



PLANS PREPARED BY:



CONSULTANT:

REV:	DATE:	DESCRIPTION:	BY:
A	08/19/13	PRELIM CD REVIEW	a.z.

ISSUE DATE:
AUG. 19. 2013

LICENSURE NO.:

A-1

PROJECT INFORMATION:

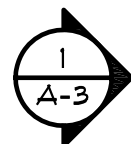
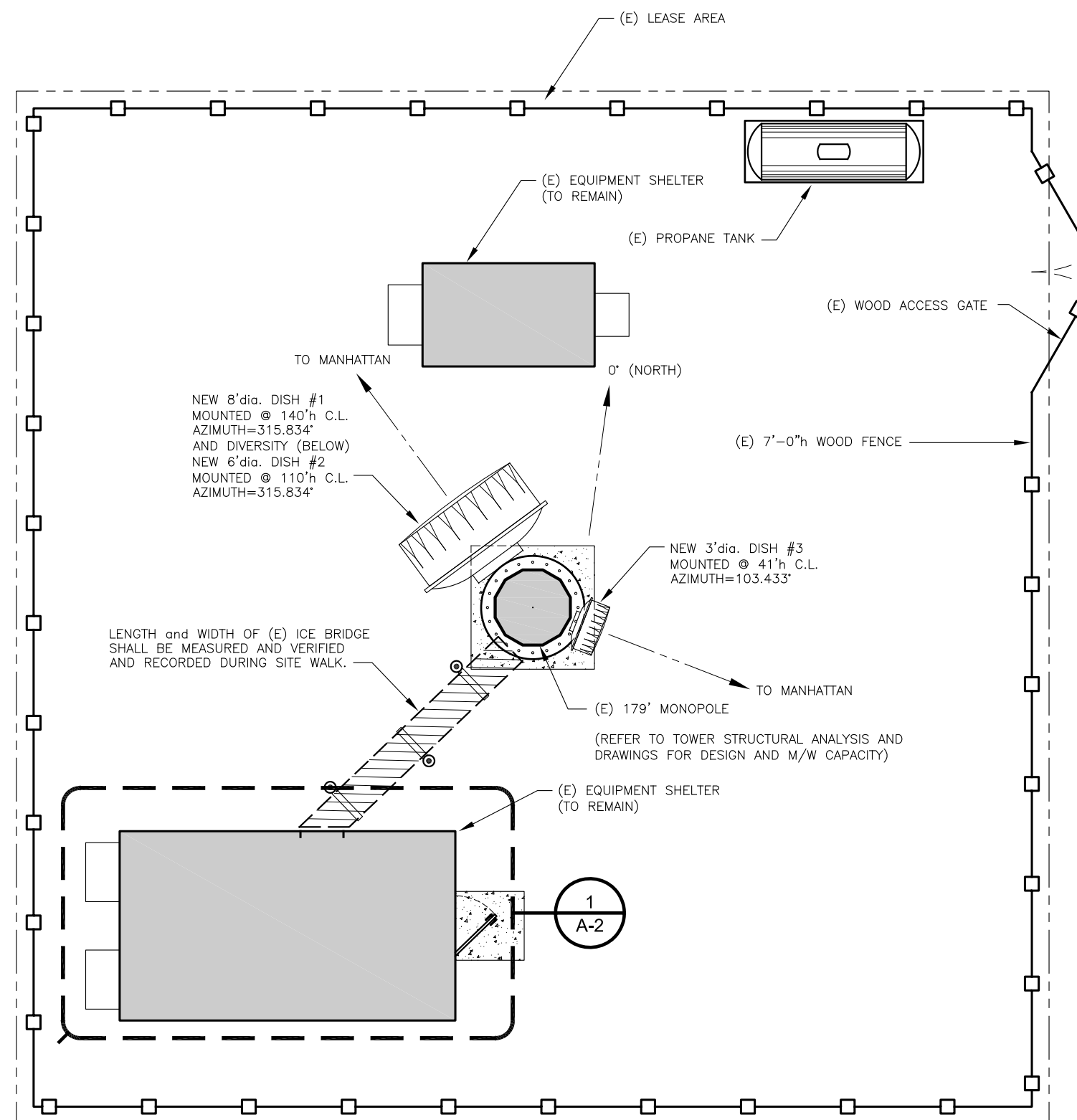
SITE NAME
BOZEMAN CENTRAL
SITE ID
MTU2807
FA LOCATION CODE
10139007
2826 W. COLLEGE ST.
BOZEMAN, MT 59715
179'H MONOPOLE

SHEET TITLE:

SITE PLAN

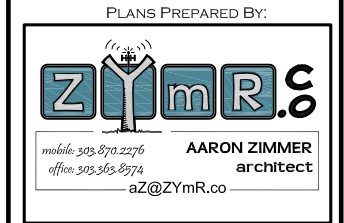
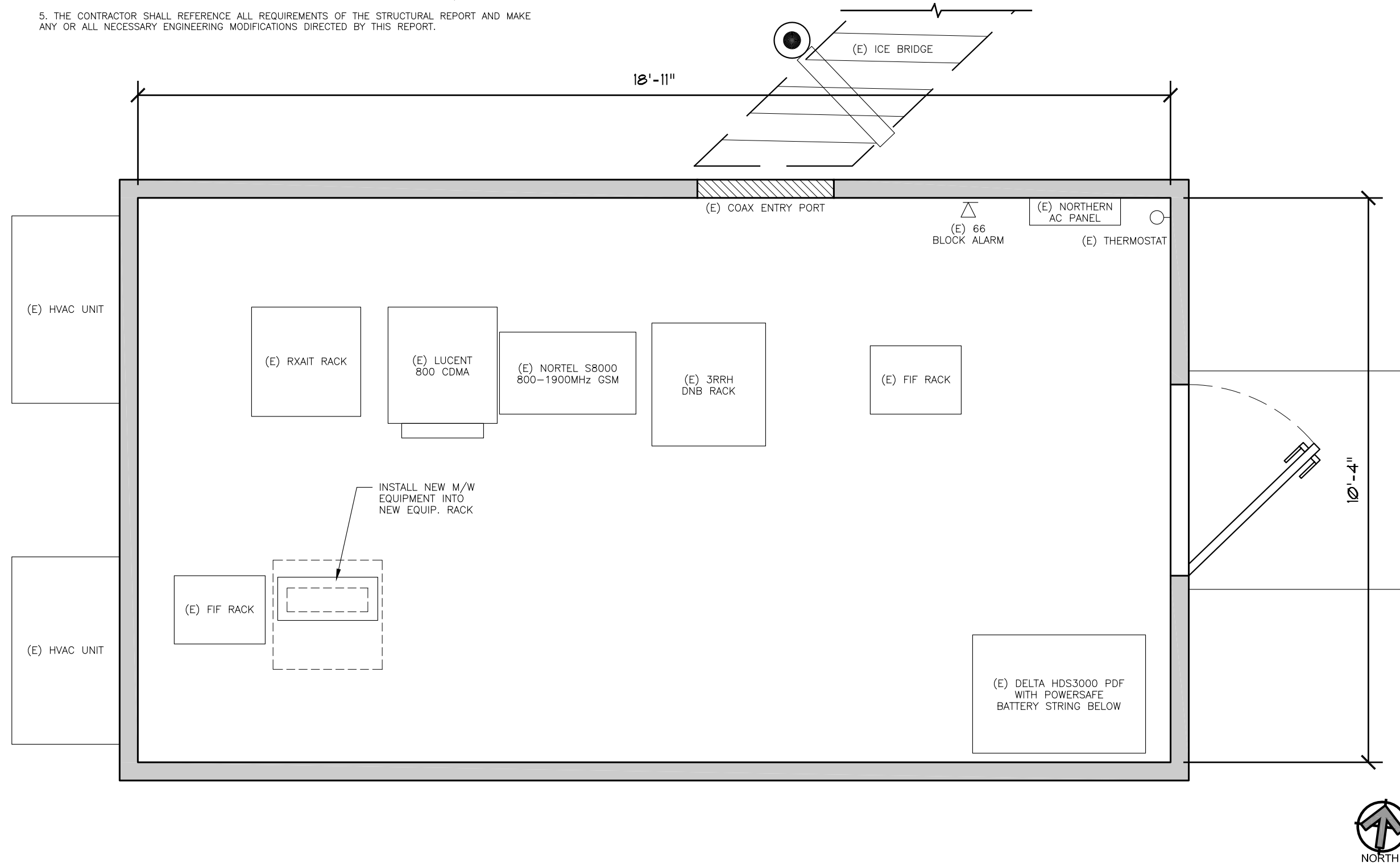
SHEET NUMBER:

A-1



NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO ANY CONSTRUCTION.
2. ALL EQUIPMENT AND SHELTER AS-BUILT INFORMATION WAS TAKEN FROM RECORD FILES FOUND IN SITERRA. ARCHITECT DOES NOT WARRANT THAT EXISTING CONDITIONS AND INSTALLATIONS MATCH THE AS-BUILT DRAWING PRESENTED IN THIS CD SET.
3. IF ANY DISCREPANCIES OR UNSOUND CONDITIONS ARE FOUND TO BE ON SITE, CONTRACTOR SHALL NOTIFY THE ARCHITECT FOR RESOLUTION PRIOR TO BEGINNING WORK.
4. AT&T IS RESPONSIBLE FOR PROVIDING OR ACQUIRING A STRUCTURAL ANALYSIS AND REPORT TO DETERMINE THE CAPACITY OF THE EXISTING TOWER AND THE EXISTING ANTENNA SUPPORT ASSEMBLY. THIS REPORT SHALL DETERMINE WHETHER THE EXISTING STRUCTURES ARE OF SOUND CONDITION TO SAFELY ACCOMMODATE THE PROPOSED ADDITIONAL LOADING OF THE NEW MICROWAVE DISHES AND ALL ASSOCIATED EQUIPMENT AS SHOWN IN THIS SET OF CD'S OR REFERENCED IN THE M/W DATA SHEET.
5. THE CONTRACTOR SHALL REFERENCE ALL REQUIREMENTS OF THE STRUCTURAL REPORT AND MAKE ANY OR ALL NECESSARY ENGINEERING MODIFICATIONS DIRECTED BY THIS REPORT.



CONSULTANT:

REV:	DATE:	DESCRIPTION:	BY:
A	08/19/13	PRELIM CD REVIEW	a.z.

ISSUE DATE:
AUG. 19. 2013

LICENSURE No.:

A-2

PROJECT INFORMATION:

SITE NAME
BOZEMAN CENTRAL

SITE ID
MTU2807

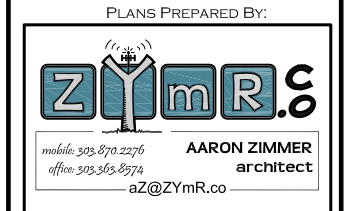
FA LOCATION CODE
10139007

2826 W. COLLEGE ST.
BOZEMAN, MT 59715

179'H MONOPOLE

SHEET TITLE:
EQUIPMENT AREA LAYOUT

SHEET NUMBER:
A-2



CONSULTANT:

REV.	DATE	DESCRIPTION	BY
A	08/19/13	PRELIM CD REVIEW	a.z.

ISSUE DATE:
AUG. 19. 2013

LICENSURE No.:

A-3

PROJECT INFORMATION:
 SITE NAME: **BOZEMAN CENTRAL**
 SITE ID: **MTU2807**
 FA LOCATION CODE: **10139007**
 2826 W. COLLEGE ST.
 BOZEMAN, MT 59715
 179'H MONOPOLE

SHEET TITLE:
ELEVATION, DETAILS AND NOTES

SHEET NUMBER:
A-3

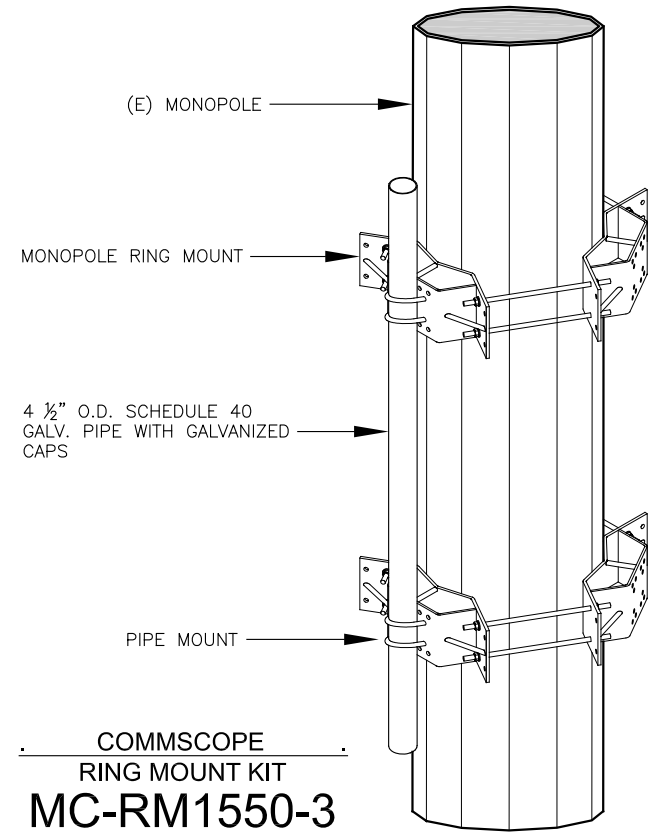
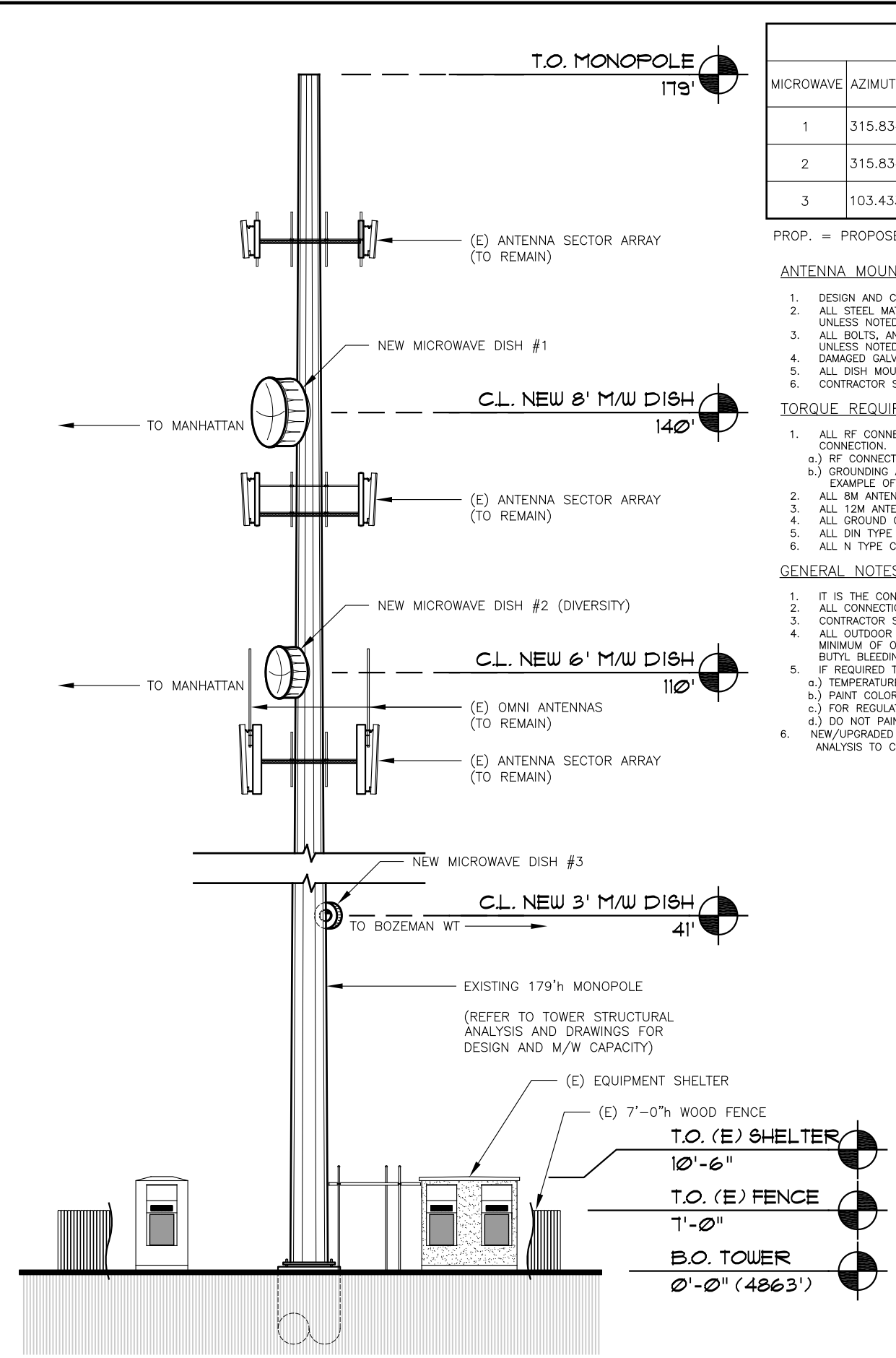
MICROWAVE	AZIMUTH	RAD C.L.	ANTENNA QUANTITY	MANUF.	MODEL	FREQUENCY	RADIO TYPE	TRANSMISSION LINE	LINE LENGTH	QTY LINES
1	315.834°	140'	1	COMMSCOPE	UHX8-59J LF	6093.4500V(16T)	95MPR61-H128F30-160	EW63	380'	1
2	315.834°	110'	1	COMMSCOPE	UHX6-59L LF	6093.4500V(16T)	95MPR61-H128F30-160	EW63	380'	1
3	103.433°	41'	1	COMMSCOPE	VHLPX3-11W	11265.0000V(2)	95MPR11-C128F40-221	EW90	91'	1

PROP. = PROPOSED DISH TO REPLACE (E) DISH
 TAKEN FROM MW PATH DATA SHEET (PCN) by COMSEARCH

- ANTENNA MOUNTING NOTES:**
- DESIGN AND CONSTRUCTION OF DISH SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222.
 - ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
 - ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS NOTED OTHERWISE.
 - DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING PER ASTM A780.
 - ALL DISH MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
 - CONTRACTOR SHALL INSTALL DISH AND GROUNDING PER MANUFACTURER'S RECOMMENDATION.

- TORQUE REQUIREMENTS:**
- ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH, AND SHALL HAVE A TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION.
 - RF CONNECTION BOTH SIDES OF THE CONNECTOR.
 - GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE.
EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET METAL.
 - ALL 8M ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (12 NM).
 - ALL 12M ANTENNA HARDWARE SHALL BE TIGHTENED TO 43 LB-FT (58 NM).
 - ALL GROUND GROUNDING HARDWARE SHALL BE TIGHTENED UNTIL THE LOCK WASHER COLLAPSES AND THE GROUNDING HARDWARE IS NO LONGER LOOSE.
 - ALL DIN TYPE CONNECTIONS SHALL BE TIGHTENED TO 18-22 LB-FT (24.4 - 29.8 NM).
 - ALL N TYPE CONNECTIONS SHALL BE TIGHTENED TO 15-20 LB-IN (1.7 - 2.3 NM).

- GENERAL NOTES:**
- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY DISH CONFIGURATION, MAKE AND MODELS PRIOR TO INSTALLATION.
 - ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER TOWER OWNER OR TOWER ANALYSIS RECOMMENDATIONS.
 - CONTRACTOR SHALL REFERENCE THE TOWER STRUCTURAL ANALYSIS/DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION/ROUTING.
 - ALL OUTDOOR RF CONNECTORS/CONNECTIONS SHALL BE WEATHERPROOFED USING BUTYL TAPE AFTER INSTALLATION AND FINAL CONNECTIONS MADE. BUTYL TAPE SHALL HAVE A MINIMUM OF ONE-HALF TAPE WIDTH OVERLAP ON EACH TURN AND EACH LAYER SHALL BE WRAPPED THREE TIMES. WEATHERPROOFING SHALL BE SMOOTH WITHOUT BUCKLING. BUTYL BLEEDING IS NOT ALLOWED.
 - IF REQUIRED TO PAINT DISH AND/OR COAX:
 - TEMPERATURE SHALL BE ABOVE 50°
 - PAINT COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.
 - FOR REGULATED TOWERS, FAA/FCC APPROVED PAINT IS REQUIRED.
 - DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS.
 - NEW/UPGRADED MICROWAVE DISHES ARE SHOWN FOR DESIGN AND PLACEMENT ONLY. CARRIER SHALL CONSULT A TOWER STRUCTURAL ANALYSIS TO CONFIRM IF EXISTING TOWER HAS ADEQUATE CAPACITY FOR THE DESIRED MICROWAVE INSTALLATION/CONFIGURATION.



- STIFF ARM and ICE SHIELD REQUIREMENTS:**
- INSTALL SIDE STRUT STABILIZER ARMS (FOR RADIOWAVES)
 - 2'-3' DISHES DO NOT REQUIRE STIFF ARMS UNLESS SUPPLIED BY MANUF.
 - INSTALL (1) STIFF ARM BRACKET FOR 4' MICROWAVE DISHES.
 - INSTALL (2) STIFF ARM BRACKETS FOR 6' and 8' MICROWAVE DISHES.
 - INSTALL (3) STIFF ARM BRACKETS FOR 10' MICROWAVE DISHES.
 - INSTALL ICE SHIELDS FOR ANTENNAS OR DISHES LARGER THAN 3'.
 - ICE SHIELDS LARGER THAN 6' REQUIRE A SEPARATE PIPE MOUNT.