



Contract Number
13-429 A-2

SAP Number

Real Estate Services Department

| | |
|---|---|
| Department Contract Representative | <u>Terry W. Thompson, Director</u> |
| Telephone Number | <u>(909) 387-5000</u> |
| Contractor | <u>Los Angeles SMSA Limited</u> |
| | <u>Partnership dba Verizon Wireless</u> |
| Contractor Representative | <u>Lysa Horn-Lyle Company</u> |
| Telephone Number | <u>(916) 266-7051</u> |
| Contract Term | <u>7/1/2013 – 1/31/2030</u> |
| Original Contract Amount | <u>\$226,639.04</u> |
| Amendment Amount | <u>\$233,947.88</u> |
| Total Contract Amount | <u>\$460,586.92</u> |
| Cost Center | <u>7810001000</u> |
| Grant Number (if applicable) | <u></u> |

IT IS HEREBY AGREED AS FOLLOWS:

WHEREAS, San Bernardino County as licensor ("COUNTY") and Los Angeles SMSA Limited Partnership as licensee ("LICENSEE"), have previously entered into a License Agreement, Contract NO. 13-429 dated June 25, 2013 and amended by the First Amendment dated November 6, 2018 ("the License") wherein COUNTY agreed to license certain premises to LICENSEE, which License expired on October 31, 2023 and which has continued on a month-to-month term; and,

WHEREAS, following a permitted eight-month holdover of the License on the same terms and conditions with COUNTY's consent, the COUNTY and LICENSEE desire now to amend the License to extend the term of the License five years for the period of February 1, 2025 through January 31, 2030, expand the size of the Premises by approximately 130 square feet, allow for the collocation of Dish Wireless L.L.C. wireless communication equipment within the expanded non-exclusive Premises, adjust the license fee, and amend certain other provisions of the License, as more specifically set forth in the amendment ("Second Amendment"); and,

WHEREAS, Dish Wireless L.L.C., as sublicensee, collocation of wireless communication equipment within the expanded premises, as depicted on Exhibit B-1 attached hereto, shall be subject to all the same terms and conditions of this License and any of its amendments, and LICENSEE shall be directly responsible and liable to COUNTY for Dish Wireless L.L.C.'s construction, installation, use, operation, interference, maintenance, and removal of equipment, and LICENSEE and/or American Tower (as defined below) shall provide insurance and indemnification for the same; and,

WHEREAS, LICENSEE, Verizon Communications Inc., a Delaware corporation, and other parties identified therein, entered into a Management Agreement and a Master Prepaid Lease, both with an effective date of March 27, 2015 and both with ATC Sequoia LLC, a Delaware limited liability company ("**American Tower**"), pursuant to which American Tower subleases, manages, operates and/or maintains, as applicable, the Licensed Premises, all as more particularly described therein; and

WHEREAS, LICENSEE has granted American Tower a limited power of attorney (the "**POA**") to, among other things, prepare, negotiate, execute, deliver, record and/or file certain documents on behalf of LICENSEE, all as more particularly set forth in the POA; and

NOW, THEREFORE, in consideration of mutual covenants and conditions, the parties hereto agree that the above recitals are incorporated herein, and the License is amended as follows:

1. Pursuant to **Paragraph 13, HOLDING OVER** of the License, LICENSEE shall, with COUNTY's express consent granted herein, occupy the Premises on a holdover tenancy for the period of November 1, 2023 through January 31, 2025. COUNTY and LICENSEE acknowledge and agree that for the period of November 1, 2023 through April 2024, LICENSEE has paid monthly license fees at a monthly rate of \$2,134.97, and for the period of May 31, 2024 through January 31, 2025, LICENSEE has paid monthly license fees at a monthly rate of \$3,202.46.

2. Effective February 1, 2025 in addition to the existing Premises of approximately 542 square feet of land ("Existing Premises"), COUNTY hereby licenses to LICENSEE additional premises of approximately 130 square feet for a total of approximately 672 square feet ("Expanded Premises"). The Expanded Premises are more specifically described on Exhibit B-1 attached hereto and made a part hereof. LICENSEE may use the Expanded Premises in the same manner pursuant to **Paragraph 1., USE** of the License. COUNTY and LICENSEE acknowledge and agree that the license fee for the expanded Premises shall be an additional \$800.00 per month (the "Additional Fee") to the Fees as more particularly set forth in **Paragraph 4., FEES** below. LICENSEE shall commence payment of the Additional Fee on July 1, 2025; provided that LICENSEE shall install, operate and maintain thereon only LICENSEE's authorized equipment as set forth in Exhibit B-1. Following the first payment of Additional Fee, Premises shall collectively include the Existing Premises and the Expanded Premises. COUNTY hereby grants to LICENSEE its officers, agents, employees, customers, and/or independent contractors the right and privilege to Expanded Premises at any time on or after the Effective Date, to perform or cause to be performed test borings of the soil, environmental audits, sampling, and/or tests, engineering studies.

3. Effective February 1, 2025, pursuant to **Paragraph 3, OPTION TO EXTEND TERM**, DELETE in its entirety **Paragraph 2., TERM** and SUBSTITUTE therefore a new **Paragraph 2., TERM**, which shall read as follows:

"2. **TERM:** The term of this License shall be extended an additional five years ending on January 31, 2030 ("Second Extended Term")."

4. Effective February 1, 2025, DELETE in its entirety **Paragraph 3.A.**, and SUBSTITUTE therefore a new **Paragraph 3.A. OPTION TO EXTEND TERM**, which shall read as follows:

"3. **OPTION TO EXTEND TERM:**

A. COUNTY gives LICENSEE the option to extend the term of the License on the same provisions and conditions, except for the annual fee for one (1) five (5)-year period singularly referred to as "extended term" following the expiration of the Second Extended Term, by LICENSEE giving written notice of exercise of the option to COUNTY at least one (1) year prior to the expiration of the preceding term, and by complying with all terms, stated herein or other requirements for the continued use of the Premises. The annual fee for each extended term shall be reestablished in accordance with **Paragraph 5., FEE ADJUSTMENTS**. If however, at the time of exercise of the option, LICENSEE is in default with respect to any of the terms, covenants, or conditions to be observed or performed by LICENSEE hereunder, the exercise of the option shall

be invalid. Further, if Licensee is in default on the date an extended term is to commence, the extended term will not commence and this License will expire at the end of the existing term. Upon proper exercise of the option and agreement to the monthly License Fee, the COUNTY will prepare an amendment to this License for approval and execution by LICENSEE and the Board of Supervisors. The COUNTY shall prepare and provide the amendment for approval and execution by LICENSEE and the Board of Supervisors within sixty (60) days of COUNTY's receipt of LICENSEE's notice to extend. **Failure of the LICENSEE to execute the amendment within thirty (30) days of receipt by LICENSEE shall be deemed a rejection of the COUNTY's offer to extend the term of the License and the License will expire at the end of the existing term unless the COUNTY extends the above-referenced time period in writing."**

5. Effective February 1, 2025, DELETE the existing **Paragraph 4., FEES** and SUBSTITUTE therefore a new **Paragraph 4., FEES**, which shall read as follows:

"4. FEES:

- A. LICENSEE shall pay to COUNTY the following monthly license fee payments in advance commencing February 1 of each year, commencing when the Second Extended Term commences and continuing on each February 1 thereafter, in amount pursuant to **Paragraph 5. FEE ADJUSTMENTS**, throughout the Second Extended Term, as more specifically set forth below:

| Year | Monthly License Fee |
|-------------------------------------|---------------------|
| * November 1, 2023 - April 30, 2024 | \$2,134.97 |
| * May 1, 2024 - January 31, 2025 | \$3,202.46 |
| February 1, 2025 - June 30, 2025 | \$2,220.27 |
| July 1, 2025 - January 31, 2026 | \$3,020.27 |
| February 1, 2026 - January 31, 2027 | \$3,141.18 |
| February 1, 2027 - January 31, 2028 | \$3,266.82 |
| February 1, 2028 - January 31, 2029 | \$3,397.49 |
| February 1, 2029 - January 31, 2030 | \$3,533.90 |

* Holdover Period

- B. If any fee is not paid when due and payable, LICENSEE SHALL PAY TO county AND ADDITIONAL Twenty-five and 00/100 Dollars (\$25.00) for each fee due as an administrative processing charge. The parties agree that this late charge represents a fair and reasonable estimate of the costs that COUNTY will incur by reason of late payment by LICENSEE. Acceptance of any late charge shall not constitute a waiver of LICENSEE's default with respect to the overdue fees or other sums due or prevent COUNTY from exercising any of the other rights and remedies available to COUNTY. Fees not paid when due shall bear simple interest from date due at the rate of one and one-half percent (1 ½ %) per month."

6. Effective February 1, 2025 ADD a new **Paragraph 40, CAMPAIGN CONTRIBUTION DISCLOSURE (SB1439)** and **Exhibit "D", Campaign Contribution Disclosure Senate Bill 1439** incorporated and attached herein, which shall read as follows:

"40. CAMPAIGN CONTRIBUTION DISCLOSURE (SB 1439): LICENSEE has disclosed to the County using Exhibit "D" - Campaign Contribution Disclosure Senate Bill 1439, whether it has made any campaign contributions of more than \$250 to any member of the Board of Supervisors or other County elected officer [Sheriff, Assessor-Recorder-Clerk, Auditor-Controller/Treasurer/Tax Collector and the District Attorney] within the earlier of: (1) the date of the submission of LICENSEE's proposal to the County, or (2) 12 months before the date this Contract was approved by the Board of Supervisors. Contractor acknowledges that under Government Code section 84308, LICENSEE is prohibited from making campaign contributions

of more than \$250 to any member of the Board of Supervisors or other County elected officer for 12 months after the County's consideration of the Contract.

In the event of a proposed amendment to this License, the LICENSEE will provide the County a written statement disclosing any campaign contribution(s) of more than \$250 to any member of the Board of Supervisors or other County elected officer within the preceding 12 months of the date of the proposed amendment.

Campaign contributions include those made by any agent/person/entity on behalf of the LICENSEE or by a parent, subsidiary or otherwise related business entity of LICENSEE."

7. This Second Amendment may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, and such counterparts shall together constitute one and the same Second Amendment. The parties shall be entitled to sign and transmit an electronic signature of this Second Amendment (whether by facsimile, PDF or other email transmission), which signature shall be binding on the party whose name is contained therein. Each party providing an electronic signature agrees to promptly execute and deliver to the other party an original signed Second Amendment upon request.

8. All other provisions and terms of the License shall remain the same and are hereby incorporated by reference. In the event of any conflict between the License and this Second Amendment, the terms and conditions of this Second Amendment shall control.

END OF SECOND AMENDMENT

* * * * *

SAN BERNARDINO COUNTY

►

Dawn Rose, Chair, Board of Supervisors

Dated: _____
SIGNED AND CERTIFIED THAT A COPY OF THIS
DOCUMENT HAS BEEN DELIVERED TO THE
CHAIRMAN OF THE BOARD

Lynna Monell
Clerk of the Board of Supervisors
San Bernardino County

By _____
Deputy

LICENSEE: Los Angeles SMSA Limited
Partnership dba Verizon Wireless, by and through
ATC Sequoia, LLC, its attorney-in-fact
(Print or type name of corporation, company, contractor, etc.)

By ► _____
(Authorized signature - sign in blue ink)

Name _____
(Print or type name of person signing contract)

Title _____
(Print or Type)

Dated: _____

Address 180 Washington Valley Road

Bedminster, NJ 07921

FOR COUNTY USE ONLY

| | | |
|---|----------------------------------|--|
| Approved as to Legal Form | Reviewed for Contract Compliance | Reviewed/Approved by Department |
| ► John Tubbs II, Deputy County Counsel | ► _____ | ► Lyle Ballard, Real Property Manager, RESD |
| Date _____ | Date _____ | Date _____ |

EXHIBIT A-1
PREMISES

A TRACT OF LAND OUT OF PARCEL 1 OF PARCEL MAP NO. 10215, AS PER MAP ON FILE IN BOOK 119, PAGES 76 AND 77 OF PARCEL MAPS, SAN BERNARDINO COUNTY RECORDS, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF PARCEL 1 OF PARCEL MAP NO. 10215; THENCE NORTH 00 DEGREES 19 MINUTES 16 SECONDS WEST, A DISTANCE OF 154.17 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 44 SECONDS WEST, A DISTANCE OF 12.90 FEET; THENCE SOUTH 89 DEGREES 47 MINUTES 27 SECONDS WEST, A DISTANCE OF 9.50 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 89 DEGREES 47 MINUTES 27 SECONDS WEST, A DISTANCE OF 17.10 FEET; THENCE NORTH 00 DEGREES 12 MINUTES 33 SECONDS WEST, A DISTANCE OF 31.50 FEET; THENCE NORTH 89 DEGREES 47 MINUTES 27 SECONDS EAST, A DISTANCE OF 17.10 FEET; THENCE SOUTH 00 DEGREES 12 MINUTES 33 SECONDS EAST, A DISTANCE OF 31.50 FEET TO THE POINT OF BEGINNING. CONTAINING 539 SQ.FT. OR 0.012 ACRES OF LAND MORE OR LESS.

EXPANDED PREMISES

A TRACT OF LAND OUT OF PARCEL 1 OF PARCEL MAP NO. 10215, AS PER MAP ON FILE IN BOOK 119, PAGES 76 AND 77 OF PARCEL MAPS, SAN BERNARDINO COUNTY RECORDS, SAID TRACT OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE SOUTHEAST CORNER OF PARCEL 1 OF PARCEL MAP NO. 10215; THENCE NORTH 00 DEGREES 19 MINUTES 16 SECONDS WEST, A DISTANCE OF 154.17 FEET; THENCE SOUTH 89 DEGREES 40 MINUTES 44 SECONDS WEST, A DISTANCE OF 12.90 FEET TO THE POINT OF BEGINNING; THENCE SOUTH 89 DEGREES 47 MINUTES 27 SECONDS WEST, A DISTANCE OF 9.50 FEET; THENCE NORTH 00 DEGREES 12 MINUTES 33 SECONDS WEST, A DISTANCE OF 13.00 FEET; THENCE NORTH 89 DEGREES 47 MINUTES 27 SECONDS EAST, A DISTANCE OF 9.50 FEET; THENCE SOUTH 00 DEGREES 12 MINUTES 33 SECONDS EAST, A DISTANCE OF 13.00 FEET TO THE POINT OF BEGINNING. CONTAINING 124 SQ.FT. OR 0.003 ACRES OF LAND MORE OR LESS.

EXHIBIT "B-1"

Expanded Premises Depiction and Authorized Equipment

The following twenty-four (24) pages T-1,LS-1,A-1, A-2.1, A-2.2, A-2.3, A-2.4, A-2.5, A-3, A-4,A-5, A-6, A-7,E-1,E-2, E-3, G-1, G-2, G-3, RF-1, GN-1, GN-2 GN-3, GN-4



DISH Wireless L.L.C. SITE ID:

LSSNA03163B

DISH Wireless L.L.C. SITE ADDRESS:

**11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308**

CALIFORNIA CODE OF 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 | 2019 CALIFORNIA BUILDING CODE (CBC)/2018 IBC |
| MECHANICAL | 2019 CALIFORNIA MECHANICAL CODE (CMC)/2018 IMC |
| ELECTRICAL | 2019 CALIFORNIA ELECTRICAL CODE (CEC)/2017 NEC |

SHEET INDEX

| SHEET NO. | SHEET TITLE |
|-----------|--|
| T-1 | TITLE SHEET |
| LS1 | SITE SURVEY |
| A-1 | OVERALL AND ENLARGED SITE PLAN |
| A-2 | ELEVATION, ANTENNA LAYOUT AND SCHEDULE |
| A-3 | EQUIPMENT PLATFORM AND H-FRAME DETAILS |
| A-4 | EQUIPMENT DETAILS |
| A-5 | EQUIPMENT DETAILS |
| A-6 | EQUIPMENT DETAILS |
| A-7 | COMPOUND DETAILS |
| E-1 | ELECTRICAL/FIBER ROUTE PLAN AND NOTES |
| E-2 | ELECTRICAL DETAILS |
| E-3 | ELECTRICAL ONE-LINE, FAULT CALC & PANEL SCHEDULE |
| G-1 | GROUNDING PLANS AND NOTES |
| G-2 | GROUNDING DETAILS |
| G-3 | GROUNDING DETAILS |
| RF-1 | RF CABLE COLOR CODE |
| GN-1 | LEGEND AND ABBREVIATIONS |
| GN-2 | GENERAL NOTES |
| GN-3 | GENERAL NOTES |
| GN-4 | GENERAL NOTES |

THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION REMOVAL AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR 1.61000 (b)(7).

SCOPE OF WORK

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

TOWER SCOPE OF WORK:
- INSTALL (3) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
- INSTALL (3) PROPOSED SECTOR FRAMES
- INSTALL PROPOSED JUMPERS
- INSTALL (6) PROPOSED NINJA (2 PER SECTOR)
- INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
- INSTALL (1) PROPOSED HYBRID CABLE

GROUND SCOPE OF WORK:
- INSTALL (1) PROPOSED CONCRETE PAD
- INSTALL (1) PROPOSED ICE BRIDGE
- INSTALL (1) PROPOSED PPC CABINET
- INSTALL (1) PROPOSED EQUIPMENT CABINET
- INSTALL (1) PLINTH LT-97
- INSTALL (1) PROPOSED POWER CONDUIT
- INSTALL (1) PROPOSED TELCO CONDUIT
- INSTALL (1) PROPOSED TELCO-FIBER BOX
- INSTALL (1) PROPOSED GPS UNIT
- INSTALL (1) PROPOSED SWEITY SWITCH (IF REQUIRED)
- INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)
- INSTALL (1) PROPOSED METER SOCKET
- INSTALL COMPOUND EXPANSION OF 32'-1" (FENCE)

SITE PHOTO



UNDERGROUND SERVICE ALERT
UTILITY NOTIFICATION CENTER OF CALIFORNIA
(800) 422-4133
WWW.CALIFORNIA811.ORG

CALL 2-1-1 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION



GENERAL NOTES

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

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: COUNTY OF SAN BERNARDINO
ADDRESS: 2024 ORANGE TREE LN
APPLE VALLEY, CA 92308
TOWER TYPE: SELF-SUPPORT TOWER
TOWER CO SITE ID: 420180
TOWER APP NUMBER: 13711871
COUNTY: SAN BERNARDINO
LATITUDE (NAD 83): 34° 28' 1.62" N
34.46711700 N
LONGITUDE (NAD 83): -117° 14' 26.07" W
-117.24057500 W
ZONING JURISDICTION: SAN BERNARDINO COUNTY
ZONING DISTRICT: COMMERCIAL
PARCEL NUMBER: 043402150
OCCUPANCY GROUP: U
II-B
POWER COMPANY: SOUTHERN CALIFORNIA EDISON
TELEPHONE COMPANY: T.B.D.

PROJECT DIRECTORY

APPLICANT: DISH Wireless L.L.C.
5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120
TOWER OWNER: AMERICAN TOWER CORPORATION
10 PRESIDENTIAL WAY
WOBBURN, MA 01801
(781) 926-4500
SITE DESIGNER: B+T GROUP
1717 S. BOULDER
TULSA, OK 74119
(918) 587-4630
SITE ACQUISITION: SUET YAM
suet.yam@dish.com
CONST. MANAGER: CARRINGTON HILDEBRANT
carrington.hildebrant@dish.com
RF ENGINEER: SALVADOR RUIZ
salvador.ruiz@dish.com

DIRECTIONS

DIRECTIONS FROM DISH WIRELESS L.L.C. OFFICE:
DEPART 16812 ARMSTRONG AVE, IRVINE, CA 92606 ON ARMSTRONG AVE. TURN RIGHT ONTO BARRANCA PKWY. TURN LEFT ONTO JAMBOREE RD. KEEP STRAIGHT ONTO CA-261 [EASTERN TRANSPORTATION CORRIDOR]. AT EXIT 6A TAKE RAMP (LEFT) ONTO CA-241 [EASTERN TRANSPORTATION CORRIDOR]. AT EXIT 398, KEEP RIGHT ONTO RAMP. MERGE ONTO CA-91 [RIVERSIDE FWY]. KEEP STRAIGHT ONTO RAMP. TAKE RAMP (LEFT) ONTO I-15 [CORONA FWY]. AT EXIT 123, TAKE RAMP (LEFT) ONTO I-15 [BARTON FWY]. AT EXIT 147, TURN RIGHT ONTO RAMP. TURN RIGHT ONTO BEAR VALLEY RD. TURN RIGHT ONTO APPLE VALLEY RD. TURN LEFT ONTO TOWN CENTER DR. TURN LEFT ONTO ACCESS ROAD. ARRIVE AT LSSNA03163B.

VICINITY MAP



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CH BLJ
CHECKED BY: BLJ
APPROVED BY: BLJ
RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

| REV | DATE | DESCRIPTION |
|-----|----------|-------------------------|
| A | 10/27/21 | ISSUED FOR REVIEW |
| B | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/29/21 | ISSUED FOR CONSTRUCTION |

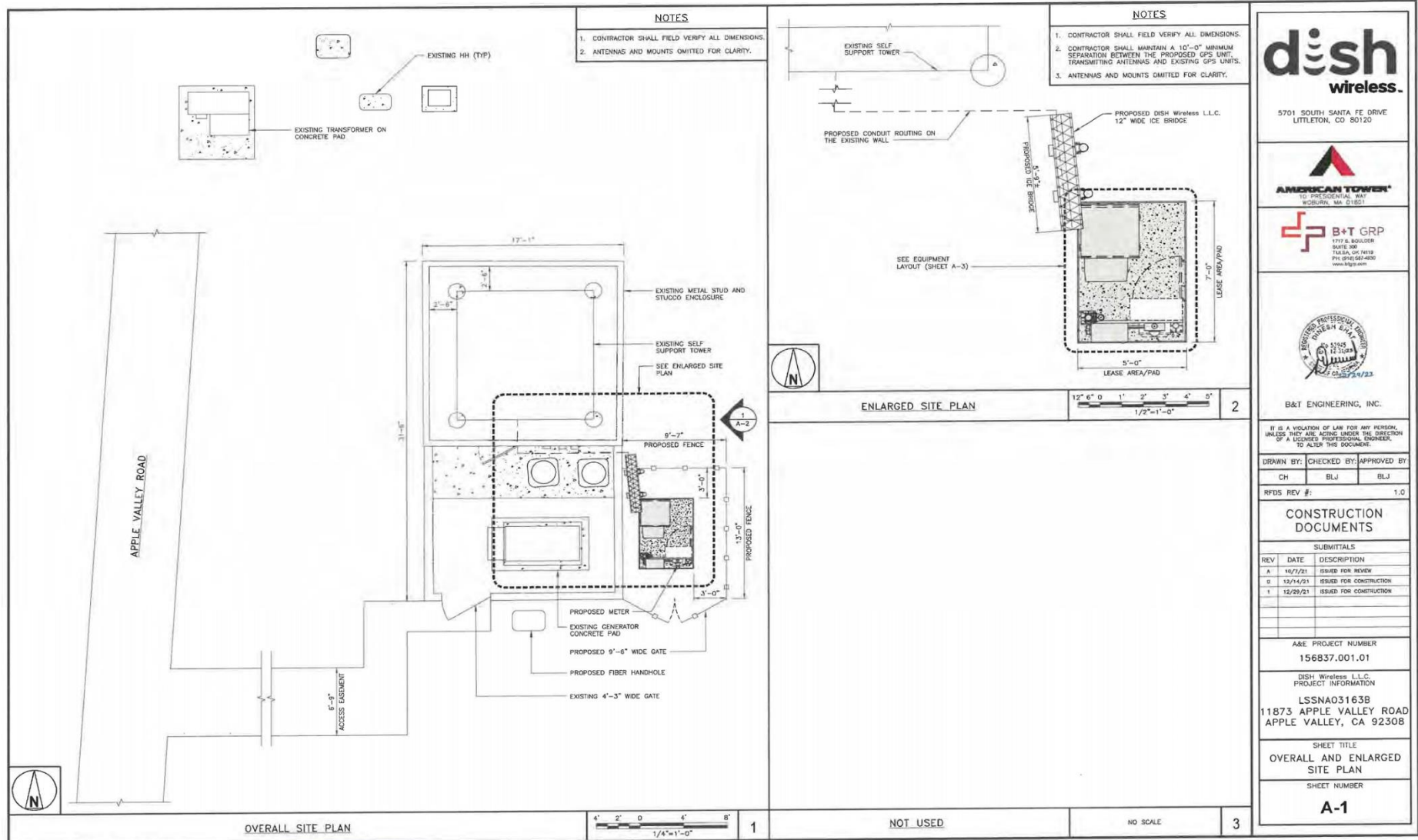
A&E PROJECT NUMBER
156837.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1





DISH Wireless L.L.C. TEMPLATE VERSION 41 - 09/03/2021



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CH CHECKED BY: BLJ APPROVED BY: BLJ

RFD REV # 1.0

CONSTRUCTION DOCUMENTS

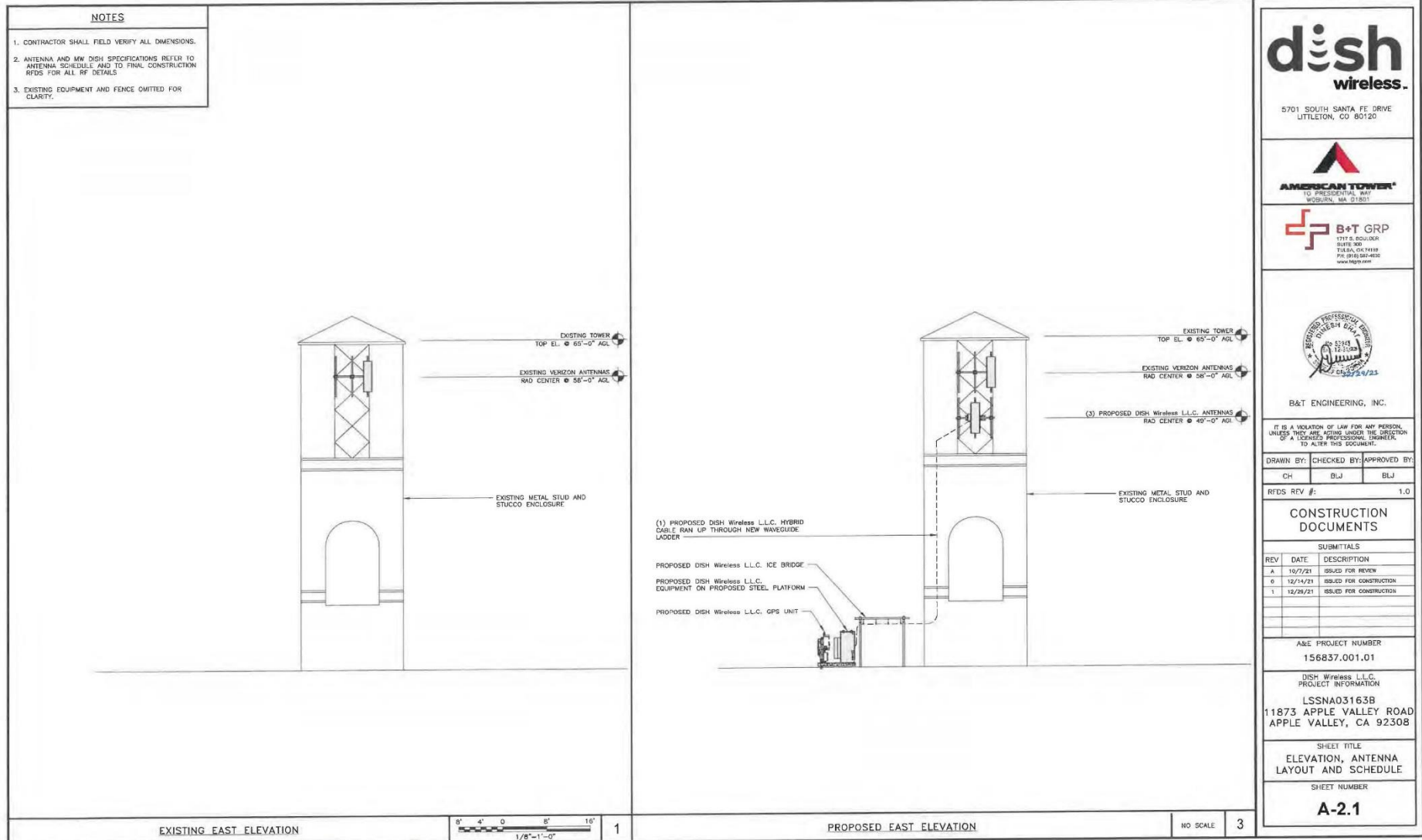
| REV | DATE | DESCRIPTION |
|-----|----------|-------------------------|
| A | 10/22/21 | ISSUED FOR REVIEW |
| B | 12/14/21 | ISSUED FOR CONSTRUCTION |
| C | 12/29/21 | ISSUED FOR CONSTRUCTION |

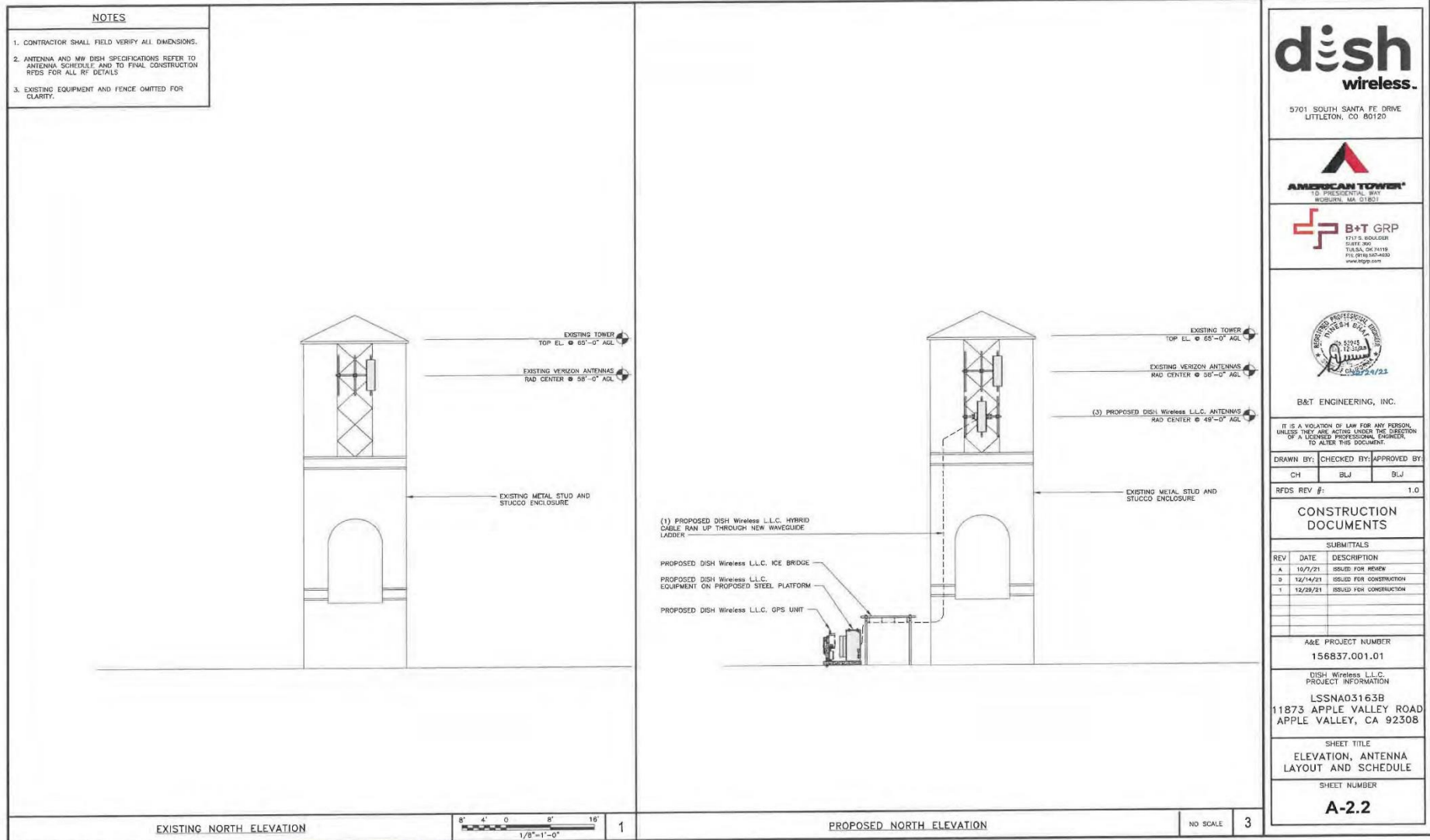
A&E PROJECT NUMBER
156837.001.01

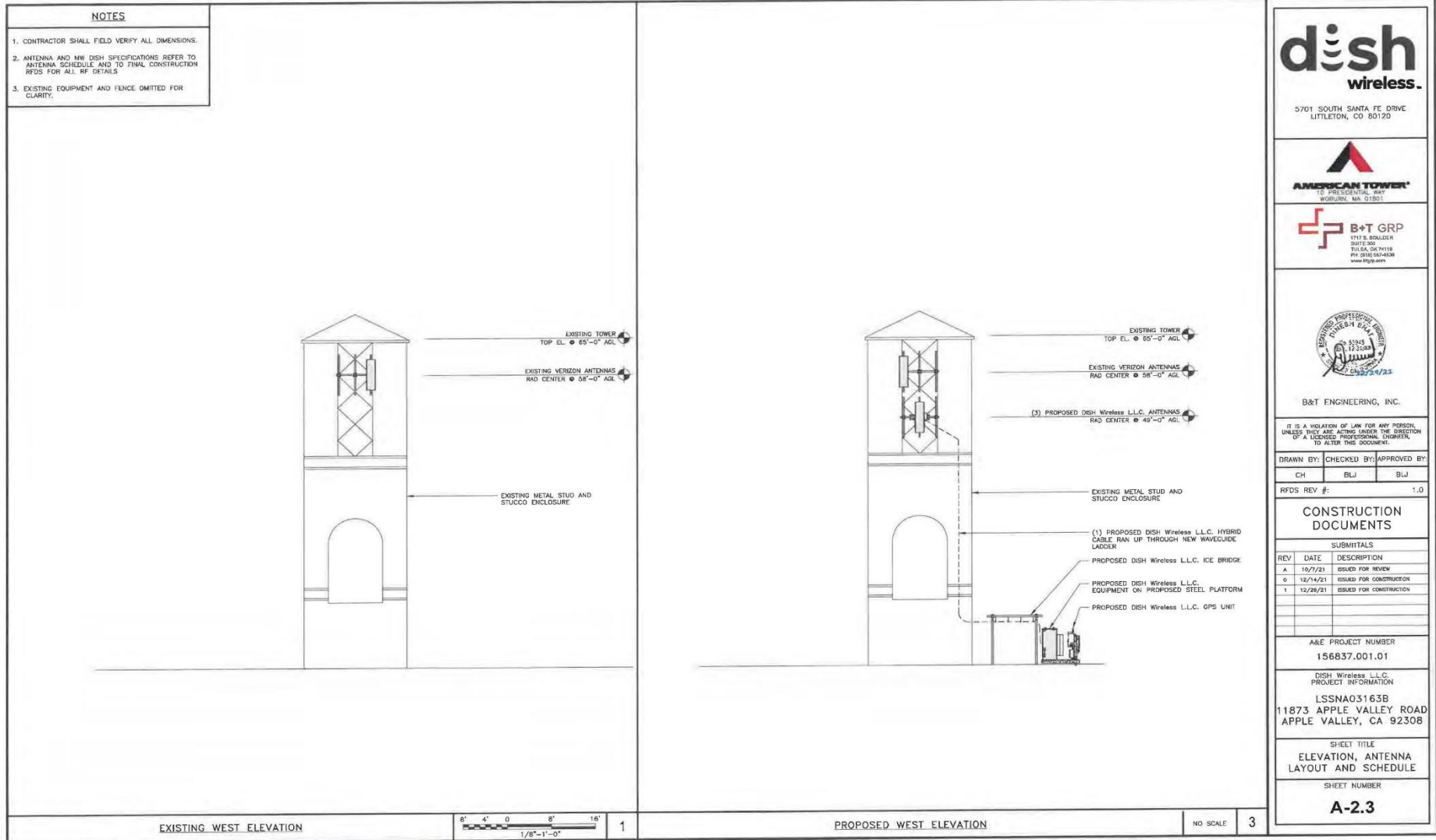
DISH Wireless L.L.C.
PROJECT INFORMATION
LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

SHEET TITLE
OVERALL AND ENLARGED
SITE PLAN

SHEET NUMBER
A-1







5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

10 PRESIDENTIAL WAY
WOBURN, MA 01801

1717 S. BOULDER
SUITE 300
TULSA, OK 74116
PH: (918) 584-6408
www.btgp.com

B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

| | | | | | |
|-------------|-----|-------------|--|--------------|--|
| DRAWN BY: | | CHECKED BY: | | APPROVED BY: | |
| CH | BLJ | BLJ | | | |
| RFDS REV #: | | 1.0 | | | |

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|----------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 10/7/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/28/21 | ISSUED FOR CONSTRUCTION |
| | | |
| | | |

A/E PROJECT NUMBER
156837.001.01

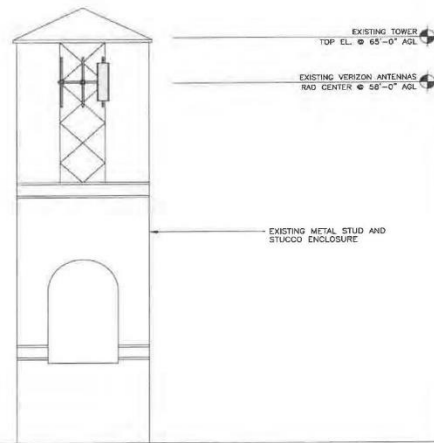
DISH Wireless L.L.C. PROJECT INFORMATION
LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

SHEET TITLE
ELEVATION, ANTENNA LAYOUT AND SCHEDULE

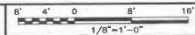
SHEET NUMBER
A-2.3

NOTES

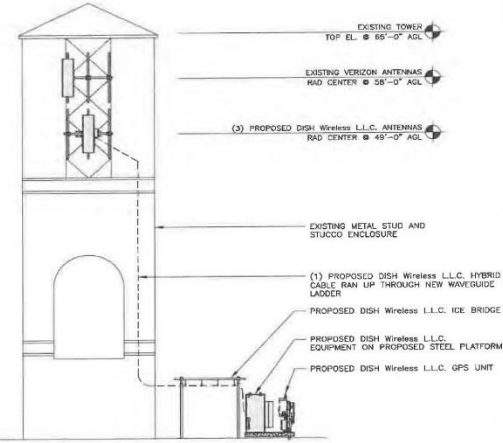
1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. ANTENNA AND MW DISH SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND TO FINAL CONSTRUCTION RENDS FOR ALL OF DETAILS.
3. EXISTING EQUIPMENT AND FENCE OMITTED FOR CLARITY.



EXISTING SOUTH ELEVATION



1



PROPOSED SOUTH ELEVATION

NO SCALE 3

dish
wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

AMERICAN TOWER
10000 W. WILLOW AVE
WILLOW, MA 01801

B+T GRP
1717 E. BOULDER
SUITE 300
TULSA, OK 74116
PH: (918) 584-4800
www.btgrp.com



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CHECKED BY: APPROVED BY:
CM BLJ BLJ

RFD5 REV # 1.0

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|----------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 10/7/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/28/21 | ISSUED FOR CONSTRUCTION |

A&E PROJECT NUMBER
156837.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

SHEET TITLE
ELEVATION, ANTENNA
LAYOUT AND SCHEDULE

SHEET NUMBER

A-2.4



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CHECKED BY: APPROVED BY:

CH BLJ BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

SUBMITTALS

| REV | DATE | DESCRIPTION |
|-----|----------|-------------------------|
| A | 10/7/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/28/21 | ISSUED FOR CONSTRUCTION |

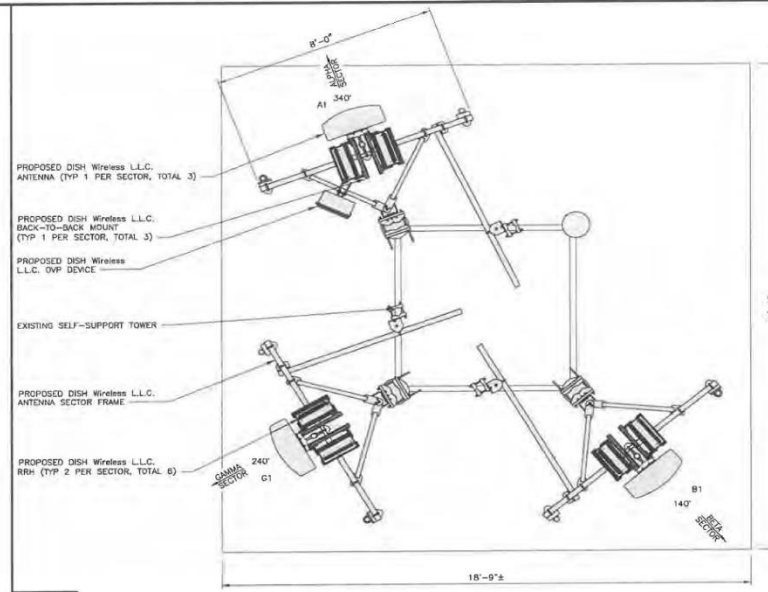
A&E PROJECT NUMBER
156837.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
LSSNA031638
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

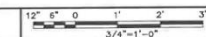
SHEET TITLE
ELEVATION, ANTENNA
LAYOUT AND SCHEDULE

SHEET NUMBER

A-2.5



ANTENNA LAYOUT



2

| SECTOR | POSITION | EXISTING OR PROPOSED | ANTENNA | | | | TRANSMISSION CABLE |
|--------|----------|----------------------|-----------------------------|------------|---------------|---------|--------------------|
| | | | MANUFACTURER - MODEL NUMBER | TECHNOLOGY | SIZE (HxW) | AZIMUTH | |
| ALPHA | A1 | PROPOSED | CELLMAX-CX12044x | 5G | 72.4" x 26.7" | 340° | 49'-0" |
| BETA | B1 | PROPOSED | CELLMAX-CX12044x | 5G | 72.4" x 26.7" | 140° | 49'-0" |
| GAMMA | G1 | PROPOSED | CELLMAX-CX12044x | 5G | 72.4" x 26.7" | 240° | 49'-0" |

(1) HIGH-CAPACITY
HYBRID CABLE
(90' LONG)

| SECTOR | POSITION | RRH | | NOTES |
|--------|----------|-----------------------------|------------|--|
| | | MANUFACTURER - MODEL NUMBER | TECHNOLOGY | |
| ALPHA | A1 | FUJITSU-TAD8025-B605 | 5G | 1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS. 2. ANTENNA AND RRH MODELS MAY CHANGE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES. |
| | A1 | FUJITSU-TAD8025-B604 | 5G | |
| BETA | B1 | FUJITSU-TAD8025-B605 | 5G | |
| | B1 | FUJITSU-TAD8025-B604 | 5G | |
| GAMMA | G1 | FUJITSU-TAD8025-B605 | 5G | |
| | G1 | FUJITSU-TAD8025-B604 | 5G | |

ANTENNA SCHEDULE

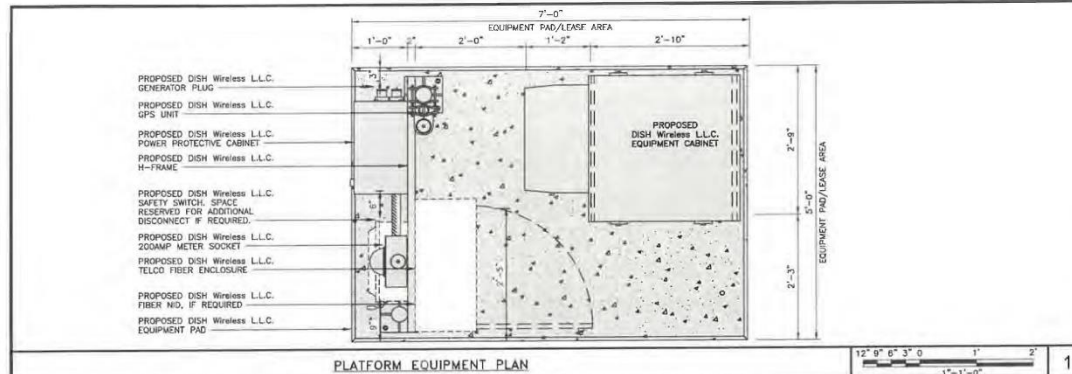
NO SCALE

3

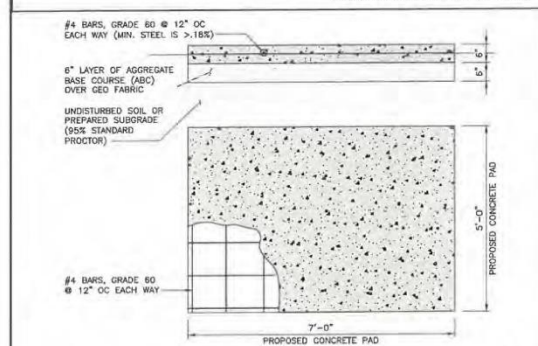
NOT USED



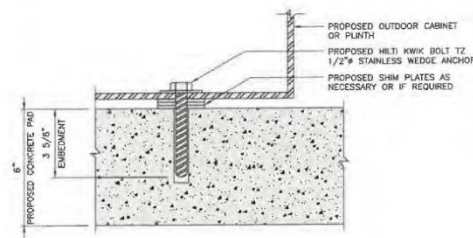
1



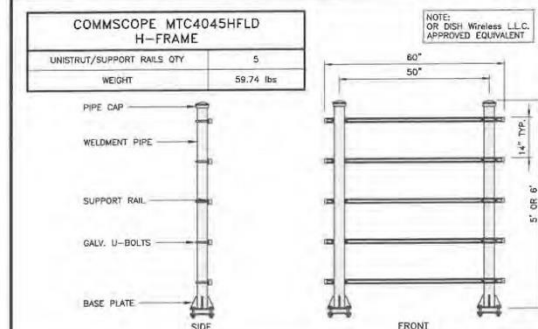
PLATFORM EQUIPMENT PLAN



TYPICAL CONCRETE PAD DETAIL



TYPICAL OUTDOOR EQUIPMENT TO CONCRETE SLAB ANCHORAGE

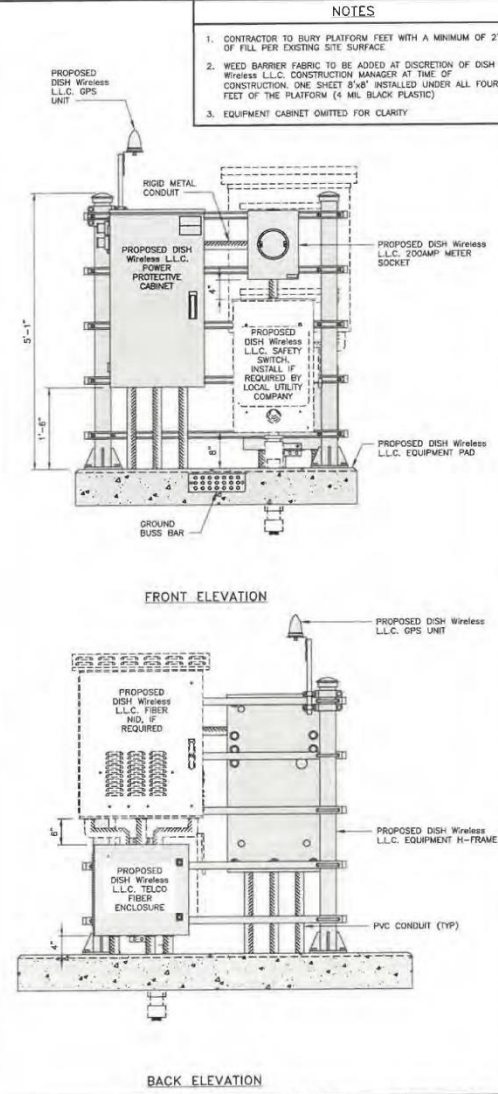


H-FRAME DETAIL

NO SCALE

NOT USED

NO SCALE



H-FRAME EQUIPMENT ELEVATION

NO SCALE



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

| | | |
|-------------|-------------|--------------|
| DRAWN BY: | CHECKED BY: | APPROVED BY: |
| CH | BLJ | BLJ |
| RFDS REV #: | | 1.0 |

CONSTRUCTION DOCUMENTS

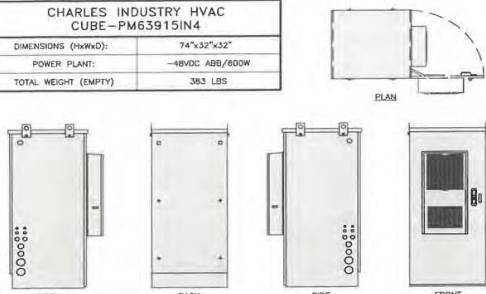
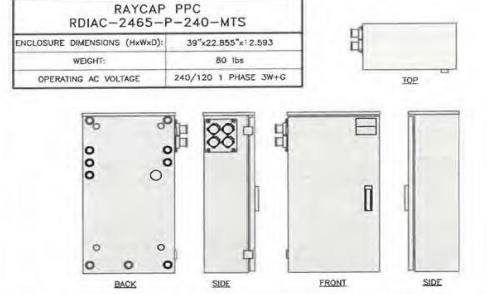
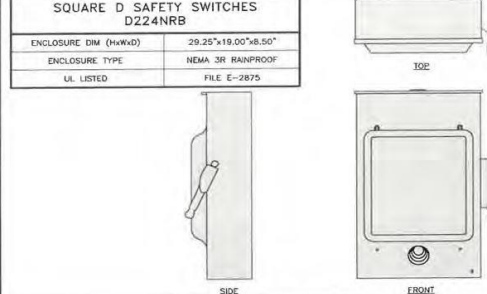




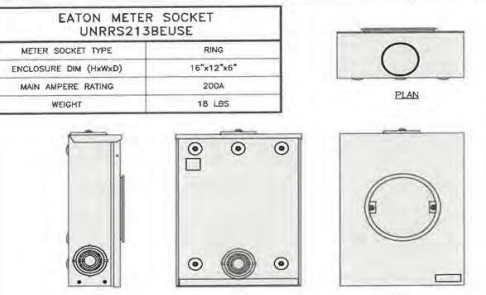
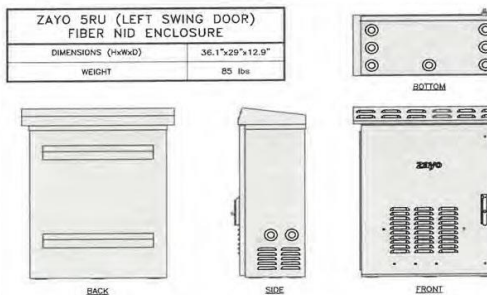
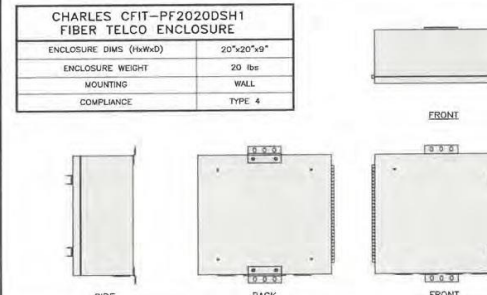
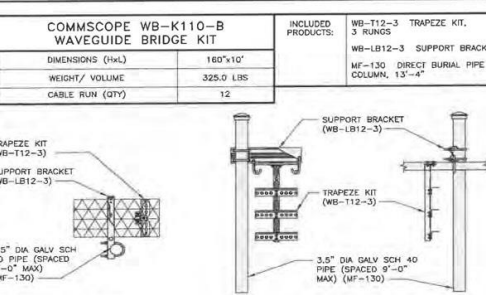
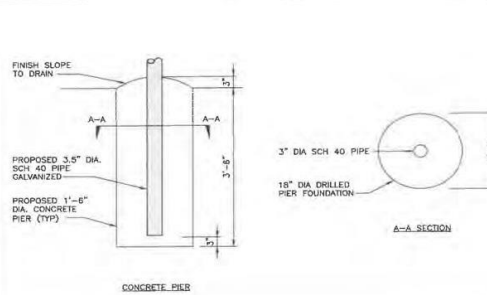
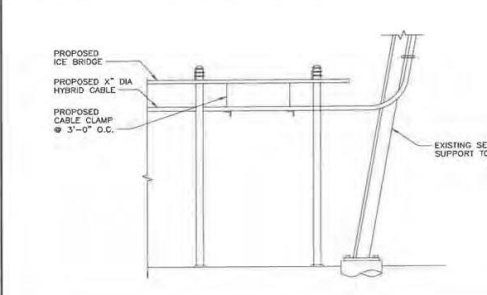
| REV | DATE | DESCRIPTION |
|-----|----------|-------------------------|
| A | 10/7/21 | ISSUED FOR REVIEW |
| O | 12/14/21 | ISSUED FOR CONSTRUCTION |
| I | 12/29/21 | ISSUED FOR CONSTRUCTION |

A&E PROJECT NUMBER
156837.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

SHEET TITLE
EQUIPMENT PLATFORM AND
H-FRAME DETAILS

SHEET NUMBER
A-3

| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">CHARLES INDUSTRY HVAC CUBE-PM639151N4</th> </tr> <tr> <td style="width: 50%;">DIMENSIONS (HxWxD):</td> <td>74"x32"x32"</td> </tr> <tr> <td>POWER PLANT:</td> <td>-48VDC ABG/600W</td> </tr> <tr> <td>TOTAL WEIGHT (EMPTY):</td> <td>363 LBS</td> </tr> </table>  <p style="text-align: center;">CABINET DETAIL</p> <p style="text-align: right;">NO SCALE 1</p> | CHARLES INDUSTRY HVAC CUBE-PM639151N4 | | DIMENSIONS (HxWxD): | 74"x32"x32" | POWER PLANT: | -48VDC ABG/600W | TOTAL WEIGHT (EMPTY): | 363 LBS | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">RAYCAP PPC RDIAC-2465-P-240-MTS</th> </tr> <tr> <td style="width: 50%;">ENCLOSURE DIMENSIONS (HxWxD):</td> <td>39"x22.850"x12.593</td> </tr> <tr> <td>WEIGHT:</td> <td>80 lbs</td> </tr> <tr> <td>OPERATING AC VOLTAGE:</td> <td>240/120 1 PHASE 3W+G</td> </tr> </table>  <p style="text-align: center;">POWER PROTECTION CABINET (PPC) DETAIL</p> <p style="text-align: right;">NO SCALE 2</p> | RAYCAP PPC RDIAC-2465-P-240-MTS | | ENCLOSURE DIMENSIONS (HxWxD): | 39"x22.850"x12.593 | WEIGHT: | 80 lbs | OPERATING AC VOLTAGE: | 240/120 1 PHASE 3W+G | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">SQUARE D SAFETY SWITCHES D224NRB</th> </tr> <tr> <td style="width: 50%;">ENCLOSURE DIM (HxWxD):</td> <td>29.25"x19.00"x8.50"</td> </tr> <tr> <td>ENCLOSURE TYPE:</td> <td>NEMA 3R RAINPROOF</td> </tr> <tr> <td>UL LISTED:</td> <td>FILE E-2875</td> </tr> </table>  <p style="text-align: center;">SAFETY SWITCH DETAIL</p> <p style="text-align: right;">NO SCALE 3</p> | SQUARE D SAFETY SWITCHES D224NRB | | ENCLOSURE DIM (HxWxD): | 29.25"x19.00"x8.50" | ENCLOSURE TYPE: | NEMA 3R RAINPROOF | UL LISTED: | FILE E-2875 | <div style="text-align: center;">  <p>5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120</p> </div> <div style="text-align: center;">  <p>10 PRESIDENTIAL WAY WOBURN, MA 01801</p> </div> <div style="text-align: center;">  <p>1777 S. BOULDER SUITE 300 TULSA, OK 74119 PH: (918) 567-4800 www.btggrp.com</p> </div> <div style="text-align: center;">  <p>B&T ENGINEERING, INC.</p> <p>IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.</p> <p>DRAWN BY: CH CHECKED BY: BLJ APPROVED BY: BLJ</p> <p>RFDS REV #: 1.0</p> <p style="text-align: center;">CONSTRUCTION DOCUMENTS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>A</td> <td>10/7/21</td> <td>ISSUED FOR REVIEW</td> </tr> <tr> <td>0</td> <td>12/14/21</td> <td>ISSUED FOR CONSTRUCTION</td> </tr> <tr> <td>1</td> <td>12/25/21</td> <td>ISSUED FOR CONSTRUCTION</td> </tr> </table> <p style="text-align: center;">A&E PROJECT NUMBER 156837.001.01</p> <p style="text-align: center;">DISH Wireless, L.L.C. PROJECT INFORMATION</p> <p style="text-align: center;">LSSNA031638 11873 APPLE VALLEY ROAD APPLE VALLEY, CA 92308</p> <p style="text-align: center;">SHEET TITLE EQUIPMENT DETAILS</p> <p style="text-align: center;">SHEET NUMBER A-4</p> </div> | REV | DATE | DESCRIPTION | A | 10/7/21 | ISSUED FOR REVIEW | 0 | 12/14/21 | ISSUED FOR CONSTRUCTION | 1 | 12/25/21 | ISSUED FOR CONSTRUCTION |
|---|---|-------------------------|---------------------|-------------|------------------------|-----------------|-----------------------|---------|--|---|---|---|--------------------|---------------------|-----------------|-----------------------|----------------------|--|--|--|-------------------------|---------------------|-------------------|-------------------|------------|-------------|--|--------|------|-------------|---|---------|-------------------|---|----------|-------------------------|---|----------|-------------------------|
| CHARLES INDUSTRY HVAC CUBE-PM639151N4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIMENSIONS (HxWxD): | 74"x32"x32" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POWER PLANT: | -48VDC ABG/600W | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOTAL WEIGHT (EMPTY): | 363 LBS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RAYCAP PPC RDIAC-2465-P-240-MTS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENCLOSURE DIMENSIONS (HxWxD): | 39"x22.850"x12.593 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WEIGHT: | 80 lbs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| OPERATING AC VOLTAGE: | 240/120 1 PHASE 3W+G | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SQUARE D SAFETY SWITCHES D224NRB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENCLOSURE DIM (HxWxD): | 29.25"x19.00"x8.50" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENCLOSURE TYPE: | NEMA 3R RAINPROOF | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| UL LISTED: | FILE E-2875 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| REV | DATE | DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | 10/7/21 | ISSUED FOR REVIEW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 12/25/21 | ISSUED FOR CONSTRUCTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">EATON METER SOCKET UNRRS213BEUSE</th> </tr> <tr> <td style="width: 50%;">METER SOCKET TYPE:</td> <td>RING</td> </tr> <tr> <td>ENCLOSURE DIM (HxWxD):</td> <td>16"x12"x6"</td> </tr> <tr> <td>MAIN AMPERE RATING:</td> <td>200A</td> </tr> <tr> <td>WEIGHT:</td> <td>18 LBS</td> </tr> </table>  <p style="text-align: center;">METER SOCKET DETAIL</p> <p style="text-align: right;">NO SCALE 4</p> | EATON METER SOCKET UNRRS213BEUSE | | METER SOCKET TYPE: | RING | ENCLOSURE DIM (HxWxD): | 16"x12"x6" | MAIN AMPERE RATING: | 200A | WEIGHT: | 18 LBS | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">ZAYO 5RU (LEFT SWING DOOR) FIBER NID ENCLOSURE</th> </tr> <tr> <td style="width: 50%;">DIMENSIONS (HxWxD):</td> <td>36.1"x29"x12.9"</td> </tr> <tr> <td>WEIGHT:</td> <td>85 lbs</td> </tr> </table>  <p style="text-align: center;">FIBER NID ENCLOSURE DETAIL</p> <p style="text-align: right;">NO SCALE 5</p> | ZAYO 5RU (LEFT SWING DOOR) FIBER NID ENCLOSURE | | DIMENSIONS (HxWxD): | 36.1"x29"x12.9" | WEIGHT: | 85 lbs | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">CHARLES CFIT-PF2020DSH1 FIBER TELCO ENCLOSURE</th> </tr> <tr> <td style="width: 50%;">ENCLOSURE DIMS (HxWxD):</td> <td>20"x20"x9"</td> </tr> <tr> <td>ENCLOSURE WEIGHT:</td> <td>20 lbs</td> </tr> <tr> <td>MOUNTING:</td> <td>WALL</td> </tr> <tr> <td>COMPLIANCE:</td> <td>TYPE 4</td> </tr> </table>  <p style="text-align: center;">FIBER TELCO ENCLOSURE DETAIL</p> <p style="text-align: right;">NO SCALE 6</p> | CHARLES CFIT-PF2020DSH1 FIBER TELCO ENCLOSURE | | ENCLOSURE DIMS (HxWxD): | 20"x20"x9" | ENCLOSURE WEIGHT: | 20 lbs | MOUNTING: | WALL | COMPLIANCE: | TYPE 4 | | | | | | | | | | | |
| EATON METER SOCKET UNRRS213BEUSE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| METER SOCKET TYPE: | RING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENCLOSURE DIM (HxWxD): | 16"x12"x6" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAIN AMPERE RATING: | 200A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WEIGHT: | 18 LBS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZAYO 5RU (LEFT SWING DOOR) FIBER NID ENCLOSURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIMENSIONS (HxWxD): | 36.1"x29"x12.9" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WEIGHT: | 85 lbs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CHARLES CFIT-PF2020DSH1 FIBER TELCO ENCLOSURE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENCLOSURE DIMS (HxWxD): | 20"x20"x9" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENCLOSURE WEIGHT: | 20 lbs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MOUNTING: | WALL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMPLIANCE: | TYPE 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">COMMSCOPE WB-K110-B WAVEGUIDE BRIDGE KIT</th> </tr> <tr> <td style="width: 50%;">DIMENSIONS (HxL):</td> <td>160"x10"</td> </tr> <tr> <td>WEIGHT/ VOLUME:</td> <td>325.0 LBS</td> </tr> <tr> <td>CABLE RUN (QTY):</td> <td>12</td> </tr> </table> <div style="display: flex; justify-content: space-between;"> <div> <p>INCLUDED PRODUCTS:</p> <p>WB-T12-3 TRAPEZE KIT, 3 RUNGS</p> <p>WB-LB12-3 SUPPORT BRACKET</p> <p>MF-130 DIRECT BURIAL PIPE COLUMN, 13'-4"</p> </div> <div>  </div> </div> <p style="text-align: center;">ICE BRIDGE DETAIL</p> <p style="text-align: right;">NO SCALE 7</p> | COMMSCOPE WB-K110-B WAVEGUIDE BRIDGE KIT | | DIMENSIONS (HxL): | 160"x10" | WEIGHT/ VOLUME: | 325.0 LBS | CABLE RUN (QTY): | 12 |  <p style="text-align: center;">TYPICAL ICE BRIDGE CONCRETE PIER DETAIL</p> <p style="text-align: right;">NO SCALE 8</p> |  <p style="text-align: center;">HYBRID CABLE RUN</p> <p style="text-align: right;">NO SCALE 9</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COMMSCOPE WB-K110-B WAVEGUIDE BRIDGE KIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DIMENSIONS (HxL): | 160"x10" | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WEIGHT/ VOLUME: | 325.0 LBS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CABLE RUN (QTY): | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | |
|---|--------------------------|------------------------|--------------------------------|----------|--------------------------------|--------------------------------|-----------------|--------------------------------|----------|---|---|----------|---|---|----------|---|
| <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p align="center">PCTEL GPSGL-TMG-SPI-40NCB</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DIMENSIONS (DIM) MM/INCH</td> <td>81x188mm 3.2"x7.25"</td> </tr> <tr> <td>WEIGHT W/ACCESSORIES</td> <td>0.75 lbs</td> </tr> <tr> <td>CONNECTOR</td> <td>N-FEMALE</td> </tr> <tr> <td>FREQUENCY RANGE</td> <td>1590 ± 30MHz</td> </tr> </table> </div> <div style="display: flex; justify-content: space-around;"> </div> <p align="center">GPS DETAIL</p> | DIMENSIONS (DIM) MM/INCH | 81x188mm 3.2"x7.25" | WEIGHT W/ACCESSORIES | 0.75 lbs | CONNECTOR | N-FEMALE | FREQUENCY RANGE | 1590 ± 30MHz | NO SCALE | 1 | <p align="center">GPS MINIMUM SKY VIEW REQUIREMENTS</p> | NO SCALE | 2 | <p align="center">CABLES UNLIMITED HYBRID CABLE MINIMUM BEND RADIUSES</p> | NO SCALE | 3 |
| DIMENSIONS (DIM) MM/INCH | 81x188mm 3.2"x7.25" | | | | | | | | | | | | | | | |
| WEIGHT W/ACCESSORIES | 0.75 lbs | | | | | | | | | | | | | | | |
| CONNECTOR | N-FEMALE | | | | | | | | | | | | | | | |
| FREQUENCY RANGE | 1590 ± 30MHz | | | | | | | | | | | | | | | |
| <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p align="center">CHARLES INDUSTRY LT-97-002422 PLINTH KIT</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">DIMENSIONS (HxWxD)</td> <td>6" x 32" x 32"</td> </tr> </table> <p>NOTE: GASKET AND MOUNTING HARDWARE INCLUDED</p> </div> <div style="display: flex; justify-content: space-around;"> </div> <p align="center">PLINTH DETAIL</p> | DIMENSIONS (HxWxD) | 6" x 32" x 32" | NO SCALE | 4 | <p align="center">NOT USED</p> | NO SCALE | 5 | <p align="center">NOT USED</p> | NO SCALE | 6 | | | | | | |
| DIMENSIONS (HxWxD) | 6" x 32" x 32" | | | | | | | | | | | | | | | |
| <p align="center">NOT USED</p> | NO SCALE | 7 | <p align="center">NOT USED</p> | NO SCALE | 8 | <p align="center">NOT USED</p> | NO SCALE | 9 | | | | | | | | |



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON,
UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

DRAWN BY: CHECKED BY: APPROVED BY:

CH BLJ BLJ

RFDS REV #: 1.0

CONSTRUCTION
DOCUMENTS

| SUBMITTALS | | |
|------------|----------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 10/7/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/28/21 | ISSUED FOR CONSTRUCTION |

A&L PROJECT NUMBER

156837.001.01

DISH Wireless, L.L.C.

PROJECT INFORMATION

ISSN031638

11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

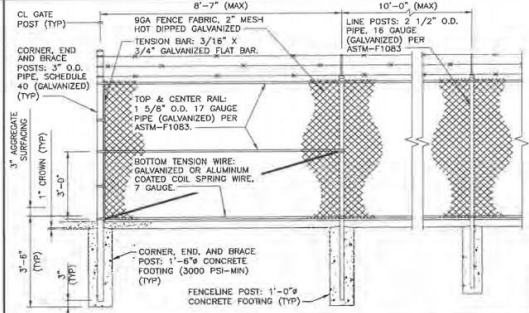
SHEET TITLE

EQUIPMENT DETAILS

SHEET NUMBER

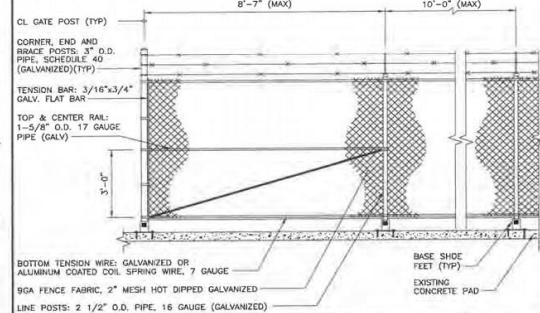
A-5

1. LINE POSTS: 2 1/2" O.D. PIPE, 16 GAUGE (GALVANIZED) PER ASTM-F1083.
2. CORNER, END AND BRACE POSTS: 3" O.D. PIPE, SCHEDULE 40 (GALVANIZED).
3. TOP RAIL: 1 5/8" O.D. 17 GAUGE PIPE (GALVANIZED) PER ASTM-F1083.
4. BRACE RAIL: 1 5/8" O.D. 17 GAUGE PIPE (GALVANIZED).
5. DIAGONAL TRUSS ROD: 3/8" GALVANIZED ROD WITH TURNBUCKLE.
6. TENSION BAR: 3/16" X 3/4" GALVANIZED FLAT BAR.
7. BOTTOM TENSION WIRE: GALVANIZED OR ALUMINUM COATED COIL SPRING WIRE, 7 GAUGE.
8. GATE POSTS: 2 7/8" O.D. SCHEDULE 40 PIPE (GALVANIZED).
9. COMBINATION PADLOCK ACCORDING TO DISH WIRELESS REQUIREMENTS.
10. GATE FRAMES: 1 7/8" O.D. SCHEDULE 40 PIPE (GALVANIZED).
11. BARBED WIRE SUPPORT ARM: SINGLE ARM TYPE (GALVANIZED). ARM SHALL BE INCLINED OUTWARD AT AN ANGLE OF 45 DEGREES.
12. BARBED WIRE: GALVANIZED, ASTM A121 CLASS 3; THREE 14 GAUGE MINIMUM STEEL WIRES WITH 4 POINT ROUND 14 GAUGE BARBS SPACED 4" APART.
13. 9GA FENCE FABRIC, 2" MESH HOT DIPPED GALVANIZED
14. MISCELLANEOUS:
 - A. RAIL COUPLINGS: SLEEVE TYPE, 6" LONG EXPANSION SPRING EVERY FIFTH COUPLING.
 - B. POST TOPS: PRESSED STEEL, MALLEABLE IRON WITH PRESSED STEEL EXTENSION ARM, OR ONE-PIECE ALUMINUM CASTING WITH HOLE FOR TOP. ALL DESIGNED TO FIT OVER THE OUTSIDE OF THE POSTS AND TO PREVENT ENTRY OF MOISTURE INTO TUBULAR POSTS.
 - C. LATCHES SHALL BE FORKED TYPE AND SHALL BE ARRANGED FOR PADLOCKING WITH THE PADLOCK ACCESSIBLE FROM BOTH SIDES OF THE GATE.
 - D. KEEPERS SHALL CONSIST OF MECHANICAL DEVICES FOR SECURING AND SUPPORTING THE FREE END OF THE GATES WHEN IN THE FULL OPEN POSITION. KEEPERS SHALL BE MOUNTED ON 2 7/8" O.D. PIPE POSTS FILLED WITH CONCRETE AND SET IN CONCRETE FOUNDATIONS.
 - E. INSTALL FENCING PER ASTM-F567.
 - F. INSTALL SWING GATES PER ASTM-F900.
 - G. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLETED IF REQUIRED.
 - H. USE GALVANIZED HOG RING WIRE TO MOUNT ALL SIGNS.
 - I. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE.



TYPICAL FENCE DETAIL

NO SCALE 2



TYPICAL FENCE ELEVATION DETAIL

NO SCALE 3

MATERIAL DESCRIPTION

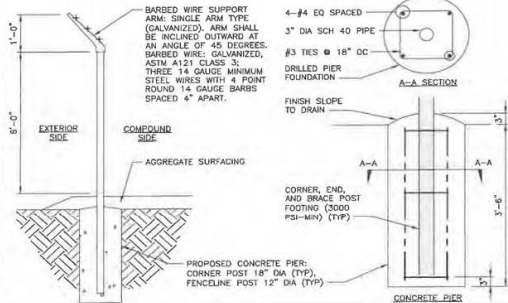
NO SCALE 1

NOT USED

NO SCALE 4

NOT USED

NO SCALE 5



TYPICAL FENCE & CONCRETE PIER SECTION

NO SCALE 6

NOT USED

NO SCALE 7

NOT USED

NO SCALE 8



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON
UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

DRAWN BY: CHECKED BY: APPROVED BY:

CH BLJ BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|----------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 10/7/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/28/21 | ISSUED FOR CONSTRUCTION |

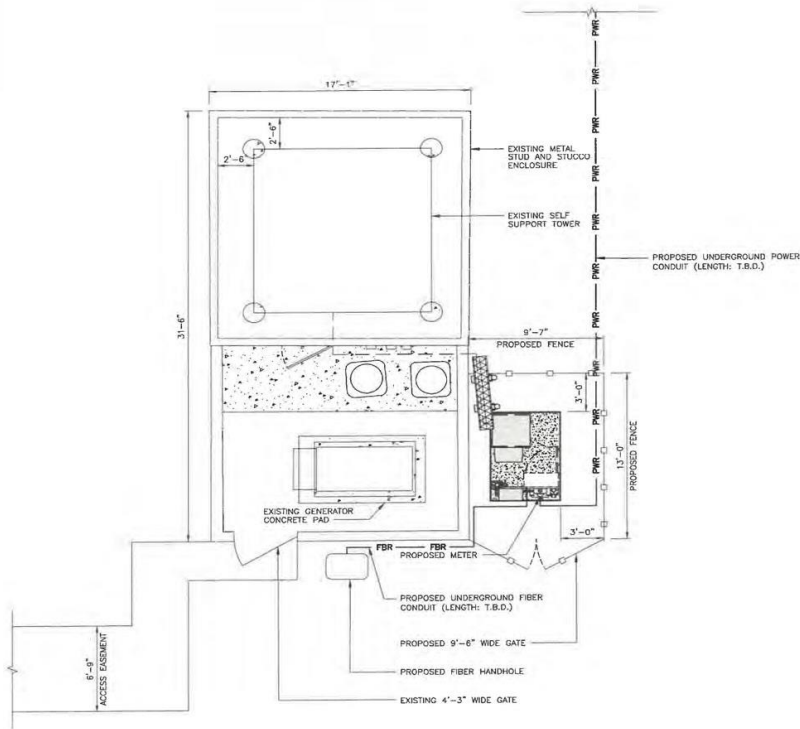
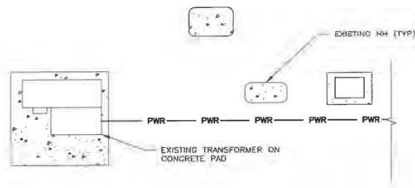
A&E PROJECT NUMBER
156837.001.01

DISH Wireless, L.L.C.
PROJECT INFORMATION
LSSNA031639
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

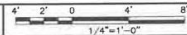
SHEET TITLE
COMPOUND DETAILS

SHEET NUMBER

A-7



UTILITY ROUTE PLAN



1

NOTES

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

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

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



ELECTRICAL NOTES

NO SCALE

2



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CH CHECKED BY: BLJ APPROVED BY: BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|----------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 10/5/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/29/21 | ISSUED FOR CONSTRUCTION |

A&E PROJECT NUMBER
156837.001.01

DISH Wireless LLC
PROJECT INFORMATION
LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

SHEET TITLE
ELECTRICAL/FIBER ROUTE
PLAN AND NOTES

SHEET NUMBER

E-1

VARIES PER PART NUMBER

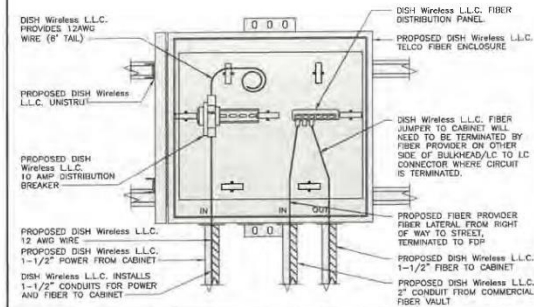
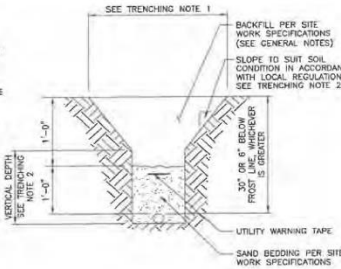
2'-0"

1/2"





SLIP JOINT (SEE CHART FOR PART NUMBER)

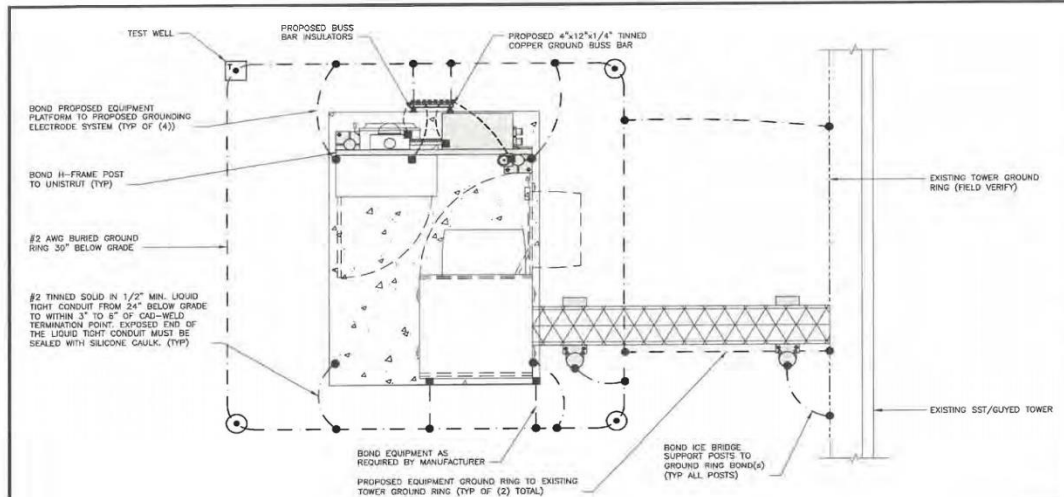
NOTE: CONTRACTOR TO INSTALL EXPANSION FITTING SLIP JOINT AT METER CENTER CONDUIT TERMINATION, AS PER LOCAL UTILITY POLICY, ORDINANCE AND/OR SPECIFIED REQUIREMENT

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



| | | | | | | | | | | | | | |
|--|--|----------|---|-----------------------------------|---|----------|---|---|---|----------|---|----------|---|
| EXPANSION JOINT DETAIL | | NO SCALE | 1 | TYPICAL UNDERGROUND TRENCH DETAIL | | NO SCALE | 2 | DARK TELCO BOX — INTERIOR WIRING LAYOUT | | NO SCALE | 3 | | |
| <p>Diagram showing a cross-section of an expansion joint for a fiber optic cable. The joint is labeled 'PROPOSED FIBER MD, IF REQUIRED'. It shows 'IN' and 'OUT' ports. A note states: 'NOTE: FIBER PROVIDER WILL NEED TO PROVIDE AN ADDITIONAL 5FT UNISTRUT, 2 U-BOLTS WITH 4 NUTS, IN THE EVENT THE BRACKET SPACING DOESN'T LINE UP WITH CURRENT SPACING BELOW'. Other labels include: 'PROPOSED DISH Wireless L.L.C. UNISTRUT', 'PROPOSED FIBER PROVIDER 1-1/4" FLEX CONDUITS', 'FIBER PROVIDER TO TERMINATE POWER TO FIBER PROVIDER NID', 'PROPOSED DISH Wireless L.L.C. 12 AWG WIRE (6' TAIL)', 'PROPOSED DISH Wireless L.L.C. 10 AMP DISTRIBUTION BREAKER', 'PROPOSED DISH Wireless L.L.C. 12 AWG WIRE', 'PROPOSED DISH Wireless L.L.C. 1-1/2" POWER FROM CABINET', 'FIBER PROVIDER TO PUNCH TOP OF TELCO BOX OF NID ENCLOSURE AND INSTALL 1-1/4" LIQUID TIGHT CONNECTORS, UL LISTED, NYLON MATERIAL, WITH O-RING GASKET', 'FIBER PROVIDER TO INSTALL 1-1/4" FLEX CONDUITS BETWEEN FDP TELCO BOX & NID', 'PROPOSED DISH Wireless L.L.C. TELCO FIBER ENCLOSURE', 'PROPOSED DISH Wireless L.L.C. 1-1/2" FIBER TO CABINET', and 'PROPOSED DISH Wireless L.L.C. 2" CONDUIT FROM COMMERCIAL FIBER VAULT'.</p> | | | | | | | | | | | | | |
| LIT TELCO BOX — INTERIOR WIRING LAYOUT (OPTIONAL) | | | | NO SCALE | 4 | NOT USED | | NO SCALE | 5 | NOT USED | | NO SCALE | 6 |
| NOT USED | | | | NO SCALE | 7 | NOT USED | | NO SCALE | 8 | NOT USED | | NO SCALE | 9 |

| | | |
|--|----------|-------------------------|
| <div> 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120</div> | | |
| <div> AMERICAN TOWER® 12 PRESIDENTIAL WAY WILMINGTON, MA 01827</div> | | |
| <div> B+T GRP 1717 B. BOGNER SUITE 200 TALLA HEE RD #118 PH: (916) 587-4550 www.btggrp.com</div> | | |
| <div> B&T ENGINEERING, INC.</div> | | |
| IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT. | | |
| DRAWN BY: CHECKED BY: APPROVED BY: | | |
| CH | BLJ | BLJ |
| RFDS REV #: | | 1.0 |
| CONSTRUCTION DOCUMENTS | | |
| SUBMITTALS | | |
| REV | DATE | DESCRIPTION |
| A | 10/2/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/29/21 | ISSUED FOR CONSTRUCTION |
| | | |
| | | |
| | | |
| A&E PROJECT NUMBER | | |
| 156837.001.01 | | |
| DISH Wireless L.L.C. PROJECT INFORMATION | | |
| LSSNA031638 | | |
| 11873 APPLE VALLEY ROAD APPLE VALLEY, CA 92308 | | |
| SHEET TITLE | | |
| ELECTRICAL DETAILS | | |
| SHEET NUMBER | | |
| E-2 | | |

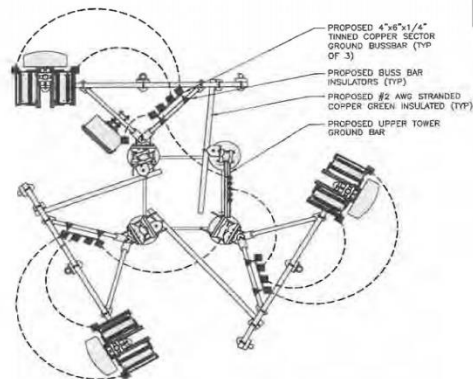


TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE 1

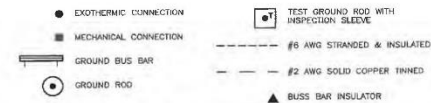
NOTES

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



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE 2



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.

GROUNDING KEY NOTES

- A. EXTERIOR GROUND RING: #2 AWG SOLID COPPER, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 8 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.
- B. TOWER GROUND RING: THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING. AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.
- C. INTERIOR GROUND RING: #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUND TO THE INTERIOR GROUND RING WITH #6 AWG STRANDED GREEN INSULATED CONDUCTOR.
- D. BOND TO INTERIOR GROUND RING: #2 AWG SOLID TINNED COPPER WIRE. PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.
- E. GROUND ROD: U.S. LISTED COPPER CLAD STEEL, MINIMUM 1/2" DIAMETER BY EIGHT FEET LONG. GROUND RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR.
- F. CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.
- G. MATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A MATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE ORGB 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 BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.
- I. TELCO GROUND BAR: BOND TO BOTH CELL REFERENCE GROUND BAR OR EXTERIOR GROUND RING.
- J. FRAME BONDING: THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE 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 WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS.
- M. EXTERIOR UNIT BONDS: METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING USING #2 TINNED SOLID COPPER WIRE.
- N. ICE BRIDGE SUPPORTS: EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING.
- O. DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTFITS, 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 CARRY ALL DC POWER SYSTEMS ARE EQUIPPED WITH A MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR.
- P. TOWER TOP COLLECTOR BUSS BAR IS TO BE MECHANICALLY BONDED TO TOWER STEEL.
REFER TO DISH Wireless L.L.C. GROUNDING NOTES.

GROUNDING KEY NOTES

NO SCALE 3

dish
wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

AMERICAN TOWER
10 PRESCOTT BLVD
WOBURN, MA 01801

B+T GRP
1917 S. BRADLEY
SUITE 300
TULSA, OK 74110
PH: (918) 487-8800
WWW.BTGP.COM



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CHECKED BY: APPROVED BY:

CH BLJ BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

SUBMITTALS

| REV | DATE | DESCRIPTION |
|-----|----------|-------------------------|
| A | 10/2/21 | ISSUED FOR REVIEW |
| B | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/28/21 | ISSUED FOR CONSTRUCTION |

A&E PROJECT NUMBER

156837.001.01

DISH Wireless L.L.C.

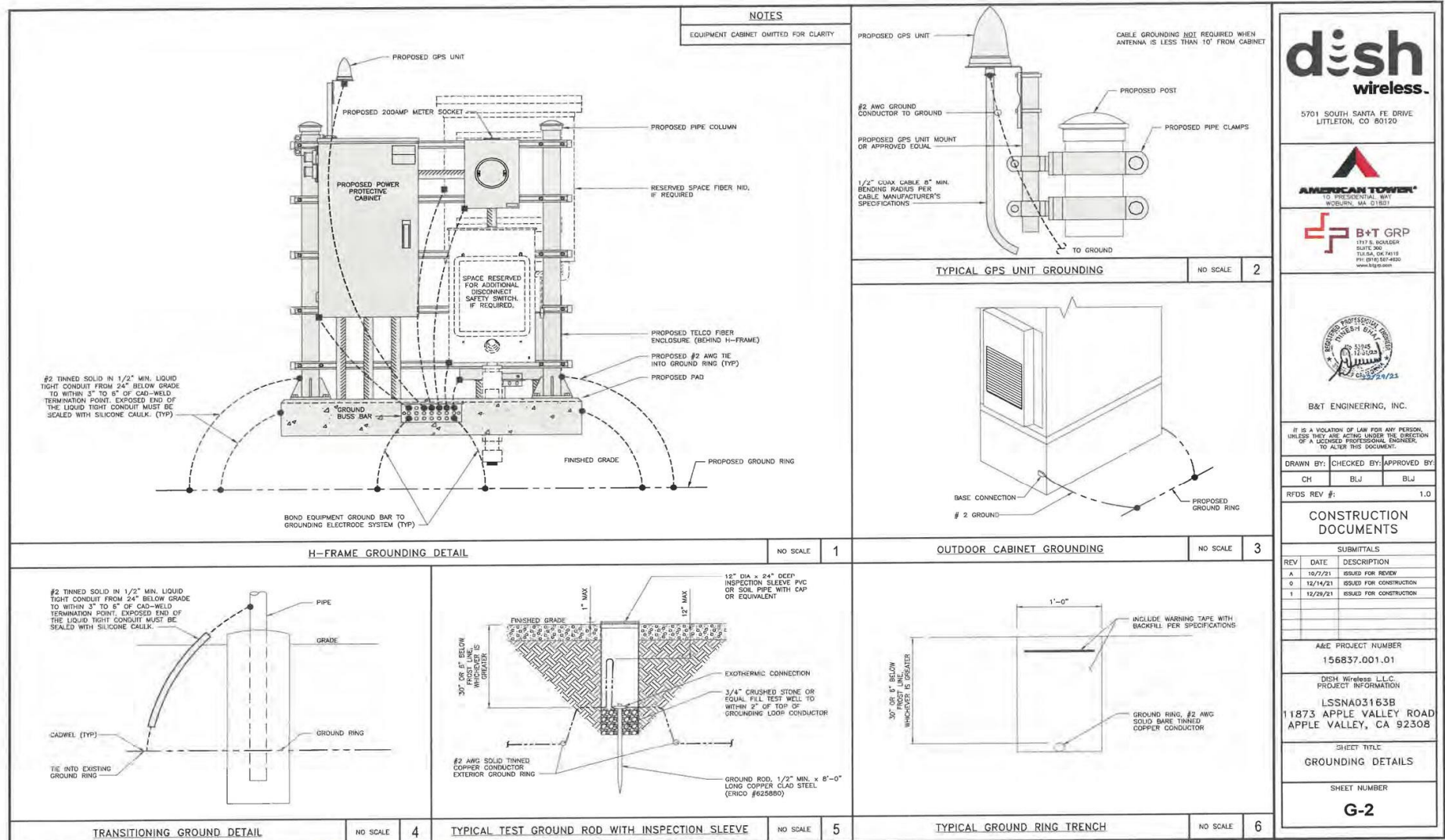
PROJECT INFORMATION

LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

SHEET TITLE
GROUNDING PLANS
AND NOTES

SHEET NUMBER

G-1



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

10 PRESIDENTIAL WAY
WILMINGTON, MA 01801

11715 ROADSTER
SUITE 300
DALLAS, TX 75248
PH: (972) 567-4530
www.btg.com

B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CH CHECKED BY: BLJ APPROVED BY: BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|----------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 10/2/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/26/21 | ISSUED FOR CONSTRUCTION |

A&E PROJECT NUMBER
156837.001.01

DISH Wireless, L.L.C.
PROJECT INFORMATION

LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-2

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|----------|--|--|---|--|--|-------------------------------|--|--|----------|--|--|---|--|--|-------------------------------|--|--|----------|--|--|---|--|--|
| <p>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.</p> <p>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.</p> <p>3. FOR GROUND BOND TO STEEL ONLY: COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.</p> <p>4. DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUNDING BUS.</p> <p>5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE.</p> <p>6. ALL GROUNDING PARTS AND EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.</p> <p>7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED.</p> <p>8. ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).</p> | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TYPICAL GROUNDING NOTES | | | NO SCALE | | | 1 | | | TYPICAL EXTERIOR TWO-HOLE LUG | | | NO SCALE | | | 2 | | | TYPICAL INTERIOR TWO-HOLE LUG | | | NO SCALE | | | 3 | | |
| | | | NO SCALE | | | 4 | | | NOT USED | | | NO SCALE | | | 5 | | | NOT USED | | | NO SCALE | | | 6 | | |
| LUG DETAIL | | | NO SCALE | | | 4 | | | NOT USED | | | NO SCALE | | | 5 | | | NOT USED | | | NO SCALE | | | 6 | | |
| NOT USED | | | NO SCALE | | | 7 | | | NOT USED | | | NO SCALE | | | 8 | | | NOT USED | | | NO SCALE | | | 9 | | |

DISH Wireless L.L.C. TEMPLATE VERSION 41 - 09/03/2021

dish
wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

AMERICAN TOWER
10 PRESIDENTIAL WAY
ROSLINDALE, MA 01151

B+T GRP
VITO K. KRAMER
SUITE 300
TULSA, OK 74110
PH: (918) 647-4533
www.BTG.com



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CH CHECKED BY: BLJ APPROVED BY: BLJ

RFDS REV #: 1.0

CONSTRUCTION
DOCUMENTS

| SUBMITTALS | | |
|--|----------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 10/7/21 | ISSUED FOR REVIEW |
| G | 12/14/21 | ISSUED FOR CONSTRUCTION |
| I | 12/28/21 | ISSUED FOR CONSTRUCTION |
| | | |
| | | |
| | | |
| A&E PROJECT NUMBER | | |
| 156837.001.01 | | |
| DISH Wireless L.L.C. PROJECT INFORMATION | | |
| LSSNA03163B 11873 APPLE VALLEY ROAD APPLE VALLEY, CA 92308 | | |
| SHEET TITLE | | |
| GROUNDING DETAILS | | |
| SHEET NUMBER | | |
| G-3 | | |

| 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) | | PORT 1 + SLANT RED ORANGE WHITE (-) PORT | | | | PORT 2 - SLANT RED ORANGE WHITE (-) PORT | | | | PORT 3 + SLANT RED ORANGE WHITE (-) PORT | | | | PORT 4 - SLANT RED ORANGE WHITE (-) PORT | | | |
| MID-BAND RRH - (AWS BANDS N66+N70) | | RED PURPLE WHITE (-) PORT | | | | BLUE PURPLE WHITE (-) PORT | | | | BLUE PURPLE WHITE (-) PORT | | | | GREEN PURPLE WHITE (-) PORT | | | |
| 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 | | EXAMPLE 1 RED BLUE GREEN ORANGE PURPLE | | | | EXAMPLE 2 RED BLUE GREEN ORANGE PURPLE | | | | EXAMPLE 3 RED BLUE GREEN ORANGE PURPLE | | | | CONTRACTOR TO REFER TO FINAL CONSTRUCTION INFO FOR ALL RD DETAILS. FINAL RD'S IS IN NEXT ISSUE. | | | |
| FIBER JUMPERS TO RRHs LOW-BAND RRH FIBER CABLES HAVE SECTOR STRIPE ONLY | | LOW BAND RRH RED PURPLE | | | | HIGH BAND RRH RED PURPLE | | | | LOW BAND RRH BLUE PURPLE | | | | HIGH BAND RRH BLUE PURPLE | | | |
| POWER CABLES TO RRHs LOW-BAND RRH POWER CABLES HAVE SECTOR STRIPE ONLY | | LOW BAND RRH RED PURPLE | | | | HIGH BAND RRH RED PURPLE | | | | LOW BAND RRH BLUE PURPLE | | | | HIGH BAND RRH BLUE PURPLE | | | |
| RET MOTORS AT ANTENNAS | | ANTENNA 1 LOW BAND/ "LW" RED PURPLE | | | | ANTENNA 1 HIGH BAND/ "HW" RED PURPLE | | | | ANTENNA 1 LOW BAND/ "LW" BLUE PURPLE | | | | ANTENNA 1 HIGH BAND/ "HW" BLUE 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 PRIMARY WHITE RED WHITE WHITE WHITE | | | | SECONDARY WHITE RED WHITE WHITE WHITE | | | | FORWARD AZIMUTH OF 120-240 DEGREES PRIMARY WHITE BLUE WHITE WHITE WHITE | | | | SECONDARY WHITE BLUE WHITE WHITE WHITE | | | |
| FORWARD AZIMUTH OF 240-360 DEGREES PRIMARY WHITE GREEN WHITE WHITE WHITE | | SECONDARY WHITE GREEN WHITE WHITE WHITE | | | | | | | | | | | | | | | |

RF CABLE COLOR CODES

NO SCALE

1

| | | | |
|---|--|--|--|
| LOW BANDS (N71+N26) OPTIONAL - (N29) ORANGE | | AWS (N66+N70+H+BLOCK) PURPLE | |
| CBRS 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

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

1717 S. BOULDER
SUITE 300
TULSA, OK 74110
PH: (918) 444-4400
WWW.ATG.COM

1717 S. BOULDER
SUITE 300
TULSA, OK 74110
PH: (918) 444-4400
WWW.BTGRP.COM

B&T ENGINEERING, INC.
 IT IS A VIOLATION OF LAW FOR ANY PERSON
 UNLESS THEY ARE ACTING UNDER THE DIRECTION
 OF A LICENSED PROFESSIONAL ENGINEER,
 TO ALTER THIS DOCUMENT.

DRAWN BY: CHECKED BY: APPROVED BY:

| | | |
|----|-----|-----|
| CH | BLJ | BLJ |
|----|-----|-----|

RFD REV #:

| |
|-----|
| 1.0 |
|-----|

CONSTRUCTION DOCUMENTS

| REV | DATE | DESCRIPTION |
|-----|----------|-------------------------|
| A | 10/7/21 | ISSUED FOR REVIEW |
| G | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/29/21 | ISSUED FOR CONSTRUCTION |

A&E PROJECT NUMBER
156837.001.01

DISH Wireless, L.L.C.
PROJECT INFORMATION
LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

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, GFI RECEPTACLE | |
| FLUORESCENT LIGHTING FIXTURE (2) TWO LAMPS, 48-18 | |
| SMOKE DETECTION (DC) | |
| EMERGENCY LIGHTING (DC) | |
| SECURITY LIGHT W/PHOTODELL LITHONIA ALW LED-1-25A400/51K-SR4-120-PC-DOBTD | |
| CHAIN LINK FENCE | |
| WOOD/WROUGHT IRON FENCE | |
| WALL STRUCTURE | |
| LEASE AREA | |
| PROPERTY LINE (PL) | |
| SETBACKS | |
| ICE BRIDGE | |
| CABLE TRAY | |
| WATER LINE | |
| UNDERGROUND POWER | |
| UNDERGROUND TELCO | |
| OVERHEAD POWER | |
| OVERHEAD TELCO | |
| UNDERGROUND TELCO/POWER | |
| ABOVE GROUND POWER | |
| ABOVE GROUND TELCO | |
| ABOVE GROUND TELCO/POWER | |
| WORKPOINT | |
| SECTION REFERENCE | |
| DETAIL REFERENCE | |

LEGEND

| | | | |
|--------|-----------------------------------|-------|---|
| AB | ANCHOR BOLT | IN | INCH |
| ABV | ABOVE | INT | INTERIOR |
| AC | ALTERNATING CURRENT | LB(S) | POUNDS(S) |
| ADDL | ADDITIONAL | LF | LINEAR FEET |
| AFT | ABOVE FINISHED FLOOR | LTE | LONG TERM EVOLUTION |
| AFG | ABOVE FINISHED GRADE | MAS | MASONRY |
| AGL | ABOVE GROUND LEVEL | MAX | MAXIMUM |
| AKC | AMPERAGE INTERRUPTION CAPACITY | MB | MACHINE BOLT |
| ALUM | ALUMINUM | MECH | MECHANICAL |
| ALT | ALTERNATE | MFR | MANUFACTURER |
| ANT | ANTENNA | MGB | MASTER GROUND BAR |
| APPROX | APPROXIMATE | MIN | MINIMUM |
| ARCH | ARCHITECTURAL | MISC | MISCELLANEOUS |
| ATS | AUTOMATIC TRANSFER SWITCH | MTL | METAL |
| AWG | AMERICAN WIRE GAUGE | MTS | MANUAL TRANSFER SWITCH |
| BATT | BATTERY | MW | MICROWAVE |
| BLDG | BUILDING | NEC | NATIONAL ELECTRIC CODE |
| BLK | BLOCK | NM | NEWTON METERS |
| BLKG | BLOCKING | NO. | NUMBER |
| BM | BEAM | # | NUMBER |
| BTC | BARE TINNED COPPER CONDUCTOR | HTS | HOT TO SCALE |
| BOF | BOTTOM OF FOOTING | OC | ON-CENTER |
| CAB | CABINET | OSHA | OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION |
| CANT | CANTILEVERED | OPNG | OPENING |
| CHG | CHARGING | P/C | PRECAST CONCRETE |
| CLG | Ceiling | PCS | PERSONAL COMMUNICATION SERVICES |
| CLR | CLEAR | PCU | PRIMARY CONTROL UNIT |
| COL | COLUMN | PRC | PRIMARY RADIO CABINET |
| COMM | COMMON | PP | POLARIZING PRESERVING |
| CONC | CONCRETE | PSF | POUNDS PER SQUARE FOOT |
| CONSTR | CONSTRUCTION | PSI | POUNDS PER SQUARE INCH |
| DBL | DOUBLE | PT | PRESSURE TREATED |
| DC | DIRECT CURRENT | PWR | POWER CABINET |
| DEPT | DEPARTMENT | QTY | QUANTITY |
| DF | DOUGLAS FIR | RAD | RADIUS |
| DI | DIAMETER | RECT | RECEIVER |
| DIG | DIAGONAL | REF | REFERENCE |
| DM | DIMENSION | REINF | REINFORCEMENT |
| DWG | DRAWING | REQ'D | REQUIRED |
| DWL | DOWEL | RET | REMOTE ELECTRIC TILT |
| EA | EACH | RF | RADIO FREQUENCY |
| EC | ELECTRICAL CONDUCTOR | RMC | RIGID METALLIC CONDUIT |
| EL | ELEVATION | RRH | REMOTE RADIO HEAD |
| ELEC | ELECTRICAL | RRU | REMOTE RADIO UNIT |
| EMT | ELECTRICAL METALLIC TUBING | RWY | RACWAY |
| ENG | ENGINEER | SCH | SCHEDULE |
| EQ | EQUAL | SHT | SHEET |
| EXP | EXPANSION | SIAD | SMART INTEGRATED ACCESS DEVICE |
| EXT | EXTERIOR | SM | SIMILAR |
| EW | EACH WAY | SPEC | SPECIFICATION |
| FAD | FABRICATION | SQ | SQUARE |
| FF | FINISH FLOOR | SS | STAINLESS STEEL |
| FG | FINISH GRADE | STD | STANDARD |
| FI | FACILITY INTERFACE FRAME | STL | STEEL |
| FIN | FINISH(ED) | TEMP | TEMPORARY |
| FLR | FLOOR | THK | THICKNESS |
| FDN | FOUNDATION | TMA | TOWER MOUNTED AMPLIFIER |
| FOC | FACE OF CONCRETE | TN | TOE NAIL |
| FOAM | FACE OF MASONRY | TOA | TOP OF ANTENNA |
| FOS | FACE OF STUD | TOC | TOP OF CURB |
| FOW | FACE OF WALL | TGF | TOP OF FOUNDATION |
| FS | FINISH SURFACE | TGP | TOP OF PLATE (PARAPET) |
| FT | FOOT | TOS | TOP OF STEEL |
| FTG | FOOTING | TOW | TOP OF WALL |
| GA | GAUGE | TVSS | TRANSIENT VOLTAGE SURGE SUPPRESSION |
| GEN | GENERATOR | TYP | TYPICAL |
| GFCI | GROUND FAULT CIRCUIT INTERRUPTER | UG | UNDERGROUND |
| GLB | GLUE LAMINATED BEAM | UL | UNDERWRITERS LABORATORY |
| GLV | GALVANIZED | UND | UNLESS NOTED OTHERWISE |
| GPS | GLOBAL POSITIONING SYSTEM | UMTS | UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM |
| GND | GROUND | UPS | UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT) |
| GSM | GLOBAL SYSTEM FOR MOBILE | VIF | VERTIFIED IN FIELD |
| HOG | HOT DIPPED GALVANIZED | W | WIDE |
| HOR | HEADER | W/ | WITH |
| HGR | HANGER | WO | WOOD |
| HVAC | HEAT/VENTILATION/AIR CONDITIONING | WP | WEATHERPROOF |
| HT | HEIGHT | WT | WEIGHT |
| IGR | INTERIOR GROUND RING | | |

ABBREVIATIONS



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE USING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CHECKED BY: APPROVED BY:
CH BLJ BLJ

RFD REV #: 1.0

CONSTRUCTION DOCUMENTS

| REV | DATE | DESCRIPTION |
|-----|----------|-------------------------|
| A | 10/7/21 | ISSUED FOR REVIEW |
| 9 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/28/21 | ISSUED FOR CONSTRUCTION |

A&E PROJECT NUMBER
156837.001.01

DISH Wireless, L.L.C.
PROJECT INFORMATION
LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

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 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 ON-SITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS MUST 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.



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON
UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

DRAWN BY: CHECKED BY: APPROVED BY:

CH BLJ BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|----------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 12/7/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/28/21 | ISSUED FOR CONSTRUCTION |
| | | |
| | | |
| | | |

A&E PROJECT NUMBER

156837.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION

LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

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-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 DOWNWARD (WIREFOLD 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.

| | |
|---|----------------------------------|
|  5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120 | |
|  12 PRESIDENTIAL WAY WOOLIN, MA 01801 | |
|  B+T GRP 1717 S. GUALDER SUITE 300 SALTA, OR 97155 PH (531) 987-4530 www.btg.com | |
|  B&T ENGINEERING, INC. | |
| IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT. | |
| DRAWN BY: | CHECKED BY: |
| CH | BLJ |
| RFDS REV #: | 1.0 |
| APPROVED BY: | |
| BLJ | |
| CONSTRUCTION DOCUMENTS | |
| SUBMITTALS | |
| REV | DATE DESCRIPTION |
| A | 10/2/21 ISSUED FOR REVIEW |
| 0 | 12/14/21 ISSUED FOR CONSTRUCTION |
| 1 | 12/29/21 ISSUED FOR CONSTRUCTION |
| A&E PROJECT NUMBER | |
| 156837.001.01 | |
| DISH Wireless L.L.C. PROJECT INFORMATION | |
| LSSNA03163B 11873 APPLE VALLEY ROAD APPLE VALLEY, CA 92308 | |
| SHEET TITLE | |
| GENERAL NOTES | |
| SHEET NUMBER | |
| GN-3 | |

GROUNDING NOTES:

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



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



B&T ENGINEERING, INC.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWN BY: CH CHECKED BY: BLJ APPROVED BY: BLJ

RFDS REV #: 1.0

CONSTRUCTION DOCUMENTS

| SUBMITTALS | | |
|------------|----------|-------------------------|
| REV | DATE | DESCRIPTION |
| A | 10/7/21 | ISSUED FOR REVIEW |
| 0 | 12/14/21 | ISSUED FOR CONSTRUCTION |
| 1 | 12/29/21 | ISSUED FOR CONSTRUCTION |
| | | |
| | | |
| | | |

A&E PROJECT NUMBER
156837.001.01

DISH Wireless L.L.C.
PROJECT INFORMATION
LSSNA03163B
11873 APPLE VALLEY ROAD
APPLE VALLEY, CA 92308

SHEET TITLE
GENERAL NOTES

SHEET NUMBER

GN-4



Exhibit "D"
Campaign Contribution Disclosure
(Senate Bill 1439)

DEFINITIONS

Actively supporting the matter: (a) Communicate directly with a member of the Board of Supervisors or other County elected officer [Sheriff, Assessor-Recorder-Clerk, District Attorney, Auditor-Controller/Treasurer/Tax Collector] for the purpose of influencing the decision on the matter; or (b) testifies or makes an oral statement before the County in a proceeding on the matter for the purpose of influencing the County's decision on the matter; or (c) communicates with County employees, for the purpose of influencing the County's decision on the matter; or (d) when the person/company's agent lobbies in person, testifies in person or otherwise communicates with the Board or County employees for purposes of influencing the County's decision in a matter.

Agent: A third-party individual or firm who, for compensation, is representing a party or a participant in the matter submitted to the Board of Supervisors. If an agent is an employee or member of a third-party law, architectural, engineering or consulting firm, or a similar entity, both the entity and the individual are considered agents.

Otherwise related entity: An otherwise related entity is any for-profit organization/company which does not have a parent-subsidary relationship but meets one of the following criteria:

- (1) One business entity has a controlling ownership interest in the other business entity;
- (2) there is shared management and control between the entities; or
- (3) a controlling owner (50% or greater interest as a shareholder or as a general partner) in one entity also is a controlling owner in the other entity.

For purposes of (2), "shared management and control" can be found when the same person or substantially the same persons own and manage the two entities; there are common or commingled funds or assets; the business entities share the use of the same offices or employees, or otherwise share activities, resources, or personnel on a regular basis; or there is otherwise a regular and close working relationship between the entities.

Parent-Subsidiary Relationship: A parent-subsidiary relationship exists when one corporation has more than 50 percent of the voting power of another corporation.

LICENSEE must respond to the questions on the following page. If a question does not apply respond N/A or Not Applicable.

1. Name of LICENSEE: Los Angeles SMSA Limited Partnership dba VERI zan wireless
by and through its attorney in fact ATC Sequoia

2. Is the entity listed in Question No. 1 a non-profit organization under Internal Revenue Code section 501(c)(3)?
 Yes ☐ If yes, skip Question Nos. 3 - 4 and go to Question No. 5.
 No ☒

3. Name of Principal (i.e., CEO/President) of entity listed in Question No. 1, if the individual actively supports the matter and has a financial interest in the decision: N/A

4. If the entity identified in Question No.1 is a corporation held by 35 or less shareholders, and not publicly traded ("closed corporation"), identify the major shareholder(s): N/A

5. Name of any parent, subsidiary, or otherwise related entity for the entity listed in Question No. 1 (see definitions above):

| Company Name | Relationship |
|----------------------------|----------------|
| American Tower Corporation | Parent Company |
| | |

6. Name of agent(s) of LICENSEE:

| Company Name | Agent(s) | Date Agent Retained (if less than 12 months prior) |
|--------------|----------|---|
| | | |
| | | |

7. Name of Subcontractor(s) (including Principal and Agent(s)) that will be providing services/work under the awarded contract if the subcontractor (1) actively supports the matter and (2) has a financial interest in the decision and (3) will be possibly identified in the contract with the County or board governed special district:

| Company Name | Subcontractor(s): | Principal and/or Agent(s): |
|--------------|-------------------|----------------------------|
| | | |
| | | |

8. Name of any known individuals/companies who are not listed in Questions 1-7, but who may (1) actively support or oppose the matter submitted to the Board and (2) have a financial interest in the outcome of the decision:

| Company Name | Individual(s) Name |
|--------------|--------------------|
| | |
| | |

9. Was a campaign contribution, of more than \$250, made to any member of the San Bernardino County Board of Supervisors or other County elected officer within the prior 12 months, by any of the individuals or entities listed in Question Nos. 1-8?

No ☐ If **no**, please skip Question No. 10.

Yes ☐ If **yes**, please continue to complete this form.

10. Name of Board of Supervisor Member or other County elected officer: _____

Name of Contributor: _____

Date(s) of Contribution(s): _____

Amount(s): _____

Please add an additional sheet(s) to identify additional Board Members or other County elected officers to whom anyone listed made campaign contributions.

By signing below, LICENSEE certifies that the statements made herein are true and correct. LICENSEE understands that the individuals and entities listed in Question Nos. 1-8 are prohibited from making campaign contributions of more than \$250 to any member of the Board of Supervisors or other County elected officer while this matter is pending and for 12 months after a final decision is made by the County.



Signature

Richard P. Palermo
Senior Counsel, US Tower

Print Name

11/16/25

Date

Print Entity Name, if applicable