

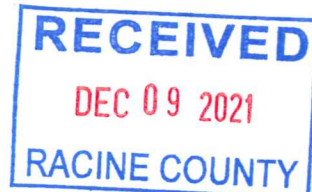


DISH WIRELESS, LLC. SITE ID:

MWMKE00182A

DISH WIRELESS, LLC. SITE ADDRESS:

**6839 CALDWELL ROAD
WATERFORD, WI 53185**



SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

- TOWER SCOPE OF WORK:**
- INSTALL (3) PROPOSED ANTENNA SECTOR FRAME MOUNTS (1 PER SECTOR)
 - INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
 - INSTALL (6) PROPOSED RRU's (2 PER SECTOR)
 - INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
 - INSTALL (1) PROPOSED HYBRID CABLE (LENGTH: 200'-0")
 - INSTALL PROPOSED JUMPERS

- GROUND SCOPE OF WORK:**
- INSTALL (1) PROPOSED METAL PLATFORM
 - INSTALL (1) PROPOSED ICE BRIDGE
 - INSTALL (1) PROPOSED CABLE LADDER
 - INSTALL (1) PROPOSED PPC CABINET
 - INSTALL (1) PROPOSED EQUIPMENT CABINET
 - INSTALL (1) PROPOSED POWER CONDUIT
 - INSTALL (1) PROPOSED TELCO CONDUIT
 - INSTALL (1) PROPOSED TELCO-FIBER BOX
 - INSTALL (1) PROPOSED GPS UNIT
 - INSTALL (1) PROPOSED SAFETY SWITCH (IF REQUIRED)
 - INSTALL (1) PROPOSED CIEHA BOX (IF REQUIRED)
 - INSTALL (1) METER INSIDE EXISTING METER BANK (BY POWER COMPANY)

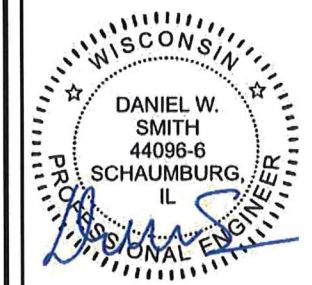
SITE INFORMATION	PROJECT DIRECTORY
PROPERTY OWNER: TBD ADDRESS: 6839 CALDWELL ROAD WATERFORD, WI 53185	APPLICANT: DISH WIRELESS, LLC. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120
TOWER TYPE: SELF-SUPPORT TOWER	TOWER OWNER: UNITI
TOWER CO SITE ID: WMIL2028	
TOWER APP NUMBER: TBD	
COUNTY: RACINE	SITE DESIGNER: FULLERTON ENGINEERING 1100 E WOODFIELD RD., STE 500 SCHAUMBURG, IL 60173 (847) 908-8400
LATITUDE (NAD 83): 42°48'44.6"N 42.812397	SITE ACQUISITION: MEGHAN LANIGAN
LONGITUDE (NAD 83): 88°16'33.7"W -88.276038	CONSTRUCTION MANAGER: ANDREW HILGERSON
ZONING JURISDICTION: WATERFORD TOWNSHIP	RF ENGINEER: NAVEED SHERWANI
ZONING DISTRICT: TBD	
PARCEL NUMBER: 016-04-19-17-001-000	
OCCUPANCY GROUP: U	
CONSTRUCTION TYPE: II-B	
POWER COMPANY: WE ENERGIES	
TELEPHONE COMPANY: TBD	



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



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RFDS REV #: 3

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WATERFORD, WI 53185

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

WISCONSIN CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS 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 THESE CODES:

CODE TYPE	CODE
BUILDING	WISCONSIN CBC/2015 IBC W/ WI AMENDMENTS
MECHANICAL	WISCONSIN CBC/2015 IMC W/ WI AMENDMENTS
ELECTRICAL	WISCONSIN ELECTRICAL CODE/2017 NEC W/ WI AMENDMENTS

SITE PHOTO



DIRECTIONS

DIRECTIONS FROM GENERAL MITCHELL INTERNATIONAL AIRPORT:
HEAD EAST TOWARD ARRIVALS / BAGGAGE CLAIM, USE THE LEFT 2 LANES TO TURN SLIGHTLY LEFT ONTO ARRIVALS / BAGGAGE CLAIM, KEEP LEFT TO CONTINUE ON WI-119 W, TAKE THE I-41 N/1-894 W EXIT, CONTINUE ONTO I-41/1-43 S/1-894 W, USE THE LEFT LANE TO TAKE EXIT 4 FOR I-43 S/US-45 S TOWARD BELOIT, CONTINUE ONTO I-43 S/US-45 S, KEEP RIGHT TO CONTINUE ON I-43 S, TAKE EXIT 43 FOR WI-83 TOWARD WATERFORD/MUKWONAGO, TURN LEFT ONTO WI-83 S (SIGNS FOR WATERFORD), TURN LEFT ONTO CALDWELL RD, DESTINATION WILL BE ON THE RIGHT

VICINITY MAP



UNDERGROUND SERVICE ALERT - DIGGERS HOTLINE
UTILITY NOTIFICATION CENTER OF WISCONSIN
(800) 242-8511
WWW.DIGGERSHOTLINE.COM
CALL 3 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

GENERAL NOTES

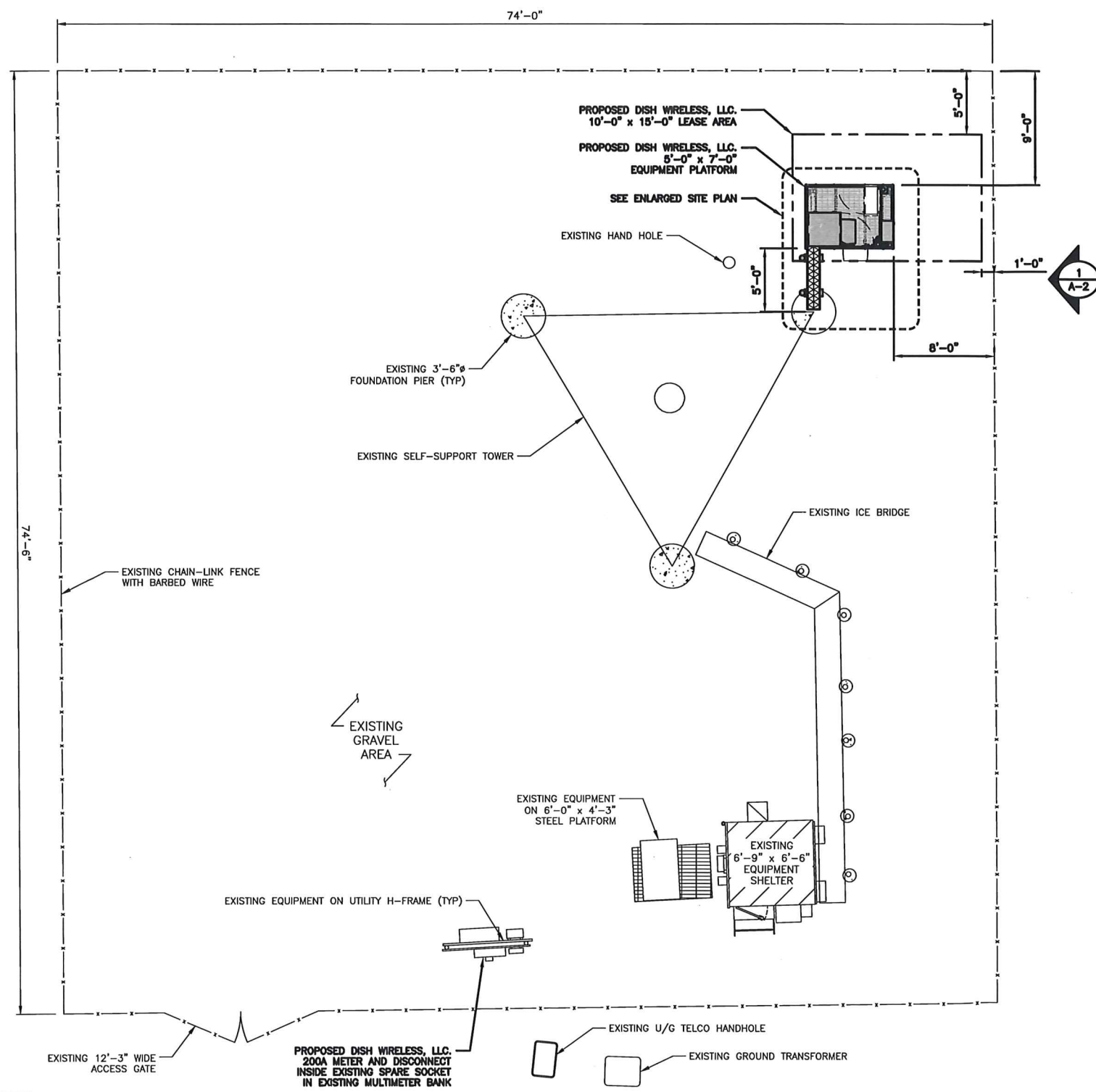
THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE. NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

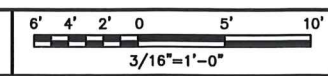
CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE, AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

SHEET INDEX

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
A-1	OVERALL AND ENLARGED SITE PLAN
A-2	ELEVATION, ANTENNA LAYOUT AND SCHEDULE
A-3	EQUIPMENT PLATFORM AND H-FRAME DETAILS
A-4	EQUIPMENT DETAILS
A-5	EQUIPMENT DETAILS
A-6	EQUIPMENT DETAILS
E-1	ELECTRICAL/FIBER ROUTE PLAN AND NOTES
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL ONE-LINE, FAULT CALCS, & PANEL SCHEDULE
G-1	GROUNDING PLANS AND NOTES
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS
RF-1	RF CABLE COLOR CODE
GN-1	LEGEND AND ABBREVIATIONS
GN-2	GENERAL NOTES
GN-3	GENERAL NOTES
GN-4	GENERAL NOTES



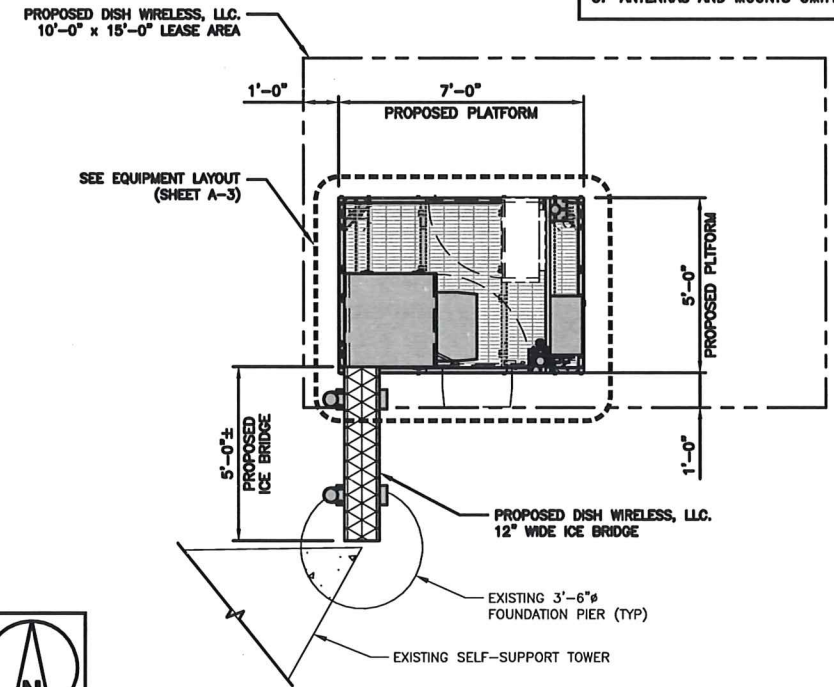
OVERALL SITE PLAN



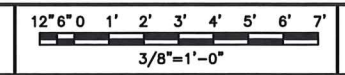
1

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



ENLARGED SITE PLAN



2



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SHEET TITLE
OVERALL AND ENLARGED SITE PLAN

SHEET NUMBER

A-1

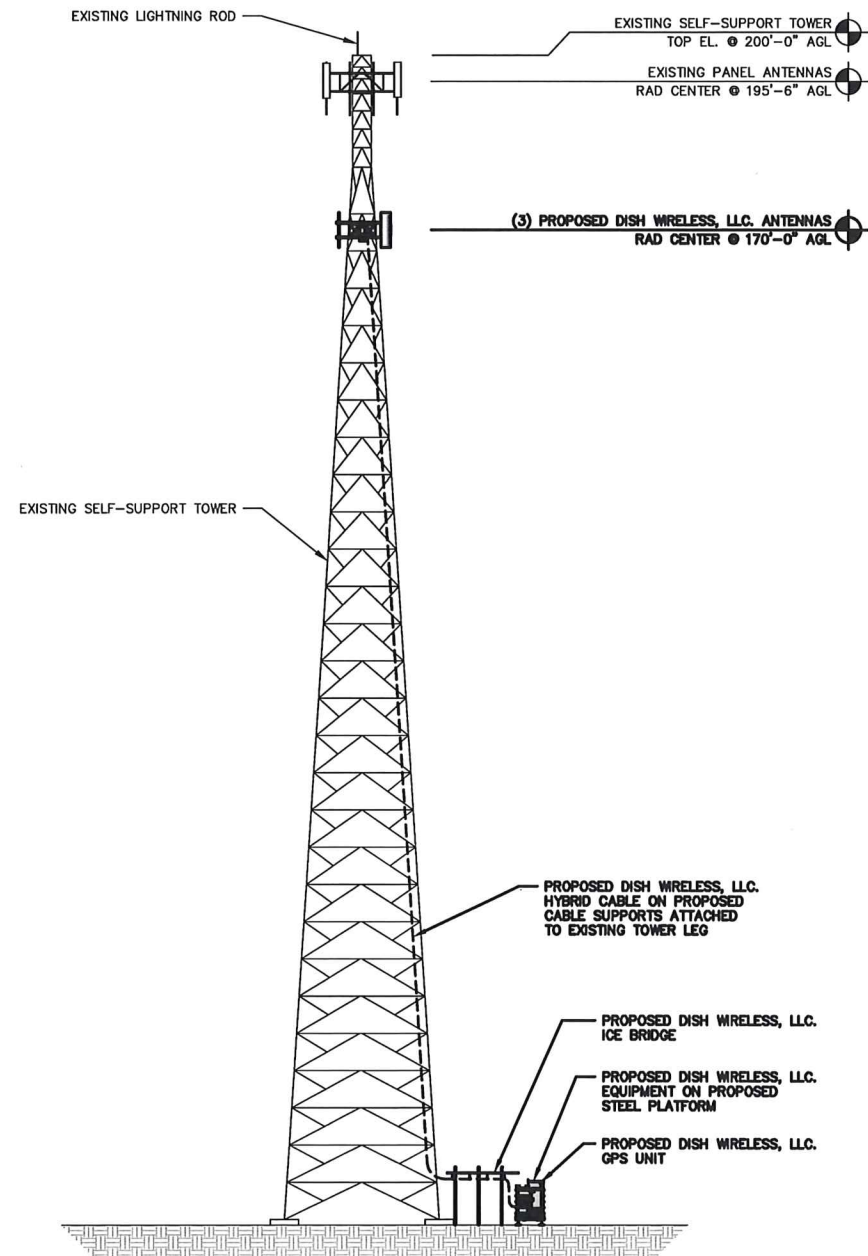
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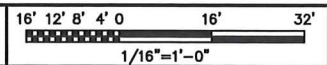
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NOTES

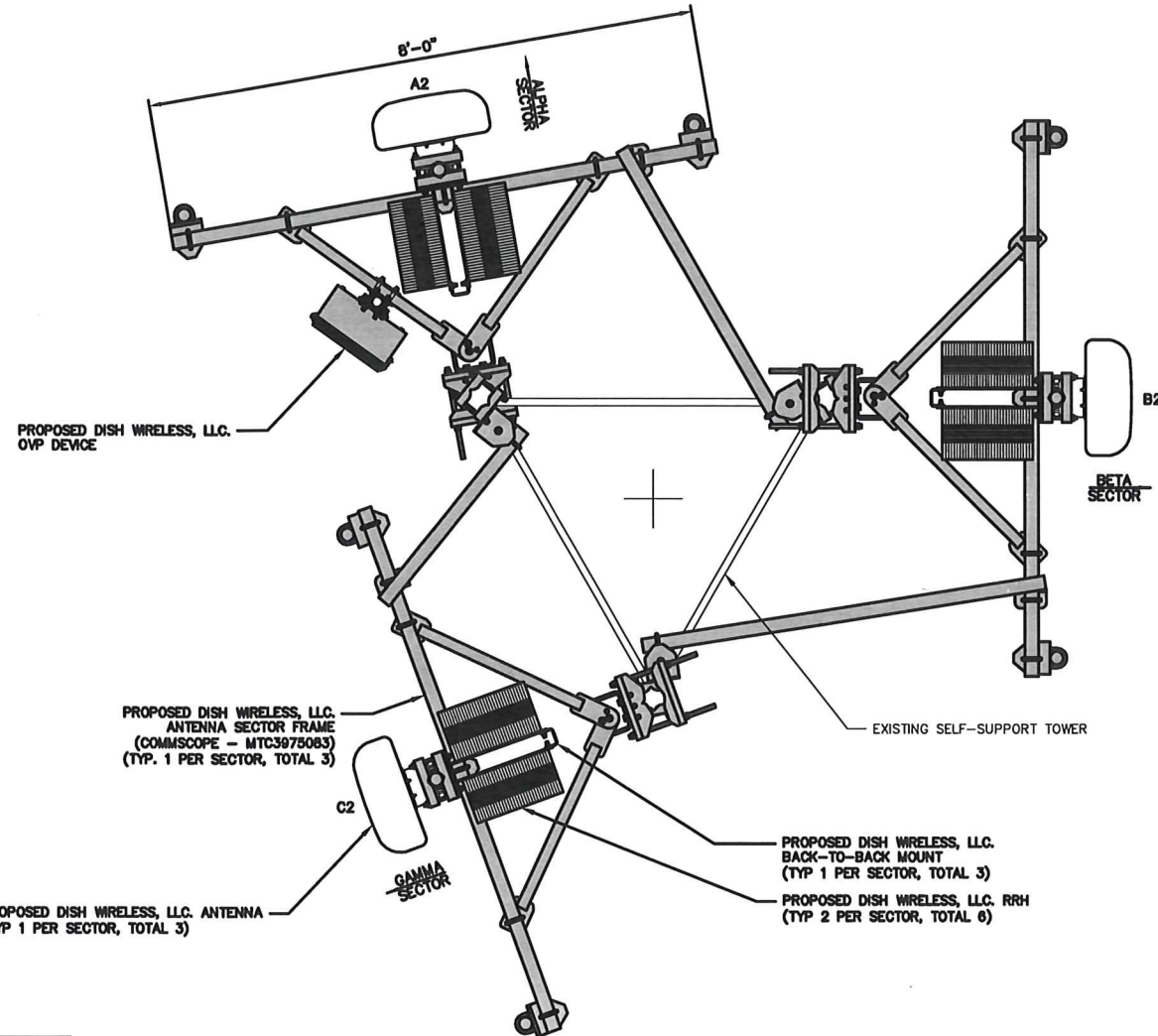
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



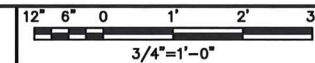
PROPOSED EAST ELEVATION



1



ANTENNA LAYOUT



2

SECTOR	POSITION	ANTENNA						TRANSMISSION CABLE
		EXISTING OR PROPOSED	MANUFACTURER - MODEL NUMBER	TECHNOLOGY	SIZE (HxW)	AZIMUTH	RAD CENTER	FEED LINE TYPE AND LENGTH
ALPHA	A2	PROPOSED	JMA - MX08FR0685-21	5G	72.0" x 20.0"	350°	170'-0"	(1) HIGH-CAPACITY HYBRID CABLE (200' LONG)
BETA	B2	PROPOSED	JMA - MX08FR0685-21	5G	72.0" x 20.0"	90°	170'-0"	
GAMMA	C2	PROPOSED	JMA - MX08FR0685-21	5G	72.0" x 20.0"	250°	170'-0"	
SECTOR	POSITION	RRH		NOTES				
		MANUFACTURER - MODEL NUMBER	TECHNOLOGY	1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS. 2. ANTENNA AND RRH MODELS MAY CHANGE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES. 3. VERIFY AZIMUTHS WITH LATEST DISH RFDS PRIOR TO INSTALLATION.				
ALPHA	A2	FUJITSU - TA08025-B604	5G					
ALPHA	A2	FUJITSU - TA08025-B605	5G					
BETA	B2	FUJITSU - TA08025-B604	5G					
BETA	B2	FUJITSU - TA08025-B605	5G					
GAMMA	C2	FUJITSU - TA08025-B604	5G					
GAMMA	C2	FUJITSU - TA08025-B605	5G					

ANTENNA SCHEDULE

NO SCALE 3



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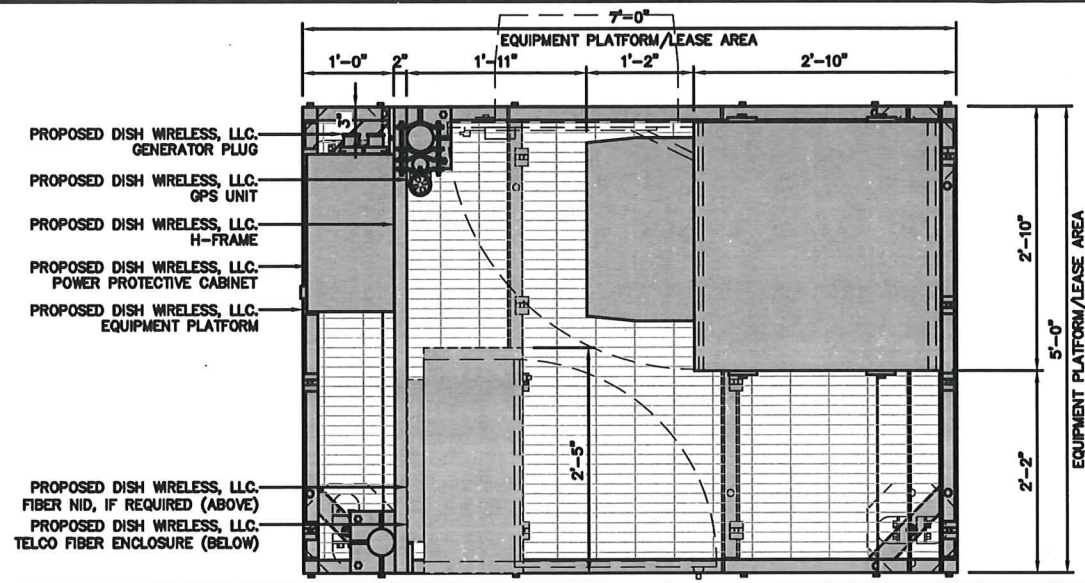
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WATERFORD, WI 53185

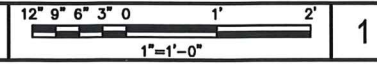
SHEET TITLE
ELEVATION, ANTENNA
LAYOUT AND SCHEDULE

SHEET NUMBER

A-2

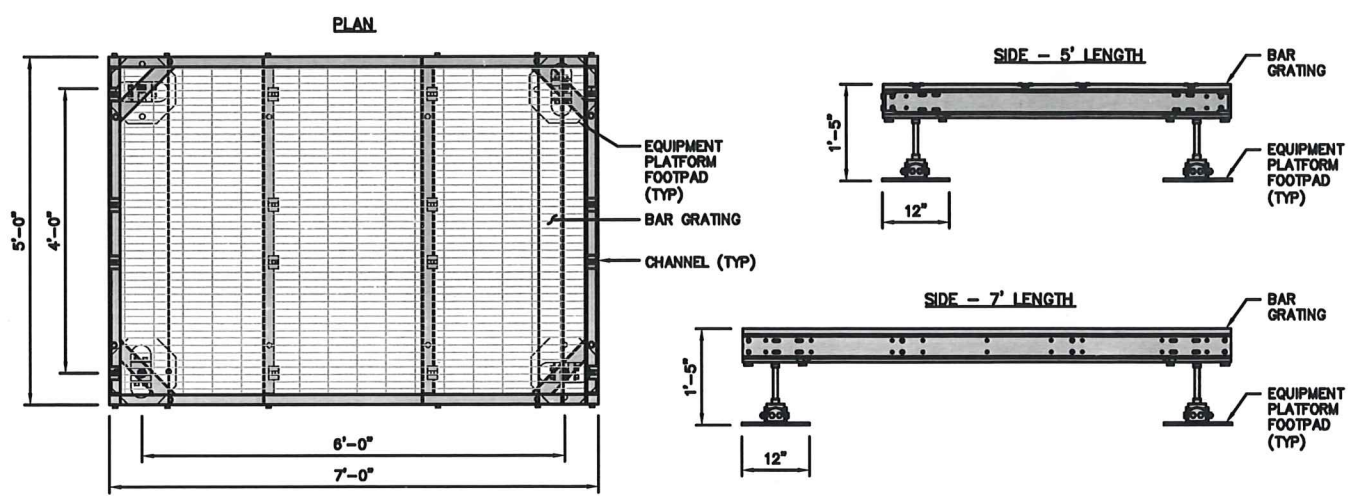


PLATFORM EQUIPMENT PLAN



1

COMMSCOPE MTC4045LP 5X7 PLATFORM	
DIMENSIONS (HxWxD)	16"x84"x60"
TOTAL WEIGHT	423 LBS

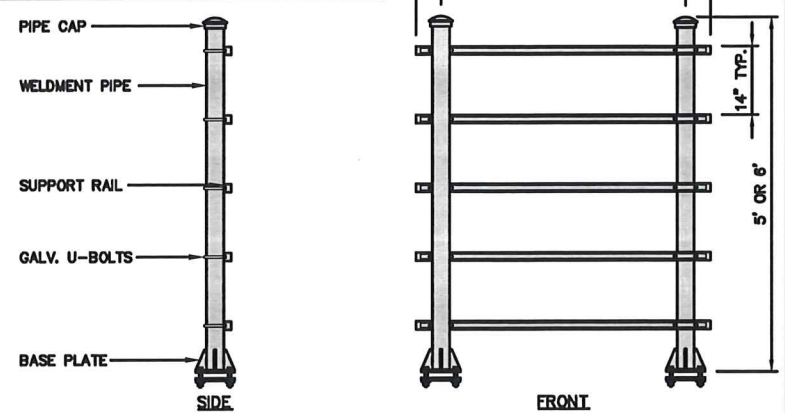


PLATFORM DETAIL

NO SCALE 2

COMMSCOPE MTC4045HFLD H-FRAME	
UNISTRUT/SUPPORT RAILS QTY	5
WEIGHT	59.74 lbs

NOTE:
OR DISH WIRELESS, LLC.
APPROVED EQUIVALENT



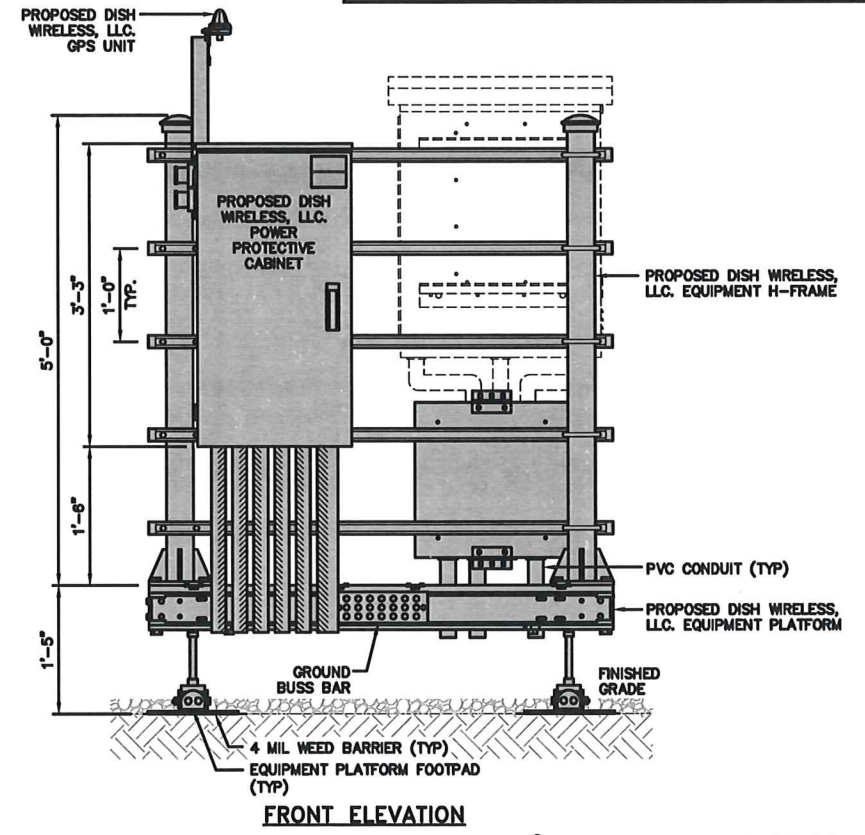
H-FRAME DETAIL

NO SCALE 3

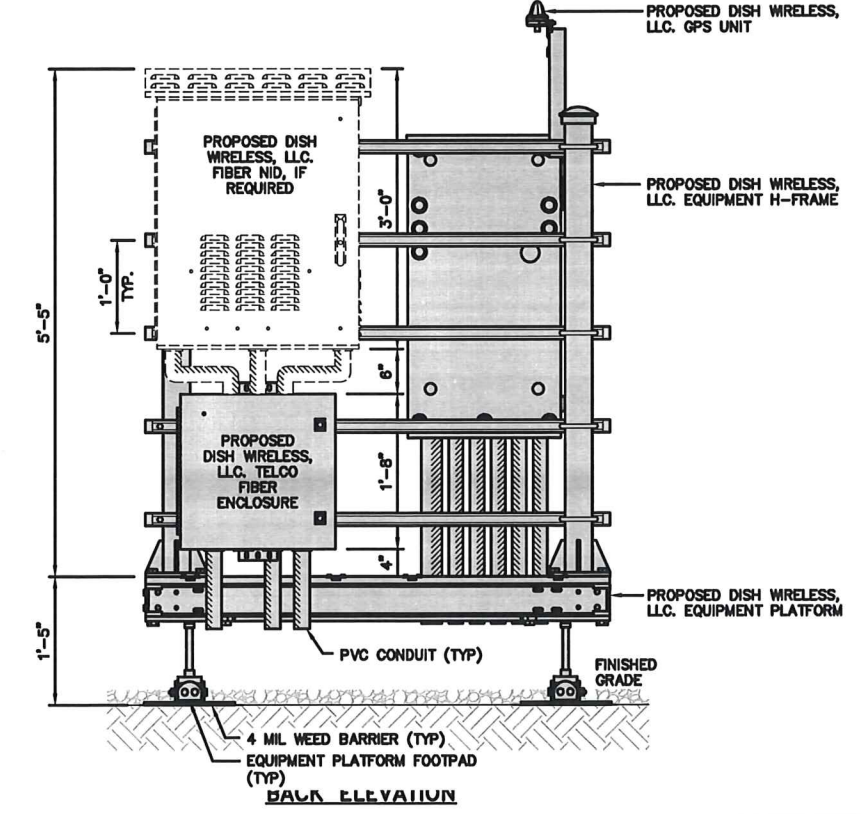
NOT USED

NO SCALE 4

- NOTES**
- CONTRACTOR TO BURY PLATFORM FEET WITH A MINIMUM OF 2" OF FILL PER EXISTING SITE SURFACE.
 - WEED BARRIER FABRIC TO BE ADDED AT DISCRETION OF DISH WIRELESS, LLC. CONSTRUCTION MANAGER AT TIME OF CONSTRUCTION. ONE SHEET 8'x8' INSTALLED UNDER ALL FOUR FEET OF THE PLATFORM (4 MIL BLACK PLASTIC).
 - EQUIPMENT CABINET OMITTED FOR CLARITY.

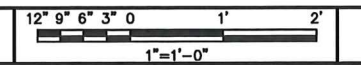


FRONT ELEVATION



BACK ELEVATION

H-FRAME EQUIPMENT ELEVATION



5



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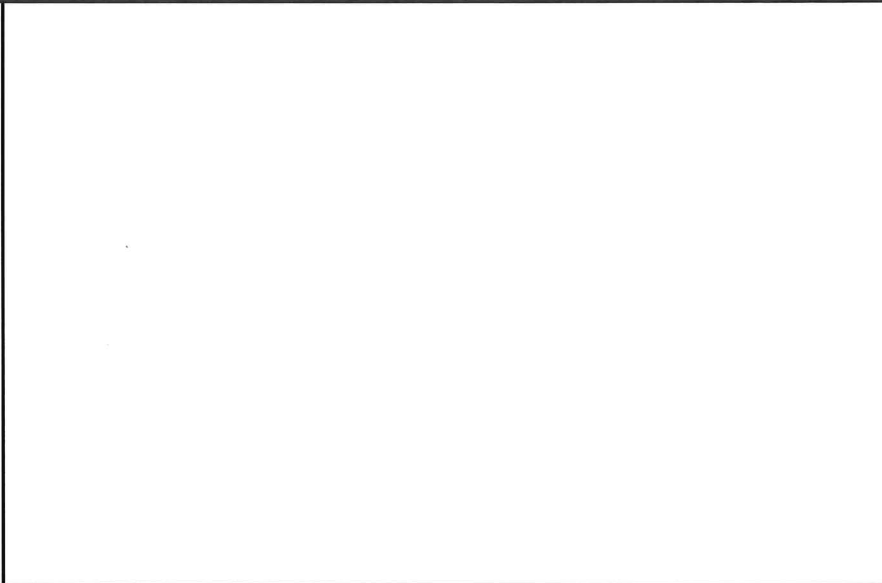
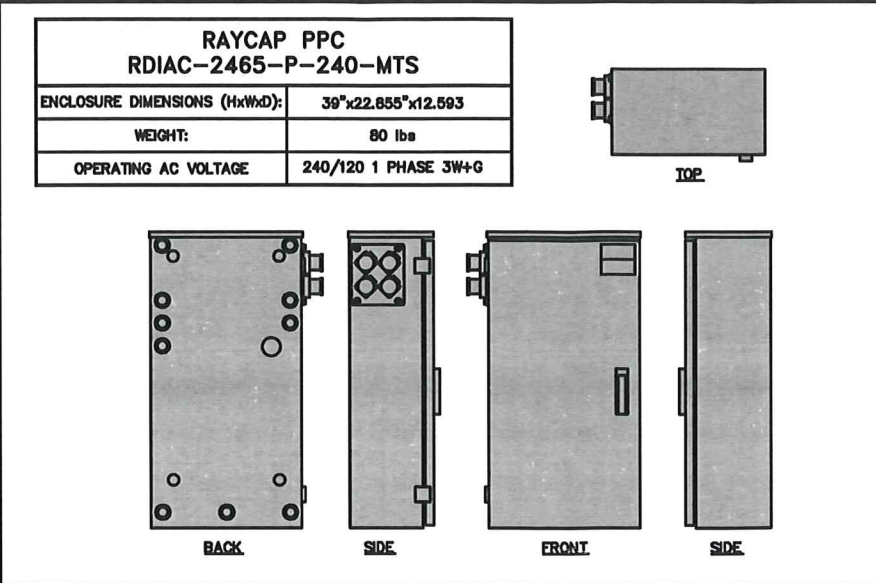
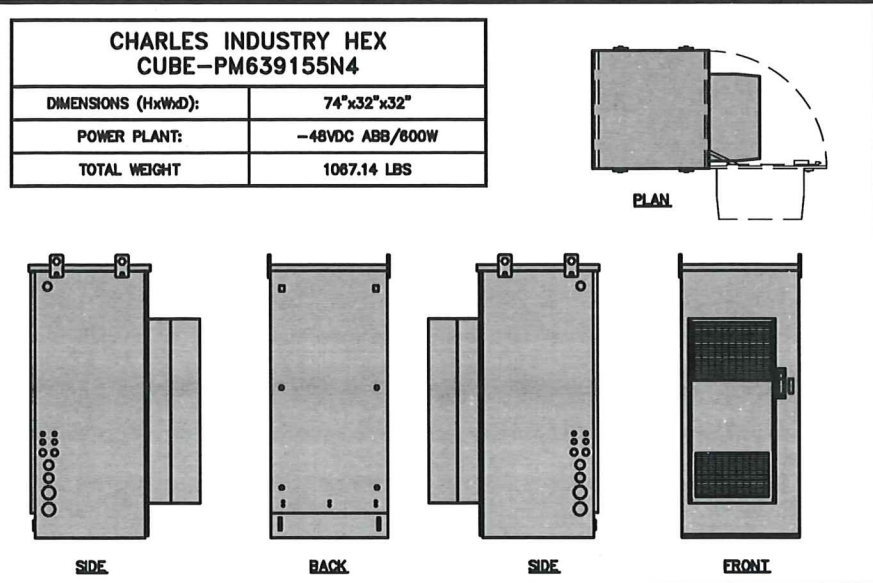
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SHEET NUMBER

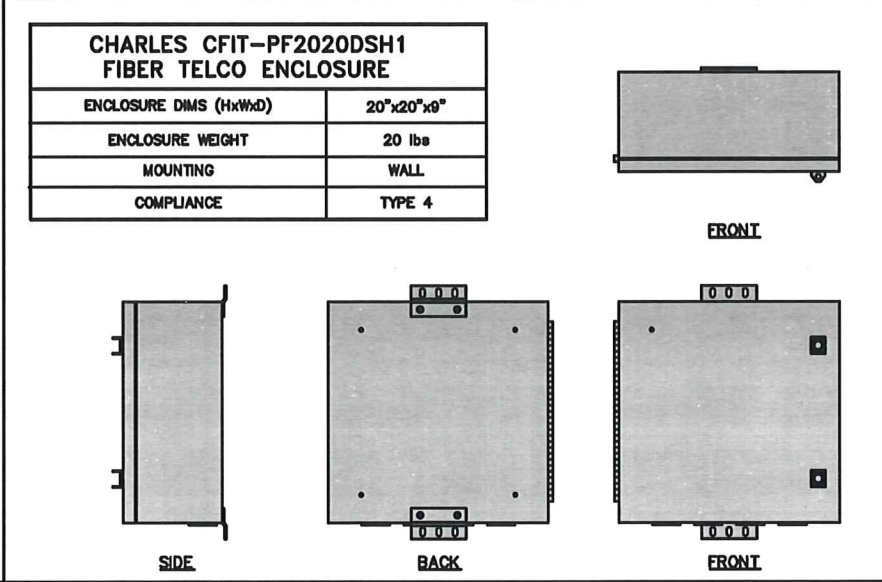
A-3



CABINET DETAIL NO SCALE 1

POWER PROTECTION CABINET (PPC) DETAIL NO SCALE 2

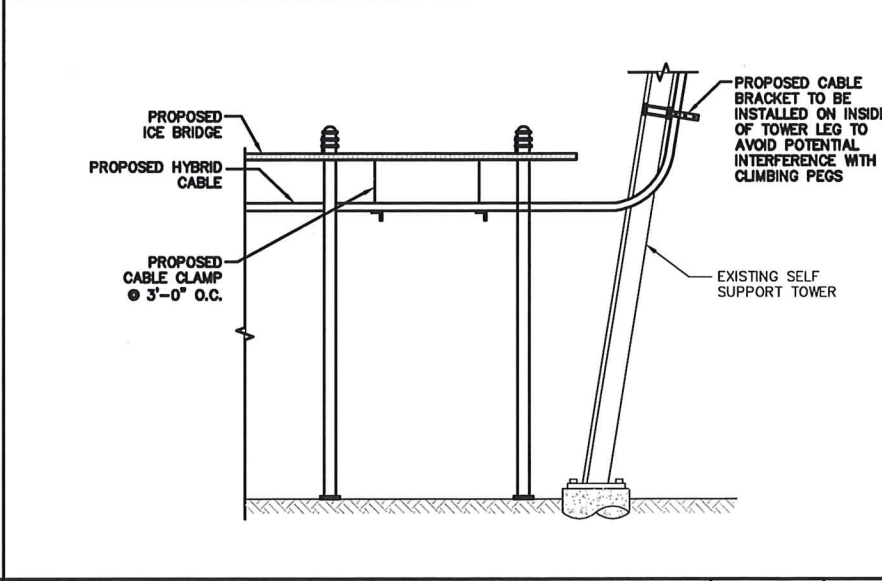
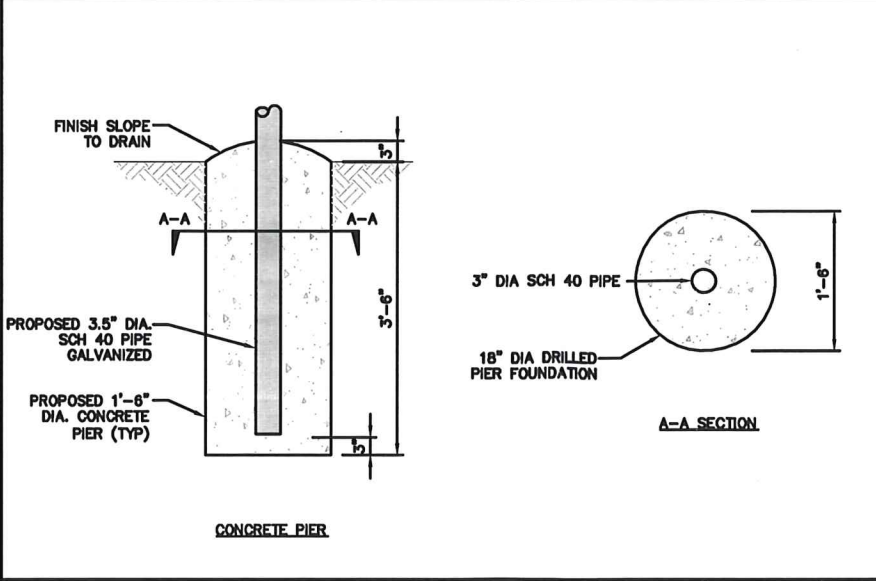
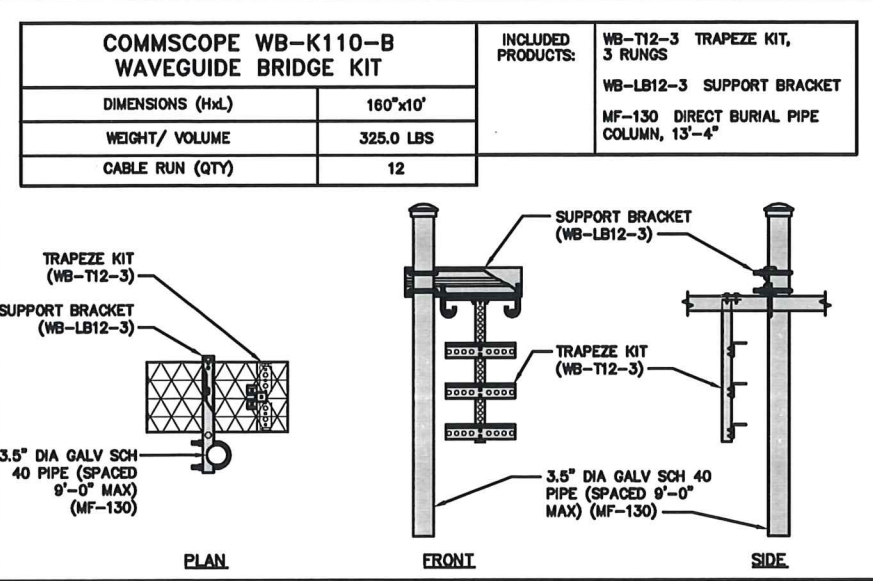
NOT USED NO SCALE 3



NOT USED NO SCALE 4

NOT USED NO SCALE 5

FIBER TELCO ENCLOSURE DETAIL NO SCALE 6



ICE BRIDGE DETAIL NO SCALE 7

TYPICAL ICE BRIDGE CONCRETE PIER DETAIL NO SCALE 8

HYBRID CABLE RUN NO SCALE 9

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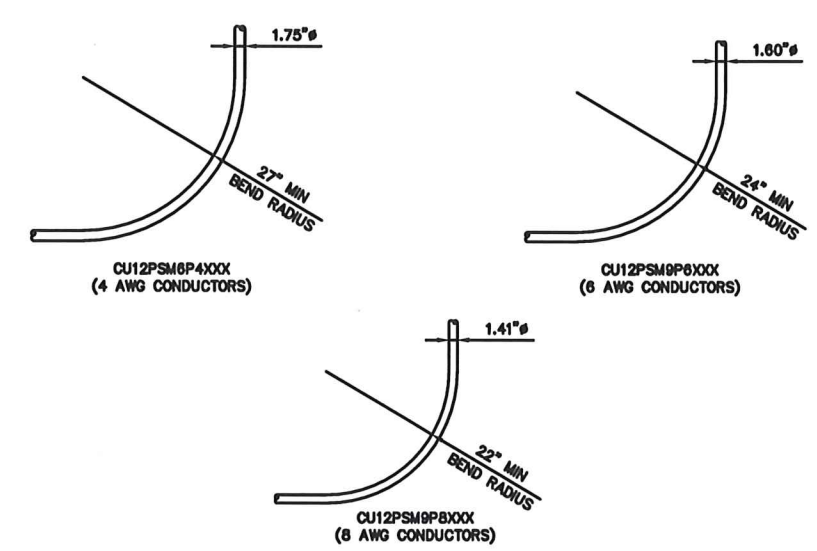
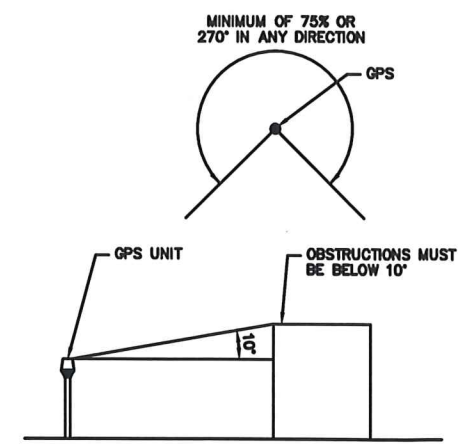
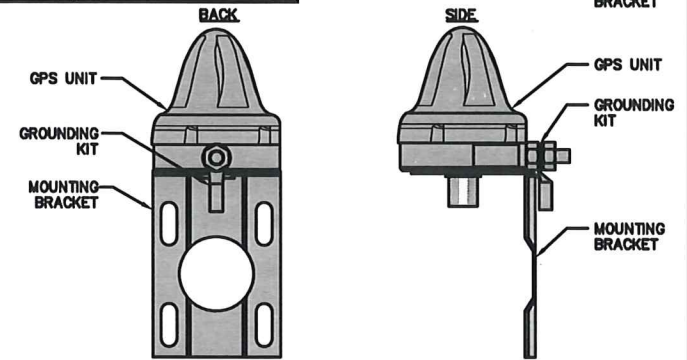
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SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-4

ROSENBERGER GPSGLONASS-36-N-S	
DIMENSION (DIA x H)	69mm x 98.5mm
WEIGHT (WITH ACCESSORIES)	515.74g
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1559 MHz ~ 1610.5MHz



GPS ANTENNA DETAIL NO SCALE 1

GPS MINIMUM SKY VIEW REQUIREMENTS NO SCALE 2

CABLES UNLIMITED HYBRID CABLE MINIMUM BEND RADIUSES NO SCALE 3

NOT USED NO SCALE 4

NOT USED NO SCALE 5

NOT USED NO SCALE 6

NOT USED NO SCALE 7

NOT USED NO SCALE 8

NOT USED NO SCALE 9

dish wireless.

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