

APPROVING A SPECIAL USE PERMIT FOR ANTENNAS AND ASSOCIATED EQUIPMENT ON TOP OF A 16-STORY BUILDING AT 507 E. TAYLOR STREET DEKALB, ILLINOIS (DISH WIRELESS).

WHEREAS, the City of DeKalb (the "City") is a home rule unit of local government and may exercise any power and perform any function pertaining to its government and affairs pursuant to Article VII, Section 6, of the Illinois Constitution of 1970; and

WHEREAS, Fullerton Engineering Consultants, LLC, on behalf of DISH Wireless, LLC (the "Petitioner"), who is the owner of the equipment to be installed on a 16-story building located at 507 E. Taylor Street, DeKalb, Illinois and legally described in Exhibit A attached hereto and incorporated herein (the "Property"), petitioned the City to approve a special use permit for antennas and associated equipment on the Property (the "Special Use Petition"); and

WHEREAS, on September 6, 2022, pursuant to due notice, the City's Planning and Zoning Commission (the "PZC") held a public hearing on the Special Use Petition and recommended approving the Special Use Petition; and

WHEREAS, the City's corporate authorities adopt and incorporate by reference the PZC's findings of fact, find that approving the Special Use Petition is in the public interest for the promotion of the public health, safety and welfare, and further find as follows:

STANDARDS OF A SPECIAL USE PERMIT FOR ANTENNA FACILITIES – ARTICLE 7.08.08 OF THE UNIFIED DEVELOPMENT ORDINANCE ("UDO")

1. Points of Visual Interest Shall Be Protected.

The only point of visual interest, as defined by the UDO, in the vicinity of the Property is park property to the east and west of the subject site. The proposed upgrade to the equipment will have no impact on the park areas as the equipment is on top of an existing 16-story building and there will be concealment film added to camouflage the antennas and equipment.

2. Methods for Protecting Points of Visual Interest.

As noted in standard #1, concealment film will be added to camouflage the antennas and related equipment, which will help to minimize the visual effect on the surrounding area. Camouflaging of the antennas will be a combination of reflective material (concealment film) and a brick design to blend with the building.

3. Color

Reflective screening of the visible equipment is proposed to reduce the visual impact on the surrounding area.

4. Height

The UDO stipulates antennas may be permitted provided it is no greater than 22 feet taller than the existing structure. The proposed antenna upgrades and replacements will be no higher than the existing equipment on the building.

5. Setbacks Adjacent to Residential Uses

The proposed equipment will be on an existing roof top that is an approved location for wireless facilities.

6. Lighting

The UDO stipulates that no lighting is permitted except as required by the Federal Aviation Administration (FAA). There is no lighting present or proposed on the rooftop equipment, and the FAA does not require lighting at this location.

7. Fencing and Security

This factor does not apply because the upgrade is for roof-top equipment.

8. Landscaping and Screening

The Petitioner is proposing to use print wrap film on the equipment and concealment film on the antennas to help blend them into the surrounding environment.

9. Noise

No noise generating equipment is present or proposed for the Special Use Petition.

10. Tower Design

This factor does not apply because this is an upgrade to existing equipment on the roof-top of the building.

STANDARDS OF A SPECIAL USE – ARTICLE 14.03.05 (2)

1. The proposed special use complies with all provisions of the applicable district regulations.

The proposed special use is for a new co-location on an existing building with other carriers. The property is zoned RC-1 and the proposed special use meets all the requirements of the district and Article 7.08 (Wireless Communications Ordinance) of the UDO. The proposed facilities will provide communication services to the City which supports the goals of the 2022 Comprehensive Plan.

2. The proposed special use will not be unreasonably detrimental to the value of other property in the neighborhood in which it is to be located or to the public welfare at large.

There have been antenna and associated equipment on top of the building on the Property for many years, and there is no evidence that the presence of the antennas and equipment have been detrimental to the value of neighboring properties. In addition, the Petitioner is proposing to use concealment tape on the equipment to minimize the visual effect on the surrounding area. The facility will operate in accordance with all FCC regulations.

3. The location and size of the special use, the nature and intensity of the operation involved in or conducted in connection with it, and the location of the site with respect to streets giving access to it are such that the special use will not dominate the immediate neighborhood so as to prevent development and use of neighboring property in accordance with the applicable zoning district regulations.

The antenna and associated equipment related to the Special Use Petition will be located on top of an existing 16-story building and will not dominate the immediate area and will not prevent development on the neighboring properties. The proposed facility will be unstaffed and a low

intensity operation.

4. Adequate utility, drainage and other such necessary facilities have been or will be provided.

The subject site and structure are already served with adequate utilities. The only utilities that are necessary are telephone/fiber and electricity, both of which are already onsite in connection with the existing facilities. In addition, the facility will operate in accordance with all FCC regulations.

5. The proposed use, where such developments and uses are deemed consistent with good planning practice, or can be operated in a manner that is not detrimental to the permitted developments and uses in the district; can be developed and operated in a manner that is visually compatible with the permitted uses in the surrounding area; shall in all other respects conform to the applicable regulations of the district in which it is located; and is deemed essential or desirable to preserve and promote the public health, safety and general welfare of the City of DeKalb.

There have been antenna and associated equipment on top of the building on the subject site for many years, and they will be operated in a manner that is visually compatible with the surrounding area. The proposed wireless installation will have a positive impact on the community and ensure the area has a reliable wireless service. The Petitioner is proposing to place concealment tape on the antennas and equipment to minimize the visual effect on the surrounding neighborhood.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DEKALB, ILLINOIS:

SECTION 1: The recitals to this Ordinance are true, material, adopted and incorporated herein as Section 1 to this Ordinance.

SECTION 2: The City's corporate authorities approve the Special Use Petition for an antenna and associated equipment on top of a 16-story building at the Property legally described in Exhibit A attached hereto and incorporated herein by reference, subject to the following conditions:

1. The antennas and equipment shall comply with the drawings dated 7-19-22 indicated on Exhibit B.
2. Antennas and associated visible equipment shall be wrapped with concealment tape.
3. The Petitioner is required to submit the necessary application and plans to the City in compliance with applicable Building Codes and the regulations of Article 7.08 of the UDO (Wireless Communications Ordinance).
4. Petitioner shall comply with all applicable laws, rules, regulations, City of DeKalb Municipal Code, and representations made to the City, PZC, and City Council.

SECTION 3: The City Manager and his designee are authorized to record this Ordinance in the DeKalb County Clerk and Recorder's Office.

SECTION 4: This Ordinance and each of its terms shall be the effective legislative act of a home rule municipality without regard to whether such ordinance should (a) contain terms contrary to the provisions of current or subsequent non-preemptive state law, or (b) legislate in a manner or regarding a matter not delegated to municipalities by state law. It is the City's corporate authorities' intent that to the extent that the terms of this Ordinance should be inconsistent with any non-preemptive state law, this Ordinance shall supersede state law in that regard within its jurisdiction.

SECTION 5: This Ordinance shall be in full force and effect from and after its passage and approval as provided by law.

PASSED BY THE CITY COUNCIL of the City of DeKalb, Illinois at a Regular meeting thereof held on the 12th day of September 2022 and approved by me as Mayor on the same day. Passed on First Reading by a 6-0-2 roll call vote. Aye: Morris, Smith, McAdams, Verbic, Faivre Barnes. Nay: None. Absent: Larson, Perkins. Second Reading waived by a 6-0-2 roll call vote. Aye: Morris, Smith, McAdams, Verbic, Faivre, Barnes. Nay: None. Absent: Larson, Perkins.




COHEN BARNES, Mayor

ATTEST:



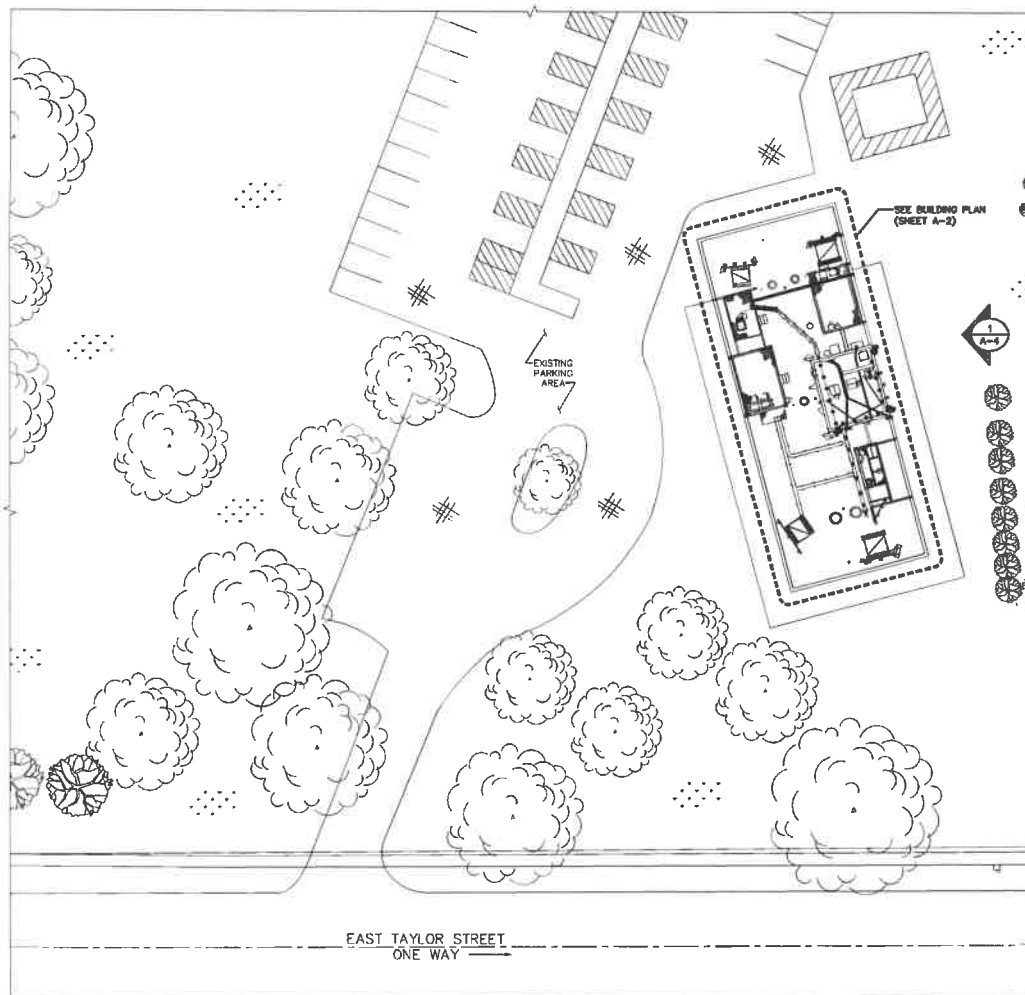
Ruth A. Scott, Executive Assistant

EXHIBIT A
(Legal Description of the Property)

The Property is legally described as follows:

Part of Assessor's Lot 11 of the Southwest Quarter of Section 23, Township 40, North Range 4, East of the Third principal Meridian, DeKalb County, Illinois, described as follows: Commencing at the Southwest corner of said Assessor's Lot 11: thence Northeasterly along the West line of said Assessor's Lot 11, a distance of 35.7 feet to the point of intersection of the West line of said Assessor's Lot 11 with the North right of way line of Taylor Street for the place of beginning; thence Easterly along the North right of way line of said Taylor Street, a distance of 252.4 feet to the Southeast corner of Lot 3 of Sweet Subdivision, according to the Plat thereof recorded in the DeKalb County Recorder's Office: thence Northerly along the West line of said Sweet Subdivision, a distance of 208.0 feet to the Northwest corner of Lot 3 of said Sweet Subdivision; thence Easterly along the North line of said Sweet Subdivision, a distance of 17.15 feet: thence Northeasterly at an angle of 112 degrees 22 minutes measured clockwise from the last described course, a distance of 194.8 feet to a point that is 300.0 feet Southwesterly of (as measured at right angles to) the South line of Roosevelt Street; thence Northwesterly and parallel with the South line of Roosevelt Street in the City of DeKalb, Illinois, a distance of 170.6 feet to the West line of said Assessor's Lot 11; thence Southwesterly along the West line of said Assessor's Lot 11, a distance of 489.3 feet to the place of beginning situated in the City of DeKalb in the County of DeKalb in the State of Illinois.

Common Address: 507 E. Taylor Street, DeKalb, IL 60115;
Parcel Identification Number (PIN): 08-23-361-031.



NOTES

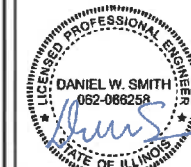
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. CONTRACTOR SHALL MAINTAIN A 10'-0" MINIMUM SEPARATION BETWEEN THE PROPOSED GPS UNIT, TRANSMITTING ANTENNAS AND EXISTING GPS UNITS.

dish
wireless.

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DRAWN BY: CHECKED BY: APPROVED BY:

LA DZ DS

R/FDS REV # 4.1

PERMITTING DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
A	05/29/2021	SUBMITTED FOR REVIEW
B	11/03/2021	REVISION
C	05/07/2022	REVISION
D	05/23/2022	SUBMITTED FOR PERMITTING
E	07/19/2022	CONCURRENCE MORE ADDITION

A&E PROJECT NUMBER

2020.0185.0053

DISH Wireless L.L.C.

PROJECT INFORMATION

CHCH100B94A

507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE

OVERALL

SITE PLAN

SHEET NUMBER

A-1

OVERALL SITE PLAN

30' 10' 0' 20' 40'
1"=20'

1

NOTE

EXISTING OTHER CARRIER ABANDONED EQUIPMENT CABINETS, AC PANEL, CABLES AND ANTENNAS WERE PRESENT AT SITE AT THE TIME OF THE ORIGINAL DESIGN VISIT. CONTRACTOR TO VERIFY WITH CONSTRUCTION MANAGER WHO IS RESPONSIBLE FOR REMOVAL OF EQUIPMENT THAT WILL NOT BE REUSED FOR DISH WIRELESS, LLC INSTALLATION, IF THE EQUIPMENT IS ON SITE AT BEGINNING OF CONSTRUCTION.

NOTES

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

dish
wireless.

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LA DZ DS

RFDVS REV # 4.1

PERMITTING DOCUMENTS

SUBMITTALS

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B	11/03/2021	REVISION
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D	08/23/2022	ISSUED FOR PERMITTING
1	07/19/2023	CONCEALMENT NOTE ADDITION

A&E PROJECT NUMBER
2020.0185.0053

DISH Wireless L.L.C.
PROJECT INFORMATION
CHCHI00894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
ENLARGED BUILDING
PLAN

SHEET NUMBER

A-2

EXISTING OTHER CARRIER
ANTENNA AND MICROWAVE DISH
ON SLED MOUNT (TYP.)

EXISTING OTHER
CARRIER EQUIPMENT
PLATFORM (TYP.)

EXISTING POWER CONDUIT FROM
NEW DISH WIRELESS SERVICE METER
(BY UTILITY COMPANY) INSIDE
EXISTING ABANDONED METER
ENCLOSURE AT GRADE LEVEL
TO PROPOSED DISH
WIRELESS EQUIPMENT CABINET ON
EXISTING ABANDONED PLATFORM
(APPROX. LENGTH = 145'-0")
(TO BE V.L.F.)

EXISTING/PROPOSED FIBER CONDUIT
FROM PROPOSED FIBER MIP AT
LI BOLLER ROOM AT BASEMENT
TO PROPOSED DISH
WIRELESS EQUIPMENT CABINET ON
EXISTING ABANDONED PLATFORM
(APPROX. LENGTH = 105'-0")
(TO BE V.L.F.)

EXISTING ABANDONED
UTILITY CONDUITS
TO BE REUSED BY
DISH WIRELESS

PROPOSED DISH WIRELESS
HYBRID CABLE INSIDE
EXISTING ABANDONED
CABLE TRAY

PROPOSED DISH WIRELESS
HYBRID CABLE INSIDE
EXISTING PROPOSED
CABLE TRAY

PROPOSED DISH WIRELESS
EQUIPMENT CABINET ON
EXISTING ABANDONED
PLATFORM

EXISTING ABANDONED
ANTENNAS AND MOUNTS AT
LOCATIONS OF PROPOSED DISH
WIRELESS ANTENNAS AND
MOUNTS TO BE REMOVED
(TYP. ALL SECTORS)

PROPOSED DISH WIRELESS ANTENNA ON
PROPOSED MOUNTING PIPE CONCEALED WITH
RF TRANSPARENT REFLECTIVE TAPE
(FOR DETAILS REFER TO MANUFACTURER'S
WEBSITE - www.obocuretechllc.com)
(TYP. 1 PER SECTOR, TOTAL 3)
SEE ANTENNA PLAN ON SHEET A-3

PROPOSED 2" INNERDUCT WITH
DISCRETE CABLE WITH FIBER JUMPERS
ON PROPOSED SLEEPERS TO SECTORS
ALPHA AND BETA

PROPOSED DISH WIRELESS
HYBRID CABLE ON
PROPOSED SUPPORTS
ATTACHED TO EXISTING
PENTHOUSE WALL

PROPOSED DISH WIRELESS HYBRID CABLE
ON PROPOSED SLEEPERS TO SECTOR GAMMA

EXISTING VENT
(TYP.)

ENLARGED BUILDING PLAN

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

1

NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.

EXISTING PENTHOUSE WALL (TYP.)

EXISTING ABANDONED ANTENNAS AND MOUNTS AT LOCATIONS OF PROPOSED DISH WIRELESS ANTENNAS AND MOUNTS TO BE REMOVED (TYP. ALL SECTORS)

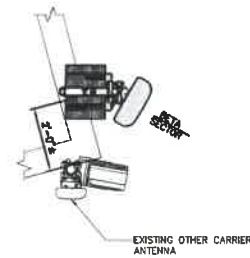
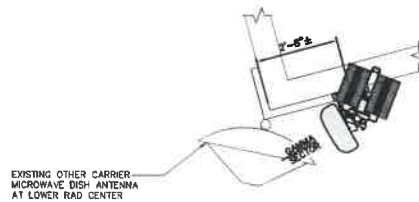
PROPOSED DISH WIRELESS ANTENNA ON PROPOSED MOUNTING PIPE CONCEALED WITH RF TRANSPARENT REFLECTIVE TAPE (FOR DETAILS REFER TO MANUFACTURER'S WEBSITE - www.dishwirelessllc.com) (TYP 1 PER SECTOR, TOTAL 3)

PROPOSED ANTENNA MOUNTING PIPE AND WALL MOUNTS (TYP 1 PER SECTOR, TOTAL 3) SEE 5-2 FOR MOUNTING DETAILS

PROPOSED DISH WIRELESS ONP DEVICE ON PROPOSED MOUNTING PIPE (TYP 1, SECTOR ALPHA)

PROPOSED DISH WIRELESS RRH ON PROPOSED RRH MOUNT (TYP 2 PER SECTOR, TOTAL 6)

PROPOSED DISH WIRELESS BACK-TO-BACK MOUNT ON PROPOSED MOUNTING PIPE (TYP 1 PER SECTOR, TOTAL 3)



ANTENNA PLAN

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

1

SECTOR	POSITION	ANTENNA						TRANSMISSION CABLE	
		EXISTING OR PROPOSED	MANUFACTURER - MODEL NUMBER	TECHNOLOGY	SIZE (HxW)	AZMUTH	RAD CENTER	FEED LINE TYPE AND LENGTH	
ALPHA	A1	PROPOSED	JMA - M008FRO685-21	5G	72.0" x 20.0"	0°	156'-0"	DISCRETE CABLE AND FIBER JUMPER (45')	
BETA	B1	PROPOSED	JMA - M008FRO685-21	5G	72.0" x 20.0"	120°	156'-0"	DISCRETE CABLE AND FIBER JUMPER (25')	
GAMMA	C1	PROPOSED	JMA - M008FRO685-21	5G	72.0" x 20.0"	240°	156'-0"	(1) HIGH-CAPACITY HYBRID CABLE (100')	
SECTOR	POSITION	RRH		NOTES					
		MANUFACTURER - MODEL NUMBER	TECHNOLOGY						
ALPHA	A1	FUJITSU - TA08025-B604	5G						
	A1	FUJITSU - TA08025-B603	5G						
BETA	B1	FUJITSU - TA08025-B604	5G						
	B1	FUJITSU - TA08025-B603	5G						
GAMMA	C1	FUJITSU - TA08025-B604	5G						
	C1	FUJITSU - TA08025-B603	5G						

1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.
2. ANTENNA AND RRH MODELS MAY CHANGE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES.

NOT USED

NO SCALE

2

ANTENNA SCHEDULE

NO SCALE

3

dish
wireless.

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

RFDS REV # 4.1

PERMITTING DOCUMENTS

SUBMITTALS	
REV	DATE DESCRIPTION
A	06/29/2021 ISSUED FOR REVIEW
B	11/03/2021 REVISION
C	04/07/2022 REVISION
D	06/02/2022 ISSUED FOR PERMITTING
E	07/19/2022 CONCEALMENT NOTE ADDITION

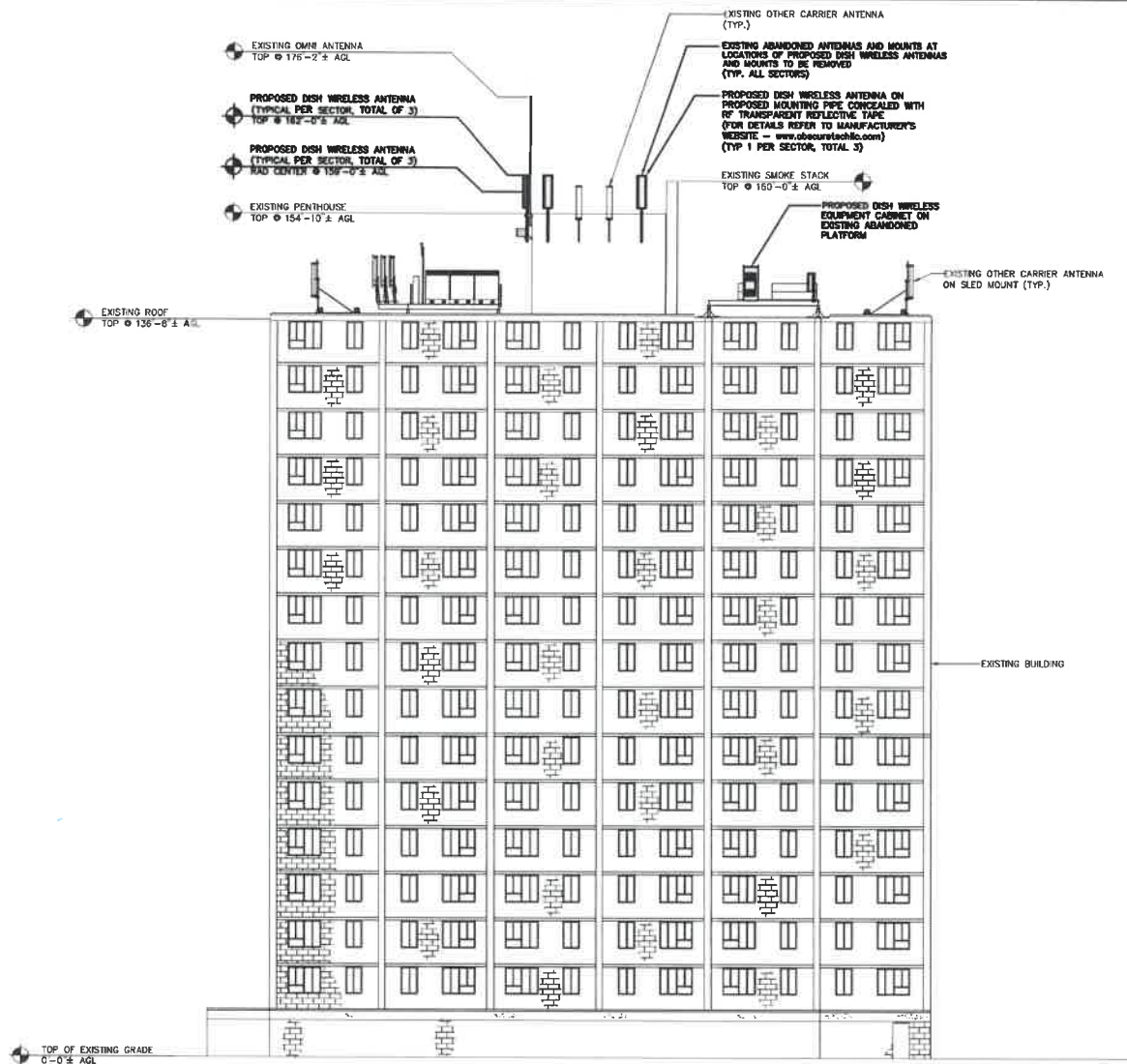
A&E PROJECT NUMBER
2020.0185.0053

DISH Wireless L.L.C.
PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
ANTENNA PLAN,
ELEVATION AND SCHEDULE

SHEET NUMBER

A-3



NOTES

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



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RFD REV # 4.1

PERMITTING DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	08/09/2020	ISSUED FOR REVIEW
B	11/05/2020	REVISION
C	04/07/2021	REVISION
D	04/24/2021	ISSUED FOR PERMITTING
1	07/19/2021	CONCEALMENT NOTE ADDITION

A&E PROJECT NUMBER
2020.0185.0053

DISH Wireless LLC
PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
BUILDING
ELEVATION

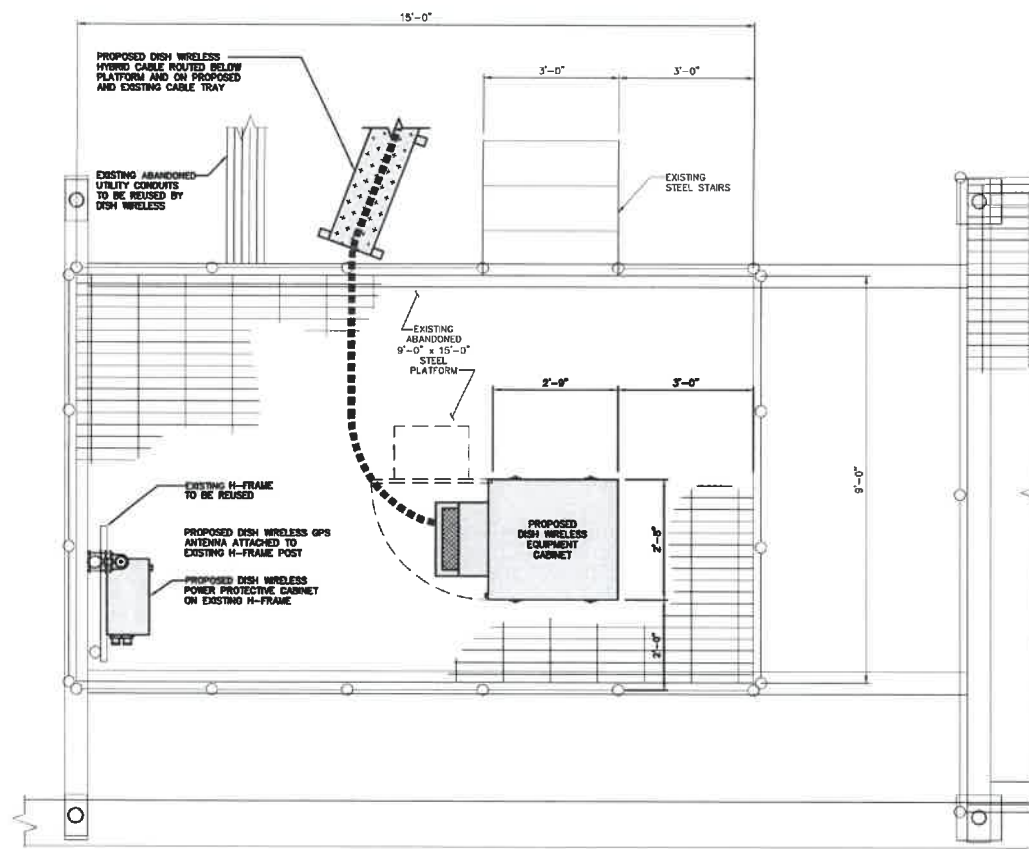
SHEET NUMBER

A-4

BUILDING EAST ELEVATION

12' 8' 4' 0' 10' 20'
3/32"=1'-0"

1



EQUIPMENT PLAN



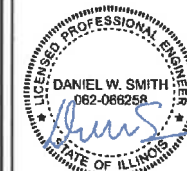
1



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

RFDS REV # 4.1

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1	07/19/2023	CONCEALMENT NOTE ADDITION

A&E PROJECT NUMBER
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DISH Wireless LLC
PROJECT INFORMATION
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DEKALB, IL 60115

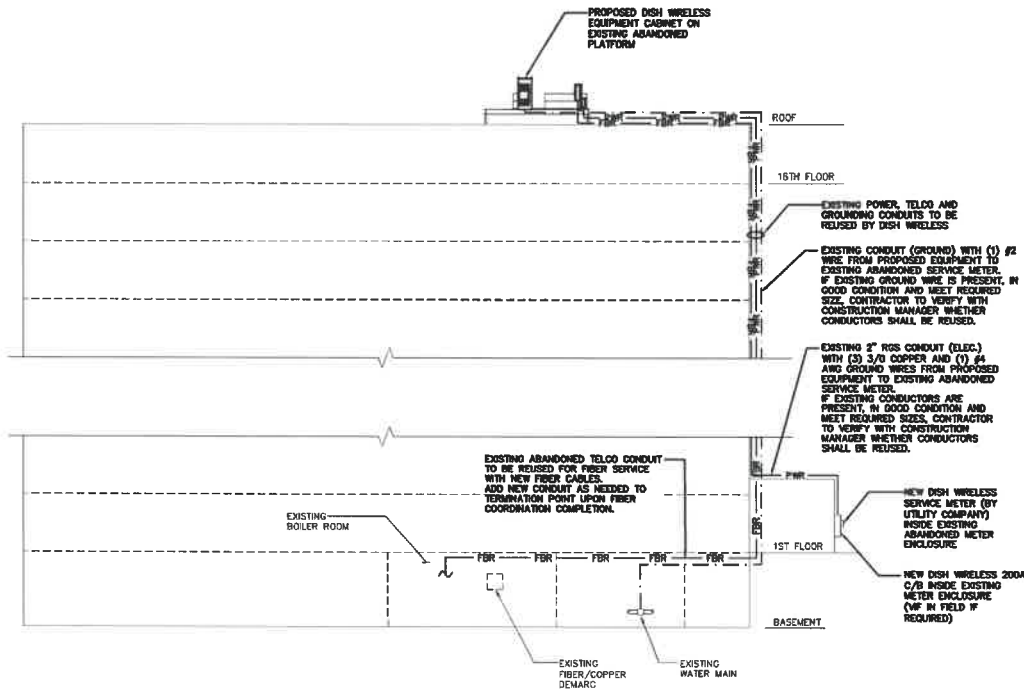
SHEET TITLE
EQUIPMENT PLAN

SHEET NUMBER

A-5

NOTE

FINAL FIBER MEET-WE-POINT LOCATION TO BE
CONFIRMED AND APPROVED BY FIBER
PROVIDER ASSIGNED BY DISH WIRELESS.



UTILITY RISER DIAGRAM

NO SCALE 1

NOT USED

NO SCALE 2



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RFDS REV # 4.1

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DISH Wireless LLC
PROJECT INFORMATION
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507 E. TAYLOR ST.
DEKALB, IL 60115

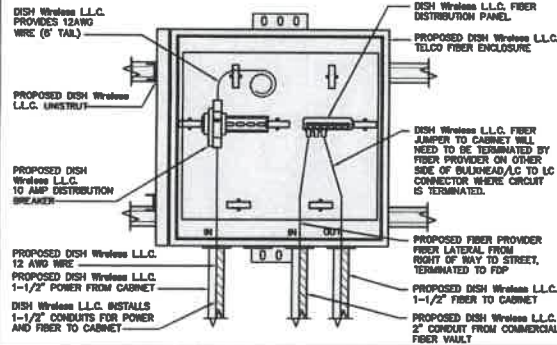
SHEET TITLE
UTILITY RISER
DIAGRAM

SHEET NUMBER

E-1

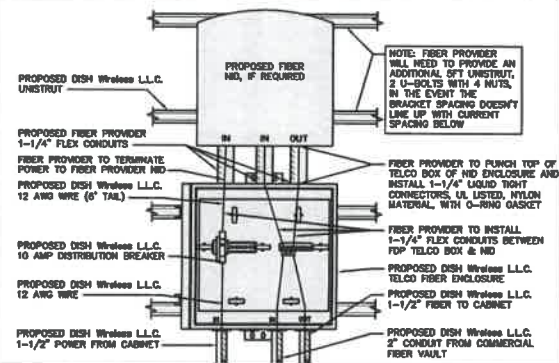
DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND -48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY -48V.

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 ROUNG-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.



DARK TELCO BOX - INTERIOR WIRING LAYOUT

NO SCALE 2



LIT TELCO BOX - INTERIOR WIRING LAYOUT (OPTIONAL)

NO SCALE 3

ELECTRICAL NOTES

NO SCALE 1

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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RFDG REV # 4.1

PERMITTING DOCUMENTS

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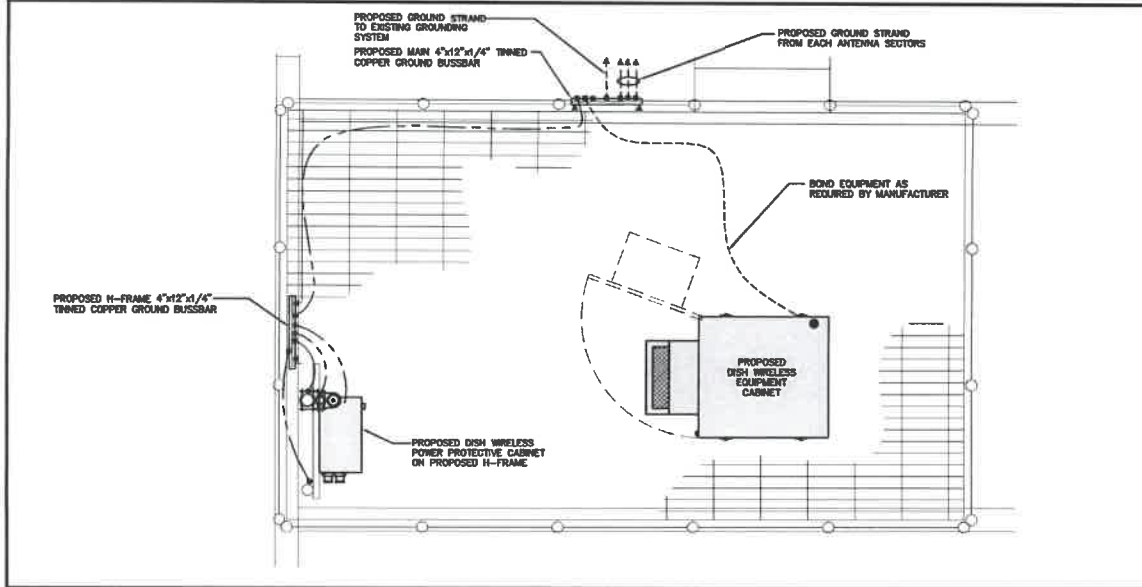
A&E PROJECT NUMBER
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DISH Wireless L.L.C.
PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
ELECTRICAL
DETAILS

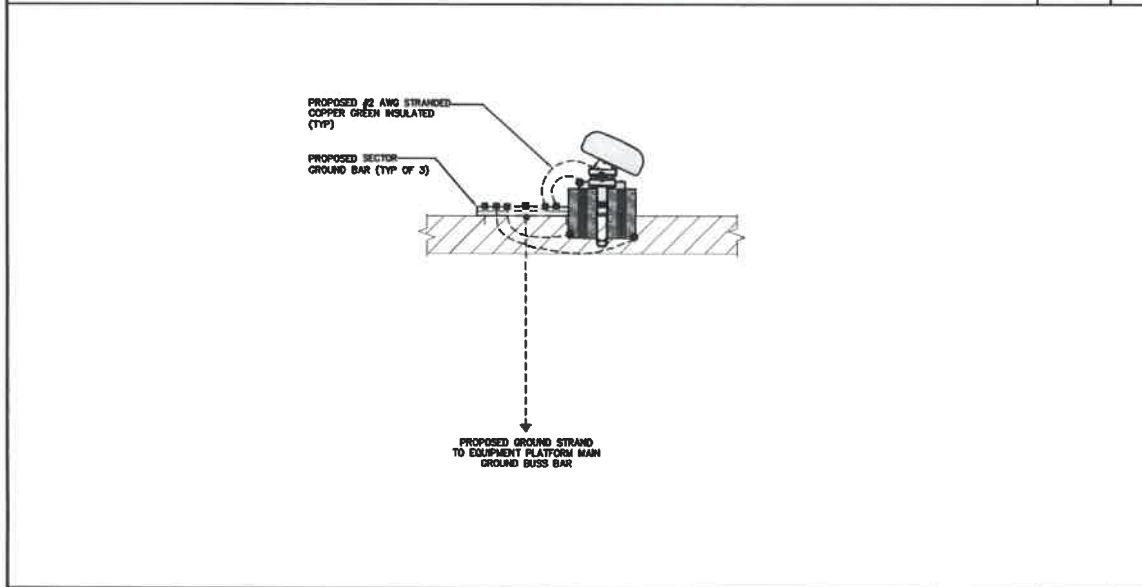
SHEET NUMBER

E-2



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 THINNED

▲ BUSS BAR INSULATOR

GROUNDING LEGEND

- GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.
- CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND DISH WIRELESS L.L.C. GROUNDING AND BONDING REQUIREMENTS AND MANUFACTURER'S SPECIFICATIONS.
- ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.
- 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 FIRST 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 GROUND TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.

(D) BOND TO INTERIOR GROUND RING: #2 AWG SOLID THINNED 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 (CGRB): 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 THINNED COPPER CONDUCTORS.

(G) MATCH PLATE GROUND BAR: BOND TO THE COMMON BUILDING GROUND SYSTEM WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A MATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CGRB MUST BE CONNECTED TO THE MATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS EACH.

(H) EXTERIOR CABLE ENTRY POINT GROUND BARS, LOCATED AT THE ENTRANCE TO THE CELL SITE ROOM, BOND TO GROUND RING WITH A #2 AWG SOLID THINNED 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 EQUIPMENT'S METAL FRAMEWORK.

(K) INTERIOR UNIT BONDS: METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITHIN 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 THINNED 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 THINNED SOLID COPPER WIRE.

(N) ICE BRIDGE SUPPORTS: EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE THINNED 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 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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RFD'S REV # 4.1

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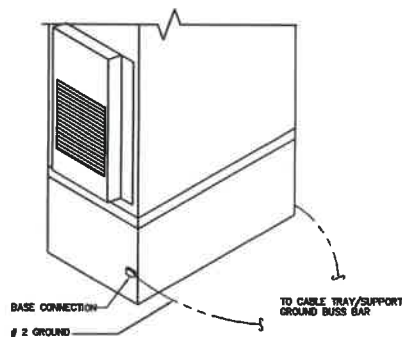
AKA PROJECT NUMBER
2020.0185.0053

DISH Wireless L.L.C. PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
GROUNDING PLANS

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 (B-S 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 SHINNERS).



TYPICAL GROUNDING NOTES

NO SCALE 1

OUTDOOR CABINET GROUNDING

NO SCALE 2

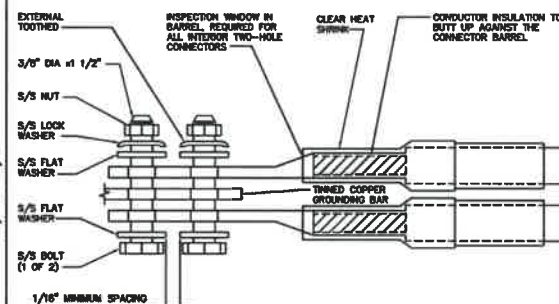
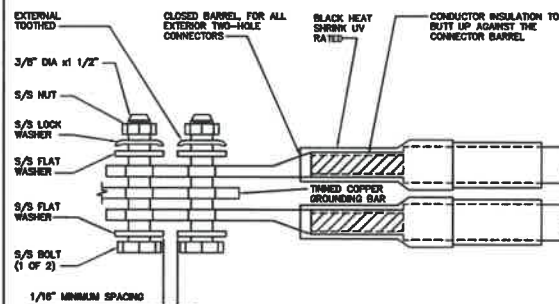
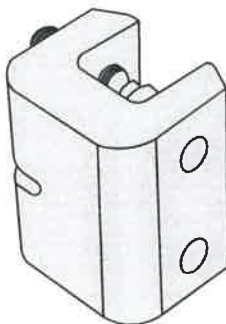
NOT USED

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

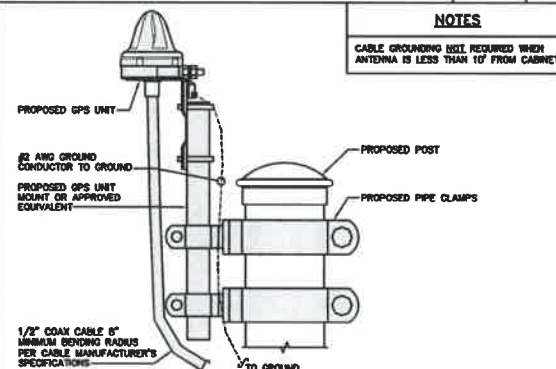
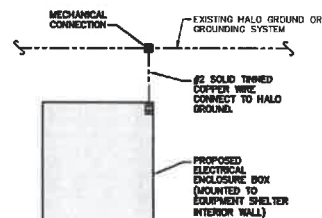
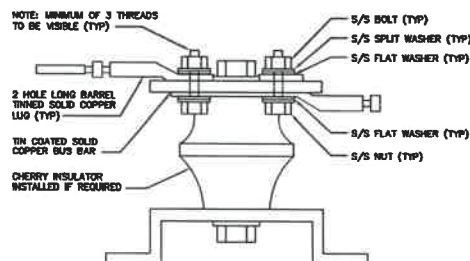
NO SCALE 4

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

TYPICAL GPS UNIT GROUNDING

NO SCALE 9

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RFDS REV # 4.1

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DISH Wireless L.L.C.
PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER

G-2

RF JUMPER COLOR CODING

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

LOW-BAND RRH =
(800MHz N71 BASEBAND) +
(850MHz N26 BAND) +
(700MHz N29 BAND) = OPTIONAL PER MARKET

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

ALPHA RRH				BETA RRH				GAMMA RRH			
PORT 1 + SLANT	PORT 2 - SLANT	PORT 3 + SLANT	PORT 4 - SLANT	PORT 1 + SLANT	PORT 2 - SLANT	PORT 3 + SLANT	PORT 4 - SLANT	PORT 1 + SLANT	PORT 2 - SLANT	PORT 3 + SLANT	PORT 4 - SLANT
RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN	GREEN	GREEN
ORANGE	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE
WHITE (-3 PORT)	ORANGE	ORANGE	ORANGE	WHITE (-3 PORT)	ORANGE	ORANGE	ORANGE	WHITE (-3 PORT)	ORANGE	ORANGE	ORANGE

MID-BAND RRH =
(AWS BANDS N66-N70)

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

RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN	GREEN	GREEN
PURPLE	PURPLE	PURPLE	PURPLE	PURPLE	PURPLE	PURPLE	PURPLE	PURPLE	PURPLE	PURPLE	PURPLE
WHITE (-3 PORT)	PURPLE	PURPLE	PURPLE	WHITE (-3 PORT)	PURPLE	PURPLE	PURPLE	WHITE (-3 PORT)	PURPLE	PURPLE	PURPLE

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
CIRS ONLY, ALL SECTORS

EXAMPLE 1	EXAMPLE 2	EXAMPLE 3
RED	RED	RED
BLUE	BLUE	ORANGE
GREEN	GREEN	PURPLE
ORANGE	YELLOW	
PURPLE		

FIBER JUMPERS TO RRHs

LOW-BAND RRH FIBER CABLES HAVE SECTOR
STRIPE ONLY

LOW BAND RRH	HIGH BAND RRH	LOW BAND RRH	HIGH BAND RRH	LOW BAND RRH	HIGH BAND RRH
RED	RED	BLUE	BLUE	GREEN	GREEN
	PURPLE		PURPLE		PURPLE

POWER CABLES TO RRHs

LOW-BAND RRH POWER CABLES HAVE SECTOR
STRIPE ONLY

LOW BAND RRH	HIGH BAND RRH	LOW BAND RRH	HIGH BAND RRH	LOW BAND RRH	HIGH BAND RRH
RED	RED	BLUE	BLUE	GREEN	GREEN
	PURPLE		PURPLE		PURPLE

RET MOTORS AT ANTENNAS

ANTENNA 1 LOW BAND/ 70"	ANTENNA 1 HIGH BAND/ 70"	ANTENNA 1 LOW BAND/ 70"	ANTENNA 1 HIGH BAND/ 70"	ANTENNA 1 LOW BAND/ 70"	ANTENNA 1 HIGH BAND/ 70"
RED	RED	BLUE	BLUE	GREEN	GREEN
	PURPLE		PURPLE		PURPLE

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

FORWARD AZIMUTH OF 0-120 DEGREES		FORWARD AZIMUTH OF 120-240 DEGREES		FORWARD AZIMUTH OF 240-360 DEGREES	
PRIMARY	SECONDARY	PRIMARY	SECONDARY	PRIMARY	SECONDARY
WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
RED	RED	BLUE	BLUE	GREEN	GREEN
WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
RED	RED	WHITE	WHITE	WHITE	WHITE
	WHITE		WHITE		WHITE

RF CABLE COLOR CODES

NO SCALE

1

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

ORANGE

AWS
(N66+N70+H-BLOCK)

PURPLE

CIRS TECH
(3 GHz)

YELLOW

NEGATIVE SLANT PORT
ON ANT/RRH

WHITE

ALPHA SECTOR

RED

BETA SECTOR

BLUE

GAMMA SECTOR

GREEN

COLOR IDENTIFIER

NO SCALE

2

NOT USED

NO SCALE

3

NOT USED

NO SCALE

4

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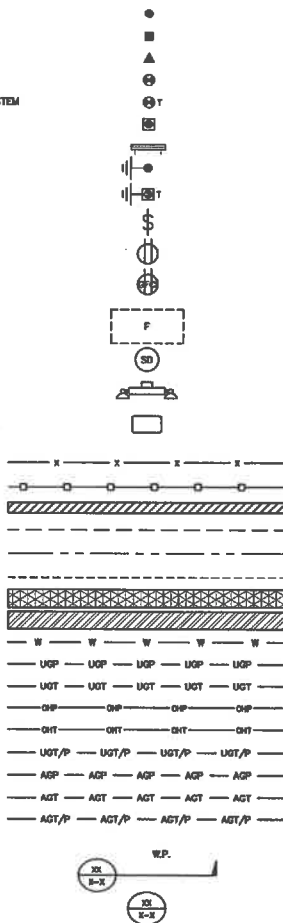
DISH Wireless L.L.C.
PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
RF
CABLE COLOR CODE

SHEET NUMBER

RF-1

EXOTHERMIC CONNECTION
MECHANICAL CONNECTION
BUSS BAR INSULATOR
CHEMICAL ELECTROLYTIC GROUNDING SYSTEM
TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM
EXOTHERMIC WITH INSPECTION SLEEVE
GROUNDING BAR
GROUND ROD
TEST GROUND ROD WITH INSPECTION SLEEVE
SINGLE POLE SWITCH
DUPLEX RECEPTACLE
DUPLEX GFCI RECEPTACLE
FLUORESCENT LIGHTING FIXTURE
(2) TWO LAMPS 48-1B
SMOKE DETECTION (DC)
EMERGENCY LIGHTING (DC)
SECURITY LIGHT W/PHOTOCELL LITHONIA ALKW
LED-1-25A400/SIK-SR4-120-PE-0087ND
CHAIN LINK FENCE
WOOD/WROUGHT IRON FENCE
WALL STRUCTURE
LEASE AREA
PROPERTY LINE (PL)
SETBACKS
ICE BRIDGE
CABLE TRAY
WATER LINE
UNDERGROUND POWER
UNDERGROUND TELCO
OVERHEAD POWER
OVERHEAD TELCO
UNDERGROUND TELCO/POWER
ABOVE GROUND POWER
ABOVE GROUND TELCO
ABOVE GROUND TELCO/POWER
WORKPOINT
SECTION REFERENCE
DETAIL REFERENCE



LEGEND

AB ANCHOR BOLT
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
CLO 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
DWO DRAWING
DNL 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
FF FACILITY INTERFACE FRAME
FIN FINISHED
FLR FLOOR
FDM FOUNDATION
FC FACE OF CONCRETE
FM FACE OF MASONRY
FS FACE OF STUD
FOW FACE OF WALL
FS FINISH SURFACE
FT FOOT
FTD FOOTING
GA GAUGE
GEN GENERATOR
GFI GROUND FAULT CIRCUIT INTERRUPTER
GLB GLUE LAMINATED BEAM
GLV GALVANIZED
GPS GLOBAL POSITIONING SYSTEM
GND GROUND
GSM GLOBAL SYSTEM FOR MOBILE
HDO HOT DIPPED GALVANIZED
HDR HEADER
HGR HANGER
HVAC HEAT/VENTILATION/AIR CONDITIONING
HT HEIGHT
IGR INTERIOR GROUND RING
IN INCH
INT INTERIOR
LBS(LB) POUNDS(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
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
REQD REQUIRED
RET REMOTE ELECTRIC TILT
RF RADIO FREQUENCY
RMC RIGID METALLIC CONDUIT
RSH REMOTE RADIO HEAD
RUU REMOTE RADIO UNIT
RWY RACEWAY
SCH SCHEDULE
SHT SHEET
SIAD SMART INTEGRATED ADDRESS DEVICE
SM 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 UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
VF VERIFIED IN FIELD
W WIDE
W/ WITH
WD WOOD
WP WEATHERPROOF
WT WEIGHT

ABBREVIATIONS

dish
wireless.

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LITTLETON, CO 80120

FULLERTON

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DRAWN BY: CHECKED BY: APPROVED BY:

LA DZ DS

RFD5 REV # 4.1

PERMITTING DOCUMENTS

SUBMITTALS		
REV	DATE	DESCRIPTION
A	08/29/2020	ISSUED FOR REVIEW
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1	07/19/2021	CONSULTANT NOTE ADDITION

A&E PROJECT NUMBER
2020.0185.0053

DISH Wireless L.L.C.
PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
LEGEND AND
ABBREVIATIONS

SHEET NUMBER

GN-1

SITE ACTIVITY REQUIREMENTS:

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

BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

1.FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTOR:GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION

CARRIER:DISH Wireless L.L.C.

TOWER OWNER:TOWER OWNER

2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.

3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.

4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.

5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.

6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CARRIER POC AND TOWER OWNER.

7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.

11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION, BEFORE SUBMITTING BIDS, TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.

12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF DISH Wireless L.L.C. AND TOWER OWNER

13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.



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PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
GENERAL NOTES

SHEET NUMBER

GN-2

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'_c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°F AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (F_y) 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 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 SPECIMATE 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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GENERAL NOTES

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GN-3

GROUNDING NOTES:

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



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DRAWN BY: CHECKED BY: APPROVED BY:

LA DZ DS

RFD5 REV # 4.1

**PERMITTING
DOCUMENTS**

SUBMITTALS		
REV	DATE	DESCRIPTION
A	06/29/2021	ISSUED FOR REVIEW
B	11/03/2021	REVISION
C	06/07/2022	REVISION
D	06/23/2022	ISSUED FOR PERMITTING
E	07/16/2022	CONCEALMENT NOTE ADDITION

A&E PROJECT NUMBER
2020.0185.0053

DISH Wireless, L.L.C.
PROJECT INFORMATION
CHCHI00894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-4

STRUCTURAL NOTES:

APPLICABLE CODES

- DESIGN & CONSTRUCTION OF ALL WORK SHALL CONFORM TO THE FOLLOWING CODES:
2015 INTERNATIONAL BUILDING CODE
TIA-222-G

DESIGN LOADS:

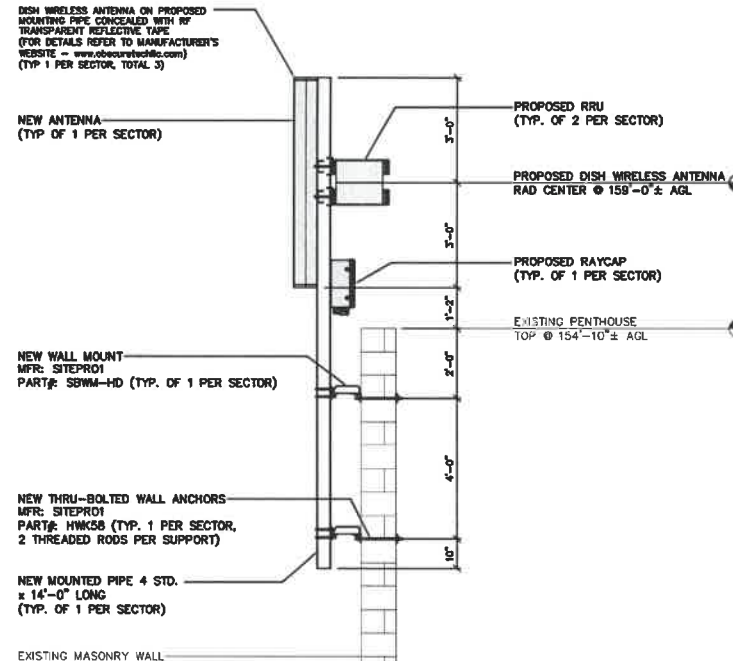
WIND LOAD:
90 MPH BASIC DESIGN WIND SPEED PER TIA-222-G

GENERAL NOTES

- 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.
- ALL WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS, PROJECT SPECIFICATIONS, AND THE CONSTRUCTION CONTRACT DOCUMENTS.
- 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.
- 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.
- 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.
- DRAWING PLANS SHALL NOT BE SCALED.
- THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK NOT CLEARLY IDENTIFIED ON THE DRAWINGS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE PROJECT MANAGER.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE NOTED.
- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
- 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.
- 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.
- 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:

- 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.
- ALL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 UNLESS NOTED ON THE CONSTRUCTION DRAWINGS.
- ROLLED STEEL SHAPES, PLATES AND BARS SHALL BE NO LESS THAN 3/16 INCHES IN THICKNESS AND SHALL COMPLY WITH ASTM A-36 AS A MINIMUM.
- STEEL PIPE SHALL COMPLY WITH ASTM A-501 OR ASTM A-53, TYPE E OR S, GRADE B. A-500 GRADE B STEEL MAY BE SUBSTITUTED.
- GALVANIZED STEEL GRATING SHALL BE A MINIMUM 1-1/4 INCH X 1/8 INCH AT 3/16 INCHES ON CENTER.
- COLD FORMED CHANNELS, C'S AND Z'S USED AS GIRTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM STANDARD A607 GRADE 50.
- CONNECTIONS:
 - CONTRACTOR SHALL PROVIDE ALL HARDWARE REQUIRED TO COMPLETE FIELD ERECTION OF STRUCTURE AS INDICATED BY CONTRACT DOCUMENTS OR THESE SPECIFICATIONS.
 - HIGH STRENGTH THREADED FASTENERS SHALL BE INSTALLED IN ACCORDANCE WITH AISC SPECIFICATIONS FOR STRUCTURAL JOINTS USING ASTM A-325 BOLTS. USE A-325N BEARING-TYPE CONNECTION BOLTS UNLESS NOTED OTHERWISE.
 - 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.
 - ALL UNFINISHED THREADED FASTENERS SHALL COMPLY WITH ASTM A-307, GRADE A, REGULAR LOW-CARBON STEEL BOLTS AND NUTS WITH HEXAGONAL HEADS.
 - 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.



NOTES

1

NEW ANTENNA WALL MOUNT

NO SCALE

2



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1	07/18/2023 CONCEALMENT NOTE ADDITION

A&E PROJECT NUMBER
2020.0185.0053

DISH Wireless, LLC
PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
STRUCTURAL NOTES
& DETAIL

SHEET NUMBER

S-1



5701 SOUTH SANTA FE DRIVE
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LA DZ DS

RFDS REV # 4.1

PERMITTING DOCUMENTS

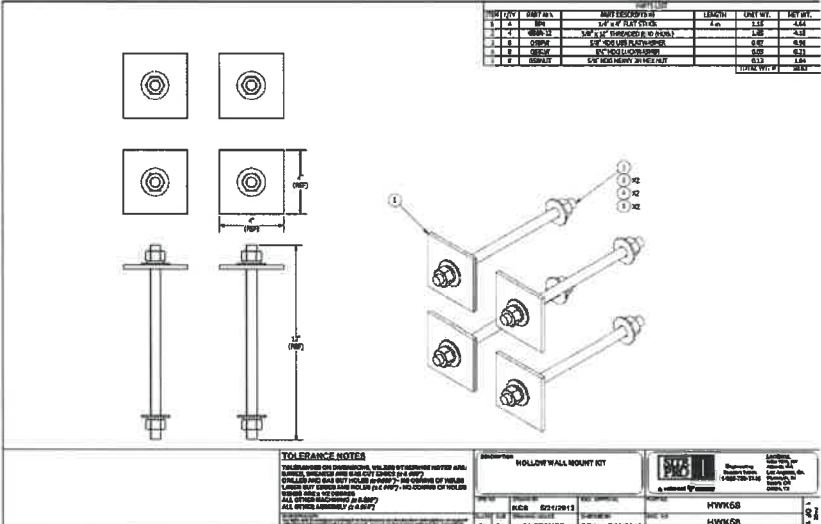
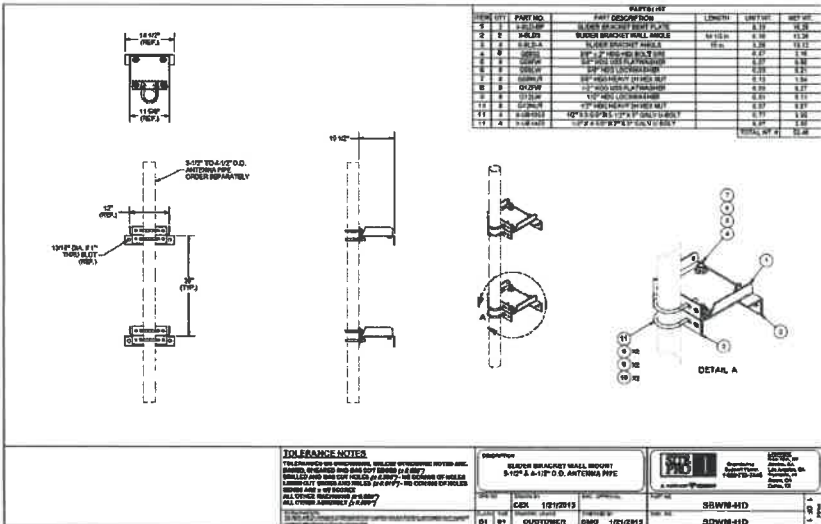
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DISH Wireless L.L.C.
PROJECT INFORMATION
CHCH100894A
507 E. TAYLOR ST.
DEKALB, IL 60115

SHEET TITLE
STRUCTURAL DETAILS

SHEET NUMBER
S-2





2022008955

DOUGLAS J. JOHNSON
RECORDER - DEKALB COUNTY, IL

RECORDED: 9/15/2022 11:13 AM
REC FEE: 75.00

STATE OF ILLINOIS)
COUNTY OF DEKALB) SS
CITY OF DEKALB)

PAGES: 26

CERTIFICATION

I, **RUTH A. SCOTT**, am the duly qualified and appointed Executive Assistant of the City of DeKalb, DeKalb County, Illinois, as authorized by Local Ordinance 2019-059, and as such Executive Assistant, I maintain and am safe-keeper of the records and files of the Mayor and City Council of said City.

I do hereby certify that the attached hereto is a true and correct copy of:

ORDINANCE 2022-044

**APPROVING A SPECIAL USE PERMIT FOR ANTENNAS AND
ASSOCIATED COMMUNICATIONS EQUIPMENT ON TOP OF THE
BUILDING AT 507 E. TAYLOR STREET (DISH WIRELESS).**

PASSED BY THE CITY COUNCIL of the City of DeKalb, Illinois, on the 12th day of September 2022.

WITNESS my hand and the official seal of said City this 15th day of September 2022.



RUTH A. SCOTT, Executive Assistant

Prepared by and Return to:

City of DeKalb
City Manager's Office
Attention: Ruth A. Scott
164 E. Lincoln Highway
DeKalb, Illinois 60115