Oak Park

Application for Public Hearing
SPECIAL USE PERMITS

YOU MUST PROVIDE THE FOLLOWING INFORMATION: IF ADDITIONAL SPACE IS NEEDED, ATTACH EXTRA PAGES TO THE PETITION.

Name of Business (If applicable): DISH WIRELESS

Address/Location of Property in Question: 715 LAKE STREET

Property Identification Number(s)(PIN): 16-07-224-004-0000

Name of Property Owner(s): INFRAUS WIRELESS I, LLC, ATTORNEY-IN FACT FOR OP MEDICAL ARTS HOLDING, LLC

Address of Property Owner(s): 715 LAKE STREET, OAK PARK, IL 60301

E-Mail of Property Owner(s): _____ **Phone:** _____

If Land Trust, name(s) of all beneficial owners: (A Certificate of Trust must be filed.) _____

_____

Name of Applicant(s): DISH WIRELESS

Applicant's Address: 5701 SOUTH SANTA FE DRIVE, LITTLETON, CO 80120

Applicant's Phone Number: _____ E-Mail _____

Other: _____

Project Contact: (if Different than Applicant) ARIEL STOUDER - FULLERTON

Contact's Address: 1100 WOODFIELD ROAD #500, SCHAUMBURG, IL 60173

Contact's Phone Number: 574-849-8420 E-Mail ASTOUDER@FULLERTON-US.COM

Other: _____

Property Interest of Applicant: _____Owner _____Legal Representative _____Contract Purchaser __x__Other

(If Other - Describe): TENANT

Existing Zoning: DT-2 **Describe Proposal**: _____

TELECOMMUNICATIONS EQUIPMENT INSTALLATION FOR DISH WIRELESS ON ROOFTOP. INSTALL (3) ANTENNAS, (6) RADIOS, ANTENNA MOUNTS, AND CABLING. ON AN EXISTING STEEL PLATFORM INSTALL AN EQUIPMENT CABINET.

_____

Size of Parcel (from Plat of Survey): _____Square Feet

Adjacent:	**Zoning Districts**	**Land Uses**
To the North:	DT-2	COMMERCIAL
To the South:	DT-2	RESIDENTIAL
To the East:	DT-2	MIXED USE
To the West:	DT-2	COMMERCIAL

How the property in question is currently improved?

☐ Residential ☒ Non-Residential ☐ Mixed Use ☐ OTHER:_____

Describe Improvement: INSTALLATION OF WIRELESS TELECOMMUNICATION ANTENNA EQUIPMENT

Is the property in question currently in violation of the Zoning Ordinance? _____Yes __X__No

If *Yes*, how? _____

Is the property in question presently subject to a Special Use Permit? _____Yes _____No

If *Yes*, how? _____

If *Yes*, please provide relevant Ordinance No.'s _____

Is the subject property located within any Historic District? _____ Yes __X__ No

If Yes: ☐ Frank Lloyd Wright ☐ Ridgeland/Oak Park ☐ Gunderson

From what Section(s) of the Zoning Ordinance are you requesting approval / relief?

Article: 8 **Section:** 8.3

Article:_____ **Section:**_____

Article:_____ **Section:**_____

Explain why, in your opinion, the grant of this request will be in harmony with the neighborhood and not contrary to the intent and purpose of the Zoning Ordinance or Comprehensive Plan;

THE ADDITION OF DISH WIRELESS ANTENNAS WILL NOT BE A BE A SIGNIFICANT CHANGE IN USE OF THE BUILDING. THERE ARE ALREADY ANTENNAS EXISTING ON THE ROOF.

I (we) certify that all the above statements and the statements contained in any papers or plans submitted herewith are true to the best of my (our) knowledge and belief.

I (we) consent to the entry in or upon the premises described in this application by any authorized official of the Village of Oak Park for the purpose of securing information, posting, maintaining and removing such notices as may be required by law.

DISH WIRELESS CARE OF FULLERTON
(Printed Name) Applicant

Ariel Stouder
(Signature) Applicant **ARIEL STOUDER O.B.O. DISH WIRELESS**

5/6/2024
Date

INFRAUS WIRELESS I, LLC, ATTORNEY-IN FACT FOR OP MEDICAL ARTS HOLDING, LLC
(Printed Name) Owner

(Signature) Owner
Caitlin Garzoli

5/6/2024
Date

Owner's Signature must be notarized

SUBSCRIBED AND SWORN TO BEFORE ME THIS

6 DAY OF MAY, 2024

(Notary Public)

NEFTALI GUZMAN
NOTARY PUBLIC
Commonwealth of
Massachusetts
My Comm. Expires February 27, 2026

Updated August 2021

DISH Wireless Section 6409(a) Eligible Facilities Request Cover Letter

April 25, 2024

VIA EMAIL

Village of Oak Park
Development Services
ATTN: Michael Bruce
123 Madison Street
Oak Park, IL 60302

RE: CHCHI00890C / 715 LAKE STREET Eligible Facilities Request

To Whom It May Concern:

On behalf of DISH Wireless L.L.C. ("DISH Wireless"), we are submitting an Eligible Facilities Request ("EFR") to modify an existing support structure pursuant to Section 6409(a) of the Middle-Class Tax Relief and Job Creation Act of 2012 ("Spectrum Act") and the rules of the Federal Communications Commission ("FCC"). *See* Pub. Law No. 112-96, 126 Stat. 156 (2012); 47 C.F.R. §1.6100.

Specifically, as it moves to deploy a new broadband network, DISH Wireless is proposing to install new telecommunications equipment on a rooftop site. The proposal includes installing (3) antennas, (6) radios, antenna mounts, and cabling. On an existing steel platform an equipment cabinet will be installed. (the "Request"). This project will help support the connectivity needs of residents, businesses, and first responders. DISH Wireless looks forward to working cooperatively with you to advance these important efforts in your community.

This Request is governed by Section 6409(a) of Spectrum Act which, as you may know, provides that state and local governments "may not deny, and shall approve" any EFR to modify an existing wireless tower or base station that does not "substantially change the physical dimensions of such tower or base station." *See* Spectrum Act § 6409(a)(1), 126 Stat. at 232. Under Section 6409, such modifications include the collocation, removal, or replacement of transmission equipment. *See id*. § 6409(a)(2), 126 Stat. at 232-33. Under the FCC's rule implementing Section 6409(a), an existing base station is a structure that currently houses or supports an approved antenna, transceiver or other associated equipment "even if the structure was not built for the sole or primary purpose of providing such support." 47 C.F.R. § 1.6100(b)(1), (b)(5).

Similarly, the list of equipment that will be installed as part of this Request qualifies as "transmission equipment," which the FCC defines as "[e]quipment that facilitates transmission for any Commission-licensed or authorized wireless

communication service, including, but not limited to, radio transceivers, antennas, coaxial or fiber-optic cable." *See* 47 C.F.R. § 1.6100(b)(8).

The FCC has determined that a modification is not a substantial change, and therefore is an EFR that shall be approved under the Spectrum Act, as long as it does not fall within any of the following six criteria (47 C.F.R. § 1.6100(b)(7)):

1. For towers other than towers in the public rights-of-way, it increases the height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater; for other eligible support structures, it increases the height of the structure by more than 10% or more than ten feet, whichever is greater;

2. For towers other than towers in the public rights-of-way, it involves adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater; for other eligible support structures, it involves adding an appurtenance to the body of the structure that would protrude from the edge of the structure by more than six feet;

3. For any eligible support structure, it involves installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets; or, for towers in the public rights-of-way and base stations, it involves installation of any new equipment cabinets on the ground if there are no pre-existing ground cabinets associated with the structure, or else involves installation of ground cabinets that are more than 10% larger in height or overall volume than any other ground cabinets associated with the structure;

4. It entails any excavation or deployment outside the current site;

5. It would defeat the concealment elements of the eligible support structure; or

6. It does not comply with conditions associated with the siting approval of the construction or modification of the eligible support structure or base station equipment, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would not exceed the thresholds identified in criteria 1-4 above.

Pursuant to Section 1.6100(c) of the FCC's rules, which provides that jurisdictions may require documentation or information "only to the extent reasonably related to determining whether the request meets the requirements" of the FCC rule, DISH Wireless provides the following information to demonstrate that the proposed Request does not constitute a substantial change under the criteria above because it:

1. *Does not involve an increase in height in excess of the limits in 47 C.F.R. § 1.6100(b)(7)(i).*

2. **Details** Per the plan sets provided, the installation of the new antenna equipment will not cause an increase in the height of the building.

3. *Does not involve an increase in width in excess of the limits in 47 C.F.R. § 1.6100(b)(7)(ii)*.

   Details: Per the plan sets provided, the installation of the new antenna equipment will not involve an increase in width of the equipment from the building. The antennas will be installed on the walls of the rooftop.

4. *Does not involve installation of new equipment cabinets in excess of the limits in 47 C.F.R. § 1.6100(b)(7)(iii)*.

   Details: Per the plan sets provided, there will only be (1) equipment cabinet installed. Which is not more than the (4) equipment cabinet limit.

5. *Does not involve any excavation or deployment outside the current site*.

   Details: Per the plan sets provided the proposed work does not involve any excavation or deployment outside the current site. The installation of all equipment will take place on the rooftop.

6. *Would not defeat any concealment elements of the eligible support structure*.

   Details: Per the plan sets provided, there are no concealment elements located on the rooftop.

7. *Complies with any prior conditions, except for any non-compliance due to exceeding the thresholds in criteria 1-4 above*.

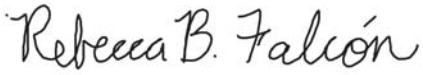
   Details: There are not any prior conditions in place for the installation of new equipment on the rooftop.

Under the FCC's rule, the submission of this request for EFR approval initiates a 60-day shot clock to review and approve the application. *Id*. § 1.6100(c)(2). If that time passes without action, "the request shall be deemed granted." *Id*. § 1.6100(c)(4).

DISH Wireless is committed to working cooperatively with you to process this request in a timely and efficient manner. We look forward to developing a long-term collaborative working relationship with you.

Please do not hesitate to contact me if you have any questions or need any other information.

Respectfully submitted,



Rebecca Falcon
Site Acquisition Project Manager II
M: (312) 498-9556
rebecca.falcon@dish.com

May 1, 2024

Village of Oak Park
ATTN: Michael Bruce
Development Services
123 Madison Street
Oak Park, IL 60302

Re: Narrative on the Installation and Operation of New DISH Wireless Network Equipment to the Existing Telecommunication Facilities Rooftop at 715 Lake Street, Oak Park, IL 60301
DISH Site CHCHI00890C

To Whom It May Concern,

Fullerton on behalf of DISH Wireless, would like to submit for review a Project Narrative for the proposed addition of Wireless Antennas and Support Equipment to the facilities located at 715 Lake Street. DISH Wireless is proposing to install their telecommunication equipment on the rooftop and within a leased space on the rooftop supporting equipment. Currently, there is (1) other carrier located on this rooftop. This has established the rooftop telecommunications facility as determined by Section 6409(a) of the Middle-Class Tax Relief and Job Creation Act of 2012 ("Spectrum Act") and the rules of the Federal Communications Commission ("FCC"). *See* Pub. Law No. 112-96, 126 Stat. 156 (2012); 47 C.F.R. §1.6100.

On the rooftop located at 715 Lake Street, DISH Wireless is proposing to install (3) antennas, (6) radios, and associated cabling on (3) antenna sectors to be located throughout the rooftop. Also proposed to be installed on the rooftop, DISH would install an equipment cabinet on an existing metal platform. The proposed addition of DISH Wireless's equipment will not cause an increase in the height of the building. As the equipment will be installed on the rooftop this would not cause an increase in the existing space.

DISH Wireless is a division of the company we all know to be the satellite television provider. In recent years, DISH has become one of the major wireless carriers. Wireless Communications have been designated Critical Infrastructure by the Federal Government and should be considered Essential Services in all Comprehensive Plans. As DISH Wireless is constructing this new network, every new facility in the network is essential to their seamless operation.

This facility, located at 715 Lake Street, was selected to extend DISH Wireless network to the Village of Oak Park. The proposed telecommunication antennas will not cause an increase in the existing height of the building. The tallest point on the building is a smokestack at 119'-6". There is also other carrier telecommunication equipment that is installed above the roofline.

DISH Wireless would install their telecommunication equipment on (3) separate antenna sectors throughout the rooftop for operation. The Alpha and Gamma Sector antennas and radios will be mounted to a penthouse wall at the 106'-6" centerline. The Beta Sector will be located on another penthouse wall at the 95'-6" centerline.

The proposed installation of the DISH Wireless antenna equipment will not cause a significant visual impact to the building or the surrounding area. This rooftop is an established telecommunications facility because of the presence of the other carrier. DISH Wireless is not proposing any significant modifications by installing their equipment.

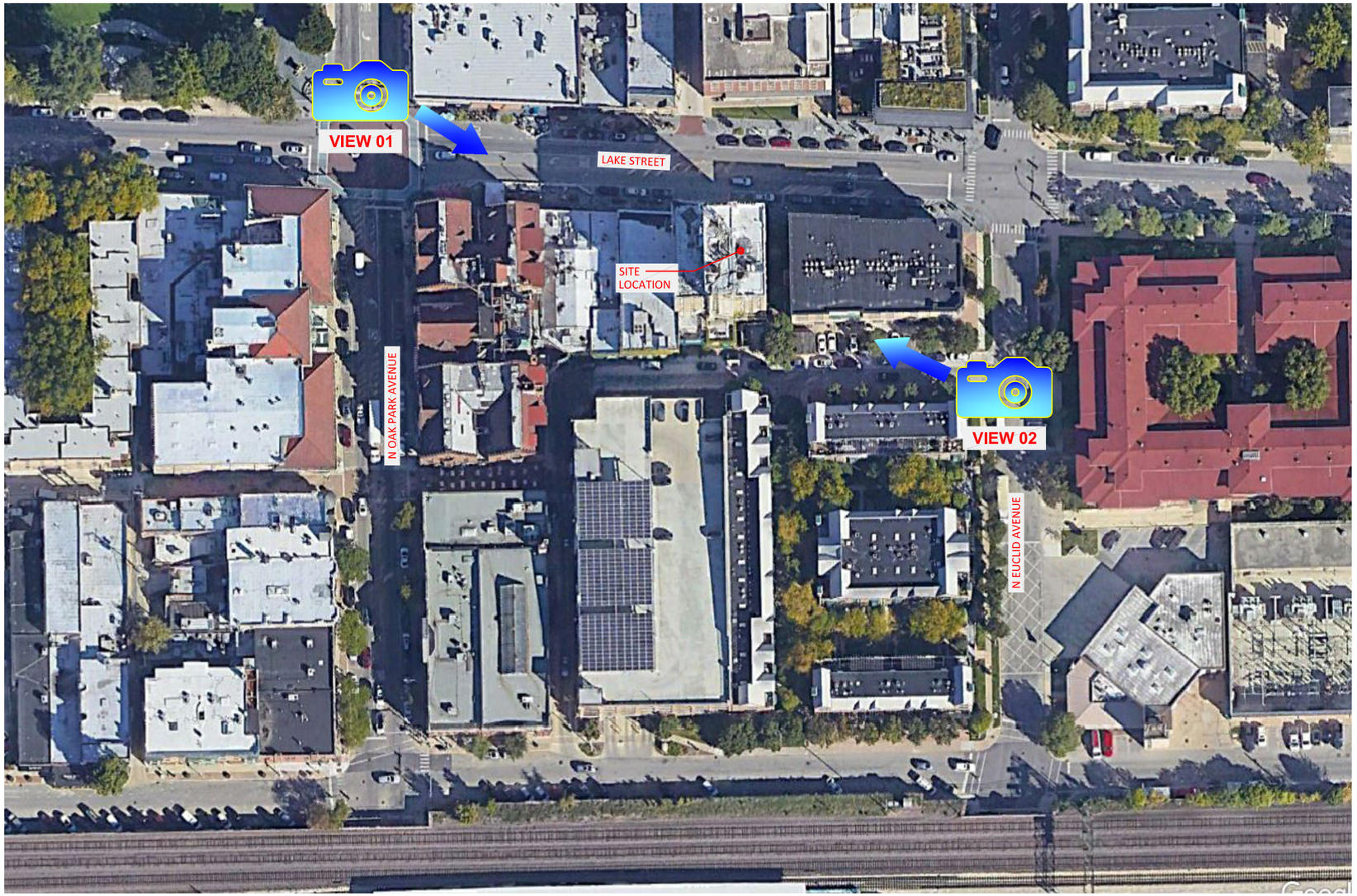
If there are still any outstanding questions or concerns, please feel free to reach out using any of my contact information listed below in my signature. Addressing all concerns for this project is of utmost importance to myself, and DISH Wireless.

Best regards,

Ariel Stouder
Senior Zoning and Permitting Specialist
Fullerton, on behalf of DISH Wireless
M: 574-849-8420
Email: astouder@fullerton-us.com

SITE ID:
CHCHI00890C

SITE ADDRESS:
715 LAKE ST.
OAK PARK, IL 60301



VICINITY AREA

These depictions are for demonstrative purposes only. They are to be used in addition to the engineering drawings for an accurate representation of the site.

SITE ID:
CHCHI00890C

SITE ADDRESS:
715 LAKE ST.
OAK PARK, IL 60301

VIEW 01 - BEFORE (LOOKING SOUTHEAST)

VIEW 01 - AFTER (LOOKING SOUTHEAST)

These depictions are for demonstrative purposes only. They are to be used in addition to the engineering drawings for an accurate representation of the site.

SITE ID:
CHCHI00890C

SITE ADDRESS:
715 LAKE ST.
OAK PARK, IL 60301

VIEW 02 - BEFORE (LOOKING NORTHWEST)

VIEW 02 - AFTER (LOOKING NORTHWEST)

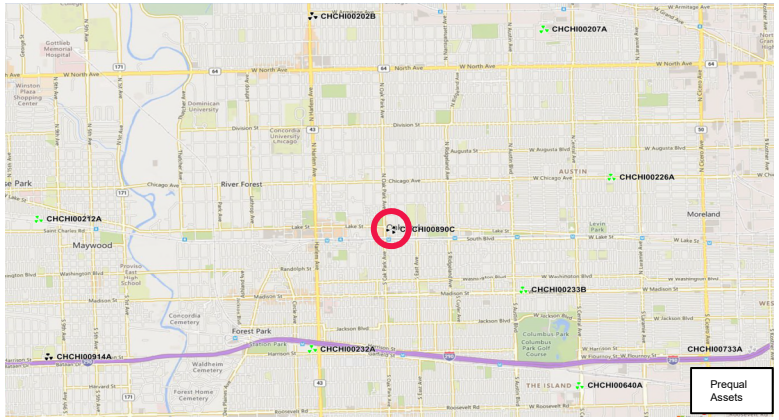
These depictions are for demonstrative purposes only. They are to be used in addition to the engineering drawings for an accurate representation of the site.

dish wireless™

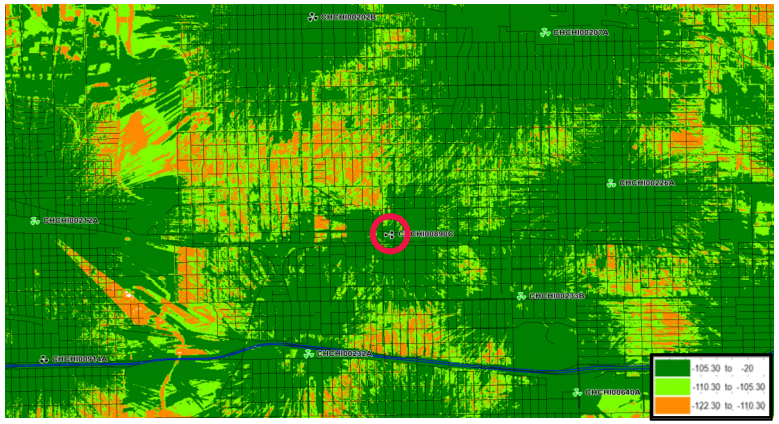
Site Review: CHCHI00890C 05/28/24

Dish Network – Village of Oak Park Coverage Maps

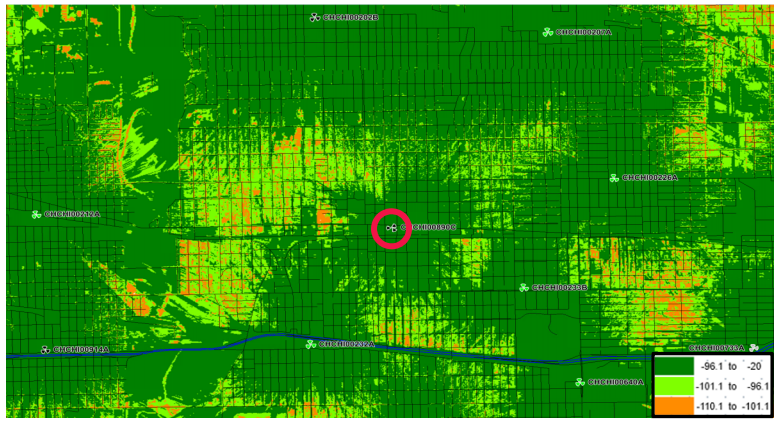
Site Location



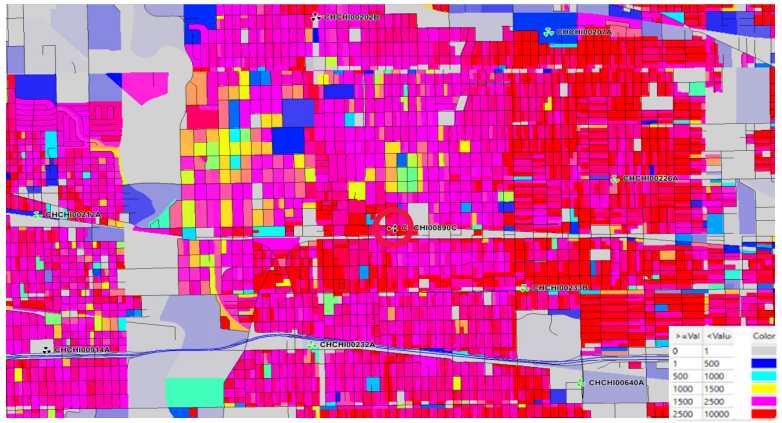
Mid-Band - Pre



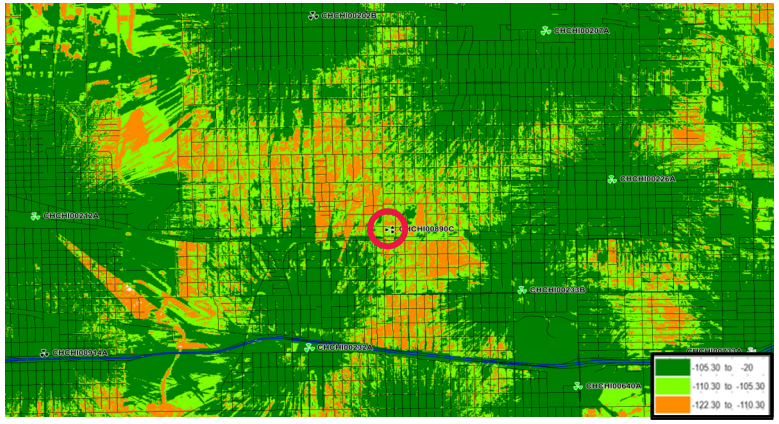
Low-Band - Pre



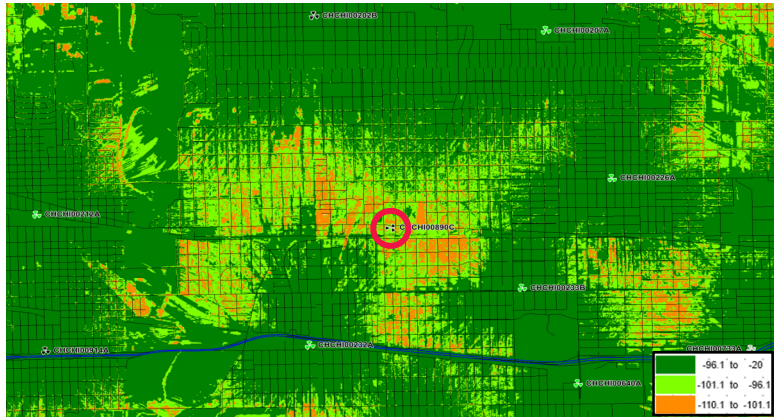
Traffic Map



Mid-Band - Post



Low-Band - Post



Thank You

DISH Wireless L.L.C. SITE ID:

CHCHI00890C

DISH Wireless L.L.C. SITE ADDRESS:

715 LAKE ST.
OAK PARK, IL 60301

ILLINOIS - VILLAGE OF OAK PARK 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 IBC
ELECTRICAL	2017 NEC

SHEET INDEX

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:

SECTOR SCOPE OF WORK:
- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (3) PROPOSED ANTENNA MOUNTS (1 PER SECTOR)
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED RRUs (2 PER SECTOR)
- INSTALL (3) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP) (1 PER SECTOR)
- INSTALL (3) PROPOSED HYBRID CABLES
- INSTALL PROPOSED CABLE TRAY

ROOFTOP SCOPE OF WORK:
- INSTALL (1) PROPOSED EQUIPMENT CABINET ON ABANDONED EQUIPMENT PLATFORM
- INSTALL (1) PROPOSED BBU IN CABINET
- INSTALL (1) POWER PROTECTIVE CABINET
- INSTALL (1) PROPOSED NEMA 3 TELCO-FIBER BOX
- INSTALL (1) PROPOSED TELCO CONDUIT
- INSTALL (1) PROPOSED GPS UNIT

SITE PHOTO

UNDERGROUND SERVICE ALERT
UTILITY NOTIFICATION CENTER OF ILLINOIS
(800) 892-0123
WWW.ILLINOIS1CALL.COM

CALL 2 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION

811

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.

SITE INFORMATION

PROPERTY OWNER:	J & T BUILDING MGT
ADDRESS:	715 LAKE ST. OAK PARK, IL 60301
STRUCTURE TYPE:	ROOFTOP
COUNTY:	COOK
LATITUDE (NAD 83):	41° 53' 18.19" N 41.888385°
LONGITUDE (NAD 83):	87° 47' 36.43" W -87.793454°
GROUND ELEVATION:	623.5 FT AMSL (NAVD 88)
ZONING JURISDICTION:	VILLAGE OF OAK PARK
ZONING DISTRICT:	DT DOWNTOWN
PARCEL NUMBER:	16-07-224-004-0000
OCCUPANCY GROUP:	U
CONSTRUCTION TYPE:	II-B
POWER COMPANY:	COMED
FIBER COMPANY:	AT&T

PROJECT DIRECTORY

APPLICANT:	DISH Wireless L.L.C. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120
SITE DESIGNER:	FULLERTON ENGINEERING 1100 E, WOODFIELD ROAD, STE. 500 SCHAUMBURG, IL 60173 (847) 908-8400
SITE ACQUISITION:	KEVIN HOM khom@fullerton-us.com
CONSTRUCTION MANAGER:	ANDREW LOVEJOY andrew.lovejoy@dish.com
RF ENGINEER:	FAISAL SYED faisal.syed@dish.com

DIRECTIONS

DIRECTIONS FROM O'HARE INTERNATIONAL AIRPORT:

TURN RIGHT (SOUTH) ONTO BESSIE COLEMAN DR. TAKE RAMP (RIGHT) ONTO I-190.
AT EXIT 1B, TURN RIGHT ONTO RAMP SOUTH RIVER RD.
ROAD NAME CHANGES TO (N) DES PLAINES RIVER RD.
BEAR RIGHT (SOUTH) ONTO IL-171 [N 1ST AVE].
KEEP STRAIGHT ONTO IL-171 [1ST AVE].
TURN LEFT (EAST) ONTO LAKE ST.
TURN RIGHT (SOUTH) ONTO LOCAL ROAD(S), ARRIVE AT SITE.

VICINITY MAP

NO SCALE

dish WIRELESS
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Fullerton
DESIGN DEVELOP CONSTRUCT
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
DESIGN FIRM NO. 184.008202-0006
www.fullerton-us.com

DRAWN BY:	CHECKED BY:	APPROVED BY:
LA	DZ	DS

RFDS REV #: 1

PERMITTING DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	1/19/24	ISSUED FOR REVIEW
B	2/6/24	REVISION
0	5/1/24	ISSUED FOR PERMITTING
1	5/24/24	REVISION

A&E PROJECT NUMBER

2023.0017.0072

DISH WIRELESS L.L.C.
PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

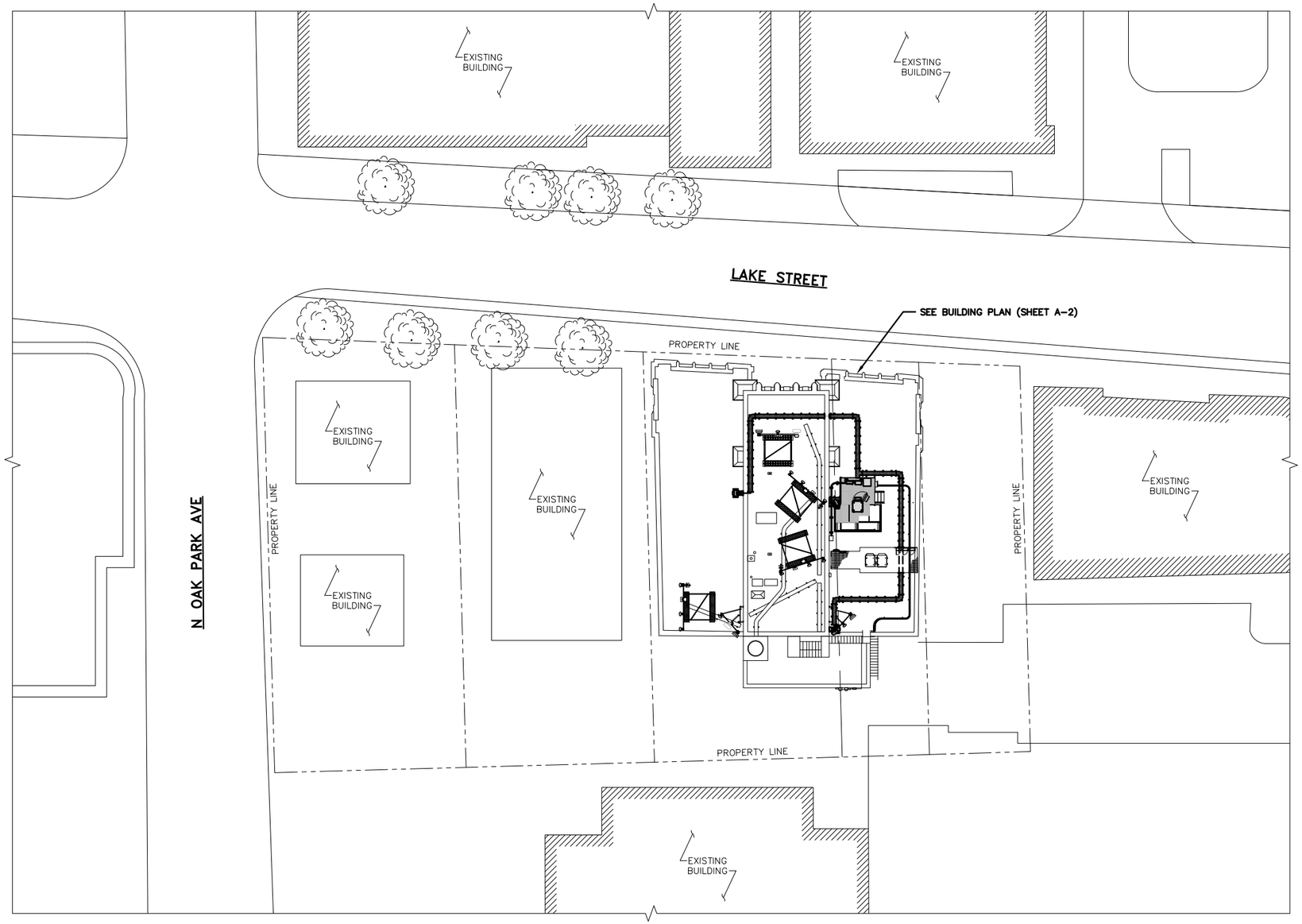
TITLE SHEET

SHEET NUMBER

T-1

NOTES

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



OVERALL SITE PLAN

16' 12' 8' 4' 0 16' 32'
1/16"=1'-0"

1

dish WIRELESS
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Fullerton DESIGN DEVELOP CONSTRUCT
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DISH WIRELESS L.L.C.
PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

OVERALL SITE PLAN

SHEET NUMBER

A-1

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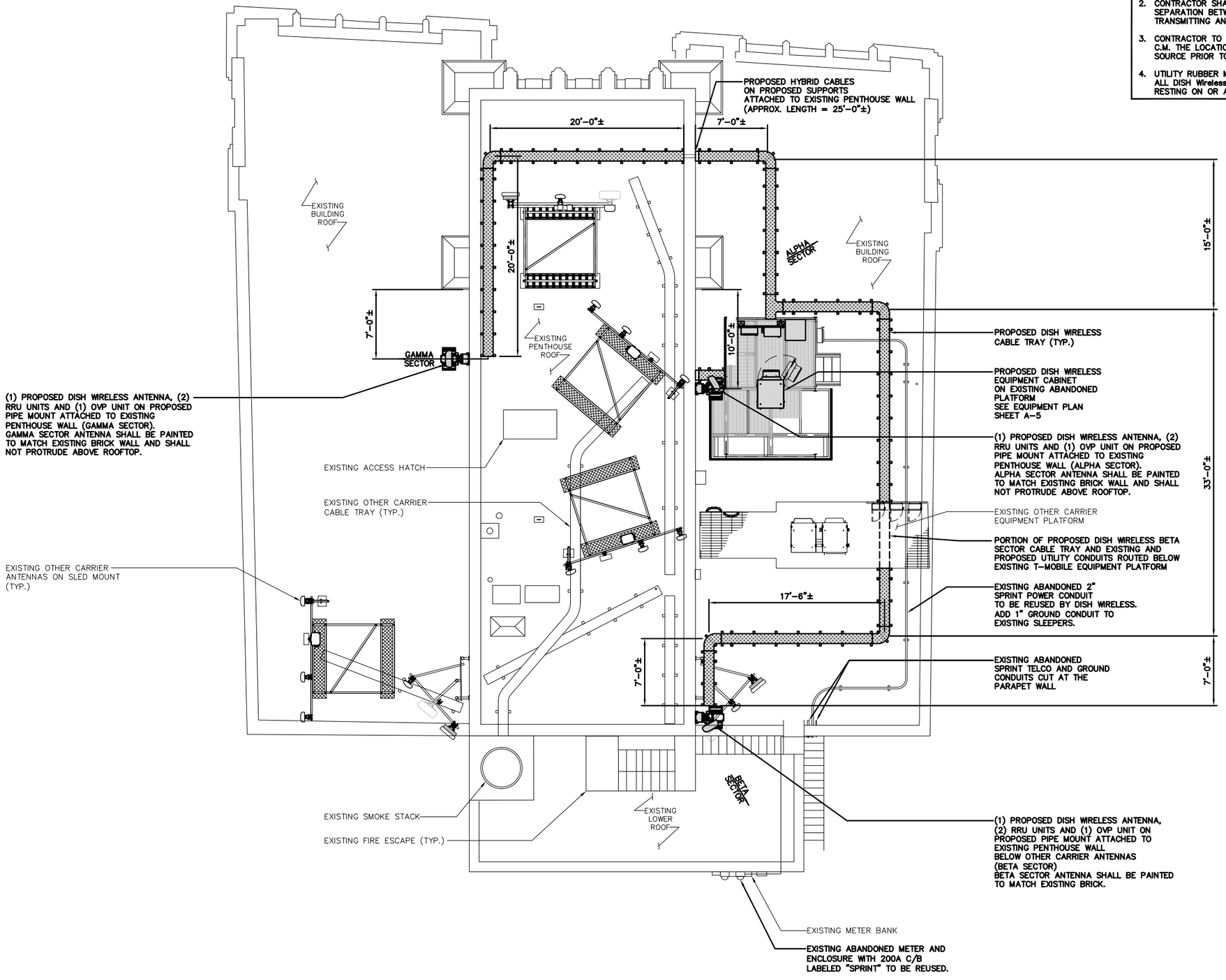
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.
3. CONTRACTOR TO VERIFY WITH DISH Wireless L.L.C. C.M. THE LOCATION OF THE POWER AND FIBER SOURCE PRIOR TO CONSTRICTION.
4. UTILITY RUBBER MAT TO BE IN STALLED UNDER ALL DISH Wireless L.L.C. EQUIPMENT THAT IS RESTING ON OR AFFIXED TO ROOF MEMBRANE



ENLARGED BUILDING PLAN

6' 4' 2' 0 5' 10'
3/16"=1'-0"

1

dish WIRELESS
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Fullerton DESIGN DEVELOP CONSTRUCT
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DISH WIRELESS L.L.C.
PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

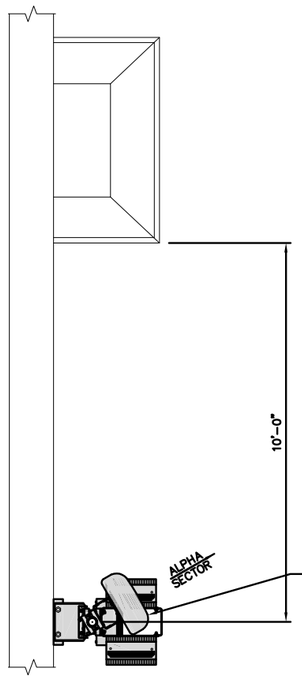
ENLARGED BUILDING PLAN

SHEET NUMBER

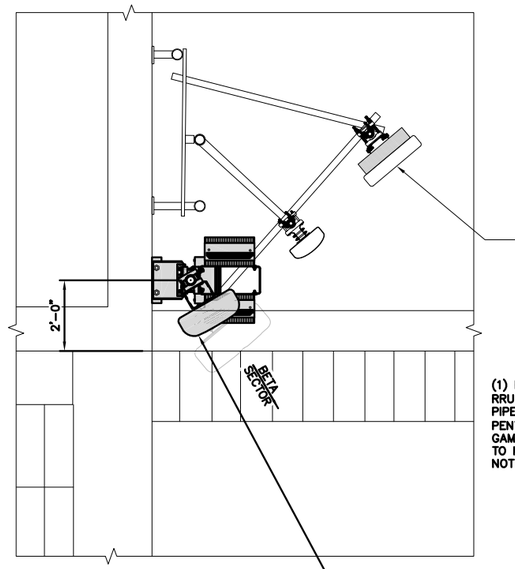
A-2

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

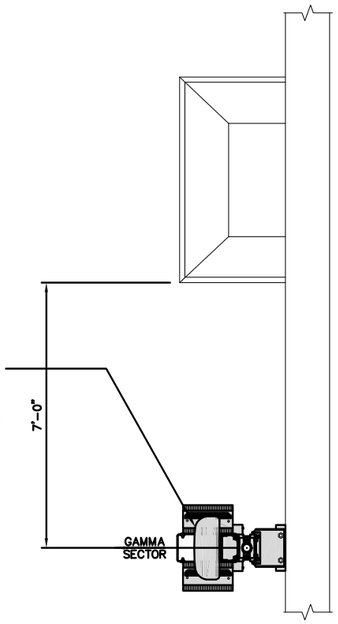


(1) PROPOSED DISH WIRELESS ANTENNA, (2) RRU UNITS AND (1) OVP UNIT ON PROPOSED PIPE MOUNT ATTACHED TO EXISTING PENTHOUSE WALL (ALPHA SECTOR).
ALPHA SECTOR ANTENNA SHALL BE PAINTED TO MATCH EXISTING BRICK WALL AND SHALL NOT PROTRUDE ABOVE ROOFTOP.



(1) PROPOSED DISH WIRELESS ANTENNA, (2) RRU UNITS AND (1) OVP UNIT ON PROPOSED PIPE MOUNT ATTACHED TO EXISTING PENTHOUSE WALL.
BELOW OTHER CARRIER ANTENNAS
(BETA SECTOR)
BETA SECTOR ANTENNA SHALL BE PAINTED TO MATCH EXISTING BRICK WALL.

(1) PROPOSED DISH WIRELESS ANTENNA, (2) RRU UNITS AND (1) OVP UNIT ON PROPOSED PIPE MOUNT ATTACHED TO EXISTING PENTHOUSE WALL (GAMMA SECTOR).
GAMMA SECTOR ANTENNA SHALL BE PAINTED TO MATCH EXISTING BRICK WALL AND SHALL NOT PROTRUDE ABOVE ROOFTOP.



ANTENNA PLAN

12" 6" 0 1' 2' 3' 4' 5'
1/2"=1'-0"

1

NOT USED

NO SCALE | 2

ANTENNA SCHEDULE

NO SCALE | 3

SECTOR	POSITION	ANTENNA						TRANSMISSION CABLE
		EXISTING OR PROPOSED	MANUFACTURER – MODEL NUMBER	TECHNOLOGY	SIZE (HxW)	AZIMUTH	RAD CENTER	FEED LINE TYPE AND LENGTH
ALPHA	A2	PROPOSED	JMA – MX08FRO665–21	5G	72.0" x 20.0"	60°	106'–6"	(1) HIGH–CAPACITY HYBRID CABLE (30'±)
BETA	B2	PROPOSED	JMA – MX08FRO665–21	5G	72.0" x 20.0"	150°	95'–6"	(1) HIGH–CAPACITY HYBRID CABLE (100'±)
GAMMA	C2	PROPOSED	JMA – MX08FRO665–21	5G	72.0" x 20.0"	270°	106'–6"	(1) HIGH–CAPACITY HYBRID CABLE (100'±)

SECTOR	POSITION	RRH	
		MANUFACTURER – MODEL NUMBER	TECHNOLOGY
ALPHA	A2	SAMSUNG – RF4450T–71A	5G
	A2	SAMSUNG – RF4451D–70A	5G
BETA	B2	SAMSUNG – RF4450T–71A	5G
	B2	SAMSUNG – RF4451D–70A	5G
GAMMA	C2	SAMSUNG – RF4450T–71A	5G
	C2	SAMSUNG – RF4451D–70A	5G

NOTES

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.

dish WIRELESS
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Fullerton
DESIGN DEVELOP CONSTRUCT
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
TEL: 847-908-8400
DESIGN FIRM NO. 184.008202-0006
www.fullerton-us.com

DRAWN BY:	CHECKED BY:	APPROVED BY:
LA	DZ	DS

RFDS REV #: 1

PERMITTING DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	1/19/24	ISSUED FOR REVIEW
B	2/6/24	REVISION
0	5/1/24	ISSUED FOR PERMITTING
1	5/24/24	REVISION

A&E PROJECT NUMBER
2023.0017.0072

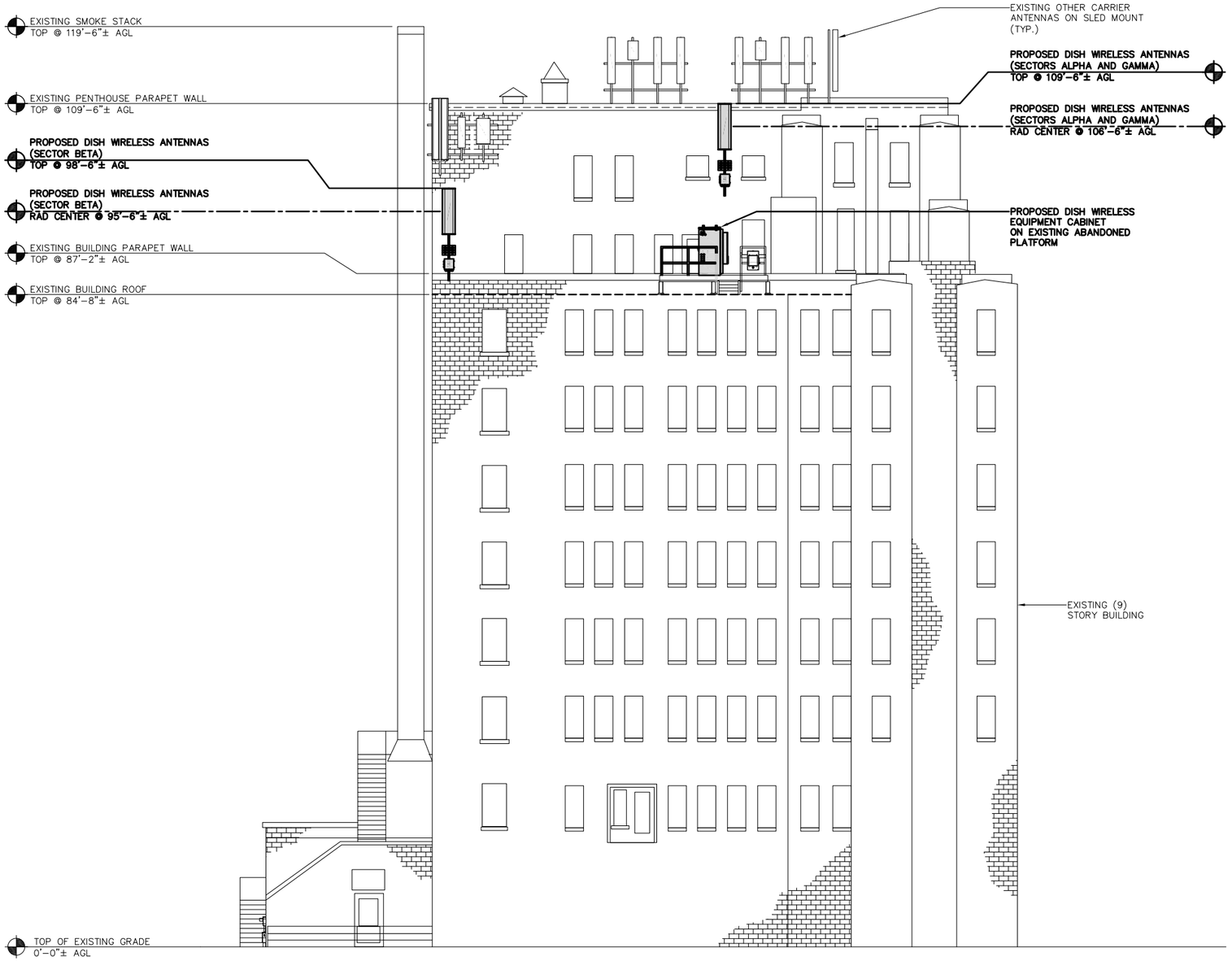
DISH WIRELESS L.L.C.
PROJECT INFORMATION
CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE
ANTENNA PLAN AND SCHEDULE

SHEET NUMBER
A-3

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.



BUILDING ELEVATION

8' 4' 0 8' 16'
1/8"=1'-0"

1

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PROJECT INFORMATION

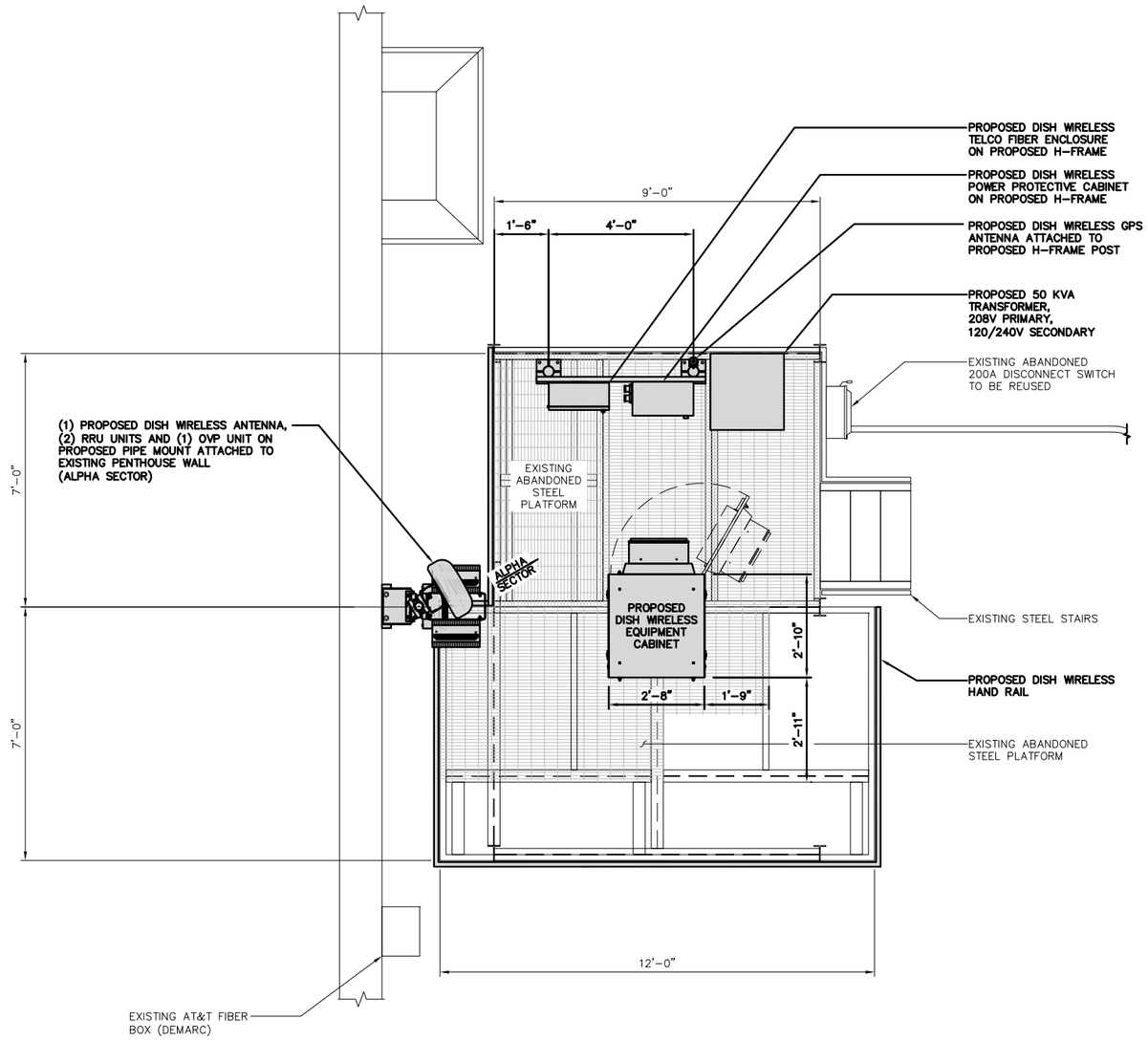
CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

BUILDING ELEVATION

SHEET NUMBER

A-4



EQUIPMENT PLAN

12" 6" 0 1' 2' 3' 4' 5'
1/2"=1'-0"

1

dish WIRELESS
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PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

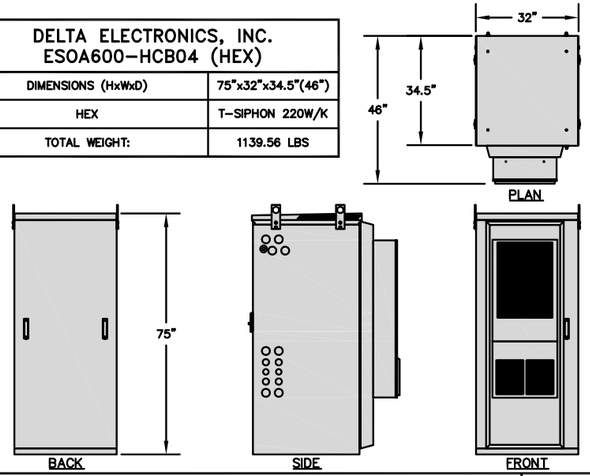
SHEET TITLE

EQUIPMENT PLAN

SHEET NUMBER

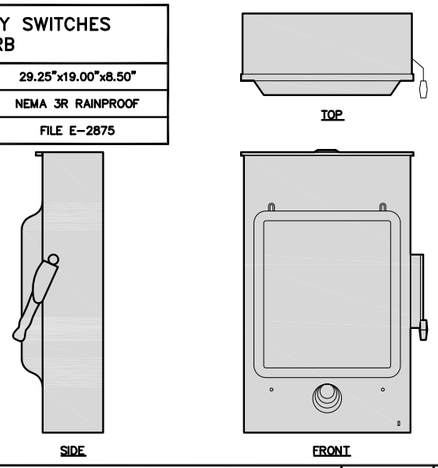
A-5

DELTA ELECTRONICS, INC. ESOA600-HCB04 (HEX)	
DIMENSIONS (HxWxD)	75"x32"x34.5"(46")
HEX	T-SIPHON 220W/K
TOTAL WEIGHT:	1139.56 LBS



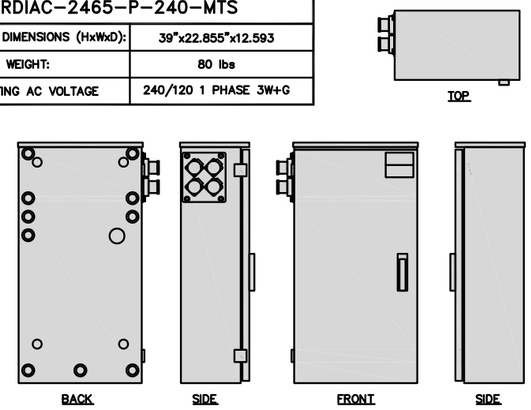
CABINET DETAIL | NO SCALE | 1

SQUARE D SAFETY SWITCHES D224NRB	
ENCLOSURE DIM (HxWxD)	29.25"x19.00"x8.50"
ENCLOSURE TYPE	NEMA 3R RAINPROOF
UL LISTED	FILE E-2875



SAFETY SWITCH DETAIL | NO SCALE | 2

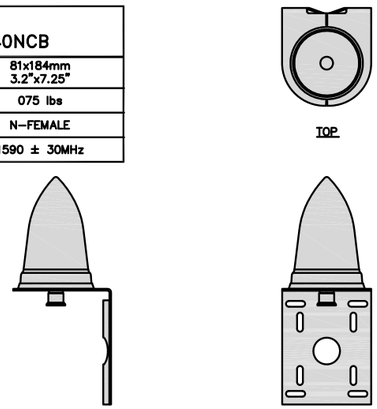
RAYCAP PPC RDIAC-2465-P-240-MTS	
ENCLOSURE DIMENSIONS (HxWxD):	39"x22.855"x12.593
WEIGHT:	80 lbs
OPERATING AC VOLTAGE	240/120 1 PHASE 3W+G



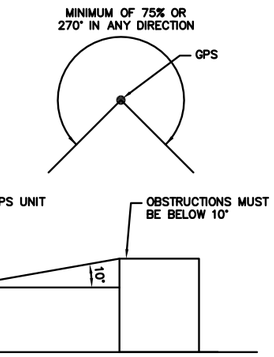
CABINET DETAIL | NO SCALE | 3

NOT USED | NO SCALE | 4

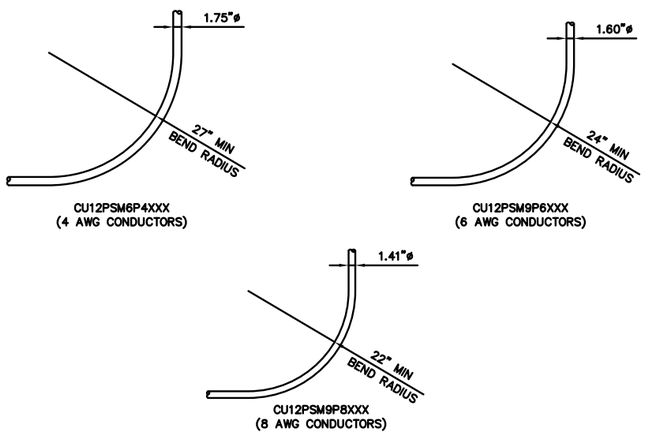
PCTEL GPSGL-TMG-SPI-40NCB	
DIMENSIONS (DIAxH) MM/INCH	81x184mm 3.2"x7.25"
WEIGHT W/ACCESSORIES	075 lbs
CONNECTOR	N-FEMALE
FREQUENCY RANGE	1590 ± 30MHz



GPS DETAIL | NO SCALE | 5

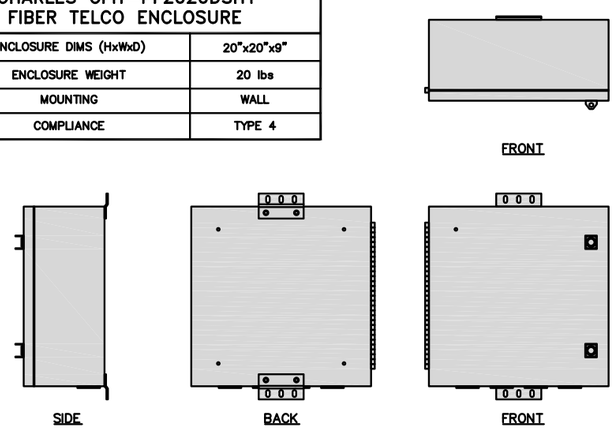


GPS MINIMUM SKY VIEW REQUIREMENTS | NO SCALE | 6



CABLES UNLIMITED HYBRID CABLE MINIMUM BEND RADIUSES | NO SCALE | 7

CHARLES CFIT-PF2020DSH1 FIBER TELCO ENCLOSURE	
ENCLOSURE DIMS (HxWxD)	20"x20"x9"
ENCLOSURE WEIGHT	20 lbs
MOUNTING	WALL
COMPLIANCE	TYPE 4



FIBER TELCO ENCLOSURE DETAIL | NO SCALE | 8

NOT USED | NO SCALE | 9

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A&E PROJECT NUMBER

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DISH WIRELESS L.L.C.
PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

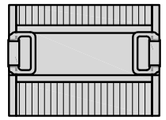
SHEET TITLE

EQUIPMENT DETAILS

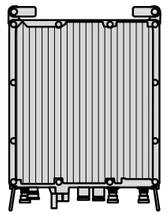
SHEET NUMBER

A-6

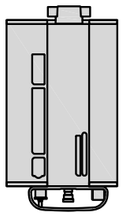
SAMSUNG – LOW BAND SFG–ARR3J601DI_RF4450T–71A	
DIMENSIONS (HxWxD)	15"x16.5"x11"
WEIGHT	94.6 lbs
CONNECTOR TYPE	4.3–10 RF CONNECTOR
INPUT VOLTAGE	–48VDC (–36 to 58 VDC)



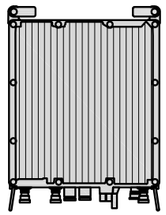
PLAN



BACK



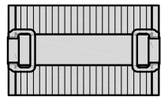
SIDE



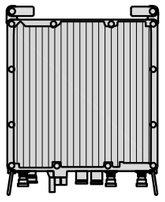
FRONT

RRH DETAIL | NO SCALE | 1

SAMSUNG – MID BAND SFG–ARR3KM01DI_RF4451D–70A	
DIMENSIONS (HxWxD)	15"x15"x8.9"
WEIGHT	61.3 lbs
CONNECTOR TYPE	4.3–10 RF CONNECTOR
INPUT VOLTAGE	–48VDC (–36 to 58 VDC)



PLAN



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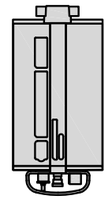
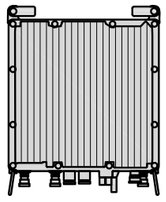


SIDE



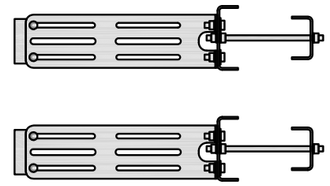
FRONT

RRH DETAIL | NO SCALE | 2

COMMSCOPE RR–FA2 LARGE STABILIZER	
DIMENSIONS (HxWxD)	16.4"x8.5"x18"
WEIGHT	39.2 lbs

DESIGN NOTES:
MOUNT WILL FIT LEGS UP TO:
- 5.6" ROUND
- 6.0" 60° ANGLE
- 4.5" 90° ANGLE

PLAN



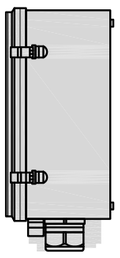
SIDE

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

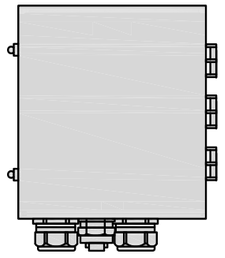
RRH MOUNT DETAIL | NO SCALE | 3

RAYCAP RDIDC–4045–PF–48 SURGE PROTECTION DEVICE (OVP)	
DIMENSIONS (HxWxD)	14" x 16" x 8"
WEIGHT	21.85 LBS

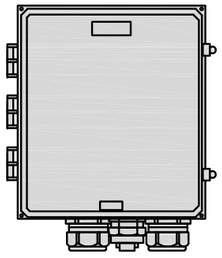
PLAN



SIDE



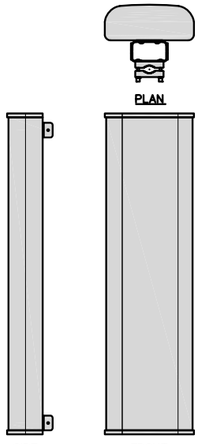
BACK



FRONT

SURGE PROTECTION DEVICE DETAIL (OVP) | NO SCALE | 4

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

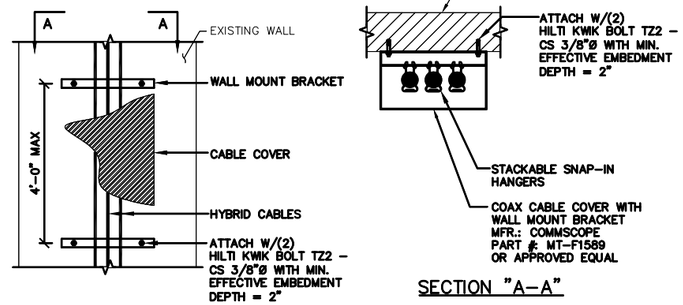


PLAN

SIDE

FRONT

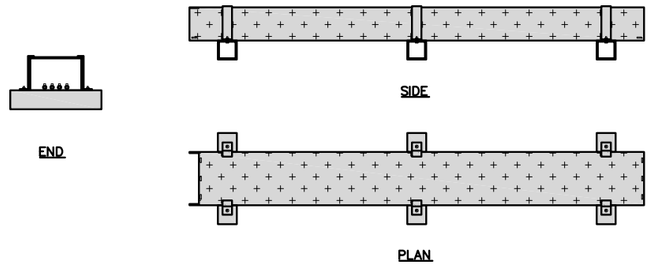
ANTENNA DETAIL | NO SCALE | 5



SECTION "A–A"

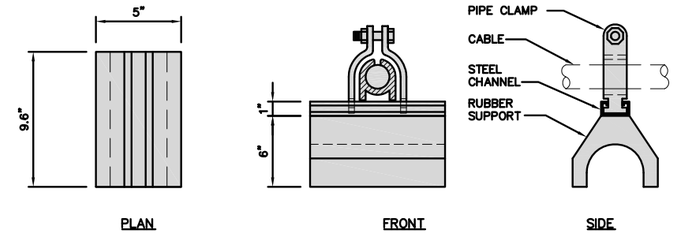
CABLE W/COVER WALL MOUNT DETAIL | NO SCALE | 6

COMMSCOPE RT–CB4D ROOFTOP COVER KIT		MOUNTING	NON–PENETRATING
DIMENSIONS (HxWxL)	7"x 11.25"x 96"	INCLUDED PRODUCTS:	RTCB4D.01 CHANNEL (1) MT–F1598 SLEEPERS (3) RTCUH HARDWARE RTHC.01 HOLD–DOWN CLAMPS (6)
WEIGHT/ VOLUME	85.98 LBS		



ROOFTOP CABLE TRAY DETAIL | NO SCALE | 8

DURA–BLOK DB10 ROOFTOP CABLE SUPPORT	
DIMENSIONS (HxWxL)	5"x6"x9.6"
WEIGHT/ VOLUME	5.28 LBS
ULTIMATE LOAD CAPACITY	500 LBS
NOTE: NON–PENETRATING	



PLAN FRONT SIDE

ROOFTOP CABLE SUPPORT DETAIL | NO SCALE | 9

NOT USED | NO SCALE | 7

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5701 SOUTH SANTA FE DRIVE
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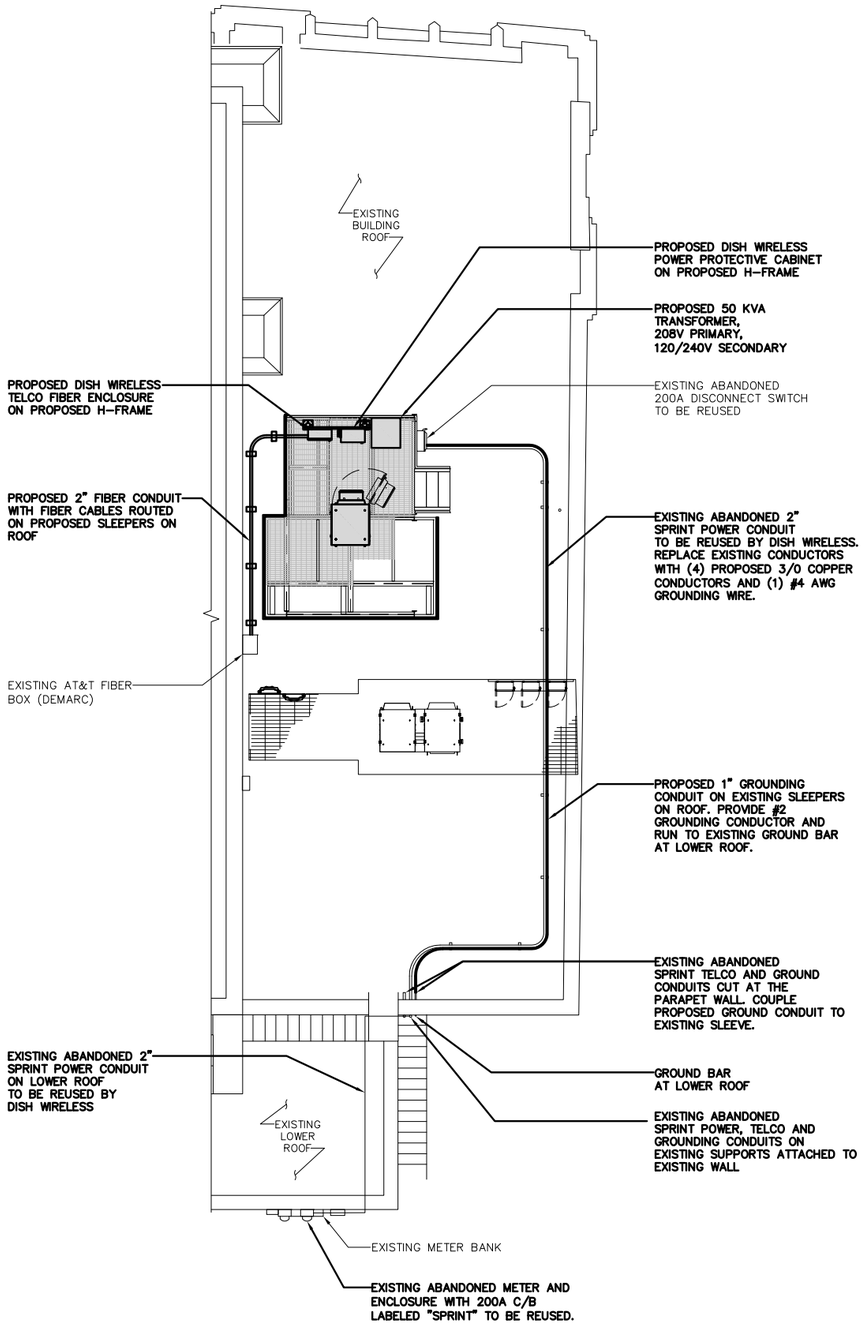
PROJECT INFORMATION
CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-7

NOTE

FINAL FIBER MEET-ME-POINT LOCATION TO BE CONFIRMED AND APPROVED BY FIBER PROVIDER ASSIGNED BY DISH WIRELESS. REFER TO FIBER DESIGN FORM FOR FINAL FIBER ROUTE.



N

UTILITY PLAN

NO SCALE | 1

dish WIRELESS

5701 SOUTH SANTA FE DRIVE
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PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

UTILITY PLAN

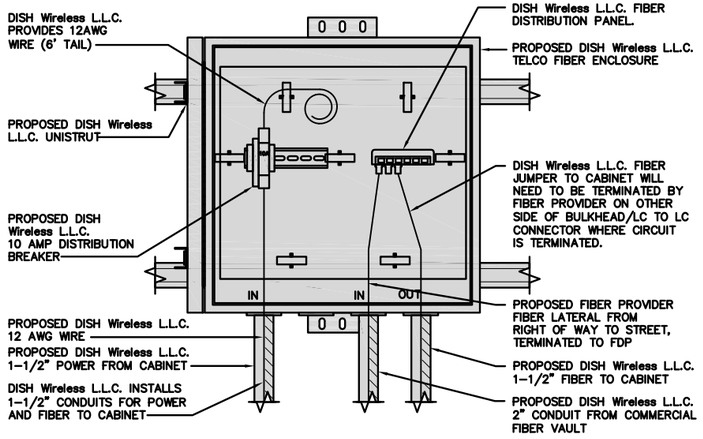
SHEET NUMBER

E-1

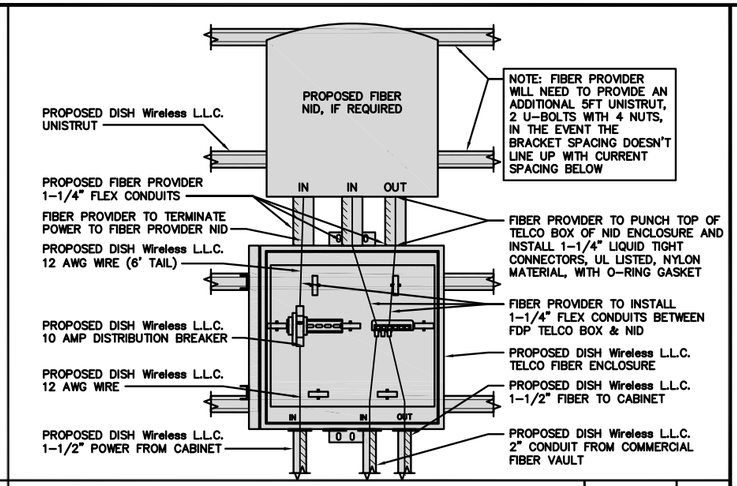
DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND −48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY −48V.

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.

ELECTRICAL NOTES | NO SCALE | 1



DARK TELCO BOX – INTERIOR WIRING LAYOUT | NO SCALE | 2



LIT TELCO BOX – INTERIOR WIRING LAYOUT (OPTIONAL) | 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

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A&E PROJECT NUMBER

2023.0017.0072

DISH WIRELESS L.L.C.
PROJECT INFORMATION

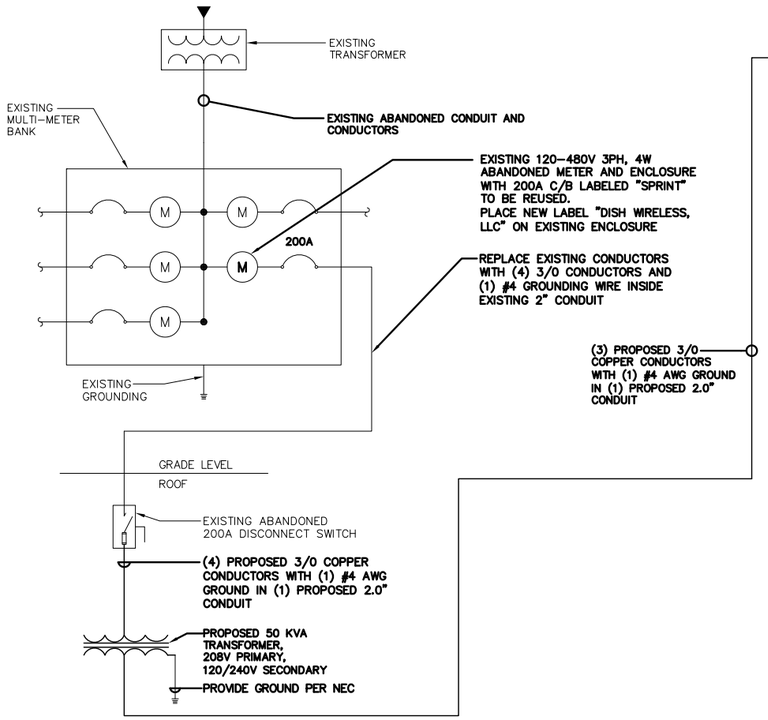
CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

ELECTRICAL DETAILS

SHEET NUMBER

E-2



NOTE:
BRANCH CIRCUIT WIRING SUPPLYING RECTIFIERS ARE TO BE RATED UL1015, 105°C, 600V, AND PVC INSULATED, IN THE SIZES SHOWN IN THE ONE-LINE DIAGRAM. CONTRACTOR MAY SUBSTITUTE UL1015 WIRE FOR THWN-2 FOR CONVENIENCE OUTLET BRANCH CIRCUIT.

BREAKERS REQUIRED: (OR EQUIVALENT MANUFACTURER)
(4) 20A, 2P BREAKER – SQUARE D P/N: QO220
(2) 15A, 1P BREAKER – SQUARE D P/N: QO115

NOTES

THE (2) CONDUITS WITH (4) CURRENT CARRYING CONDUCTORS EACH, SHALL APPLY THE ADJUSTMENT FACTOR OF 80% PER 2020 NEC TABLE 310.15(C)(1) FOR UL1015 WIRE. (ALL WIRE AND TERMINATION HARDWARE TO BE RATED 75°C)

#12 FOR 20A OCPD WIRE DERATING: 0.8 x 25A = 20.0A
#8 FOR 40A OCPD WIRE DERATING: 0.8 x 50A = 40.0A

CONDUIT SIZING: AT 40% FILL PER NEC CHAPTER 9, TABLE 4, ARTICLE 358.

1.0" CONDUIT – .3460 SQ. IN AREA
3.0" CONDUIT – 3.538 SQ. IN AREA

(2 CONDUIT): USING THWN-2, CU.
RECTIFIER CONDUCTORS

#8 – 0.0366 SQ. IN X 4 = 0.1464 SQ. IN
#8 – 0.0366 SQ. IN X 1 = 0.0366 SQ. IN <GROUND
TOTAL = 0.1830 SQ. IN

RECTIFIER & GFCI CONDUCTORS

#12 – 0.0050 SQ. IN X 2 = 0.0100 SQ. IN
#8 – 0.0366 SQ. IN X 2 = 0.0732 SQ. IN
#8 – 0.0366 SQ. IN X 1 = 0.0366 SQ. IN <GROUND
TOTAL = 0.1198 SQ. IN

1.0" 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
#4 – 0.0824 SQ. IN X 1 = 0.0824 SQ. IN <GROUND
TOTAL = 0.8861 SQ. IN

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

PPC ONE-LINE DIAGRAM — NO SCALE — 1

PANEL NAME	LOCATION	VOLTAGE: 240/120 1Ø MAIN C/B: 200 AMPS BUS RATING: 200 AMPS	MOUNTING/ENCLOSURE: SURFACE/NEMA 3R AVAIL. FAULT CURRENT: SHORT CIRCUIT RATING: 65,000 / 10,000 SERIES RATED
DELTA	EQUIPMENT PLATFORM		

AMPS POLES	WIRE & CONDUIT	TYPE	DESCRIPTION	KVA	CKT	A		B	CKT	KVA	DESCRIPTION	TYPE	WIRE & CONDUIT	AMPS POLES
15/1	2 #12, 1 #12G	R	INTERNAL GFCI	0.18	1	1.68			2	1.50	RECTIFIER	EQ	SEE ONE LINE	40/2
15/1	SEE ONE LINE	R	CONVENIENCE OUTLET	0.18	3			1.68	4	1.50		EQ		
			SPACE		5	1.50			6	1.50	RECTIFIER	EQ	SEE ONE LINE	40/2
			SPACE		7			1.50	8	1.50		EQ		
			SPACE		9	1.50			10	1.50	RECTIFIER	EQ	SEE ONE LINE	40/2
			SPACE		11			1.50	12	1.50		EQ		
			SPACE		13				14		SPACE			
			SPACE		15				16		SPACE			
			SPACE		17				18		SPACE			
			SPACE		19				20		SPACE			
			SPACE		21				22		SPACE			
			SPACE		23				24		SPACE			
			PHASED LOAD			4.7		4.7	KVA					

TOTAL CONNECTED LOAD	9.4 kVA	39 A
TOTAL DEMAND LOAD	9.4 kVA	39 A

LOAD TYPE	DESCRIPTION	CONN. LOAD KVA	CONN. LOAD AMPS	DEMAND FACTOR	DESIGN LOAD KVA	DESIGN LOAD AMPS
L	LIGHTING	0.0	0.0	1.25	0.0	0.0
R	RECEPTACLE	0.4	1.5	NEC	0.4	1.5
M	MOTOR	0.0	0.0	NEC	0.0	0.0
H	HEATING	0.0	0.0	1.00	0.0	0.0
AC	HVAC	0.0	0.0	1.00	0.0	0.0
EQ	EQUIPMENT	9.0	37.5	1.00	9.0	37.5
E	EXISTING	0.0	0.0	1.25	0.0	0.0

*ALL EQUIPMENT LOADS CONSIDERED CONTINUOUS LOADS

PANEL SCHEDULE — NO SCALE — 2

NOT USED — NO SCALE — 3

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PROJECT INFORMATION
CHCHI00890C
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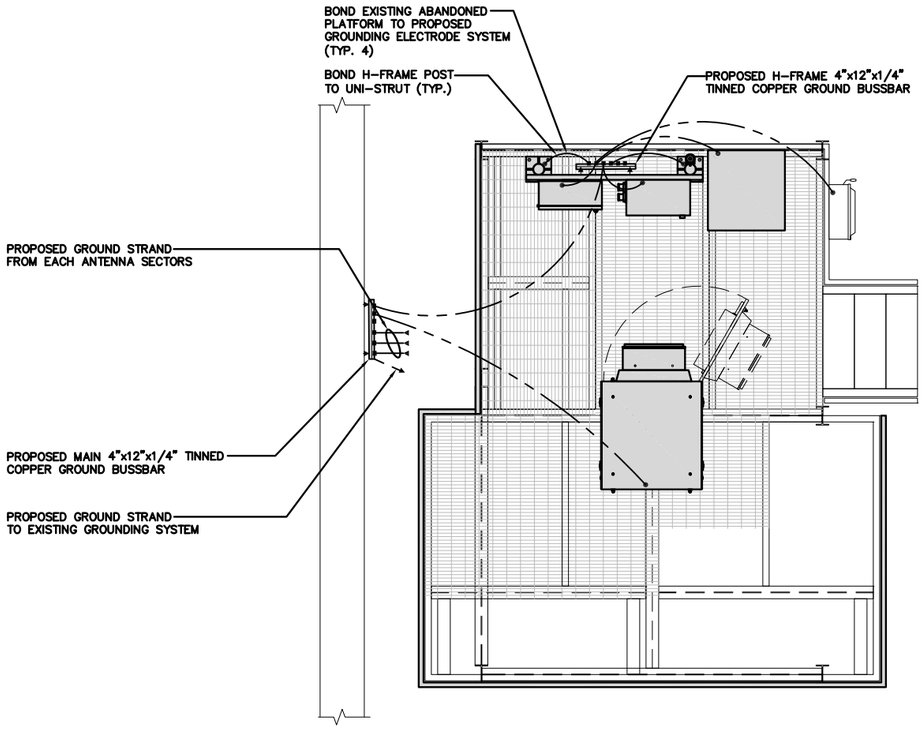
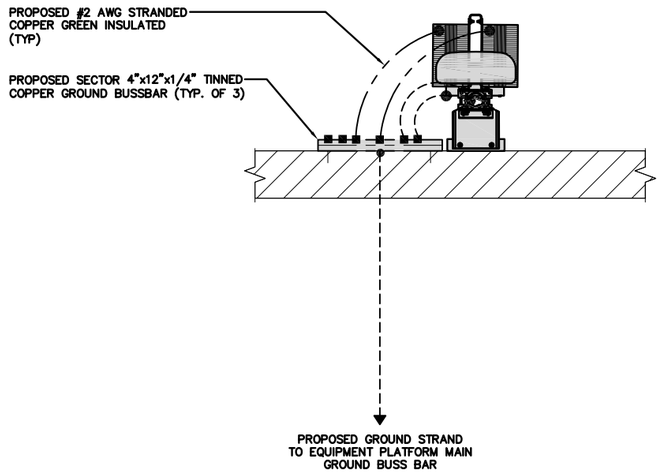
SHEET TITLE
ELECTRICAL ONE-LINE AND PANEL SCHEDULE

SHEET NUMBER
E-3



TYPICAL ROOFTOP EQUIPMENT GROUNDING PLAN

NO SCALE | 1



TYPICAL ROOFTOP ANTENNA GROUNDING PLAN

NO SCALE | 2

- EXOTHERMIC CONNECTION
- MECHANICAL CONNECTION
- GROUND BUS BAR
- GROUND ROD
- TEST GROUND ROD WITH INSPECTION SLEEVE
- #6 AWG STRANDED & INSULATED
- #2 AWG SOLID COPPER TINNED
- BUSS BAR INSULATOR

GROUNDING LEGEND

1. GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
2. 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.
3. ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.
4. NO EXOTHERMIC WELDING ON ROOFTOP

GROUNDING ROOFTOP 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) ROOFTOP GROUND SYSTEM: THE 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 GROUNDED 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 OR ROOM.

(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 (CRGB): 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 COMMON BUILDING GROUND SYSTEM WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.

(G) HATCH PLATE GROUND BAR: BOND TO THE COMMON BUILDING GROUND SYSTEM 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 ROOM. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH MECHANICAL CONNECTIONS.

(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 SHALL BE BONDED TO THE COMMON BUILDING GROUND SYSTEM 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 COMMON BUILDING GROUND SYSTEM. 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) ROOFTOP COLLECTOR BUSS BAR IS TO BE MECHANICALLY BONDED TO COMMON BUILDING GROUND SYSTEM.

REFER TO DISH Wireless L.L.C. GROUNDING NOTES.

GROUNDING KEY NOTES

NO SCALE | 3

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PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

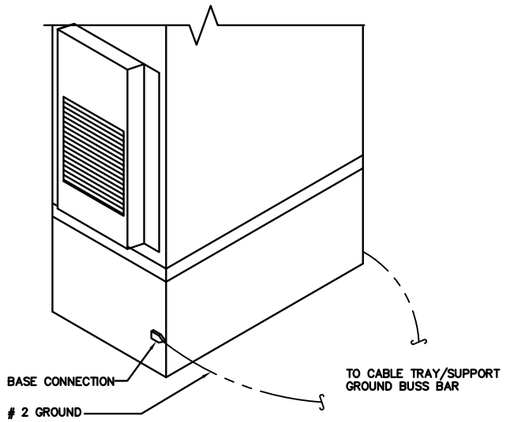
GROUNDING PLANS AND NOTES

SHEET NUMBER

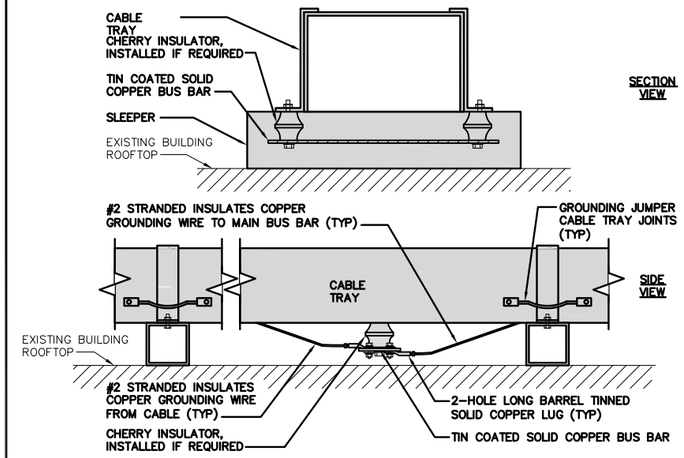
G-1

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



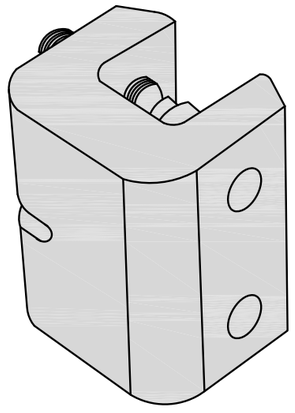
OUTDOOR CABINET GROUNDING | NO SCALE | 2



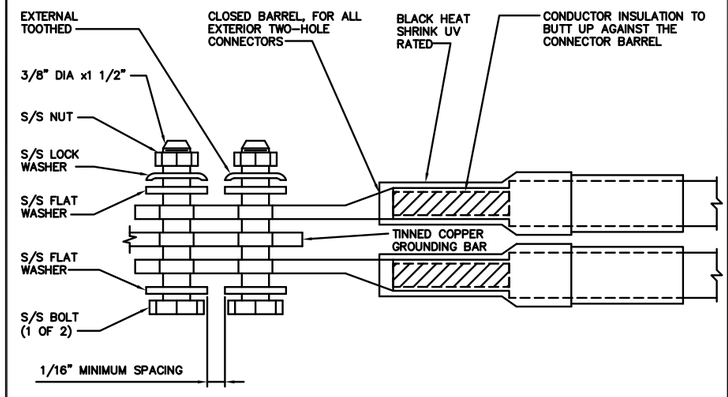
TYPICAL CABLE TRAY GROUND BUSS BAR | NO SCALE | 3

PANDUIT GUBC500-6 UNIVERSAL BEAM GROUNDING, CLAMP	
COPPER CONDUCTOR SIZE RANGE AWG	#6-500
FLANGE THICKNESS INCHES	0.250-0.675
STUD SIZE INCHES	1/2"
THREAD SIZE	1/2"-13
DIMENSIONS (LxWxH)	3.15"x 2.13"x 2.50"

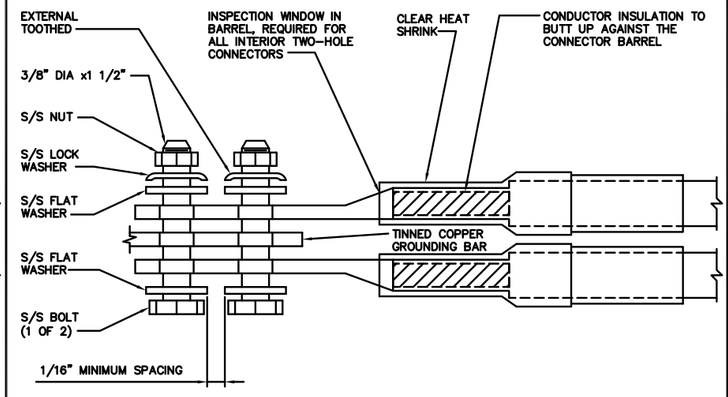
NOTE:
1. UNIVERSAL, FITS ON A WIDE RANGE OF STANDARD (ANGLED) AND WIDE FLANGE (PARALLEL) STRUCTURAL STEEL BEAMS.
2. UL 467 LISTED FOR GROUNDING AND BONDING ONLY



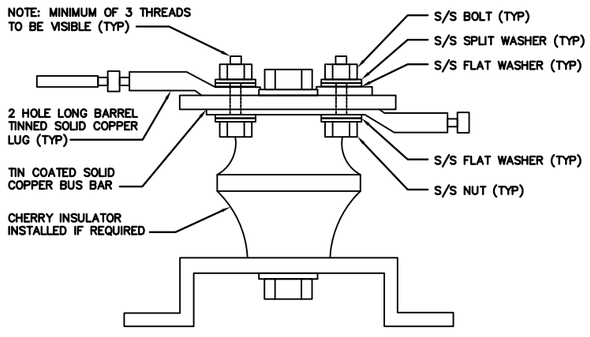
BUILDING STEEL GROUNDING DETAIL | NO SCALE | 4



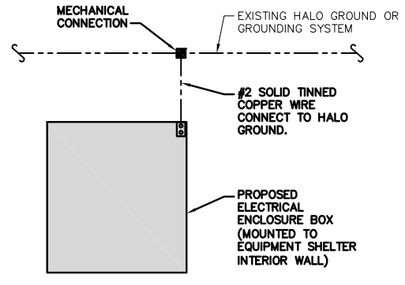
TYPICAL EXTERIOR TWO HOLE LUG | NO SCALE | 5



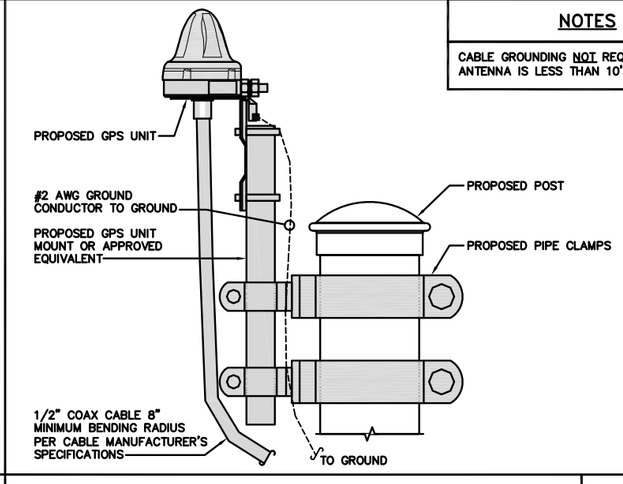
TYPICAL INTERIOR TWO HOLE LUG | NO SCALE | 6



LUG DETAIL | NO SCALE | 7



TYPICAL INDOOR ELECTRICAL ENCLOSURE BOX GROUNDING DETAIL | NO SCALE | 8



NOTES

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

TYPICAL GPS UNIT GROUNDING | NO SCALE | 9

dish WIRELESS
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SHEET TITLE
GROUNDING DETAILS

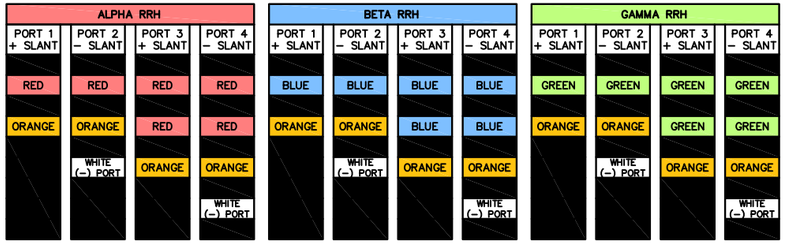
SHEET NUMBER
G-2

RF JUMPER COLOR CODING

3/4" TAPE WIDTHS WITH 3/4" SPACING

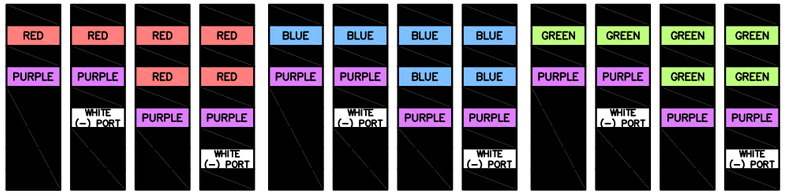
LOW-BAND RRH –
(600MHz N71 BASEBAND) +
(850MHz N26 BAND) +
(700MHz N29 BAND) – OPTIONAL PER MARKET

ADD FREQUENCY COLOR TO SECTOR BAND
(CBRS WILL USE YELLOW BANDS)



MID-BAND RRH –
(AWS BANDS N66+N70)

ADD FREQUENCY COLOR TO SECTOR BAND
(CBRS WILL USE YELLOW BANDS)

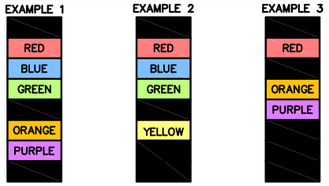


HYBRID/DISCREET CABLES

INCLUDE SECTOR BANDS BEING SUPPORTED
ALONG WITH FREQUENCY BANDS

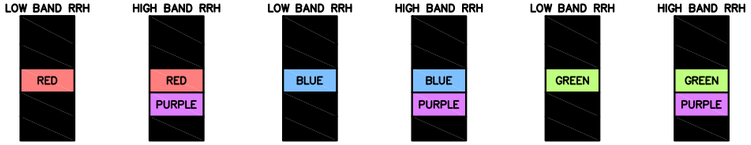
EXAMPLE 1 – HYBRID, OR DISCREET, SUPPORTS
ALL SECTORS, BOTH LOW-BANDS AND MID-BANDS

EXAMPLE 2 – HYBRID, OR DISCREET, SUPPORTS
CBRS ONLY, ALL SECTORS



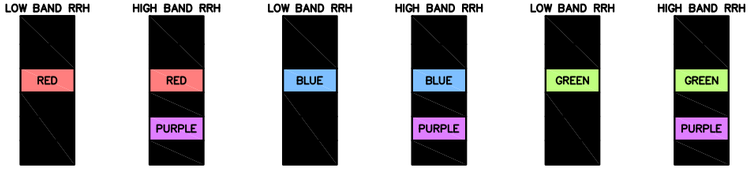
FIBER JUMPERS TO RRHs

LOW-BAND RRH FIBER CABLES HAVE SECTOR
STRIPE ONLY

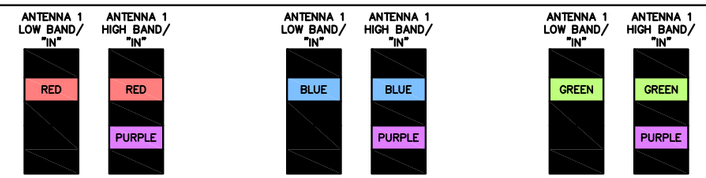


POWER CABLES TO RRHs

LOW-BAND RRH POWER CABLES HAVE SECTOR
STRIPE ONLY



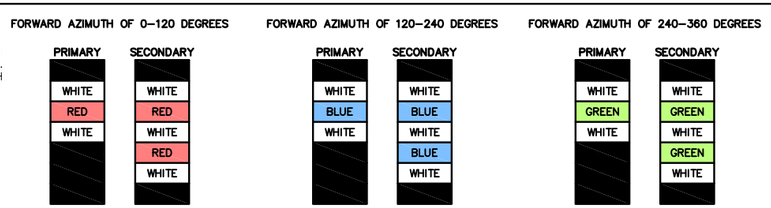
RET MOTORS AT ANTENNAS



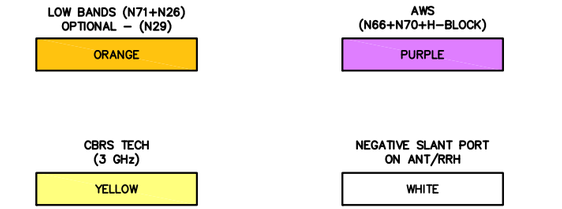
MICROWAVE RADIO LINKS

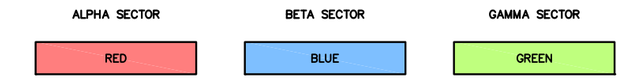
LINKS WILL HAVE A 1.5–2 INCH WHITE WRAP WITH
THE AZIMUTH COLOR OVERLAPPING IN THE MIDDLE.
ADD ADDITIONAL SECTOR COLOR BANDS FOR EACH
ADDITIONAL MW RADIO.

MICROWAVE CABLES WILL REQUIRE P-TOUCH
LABELS INSIDE THE CABINET TO IDENTIFY THE
LOCAL AND REMOTE SITE ID'S



RF CABLE COLOR CODES | NO SCALE | 1





COLOR IDENTIFIER | NO SCALE | 2

NOT USED | NO SCALE | 3

NOT USED | NO SCALE | 4

dish WIRELESS
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Fullerton DESIGN DEVELOP CONSTRUCT
1100 E. WOODFIELD ROAD, SUITE 500
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TEL: 847-908-8400
DESIGN FIRM NO. 184.008202-0006
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DRAWN BY:	CHECKED BY:	APPROVED BY:
LA	DZ	DS

RFDS REV #: 1

PERMITTING DOCUMENTS

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A&E PROJECT NUMBER

2023.0017.0072

DISH WIRELESS L.L.C.
PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

RF CABLE
COLOR CODE

SHEET NUMBER

RF-1

LEGEND

EXOTHERMIC CONNECTION

MECHANICAL CONNECTION

BUSS BAR INSULATOR

CHEMICAL ELECTROLYTIC GROUNDING SYSTEM

TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM — T

EXOTHERMIC WITH INSPECTION SLEEVE

GROUNDING BAR

GROUND ROD

TEST GROUND ROD WITH INSPECTION SLEEVE — T

SINGLE POLE SWITCH — $

DUPLEX RECEPTACLE

DUPLEX GFCI RECEPTACLE — GFCI

FLUORESCENT LIGHTING FIXTURE (2) TWO LAMPS 48–T8 — F

SMOKE DETECTION (DC) — SD

EMERGENCY LIGHTING (DC)

SECURITY LIGHT W/PHOTOCELL LITHONIA ALXW LED–1–25A400/51K–SR4–120–PE–DDBTXD

CHAIN LINK FENCE — X — X — X — X

WOOD/WROUGHT IRON FENCE

WALL STRUCTURE

LEASE AREA

PROPERTY LINE (PL)

SETBACKS

ICE BRIDGE

CABLE TRAY

WATER LINE — W — W — W — W — W

UNDERGROUND POWER — UGP — UGP — UGP — UGP — UGP

UNDERGROUND TELCO — UGT — UGT — UGT — UGT — UGT

OVERHEAD POWER — OHP — OHP — OHP — OHP

OVERHEAD TELCO — OHT — OHT — OHT — OHT

UNDERGROUND TELCO/POWER — UGT/P — UGT/P — UGT/P — UGT/P

ABOVE GROUND POWER — AGP — AGP — AGP — AGP — AGP

ABOVE GROUND TELCO — AGT — AGT — AGT — AGT — AGT

ABOVE GROUND TELCO/POWER — AGT/P — AGT/P — AGT/P — AGT/P

WORKPOINT — W.P.

SECTION REFERENCE — XX / X–X

DETAIL REFERENCE — XX / X–X

ABBREVIATIONS

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

dish WIRELESS
5701 SOUTH SANTA FE DRIVE
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RFDS REV #: 1

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A&E PROJECT NUMBER

2023.0017.0072

DISH WIRELESS L.L.C.
PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

LEGEND AND ABBREVIATIONS

SHEET NUMBER

GN-1

SIGN TYPES		
TYPE	COLOR	COLOR CODE PURPOSE
INFORMATION	GREEN	**"INFORMATIONAL SIGN"** TO NOTIFY OTHERS OF SITE OWNERSHIP & CONTACT NUMBER AND POTENTIAL RF EXPOSURE.
NOTICE	BLUE	**"NOTICE BEYOND THIS POINT"** RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
CAUTION	YELLOW	**"CAUTION BEYOND THIS POINT"** RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
WARNING	ORANGE/RED	**"WARNING BEYOND THIS POINT"** RF FIELDS AT THIS SITE EXCEED FCC RULES FOR HUMAN EXPOSURE. FAILURE TO OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS COULD RESULT IN SERIOUS INJURY. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)

SIGN PLACEMENT:

- RF SIGNAGE PLACEMENT SHALL FOLLOW THE RECOMMENDATIONS OF AN EXISTING EME REPORT, CREATED BY A THIRD PARTY PREVIOUSLY AUTHORIZED BY DISH Wireless L.L.C.
- INFORMATION SIGN (GREEN) SHALL BE LOCATED ON EXISTING DISH Wireless L.L.C EQUIPMENT.
  A) IF THE INFORMATION SIGN IS A STICKER, IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C EQUIPMENT CABINET.
  B) IF THE INFORMATION SIGH IS A METAL SIGN IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C H-FRAME WITH A SECURE ATTACH METHOD.
- IF EME REPORT IS NOT AVAILABLE AT THE TIME OF CREATION OF CONSTRUCTION DOCUMENTS; PLEASE CONTACT DISH Wireless L.L.C. CONSTRUCTION MANAGER FOR FURTHER INSTRUCTION ON HOW TO PROCEED.

NOTES:

1. FOR DISH Wireless L.L.C. LOGO, SEE DISH Wireless L.L.C. DESIGN SPECIFICATIONS (PROVIDED BY DISH Wireless L.L.C.)
2. SITE ID SHALL BE APPLIED TO SIGNS USING "LASER ENGRAVING" OR ANY OTHER WEATHER RESISTANT METHOD (DISH Wireless L.L.C. APPROVAL REQUIRED)
3. TEXT FOR SIGNAGE SHALL INDICATE CORRECT SITE NAME AND NUMBER AS PER DISH Wireless L.L.C. CONSTRUCTION MANAGER RECOMMENDATIONS.
4. CABINET/SHELTER MOUNTING APPLICATION REQUIRES ANOTHER PLATE APPLIED TO THE FACE OF THE CABINET WITH WATER PROOF POLYURETHANE ADHESIVE
5. ALL SIGNS WILL BE SECURED WITH EITHER STAINLESS STEEL ZIP TIES OR STAINLESS STEEL TECH SCREWS
6. ALL SIGNS TO BE 8.5"x11" AND MADE WITH 0.04" OF ALUMINUM MATERIAL

INFORMATION

This is an access point to an area with transmitting antennas.

Obey all signs and barriers beyond this point.
Call the DISH Wireless L.L.C. NOC at 1-866-624-6874

Site ID: _____

THIS SIGN IS FOR REFERENCE PURPOSES ONLY

NOTICE

Transmitting Antenna(s)

Radio frequency fields beyond this point MAY *EXCEED* the FCC Occupational exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

Call the DISH Wireless L.L.C. NOC at 1-866-624-6874 prior to working beyond this point.

Site ID: _____

dish

THIS SIGN IS FOR REFERENCE PURPOSES ONLY

CAUTION

Transmitting Antenna(s)

Radio frequency fields beyond this point MAY *EXCEED* the FCC Occupational exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

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Site ID: _____

dish

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Transmitting Antenna(s)

Radio frequency fields beyond this point *EXCEED* the FCC Occupational exposure limit.

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Call the DISH Wireless L.L.C. NOC at 1-866-624-6874 prior to working beyond this point.

Site ID: _____

dish

THIS SIGN IS FOR REFERENCE PURPOSES ONLY

RF SIGNAGE

dish WIRELESS
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

Fullerton
DESIGN DEVELOP CONSTRUCT
1100 E. WOODFIELD ROAD, SUITE 500
SCHAUMBURG, ILLINOIS 60173
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DRAWN BY:	CHECKED BY:	APPROVED BY:
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RFDS REV #: 1

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A&E PROJECT NUMBER
2023.0017.0072

DISH WIRELESS L.L.C.
PROJECT INFORMATION
CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE
RF SIGNAGE

SHEET NUMBER
GN-2

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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PERMITTING DOCUMENTS

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A&E PROJECT NUMBER

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DISH WIRELESS L.L.C.
PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-3

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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RFDS REV #: 1

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A&E PROJECT NUMBER

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DISH WIRELESS L.L.C.
PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-4

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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PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-5

STRUCTURAL NOTES:

APPLICABLE CODES

1. DESIGN & CONSTRUCTION OF ALL WORK SHALL CONFORM TO THE FOLLOW CODES:

   2021 INTERNATIONAL BUILDING

DESIGN LOADS:

WIND LOAD:

107 MPH ULTIMATE DESIGN WIND SPEED

SEISMIC LOAD:

SS = 0.12	SDS = 0.13
S1 = 0.063	SD1 = 0.1
SOIL SITE CLASS (ASSUMED)	D
SEISMIC DESIGN CATEGORY	B

MANDATORY SUBMITTALS:

1. THE FOLLOWING PRE CONSTRUCTION ITEMS SHALL BE SUBMITTED BY THE CONTRACTOR FOR REVIEW AND APPROVAL TO THE ENGINEER OF RECORD TO ORDERING OR FABRICATION OF ANY MATERIAL.

   STRUCTURAL STEEL SHOP DRAWINGS

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL LAWS, REGULATIONS, AND RULES SET FORTH BY FEDERAL, STATE, AND LOCAL AUTHORITIES WITH JURISDICTION OVER THE PROJECT. THIS RESPONSIBILITY IS IN EFFECT REGARDLESS OF WHETHER THE LAW, ORDINANCE, REGULATION OR RULE IS MENTIONED IN THESE SPECIFICATIONS.
2. ALL WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS, PROJECT SPECIFICATIONS, AND THE CONSTRUCTION CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL HAVE AND MAINTAIN A VALID CONTRACTOR'S LICENSE FOR THE LOCATION IN WHICH THE WORK IS TO BE PERFORMED. FOR JURISDICTIONS THAT LICENSE INDIVIDUAL TRADES, THE TRADESMAN OR SUBCONTRACTOR PERFORMING THOSE TRADES SHALL BE LICENSED.
4. FOLLOW ALL APPLICABLE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND STATE LAW AS DEFINED IN THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT.
5. PRIOR TO THE SUBMISSION OF THE BID, THE CONTRACTOR SHALL VISIT THE JOB SITE, VERIFY ALL DIMENSIONS AND BECOME FAMILIAR WITH THE FIELD CONDITIONS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER.
6. DRAWING PLANS SHALL NOT BE SCALED.
7. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK NOT CLEARLY IDENTIFIED ON THE DRAWINGS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE PROJECT MANAGER.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE NOTED.
9. ALL MEANS AND METHODS OF CONSTRUCTION DEALING WITH TOWER CONSTRUCTION AND SAFETY, STEEL ERECTION, EXCAVATIONS, TRENCHING, SCAFFOLDING, FORMWORK, ELECTRICAL, AND WORK IN CONFINED SPACES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
11. THE CONTRACTOR SHALL BE EXPERIENCED IN THE PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY AND THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED.
12. THE CONTRACTOR SHALL PROVIDE SUFFICIENT TEMPORARY BRACING AND/OR SHORING OF ALL STRUCTURAL AND NON-STRUCTURAL ELEMENTS DURING CONSTRUCTION UNTIL ALL STRUCTURAL ELEMENTS HAVE BEEN PROPERLY INSTALLED.
13. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS SHALL BE REPORTED TO THE PROJECT MANAGER AND ENGINEER, AND SHALL REQUIRE APPROVAL PRIOR TO PERFORMING ANY REMEDIAL OR CORRECTIVE ACTION.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL MATERIALS CONFORM TO THE LATEST EDITION OF APPLICABLE STANDARDS AND TO ALL APPLICABLE CODES AND REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION, WHICHEVER IS MORE STRINGENT. ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST APPLICABLE REQUIREMENTS OF AISC, ASTM, ACI, CRSI, AWS AND ALL OTHER APPLICABLE STANDARDS
2. ALL NEW STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING, UNLESS NOTED OTHERWISE ON THE DRAWINGS:
   ASTM A36 (Fy = 36 KSI) M-SHAPES, S-SHAPES, ANGLES, PLATES (U.N.O.)
   ASTM A992 (Fy = 50 KSI) W-SHAPES, CHANNELS (U.N.O.)
   ASTM A500 Gr C (Fy = 50 KSI) ROUND AND SQUARE HSS
3. STEEL PIPE SHALL COMPLY WITH ASTM A53 GRADE B. MAY BE SUBSTITUTED WITH ASTM 500 GRADE C (ROUND HSS)
4. ALL STRUCTURAL STEEL, UNISTRUT, AND ALL SUPPORTING STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 AND A123, INCLUDING CONNECTION HARDWARE (BOLTS, WASHERS, NUTS, AND PINS), PLATES, SPACERS, AND FILLERS.
5. CONNECTIONS:
   A. CONTRACTOR SHALL PROVIDE ALL HARDWARE REQUIRED TO COMPLETE FIELD ERECTION OF STRUCTURE AS INDICATED BY CONTRACT DOCUMENTS OR THESE SPECIFICATIONS.
   B. HIGH STRENGTH THREADED FASTENERS SHALL BE INSTALLED IN ACCORDANCE WITH THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS (RCSC) SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS. USE A-325N BEARING-TYPE CONNECTION BOLTS UNLESS NOTED OTHERWISE.
   C. GRATING AND PLATES SHALL BE FASTENED WITH SADDLE CLIPS. THE NECESSARY HOLES TO COMPLETE ALL PHASES OF CONSTRUCTION SHALL BE PROVIDED AND CALLED OUT ON THE APPROVED SHOP DRAWINGS. ALL HOLES SHALL BE DRILLED OR PUNCHED PERPENDICULAR TO METAL SURFACES, FLAME CUT OR BURNED HOLES WILL NOT BE PERMITTED.
   D. ALL UNFINISHED THREADED FASTENERS SHALL COMPLY WITH ASTM A-307, GRADE A, REGULAR LOW-CARBON STEEL BOLTS AND NUTS WITH HEXAGONAL HEADS IN ACCORDANCE WITH ASTM SPECIFICATION A563.
   E. ALL HIGH STRENGTH THREADED FASTENERS SHALL BE HEAVY HEXAGONAL BOLTS AND NUTS WITH HARDENED WASHERS, ALL FROM QUENCHED AND TEMPERED MEDIUM CARBON STEEL COMPLYING WITH ASTM A-325.

GENERAL WELDING

1. ALL WELDING SHALL BE IN ACCORDANCE WITH AWWA D100 SEC. 8, WELDING, SEC. 10, ERECTION AND SEC. 11, INSPECTION AND TESTING.
2. UNLESS NOTED OTHERWISE ALL WELDS TO THE TANK SURFACE SHALL BE MADE WITH E7018 LOW HYDROGEN ROD AND SHALL BE SMOOTH AND FREE OF BURRS AND UNDERCUTS. UNACCEPTABLE WELDS SHALL BE REPAIRED AS REQUIRED TO MEET AWWA D100 REQUIREMENTS.
3. NO WELDING SHALL BE DONE WHEN THE AMBIENT TEMPERATURE IS BELOW 32 DEGREE FAHRENHEIT UNLESS THE REQUIREMENTS OF AWWA D100, SEC 10.2.1 ARE FOLLOWED.
4. WELDING MAY CAUSE BLISTERING OF THE INTERIOR PAINT OPPOSITE THE WELD. DAMAGED PAINT SURFACES SHOULD BE REPAIRED PER WATER TANK OWNER SPECIFICATIONS. CONTRACTOR SHALL COORDINATE ALL PAINT MATERIALS & METHODS WITH OWNER PRIOR TO WORK BEING DONE.
5. GALVANIZED COMPONENTS SHALL NOT BE WELDED DIRECTLY TO THE TANK SURFACE.
6. ALL WELDS IN THE TANK AND STRUCTURAL ATTACHMENTS SHALL BE MADE IN A MANNER TO ENSURE COMPLETE FUSION WITH THE BASE METAL, WITHIN THE LIMITS SPECIFIED FOR EACH JOINT, AND IN STRICT ACCORDANCE WITH THE QUALIFIED WELDING PROCEDURE SPECIFICATIONS.
7. UNLESS NOTED OTHERWISE ALL WELDS FOR ANTENNA INSTALLATION SHALL BE SEAL WELDS.

NOTES | 1

NOT USED | 2

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www.fullerton-us.com

DRAWN BY:	CHECKED BY:	APPROVED BY:
LA	DZ	DS

RFDS REV #: 1

PERMITTING DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	1/19/24	ISSUED FOR REVIEW
B	2/6/24	REVISION
0	5/1/24	ISSUED FOR PERMITTING
1	5/24/24	REVISION

A&E PROJECT NUMBER

2023.0017.0072

DISH WIRELESS L.L.C.
PROJECT INFORMATION

CHCHI00890C
715 LAKE ST.
OAK PARK, IL 60301

SHEET TITLE

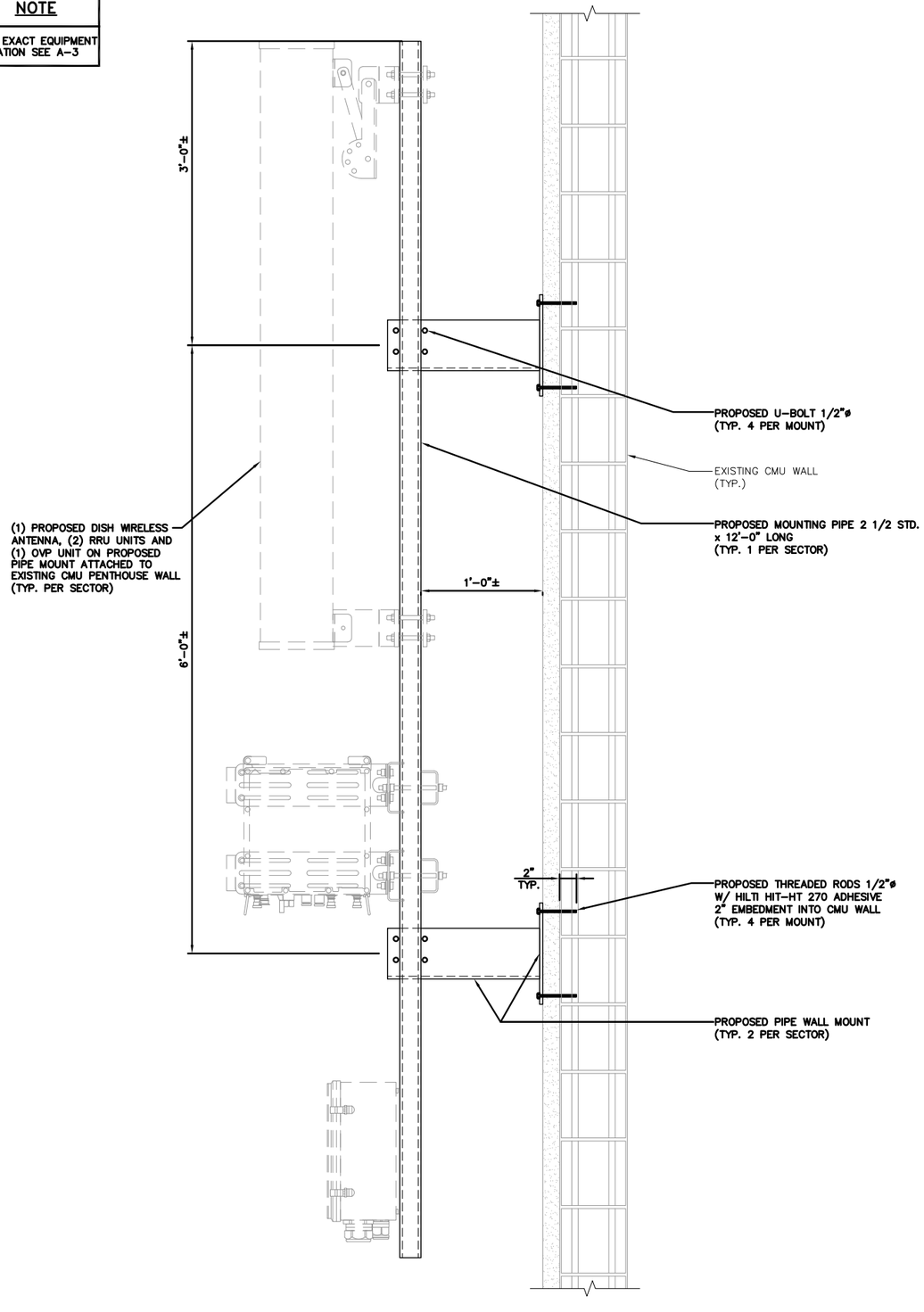
STRUCTURAL NOTES AND DETAILS

SHEET NUMBER

S-1

NOTE

FOR EXACT EQUIPMENT LOCATION SEE A-3



ANTENNA MOUNT ELEVATION SIDE VIEW

12" 9" 6" 3" 0 1'

1 1/2"=1'-0"

1

NOT USED

NO SCALE

2

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SHEET TITLE

STRUCTURAL DETAILS

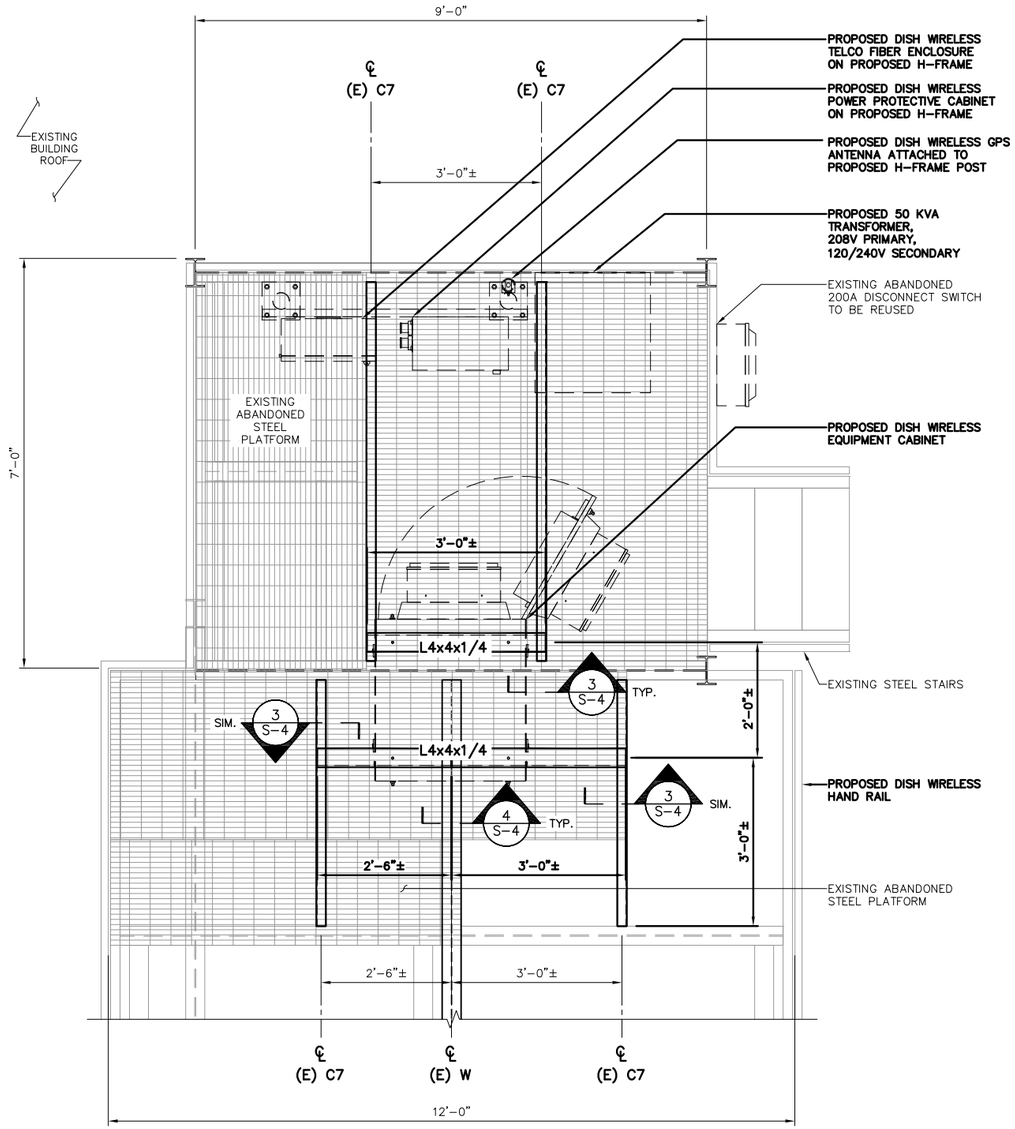
SHEET NUMBER

S-2

NOTES

FOR EXACT EQUIPMENT LOCATION SEE A-2

CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE OF EXISTING CONNECTION BELOW STEEL PLATFORM PRIOR TO CONSTRUCTION



EXISTING STEEL PLATFORM PLAN VIEW

12" 6" 0 1' 2' 3'
3/4"=1'-0"

1

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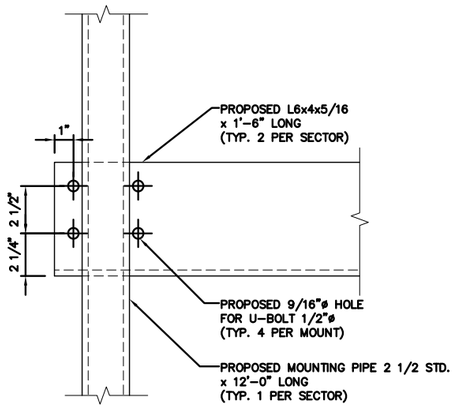
SHEET TITLE

STRUCTURAL DETAILS

SHEET NUMBER

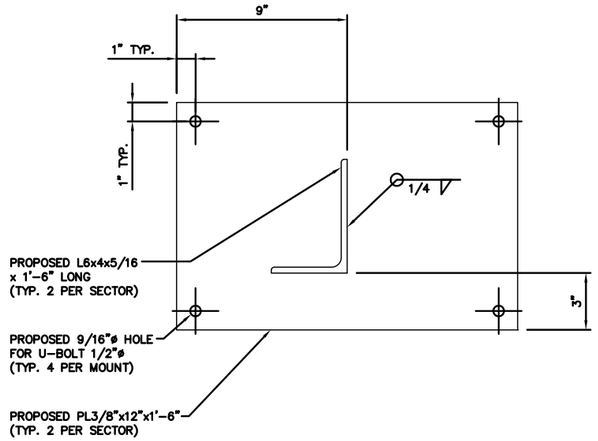
S-3



ANTENNA DETAIL

12" 9" 6" 3" 0
3"=1'-0"

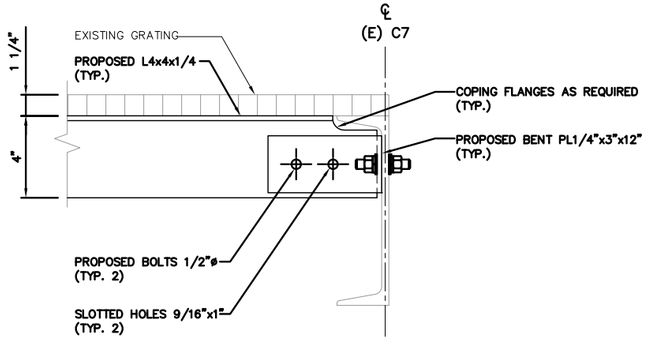
1



L6 TO PL DETAIL

12" 9" 6" 3" 0
3"=1'-0"

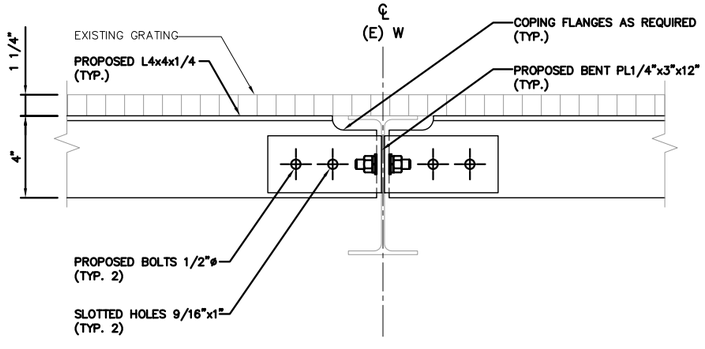
2



PROPOSED L4x4 TO EXISTING C7 CONNECTION DETAIL

12" 9" 6" 3" 0
3"=1'-0"

3



PROPOSED L4x4 TO EXISTING W CONNECTION DETAIL

12" 9" 6" 3" 0
3"=1'-0"

4

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SHEET TITLE

STRUCTURAL DETAILS

SHEET NUMBER

S-4