



STATE OF CONNECTICUT  
*CONNECTICUT SITING COUNCIL*

Ten Franklin Square, New Britain, CT 06051  
Phone: (860) 827-2935 Fax: (860) 827-2950  
E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)  
Web Site: [portal.ct.gov/csc](http://portal.ct.gov/csc)

**VIA ELECTRONIC MAIL**

December 7, 2021

David Hoogasian  
Project Manager  
Network Building + Consulting, LLC  
100 Apollo Drive, Suite 303  
Chelmsford, MA 01824  
[dhoogasian@nbcllc.com](mailto:dhoogasian@nbcllc.com)

**RE: TS-DISH-105-211105** - Dish Wireless LLC request for an order to approve tower sharing at an existing telecommunications facility located at 61-1 Buttonball Road, Old Lyme, Connecticut. .

Dear Mr. Hoogasian:

The Connecticut Siting Council (Council) is in receipt of your correspondence of December 7, 2021 submitted in response to the Council's December 7, 2021 notification of an incomplete request for tower sharing with regard to the above-referenced matter.

The submission renders the request for tower sharing complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "Melanie A. Bachman".

Melanie A. Bachman  
Executive Director

MAB/IN/laf

**From:** David Hoogasian <dhoogasian@nbcllc.com>  
**Sent:** Tuesday, December 7, 2021 3:48 PM  
**To:** Robidoux, Evan <Evan.Robidoux@ct.gov>  
**Cc:** CSC-DL Siting Council <Siting.Council@ct.gov>  
**Subject:** RE: Council Incomplete Letter for TS-DISH-105-211105 (Buttonball Road, Old Lyme)

Good afternoon. Attached please find the requested documentation:

- Original Tower facility approval (CSC Docket No. 393 – Decision and Order)
- Project Narrative referencing the original facility approval
- Property owner record card
- PE Stamped CD's

A hard copy of these materials will be mailed in to you shortly.

If you have any questions or need any further information, please feel free to contact me.

**Thank you,**

**David Hoogasian**

*Project Manager*

**NETWORK BUILDING + CONSULTING**

100 Apollo Drive | Suite 303 | Chelmsford, MA | 01824  
M 508.344.3343



**DOCKET NO. 393** - T-Mobile Northeast, LLC application for a }  
Certificate of Environmental Compatibility and Public Need for }  
the construction, maintenance and operation of a }  
telecommunications facility located 61-1 Buttonball Road, Old }  
Lyme, Connecticut. }

Connecticut

Siting

Council

September 23, 2010

### **Decision and Order**

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, maintenance, and operation of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to T-Mobile Northeast, LLC (T-Mobile), hereinafter referred to as the Certificate Holder, for a telecommunications facility at the proposed site, located at 61-1 Buttonball Road, Old Lyme, Connecticut.

Unless otherwise approved by the Council, the facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The tower shall be constructed as a stealth monopole with flush-mounted antennas consistent with the agreement between T-Mobile and Black Hall Club, and no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of Certificate Holder and other entities, both public and private, but such tower shall not exceed a height of 100 feet above ground level. The height at the top of T-Mobile's antennas shall not exceed 100 feet above ground level.
2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Old Lyme for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
  - a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound including cedar fencing, radio equipment, access road, utility line, and landscaping; and
  - b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.
3. Prior to the commencement of operation, the Certificate Holder shall provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.
5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.
6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Old Lyme public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.
7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.
8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Old Lyme. Any proposed modifications to this Decision and Order shall likewise be so served.
9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.
10. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.
11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.
12. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.
13. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder\transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder\transferor and the transferee shall provide the Council a written agreement as to the

entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in *The Day*.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with Section 16-50j-17 of the Regulations of Connecticut State Agencies.

The parties and intervenors to this proceeding are:

**Applicant**

T-Mobile Northeast, LLC

**Its Representative**

Julie D. Kohler, Esq.  
Monte E. Frank, Esq.  
Jesse A. Langer, Esq.  
Cohen and Wolf, P.C.  
1115 Broad Street  
Bridgeport, CT 06604

**Party**

Town of Old Lyme

**Its Representative**

The Honorable Timothy G. Griswold  
Office of the Selectman  
Town of Old Lyme  
52 Lyme Street  
Old Lyme, CT 06371

**Intervenor**

Black Hall Club

**Its Representative**

Keith R. Ainsworth, Esq.  
Evans Feldman & Ainsworth, LLC  
261 Bradley Street  
P.O. Box 1694  
New Haven, CT 06507-1694

December 7, 2021

Melanie A. Bachman  
Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

Re: Request of DISH Wireless LLC for an Order to Approve the Shared Use of an Existing Tower  
61-1 Buttonball Road, Old Lyme, CT 06371  
Latitude: 41°17'46.3" / Longitude: -72°18'01.5"

Dear Ms. Bachman:

Pursuant to Connecticut General Statutes ("C.G.S.") §16-50aa, as amended, DISH Wireless LLC ("DISH") hereby requests an order from the Connecticut Siting Council ("Council") to approve the shared use by DISH of an existing telecommunication tower at 61-1 Buttonball Road in Old Lyme (the "Property"). The existing 100-foot monopole tower is owned by American Tower Corporation ("ATC"). The underlying property is owned by Landmark Dividend LLC. DISH requests that the Council find that the proposed shared use of the ATC tower satisfies the criteria of C.G.S. §16-50aa and issue an order approving the proposed shared use. A copy of this filing is being sent to Timothy C. Griswold, First Selectman for the Town of Old Lyme, Mark Wayland, Town of Old Lyme Building Official and Landmark Dividend LLC as the property owner.

### **Background**

This facility was approved by the Council under Docket No. 393 on September 23, 2010. A copy of the Decision and Order is included in the filing attachments. The existing ATC facility consists of a 100-foot monopole tower located within an existing leased area. T-Mobile currently maintains antennas at the 95-foot level. Equipment associated with these antennas are located at various positions within the tower and compound.

DISH is licensed by the Federal Communications Commission ("FCC") to provide wireless services throughout the State of Connecticut. DISH and Crown Castle have agreed to the proposed shared use of the 61-1 Buttonball Road tower pursuant to mutually acceptable terms and conditions. Likewise, DISH and ATC have agreed to the proposed installation of equipment cabinets on the ground within the existing compound. ATC has authorized DISH to apply for all necessary permits and approvals that may be required to share the existing tower.  
(See attached Letter of Authorization)

DISH proposes to install three (3) antennas, (1) Tower platform mount, (6) Remote radio units at the 74-foot level along with (1) over voltage protection device (OVP) and (1) Hybrid cable. DISH will install an equipment cabinet on a 5'x7' equipment platform. DISH's Construction Drawings provide project specifications for all proposed site improvement locations. The construction drawings also include specifications for DISH's proposed antenna and ground work.

C.G.S. § 16-50aa(c)(1) provides that, upon written request for approval of a proposed shared use, "if the Council finds that the proposed shared use of the facility is technically, legally, environmentally and economically feasible and meets public safety concerns, the council shall issue an order approving such a shared use." DISH respectfully submits that the shared use of the tower satisfies these criteria.

**A. Technical Feasibility.** The existing ATC tower is structurally capable of supporting DISH's proposed improvements. The proposed shared use of this tower is, therefore, technically feasible. A Feasibility Structural Analysis Report ("Structural Report") prepared for this project confirms that this tower can support DISH's proposed loading. A copy of the Structural Report has been included in this application.

**B. Legal Feasibility.** Under C.G.S. § 16-50aa, the Council has been authorized to issue order approving the shared use of an existing tower such as the ATC tower. This authority complements the Council's prior-existing authority under C.G.S. § 16-50p to issue orders approving the construction of new towers that are subject to the Council's jurisdiction. In addition, § 16-50x(a) directs the Council to "give such consideration to the other state laws and municipal regulations as it shall deem appropriate" in ruling on requests for the shared use of existing tower facilities. Under the statutory authority vested in the Council, an order by the Council approving the requested shared use would permit the Applicant to obtain a building permit for the proposed installations.

**C. Environmental Feasibility.** The proposed shared use of the ATC tower would have a minimal environmental effect for the following reasons:

1. The proposed installation will have no visual impact on the area of the tower. DISH's equipment cabinet would be installed within the existing facility compound. DISH's shared use of this tower therefore will not cause any significant change or alteration in the physical or environmental characteristics of the existing site.
2. Operation of DISH's antennas at this site would not exceed the RF emissions standard adopted by the Federal Communications Commission ("FCC"). Included in the EME report of this filing are the approximation tables that demonstrate that DISH's proposed facility will operate well within the FCC RF emissions safety standards.
3. Under ordinary operating conditions, the proposed installation would not require the use of any water or sanitary facilities and would not generate air emissions or discharges to water bodies or sanitary facilities. After construction is complete the proposed installations would not generate any increased traffic to the ATC facility other than periodic maintenance. The proposed shared use of the ATC tower, would, therefore, have a minimal environmental effect, and is environmentally feasible.

D. **Economic Feasibility.** As previously mentioned, DISH has entered into an agreement with ATC for the shared use of the existing facility subject to mutually agreeable terms. The proposed tower sharing is, therefore, economically feasible.

E. **Public Safety Concerns.** As discussed above, the tower is structurally capable of supporting DISH's full array of three (3) antennas, (1) Tower platform mount, (6) Remote radio units, (1) over voltage protection device (OVP) and (1) Hybrid cable and all related equipment. DISH is not aware of any public safety concerns relative to the proposed sharing of the existing ATC tower

### **Conclusion**

For the reasons discussed above, the proposed shared use of the existing ATC tower at 61-1 Buttonball Road in satisfies the criteria stated in C.G.S. §16-50aa and advances the Council's goal of preventing the unnecessary proliferation of towers in Connecticut. The Applicant, therefore, respectfully requests that the Council issue an order approving the proposed shared use.

Sincerely,

*David Hoogasian*

**David Hoogasian**  
*Project Manager*



# 61-1X BUTTONBALL RD

**Location** 61-1X BUTTONBALL RD

**Mblu** 8 / 11 / 1X /

**Acct#** 00017715

**Owner** LANDMARK DIVIDEND LLC

**Assessment** \$447,000

**Appraisal** \$638,500

**PID** 102970

**Building Count** 1

## Current Value

Appraisal		
Valuation Year	Improvements	Land
2019	\$238,500	\$400,000
<b>Total</b> \$638,500		
Assessment		
Valuation Year	Improvements	Land
2019	\$167,000	\$280,000
<b>Total</b> \$447,000		

**Map Links**

All locations identified on Google, Yahoo, and Bing maps are approximate and may not be exact

Go To Google Maps  
(<http://maps.google.com/?q=61-1X%20BUTTONBALL%20RD%20,%>)

Go To Yahoo Maps  
(<http://maps.yahoo.com/#q=61-1X%20BUTTONBALL%20RD%20,%>)

Go To Microsoft Bing Maps  
(<http://www.bing.com/maps/?q=61-1X%20BUTTONBALL%20RD%20,%>)

## Owner of Record

**Owner** LANDMARK DIVIDEND LLC      **Sale Price** \$400,000  
**Co-Owner**      **Certificate**  
**Address** PO BOX 3429      **Book & Page** 431/996  
 400 CONTINENTAL BLVD STE 500      **Sale Date** 01/16/2020  
 EL SEGUNDO , CA 90245      **Instrument** 25

## Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
LANDMARK DIVIDEND LLC	\$400,000		431/996	25	01/16/2020

## Building Information

### Building 1 : Section 1

**Year Built:**  
**Living Area:** 0  
**Replacement Cost:** \$0  
**Building Percent Good:**  
**Replacement Cost**  
**Less Depreciation:** \$0

Building Attributes	
Field	Description
Style:	
Model	
Grade:	
Stories:	

Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Cndtn	
Num Park	
Fireplaces	
Fndtn Cndtn	
Basement	

### Building Photo



(<http://images.vgsi.com/photos/OldLymeCTPhotos/default.jpg>)

### Building Layout

Building Layout

([http://images.vgsi.com/photos/OldLymeCTPhotos/Sketches/102970\\_1024](http://images.vgsi.com/photos/OldLymeCTPhotos/Sketches/102970_1024))

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

### Extra Features

Extra Features	Legend
No Data for Extra Features	

### Land

#### Land Use

**Use Code** 4340  
**Description** CELL TWR  
**Zone** RU80  
**Neighborhood**  
**Alt Land Appr** No  
**Category**

#### Land Line Valuation

**Size (Acres)** 0.00  
**Frontage**  
**Depth**  
**Assessed Value** \$280,000  
**Appraised Value** \$400,000

### Outbuildings

Outbuildings						Legend
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
ARRY	CELL ARRAY			2.00 UNITS	\$153,000	1
TWR	CELL TOWER			100.00 L.F.	\$85,500	1

### Valuation History

<b>Appraisal</b>			
<b>Valuation Year</b>	<b>Improvements</b>	<b>Land</b>	<b>Total</b>
2020	\$238,500	\$400,000	\$638,500

<b>Assessment</b>			
<b>Valuation Year</b>	<b>Improvements</b>	<b>Land</b>	<b>Total</b>
2020	\$167,000	\$280,000	\$447,000



DISH Wireless L.L.C. SITE ID:

**BOBOS00020A**

DISH Wireless L.L.C. SITE ADDRESS:

**61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371**

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).

**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 PANEL ANTENNAS (1 PER SECTOR)
  - INSTALL (1) PROPOSED TOWER PLATFORM MOUNT
  - INSTALL PROPOSED JUMPERS
  - INSTALL (6) PROPOSED RRUs (2 PER SECTOR)
  - INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
  - INSTALL (1) PROPOSED HYBRID CABLE

- GROUND SCOPE OF WORK:**
- INSTALL (1) PROPOSED METAL PLATFORM
  - INSTALL (1) PROPOSED ICE BRIDGE
  - 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 FIBER NID (IF REQUIRED)
  - INSTALL (1) PROPOSED METER SOCKET

**SITE INFORMATION**

PROPERTY OWNER: RON SOANEY LLC  
 ADDRESS: 59 BUTTONBALL ROAD  
 OLD LYME, CT 06371

TOWER TYPE: MONOPOLE

TOWER CO SITE ID: 284983

TOWER APP NUMBER: 13692735

COUNTY: NEW LONDON

LATITUDE (NAD 83): 41° 17' 46.31" N  
 41.296198 N

LONGITUDE (NAD 83): 72° 18' 01.20" W  
 72.300332 W

ZONING JURISDICTION: CITY OF OLD LYME

ZONING DISTRICT: INDUSTRIAL/COMMERCIAL

PARCEL NUMBER: 8-11-1

OCCUPANCY GROUP: U

CONSTRUCTION TYPE: II-B

POWER COMPANY: T.B.D.

TELEPHONE COMPANY: T.B.D.

**PROJECT DIRECTORY**

APPLICANT: DISH Wireless L.L.C.  
 5701 SOUTH SANTA FE DRIVE  
 LITTLETON, CO 80120

TOWER OWNER: AMERICAN TOWER CORPORATION  
 10 PRESIDENTIAL WAY  
 WOBURN, MA 01801  
 (781) 926-4500

SITE DESIGNER: B+T GROUP  
 1717 S. BOULDER AVE, SUITE 300  
 TULSA, OK 74119  
 (918) 587-4630

SITE ACQUISITION: APRIL PARROTT  
 april.parrott@dish.com

CONSTRUCTION MANAGER: JAVIER SOTO  
 javier.soto@dish.com

RF ENGINEER: ARVIN SEBASTIAN  
 arvin.sebastian@dish.com



5701 SOUTH SANTA FE DRIVE  
 LITTLETON, CO 80120



10/18/21

B&T ENGINEERING, INC.  
 PEC.0001564  
 Expires 2/10/22

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.

DRAWN BY: AP  
 CHECKED BY: GLS  
 APPROVED BY: GLS

RFDS REV #: ---

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	7/29/21	ISSUED FOR REVIEW
0	10/18/21	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
 153547.001.01

DISH Wireless L.L.C.  
 PROJECT INFORMATION  
 BOBOS00020A  
 61-1 BUTTONBALL ROAD  
 OLD LYME, CT 06371

SHEET TITLE  
 TITLE SHEET

SHEET NUMBER  
**T-1**

**CONNECTICUT 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	2018 CT STATE BUILDING CODE/2015 IBC W/ CT AMENDMENTS
MECHANICAL	2018 CT STATE BUILDING CODE/2015 IMC W/ CT AMENDMENTS
ELECTRICAL	2018 CT STATE BUILDING CODE/2017 NEC W/ CT AMENDMENTS

**SITE PHOTO**



**DIRECTIONS**

DIRECTIONS FROM CHESTER AIRPORT:  
 GET ON CT-9 S FROM CT-145 N AND CT-148 E/W MAIN ST, HEAD NORTHWEST ON CHESTER AIRPORT TOWARD CT-145 N, TURN RIGHT ONTO CT-145 N, TURN RIGHT ONTO CT-148 E/W MAIN ST, TURN RIGHT TO MERGE WITH CT-9 S TOWARD OLD SAYBROOK, CONTINUE ON CT-9 S TO OLD LYME, TAKE EXIT 70 FROM I-95 N/US-1 N, MERGE WITH CT-9 S, USE THE LEFT 2 LANES TO MERGE WITH I-95 N/US-1 N TOWARD NEW LONDON/PROVIDENCE, TAKE EXIT 70 TO MERGE WITH CT-156 E, CONTINUE ON CT-156 E TO YOUR DESTINATION, MERGE WITH CT-156 E, TURN LEFT ONTO BUTTONBALL RD, TURN RIGHT, ARRIVING AT BOBOS00020A.

**VICINITY MAP**



**UNDERGROUND SERVICE ALERT CBYD 811**  
 UTILITY NOTIFICATION CENTER OF CONNECTICUT  
 (800) 922-4455  
 WWW.CBYD.COM



CALL 2 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.

**PROJECT SUMMARY**

**CLIENT/PROJECT NAME:** ATC TOWER  
**SITE ADDRESS:** 61-1 BUTTONBALL ROAD, OLD LYME, CT 06371

**PARCEL INFORMATION:**  
 OTHER: FISH SWANEY, LLC, A LIMITED LIABILITY COMPANY, 16 TO FISH SWANEY INTEREST IN TOWER PARCEL, ID 811119  
 MUNICIPAL: FISH SWANEY, LLC, A DELAWARE LIMITED LIABILITY COMPANY, 45 TO LEASEHOLD INTEREST IN TOWER PARCEL, ID 811119  
 RONALD J. SWANEY, 45 TO FISH SWANEY INTEREST IN ACCESS PARCEL, ID 811119  
 OWNER ADDRESS: 61-1 BUTTONBALL ROAD, OLD LYME, CT 06371  
 APN: PARENT TOWER PARCEL, 811119 ACCESS PARCEL, 811119

**TOTAL AREA:**  
 GROSS AREA: 5,375 SQ. FT. OR 0.123 ACRES  
 ATC FEE AREA: 5,375 SQ. FT. OR 0.123 ACRES

**COORDINATE COORDINATES OF TOWER:**  
 LATITUDE: 41°17'48.29" N      LONGITUDE: 72°58'17" W  
 VERTICAL DATUM: NAVD83      HORIZONTAL DATUM: NAD83  
 GROUND ELEVATION: 42'

THIS IS TO CERTIFY THAT THE ABOVE INFORMATION IS PROVIDED TO THE FOLLOWING ACCURACY:  
 1. TWENTY (20) FEET IN THE HORIZONTAL  
 2. THREE (3) FEET IN THE VERTICAL

NEEDHAM AND COORDINATES REFER TO CONNECTICUT STATE PLANE, NAD 83, CONNECTICUT ZONE AND ARE BASED ON GPS OBSERVATIONS.

**FLOODPLAIN:**  
 FOR THE FIRM FLOODPLAIN MAP, THE SITE IS LOCATED IN AN AREA DESIGNATED AS ZONE X.  
 COMMUNITY PANEL NO.: 80110486U  
 EFFECTIVE DATE: AUGUST 5, 2013

**BOUNDARY NOTE:**  
 THIS SURVEY IS THE RESULT OF AN ACTUAL FIELD SURVEY BASED UPON SUFFICIENT RESEARCH AND FIELD EVIDENCE TO VERIFY THE PARENT PARCEL OF THE SUBJECT PROPERTY. HOWEVER, THE SURVEYOR HAS RELIED UPON THE DEEDS OF RECORD, AS PROVIDED. THIS SURVEYOR MAKES NO GUARANTEE, EITHER EXPRESS OR IMPLIED, AS TO THE QUALITY OF THE DEED REPORT AND REFERENCE DOCUMENTS PROVIDED AND THE DOCUMENTS PROVIDED AFFECTING THE LEASE AND MORTGAGE AREA HAVE BEEN PLOTTED. THE BOUNDARY SHOWN HEREON IS PLOTTED FROM THE RECORD INFORMATION PROVIDED AND DOES NOT CONSTITUTE A REPRESENTATIVE SURVEY OF THE PROPERTY.

**ENCROACHMENT NOTE:**  
 AT THE TIME OF THE SURVEY, NO VISIBLE ENCROACHMENTS WERE EVIDENT ONTO OR BEYOND THE FEE AREA.  
 ATC FEE AREA IS CONTAINED ENTIRELY ON THE PARENT PARCEL.

**ZONING INFORMATION**

ZONE:	REQUIRED:	EXISTING:
FRONT:	75'	345'
SIDE:	75'	48'
REAR:	75'	225'
HEIGHT:	35'	35'
BULK:	NA	NA

\*ALL SITE RESTRICTIONS WERE OBTAINED FROM THE LOCAL MUNICIPALITY.

**LEGAL DESCRIPTION**

**PARENT PARCEL, AS PROVIDED:**  
 THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF NEW LONDON, TOWN OF OLD LYME, STATE OF CONNECTICUT AND IS DESCRIBED AS FOLLOWS:

A LEASEHOLD INTEREST IN AND TO THE FOLLOWING DESCRIBED PROPERTY:

ALL THAT CERTAIN PIECE OF PARCEL OF LAND, TOGETHER WITH BUILDINGS AND IMPROVEMENTS THEREON, SITUATED ON BUTTONBALL ROAD IN THE TOWN OF OLD LYME, COUNTY OF NEW LONDON AND STATE OF CONNECTICUT, SHOWN AND DESIGNATED AS LOT 2-2 ON A SURVEY MAP ON FILE IN THE OFFICE OF THE OLD LYME TOWN CLERK ENTITLED "RECORD SUBDIVISION MAP PROPERTY OF RONALD AND BARBARA A. SWANEY, BUTTONBALL ROAD, OLD LYME, CONNECTICUT BY HENRIKSSON ASSOCIATES SCALE 1"=40 DATED JUNE 7, 1996 REVISED TO 7-19-97."

PARCEL ID 811119

THIS BEING THE SAME PROPERTY CONVEYED TO FISH SWANEY, LLC, A LIMITED LIABILITY COMPANY FROM RONALD J. SWANEY, IN WARRANTY DEED DATED MAY 23, 2007 AND RECORDED MAY 23, 2007, IN BOOK 394 PAGE 878.

THIS BEING THE SAME PROPERTY ASSIGNED TO MUNICIPAL, INC., A DELAWARE LIMITED LIABILITY COMPANY, 45 TO A LEASEHOLD INTEREST, FROM FISH SWANEY, LLC, A DELAWARE LIMITED LIABILITY COMPANY, IN TERMS AND CONDITIONS OF UNRECORDED ASSIGNMENT AS EVIDENCED BY MEMORANDUM OF ASSIGNMENT OF LEASE DATED FEBRUARY 3, 2018 AND RECORDED FEBRUARY 23, 2018, IN BOOK 428 PAGE 882.

ALL THAT CERTAIN PIECE OR PARCEL OF LAND, TOGETHER WITH BUILDINGS AND IMPROVEMENTS THEREON, SITUATED ON BUTTONBALL ROAD IN THE TOWN OF OLD LYME, COUNTY OF NEW LONDON AND STATE OF CONNECTICUT, SHOWN AND DESIGNATED AS LOT 2-1 ON A SURVEY MAP ON FILE IN THE OFFICE OF THE OLD LYME TOWN CLERK ENTITLED "RECORD SUBDIVISION MAP PROPERTY OF RONALD AND BARBARA A. SWANEY, BUTTONBALL ROAD, OLD LYME, CONNECTICUT BY HENRIKSSON ASSOCIATES SCALE 1"=40 DATED JUNE 7, 1996 REVISED TO 7-19-97, WHICH PREMISES ARE MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE EASTERLY HIGHWAY LINE OF BUTTONBALL ROAD, WHICH POINT IS THE SOUTHWESTERLY CORNER OF THE WITHIN DESCRIBED PREMISES AND THE NORTHWESTERLY CORNER OF LAND NOW OR FORMERLY OF MUNDAY, THENCE RUNNING IN A NORTHERLY DIRECTION ALONG THE EASTERLY HIGHWAY LINE OF BUTTONBALL ROAD 124.15 IN A DISTANCE OF 32.38 FEET TO A POINT, THENCE AGAIN ALONG THE EASTERLY HIGHWAY LINE OF BUTTONBALL ROAD 125.12 IN A DISTANCE OF 133.87 FEET TO A POINT, SAID POINT BEING THE NORTHWESTERLY CORNER OF LOT 2-1, THENCE IN AN EASTERLY DIRECTION ALONG LOT 2-2 875.14 IN A DISTANCE OF 103.87 FEET TO A POINT, THENCE N 88.37° W 319.40 FEET TO A POINT, THENCE TURNING AND RUNNING IN A SOUTHERLY DIRECTION S 28-44-41 E A DISTANCE OF 103.10 FEET TO A POINT, THENCE S 17-05-38 E A DISTANCE OF 246.38 TO A POINT ON THE NORTHERLY LINE OF LAND NOW OR FORMERLY OF BLACK HILL OIL, THENCE S 73-54-30 W A DISTANCE OF 315.15 FEET TO AN IRON PIN, SAID POINT BEING THE SOUTHEASTERLY CORNER OF LAND NOW OR FORMERLY OF GREGORY, THENCE IN A NORTHERLY DIRECTION N 21-08° W A DISTANCE OF 133.80 FEET TO AN IRON PIN, SAID POINT BEING THE NORTHWESTERLY CORNER OF LAND NOW OR FORMERLY OF GREGORY, THENCE TURNING AND RUNNING IN AN EASTERLY DIRECTION N 88-08-51 E A DISTANCE OF 30.88 FEET TO A POINT, SAID POINT BEING THE SOUTHEASTERLY CORNER OF LAND NOW OR FORMERLY MUNDAY, THENCE TURNING AND RUNNING IN A NORTHERLY DIRECTION N 87-28-15 W A DISTANCE OF 145.88 FEET TO A POINT, SAID POINT BEING THE NORTHWESTERLY CORNER OF LAND NOW OR FORMERLY MUNDAY, THENCE TURNING AND RUNNING IN A WESTERLY DIRECTION S 84-06-31 W A DISTANCE OF 288.38 FEET TO A POINT ON THE EASTERLY HIGHWAY LINE OF BUTTONBALL ROAD SAID POINT BEING THE POINT AND PLACE OF BEGINNING.

ACCESS PARCEL, ID 811119

THIS BEING THE SAME PROPERTY CONVEYED TO RONALD J. SWANEY, FROM BARBARA A. SWANEY, IN OUST CLAIM DEED DATED JUNE 14, 2001 AND RECORDED JUNE 16, 2001, IN BOOK 271 PAGE 104

**ATC FEE AREA, AS SURVEYED (NONE PROVIDED):**  
 ALL THAT CERTAIN PLOT, PIECE OR PARCEL OF LAND SITUATE, LYING AND BEING IN THE TOWN OF OLD LYME, COUNTY OF NEW LONDON, STATE OF CONNECTICUT, BEING MORE PARTICULARLY BOUND AND DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWESTERLY CORNER OF THE HEREIN DESCRIBED ATC FEE AREA, SAID POINT MARKED BY AN IRON ROD AND WHOSE STATE PLANE COORDINATE IS 60886.09 NORTH AND 112357.35 EAST, RUNNING THENCE

SOUTH 84°39'20" EAST FOR A DISTANCE OF 55.83 FEET TO A POINT, THENCE SOUTH 87°38'40" WEST FOR A DISTANCE OF 78.88 FEET TO A POINT, THENCE NORTH 84°39'20" WEST FOR A DISTANCE OF 75.88 FEET TO A POINT, THENCE NORTH 87°38'40" WEST FOR A DISTANCE OF 80.88 FEET TO A POINT, THENCE SOUTH 82°24'40" EAST FOR A DISTANCE OF 30.88 FEET TO THE POINT OF BEGINNING.

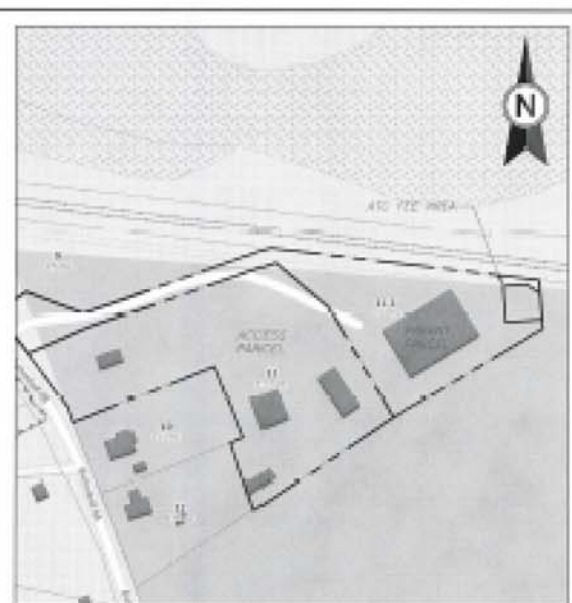
CONTAINING 8.12 ACRES OR 5,375 SQUARE FEET

**ACCESS AND UTILITY EASEMENT, AS SURVEYED (NONE PROVIDED):**  
 AS PARTIAL CONSIDERATION FOR RENT AND UNDER THIS LEASE, LANDLORD HEREBY GRANTS TO HAT ENDEMENTS ON, UNDER AND ACROSS THE PROPERTY FOR ADDRESS, EGRESS, UTILITIES AND ACCESS TO THE PREMISES ACCORDATE TO INSTALL AND MAINTAIN UTILITIES, INCLUDING, BUT NOT LIMITED TO, THE INSTALLATION OF POWER AND TELEPHONE SERVICE CABLE, AND TO SERVICE THE PREMISES AND THE WITNESS FACILITIES AT ALL TIMES DURING THE INITIAL TERM OF THIS LEASE AND ANY RENEWAL TERM. THE EASEMENTS PROVIDED HEREUNDER SHALL HAVE THE SAME TERM AS THIS LEASE.

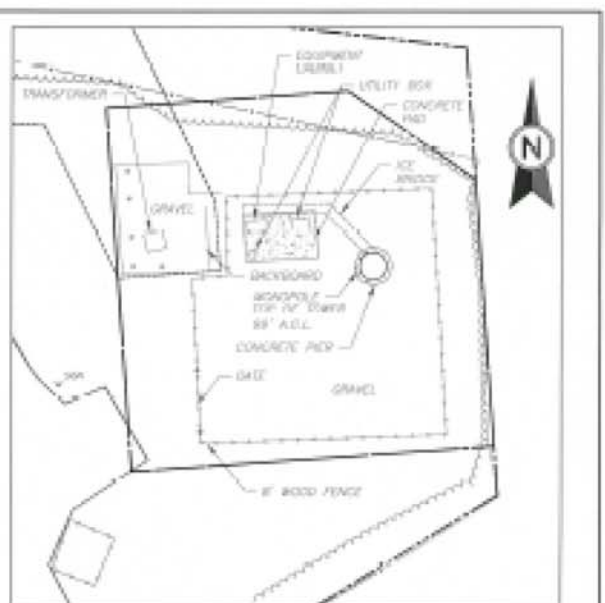
RENT SHALL HAVE 24-HOUR A-DAY, 7-DAYS-A-WEEK ACCESS TO THE PREMISES AT ALL TIMES DURING THE INITIAL TERM OF THIS LEASE AND ANY RENEWAL TERM, AT NO CHARGE TO TENANT.



1 VICINITY MAP  
NTS



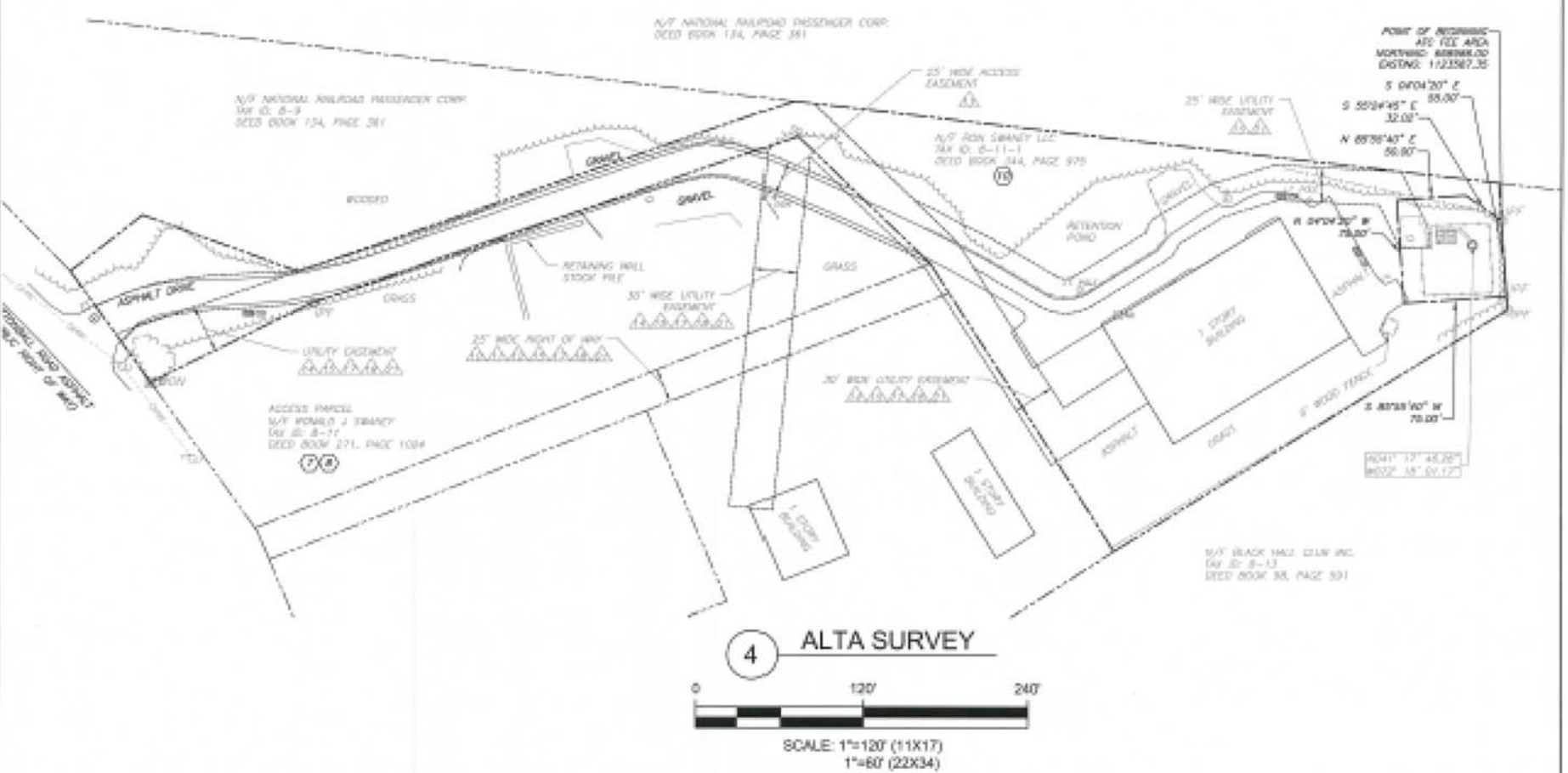
2 PARENT PARCEL



3 COMPOUND DETAIL

**SURVEY LEGEND**

-----	EXISTING PROPERTY
-----	EXISTING ALIEN PROPERTY
-----	EXISTING FEE
-----	EXISTING DISTRICT
-----	EXISTING CONTOUR (WALLOP)
-----	EXISTING CONTOUR (SINK)
-----	EXISTING TREE LINE
-----	EXISTING CHAINLINK FENCE
-----	EXISTING OVERHEAD WIRE
-----	EXISTING BUILDING
-----	EXISTING FENCE (STONE)
-----	EXISTING ROAD (PAVED)
-----	SURVEY AREA (AS FOUND)
-----	SURVEY BENCHMARK
-----	EXISTING UTILITY POLE
-----	EXISTING UTILITY ANCHOR
-----	EXISTING UTILITY CLOSURE (M.U.M)
-----	EXISTING SQUARE
-----	EXISTING DATE ASSIST
-----	EXISTING SIGN (GRAVY INSET)
-----	EXISTING LIGHT POLE
-----	WIRE (DRAWN BY REFERENC #)
-----	TITLE SECTION 8-3 REFERENCE #



**AMERICAN TOWER®**  
**ATC TOWER SERVICES, INC**  
 3303 REGENCY PARKWAY  
 SUITE 133  
 CARY, NC 27551  
 PHONE: (919) 468-8145  
 CDA-D-0204

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIC CHARGE IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. WHETHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTORS MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
1	ISSUED FOR COMMENT	DTS	08/23/18
2	UPDATED TITLE NUMBER	DTS	08/27/18
3	ISSUED	SAA	11/20/18

ATC SITE NUMBER:  
**284983**

ATC SITE NAME:  
**OLD LYME I  
CT**

SITE ADDRESS:  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

**SURVEY CERTIFICATE:**  
 TO AMERICAN TOWER CORPORATION:  
 THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(B) (TO THE EXTENT, GRAPHICALLY DEPICT ON SURVEY DRAWING THE ZONING SETBACK LINES), 7(A), 7(B)(1), 7(C), 8, 9, 11, AND 13 TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 08/13/18.

DATE OF PLAT OR MAP: 08/23/18

(SIGNED)  
 NAME: TECTONIC ENGINEERING & SURVEYING CONSULTANTS P.C.  
 10000 W. LEBANON ROAD, SUITE 100  
 COLUMBIANA, OHIO 43081

**SURVEY LOG:**

**Tectonic**  
 Tectonic Engineering & Surveying Consultants P.C.  
 10000 W. LEBANON ROAD, SUITE 100  
 COLUMBIANA, OHIO 43081  
 www.tectonicengineering.com

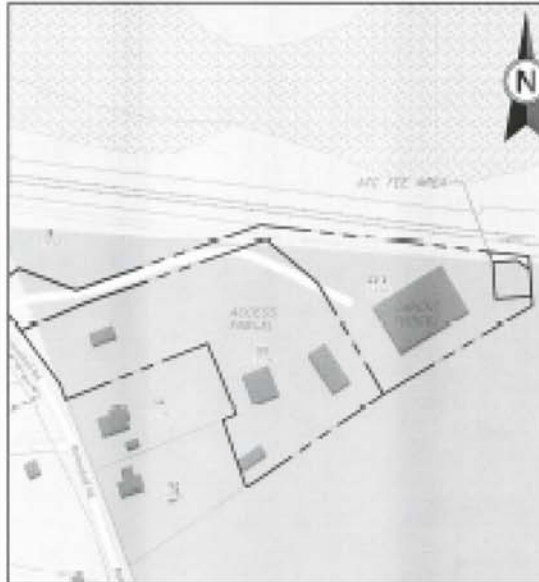
DRAWN BY:	DTS
APPROVED BY:	TGH
DATE DRAWN:	08/23/18
ATC JOB NO:	284983

**ALTA/NSPS LAND TITLE SURVEY**

SHEET NUMBER:	REVISION:
<b>V-101</b>	<b>2</b>

NOTES CORRESPONDING TO TITLE COMMITMENT

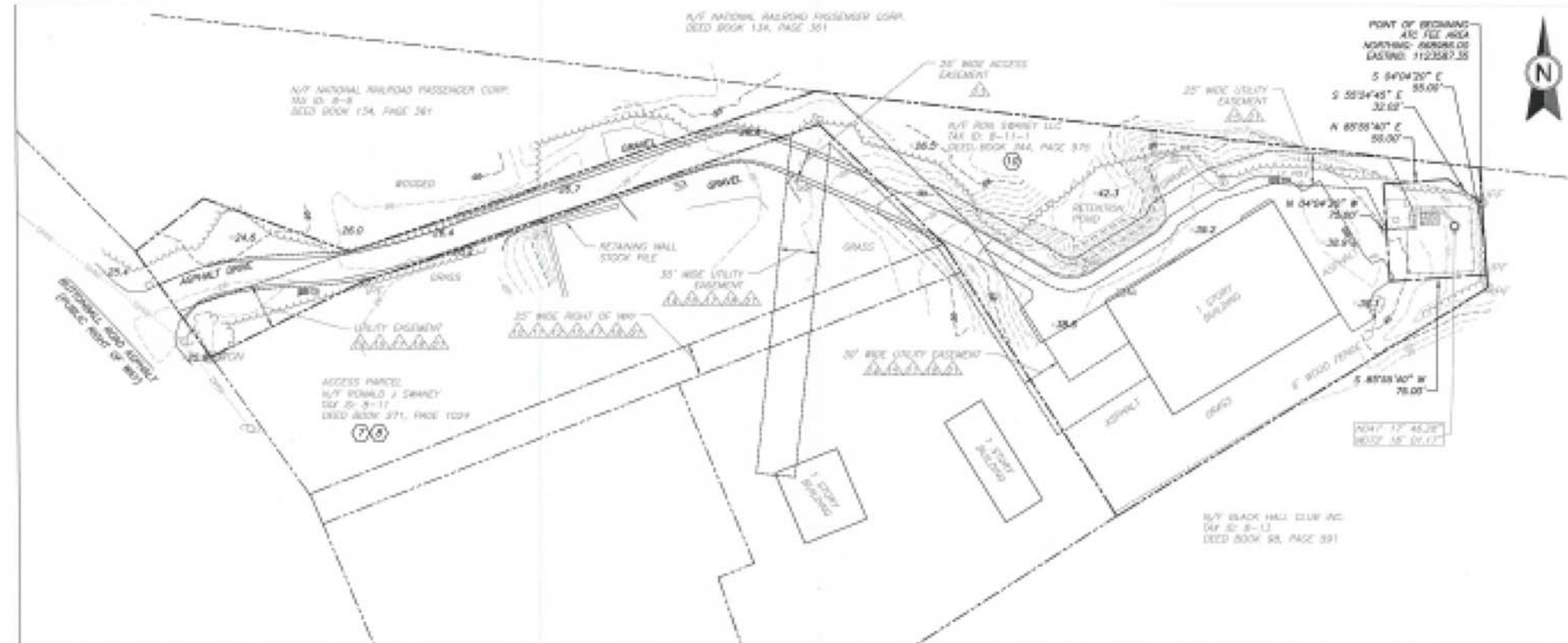
- THE TITLE COMMITMENT ISSUED BY CATC... COMMITMENT NO. A70-112826-C WITH AN EFFECTIVE DATE OF JULY 25, 2018 CONTAINS THE FOLLOWING SURVEY RELATED ITEMS:
- SCHEDULE B - SECTION 1**
- AN OPEN END MORTGAGE, DEED OF TRUST OR OTHER LIEN INSTRUMENT FROM RONALD J. SWANEY DATED APRIL 26, 2004 AND RECORDED APRIL 26, 2004, IN BOOK 370 (PAGE) 726 OF THE OFFICIAL PROPERTY RECORDS OF NEW LONDON COUNTY, CONNECTICUT, WITH A MAXIMUM DRAIN OF \$271,028.26, AND IN FAVOR OF EASTERN SAVINGS BANK, SHOWN HEREOF.
  - AN OPEN END MORTGAGE, DEED OF TRUST OR OTHER LIEN INSTRUMENT FROM RONALD J. SWANEY (BORROWER) DATED APRIL 26, 2004 AND FILED ON APRIL 26, 2004 IN BOOK 370 (PAGE) 726 OF THE OFFICIAL PROPERTY RECORDS OF NEW LONDON COUNTY, CONNECTICUT IN THE AMOUNT OF \$188,000.00 AND IN FAVOR OF EASTERN SAVINGS BANK, A CO-OPERATIVE BANK, SHOWN HEREOF.
  - AFFECTED BY COLLATERAL ASSIGNMENT OF LEASES AND RENTALS BETWEEN RONALD J. SWANEY, AND ESSEX SAVINGS BANK, A CONNECTICUT BANK, DATED APRIL 26, 2004 AND RECORDED APRIL 26, 2004, IN BOOK 370 PAGE 726, IN NEW LONDON COUNTY, CONNECTICUT SHOWN HEREOF.
  - AFFECTED BY SUBORDINATE LIEN ON LOTS 20, 20B1 AND 20B2 RECORDED AUGUST 27, 2007, IN BOOK 347 PAGE 545, IN NEW LONDON COUNTY, CONNECTICUT, NOT PLOTTABLE, NO METES AND BOUNDS.
  - AFFECTED BY MODIFICATION AGREEMENT OF COMMERCIAL REVOLVING LINE OF CREDIT NOTE AND LOAN AGREEMENT AND OPEN END MORTGAGE DEED DATED SEPTEMBER 28, 2008 AND RECORDED SEPTEMBER 29, 2008, IN BOOK 384 PAGE 174, IN NEW LONDON COUNTY, CONNECTICUT, NOT PLOTTABLE, NO METES AND BOUNDS.
  - AFFECTED BY COLLATERAL ASSIGNMENT OF LEASES AND RENTALS BETWEEN BAY COMMUNICATIONS I, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AND EASTERN SAVINGS BANK, A CONNECTICUT MUTUAL BANK, DATED AUGUST 5, 2015 AND RECORDED MARCH 6, 2015, IN BOOK 403 PAGE 143, IN NEW LONDON COUNTY, CONNECTICUT, NOT PLOTTABLE, NO METES AND BOUNDS.
  - TERMS AND CONDITIONS OF UNRECORDED PROMISSORY NOTE FROM BAY COMMUNICATIONS I, LLC, A DELAWARE LIMITED LIABILITY COMPANY CORPORATION, DATED DECEMBER 15, 2013, IN THE AMOUNT OF \$10,000,000.00, AND IN FAVOR OF LIFO, LLC, A FLORIDA LIMITED LIABILITY COMPANY, NOT PLOTTABLE, NO METES AND BOUNDS.
  - EVIDENCED AND AFFECTED BY COLLATERAL ASSIGNMENT OF GRUING LEASES BETWEEN BAY COMMUNICATIONS I, LLC, A DELAWARE LIMITED LIABILITY COMPANY CORPORATION, AND LIFO, LLC, A FLORIDA LIMITED LIABILITY COMPANY, DATED DECEMBER 15, 2013 AND RECORDED JANUARY 17, 2014, IN BOOK 387 PAGE 90, IN NEW LONDON COUNTY, CONNECTICUT, NOT PLOTTABLE, NO METES AND BOUNDS.
  - AN OPEN END MORTGAGE, DEED OF TRUST OR OTHER LIEN INSTRUMENT FROM RON SWANEY, LLC, A CONNECTICUT LIMITED LIABILITY COMPANY DATED AUGUST 5, 2015 AND RECORDED AUGUST 5, 2015, IN BOOK 411 (PAGE) 254, OF THE OFFICIAL PROPERTY RECORDS OF NEW LONDON COUNTY, CONNECTICUT, WITH A MAXIMUM DRAIN OF \$1,280,000.00, AND IN FAVOR OF EASTERN SAVINGS BANK, A CONNECTICUT MUTUAL BANK, SHOWN HEREOF.
  - AFFECTED BY ASSIGNMENT OF LEASES AND RENTS BETWEEN RON SWANEY, LLC, A CONNECTICUT LIMITED LIABILITY COMPANY, AND EASTERN SAVINGS BANK, A CONNECTICUT MUTUAL BANK, DATED AUGUST 5, 2015 AND RECORDED AUGUST 5, 2015, IN BOOK 411 PAGE 255, IN NEW LONDON COUNTY, CONNECTICUT, SHOWN HEREOF.
  - AFFECTED BY COLLATERAL ASSIGNMENT OF CELL TOWER LEASE AND LEASE INCOME BETWEEN RON SWANEY, LLC, A CONNECTICUT LIMITED LIABILITY COMPANY, AND EASTERN SAVINGS BANK, A CONNECTICUT MUTUAL BANK, DATED AUGUST 5, 2015, IN BOOK 111 (PAGE) 176, IN NEW LONDON COUNTY, CONNECTICUT, NOT PLOTTABLE, NO METES AND BOUNDS.
  - AFFECTED BY SUBORDINATE NONDISTURBANCE AND ATTORNEY AGREEMENT BETWEEN BAY COMMUNICATIONS I, LLC, A DELAWARE LIMITED LIABILITY COMPANY, AND RON SWANEY, LLC, A CONNECTICUT LIMITED LIABILITY COMPANY, AND EASTERN SAVINGS BANK, A CONNECTICUT MUTUAL BANK, DATED FEBRUARY 17, 2017 AND RECORDED FEBRUARY 27, 2017, IN BOOK 418 PAGE 427, IN NEW LONDON COUNTY, CONNECTICUT, SHOWN HEREOF.
  - A LIEN PLAT BY THE BAYLE LENDING COMPANY DATED JULY 24, 2014 AND RECORDED JULY 24, 2014, IN BOOK 417 (PAGE) 751, OF THE OFFICIAL PROPERTY RECORDS OF NEW LONDON COUNTY, CONNECTICUT, AGAINST RON SWANEY, LLC, A CONNECTICUT LIMITED LIABILITY COMPANY, IN THE AMOUNT OF \$6,200.00, IN ADDITION TO INTEREST AND PENALTIES AS MAY ACCRUE, AND IN FAVOR OF THE BAYLE LENDING COMPANY, NOT PLOTTABLE, NO METES AND BOUNDS.
  - REVIEW OF DOCUMENTATION DEMONSTRATING COMPLIANCE WITH SECTION 16 - ASSIGNMENT AND SUBLEASING, AS EVIDENCED BY TERMS AND CONDITIONS OF UNRECORDED SITE LEASE WITH OPTION DATED MARCH 18, 2008, AS EVIDENCED BY ASSIGNMENT AND ASSUMPTION OF SITE LEASE BETWEEN T-MOBILE NORTHEAST, LLC, A SUCCESSOR IN INTEREST TO T-MOBILE COMMUNICATIONS, INC., AND WHOLLY OWNED SUBSIDIARY OF T-MOBILE USA, INC., AND BAY COMMUNICATIONS I, LLC, A DELAWARE LIMITED LIABILITY COMPANY, DATED FEBRUARY 22, 2015, IN BOOK 384 PAGE 601, IN NEW LONDON COUNTY, CONNECTICUT, NOT PLOTTABLE, NO METES AND BOUNDS.
- SCHEDULE B - SECTION 2**
- ALL MATTERS CONTAINED ON THE PLAT MAP SHOWING PROPERTY OF MALCOLM G. MCCARTHY RECORDED AS MAP NUMBER 2218, PUBLIC RECORDS OF NEW LONDON COUNTY, CT, NO PLOTTABLE MATTERS.
  - ALL MATTERS CONTAINED ON THE PLAT MAP SHOWING PROPERTY OF MALCOLM G. & PATRICIA M. MCCARTHY RECORDED AS MAP NUMBER 2219, PUBLIC RECORDS OF NEW LONDON COUNTY, CT, NO PLOTTABLE MATTERS.
  - ALL MATTERS CONTAINED ON THE PLAT MAP SHOWING PROPERTY OF PATRICIA M. MCCARTHY, RECORDED AS MAP NUMBER 2212, PUBLIC RECORDS OF NEW LONDON COUNTY, CT, NO PLOTTABLE MATTERS.



**1 PARENT PARCEL**  
SCALE: 1"=2000' (11X17)  
1"=1000' (22X34)



**2 COMPOUND DETAIL**  
SCALE: 1"=40' (11X17)  
1"=20' (22X34)



**3 EXISTING CONDITIONS PLAN**  
SCALE: 1"=120' (11X17)  
1"=60' (22X34)

**SURVEY LEGEND**

[Symbol]	EXISTING PROPERTY
[Symbol]	EXISTING ADJ. PROPERTY
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING EASEMENT
[Symbol]	EXISTING CONTOUR (MAJOR)
[Symbol]	EXISTING CONTOUR (MINOR)
[Symbol]	EXISTING FENCELINE
[Symbol]	EXISTING SHOULDER FENCE
[Symbol]	EXISTING OVERHEAD WIRE
[Symbol]	EXISTING MAILBOX
[Symbol]	EXISTING ROAD (STREET)
[Symbol]	EXISTING ROAD (ALLEY)
[Symbol]	SURVEY SIGN NOT FOUND
[Symbol]	SURVEY SIGN FOUND
[Symbol]	EXISTING UTILITY POLE
[Symbol]	EXISTING SET BACK
[Symbol]	EXISTING ELECTRIC SERVICE
[Symbol]	EXISTING SIGN
[Symbol]	EXISTING GATE POST
[Symbol]	EXISTING STORM DRAIN W/LET
[Symbol]	EXISTING LIGHT POLE
[Symbol]	TITLE SECTION 2 - REFERENCED #
[Symbol]	TITLE SECTION 3 - REFERENCED #

**AMERICAN TOWER<sup>®</sup>**  
**ATC TOWER SERVICES, INC**  
3533 REGENCY PARKWAY  
SUITE 133  
CARY, NC 27551  
PHONE: (919) 468-0145  
COA: D-6204

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REV.	DESCRIPTION	BY	DATE
1	ISSUED FOR COMMENT	DTB	08/23/18
2	UPDATED TITLE NUMBER	DTB	08/27/18
3	ISSUED	SAA	11/20/18

ATC SITE NUMBER:  
**284983**

ATC SITE NAME:  
**OLD LYME I  
CT**

SITE ADDRESS:  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

**SURVEY CERTIFICATE:**  
TO AMERICAN TOWER CORPORATION:  
THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(B), 7(A), 7(B)(1), 7(C), 8, 9, 11, AND 13 TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 08/13/18.

DATE OF PLAT OR MAP: *11/20/18*

(SIGNED) NAME: *TERRANCE J. MANNING*  
BY LICENSED SURVEYOR

SURVEY LOGO:

**Tectonic**  
NATIONAL SURVEYING CONSULTANTS  
Tectonic Engineering & Surveying Consultants P.C.  
1000 W. 10th Street  
Tulsa, Oklahoma 74103  
www.tectonicengineering.com

DRAWN BY: DTB  
APPROVED BY: TGH  
DATE DRAWN: 08/23/18  
ATC JOB NO.: 284983

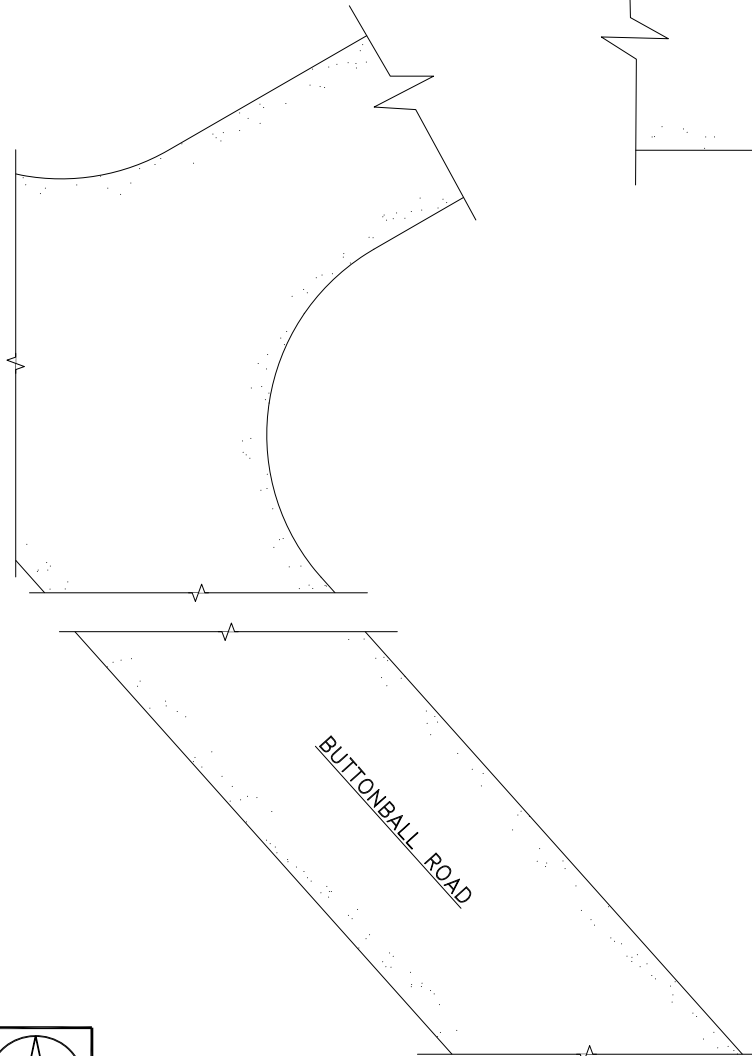
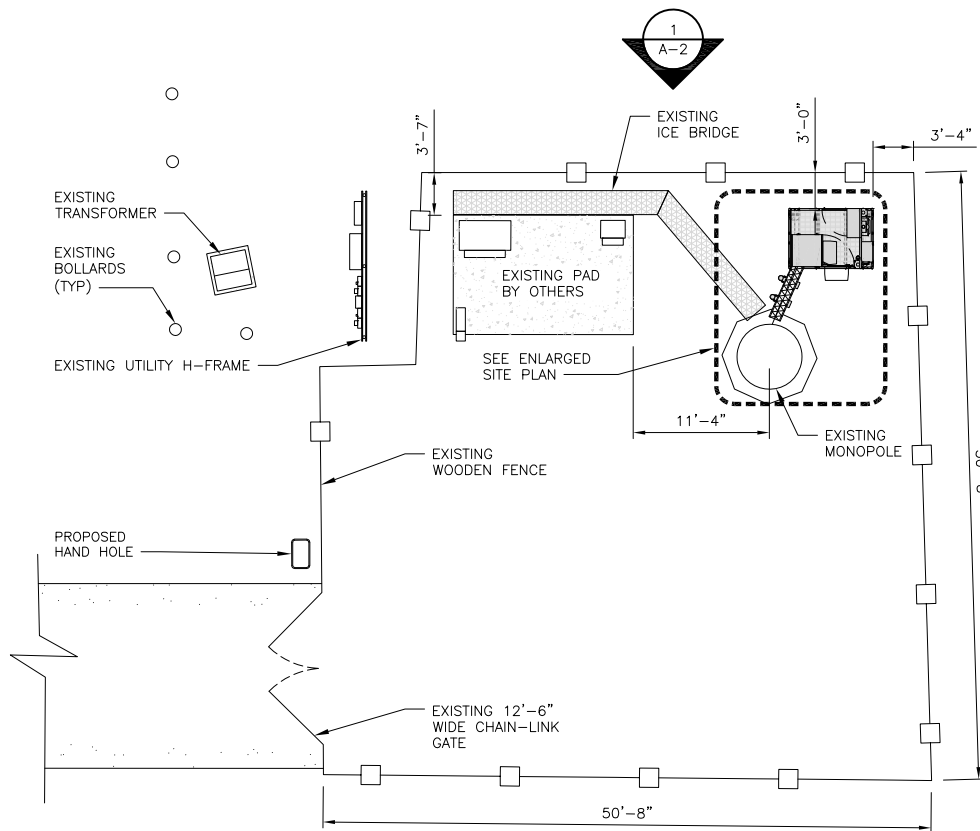
**EXISTING CONDITIONS PLAN**

SHEET NUMBER: **V-102** REVISION: **2**

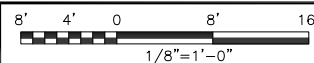
**811**  
Know what's below.  
Call before you dig.

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



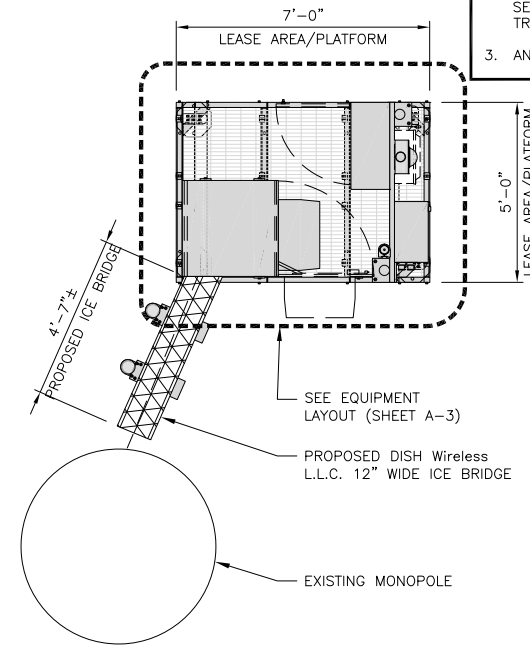
OVERALL SITE PLAN



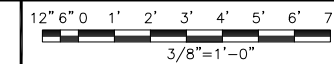
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NOTES

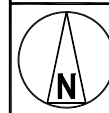
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.



ENLARGED SITE PLAN



2



ATC'S GROUND RIGHTS DO NOT INCLUDE A UTILITIES EASEMENT. LICENSEE WILL NEED TO OBTAIN A UTILITY EASEMENT AND CONSTRUCTION CONTRACTOR MUST FIELD VERIFY ALL PROPOSED UTILITY ROUTES ARE WITHIN THE OBTAINED EASEMENT.

NOT USED

3



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



B&T ENGINEERING, INC.  
PEC.0001564  
Expires 2/10/22

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.

DRAWN BY:	CHECKED BY:	APPROVED BY:
AP	GLS	GLS

RFDS REV #: ---

CONSTRUCTION DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	7/29/21	ISSUED FOR REVIEW
0	10/18/21	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
153547.001.01

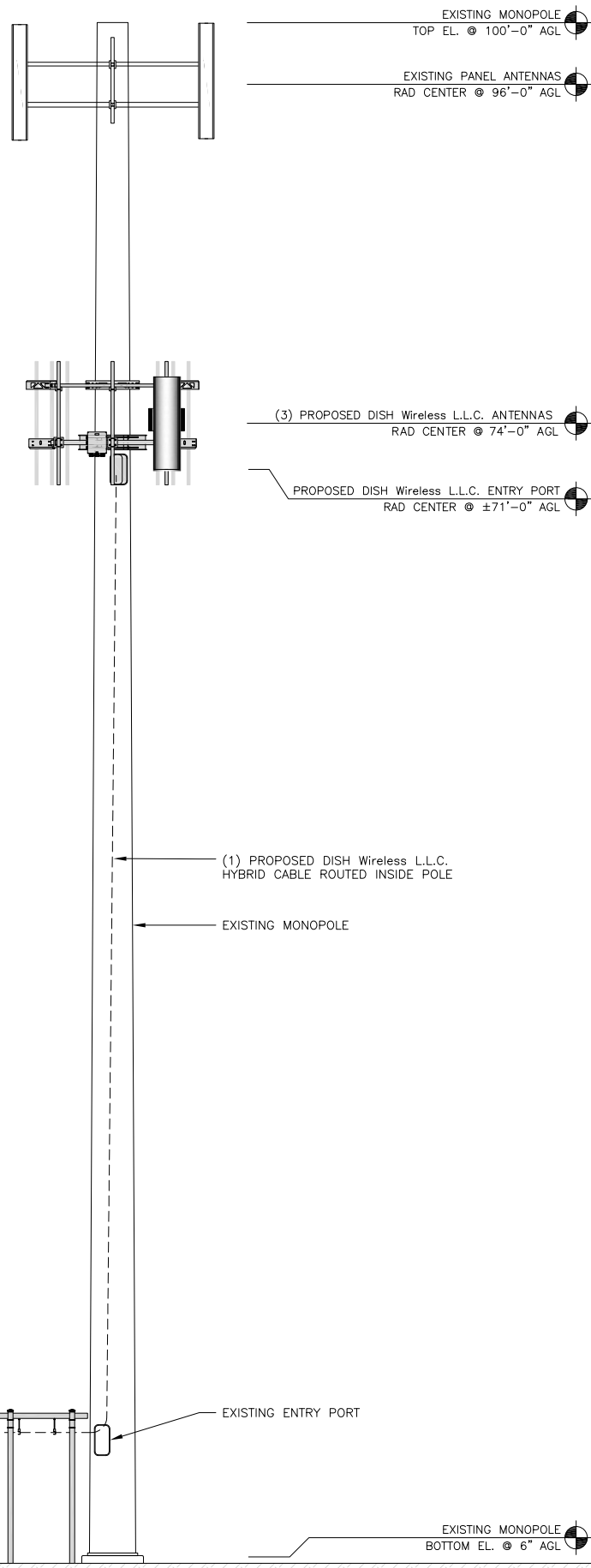
DISH Wireless L.L.C.  
PROJECT INFORMATION  
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
OVERALL AND ENLARGED  
SITE PLAN

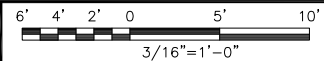
SHEET NUMBER  
**A-1**

**NOTES**

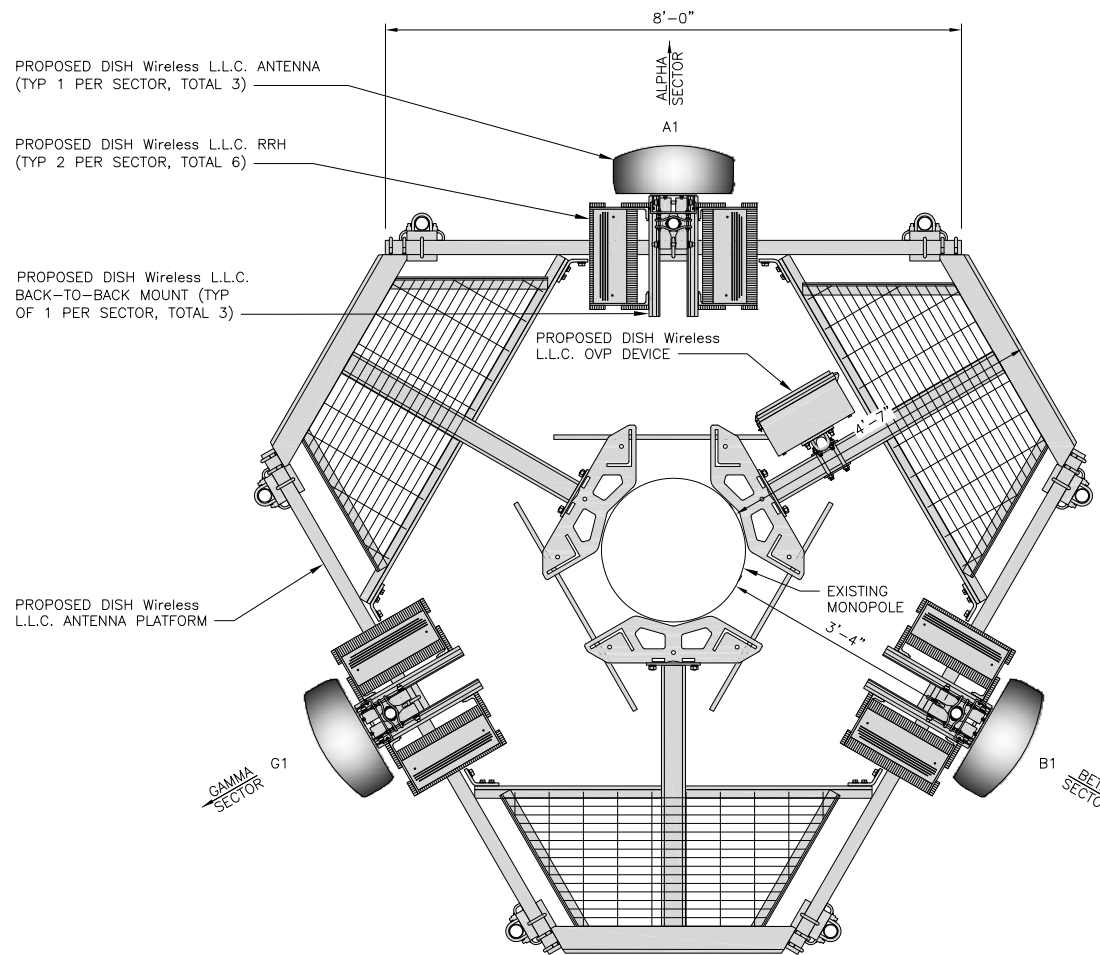
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



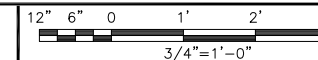
**PROPOSED NORTH ELEVATION**



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	A1	PROPOSED	JMA WIRELESS - MX08FR0665-21	5G	72.0" x 20.0"	0'	74'-0"	(1) HIGH-CAPACITY HYBRID CABLE (102' LONG)
BETA	B1	PROPOSED	JMA WIRELESS - MX08FR0665-21	5G	72.0" x 20.0"	120'	74'-0"	
GAMMA	C1	PROPOSED	JMA WIRELESS - MX08FR0665-21	5G	72.0" x 20.0"	240'	74'-0"	

SECTOR	POSITION	RRH		NOTES
		MANUFACTURER - MODEL NUMBER	TECHNOLOGY	
ALPHA	A1	FUJITSU - TA08025-B604	5G	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.
	A1	FUJITSU - TA08025-B605	5G	
BETA	B1	FUJITSU - TA08025-B604	5G	
	B1	FUJITSU - TA08025-B605	5G	
GAMMA	C1	FUJITSU - TA08025-B604	5G	
	C1	FUJITSU - TA08025-B605	5G	

**ANTENNA SCHEDULE**

NO SCALE

3



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



10/18/21

B&T ENGINEERING, INC.  
PEC.0001564  
Expires 2/10/22

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DRAWN BY: CHECKED BY: APPROVED BY:  
AP GLS GLS

RFDS REV #: ---

**CONSTRUCTION DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	7/29/21	ISSUED FOR REVIEW
0	10/18/21	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
153547.001.01

DISH Wireless L.L.C. PROJECT INFORMATION  
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
ELEVATION, ANTENNA LAYOUT AND SCHEDULE

SHEET NUMBER

**A-2**





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RFDS REV #: ---

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DISH Wireless L.L.C.  
PROJECT INFORMATION

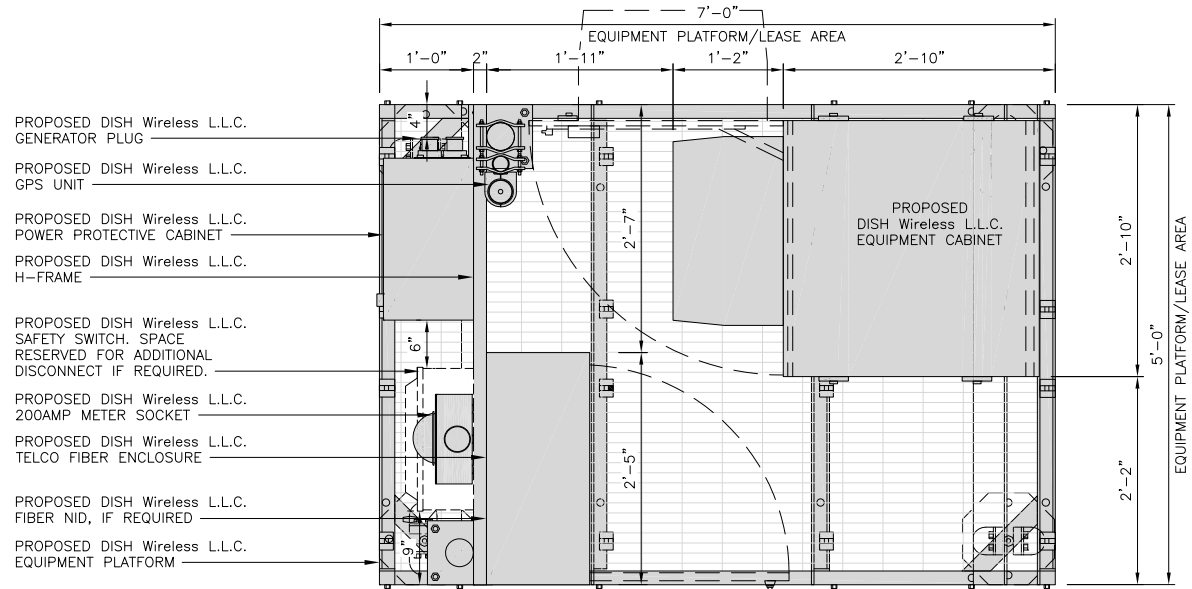
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
EQUIPMENT PLATFORM AND  
H-FRAME DETAILS

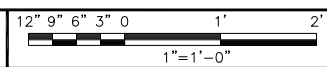
SHEET NUMBER  
**A-3**

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 L.L.C. 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



PLATFORM EQUIPMENT PLAN

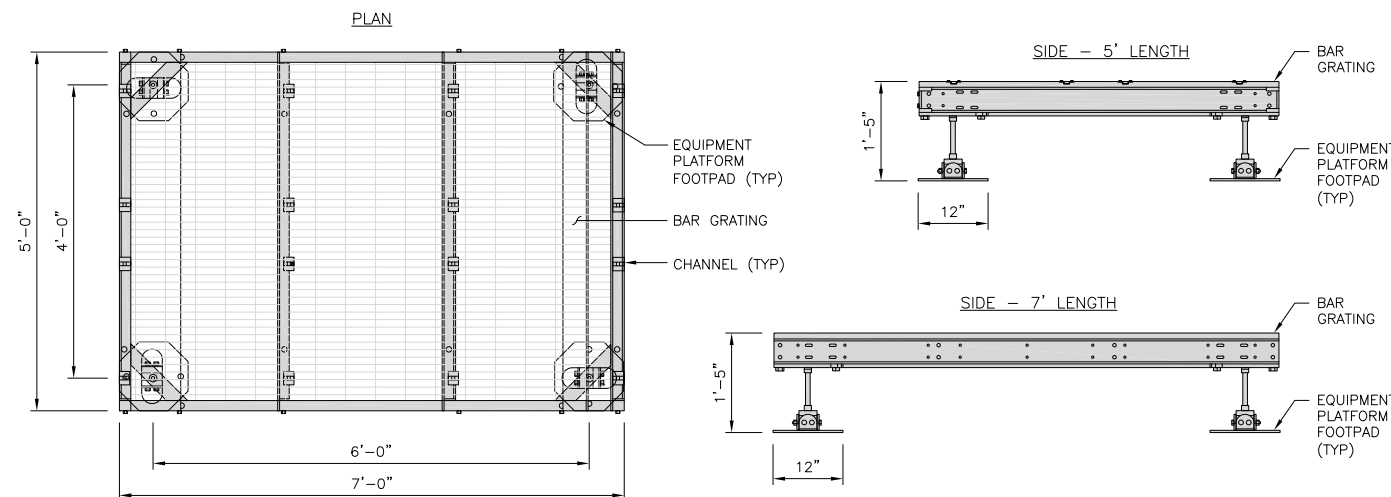


1

COMMSCOPE MTC4045LP  
5X7 PLATFORM

DIMENSIONS (HxWxD)	16"x84"x60"
TOTAL WEIGHT	423 LBS

NOTE:  
GC TO PROVIDE EXTENDED  
THREAD FOR PLATFORM IF  
REQUIRED HEIGHT EXCEEDS 17"



PLATFORM DETAIL

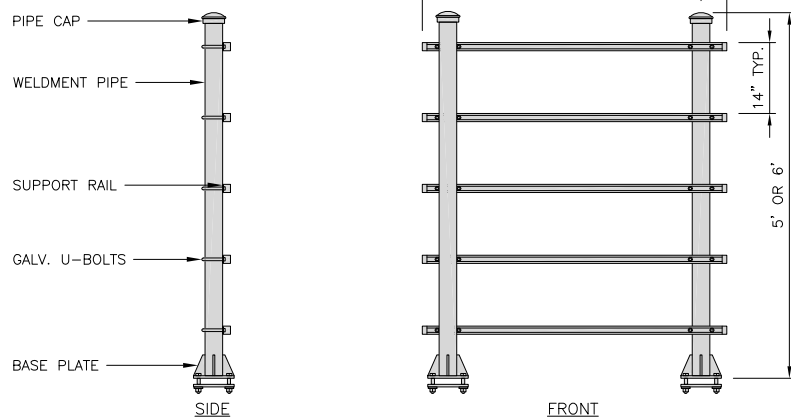
NO SCALE

3

COMMSCOPE MTC4045HFLD  
H-FRAME

UNISTRUT/SUPPORT RAILS QTY	5
WEIGHT	59.74 lbs

NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT



H-FRAME DETAIL

NO SCALE

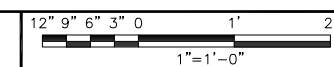
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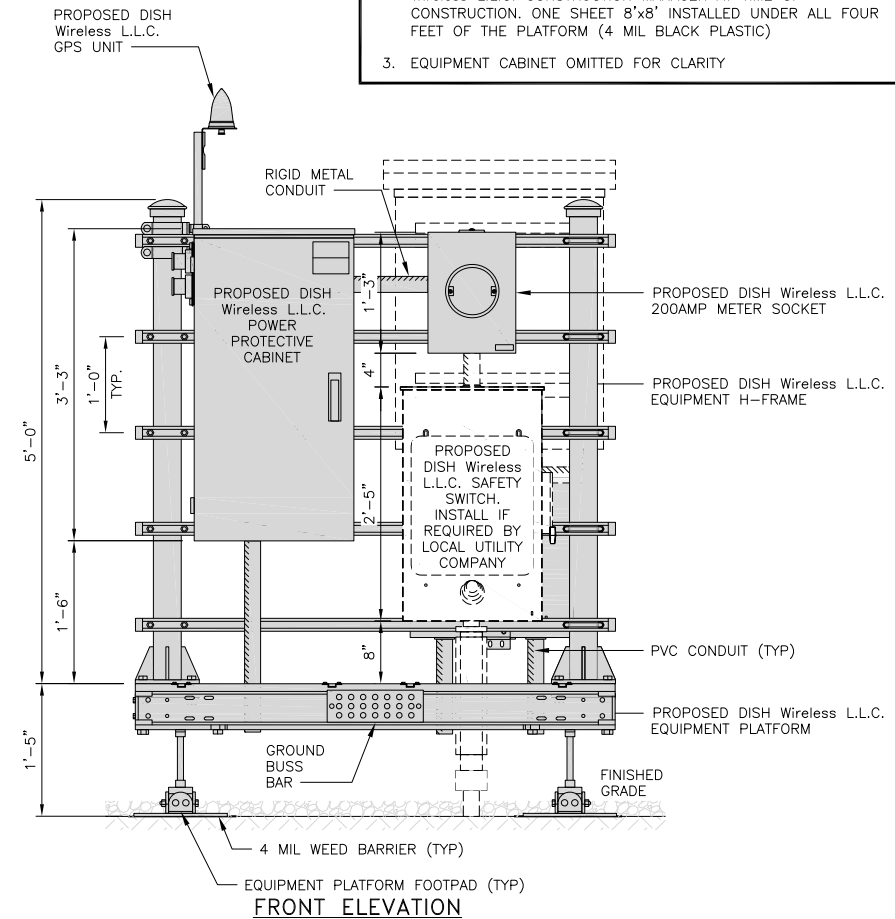
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4

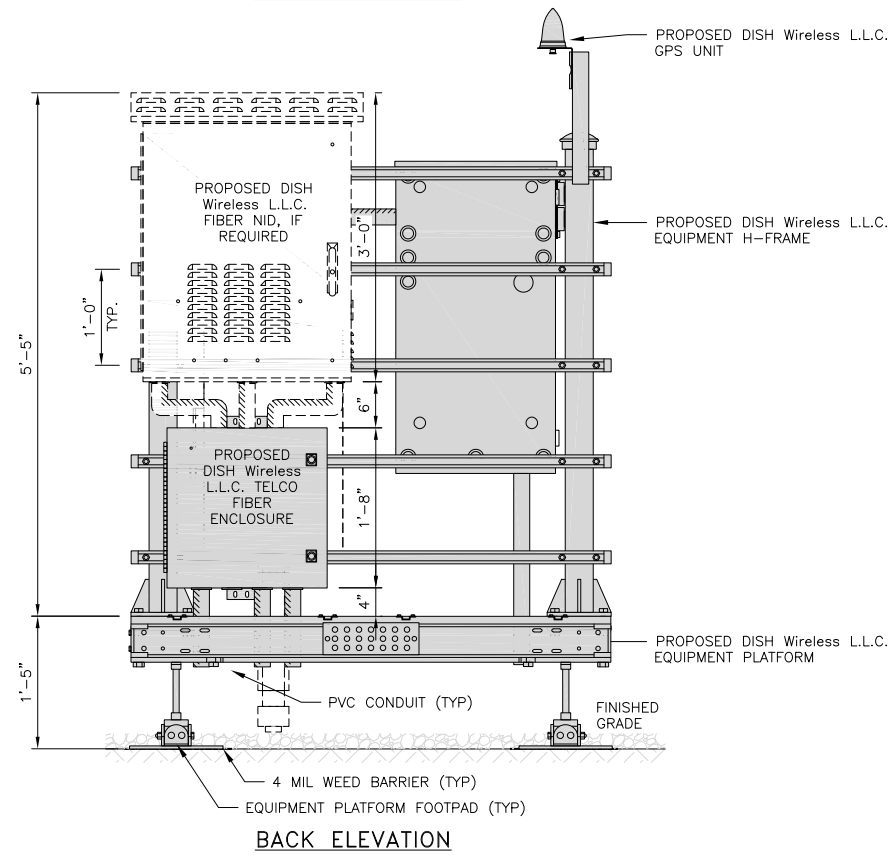
H-FRAME EQUIPMENT ELEVATION



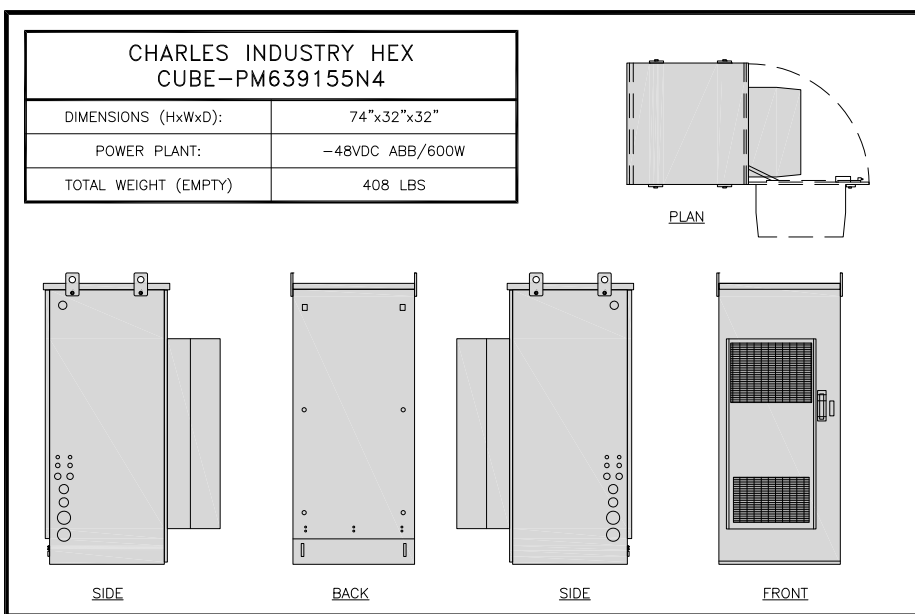
5



FRONT ELEVATION

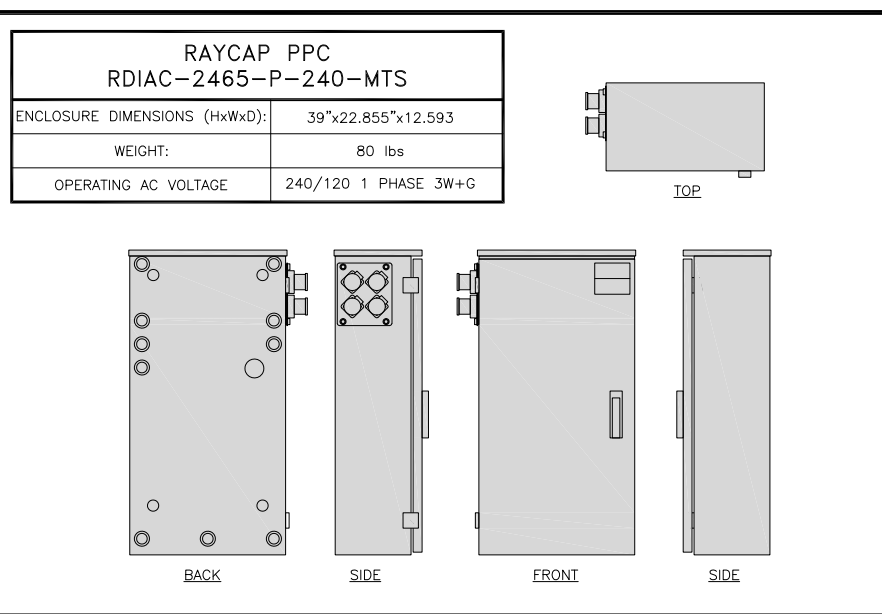


BACK ELEVATION



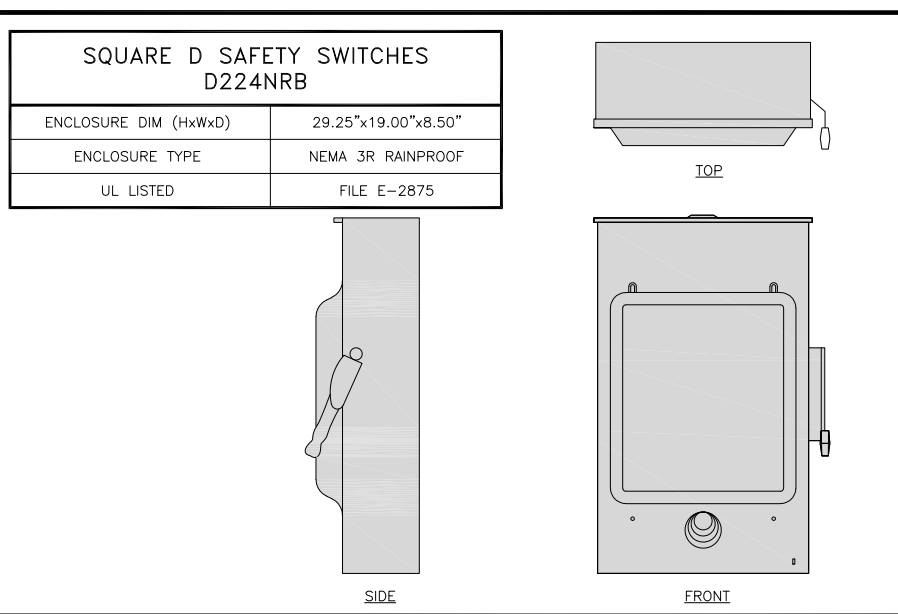
CABINET DETAIL

NO SCALE 1



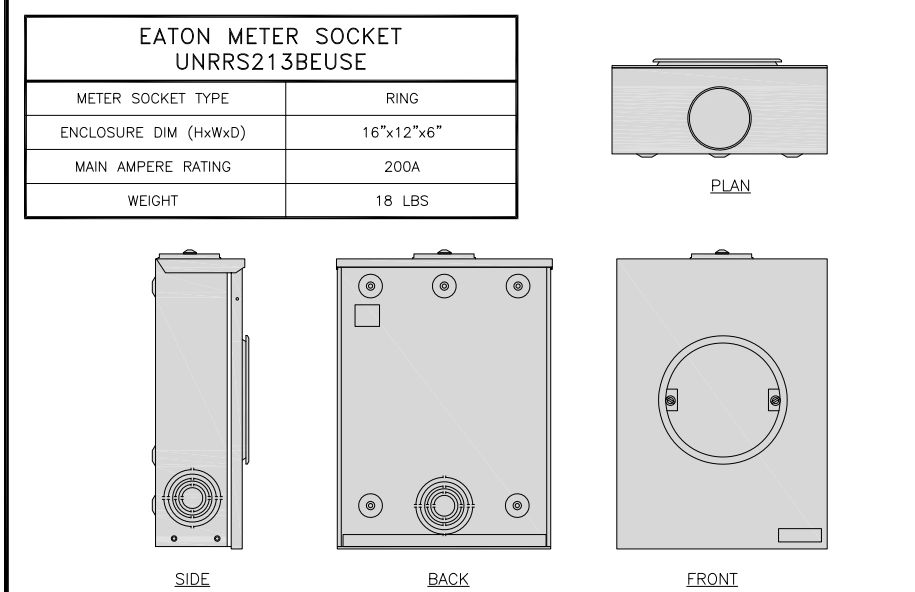
POWER PROTECTION CABINET (PPC) DETAIL

NO SCALE 2



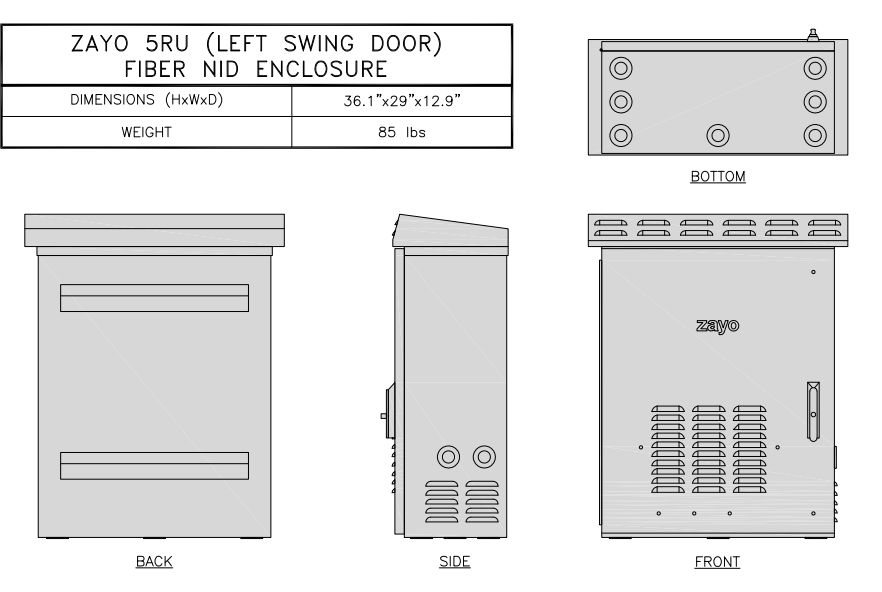
SAFETY SWITCH DETAIL

NO SCALE 3



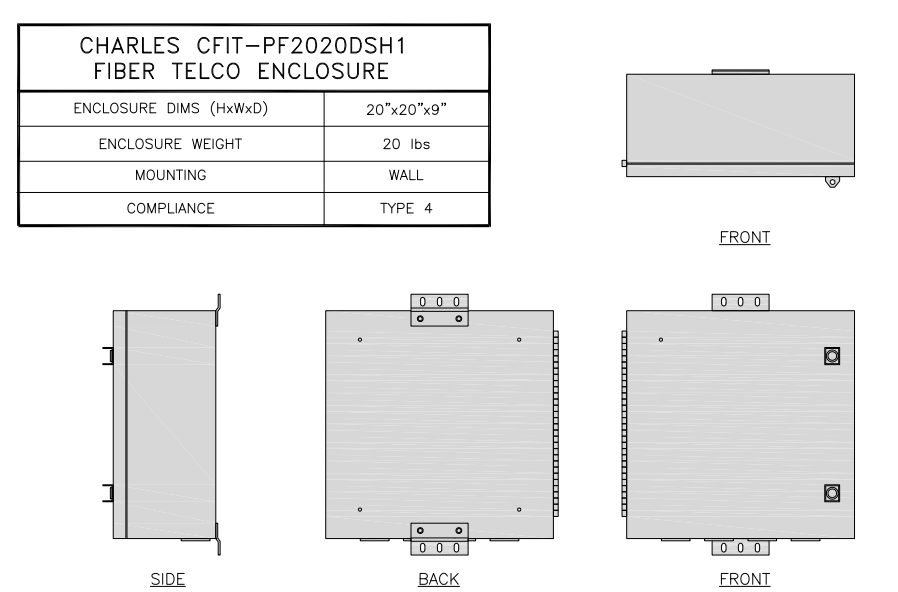
METER SOCKET DETAIL

NO SCALE 4



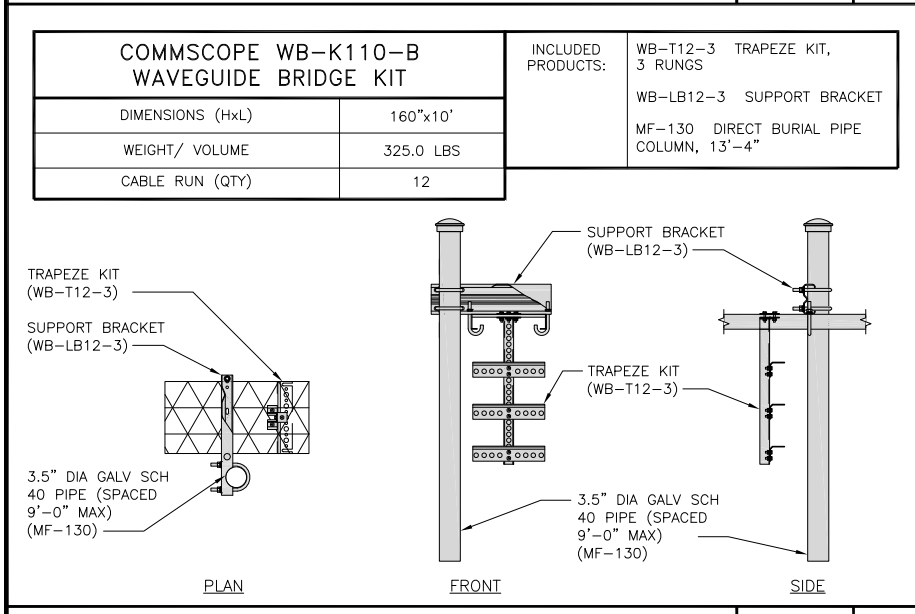
FIBER NID ENCLOSURE DETAIL

NO SCALE 5



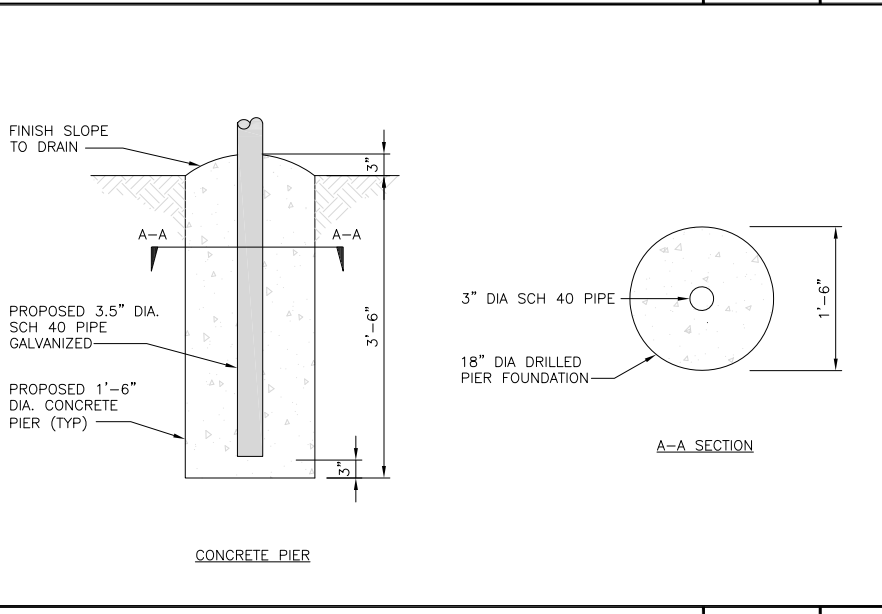
FIBER TELCO ENCLOSURE DETAIL

NO SCALE 6



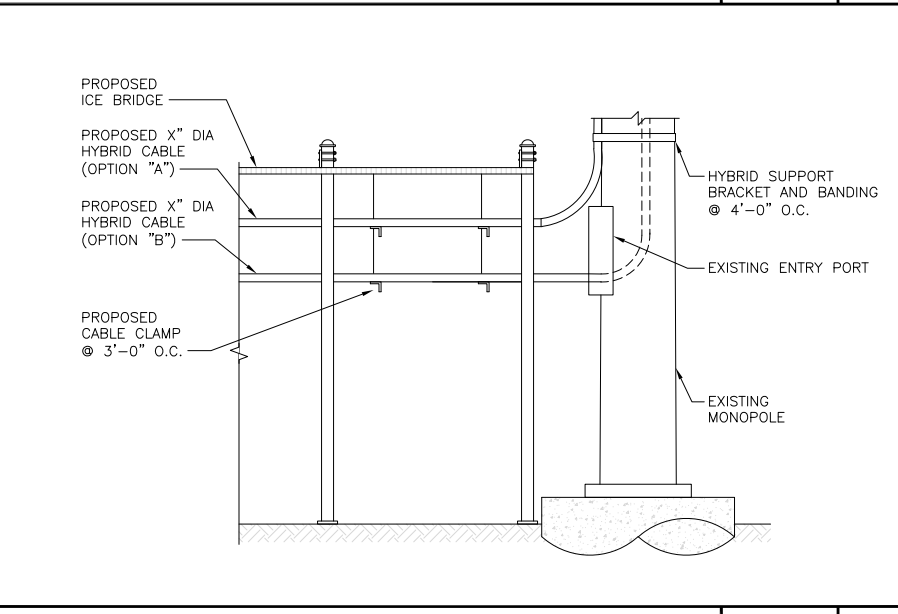
ICE BRIDGE DETAIL

NO SCALE 7



TYPICAL ICE BRIDGE CONCRETE PIER DETAIL

NO SCALE 8



HYBRID CABLE RUN

NO SCALE 9

5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120

10 PRESIDENTIAL WAY  
WOBURN, MA 01801

1717 S. BOULDER  
SUITE 300  
TULSA, OK 74119  
PH: (918) 587-4630  
www.btgrp.com

B&T ENGINEERING, INC.  
PEC.0001564  
Expires 2/10/22

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AP	GLS	GLS

RFDS REV #: ---

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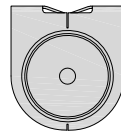
A&E PROJECT NUMBER  
153547.001.01

DISH Wireless L.L.C.  
PROJECT INFORMATION  
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

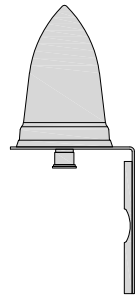
SHEET TITLE  
EQUIPMENT DETAILS

SHEET NUMBER  
**A-4**

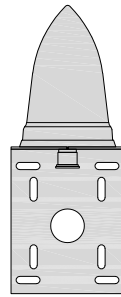
<b>PCTEL</b> <b>GPSGL-TMG-SPI-40NCB</b>	
DIMENSIONS (DIAxH) MM/INCH	81x184mm 3.2"x7.25"
WEIGHT W/ACCESSORIES	075 lbs
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1590 ± 30MHz



TOP



BACK

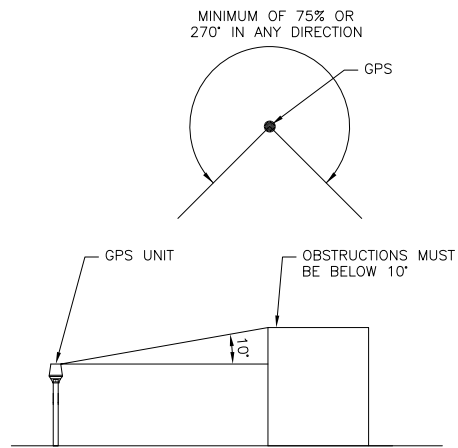


SIDE

GPS DETAIL

NO SCALE

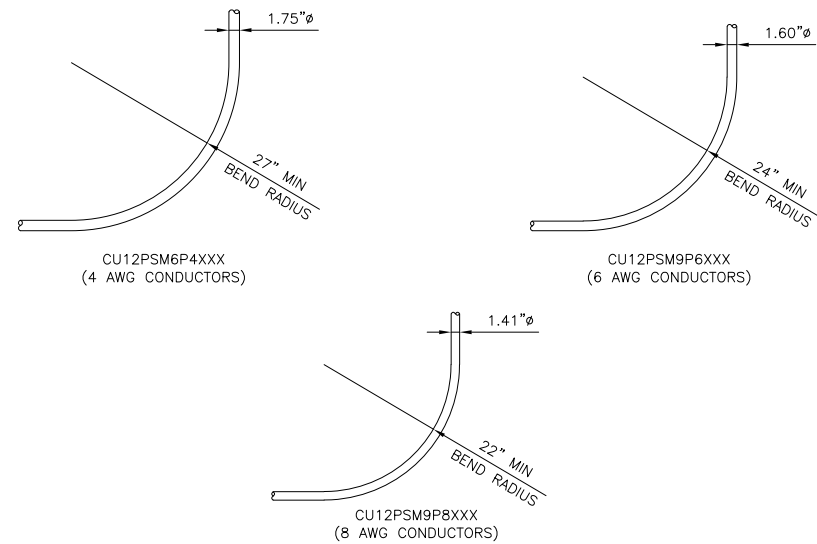
1



GPS MINIMUM SKY VIEW REQUIREMENTS

NO SCALE

2



CABLES UNLIMITED HYBRID CABLE  
MINIMUM BEND RADIUS

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



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



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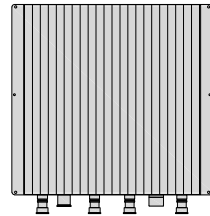
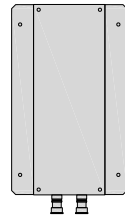
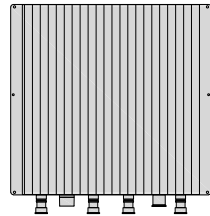
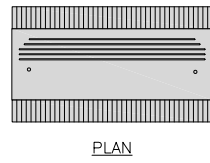
A&E PROJECT NUMBER  
**153547.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOBOS00020A**  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
**EQUIPMENT DETAILS**

SHEET NUMBER  
**A-5**

FUJITSU TRIPLE BAND TA08025-B605	
DIMENSIONS (HxWxD)	14.9"x15.7"x9"
WEIGHT	74.95 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V



BACK

SIDE

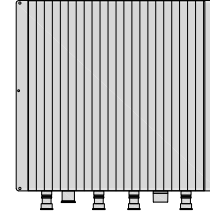
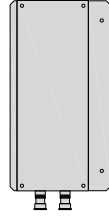
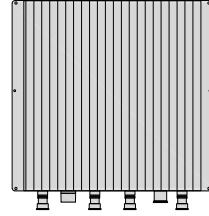
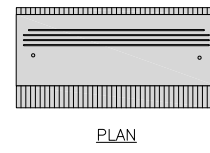
FRONT

RRH DETAIL

NO SCALE

1

FUJITSU DUAL BAND TA08025-B604	
DIMENSIONS (HxWxD)	14.9"x15.7"x7.8"
WEIGHT	63.9 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V



BACK

SIDE

FRONT

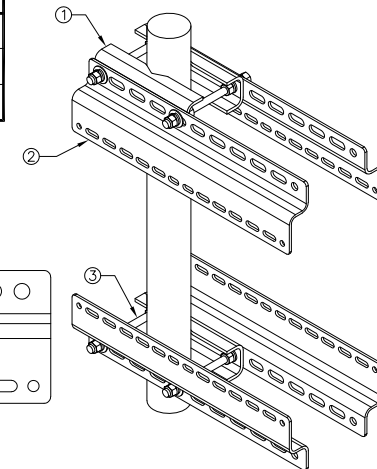
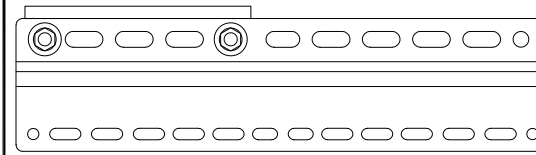
RRH DETAIL

NO SCALE

2

SABRE DOUBLE Z-BRACKET C10123155	
DIMENSIONS (HxWxD) (1 BRACKET)	5"x20"x1-13/16"
WEIGHT (FULL ASSEMBLY)	35.79 lbs
PACKAGE QUANTITY	4

#	DESCRIPTION
1	PLATE, CHANNEL BRACKET
2	RRH Z BRACKET, 3/16"
3	THREADED ROD ASSEMBLY 1/2"x12"



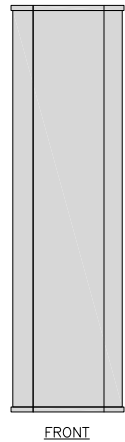
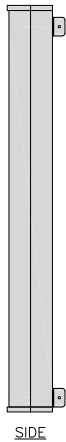
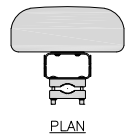
NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT

RRH MOUNT DETAIL

NO SCALE

3

JMA MX08FRO665-21	
DIMENSIONS (HxWxD)	72"x20.0"x8.0"
RF PORTS, CONNECTOR TYPE	8 x 4.3-10 FEMALE
WEIGHT	64.5 lbs
WEIGHT WITH BRACKETS	82.5 lbs



SIDE

FRONT

ANTENNA DETAIL

NO SCALE

4

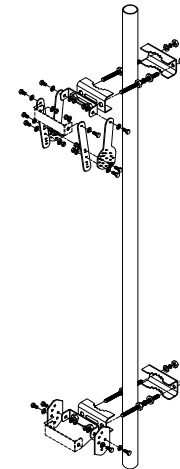
**NOT USED**

NO SCALE

5

JMA ANTENNA MOUNT BRACKET #91900318	
TOTAL WEIGHT (WITH BRACKETS)	18 lbs (8.18 Kg)
POLE DIAMETER RANGE	2.5" TO 4.5"

NOTE:  
KIT #91900318: TOP AND BOTTOM BRACKETS  
FOR 4-, 6-, AND 8-FOOT ANTENNAS  
ANTENNA BRACKET NOT PART OF KIT



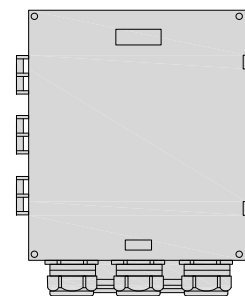
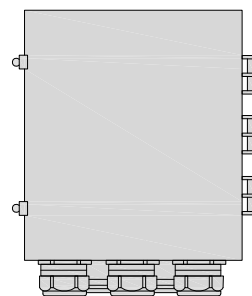
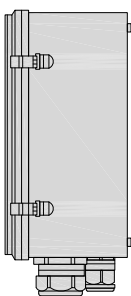
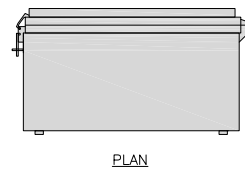
NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT

ANTENNA BRACKET DETAIL

NO SCALE

6

RAYCAP RDIDC-9181-PF-48 DC SURGE PROTECTION (OVP)	
DIMENSIONS (HxWxD)	18.98"x14.39"x8.15"
WEIGHT	21.82 LBS



SIDE

BACK

FRONT

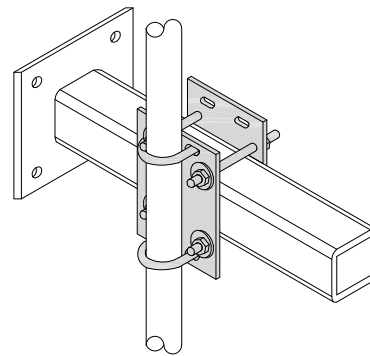
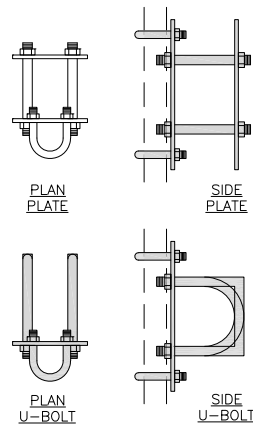
SURGE SUPPRESSION DETAIL (OVP)

NO SCALE

7

COMMSCOPE XP-2040 CROSSOVER PLATE	
DIMENSIONS (HxW)	10"x12"
WEIGHT	11 lbs

NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT



PLAN  
U-BOLT

SIDE  
U-BOLT

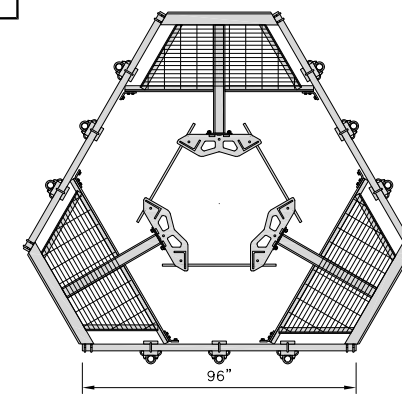
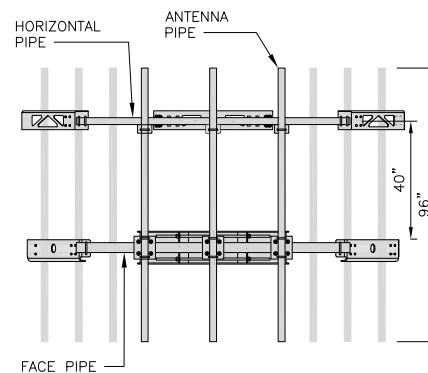
RRH/OVP MOUNT DETAIL

NO SCALE

8

COMMSCOPE MC-PK8-DSH	
FACE WIDTH	96"
WEIGHT	1373.08 lbs
NOTE: 15" TO 38" O.D.	

NOTE:  
OR DISH Wireless L.L.C.  
APPROVED EQUIVALENT



ANTENNA PLATFORM DETAIL

NO SCALE

9



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



10/18/21

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RFDS REV #: ---

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DISH Wireless L.L.C.  
PROJECT INFORMATION

BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
EQUIPMENT DETAILS

SHEET NUMBER

**A-6**

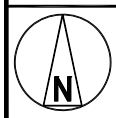
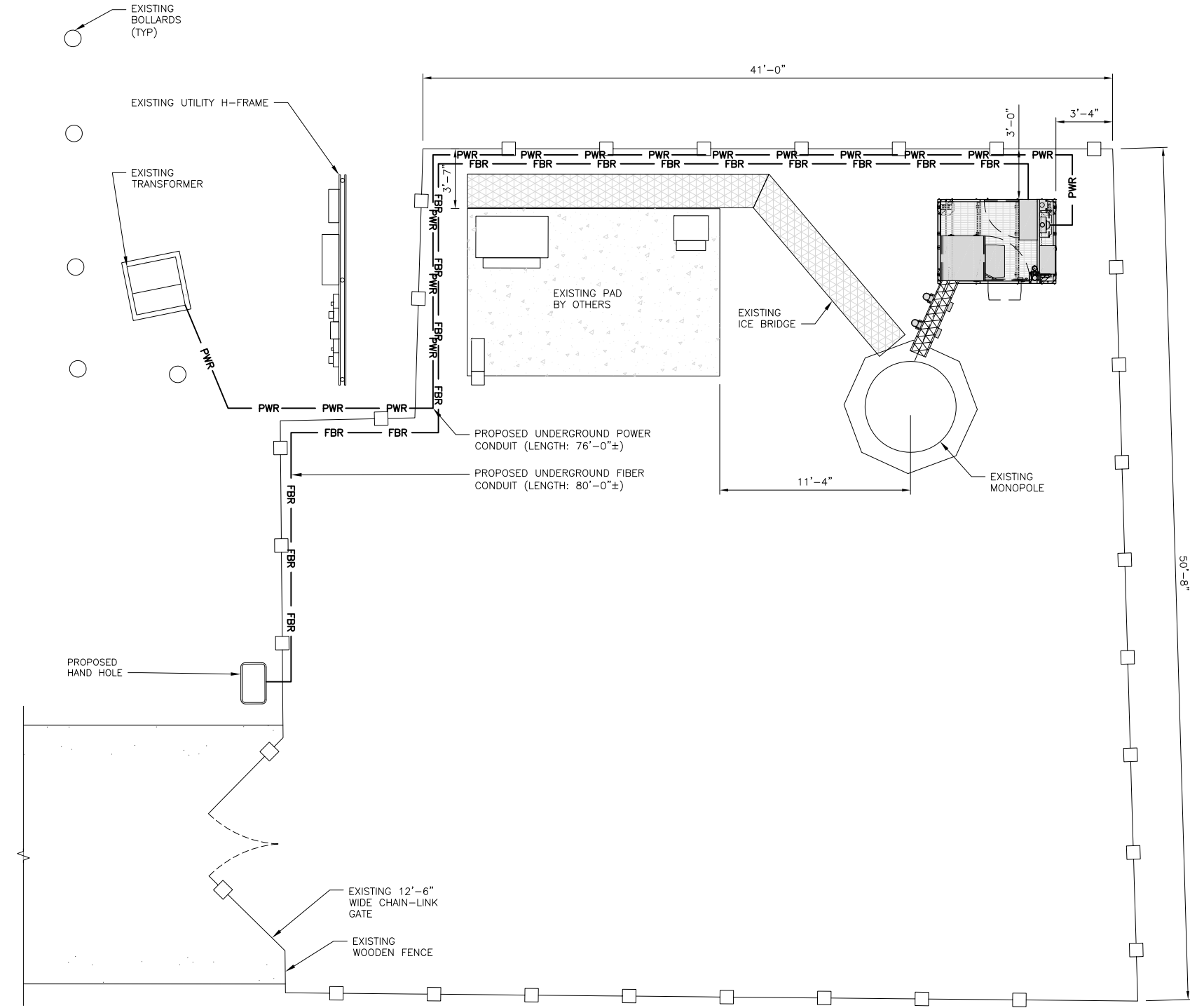
FINAL POWER OR FIBER DESIGN NOT AVAILABLE AT TIME OF ISSUE

NOTES

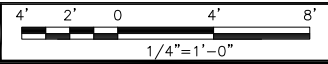
1. CONTRACTOR SHALL FIELD VERIFY ALL PROPOSED UNDERGROUND UTILITY CONDUIT ROUTE.
2. ANTENNAS AND MOUNTS OMITTED FOR CLARITY.

DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND -48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY -48V.

1. CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING A BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS TO THE CONTRACTOR'S FUNCTIONS, THE SCOPE OF WORK, OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED.
2. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH CURRENT NATIONAL ELECTRICAL CODES AND ALL STATE AND LOCAL CODES, LAWS, AND ORDINANCES. PROVIDE ALL COMPONENTS AND WIRING SIZES AS REQUIRED TO MEET NEC STANDARDS.
3. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO CONSTRUCTION.
4. CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION CONFLICTS. VERIFY WITH THE MECHANICAL EQUIPMENT CONTRACTOR AND COMPLY AS REQUIRED.
5. CONTRACTOR SHALL PROVIDE ALL BREAKERS, CONDUITS AND CIRCUITS AS REQUIRED FOR A COMPLETE SYSTEM.
6. CONTRACTOR SHALL PROVIDE PULL BOXES AND JUNCTION BOXES AS REQUIRED BY THE NEC ARTICLE 314.
7. CONTRACTOR SHALL PROVIDE ALL STRAIN RELIEF AND CABLE SUPPORTS FOR ALL CABLE ASSEMBLIES. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.
8. ALL DISCONNECTS AND CONTROLLING DEVICES SHALL BE PROVIDED WITH ENGRAVED PHENOLIC NAMEPLATES INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM.
9. INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC 250. THE EQUIPMENT GROUNDING CONDUCTORS SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, AND EQUIPMENT CABINETS.
10. ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
11. PANEL SCHEDULE LOADING AND CIRCUIT ARRANGEMENTS REFLECT POST-CONSTRUCTION EQUIPMENT.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR AS-BUILT PANEL SCHEDULE AND SITE DRAWINGS.
13. ALL TRENCHES IN COMPOUND TO BE HAND DUG.
14. ATC'S GROUND RIGHTS DO NOT INCLUDE A UTILITIES EASEMENT. LICENSEE WILL NEED TO OBTAIN A UTILITY EASEMENT AND CONSTRUCTION CONTRACTOR MUST FIELD VERIFY ALL PROPOSED UTILITY ROUTES ARE WITHIN THE OBTAINED EASEMENT.



UTILITY ROUTE PLAN



1

ELECTRICAL NOTES

NO SCALE

2



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CONSTRUCTION DOCUMENTS

SUBMITTALS		
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153547.001.01

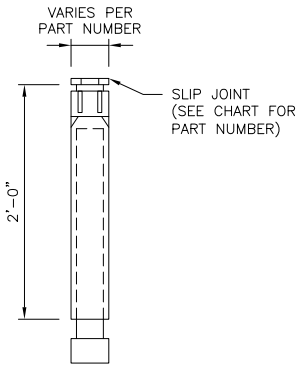
DISH Wireless L.L.C.  
PROJECT INFORMATION  
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
ELECTRICAL/FIBER ROUTE  
PLAN AND NOTES

SHEET NUMBER  
**E-1**

**CARLON EXPANSION FITTINGS**

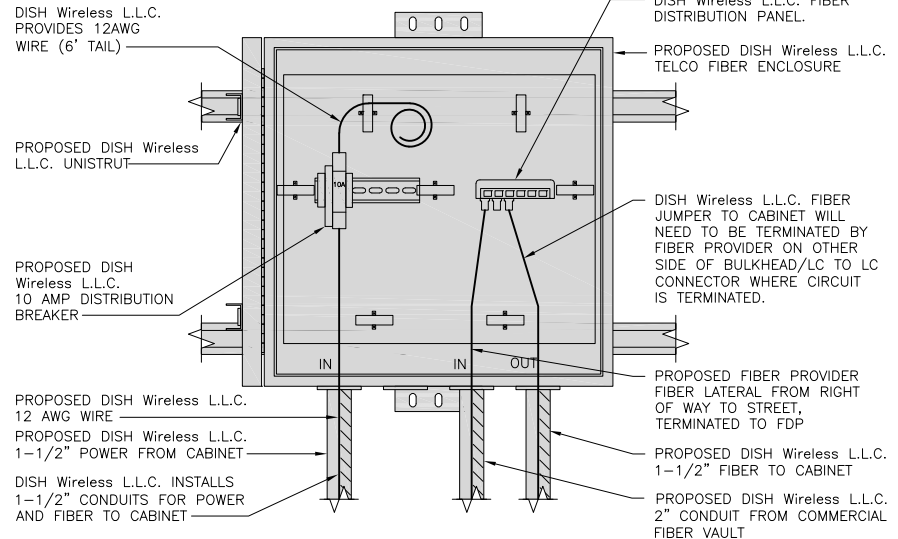
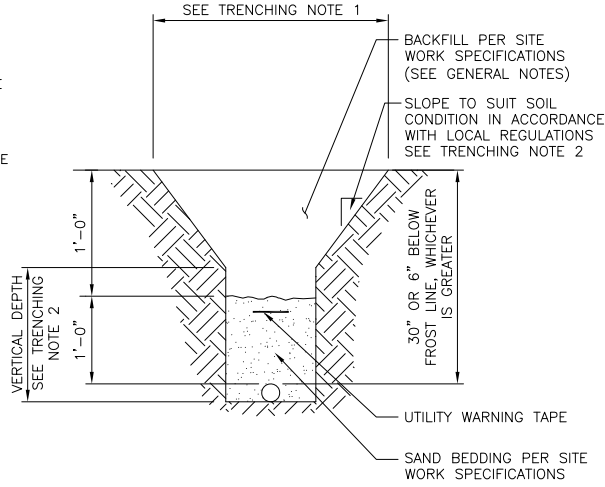
COUPLING END PART#	MALE TERMINAL ADAPTER END PART#	SIZE	STD CTN QTY.	TRAVEL LENGTH
E945D	E945DX	1/2"	20	4"
E945E	E945EX	3/4"	15	4"
E945F	E945FX	1"	10	4"
E945G	E945GX	1 1/4"	5	4"
E945H	E945HX	1 1/2"	5	4"
E945J	E945JX	2"	15	8"
E945K	E945KX	2 1/2"	10	8"
E945L	E945LX	3"	10	8"
E945M	E945MX	3 1/2"	5	8"
E945N	E945NX	4"	5	8"
E945P	E945PX	5"	1	8"
E945R	E945RX	6"	1	8"



NOTE: CONTRACTOR TO INSTALL EXPANSION FITTING SLIP JOINT AT METER CENTER CONDUIT TERMINATION, AS PER LOCAL UTILITY POLICY, ORDINANCE AND/OR SPECIFIED REQUIREMENT.

**TRENCHING NOTES**

- CONTRACTOR SHALL RESTORE THE TRENCH TO ITS ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ITS ORIGINAL CROSS SECTION.
- TRENCHING SAFETY; INCLUDING, BUT NOT LIMITED TO SOIL CLASSIFICATION, SLOPING, AND SHORING, SHALL BE GOVERNED BY THE CURRENT OSHA TRENCHING AND EXCAVATION SAFETY STANDARDS.
- ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT NATIONAL ELECTRIC CODE (NEC) OR AS REQUIRED BY THE LOCAL JURISDICTION, WHICHEVER IS THE MOST STRINGENT.



EXPANSION JOINT DETAIL

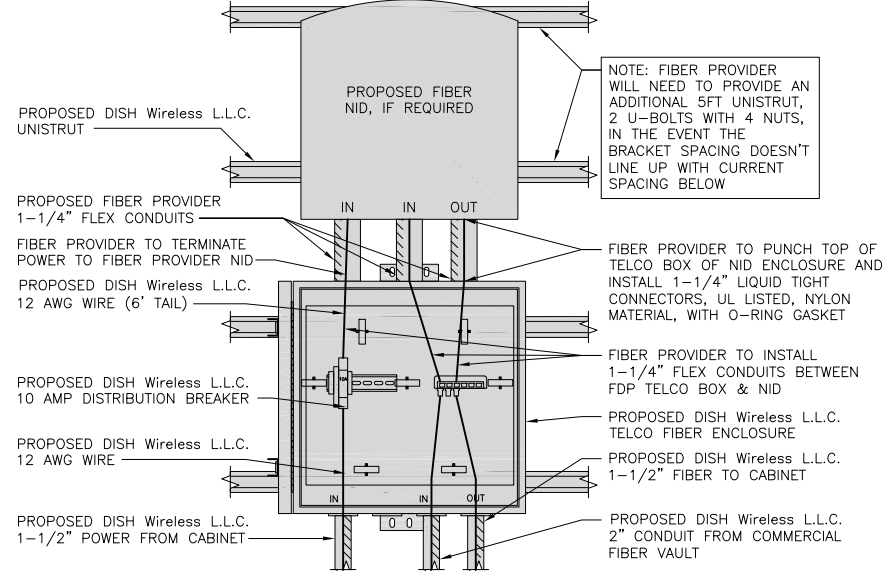
NO SCALE 1

TYPICAL UNDERGROUND TRENCH DETAIL

NO SCALE 2

DARK TELCO BOX – INTERIOR WIRING LAYOUT

NO SCALE 3



LIT TELCO BOX – INTERIOR WIRING LAYOUT (OPTIONAL)

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

NOT USED

NO SCALE 9



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



**B+T GRP**  
1717 S. BOULDER SUITE 300  
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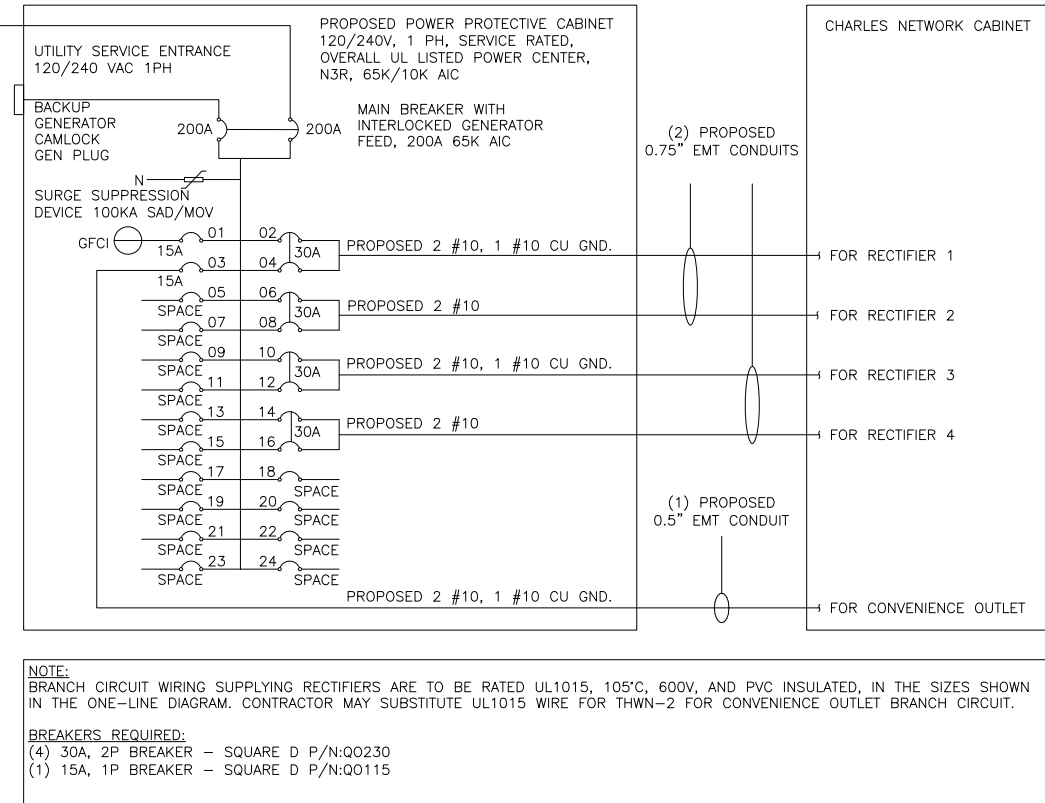
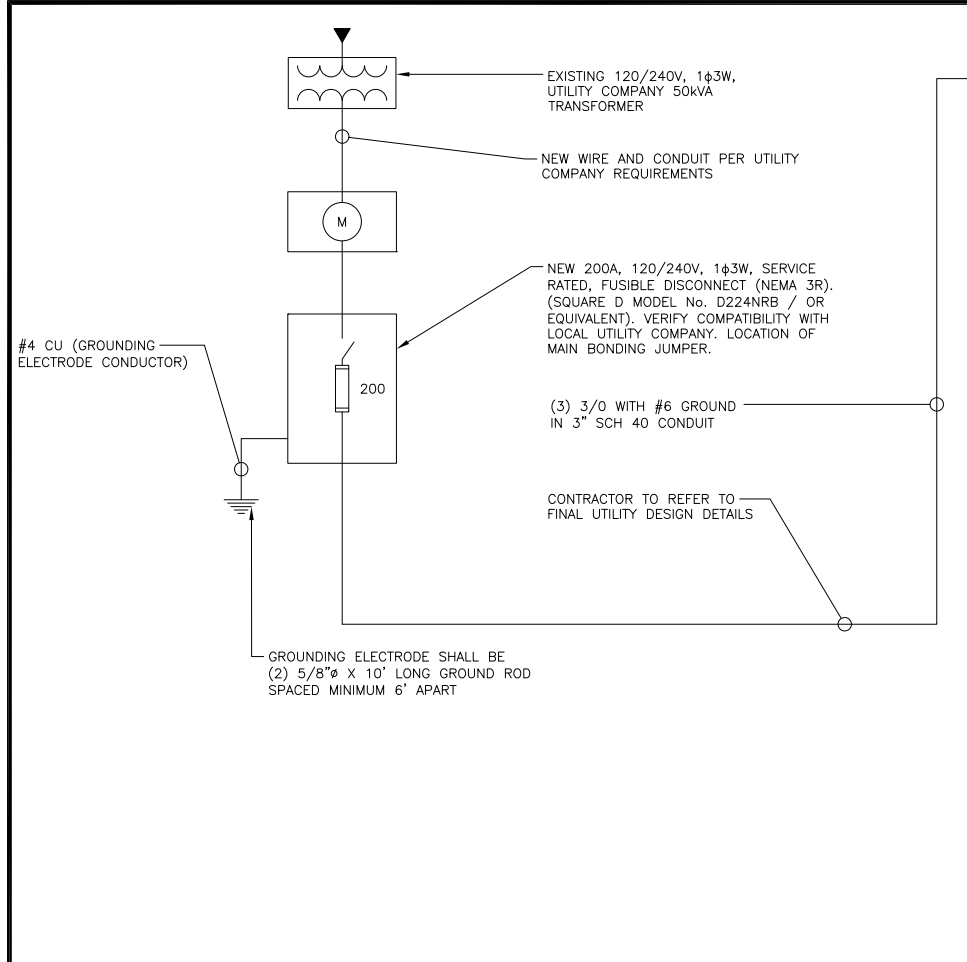
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PROJECT INFORMATION  
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
ELECTRICAL  
DETAILS

SHEET NUMBER  
**E-2**



PPC ONE-LINE DIAGRAM

**NOTES**

THE (2) CONDUITS WITH (4) CURRENT CARRYING CONDUCTORS EACH, SHALL APPLY THE ADJUSTMENT FACTOR OF 80% PER 2014/17 NEC TABLE 310.15(B)(3)(g) OR 2020 NEC TABLE 310.15(C)(1) FOR UL1015 WIRE.

#12 FOR 15A-20A/1P BREAKER: 0.8 x 30A = 24.0A  
#10 FOR 25A-30A/2P BREAKER: 0.8 x 40A = 32.0A  
#8 FOR 35A-40A/2P BREAKER: 0.8 x 55A = 44.0A  
#6 FOR 45A-60A/2P BREAKER: 0.8 x 75A = 60.0A

CONDUIT SIZING: AT 40% FILL PER NEC CHAPTER 9, TABLE 4, ARTICLE 358.  
0.5" CONDUIT - 0.122 SQ. IN AREA  
0.75" CONDUIT - 0.213 SQ. IN AREA  
2.0" CONDUIT - 1.316 SQ. IN AREA  
3.0" CONDUIT - 2.907 SQ. IN AREA

CABINET CONVENIENCE OUTLET CONDUCTORS (1 CONDUIT): USING THWN-2, CU.  
#10 - 0.0211 SQ. IN X 2 = 0.0422 SQ. IN  
#10 - 0.0211 SQ. IN X 1 = 0.0211 SQ. IN <GROUND  
TOTAL = 0.0633 SQ. IN

0.5" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (3) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

RECTIFIER CONDUCTORS (2 CONDUITS): USING UL1015, CU.  
#10 - 0.0266 SQ. IN X 4 = 0.1064 SQ. IN  
#10 - 0.0082 SQ. IN X 1 = 0.0082 SQ. IN <BARE GROUND  
TOTAL = 0.1146 SQ. IN

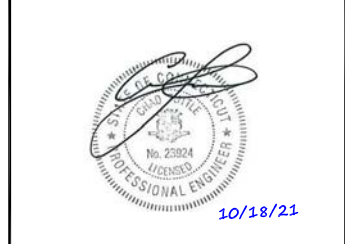
0.75" EMT CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (5) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.

PPC FEED CONDUCTORS (1 CONDUIT): USING THWN, CU.  
3/0 - 0.2679 SQ. IN X 3 = 0.8037 SQ. IN  
#6 - 0.0507 SQ. IN X 1 = 0.0507 SQ. IN <GROUND  
TOTAL = 0.8544 SQ. IN

3.0" SCH 40 PVC CONDUIT IS ADEQUATE TO HANDLE THE TOTAL OF (4) WIRES, INCLUDING GROUND WIRE, AS INDICATED ABOVE.



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PROJECT INFORMATION  
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
ELECTRICAL ONE-LINE, FAULT  
CALCS & PANEL SCHEDULE

SHEET NUMBER  
**E-3**

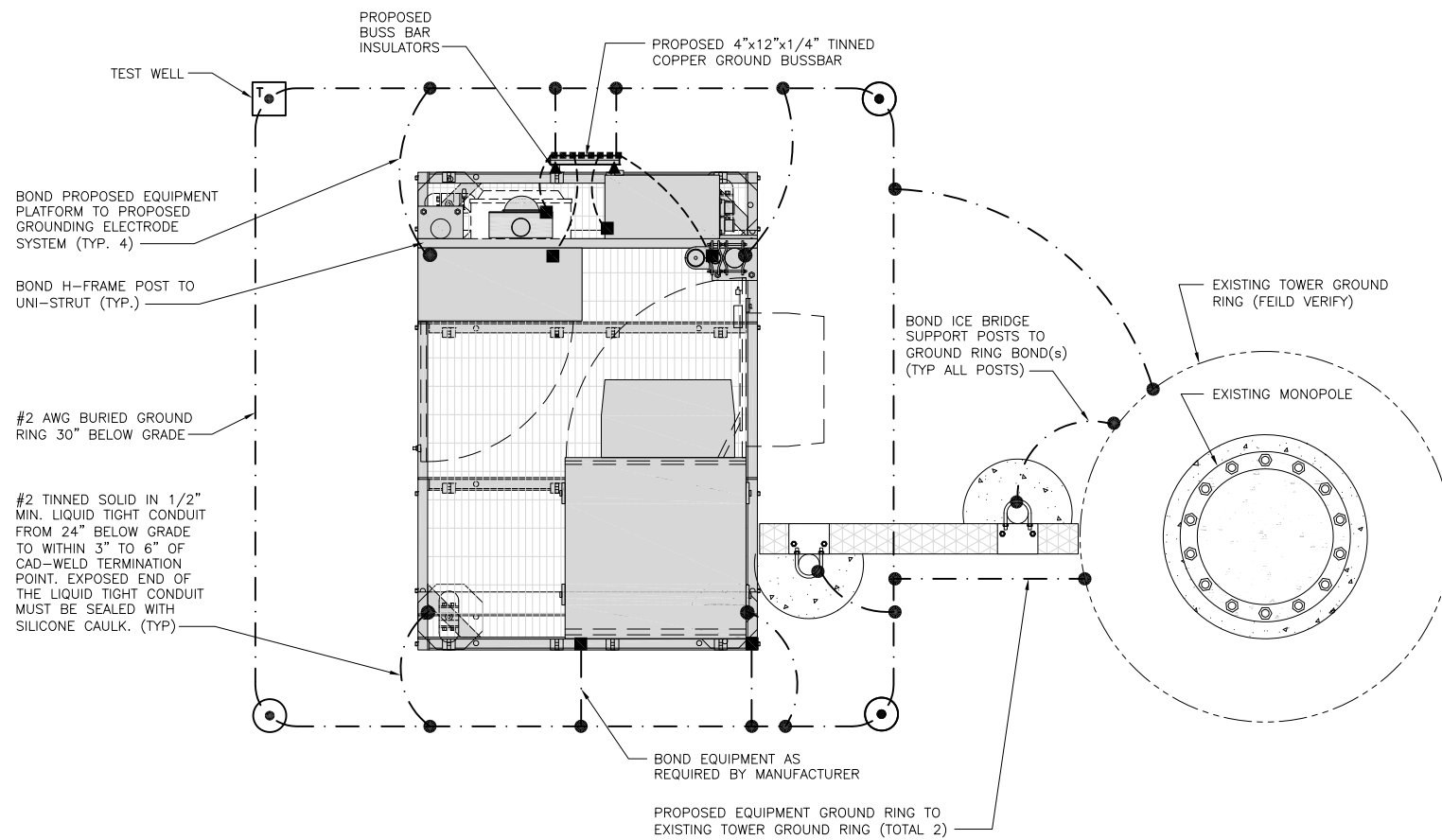
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	L1	L2						L1	L2	
PPC GFCI OUTLET	180	180	15A	1	A	2	30A	2880	2880	ABB/GE INFINITY RECTIFIER 1
CHARLES GFCI OUTLET			15A	3	B	4	30A	2880	2880	ABB/GE INFINITY RECTIFIER 1
-SPACE-				5	A	6	30A	2880	2880	ABB/GE INFINITY RECTIFIER 2
-SPACE-				7	B	8	30A	2880	2880	ABB/GE INFINITY RECTIFIER 2
-SPACE-				9	A	10	30A	2880	2880	ABB/GE INFINITY RECTIFIER 3
-SPACE-				11	B	12	30A	2880	2880	ABB/GE INFINITY RECTIFIER 3
-SPACE-				13	A	14	30A	2880	2880	ABB/GE INFINITY RECTIFIER 4
-SPACE-				15	B	16	30A	2880	2880	ABB/GE INFINITY RECTIFIER 4
-SPACE-				17	A	18				-SPACE-
-SPACE-				19	B	20				-SPACE-
-SPACE-				21	A	22				-SPACE-
-SPACE-				23	B	24				-SPACE-
VOLTAGE AMPS	180	180						11520	11520	
200A MCB, 1Φ, 24 SPACE, 120/240V				L1	L2					
MB RATING: 65,000 AIC				11700	11700					
				98	98					
				98						
				123						

PANEL SCHEDULE

NO SCALE 2

NOT USED

NO SCALE 3

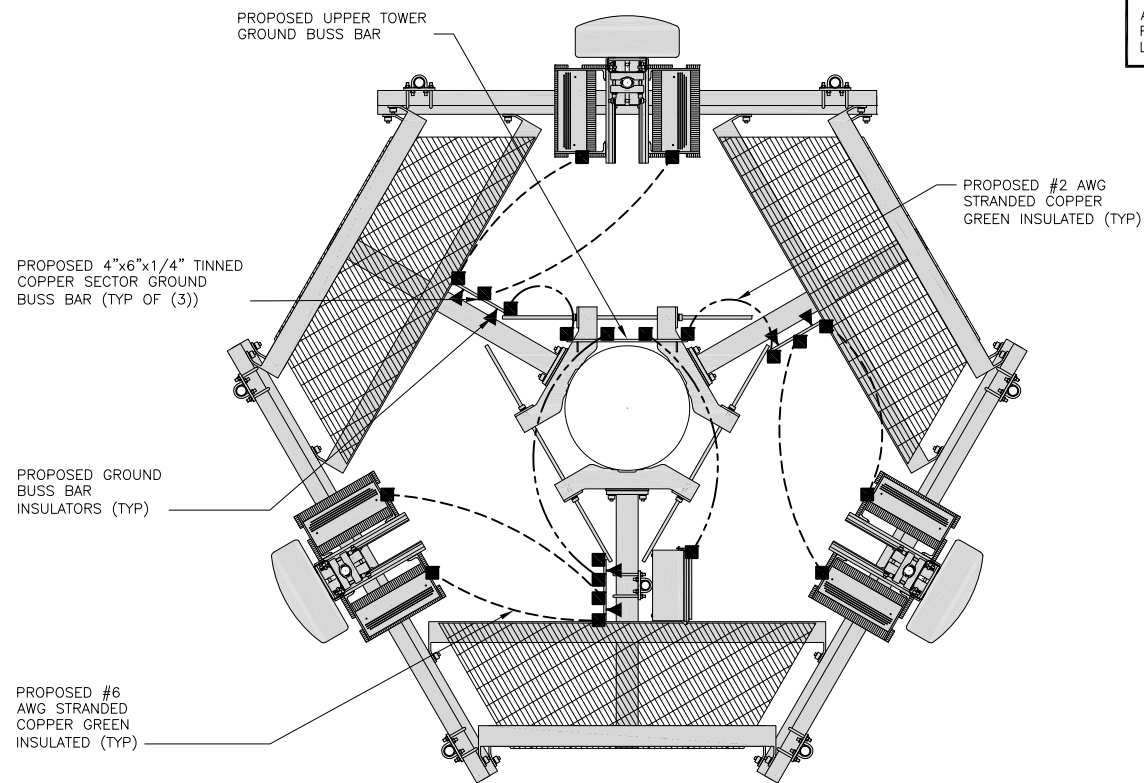


TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE 1

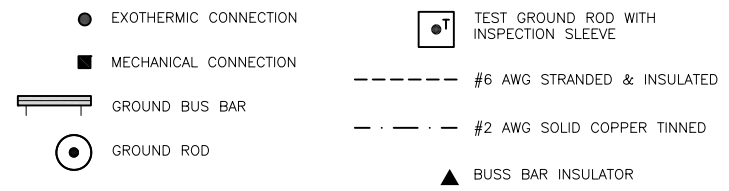
NOTES

ANTENNAS AND OVP SHOWN ARE GENERIC AND NOT REFERENCING TO A SPECIFIC MANUFACTURER. THIS LAYOUT IS FOR REFERENCE PURPOSES ONLY



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2



GROUNDING LEGEND

- GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
- CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND DISH Wireless L.L.C. GROUNDING AND BONDING REQUIREMENTS AND MANUFACTURER'S SPECIFICATIONS.
- ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.

GROUNDING KEY NOTES

- (A) EXTERIOR GROUND RING: #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.
- (B) TOWER GROUND RING: THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS. WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING, AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.
- (C) INTERIOR GROUND RING: #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUND TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.
- (D) BOND TO INTERIOR GROUND RING: #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.
- (E) GROUND ROD: UL LISTED COPPER CLAD STEEL. MINIMUM 1/2" DIAMETER BY EIGHT FEET LONG. GROUND RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR.
- (F) CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.
- (G) HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CRGB MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS EACH.
- (H) EXTERIOR CABLE ENTRY PORT GROUND BARS: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.
- (I) TELCO GROUND BAR: BOND TO BOTH CELL REFERENCE GROUND BAR OR EXTERIOR GROUND RING.
- (J) FRAME BONDING: THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK.
- (K) INTERIOR UNIT BONDS: METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITH THE AREA OF THE INTERIOR GROUND RING REQUIRE A #6 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING.
- (L) FENCE AND GATE GROUNDING: METAL FENCES WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS.
- (M) EXTERIOR UNIT BONDS: METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING. USING #2 TINNED SOLID COPPER WIRE
- (N) ICE BRIDGE SUPPORTS: EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING.
- (O) DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICE CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH A MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR
- (P) TOWER TOP COLLECTOR BUSS BAR IS TO BE MECHANICALLY BONDED TO PROPOSED ANTENNA MOUNT COLLAR. REFER TO DISH Wireless L.L.C. GROUNDING NOTES.

GROUNDING KEY NOTES

NO SCALE 3



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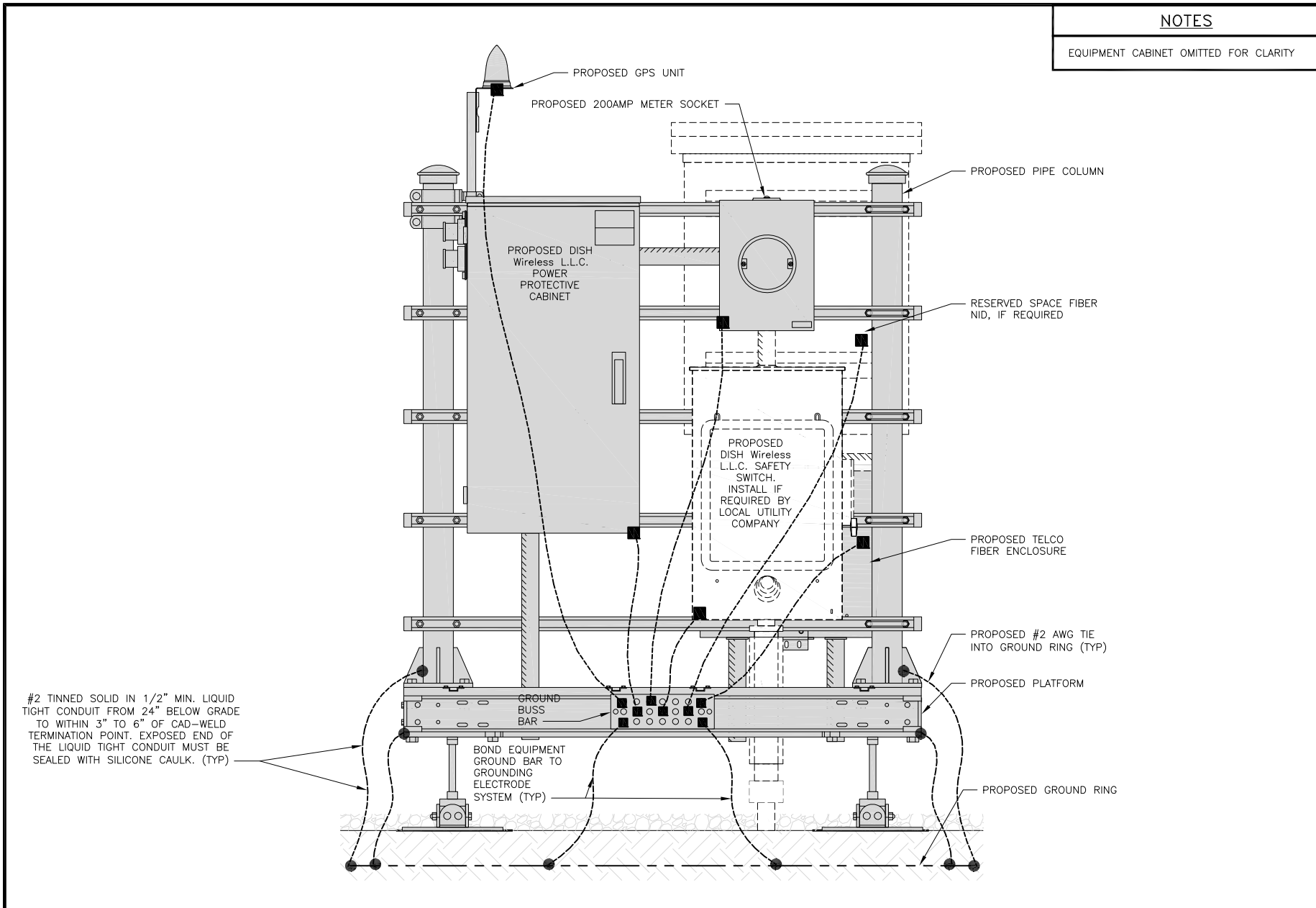
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PROJECT INFORMATION  
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
GROUNDING PLANS  
AND NOTES

SHEET NUMBER  
**G-1**

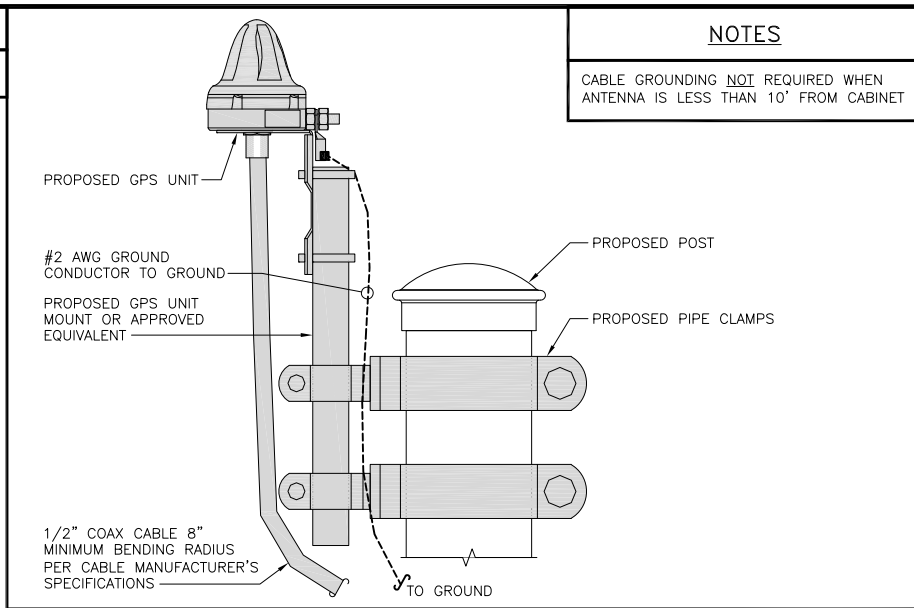




H-FRAME GROUNDING DETAIL

NO SCALE 1

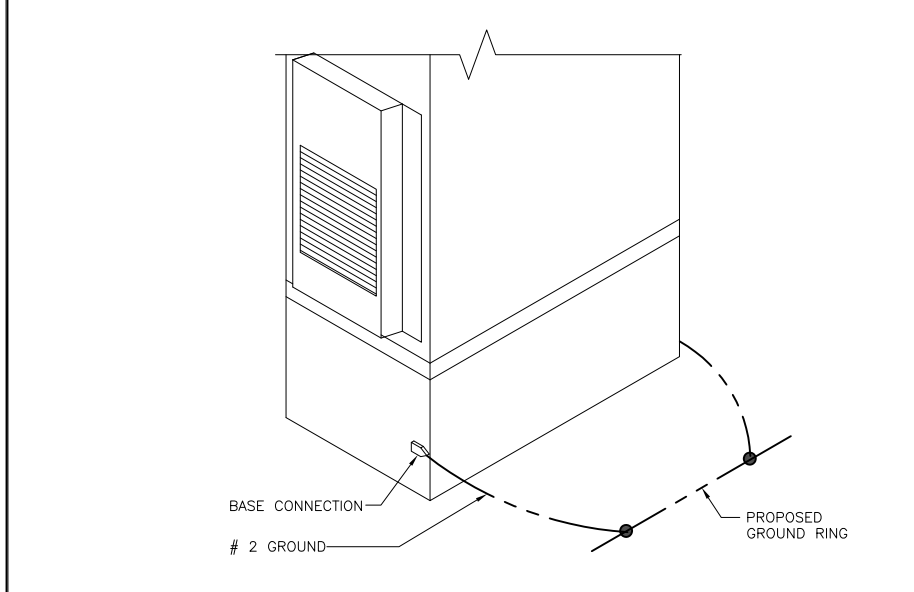
NOTES  
EQUIPMENT CABINET OMITTED FOR CLARITY



TYPICAL GPS UNIT GROUNDING

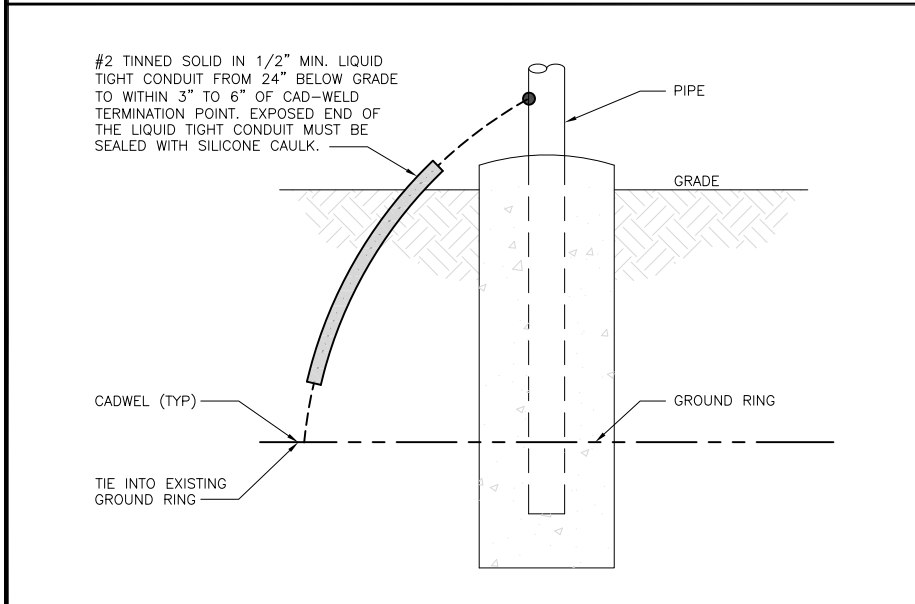
NO SCALE 2

NOTES  
CABLE GROUNDING NOT REQUIRED WHEN ANTENNA IS LESS THAN 10' FROM CABINET



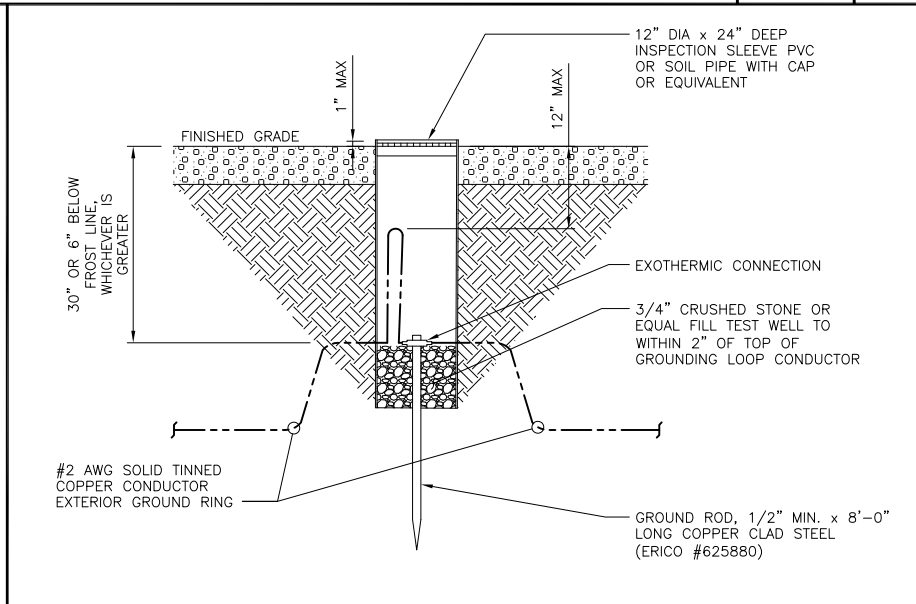
OUTDOOR CABINET GROUNDING

NO SCALE 3



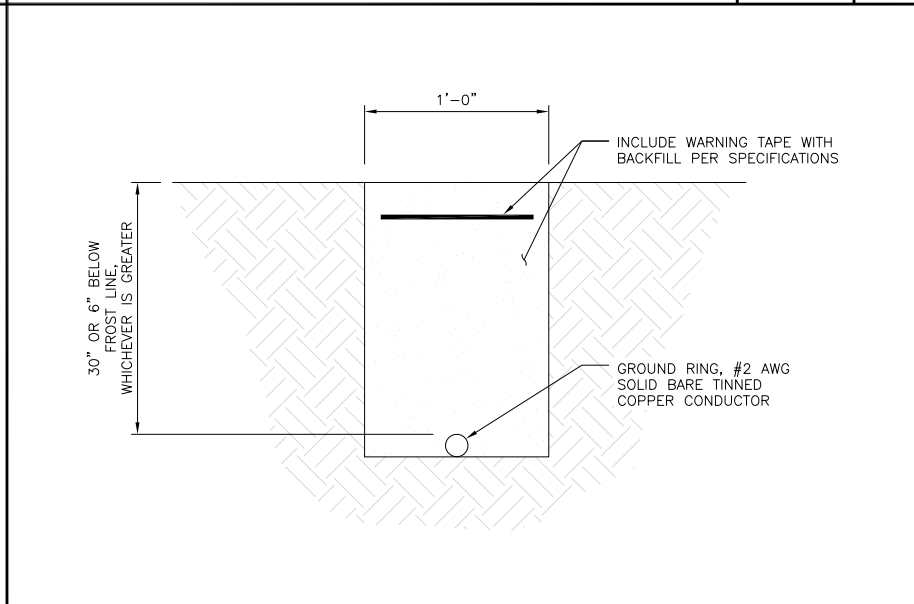
TRANSITIONING GROUND DETAIL

NO SCALE 4



TYPICAL TEST GROUND ROD WITH INSPECTION SLEEVE

NO SCALE 5



TYPICAL GROUND RING TRENCH

NO SCALE 6



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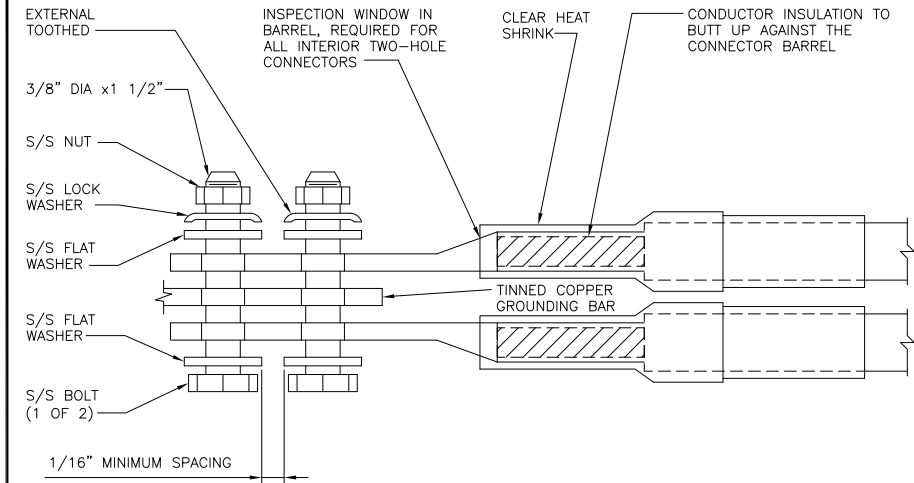
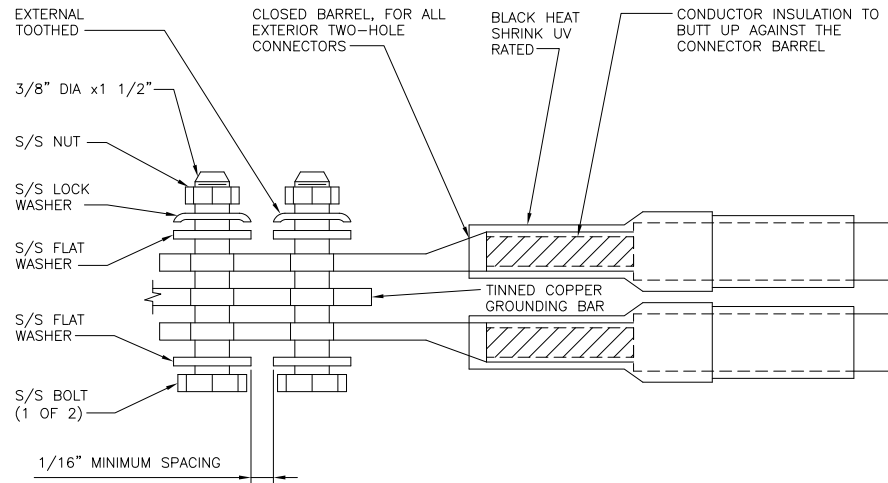
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PROJECT INFORMATION  
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
GROUNDING DETAILS

SHEET NUMBER  
**G-2**

1. EXOTHERMIC WELD (2) TWO, #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR. ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.
2. ALL EXTERIOR GROUNDING HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
3. FOR GROUND BOND TO STEEL ONLY: COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
4. DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUNDING BUS.
5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE.
6. ALL GROUNDING PARTS AND EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED.
8. ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).



TYPICAL GROUNDING NOTES

NO SCALE

1

TYPICAL EXTERIOR TWO HOLE LUG

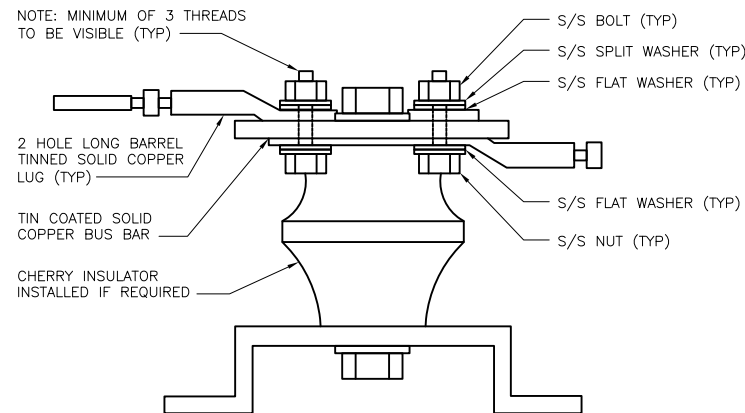
NO SCALE

2

TYPICAL INTERIOR TWO HOLE LUG

NO SCALE

3



LUG DETAIL

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



5701 SOUTH SANTA FE DRIVE  
LITTLETON, CO 80120



B&T ENGINEERING, INC.  
PEC.0001564  
Expires 2/10/22

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CONSTRUCTION DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	7/29/21	ISSUED FOR REVIEW
0	10/18/21	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
153547.001.01

DISH Wireless L.L.C.  
PROJECT INFORMATION  
BOBOS00020A  
61-1 BUTTONBALL ROAD  
OLD LYME, CT 06371

SHEET TITLE  
GROUNDING DETAILS

SHEET NUMBER  
**G-3**

HYBRID/DISCREET CABLES												3/4" TAPE WIDTHS WITH 3/4" SPACING											
LOW-BAND RRH (600 MHz N71 BASEBAND) + (850 MHz N26 BAND) + (700 MHz N29 BAND) - OPTIONAL PER MARKET  ADD FREQUENCY COLOR TO SECTOR BAND (CBRS WILL USE YELLOW BAND)												<b>ALPHA RRH</b> PORT 1 + SLANT PORT 2 - SLANT PORT 3 + SLANT PORT 4 - SLANT				<b>BETA RRH</b> PORT 1 + SLANT PORT 2 - SLANT PORT 3 + SLANT PORT 4 - SLANT				<b>GAMMA RRH</b> PORT 1 + SLANT PORT 2 - SLANT PORT 3 + SLANT PORT 4 - SLANT			
MID-BAND RRH (AWS BANDS N66+N70)  ADD FREQUENCY COLOR TO SECTOR BAND (CBRS WILL USE YELLOW BANDS)												RED PURPLE WHITE PORT (-)				BLUE PURPLE WHITE PORT (-)				GREEN PURPLE WHITE PORT (-)			
<b>HYBRID/DISCREET CABLES</b> INCLUDE SECTOR BANDS BEING SUPPORTED ALONG WITH FREQUENCY BANDS.  EXAMPLE 1 - HYBRID, OR DISCREET, SUPPORTS ALL SECTORS, BOTH LOW-BANDS AND MID-BANDS.  EXAMPLE 2 - HYBRID, OR DISCREET, SUPPORTS CBRS ONLY, ALL SECTORS.  EXAMPLE 3 - MAIN COAX WITH GROUND MOUNTED RRHs.												<b>EXAMPLE 1</b> RED BLUE GREEN ORANGE PURPLE		<b>EXAMPLE 2</b> RED BLUE GREEN YELLOW		<b>EXAMPLE 3</b> RED RED		<b>CANISTER</b> <b>COAX #1</b> <b>(ALPHA)</b> RED RED		<b>COAX #2</b> <b>(ALPHA)</b> RED RED			
<b>FIBER JUMPERS TO RRHs</b> LOW-BAND HHR FIBER CABLES HAVE SECTOR STRIPE ONLY.												<b>LOW BAND RRH</b> RED ORANGE		<b>MID BAND RRH</b> RED PURPLE		<b>LOW BAND RRH</b> BLUE ORANGE		<b>MID BAND RRH</b> BLUE PURPLE		<b>LOW BAND RRH</b> GREEN ORANGE		<b>MID BAND RRH</b> GREEN PURPLE	
<b>POWER CABLES TO RRHs</b> LOW-BAND RRH POWER CABLES HAVE SECTOR STRIPE ONLY												<b>LOW BAND RRH</b> RED ORANGE		<b>MID BAND RRH</b> RED PURPLE		<b>LOW BAND RRH</b> BLUE ORANGE		<b>MID BAND RRH</b> BLUE PURPLE		<b>LOW BAND RRH</b> GREEN ORANGE		<b>MID BAND RRH</b> GREEN PURPLE	
<b>RET MOTORS AT ANTENNAS</b> RET CONTROL IS HANDLED BY THE MID-BAND RRH WHEN ONE SET OF RET PORTS EXIST ON ANTENNA.  SEPARATE RET CABLES ARE USED WHEN ANTENNA PORTS PROVIDE INPUTS FOR BOTH LOW AND MID BANDS.												<b>ANTENNA 1</b> <b>MID BAND</b> IN RED PURPLE		<b>ANTENNA 1</b> <b>LOW BAND</b> IN RED ORANGE		<b>ANTENNA 1</b> <b>MID BAND</b> IN BLUE PURPLE		<b>ANTENNA 1</b> <b>LOW BAND</b> IN BLUE ORANGE		<b>ANTENNA 1</b> <b>MID BAND</b> IN GREEN PURPLE		<b>ANTENNA 1</b> <b>LOW BAND</b> IN GREEN ORANGE	
<b>MICROWAVE RADIO LINKS</b> LINKS WILL HAVE A 1.5-2 INCH WHITE WRAP WITH THE AZIMUTH COLOR OVERLAPPING IN THE MIDDLE. ADD ADDITIONAL SECTOR COLOR BANDS FOR EACH ADDITIONAL MW RADIO.  MICROWAVE CABLES WILL REQUIRE P-TOUCH LABELS INSIDE THE CABINET TO IDENTIFY THE LOCAL AND REMOTE SITE ID'S.												<b>FORWARD AZIMUTH OF 0-120 DEGREES</b> PRIMARY SECONDARY WHITE WHITE RED RED WHITE RED WHITE WHITE		<b>FORWARD AZIMUTH OF 120-240 DEGREES</b> PRIMARY SECONDARY WHITE WHITE BLUE BLUE WHITE BLUE WHITE WHITE		<b>FORWARD AZIMUTH OF 240-359 DEGREES</b> PRIMARY SECONDARY WHITE WHITE GREEN GREEN WHITE GREEN WHITE WHITE							

RF CABLE COLOR CODES

1

NOT USED

4

LOW BANDS (N71+N26)  
OPTIONAL - (N29)

ORANGE

CBRS TECH  
(3 GHz)

YELLOW

AWS  
(N66+N70+H-BLOCK)

PURPLE

NEGATIVE SLANT PORT  
ON ANT/RRH

WHITE

ALPHA SECTOR

RED

BETA SECTOR

BLUE

GAMMA SECTOR

GREEN

COLOR IDENTIFIER

2

NOT USED

3



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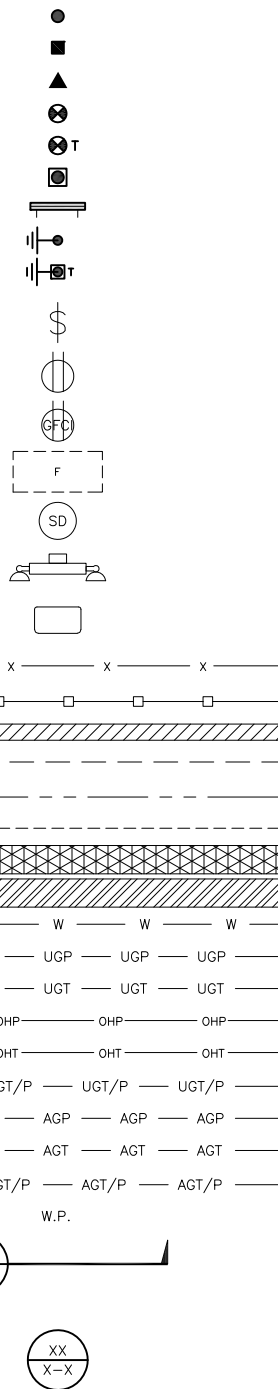
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SHEET TITLE  
RF  
CABLE COLOR CODES

SHEET NUMBER  
RF-1

EXOTHERMIC CONNECTION  
 MECHANICAL CONNECTION  
 BUSS BAR INSULATOR  
 CHEMICAL ELECTROLYTIC GROUNDING SYSTEM  
 TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM  
 EXOTHERMIC WITH INSPECTION SLEEVE  
 GROUNDING BAR  
 GROUND ROD  
 TEST GROUND ROD WITH INSPECTION SLEEVE  
 SINGLE POLE SWITCH  
 DUPLEX RECEPTACLE  
 DUPLEX GFCI RECEPTACLE  
 FLUORESCENT LIGHTING FIXTURE (2) TWO LAMPS 48-T8  
 SMOKE DETECTION (DC)  
 EMERGENCY LIGHTING (DC)  
 SECURITY LIGHT W/PHOTOCELL LITHONIA ALXW  
 LED-1-25A400/51K-SR4-120-PE-DDBTXD  
 CHAIN LINK FENCE  
 WOOD/WROUGHT IRON FENCE  
 WALL STRUCTURE  
 LEASE AREA  
 PROPERTY LINE (PL)  
 SETBACKS  
 ICE BRIDGE  
 CABLE TRAY  
 WATER LINE  
 UNDERGROUND POWER  
 UNDERGROUND TELCO  
 OVERHEAD POWER  
 OVERHEAD TELCO  
 UNDERGROUND TELCO/POWER  
 ABOVE GROUND POWER  
 ABOVE GROUND TELCO  
 ABOVE GROUND TELCO/POWER  
 WORKPOINT  
 SECTION REFERENCE  
 DETAIL REFERENCE



**LEGEND**

AB ANCHOR BOLT	IN INCH
ABV ABOVE	INT INTERIOR
AC ALTERNATING CURRENT	LB(S) POUND(S)
ADDL ADDITIONAL	LF LINEAR FEET
AFF ABOVE FINISHED FLOOR	LTE LONG TERM EVOLUTION
AFG ABOVE FINISHED GRADE	MAS MASONRY
AGL ABOVE GROUND LEVEL	MAX MAXIMUM
AIC AMPERAGE INTERRUPTION CAPACITY	MB MACHINE BOLT
ALUM ALUMINUM	MECH MECHANICAL
ALT ALTERNATE	MFR MANUFACTURER
ANT ANTENNA	MGB MASTER GROUND BAR
APPROX APPROXIMATE	MIN MINIMUM
ARCH ARCHITECTURAL	MISC MISCELLANEOUS
ATS AUTOMATIC TRANSFER SWITCH	MTL METAL
AWG AMERICAN WIRE GAUGE	MTS MANUAL TRANSFER SWITCH
BATT BATTERY	MW MICROWAVE
BLDG BUILDING	NEC NATIONAL ELECTRIC CODE
BLK BLOCK	NM NEWTON METERS
BLKG BLOCKING	NO. NUMBER
BM BEAM	# NUMBER
BTC BARE TINNED COPPER CONDUCTOR	NTS NOT TO SCALE
BOF BOTTOM OF FOOTING	OC ON-CENTER
CAB CABINET	OSHA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
CANT CANTILEVERED	OPNG OPENING
CHG CHARGING	P/C PRECAST CONCRETE
CLG CEILING	PCS PERSONAL COMMUNICATION SERVICES
CLR CLEAR	PCU PRIMARY CONTROL UNIT
COL COLUMN	PRC PRIMARY RADIO CABINET
COMM COMMON	PP POLARIZING PRESERVING
CONC CONCRETE	PSF POUNDS PER SQUARE FOOT
CONSTR CONSTRUCTION	PSI POUNDS PER SQUARE INCH
DBL DOUBLE	PT PRESSURE TREATED
DC DIRECT CURRENT	PWR POWER CABINET
DEPT DEPARTMENT	QTY QUANTITY
DF DOUGLAS FIR	RAD RADIUS
DIA DIAMETER	RECT RECTIFIER
DIAG DIAGONAL	REF REFERENCE
DIM DIMENSION	REINF REINFORCEMENT
DWG DRAWING	REQ'D REQUIRED
DWL DOWEL	RET REMOTE ELECTRIC TILT
EA EACH	RF RADIO FREQUENCY
EC ELECTRICAL CONDUCTOR	RMC RIGID METALLIC CONDUIT
EL ELEVATION	RRH REMOTE RADIO HEAD
ELEC ELECTRICAL	RRU REMOTE RADIO UNIT
EMT ELECTRICAL METALLIC TUBING	RWY RACEWAY
ENG ENGINEER	SCH SCHEDULE
EQ EQUAL	SHT SHEET
EXP EXPANSION	SIAD SMART INTEGRATED ACCESS DEVICE
EXT EXTERIOR	SIM SIMILAR
EW EACH WAY	SPEC SPECIFICATION
FAB FABRICATION	SQ SQUARE
FF FINISH FLOOR	SS STAINLESS STEEL
FG FINISH GRADE	STD STANDARD
FIF FACILITY INTERFACE FRAME	STL STEEL
FIN FINISH(ED)	TEMP TEMPORARY
FLR FLOOR	THK THICKNESS
FDN FOUNDATION	TMA TOWER MOUNTED AMPLIFIER
FOC FACE OF CONCRETE	TN TOE NAIL
FOM FACE OF MASONRY	TOA TOP OF ANTENNA
FOS FACE OF STUD	TOC TOP OF CURB
FOW FACE OF WALL	TOF TOP OF FOUNDATION
FS FINISH SURFACE	TOP TOP OF PLATE (PARAPET)
FT FOOT	TOS TOP OF STEEL
FTG FOOTING	TOW TOP OF WALL
GA GAUGE	TVSS TRANSIENT VOLTAGE SURGE SUPPRESSION
GEN GENERATOR	TYP TYPICAL
GFCI GROUND FAULT CIRCUIT INTERRUPTER	UG UNDERGROUND
GLB GLUE LAMINATED BEAM	UL UNDERWRITERS LABORATORY
GLV GALVANIZED	UNO UNLESS NOTED OTHERWISE
GPS GLOBAL POSITIONING SYSTEM	UMTS UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
GND GROUND	UPS UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
GSM GLOBAL SYSTEM FOR MOBILE	VIF VERIFIED IN FIELD
HDG HOT DIPPED GALVANIZED	W WIDE
HDR HEADER	W/ WITH
HGR HANGER	WD WOOD
HVAC HEAT/VENTILATION/AIR CONDITIONING	WP WEATHERPROOF
HT HEIGHT	WT WEIGHT
IGR INTERIOR GROUND RING	

**ABBREVIATIONS**



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**LEGEND AND ABBREVIATIONS**

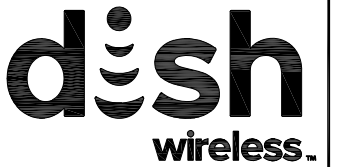
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**GN-1**

SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED – NO WORK SHALL COMMENCE PRIOR TO CONTRACTOR RECEIVING A WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE DISH Wireless L.L.C. AND TOWER OWNER NOC & THE DISH Wireless L.L.C. AND TOWER OWNER CONSTRUCTION MANAGER.
2. "LOOK UP" – DISH Wireless L.L.C. AND TOWER OWNER SAFETY CLIMB REQUIREMENT:  
THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR DISH Wireless L.L.C. AND DISH Wireless L.L.C. AND TOWER OWNER POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND DISH Wireless L.L.C. AND TOWER OWNER STANDARDS, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA-322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH DISH Wireless L.L.C. AND TOWER OWNER INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON DISH Wireless L.L.C. AND TOWER OWNER TOWER SITE AND LATEST VERSION OF ANSI/TIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY DISH Wireless L.L.C. AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES INCLUDING PRIVATE LOCATES SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND DISH PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF DISH Wireless L.L.C. AND TOWER OWNER, AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS AND RADIOS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

- 1.FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
CONTRACTOR:GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION  
CARRIER:DISH Wireless L.L.C.  
TOWER OWNER:TOWER OWNER
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CARRIER POC AND TOWER OWNER.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION, BEFORE SUBMITTING BIDS, TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF DISH Wireless L.L.C. AND TOWER OWNER
13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.



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0	10/18/21	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER  
**153547.001.01**

DISH Wireless L.L.C.  
PROJECT INFORMATION  
**BOBOS00020A**  
**61-1 BUTTONBALL ROAD**  
**OLD LYME, CT 06371**

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-2**

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:  
 #4 BARS AND SMALLER 40 ksi  
 #5 BARS AND LARGER 60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
  - CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
  - CONCRETE EXPOSED TO EARTH OR WEATHER:
    - #6 BARS AND LARGER 2"
    - #5 BARS AND SMALLER 1-1/2"
  - CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
    - SLAB AND WALLS 3/4"
    - BEAMS AND COLUMNS 1-1/2"
7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. TIE WRAPS ARE NOT ALLOWED.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3 (OR BETTER) FOR EXTERIOR LOCATIONS.
25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR DISH Wireless L.L.C. AND TOWER OWNER BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "DISH Wireless L.L.C.".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.



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SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-3**

**GROUNDING NOTES:**

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY). DO NOT ATTACH GROUNDING TO FIRE SPRINKLER SYSTEM PIPES.



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