



Development Review Committee
1020 East Pioneer Road
Draper, UT 84020
(801) 576-6399

STAFF REPORT
May 28, 2020

To: Jennifer Jastremsky, AICP, Zoning Administrator

Approved Date

From: Travis Van Ekelenburg, Planner II

Re: **AT&T 5G NR Upgrade – Permitted Use Permit**

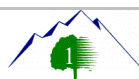
Application No.: USE-977-2020
Applicant: Craig Chagnon
Project Location: 12519 Minuteman Drive
Current Zoning: CG (General Commercial)
Acreage: 11.53 acres (approximately 502,268 square feet)
Request: Request to upgrade antennas and equipment on an existing monopole.

SUMMARY and BACKGROUND

To keep up with the changes in wireless communication technology, AT&T is upgrading many of its facilities throughout the valley. The current application pertains to the existing Wireless Facility known as Carolyn White located at approximately 12519 South Minuteman Drive. The parcel is owned by Beehive Storage Holding Co LLC and is more commonly known as the business located on it, Beehive Storage. A map showing the general area of the Wireless Facility is shown below (Exhibit B).

ANALYSIS

General Plan and Zoning. The Land Use Map of the General Plan calls for the Community Commercial land use designation for the subject property (Exhibit C). This category is characterized as follows:



Community Commercial

LAND USE DESCRIPTION	
CHARACTERISTICS	<ul style="list-style-type: none"> • Includes the full scope of commercial land uses that require and utilize exposure to the freeway • Intended to be traveler-or commuter-oriented and should provide lodging, food, personal services and other similar uses • Frontage roads • Deeper setbacks for landscaping and enhancements • Limited traffic access points • Visual unity • Uniform design standards and aesthetics • Access to individual properties should be provided only from frontage roads • Well landscaped street frontages • Limited traffic access points for the site • Common off-street traffic circulation and parking areas • Pedestrian access from surrounding residential areas
LAND USE MIX	<ul style="list-style-type: none"> • Large-scale, master-planned commercial centers • Big-box stores and offices
COMPATIBLE ZONING	<ul style="list-style-type: none"> • Community Commercial (CC) • General Commercial (CG) • Interchange Commercial (CI) • Institutional Care (IC)
LOCATION	<ul style="list-style-type: none"> • Strategically placed along high-traffic corridors with convenient points of traffic access to and from residential areas

The property is currently zoned CG (General Commercial) zoning designation: “The purpose of the CG zone is to provide areas to accommodate commercial uses which are not within shopping centers of integrated design. This zone is intended to apply to existing "strip commercial" developments. The zone should not be used for new commercial development unless integrated shopping center development is not practical or desirable because of difficult size, shape, topography, or similar problems related to land otherwise deemed to be appropriate for commercial use. Typical uses in this zone include offices, retail stores, personal services, heavy commercial, and institutional uses.” (Please see Exhibit D)

The CG (General Commercial Commercial) zoning designation is identified by the General Plan as a compatible zoning classification for the Community Commercial land use designation. The property is surrounded by CG & CR zoning to the west, RA2 to the east, CG to the south and CC to the north.

Requested Modification. This is simply an equipment upgrade and there will be no change to the facility’s height or footprint. Any change to those will need approval through Draper City. Since no additional monopole height is being requested, this request may be approved at staff level and without a public hearing, this is an equipment upgrade only. The proposal consists of the following changes:

- Remove 3 remote radio heads
- Remove 3 amplifiers
- Remove 3 antennas
- Install 3 remote radio heads

- Install 3 antennas
- Relocate 6 antennas
- Ground scope of work:
 - Upgrade the LTE rack
 - Remove 3 diplexers
 - Install 1 rectifier in power plant

Criteria for Approval. Section 9-41-050(E) of the Draper City Municipal Code contains the development standards for wireless communications facilities:

E. Monopoles With Antennas And Antenna Support Structures: The following provisions shall apply to monopoles with antennas and antenna support structures:

1. Monopoles shall be located as follows:

- a. Monopoles shall not be located in residential or agricultural zones.
- b. Monopoles may be located in commercial, public facility, or industrial zones so long as they are not within a required landscaping, buffering, or parking area.
- c. Monopoles are preferred in the rear yard area of a lot or parcel.
- d. Monopoles shall be set back as follows:

(1) A minimum of two feet (2') for every foot of pole height from the closest line of any property in an adjacent residential zone in which a residential use is located or may be located. The planning commission may reduce the required setback from a residential zone if practical difficulties are demonstrated by the carrier (i.e., city park location, public buildings, etc.).

(2) In addition to the minimum setbacks required by the zone and other locational restrictions of this subsection, monopoles shall be set back from all public rights of way the greater of one hundred feet (100') or one and one-fourth feet (1.25') for every one foot (1') of monopole height, as defined in this subsection.

(3) A monopole shall not be located within five hundred (500) linear feet from another monopole.

2. The height of monopoles shall be as follows:

- a. The maximum height of a monopole with antennas and antenna support structures shall be sixty feet (60') unless additional height is necessary to accommodate a permitted use.
- b. Height shall be measured from the average finished grade at the base of the monopole to the top of the highest portion of the facility.

3. The maximum visible width of antennas and antenna mounting structures on a monopole shall not exceed ten feet (10') in height or fifteen feet (15') in width as viewed looking directly at the monopole at the same elevation as the antennas and antenna mounting structure.

4. Monopoles shall be fenced for security purposes as required in this section.

5. There shall be no climbing pegs located on the lower twenty feet (20') of any monopole.

6. Antennas may be collocated on a single monopole subject to the development standards of this section.

REVIEWS

Planning Division Review. The Draper City Planning Division has completed their review of the request and has issued a recommendation for approval. Comments, if any, can be found in Exhibit A.

Draper City Fire Review. The Draper City Fire Marshal has completed their review of the request. Comments, if any, can be found in Exhibit A.

STAFF RECOMMENDATION

Staff finds that the application complies with the DCMC and recommends that the Zoning Administrator review the request and approve the application based on the findings listed below and the criteria for approval, as listed within the staff report.

The findings for approval as are follows:

1. That the proposed changes will have no perceptible visual impact.
2. That the proposed changes will have no adverse impact on public health and safety.
3. That the proposed changes are compliant with Section 9-41-050(E) of the DCMC.
4. The applicant shall obtain all applicable permits from Draper City Fire and the Building Division for this upgrade.

DEVELOPMENT REVIEW COMMITTEE ACKNOWLEDGEMENT

We, the undersigned, as duly appointed members of the Draper City Development Review Committee, do acknowledge that the application which provides the subject for this staff report has been reviewed by the Committee and has been found to be appropriate for review by the Draper City Planning Commission and/or City Council.

Brien Maxfield

Digitally signed by Brien Maxfield
DN: cn=Brien Maxfield, o=Draper City, ou,
email=brien.maxfield@draper.ut.us, c=US
Date: 2020.06.09 10:08:12 -06'00'

Draper City Public Works Department

Jennifer Jastremsky

Digitally signed by Jennifer Jastremsky
DN: C=US, E=jennifer.jastremsky@draper.ut.us,
O=Draper City Planning, CN=Jennifer Jastremsky
Date: 2020.06.09 10:44:55-06'00'

Draper City Planning Division

Don Buckley

Digitally signed by Don Buckley
DN: C=US, E=don.buckley@draper.ut.us,
O="Draper City Fire ", OU=Fire Marshal,
CN=Don Buckley
Date: 2020.06.09 15:03:44-06'00'

Draper City Fire Department

Mike Barker

Digitally signed by Mike Barker
DN: cn=Mike Barker, o=Draper City, ou=City
Attorney, email=mike.barker@draper.ut.us,
c=US
Date: 2020.06.09 14:28:06 -06'00'

Draper City Legal Counsel

Keith Collier

Digitally signed by Keith Collier
DN: C=US, E=keith.collier@draper.ut.us, O=Draper City,
OU=Building Dept, CN=Keith Collier
Location: Home
Reason: I agree to the terms defined by the placement of my
signature on this document.
General Info: Keith Collier
Date: 2020.06.09 09:51:16-06'00'

Draper City Building Division

EXHIBIT A
DEPARTMENT/DIVISION COMMENTS

Planning Division Review

No comments received.

Draper City Fire Review.

1. 2A-10BC Fire Extinguishers required. The extinguisher needs to be a serviceable type meaning metal head and metal neck. Extinguishers need to be located in a conspicuous location where they will be readily accessible and immediately available for use. Placed on every level of the home. If in cabinet or not the extinguisher or cabinet needs to be mounted so that the top is not more than five (5) feet above the floor.
2. Fire Department Access is required to be maintained. Vehicles cannot park in such a way to impede fire department or emergency vehicle access.
3. Hazardous Material Permit – A Draper City Fire Hazardous Material Permit may need to be obtained. This is for all new and existing installations.

EXHIBIT B AERIAL MAP

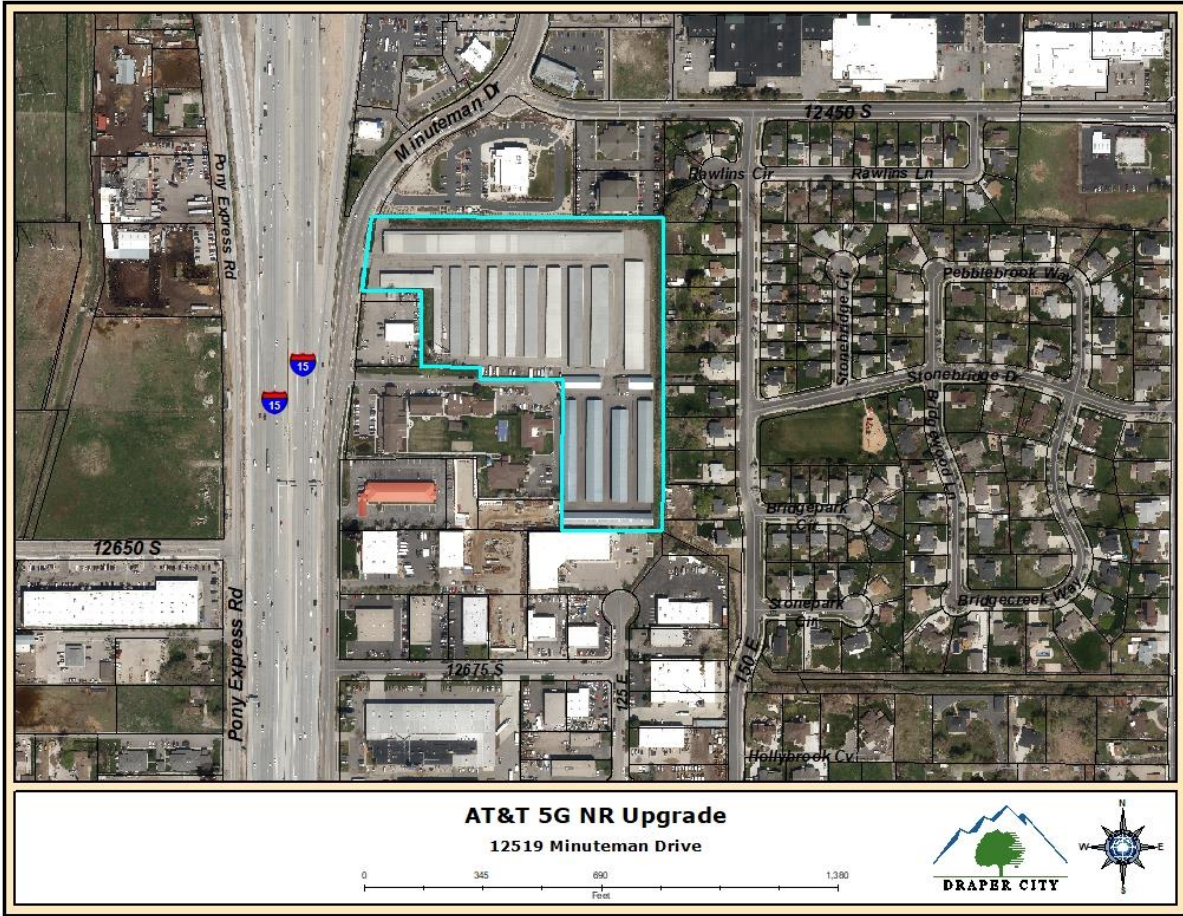
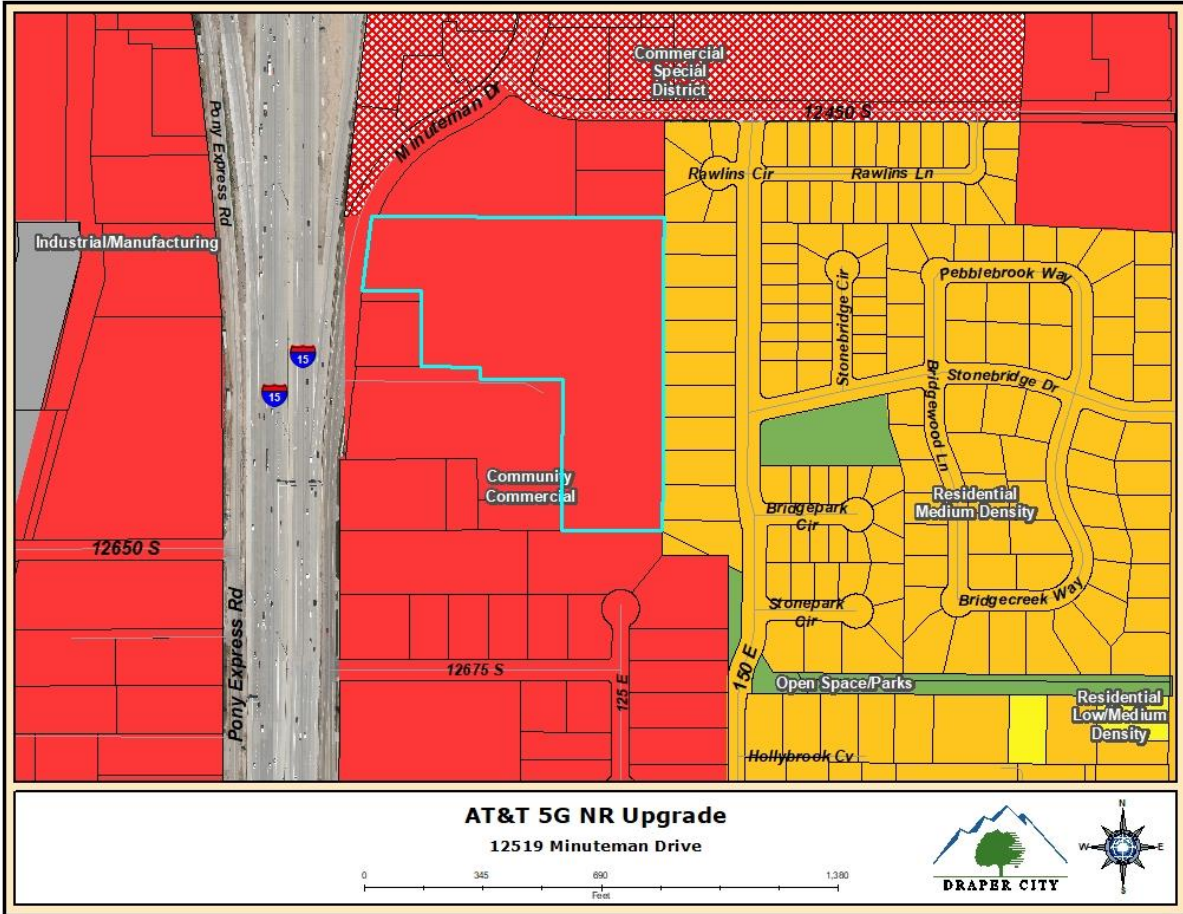
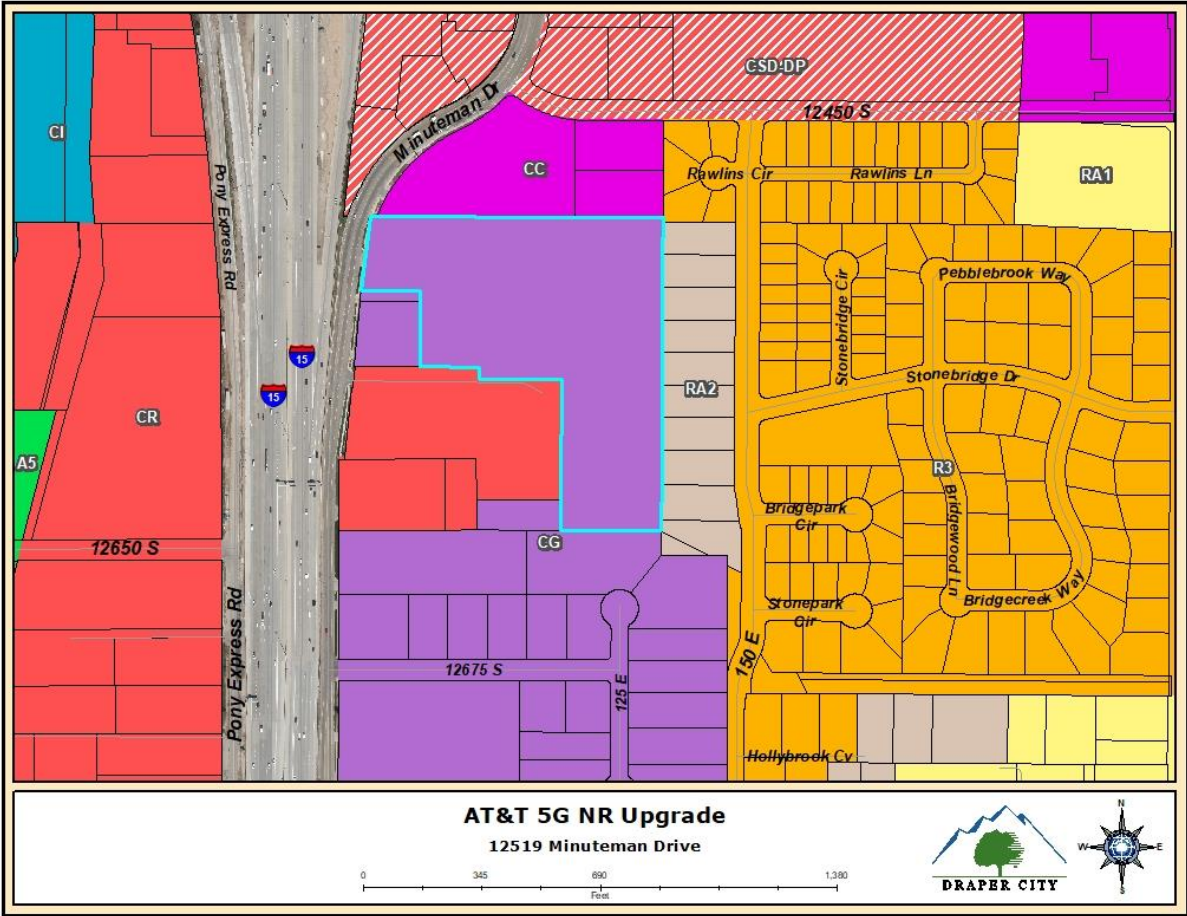


EXHIBIT C LAND USE MAP



**EXHIBIT D
ZONING MAP**



SCOPE OF WORK

THE PURPOSE OF THIS PROJECT IS AS FOLLOWS:

TOWER SCOPE OF WORK:

- REMOVE (3) RRHs
- REMOVE (6) TMAs
- REMOVE (3) ANTENNAS
- RELOCATE (6) ANTENNAS
- INSTALL (3) ANTENNAS
- INSTALL (3) RRHs

GROUND SCOPE OF WORK:

- INSTALL (1) FSM4 W/(1) AMIA, (1) ABIL (1) ASIK IN (E) LTE RACK
- REMOVE (3) DIPLEXERS

DC POWER PLAN REVIEW:

- FAILS RECTIFIER; EXISTING VERTIV 7000 -48VDC POWER PLANT IS EQUIPPED WITH (11) ENERGIZED MODEL R48 2000E3 2KW -48VDC 37A RECTIFIERS. INSTALL (1) NEW RECTIFIER FOR A TOTAL OF (12) ACTIVE RECTIFIERS
- PASSES CONVERTER; EXISTING VERTIV 7000 -48VDC POWER PLANT IS EQUIPPED WITH (3) ENERGIZED MODEL C48/24-1500 1.5KW -48/+24VDC 63A DC CONVERTERS

BATTERY CHECK:

- BATTERY RESERVE CAPACITY @ 2.04 HRS, THERE ARE (12) MARATHON M12V155FT BATTERIES I.E. (3) STRING CONFIGURED @ 48VDC NOMINAL

HVAC

- PASSES HVAC TONNAGE CAPACITY; THERE ARE (2) EXISTING 3-TON HVAC UNITS WITH DC BLOWERS

RFDS INFO:
ID: 2983967 VER: 1.00
DATE 12/31/2019

PROJECT DIRECTORY

TOWER OWNER: CROWN CASTLE
2055 S. STEARMAN DRIVE
CHANDLER, AZ 85286
CONTACT: NICOLE RUSSELL
PHONE: (602) 845-1766

APPLICANT: AT&T MOBILITY CORP.
161 INVERNESS DRIVE WEST, 2ND FLOOR
ENGLEWOOD, CO 80112
CONTACT: CONNOR RICHARDS
PHONE: (303) 828-7114

A&E FIRM: TELCYTE INFRASTRUCTURE SERVICES
2227 W PECOS RD, SUITE 4
CHANDLER, AZ 85227
CMUELLER@TELCYTE.COM

GENERAL NOTES

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



CALL UTAH ONE CALL
(800) 662-4111
CALL 3 WORKING DAYS
BEFORE YOU DIG!



CONSTRUCTION DRAWINGS

AT&T SITE NUMBER:

UTL02161

AT&T FA NUMBER:

10088425

PROJECT ID AND PACE NUMBER:

5G NR: MRUTH034365

CROWN CASTLE SITE NAME:

VF OUTLET

CROWN CASTLE SITE NUMBER:

880588

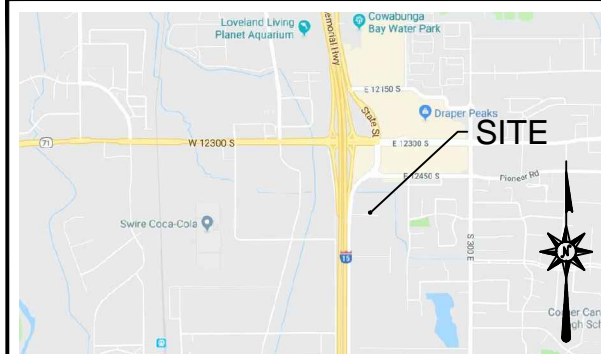
CROWN CASTLE APPLICATION:

499369

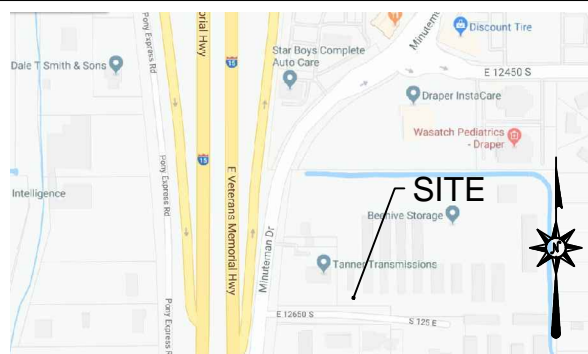
SITE ADDRESS:

12519 SOUTH MINUTEMAN DRIVE
DRAPER, UT 84020
(CITY OF DRAPER)

VICINITY MAP



LOCAL MAP



DIRECTIONS TO THE SITE FROM SALT LAKE CITY INTERNATIONAL AIRPORT:
GET ON I-80 E FROM N TERMINAL DR (3.8 MI) TAKE I-215 S AND I-15 S TO UT-71 N/E 12300 S IN DRAPER. TAKE EXIT 291 FROM I-15 S (19.2 MI) TAKE MINUTEMAN DR TO E 12650 S (0.5 MI) USE THE RIGHT LANE TO MERGE ONTO UT-71 N/E 12300 S (0.1 MI) TURN RIGHT ONTO MINUTEMAN DR 0.3 MI TURN LEFT ONTO E 12650 S DESTINATION WILL BE ON THE LEFT

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND 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 THE LATEST EDITIONS OF THE FOLLOWING:

- 2018 INTERNATIONAL BUILDING CODE
- 2018 INTERNATIONAL FIRE CODE
- 2018 INTERNATIONAL FUEL GAS CODE
- 2018 INTERNATIONAL MECHANICAL CODE
- 2018 INTERNATIONAL EXISTING BUILDING CODE
- 2018 INTERNATIONAL PROPERTY MAINTENANCE CODE
- 2017 NATIONAL ELECTRICAL CODE
- ANSI/TIA/EIA-222-G
- LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES
- FAA COMPLIANCE
- FCC COMPLIANCE

PERMITTING/ZONING APPROVAL:

SIGNATURE _____ DATE _____

LANDLORD APPROVAL:

SIGNATURE _____ DATE _____

AT&T PROJECT MANAGER APPROVAL:

SIGNATURE _____ DATE _____

SITE SUMMARY

SITE TYPE: UPGRADE
TYPE OF OCCUPANCY: TELECOMMUNICATIONS
TOWER TYPE: MONOPOLE
TOWER LATITUDE: 40.5229700'
TOWER LONGITUDE: -111.8895600'
AMSL: 4429'-0"±
ZONING JURISDICTION: CITY OF DRAPER
COUNTY: SALT LAKE
PARCEL NUMBER: 27012010290000
POWER COMPANY: ROCKY MOUNTAIN POWER
787-548-3768
TELEPHONE COMPANY: CENTURYLINK
281-359-9519
PROPERTY OWNER: 8700 SOUTH 200 WEST, LLC
T.B.D.
T.B.D.
24 HOUR NOC CONTACT: (800) 783-7011
GATE COMBINATION: 7011

SHEET INDEX

SHEET NO.	DESCRIPTION	REV. NO.	REVISION DATE
T-1	TITLE SHEET	0	04/06/20
GN-1	GENERAL NOTES	0	04/06/20
GN-2	GENERAL NOTES	0	04/06/20
S-1	SITE PLAN	0	04/06/20
C-1	COMPOUND PLANS	0	04/06/20
C-2	EQUIPMENT PLANS	0	04/06/20
C-3	TOWER ELEVATIONS	0	04/06/20
C-4	ANTENNA LAYOUTS	0	04/06/20
C-5	FINAL RF EQUIPMENT SCHEDULE	0	04/06/20
C-6	ANTENNA DETAILS	0	04/06/20
G-1	GROUNDING NOTES & DETAILS	0	04/06/20
G-2	GROUNDING DETAILS	0	04/06/20

PREPARED FOR:



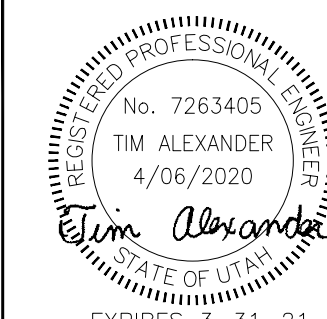
PREPARED FOR:



PREPARED BY:



2227 W. PECOS ROAD, SUITE 4,
CHANDLER AZ 85224



DRAWN BY: AK
CHECKED BY: CW
APPV'D: CM

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
8/12/19	PRELIMINARY CDs	A	AK
10/04/19	CLIENT COMMENTS	B	JM
04/06/20	SUBMITTAL CDs	0	JM

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED THE WHOLE OR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF TELCYTE IS PROHIBITED.

AT&T SITE NUMBER:

UTL02161

CROWN SITE NAME:

VF OUTLET

CROWN SITE NUMBER:

880588

SITE ADDRESS:

12519 SOUTH MINUTEMAN DRIVE
DRAPER, UT 84020

SHEET TITLE

TITLE
SHEET

SHEET NUMBER

T-1

GENERAL NOTES:

1. EVERY EFFORT HAS BEEN MADE IN THE CONSTRUCTION DOCUMENTS TO PROVIDE A COMPLETE SCOPE OF WORK. MINOR DISCREPANCIES IN THE DRAWINGS AND/OR SPECIFICATIONS SHALL NOT EXCUSE CONTRACTORS FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
2. ALL REFERENCES TO OWNER HEREIN SHALL BE CONSTRUED TO MEAN THE CARRIER OR ITS DESIGNATED REPRESENTATIVE.
3. BIDDING REQUIREMENTS
 - a. PRIOR TO THE SUBMISSION OF BIDS, VISIT THE JOB SITE TO BECOME FAMILIAR WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT. VISIT THE SITE WITH THE CONSTRUCTION DOCUMENTS TO VERIFY FIELD DIMENSIONS AND CONDITIONS TO CONFIRM THAT THE PROJECT WILL BE ACCOMPLISHED AS SHOWN.
 - b. PROVIDE NOTIFICATION TO OWNER IN WRITING OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO SUBMISSION OF PRICE PROPOSAL. IN THE EVENT OF DISCREPANCIES, PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE.
 - c. WHEN TOWER IS OWNED BY A THIRD PARTY, CONTACT TOWER OWNER REPRESENTATIVE FOR PARTICIPATION IN BID WALK.
 - d. WHERE ANCHORING TO A CONCRETE ROOF SLAB, CONFIRM (PRIOR TO SUBMITTING BID) THE PRESENCE OF POST TENSION TENDONS. INCLUDE PROVISIONS FOR X-RAY PROCEDURES TO LOCATE THE TENDONS PRIOR TO CONSTRUCTION.
4. DRAWINGS ARE NOT TO BE SCALED. WRITTEN DIMENSIONS TAKE PRECEDENCE. CONSTRUCTION DOCUMENTS ARE INTENDED FOR DIAGRAMMATIC PURPOSES ONLY, UNO.
5. FIELD VERIFY ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. BRING ANY DISCREPANCIES IMMEDIATELY TO THE ATTENTION OF THE OWNER AND RESOLVE BEFORE PROCEEDING WITH THE WORK.
6. FURNISH ALL MATERIALS, EQUIPMENT, LABOR, AND ANY REQUIREMENTS NECESSARY TO COMPLETE PROJECT AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS.
7. SUPERVISE AND DIRECT THE PROJECT DESCRIBED IN THE CONSTRUCTION DOCUMENTS. PROVIDE ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
8. ALL WORK PERFORMED ON THE PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES APPLICABLE TO THE WORK.
9. CONSTRUCTION COORDINATION REQUIREMENTS
 - a. NOTIFY OWNER OF ANY DISCREPANCIES PRIOR TO START OF WORK.
 - b. OBTAIN ALL PERMITS. SCHEDULE AND COORDINATE ALL INSPECTIONS.
 - c. PROVIDE, AT THE PROJECT SITE, A FULL, CURRENT SET OF CONSTRUCTION DOCUMENTS FOR USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
 - d. RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DOCUMENTS.
 - e. PERFORM WORK DURING OWNER'S PREFERRED HOURS TO AVOID DISTURBING NORMAL BUSINESS.
 - f. PROVIDE FALL PROTECTION IN ACCORDANCE WITH FEDERAL, STATE, LOCAL, AND OWNER REQUIREMENTS.
 - g. IF FAA LIGHTING AND MARKING IS PRESENT ON SITE AND IS POWERED BY ELECTRICAL SERVICE THAT IS TO BE INTERRUPTED, MAINTAIN THE NECESSARY LIGHTS DURING CONSTRUCTION AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A DISRUPTION.
 - h. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF PROJECT AREA DURING CONSTRUCTION.
 - i. STRUCTURAL COMPONENTS OF ADJACENT FACILITIES SHALL NOT BE ALTERED BY THIS CONSTRUCTION PROJECT, UNO. ENSURE THAT EXCAVATION DOES NOT AFFECT ADJACENT STRUCTURES.
 - j. SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL-APPROVED MATERIALS, IF APPLICABLE.
 - k. BURIED UTILITIES MAY EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY NOT BE COMPLETE. CONTACT THE UTILITY LOCATE SERVICE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
 - l. COORDINATE ALL POWER INSTALLATION WITH POWER COMPANY AS REQUIRED. REPORT POWER INSTALLATION COORDINATION SOLUTION(S) TO OWNER.
 - m. PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
 - n. KEEP GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OR PREMISES. SITE SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
 - o. MAINTAIN THE INTEGRITY OF THE BUILDING ENVELOPE AND CONSTRUCT BARRIERS IN THE AREA OF WORK TO PREVENT DAMAGE FROM WEATHER AS WELL AS FROM CONSTRUCTION DUST AND DEBRIS.
10. INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S SPECIFICATIONS, UNO, OR WHERE LOCAL CODES OR ORDINANCES DIRECT OTHERWISE.
11. PROPOSED CELLULAR EQUIPMENT AND FIXTURES WILL BE FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR, UNLESS NOTED OTHERWISE.

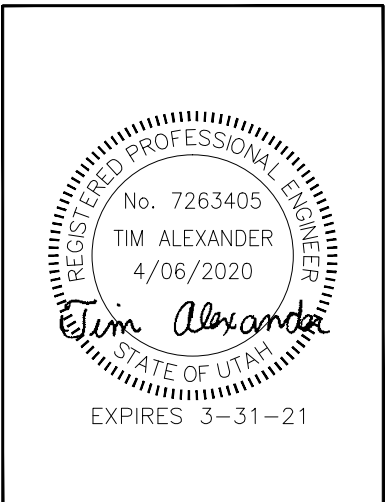
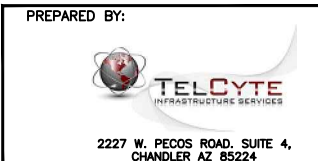
12. ANY SUBSTITUTIONS OF MATERIALS AND/OR EQUIPMENT, MUST BE APPROVED BY OWNER.
13. DOCUMENT ALL CHANGES MADE IN THE FIELD BY MARKING UP THE APPROVED CONSTRUCTION DRAWINGS AND SUBMITTING THE REDLINED SET TO OWNER UPON COMPLETION. DOCUMENT ALL WORK PERFORMED WITH PHOTOGRAPHS TO BE SUBMITTED WITH REDLINED CONSTRUCTION DRAWINGS.
14. PROVIDE SUPPORTS FOR CABLES TO THE ELEVATION OF ALL INITIAL AND FUTURE ANTENNAS IN ACCORDANCE WITH ALL MANUFACTURER'S REQUIREMENTS.
15. CONFIRM THAT THE REQUIREMENTS OF THE STRUCTURAL ANALYSIS, MOUNT ANALYSIS AND ANY ASSOCIATED MODIFICATIONS HAVE BEEN FOLLOWED AND COMPLETED AS REQUIRED TO SUPPORT THE EQUIPMENT ASSOCIATED WITH THIS PROJECT.

ABBREVIATIONS

A/C	AIR CONDITIONING	MGR	MANAGER
AFF	ABOVE FINISHED FLOOR	MIN	MINIMUM
AGL	ABOVE GROUND LEVEL, ABOVE GRADE LEVEL	MISC	MISCELLANEOUS
AWS	ADVANCED WIRELESS SERVICE	NA	NOT APPLICABLE
BBU	BATTERY BACKUP UNIT	NIC	NOT IN CONTRACT
BLDG	BUILDING	NO	NUMBER
BLK	BLOCKING	NTS	NOT TO SCALE
CLG	CEILING	OC	ON CENTER
CLR	CLEAR	OD	OUTSIDE DIAMETER
CONC	CONCRETE	PCS	PERSONAL COMMUNICATION SERVICE
CONT	CONTINUOUS	PDU	POWER DISTRIBUTION UNIT
D	DEPTH	PROJ	PROJECT
DBL	DOUBLE	PROP	PROPERTY
DEG	DEGREE	PT	PRESSURE TREATED
Ø, DIA	DIAMETER	PVC	POLYVINYL CHLORIDE
DIAG	DIAGONAL	REQ	REQUIRED
DN	DOWN	RF	RADIO FREQUENCY
DET	DETAIL	RM	ROOM
DWG	DRAWING	RO	ROUGH OPENING
E	EXISTING	RRH	REMOTE RADIO HEAD
EA	EACH	SHT	SHEET
ELEV, EL	ELEVATION	SIM	SIMILAR
ELEC	ELECTRICAL	SPEC	SPECIFICATION
EQ	EQUAL	SF	SQUARE FOOT
EQUIP	EQUIPMENT	SS	STAINLESS STEEL
EXT	EXTERIOR	STL	STEEL
FIF	FIBER INTERFACE FRAME, FACILITY INTERFACE FRAME	SUSP	SUSPENDED
FIN	FINISH	TMA	TOWER MOUNTED AMPLIFIER
FLUOR	FLUORESCENT	TND	TINNED
FLR	FLOOR	TYP	TYPICAL
FT	FOOT, FEET	UMTS	UNIVERSAL MOBILE TELECOMMUNICATION SERVICE
GA	GAUGE	UNO	UNLESS NOTED OTHERWISE
GALV	GALVANIZED	VERT	VERTICAL
GC	GENERAL CONTRACTOR	W/	WITH
GRND	GROUND	W/O	WITHOUT
GSM	GLOBAL SYSTEM MOBILE	WCS	WIRELESS COMMUNICATION SERVICE
GYP	GYPSON BOARD	WP	WATER PROOF
HORZ	HORIZONTAL		
HR	HOUR		
HT	HEIGHT		
ID	INSIDE DIAMETER		
IN	INCH, INCHES		
INSUL	INSULATION		
INT	INTERIOR		
L	LENGTH		
LBS	POUNDS		
LTE	LONG TERM EVOLUTION		
MAX	MAXIMUM		
MECH	MECHANICAL		
MTL	METAL		
MFR	MANUFACTURER		

PROJECT NOTES

1. THE FOLLOWING INFORMATION HAS BEEN PROVIDED BY CROWN CASTLE FOR THIS PROJECT AND HAS NOT BEEN FIELD VERIFIED AS PART OF THIS PROJECT.
 - a. SITE LAYOUT INFORMATION AND ORIENTATION
 - b. EXISTING TOWER, MOUNT AND EQUIPMENT ELEVATIONS
 - c. DESIGN PACKAGE BASED ON THE APPLICATION #: PENDING v0
2. A STRUCTURAL ANALYSIS TO DETERMINE THE TOWER CAPACITY TO SUPPORT THIS PROPOSED EQUIPMENT WAS PERFORMED FOR CROWN CASTLE OUTSIDE THE SCOPE OF THIS PROJECT.
 - a. STRUCTURAL ANALYSIS BY: FDH INFRASTRUCTURE SERVICES
 - b. DATED: 9/5/19
 - c. RESULTS: PASS
3. A MOUNT ANALYSIS TO DETERMINE THE MOUNT CAPACITY TO SUPPORT THIS PROPOSED EQUIPMENT WAS PERFORMED FOR CROWN CASTLE OUTSIDE THE SCOPE OF THIS PROJECT.
4. CONFIRM THAT THE REQUIREMENTS OF THE STRUCTURAL ANALYSIS AND ANY ASSOCIATED MODIFICATIONS HAVE BEEN FOLLOWED AND COMPLETED AS REQUIRED TO SUPPORT THE EQUIPMENT ASSOCIATED WITH THIS PROJECT.



DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS				
DATE	DESCRIPTION	REV	ISSUED BY	
8/12/19	PRELIMINARY CD's	A	AK	
10/04/19	CLIENT COMMENTS	B	JM	
04/06/20	SUBMITTAL CD's	0	JM	

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AT&T SITE NUMBER:
UTL02161

CROWN SITE NAME:
VF OUTLET

CROWN SITE NUMBER:
880588

SITE ADDRESS:
12519 SOUTH MINUTEMAN DRIVE
DRAPER, UT 84020

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

SITE NOTES:

- WHEN SITE WORK IS INCLUDED IN SCOPE:
 - CLEAR AND GRUB SITE OF ALL VEGETATION, PAVING, GRAVEL BASE AND OTHER DEBRIS NOT TO REMAIN. SUBGRADES ARE TO BE SET PRIOR TO LANDSCAPE INSTALLATION.
 - PROVIDE ELEVATION OF SUBGRADE WITHIN 0.10 FOOT OF ELEVATIONS SHOWN ON PLAN MINUS DEPTH OF TOPSOIL, FILL, AND MULCH.
 - ROUGH GRADE ALL AREAS WITHIN 1 FOOT OF ELEVATIONS INDICATED BEFORE PLANTING. PROVIDE POSITIVE DRAINAGE AWAY FROM EQUIPMENT SLABS, BUILDINGS AND THROUGH ALL PLANTER AREAS TO AVOID LOW SPOTS AND STANDING WATER.
 - BLEND NEW GRADES NATURALLY INTO EXISTING GRADES.
 - MAINTAIN POSITIVE DRAINAGE ON THE SITE AT ALL TIMES.
 - IF REQUIRED, MAINTAIN CONTINUOUS EROSION CONTROL ON THE DOWNSTREAM SIDE OF THE SITE.
 - IN LANDSCAPE AREAS, FINISH GRADES ARE TO FOLLOW THE GRADES AND EDGE DETAILS INDICATED AND BE MOUNDED 6 INCHES IN THE CENTER OF THE BED ABOVE THE EDGE OF THE LANDSCAPE AREA.
 - DO NOT PLACE FILL OR EMBANKMENT MATERIAL ON FROZEN GROUND. DO NOT PLACE FROZEN MATERIALS, SNOW OR ICE IN ANY FILL OR EMBANKMENT.
 - NOTIFY OWNER IF MODIFICATIONS TO THE PROPOSED GRADING SEEM NECESSARY AND OBTAIN APPROVAL PRIOR TO START OF WORK.
- FOOTINGS SHALL BEAR ON FIRM, NATURAL, UNDISTURBED SOIL, OR ON ENGINEERED FILL (COMPACTED TO 95% ASTM D1557). ENSURE THAT EXCAVATIONS ARE FREE OF ORGANIC MATERIAL, DEBRIS, OR OTHER FOREIGN MATERIAL. NOTIFY OWNER IF ANY UNUSUAL CONDITIONS ARE ENCOUNTERED.
- FILL AND SLAB BASE MATERIAL SHALL BE 3/4" MINUS CRUSHED ROCK PLACED IN 8" (MAXIMUM) LOOSE LIFTS AND COMPACTED TO 98% ASTM D1557.

CONCRETE NOTES:

- CONCRETE AND REINFORCING SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

CONCRETE CONSTRUCTION	ACI 318, f'c=4 KSI, UNO
CEMENT	ASTM C150, PORTLAND CEMENT TYPE II, UNO
REINFORCING STEEL	ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, fy=60 KSI, UNO
WELDED WIRE FABRIC	ASTM A185
SPIRAL REINFORCEMENT	ASTM A615, GRADE 60, fy=60 KSI
ANCHOR BOLTS	ASTM A307
GRADE 60 REBAR WELDING	ASTM A706

NOTES: ANY BARS SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy=40 KSI. REINFORCING COMPLYING WITH ASTM A615(S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN A.W.S. D14 ARE SUBMITTED.

- CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE	3"
FORMED SURFACES EXPOSED (≥ #6 BARS)	2"
TO EARTH OR WEATHER (≤ #5 BARS)	1 1/2"
SLABS AND WALLS (INTERIOR FACE)	3/4"

- AIR ENTRAIN ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, C618, C989 AND C1017. AIR ENTRAIN CONCRETE EXPOSED TO FREEZING AND THAWING WHILE MOIST IN ACCORDANCE WITH ACI 318, SECTION 4.4.1.
- DETAIL REINFORCING STEEL (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH AC1 315 AND 318. LAP ALL CONTINUOUS REINFORCEMENT AT LEAST 30 BAR DIAMETERS OR A MINIMUM OF 2'-0". PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS AT LEAST 30 BAR DIAMETERS OR A MINIMUM OF 2'-0". LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
- PERFORM WELDING OF GRADE 60 REINFORCING BARS (IF REQUIRED) USING LOW HYDROGEN ELECTRODES. PERFORM WELDING OF GRADE 40 REINFORCING BARS (IF REQUIRED) USING E70 XX ELECTRODES. DO NOT WELD WITHIN 4" OF COLD BENDS IN REINFORCING STEEL.
- DO NOT FIELD BEND REINFORCING PARTIALLY EMBEDDED IN CONCRETE UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE ENGINEER.
- SUPPORT BARS ON CHAIRS OR DOBIE BRICKS.
- FURNISH NON-SHRINK GROUT BY AN APPROVED MANUFACTURER. MIX AND PLACE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (4 KSI, MINIMUM).
- ALL EXPANSION ANCHORS TO BE HILTI BRAND, UNO. TEST ADHESIVE ANCHORS TO CONFIRM CAPACITY UNLESS WAIVED BY ENGINEER AND LOCAL JURISDICTION.

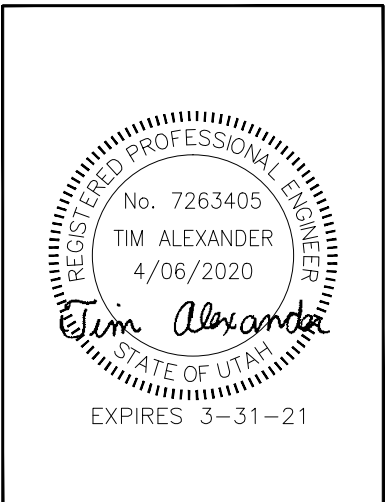
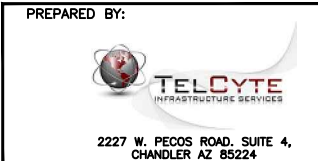
STRUCTURAL STEEL NOTES:

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

WIDE FLANGE SHAPES	ASTM A992, GRADE 50
SHAPES, PLATES, ANGLES, & RODS	ASTM A36, Fy 36 KSI
SPECIAL SHAPES AND PLATES	ASTM A572, Fy 50 KSI
PIPE COLUMNS	ASTM A53, GR B, Fy 35 KSI
STRUCTURAL TUBING	ASTM A500, GR B, Fy 46KSI
ANCHOR BOLTS	ASTM A307
CONNECTION BOLTS	ASTM A325 TWIST-OFF
- BASE STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION (INCLUDING FIELD WELDING, HIGH STRENGTH FIELD BOLTING, EXPANSION BOLTS, AND THREADED EXPANSION ANCHORS) ON THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" LATEST EDITION.
- HOT DIP GALVANIZE AFTER FABRICATION PER A123/A123M-00 ALL STEEL EXPOSED TO WEATHER AND WHERE NOTED.
- CONFORM TO ALL AISC AND AWS STANDARDS FOR WELDING. PERFORM WELDING BY ANSI/AWS D1.1 CERTIFIED WELDERS USING E70 XX ELECTRODES. USE ONLY PRE-QUALIFIED WELDS AS DEFINED BY AWS.
- PROVIDE COLD-FORMED STEEL FRAMING MEMBERS OF THE SHAPE, SIZE, AND GAGE SHOWN ON THE PLANS. PROVIDE MINIMUM SECTION PROPERTIES INDICATED. ALL COLD-FORMED STEEL FRAMING SHALL CONFORM TO THE AISI "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."
- FOR BOLTED CONNECTIONS, USE 3/4" DIA., BEARING-TYPE, A325 BOLTS WITH A MINIMUM OF TWO BOLTS, UNO.
- FOR NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING, USE 5/8" DIA. A307 BOLTS, UNO.
- PREPARE AND PAINT IN ACCORDANCE WITH THE PAINT MANUFACTURERS WRITTEN INSTRUCTIONS, UNO.
- TOUCH UP ALL FIELD DRILLING, WELDING AND CUT SURFACES WITH 2 COATS OF GALVACON (ZINC RICH PAINT) OR APPROVED EQUAL.

SPECIAL INSPECTIONS:

- WHEN REQUIRED, PROVIDE SPECIAL INSPECTIONS PERFORMED BY AN INDEPENDENT INSPECTOR, APPROVED BY OWNER'S REPRESENTATIVE AND THE LOCAL JURISDICTION.
- THE SPECIAL INSPECTOR SHALL PROVIDE A COPY OF THE REPORT TO THE OWNER'S REPRESENTATIVE, STRUCTURAL ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL.



DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
8/12/19	PRELIMINARY CDs	A	AK
10/04/19	CLIENT COMMENTS	B	JM
04/06/20	SUBMITTAL CDs	0	JM

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AT&T SITE NUMBER:
UTL02161

CROWN SITE NAME:
VF OUTLET

CROWN SITE NUMBER:
880588

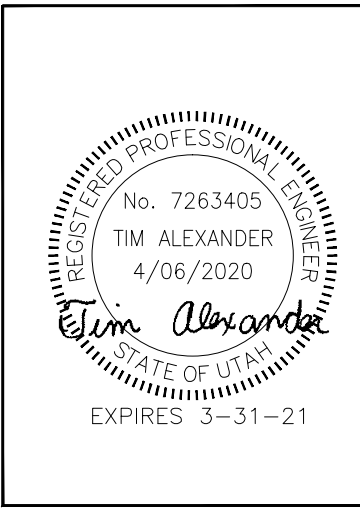
SITE ADDRESS:
12519 SOUTH MINUTEMAN DRIVE
DRAPER, UT 84020

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-2



PREPARED BY:
TEL CYTE
 INFRASTRUCTURE SERVICES
 2227 W. PECOS ROAD, SUITE 4,
 CHANDLER AZ 85224



DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS				
DATE	DESCRIPTION	REV	ISSUED BY	
8/12/19	PRELIMINARY CDs	A	AK	
10/04/19	CLIENT COMMENTS	B	JM	
04/06/20	SUBMITTAL CDs	0	JM	

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 UTL02161

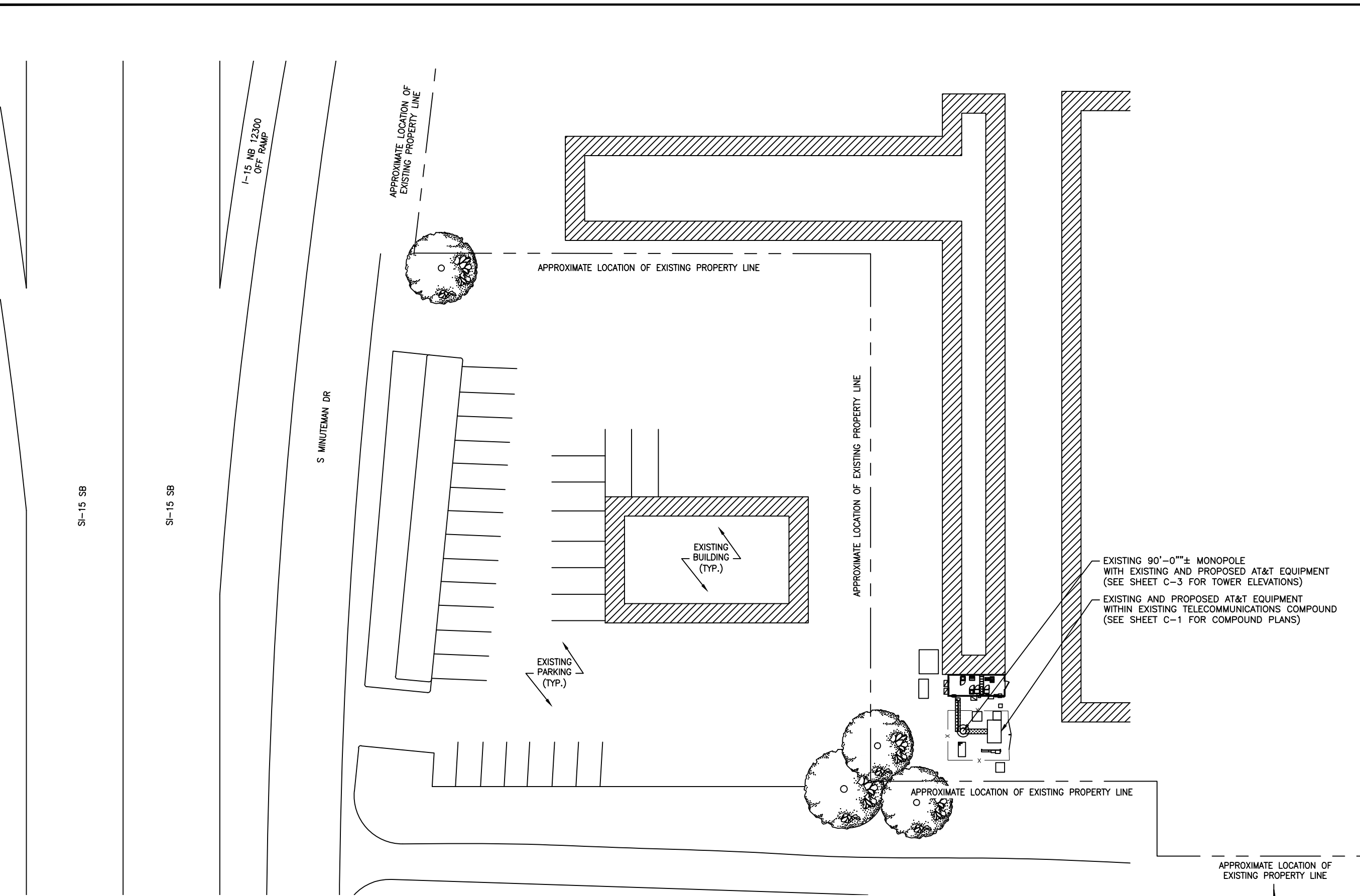
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 VF OUTLET

CROWN SITE NUMBER:
 880588

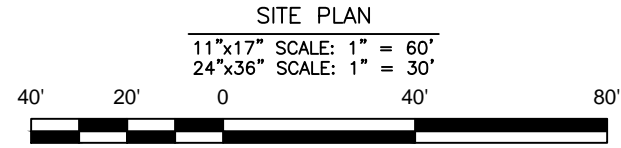
SITE ADDRESS:
 12519 SOUTH MINUTEMAN DRIVE
 DRAPER, UT 84020

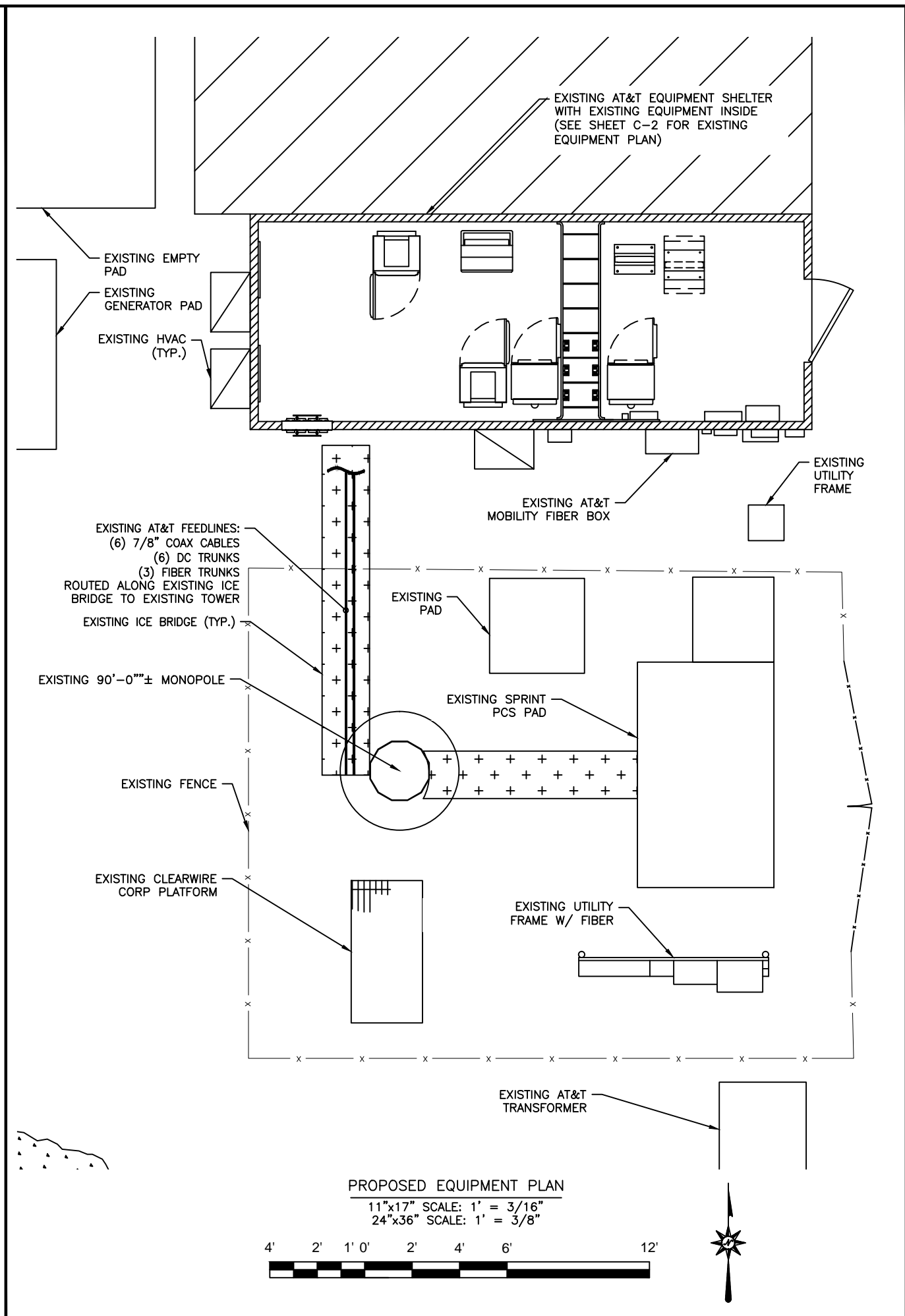
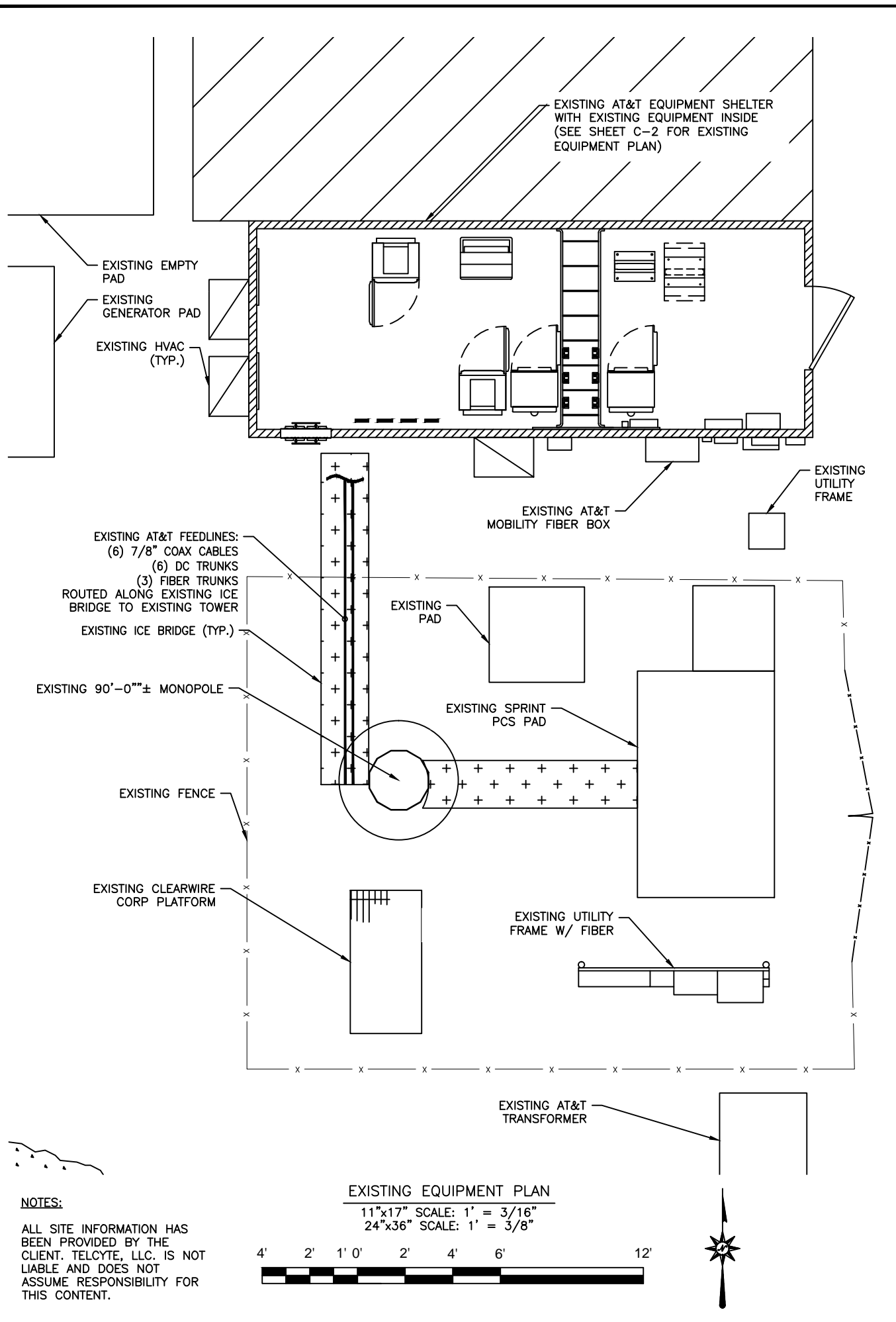
SHEET TITLE
 SITE PLAN

SHEET NUMBER
S-1



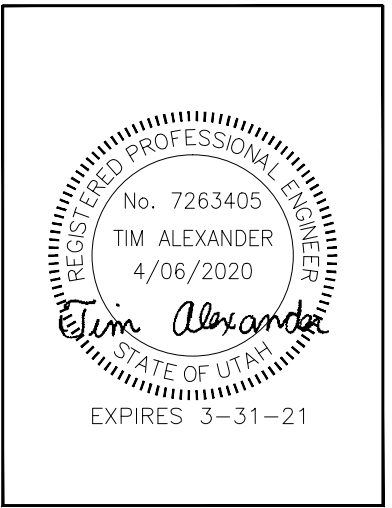
NOTES:
 ALL SITE INFORMATION HAS BEEN PROVIDED BY THE CLIENT. TELCYTE, LLC. IS NOT LIABLE AND DOES NOT ASSUME RESPONSIBILITY FOR THIS CONTENT.





PREPARED BY:

 2227 W. PECOS ROAD, SUITE 4,
 CHANDLER AZ 85224



DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
8/12/19	PRELIMINARY CDs	A	AK
10/04/19	CLIENT COMMENTS	B	JM
04/06/20	SUBMITTAL CDs	0	JM

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CROWN SITE NUMBER:
880588

SITE ADDRESS:
12519 SOUTH MINUTEMAN DRIVE
DRAPER, UT 84020

SHEET TITLE
COMPOUND PLANS

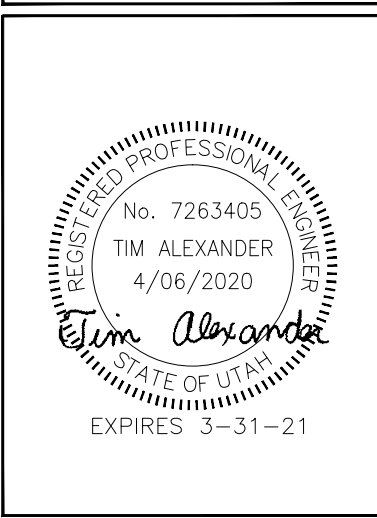
SHEET NUMBER
C-1

NOTES:
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PREPARED BY:

 2227 W. PECOS ROAD, SUITE 4,
 CHANDLER AZ 85224



DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
8/12/19	PRELIMINARY CDs	A	AK
10/04/19	CLIENT COMMENTS	B	JM
04/06/20	SUBMITTAL CDs	0	JM

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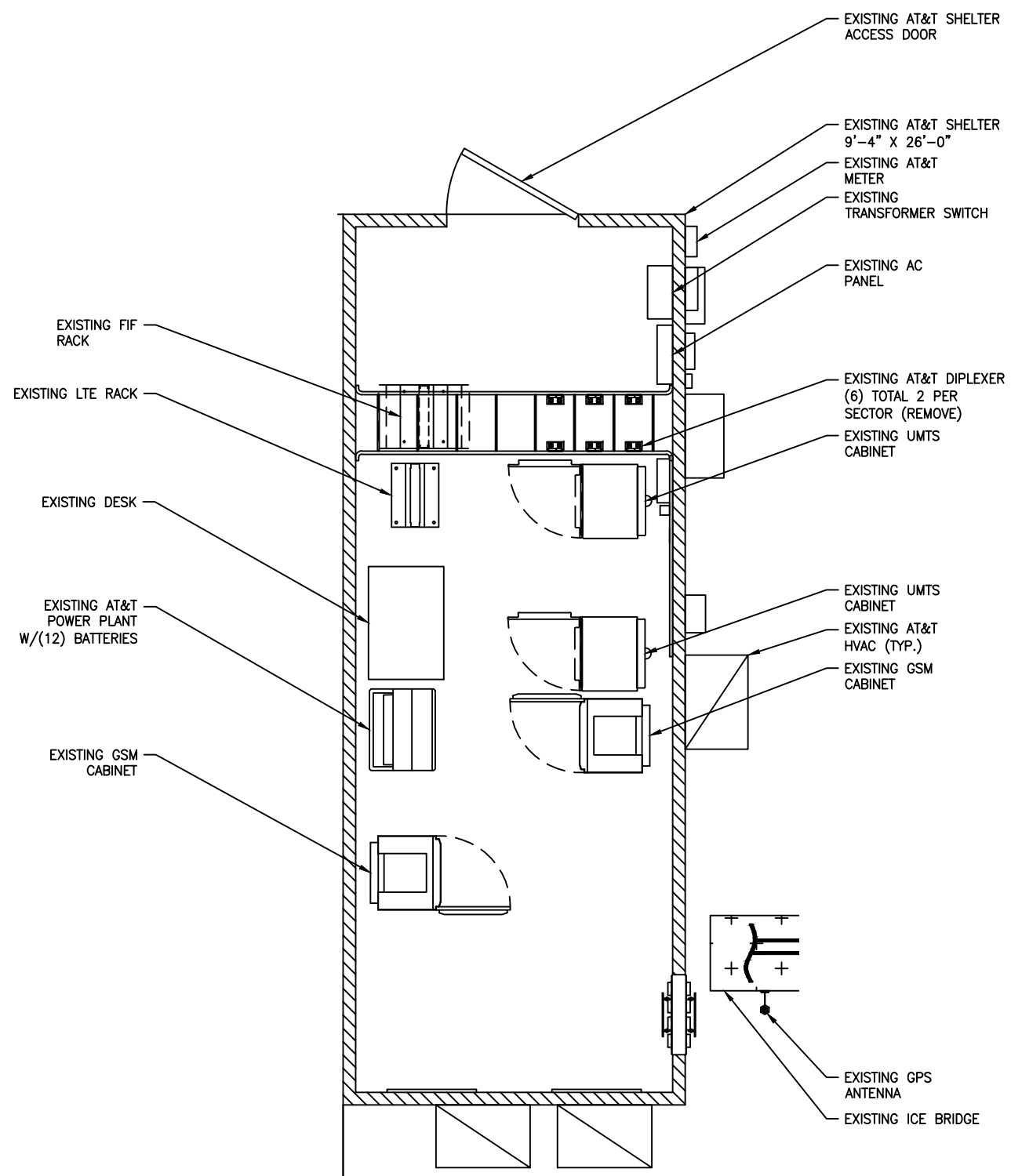
CROWN SITE NAME:
 VF OUTLET

CROWN SITE NUMBER:
 880588

SITE ADDRESS:
 12519 SOUTH MINUTEMAN DRIVE
 DRAPER, UT 84020

SHEET TITLE
 EQUIPMENT PLANS

SHEET NUMBER
C-2

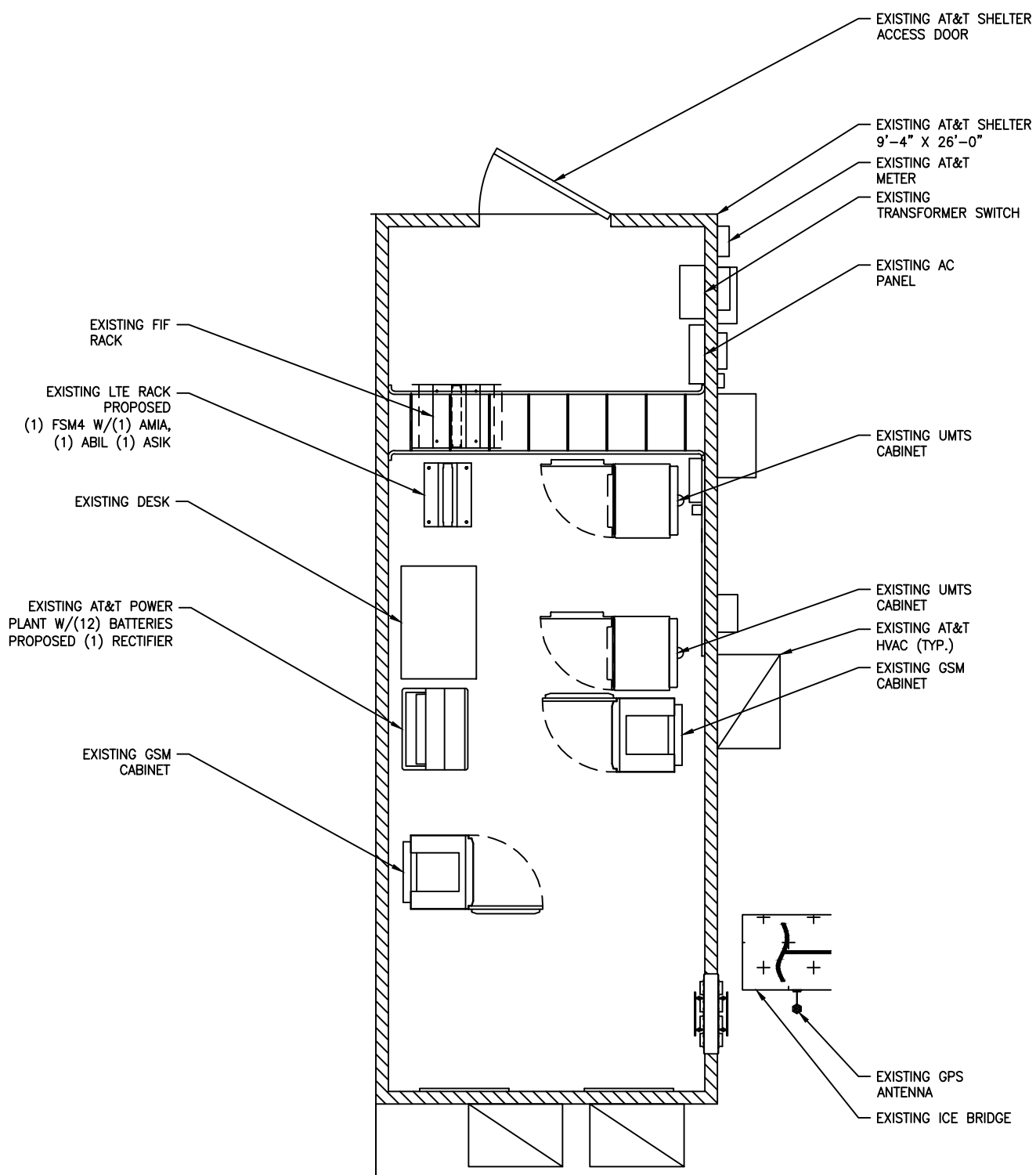


EXISTING EQUIPMENT PLAN

11"x17" SCALE: 1" = 4'
 24"x36" SCALE: 1" = 2"



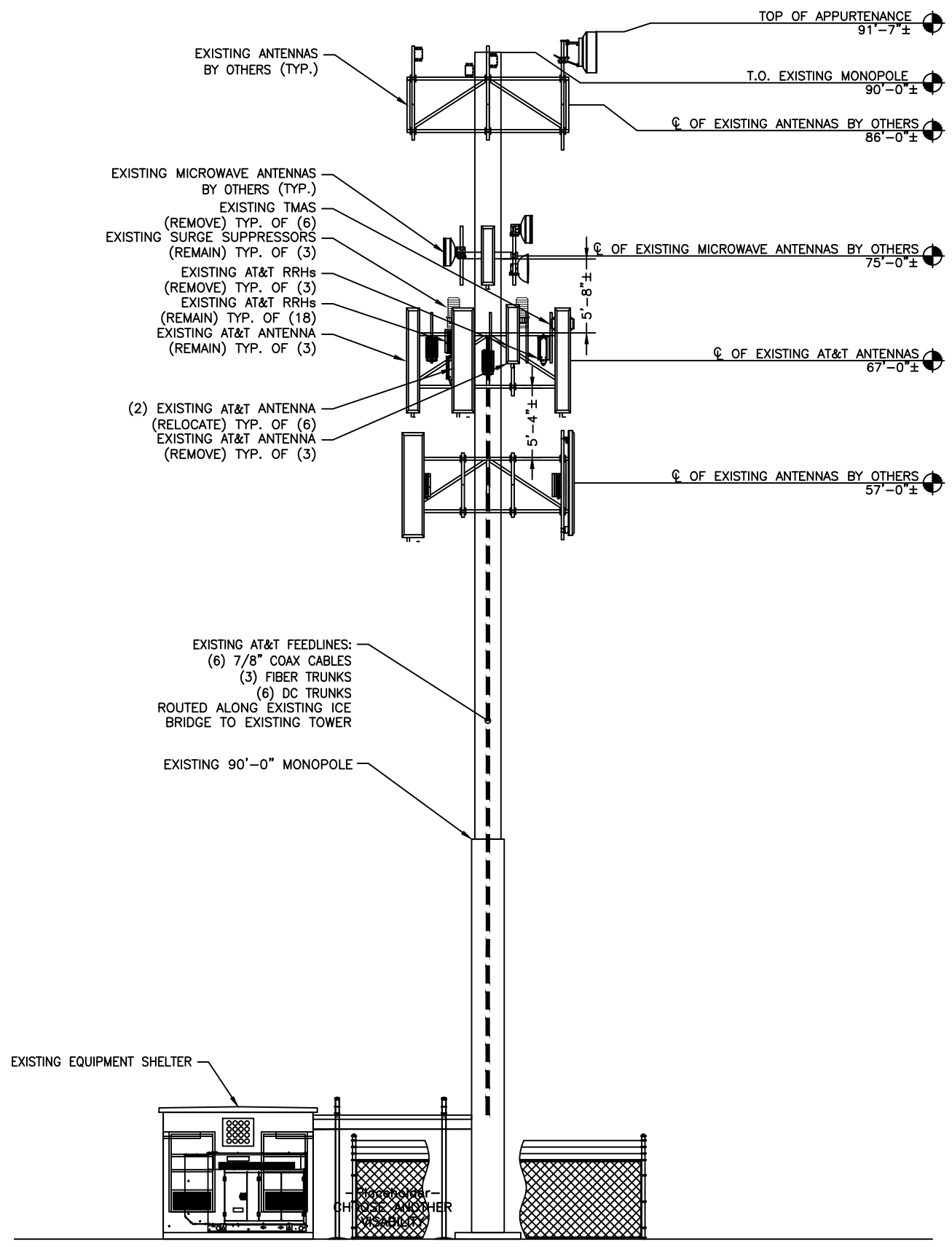
NOTES:
 1) ALL SITE INFORMATION HAS BEEN PROVIDED BY THE CLIENT. TELCYTE IS NOT LIABLE AND DOES NOT ASSUME RESPONSIBILITY FOR THIS CONTENT.
 2) CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION



PROPOSED EQUIPMENT PLAN

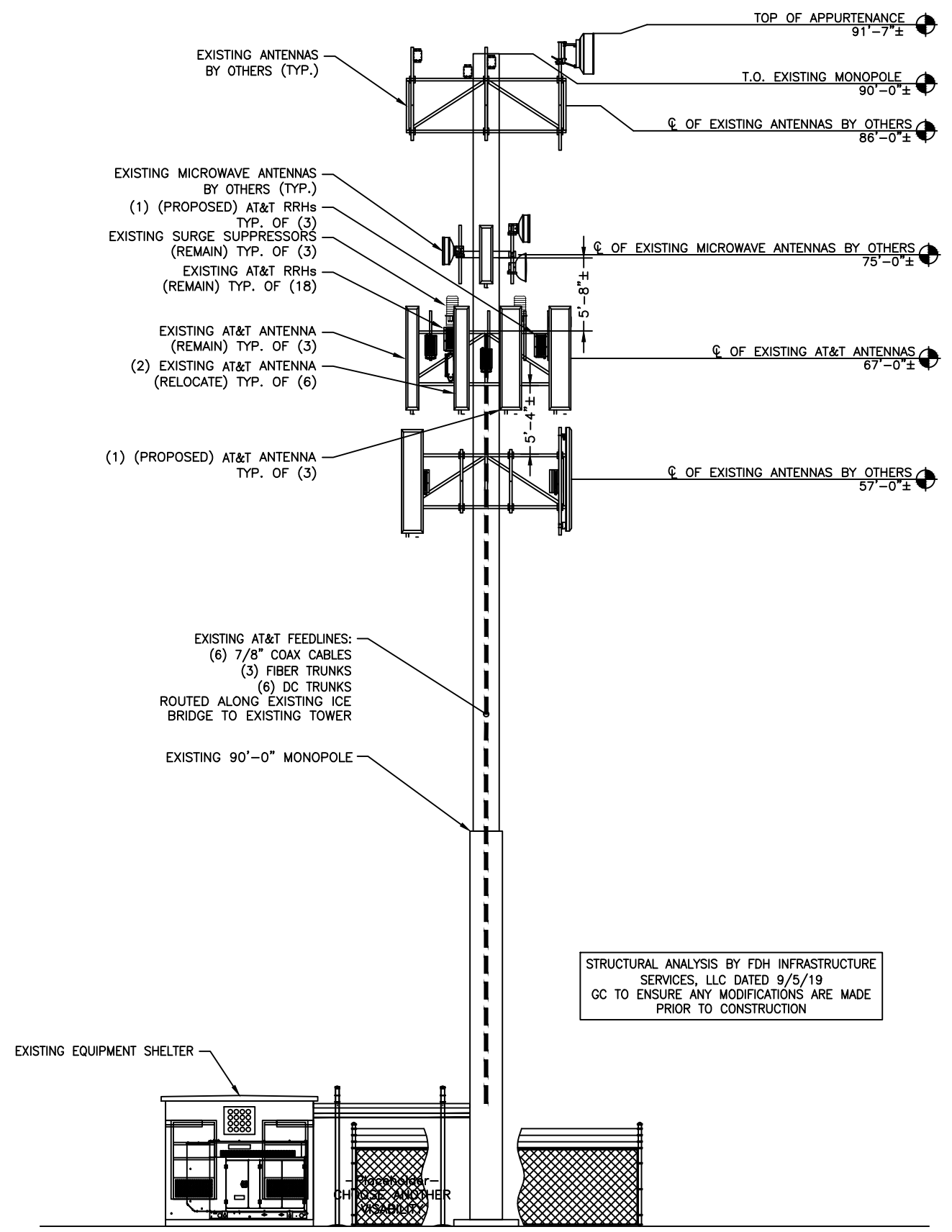
11"x17" SCALE: 1" = 4'
 24"x36" SCALE: 1" = 2"





EXISTING TOWER ELEVATION
 11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.

THE TOWER DRAWING IS ONLY A GRAPHIC REPRESENTATION OF THE STRUCTURE. THE ACTUAL TOWER MAY VARY IN THE FIELD



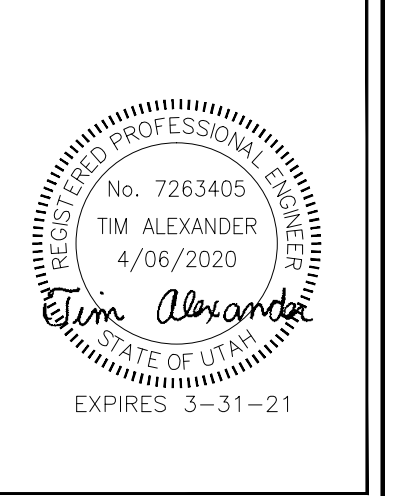
PROPOSED TOWER ELEVATION
 11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.

THE TOWER DRAWING IS ONLY A GRAPHIC REPRESENTATION OF THE STRUCTURE. THE ACTUAL TOWER MAY VARY IN THE FIELD

STRUCTURAL ANALYSIS BY FDH INFRASTRUCTURE SERVICES, LLC DATED 9/5/19 GC TO ENSURE ANY MODIFICATIONS ARE MADE PRIOR TO CONSTRUCTION



PREPARED BY:
 TELICYTE
 INFRASTRUCTURE SERVICES
 2227 W. PECOS ROAD, SUITE 4,
 CHANDLER AZ 85224

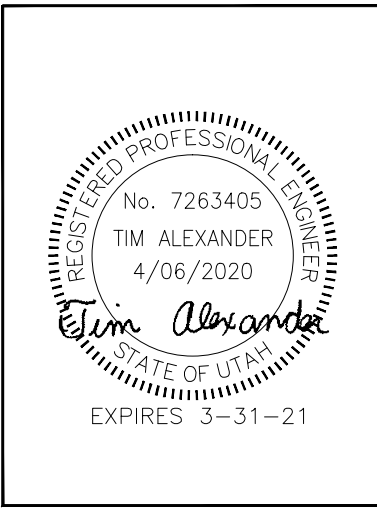
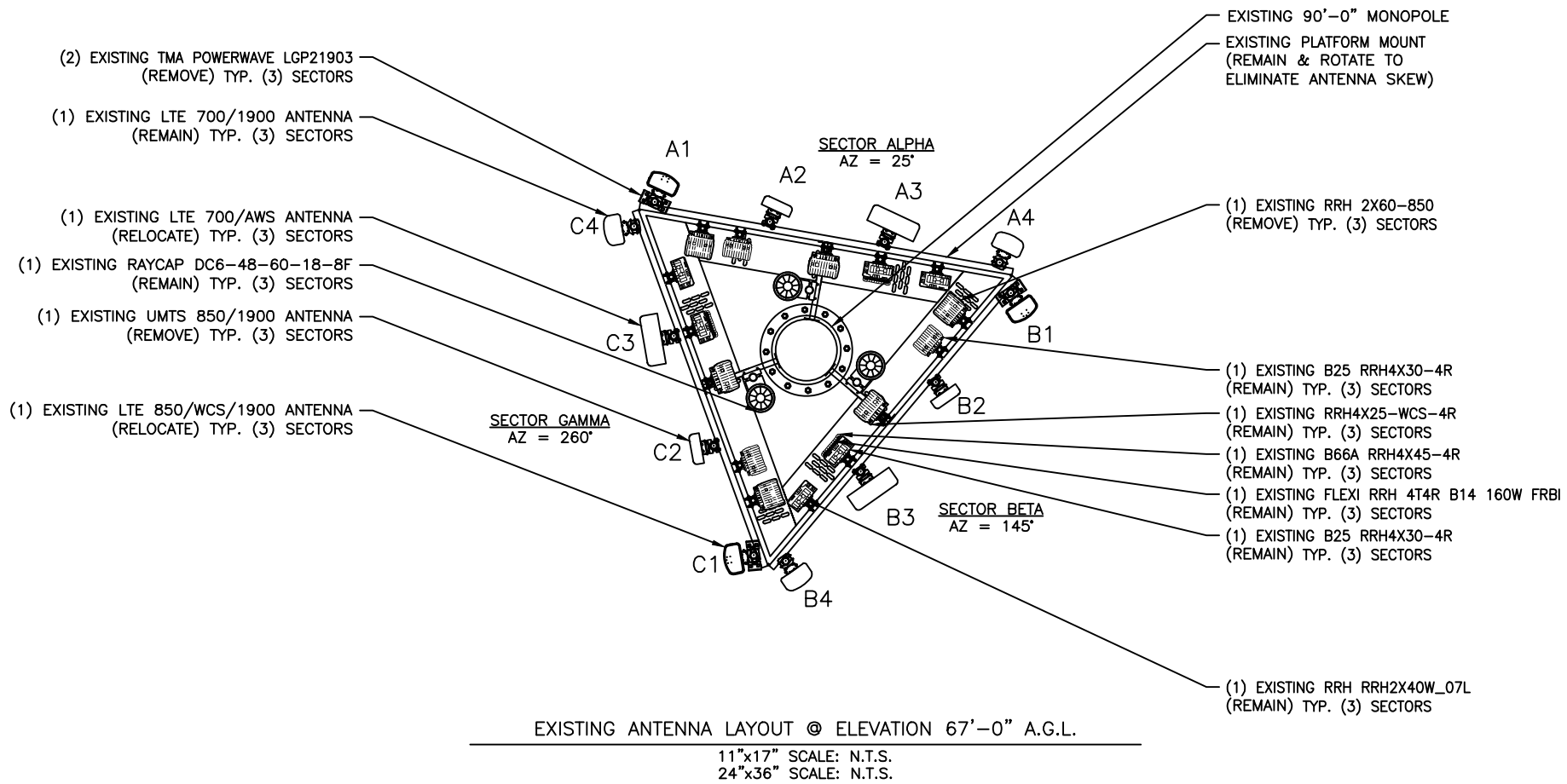


DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
8/12/19	PRELIMINARY CDs	A	AK
10/04/19	CLIENT COMMENTS	B	JM
04/06/20	SUBMITTAL CDs	0	JM

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 UTL02161
 CROWN SITE NAME:
 VF OUTLET
 CROWN SITE NUMBER:
 880588
 SITE ADDRESS:
 12519 SOUTH MINUTEMAN DRIVE
 DRAPER, UT 84020
 SHEET TITLE
 TOWER ELEVATIONS
 SHEET NUMBER
 C-3



DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS				
DATE	DESCRIPTION	REV	ISSUED BY	
8/12/19	PRELIMINARY CDs	A	AK	
10/04/19	CLIENT COMMENTS	B	JM	
04/06/20	SUBMITTAL CDs	0	JM	

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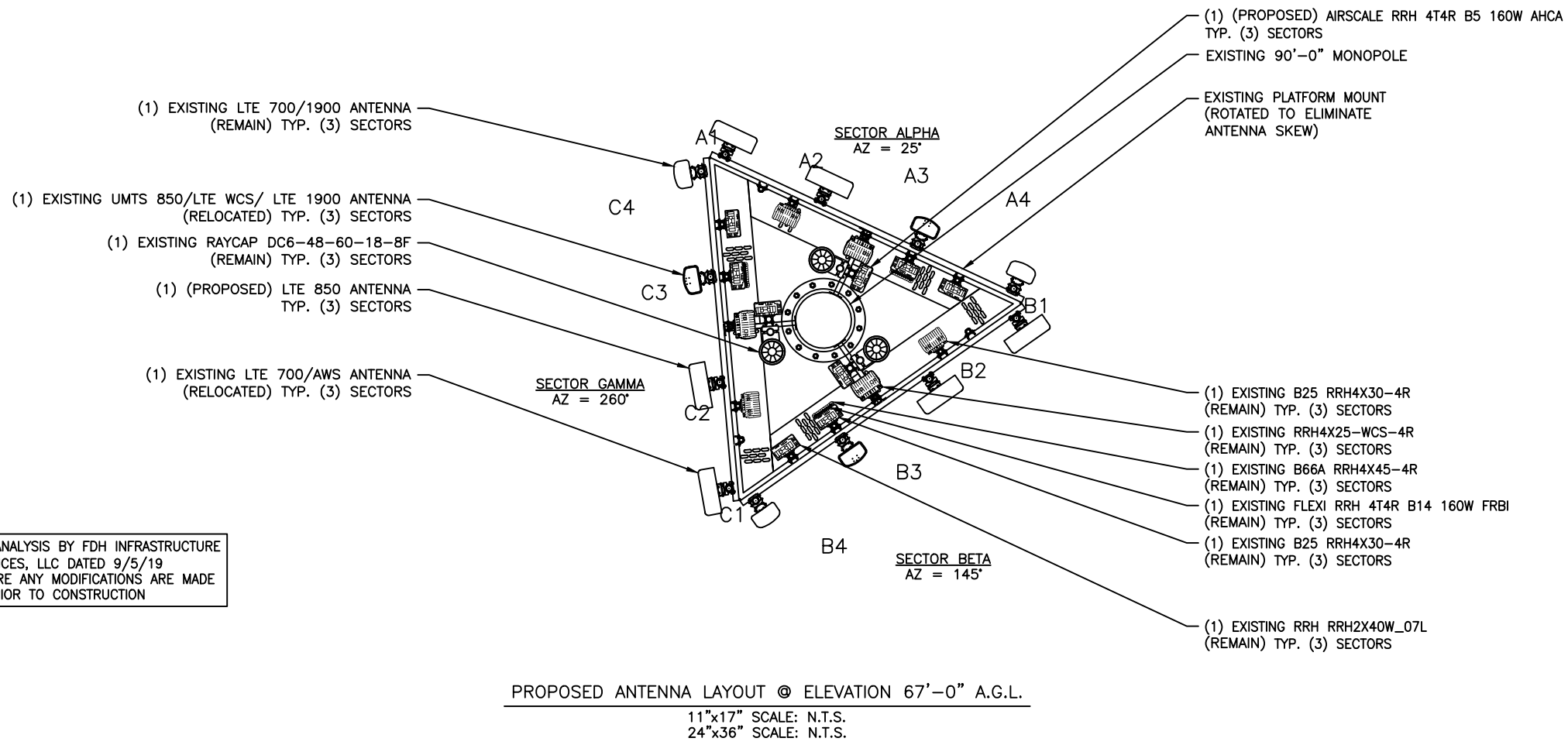
CROWN SITE NAME:
VF OUTLET

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SITE ADDRESS:
12519 SOUTH MINUTEMAN DRIVE
DRAPER, UT 84020

SHEET TITLE
ANTENNA LAYOUTS

SHEET NUMBER
C-4

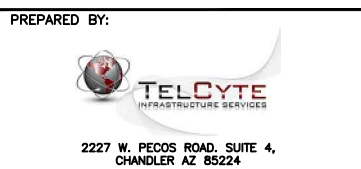


STRUCTURAL ANALYSIS BY FDH INFRASTRUCTURE SERVICES, LLC DATED 9/5/19 GC TO ENSURE ANY MODIFICATIONS ARE MADE PRIOR TO CONSTRUCTION

(P) = PROPOSED

FINAL ANTENNA & CABLE SCHEDULE (ALL EQUIPMENT MOUNTED ON TOWER)

SECTOR	MAR K	BAND	ANTENNA MAKE/MODEL	ANTENNA HEIGHT	ANTENNA AZIMUTH	TMA QTY./TYPE	RADIO QTY./TYPE	SURGE PROTECTION QTY./TYPE	CABLE QTY./TYPE
ALPHA	A1	LTE 700/AWS	COMMSCOPE - NNH4-65C-R6	67'-0"	25°	-	(1) FLEXI RRH 4T4R B14 160W FRBI (1) B66A RRH 4X45 -4R	(1) DC6-48-60-18-8F	(2) 7/8" COAX CABLES (1) FIBER TRUNK (2) DC TRUNKS
	A2	LTE 850	(P) (1) COMMSCOPE - NNH4-65C-R6			(P) (1) AIRSCALE RRH 4T4R B5 160W AHCA			
	A3	UMTS 850/ LTE WCS/ LTE1900	ANDREW - SBJAH4-1D65C-DL			(1) B25 RRH 4X30-4R (1) RRH 4X25 -WCS- 4R			
	A4	LTE 700/1900	ANDREW - SBNHH-1D65C			(1) RRH 2X40W_7L (1) B25 RRH 4X30-4R			
BETA	B1	LTE 700/AWS	COMMSCOPE - NNH4-65C-R6	67'-0"	145°	-	(1) FLEXI RRH 4T4R B14 160W FRBI (1) B66A RRH 4X45 -4R	(1) DC6-48-60-18-8F	(2) 7/8" COAX CABLES (1) FIBER TRUNK (2) DC TRUNKS
	B2	LTE 850	(P) (1) COMMSCOPE - NNH4-65C-R6			(P) (1) AIRSCALE RRH 4T4R B5 160W AHCA			
	B3	UMTS 850/ LTE WCS/ LTE1900	ANDREW - SBJAH4-1D65C-DL			(1) B25 RRH 4X30-4R (1) RRH 4X25 -WCS- 4R			
	B4	LTE 700/1900	ANDREW - SBNHH-1D65C			(1) RRH 2X40W_7L (1) B25 RRH 4X30-4R			
GAMMA	C1	LTE 700/AWS	COMMSCOPE - NNH4-65C-R6	67'-0"	260°	-	(1) FLEXI RRH 4T4R B14 160W FRBI (1) B66A RRH 4X45 -4R	(1) DC6-48-60-18-8F	(2) 7/8" COAX CABLES (1) FIBER TRUNK (2) DC TRUNKS
	C2	LTE 850	(P) (1) COMMSCOPE - NNH4-65C-R6			(P) (1) AIRSCALE RRH 4T4R B5 160W AHCA			
	C3	UMTS 850/ LTE WCS/ LTE1900	ANDREW - SBJAH4-1D65C-DL			(1) B25 RRH 4X30-4R (1) RRH 4X25 -WCS- 4R			
	C4	LTE 700/1900	ANDREW - SBNHH-1D65C			(1) RRH 2X40W_7L (1) B25 RRH 4X30-4R			



DRAWN BY: AK
CHECKED BY: CW
APPV'D: CM

SUBMITTALS				
DATE	DESCRIPTION	REV	ISSUED BY	
8/12/19	PRELIMINARY CDs	A	AK	
10/04/19	CLIENT COMMENTS	B	JM	
04/06/20	SUBMITTAL CDs	0	JM	

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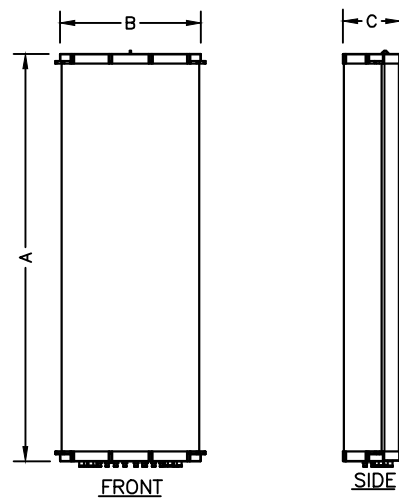
CROWN SITE NAME:
VF OUTLET

CROWN SITE NUMBER:
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SITE ADDRESS:
12519 SOUTH MINUTEMAN DRIVE
DRAPER, UT 84020

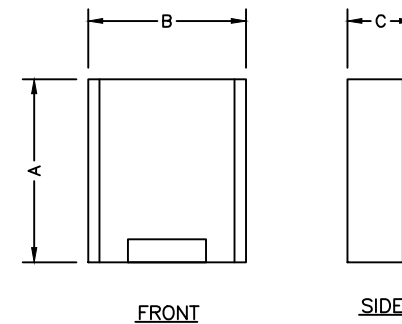
SHEET TITLE
FINAL RF EQUIPMENT SCHEDULE

SHEET NUMBER
C-5



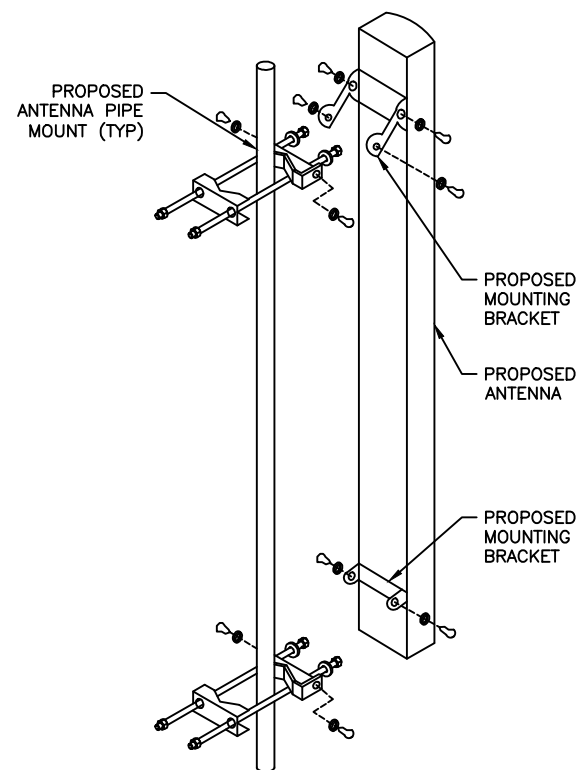
ANTENNA SPECIFICATIONS				
MODEL	LENGTH (A)	WIDTH (B)	DEPTH (C)	WEIGHT (lb)
COMMSCOPE - NNH4-65C-R6	96.0"	19.6"	7.8"	99.2

ANTENNA SPECIFICATIONS
 11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.

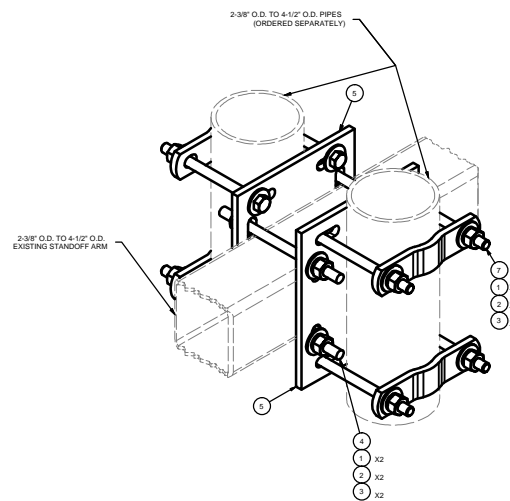


RADIO SPECIFICATIONS				
MODEL	LENGTH (A)	WIDTH (B)	DEPTH (C)	WEIGHT (lb)
NOKIA - 4T4R B5 AHCA	13.30"	11.60"	6.50"	35.27

RADIO SPECIFICATIONS
 11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.



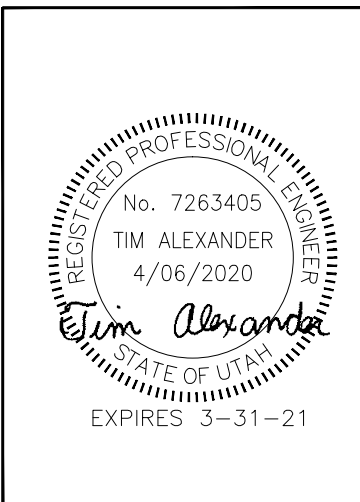
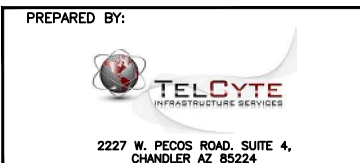
ANTENNA MOUNTING
 11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	24	G12FW	1/2" HDG USS FLATWASHER		0.03	0.82
2	16	G12LW	1/2" HDG LOCKWASHER		0.01	0.22
3	16	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	1.15
4	4	G12R-8	1/2" x 8" THREADED ROD (HDG.)		0.35	1.41
5	2	SCX3	CROSSOVER PLATE	9 1/4 in	7.19	14.38
6	4	X-115765	5" V-CLAMP		1.02	4.07
7	8	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	3.28
					TOTAL WT. #	25.33

TOLERANCE NOTES TOLERANCES ON DIMENSIONS, UNLESS OTHERWISE NOTED ARE: SAWED, SHEARED AND GAS CUT EDGES (± 0.030") DRILLED AND GAS CUT HOLES (± 0.030") - NO CONING OF HOLES LASER CUT EDGES AND HOLES (± 0.010") - NO CONING OF HOLES BENDS ARE ± 1/2 DEGREE ALL OTHER MACHINING (± 0.030") ALL OTHER ASSEMBLY (± 0.060")		DESCRIPTION UNIVERSAL BACK TO BACK PIPE MOUNT		Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX Engineering Support Team: 1-888-753-7446	
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.	PAGE	
81 03	CEK 1/30/2013	BMC 1/30/2013	BBPM-U	1 OF 1	
CLASS	DRAWING USAGE	CHECKED BY	DWG. NO.	PAGE	
81 03	CUSTOMER	BMC 1/30/2013	BBPM-U	1 OF 1	

SITEPRO1 BBPM-U BACK TO BACK PIPE MOUNT
 11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.



DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS				
DATE	DESCRIPTION	REV	ISSUED BY	
8/12/19	PRELIMINARY CDs	A	AK	
10/04/19	CLIENT COMMENTS	B	JM	
04/06/20	SUBMITTAL CDs	0	JM	

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AT&T SITE NUMBER:
 UTL02161

CROWN SITE NAME:
 VF OUTLET

CROWN SITE NUMBER:
 880588

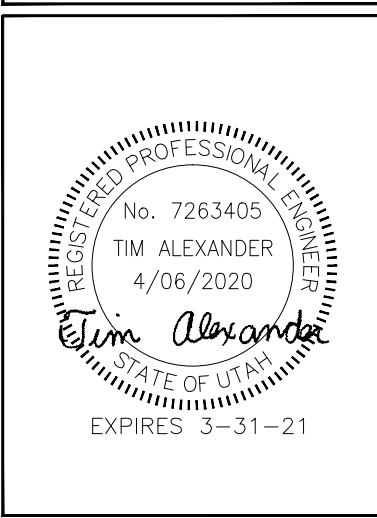
SITE ADDRESS:
 12519 SOUTH MINUTEMAN DRIVE
 DRAPER, UT 84020

SHEET TITLE
 ANTENNA DETAILS

SHEET NUMBER
 C-6



PREPARED BY:
 TELICYTE
 INFRASTRUCTURE SERVICES
 2227 W. PECOS ROAD, SUITE 4,
 CHANDLER AZ 85224



DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS				
DATE	DESCRIPTION	REV	ISSUED BY	
8/12/19	PRELIMINARY CDs	A	AK	
10/04/19	CLIENT COMMENTS	B	JM	
04/06/20	SUBMITTAL CDs	0	JM	

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 UTL02161

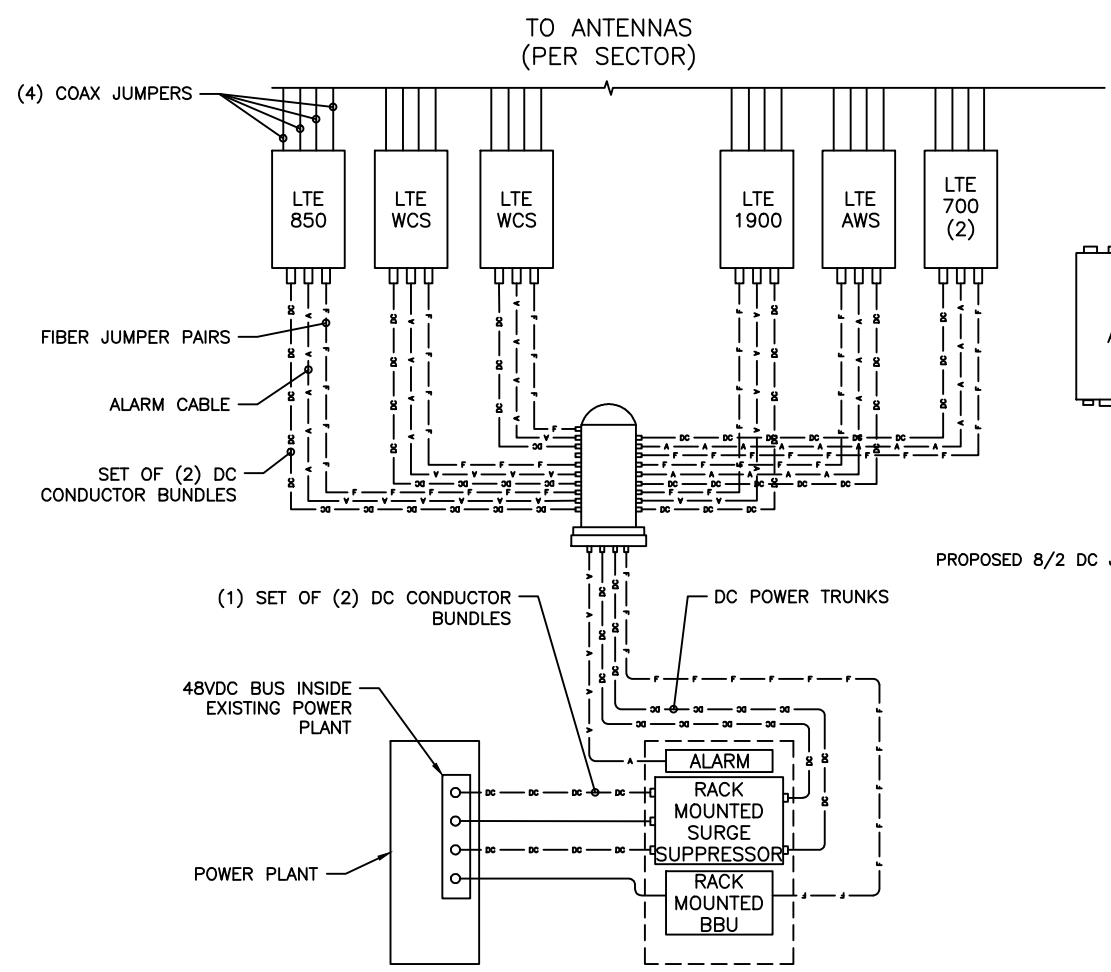
CROWN SITE NAME:
 VF OUTLET

CROWN SITE NUMBER:
 880588

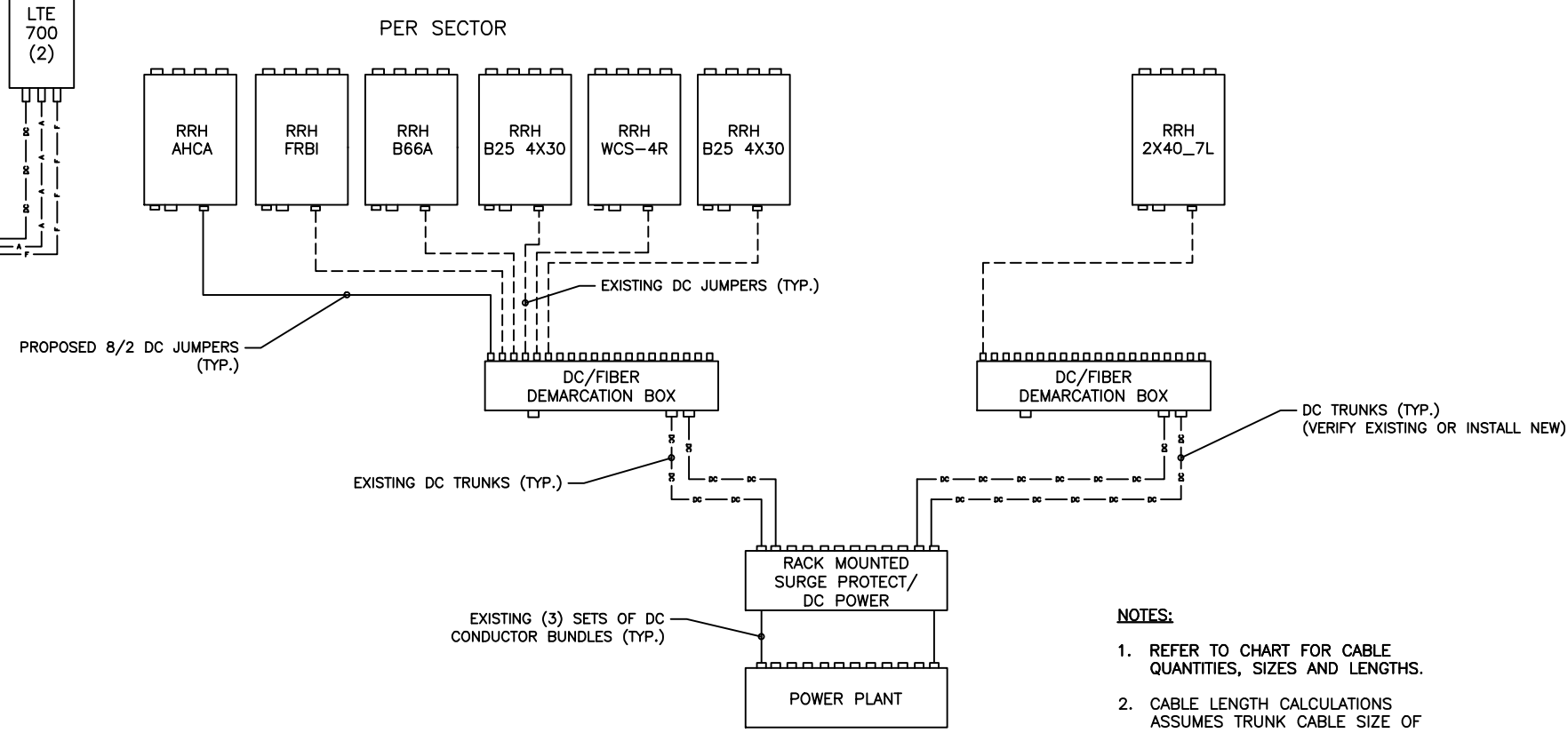
SITE ADDRESS:
 12519 SOUTH MINUTEMAN DRIVE
 DRAPER, UT 84020

SHEET TITLE
 GROUNDING NOTES
 & DETAILS

SHEET NUMBER
G-1



DC & FIBER SYSTEM SCHEMATIC
 11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.



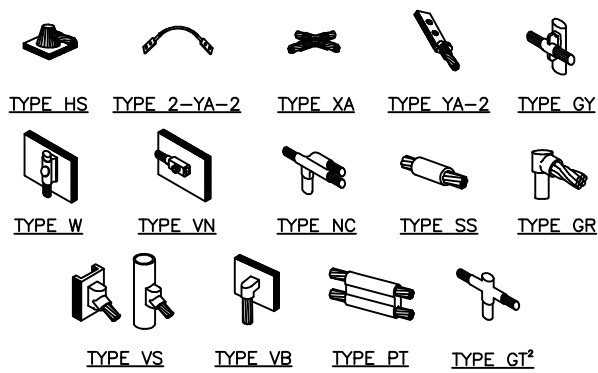
DC WIRING DIAGRAM
 11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.

- NOTES:**
- REFER TO CHART FOR CABLE QUANTITIES, SIZES AND LENGTHS.
 - CABLE LENGTH CALCULATIONS ASSUMES TRUNK CABLE SIZE OF 8-AWG.

CABLE LENGTH TABLE												
SECTOR	PDF	DISTANCE & CABLE TYPE		DC-6	DISTANCE & CABLE TYPE		SQUID	DISTANCE & CABLE TYPE		RRH	TOTAL CABLE LENGTH	FINAL VOLTAGE
		7'	#12 AWG		138'	(2) #8 AWG		8'	#12 AWG			
ALPHA		7'	#12 AWG		138'	(2) #8 AWG		8'	#12 AWG		153'	41.31
BETA		7'	#12 AWG		138'	(2) #8 AWG		8'	#12 AWG		153'	41.31
GAMMA		7'	#12 AWG		138'	(2) #8 AWG		8'	#12 AWG		153'	41.31

LTE CONDUCTOR SIZES
 11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.

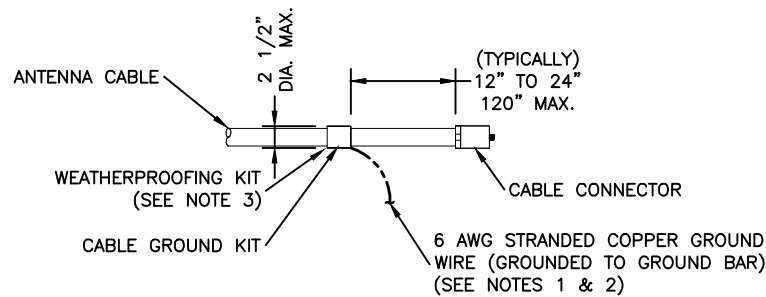
CABLE COUNT	
QTY.	CABLE TYPE
3	FIBER TRUNK
6	DC TRUNK



NOTE:
 1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
 2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

CADWELDED GROUNDING CONNECTIONS

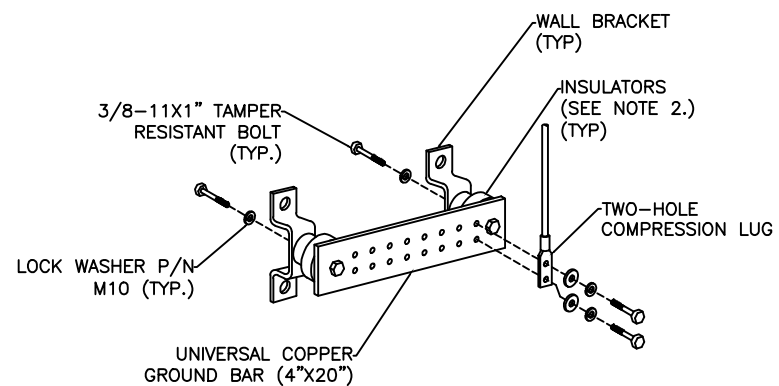
11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.



NOTES:
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
 3. WEATHERPROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

CABLE GROUND KIT CONNECTION

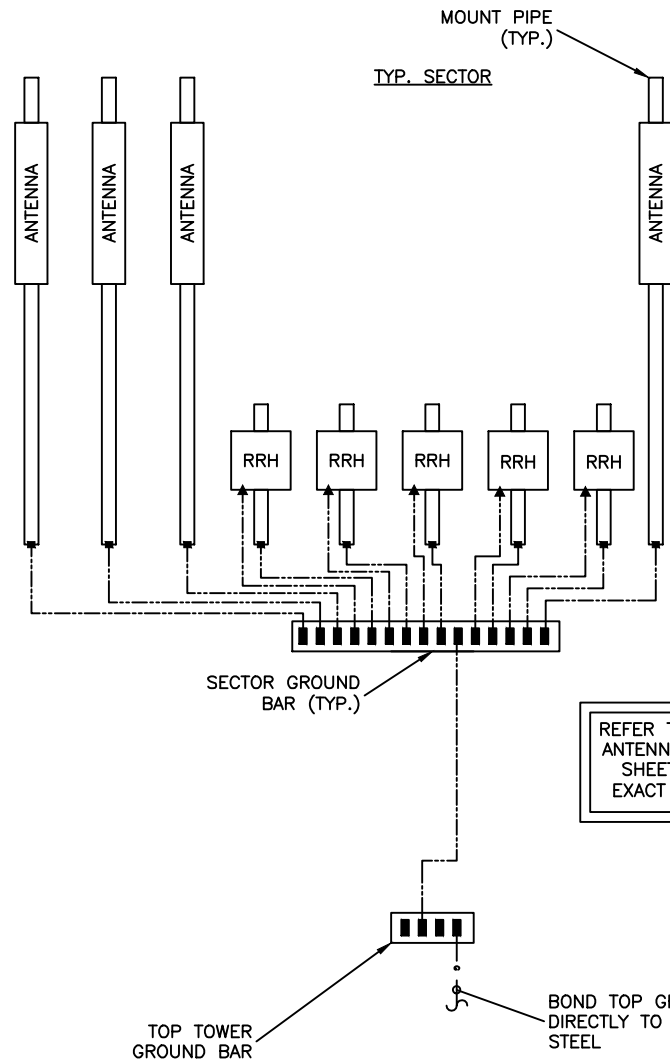
11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.



NOTE:
 1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION. CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
 2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL. USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

GROUND BAR DETAIL

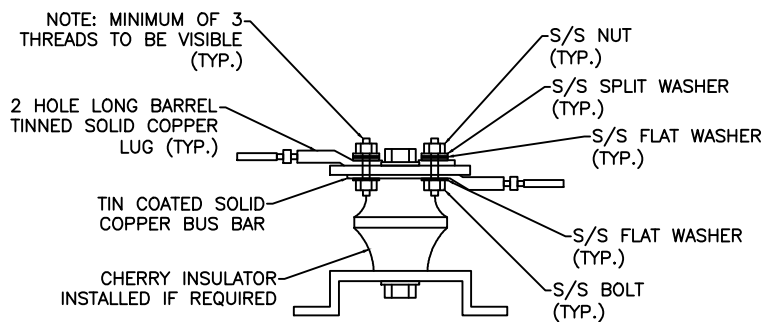
11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.



CABLE AND GROUNDING RISER DIAGRAM

11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.

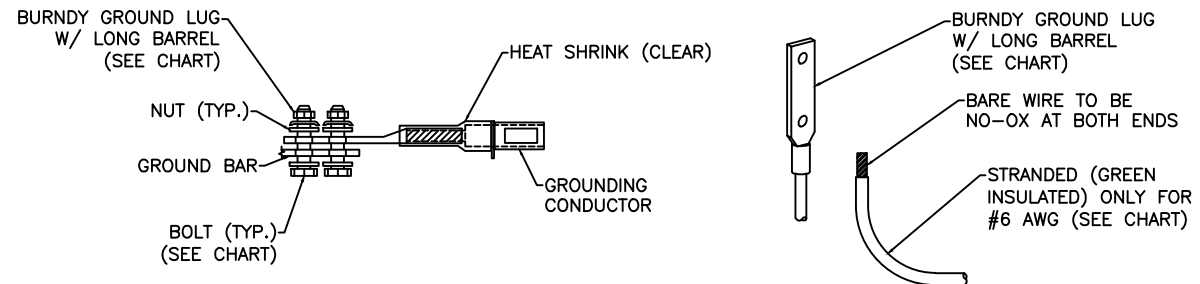
REFER TO PROPOSED ANTENNA LAYOUT ON SHEET C-4 FOR EXACT # OF RRHs



LUG DETAIL

11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.

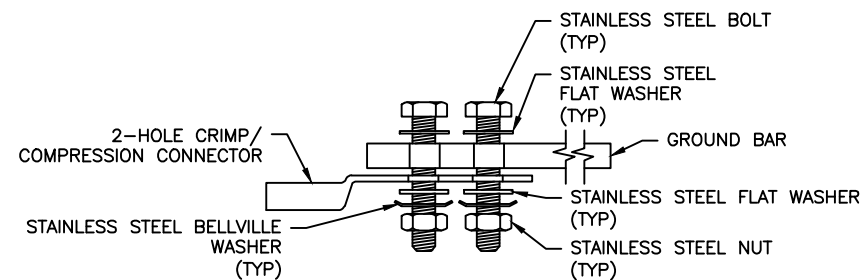
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



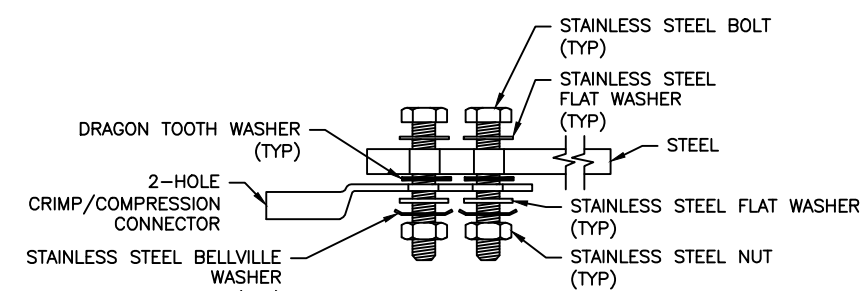
NOTE:
 1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

MECHANICAL LUG CONNECTION

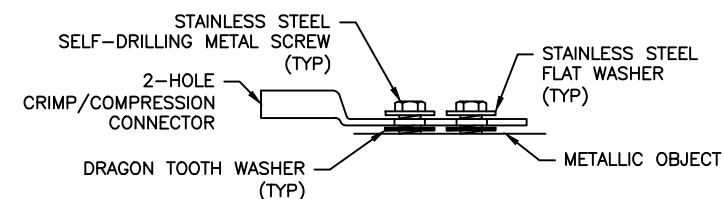
11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.



SINGLE CONNECTOR AT GROUND BARS



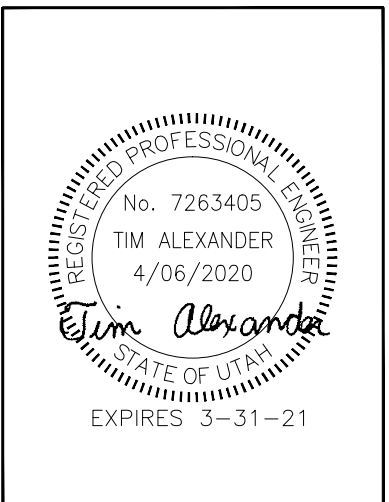
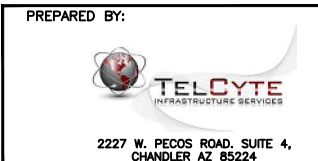
SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

HARDWARE DETAIL FOR EXT. CONNECTIONS

11"x17" SCALE: N.T.S.
 24"x36" SCALE: N.T.S.



DRAWN BY: AK
 CHECKED BY: CW
 APPV'D: CM

SUBMITTALS				
DATE	DESCRIPTION	REV	ISSUED BY	
8/12/19	PRELIMINARY CDs	A	AK	
10/04/19	CLIENT COMMENTS	B	JM	
04/06/20	SUBMITTAL CDs	0	JM	

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 UTL02161

CROWN SITE NAME:
 VF OUTLET

CROWN SITE NUMBER:
 880588

SITE ADDRESS:
 12519 SOUTH MINUTEMAN DRIVE
 DRAPER, UT 84020

SHEET TITLE
 GROUNDING DETAILS

SHEET NUMBER
 G-2