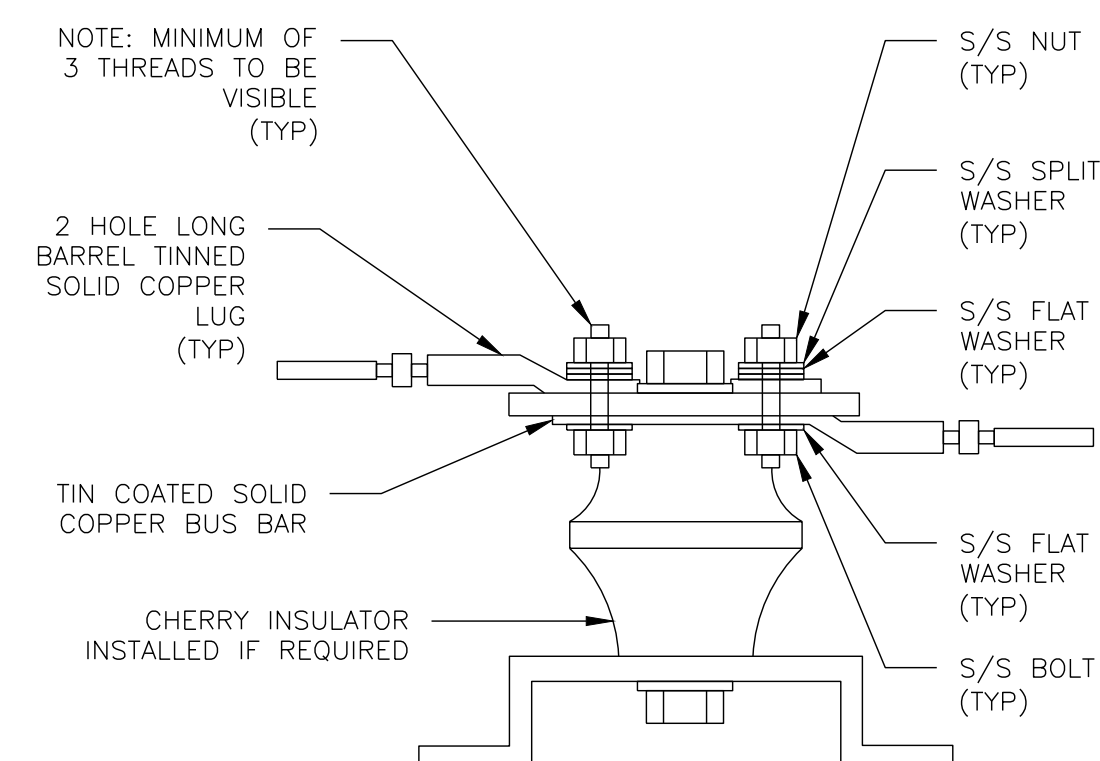


GROUND CABLE CONNECTION

SCALE: N.T.S.

MECHANICAL LUG CONNECTION

SCALE: N.T.S.



LUG DETAIL

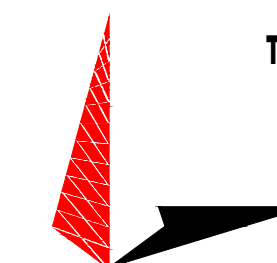
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SHEET TITLE:

GROUNDING DETAILS

SHEET NUMBER:

G-2

REVISION:

C

TEP #:

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