

CITY OF TEMPE DEVELOPMENT REVIEW COMMISSION

Meeting Date: 02/12/2019

Agenda Item: 06

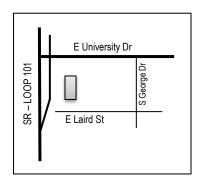
ACTION: Request approval for a 50-foot high cellular telecommunications facility (Monopalm) without landscaping for ADOT UNIVERSITY, located at 2245 EAST UNIVERSITY DRIVE. The applicant is Sally Natalino of Crown Castle.

FISCAL IMPACT: N/A

RECOMMENDATION: Staff – Approve, Subject to Conditions

BACKGROUND INFORMATION: ADOT UNIVERSITY (PL190002) is proposing a new Use Permit for an existing stealth wireless communication facility on the southeast corner of East University Drive and South Price Road, adjacent to Laird Street, in the CSS, Commercial Shopping & Services District. The Facility is currently concealed as a palm tree providing a total of nine (9) antennas at the 47-foot center of radiation Height. The new configuration will relocate 3 of the existing antennas and add 3 new antennas at the current 47-foot center of radiation height. The request includes the following:

ZUP190001 Use Permit to allow a 50-foot high cellular telecommunications facility (Monopalm).



Property Owner
Applicant
Zoning District
Total Site Area
T-Mobile Lease Area
Building Area
Monopalm Height

Arizona Department of Transportation Sally Natalino, Crown Castle CSS, Commercial Shopping & Services 18,036 s.f. 660 s.f. 240 s.f.

50 ft (top of structure) 55 ft (top of frond)

ATTACHMENTS: Development Project File

STAFF CONTACT(S): Blake Schimke, Planning Technician (480) 350-8245

Department Director: Chad Weaver, Community Development Director

Legal review by: N/A

Prepared by: Blake Schimke, Planning Technician Reviewed by: Steve Abrahamson, Principal Planner

COMMENTS

T-Mobile is proposing a new Use Permit to add and replace existing antennas at an existing telecommunications facility (monopalm). The original Use Permit conditioned the applicant provide two (2) phoenix date palm trees and one (1) Chilean Mesquite. The current lease area does not have sufficient area and access to utilities. ADOT has refused any utility easement requests made by T-Mobile or Crown Castle and because of this the landscaping has not been maintained. This new Use Permit would allow them to make site enhancements without being in violation of previous conditions.

Staff has conditioned that if this Use Permit is approved, the applicant provide landscaping and further enhance the existing monopalm with more stealth materials to conceal and make it more compatible with the area as well as, match another monopalm in the area.

PUBLIC INPUT

To date, staff has received to E-mail communications, one stating support and the other indifferent to the application.

POLICE INPUT

N/A

USE PERMIT

According to Section 3-421, *Wireless Telecommunication Facilities* of the Zoning & Development Code, wireless telecommunication towers and related equipment facilities shall be allowed upon approval with a use permit.

Section 6-308 E Approval criteria for Use Permit (*in italics*):

- 1. Any significant increase in vehicular or pedestrian traffic; the facility will not generate any traffic other than routine maintenance or events of a technical breakdown.
- 2. Nuisance arising from the emission of odor, dust, gas, noise, vibration, smoke, heat or glare at a level exceeding that of ambient conditions; the nature of this use will not emit emissions at a level exceeding ambient conditions.
- 3. Contribution to the deterioration of the neighborhood or to the downgrading of property values, which is in conflict with the goals, objectives or policies for rehabilitation, redevelopment or conservation as set forth in the city's adopted plans or General Plan; wireless communication facilities are permitted with a Use Permit by the Zoning & Development Code and consistent with the City's adopted plans and General Plan.
- 4. Compatibility with existing surrounding structures and uses; the current monopalm is existing and will be enhanced with stealth materials and landscaping to make it compatible with the surrounding area.
- 5. Adequate control of disruptive behavior both inside and outside the premises which may create a nuisance to the surrounding area or general public; the proposed facility will be unmanned and will therefore will not contribute to any disruptive behavior or create any nuisance to the surrounding area.

REASONS FOR APPROVAL:

Based on the information provided by the applicant, the public input received and the above analysis staff supports approval of the requested Use Permit. This request meets the required criteria and will conform to the conditions.

SHOULD AN AFFIRMATIVE ACTION BE TAKEN ON THIS REQUEST, THE FOLLOWING NUMBERED CONDITIONS OF APPROVAL SHALL APPLY, BUT MAY BE AMENDED BY THE DECISION-MAKING BODY.

CONDITION(S) OF APPROVAL:

1. The Use Permit is valid only after a Building Permit has been obtained and the required inspections have been completed and a Final Inspection has been passed. As part of the Building Permit process, on-site storm water retention may be required to be verified or accomplished on this Site.

- 2. The Use Permit is valid for the plans as submitted within this application. Any additions or modifications may be submitted for review during building plan check process.
- 3. All required Federal, State, County, and Municipal permits, licenses, and clearances shall be obtained or the Use Permit is void.
- 4. If there are any complaints arising from the Use Permit that are verified by a consensus of the complaining party and the City Attorney's office, the Use Permit will be reviewed by City staff to determine the need for a public hearing to re-evaluate the appropriateness of the Use Permit, which may result in termination of the Use Permit.
- 5. Any intensification or expansion of use shall require a new Use Permit.
- 6. Landscaping shall be provided onsite to further conceal the monopalm. If the Use Permit is Approved, the applicant shall submit landscape plans through a Development Plan Review.
- 7. Maintain a minimum of twenty-foot (20'-0") separation from any proposed tree
- 8. The monopalm shall be no greater than 50'-0" in height to top of structure.
- 9. A new 8-foot wall shall be constructed surrounding the lease area with materials matching the existing walls onsite.
- 10. The equipment cabinet shall be painted to match the existing integral colored masonry walls.
- 11. The antenna array shall not extend more than thirty (30) inches from the structure to which it is attached.
- 12. The entire length of the antenna must be disguised by the palm fronds
- 13. The pole structure must be clad with faux bark. The bark shall start at the base of the pole and continue to the height of the first palm frond attachment. The balance of the pole structure and the attachments must be painted to blend with the palm fronds.
- 14. All cables must be concealed within the pole structure
- 15. Microwave dishes shall be limited to one (1) square foot in size and must be concealed within the trimmed leaf cluster (often referred to as the "pineapple") of the Monopalm or within the palm fronds.
- 16. The trimmed leaf cluster shall be mounted directly below the palm fronds and shall be painted to blend with the pole structure.
- 17. A weather resistant emergency contact information sign shall be posted on the site and shall be visible to the public.
- 18. All nonconforming building lighting shall be removed and replaced with compliant light fixtures. Details can be resolved during Building Safety Plan Review.
- 19. Irrigation shall be provided onsite to all landscape areas.

CODE/ORDINANCE REQUIREMENTS:

THE BULLETED ITEMS REFER TO EXISTING CODE OR ORDINANCES THAT PLANNING STAFF OBSERVES ARE PERTINENT TO THIS CASE. THE BULLET ITEMS ARE INCLUDED TO ALERT THE DESIGN TEAM AND ASSIST IN OBTAINING A BUILDING PERMIT AND ARE NOT AN EXHAUSTIVE LIST.

- The Use Permit is valid for ADOT UNIVERSITY and may be transferable to successors in interest through an administrative review with the Community Development Director, or designee.
- Specific requirements of the Zoning and Development Code (ZDC) are not listed as a condition of approval, but will apply to any application. To avoid unnecessary review time and reduce the potential for multiple plan check submittals, become familiar with the ZDC. Access the ZDC through http://www.tempe.gov/zoning or purchase from Development Services.
- All business signs shall receive a Sign Permit. Contact sign staff at 480-350-8435.
- Wireless Telecommunication Facilities may be co-located, subject to administrative review only. Any addition to the
 existing height or change in appearance of the tower to facilitate co-location may require a new use permit.
- The wireless device shall be removed within 30 days of discontinuance of use.

HISTORY & FACTS:

March 15, 2017 Staff Administratively approved a Development Plan Review for modifications to the 55'-0" (top of

frond) wireless antenna located at 2245 East University Drive within the CSS, Commercial

Shopping & Services zoning district.

July 7, 2015 Hearing Officer approved a Use Permit for a wireless communication facility located at 2425 East

University Drive within the CSS, Commercial Shopping & Services zoning district

November 7, 2006 Hearing Officer approved a Use Permit for a 55'-0" (top of frond) wireless antenna located at 2245

East University Drive within the CSS, Commercial Shopping & Services zoning district.

ZONING AND DEVELOPMENT CODE REFERENCE:

Section 3-202 Permitted Uses in Commercial and Mixed-Use Districts

Section 3-421 Wireless Telecommunication Facilities

Section 4-203 Development Standards for Commercial and Mixed-Use Districts

Section 6-308 Use Permit



DEVELOPMENT PROJECT FILE

for ADOT UNIVERSITY PL190002

ATTACHMENTS:

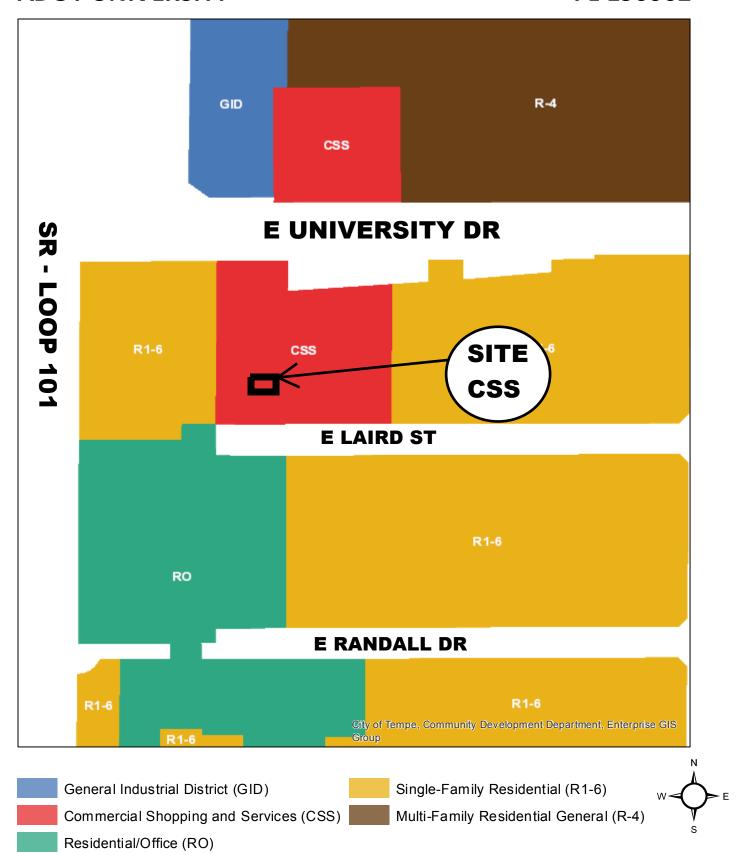
1.	Location	Мар
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- 2. Aerial
- 3-6. Map of Site and Lease Area
- 7-16. Project Plans
- 17-34. City of Tempe Application for Wireless Projects
- 35. Letter of Explanation
- 36-38. Site Plan
- 39. Elevations
- 40-46. Photo Simulations
- 47-48. Public Comment
- 49-57. Other Monopalm facility Examples



ADOT UNIVERSITY

PL 190002





ADOT UNIVERSITY

PL 190002



Aerial Map











H-Mobile-

T-MOBILE SITE NUMBER:PH10240E

T-MOBILE SITE NAME:

CROWN: ADOT/UNVIERSITY (822272) SITE ADDRESS:

MONOPALM ISITE TYPE:

50'-0" TOWER HEIGHT:

FACILITY IS UNMANNED AND NOT FOR

BUSINESS UNIT #:822272

2245 E. UNIVERSITY DR **TEMPE, AZ 85281**

COUNTY:

JURISDICTION:

LOCATION MAP

GET ON US-60 E FROM S PRIEST DR, HEAD NORTH ON S PLAZA DR, TURN RIGHT TOWARD S PRIEST DR, TURN RIGHT ONTO S PRIEST DR, USE THE

LEFT 2 LANES TO TURN LEFT TO MERGE ONTO US-60 E TOWARD MESA, CONTINUE ON US-60 E. TAKE AZ-101 LOOP N TO N PRICE RD. TAKE EXIT

52 FROM AZ-101 LOOP N, MERGE ONTO US-60 E, TAKE EXIT 176B TO MERGE ONTO AZ-101 LOOP N, TAKE EXIT 52 TOWARD UNIVERSITY DR/RIO

UNIVERSITY DR, TURN RIGHT ONTO S GEORGE DR, TURN RIGHT AT THE 1ST CROSS STREET ONTO E LAIRD ST, SITE WILL BE LOCATED ON THE

SALADO PKWY, TAKE E UNIVERSITY DR TO E LAIRD ST, MERGE ONTO N PRICE RD, USE THE RIGHT 2 LANES TO TURN RIGHT ONTO E

MARICOPA CITY OF TEMPE



CHANDLER, AZ 85286

T-MOBILE SITE NUMBER: PH10240E

BU #: **822272 ADOT UNIVERSITY**

2245 E. UNIVERSITY DR TEMPE, AZ 85281

EXISTING 50'-0" MONOPALM

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./Q
Α	07/05/18	EAJ	PRELIMINARY	KK
В	07/31/18	EAJ	PRELIMINARY	LMR
0	08/13/18	EAJ	CONSTRUCTION	DG



Crown Castle USA, Inc.

Daniel P. Gruman, P.E. rofessional Engineer License: #65055 Crown Castle USA Inc. Firm Registration #14842

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.

SHEET NUMBER:

REVISION

T-MOBILE 600 MHZ

SITE INFORMATION

ADOT UNIVERSITY

MARICOPA

135-40-041-B

EXISTING

33° 25' 17.10"

NAD83

1,190.4 FT.

-111° 53' 23.30"

CROWN CASTLE USA INC.

SITE NAME:

2245 E. UNIVERSITY DR SITE ADDRESS: **TEMPE, AZ 85281**

MAP/PARCEL#: AREA OF CONSTRUCTION:

LONGITUDE:

COUNTY:

LAT/LONG TYPE: GROUND ELEVATION: **CURRENT ZONING:**

CITY OF TEMPE URISDICTION:

OCCUPANCY CLASSIFICATION: U TYPE OF CONSTRUCTION:

A.D.A. COMPLIANCE:

PROPERTY OWNER:

ARIZONA DEPT OF TRANSPORT 205 S 17TH AVE MD612E ATTN MELISSA MITCHELL

PHOENIX, AZ 85007

TOWER OWNER:

CCTMO LLC 2000 CORPORATE DRIVE CANONSBURG, PA 15317

APPLICANT/CARRIER:

1330 WEST SOUTHERN AVE, STE. A-102

T-MOBILE

TEMPE, AZ 85282

CROWN CASTLE USA INC. APPLICATION ID:

443055

ELECTRIC PROVIDER: (602) 236-8833

TELCO PROVIDER: **QWEST** (800) 603-5555

PROJECT TEAM

A&E FIRM:

CROWN CASTLE USA INC. 2000 CORPORATE DRIVE CANONSBURG, PA 15317

CROWNAE.APPROVAL@CROWNCASTLE.COM

CROWN CASTLE USA INC. DISTRICT

2055 S. STEARMAN DRIVE CHANDLER, AZ 85286 CONTACTS:

BREYEL HIGUERA - PROJECT MANAGER (602) 845-1735

JASON ALBRAND - CONSTRUCTION MANAGER (480) 735-6914

JOY FICHIERA - A&E SPECIALIST JOY.FICHIERA@CROWNCASTLE.COM

(480) 735-6902

T-MOBILE CONTACTS:

1330 WEST SOUTHERN AVE, STE. A-102 TEMPE, AZ 85282

CAMERON LEHMAN- PROJECT MANAGER (714) 943-6261

RUDY LOPEZ - CONSTRUCTION MANAGER (623) 252-7242

DRAWING INDEX

SHEET#	SH	EET DESCRIPTION
T-1	TITLE SHEET	
T-2	GENERAL NOTES	
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C-1.3	EXISTING AND FIN	L EQUIPMENT PLANS
C-2	EXISTING AND FIN	L ANTENNA LAYOUTS
C-3	EXISTING AND FIN	L TOWER ELEVATIONS
C-4	ANTENNA SPECIFIC	ATIONS & DETAILS
G-1	GROUNDING DETA	LS
G-2	GROUNDING DETA	LS

THE ENGINEER IN WRITING O ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS 'O ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

• REMOVE (3) ANTENNAS

• REMOVE (6) TMAs

• REMOVE (2) RADIO MODULES (RELOCATE TO SHELTER)

• INSTALL (3) ANTENNAS • INSTALL (9) RADIO MODULES

• REMOVE (1) HYBRID CABLE

• INSTALL (3) TMAs

• INSTALL (1) 1-3/5" HYBRID CABI E

INSTALLER NOTE:

NEW TOWER EQUIPMENT SHALL BE PAINTED TO MATCH THE COLOR OF THE PALM FRONDS

NSTALLER NOTE:

PROPOSED TOWER LOADING MUST MATCH APPROVED, PASSING STRUCTURAL ANALYSI PRIOR TO INSTALLATION OF PROPOSED EQUIPMENT.

TOWER DOES NOT HAVE CLIMBING FACILITIES - MANLIFT REQUIRED FOR ELEVATED WORK.

DESIGN PACKAGE BASED ON THE RFDS

REVISION: 4.1 DATE: 07/15/2018 DESIGN PACKAGE BASED ON THE APPLICATION

ID: 443055 **REVISION: 1**

INSTALLER NOTE:

PRIOR TO A CESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOG AT 800-788-7011 & CRC WN CONSTRUCTION MANAGER

APPLICABLE CODES/REFERENCE **DOCUMENTS**

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 BUILDING **MECHANICAL ELECTRICAL**

RIGHT HAND SIDE.

2012 IBC W/ AMENDMENTS 2012 IMC W/ AMENDMENTS 2011 NEC W/ AMENDMENTS

DRIVING DIRECTIONS FROM T-MOBILE LOCAL OFFICE (2625 S. PLAZA DR., TEMPE AZ 85282)

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS: PENDING

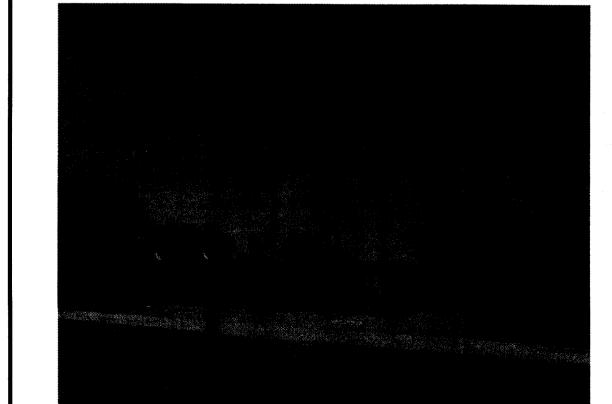
MOUNT ANALYSIS: PENDING



CALL ARIZONA ONE CALL (800) 782-5348 CALL 3 WORKING DAYS **BEFORE YOU DIG!**



SITE PHOTO:



SITE WORK GENERAL NOTES:

- 1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION
- 2. 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 SUBCONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES, SUBCONTRACTOR 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.
- 3. ALL SITE WORK TO COMPLY WITH QAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE" AND LATEST VERSION OF TIA 1019 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
- 4. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS.
- 5. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- 6. 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 CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
- 7. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.
- 8. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.
- 9. 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.
- 10. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- 11. 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 PROJECT SPECIFICATIONS.
- 12. SUBCONTRACTOR 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.
- 13. NOTICE TO PROCEED- NO WORK TO COMMENCE PRIOR TO COMPANY'S WRITTEN NOTICE TO PROCEED AND THE ISSUANCE OF A PURCHASE ORDER.
- 14. 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 CROWN STANDARD CED-STD-10253 INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH THE ANSI/TIA-322 (LATEST EDITION).

STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND IN ACCORDANCE WITH ASTM A36 UNLESS OTHERWISE NOTED.
- 2. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"ø) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
- 4. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE. SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS.

CONCRETE AND REINFORCING STEEL NOTES:

- 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. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. SLAB FOUNDATION DESIGN ASSUMING ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.
- 3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
- 4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

CONCRETE CAST AGAINST EARTH..... CONCRETE EXPOSED TO EARTH OR WEATHER: #6 AND LARGER... #5 AND SMALLER & WWF...... 1 1/2 IN. CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND: BEAMS AND COLUMNS.....1 1/2 IN.

5. A CHAMFER 3/4" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE. IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

MASONRY NOTES:

- 1. HOLLOW CONCRETE MASONRY UNITS SH/ L MEET A.S.T.M. SPECIFICATION C90, GRADE N. TYPE 1. THE SPECIFIED DESIGN COM RESSIVE STRENGTH OF CONCRETE MASONRY (F'm) SHALL BE 1500 PSI.
- 2. MORTAR SHALL MEET THE PROPERTY SP CIFICATION OF A.S.T.M. C270 TYP. "S" MORTAR AND SHALL HAVE A MINIMUM C MPRESSIVE STRENGTH OF 2000 PSI.
- 3. GROUT SHALL MEET A.S.T.M. SPECIFICATI N C475 AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI.
- 4. CONCRETE MASONRY SHALL BE LAID IN RUNNING (COMMON) BOND.

CROWN CASTLE US, INC.

5. WALL SHALL RECEIVE TEMPORARY BRACI: G. TEMPORARY BRACING SHALL NOT BE REMOVED UNTIL GROUT IS FULLY CURED

GENERAL NOTES:

TOWER OWNER-

1. FOR THE PURPOSE OF CONSTRUCTION [RAWING, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR-SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION) CARRIFR-T-MOBILE

ORIGINAL EQUIPMEN MANUFACTURER

- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR 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)F CONTRACTOR AND CROWN CASTLE USA INC.
- ALL MATERIALS FURNISHED AND INSTALL D SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND (RDINANCES, SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WIT ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC A ITHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL (OMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE
- UNLESS NOTED OTHERWISE, THE WORK HALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- 6. "KITTING LIST" SUPPLIED WITH THE BID ACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED 1 THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
- THE SUBCONTRACTOR SHALL INSTALL AL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UN ESS SPECIFICALLY STATED OTHERWISE.
- 8. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE / N ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR AND CROWN CASTLE | SA INC. PRIOR TO PROCEEDING WITH ANY SUCH
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWINGS.
- 10. THE SUBCONTRACTOR SHALL PROTECT E ISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DA MAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SA SFACTION OF OWNER.
- 11. SUBCONTRACTOR SHALL LEGALLY AND POPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS EMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE)WNER'S DESIGNATED LOCATION.
- 12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION, TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY B/3IS.

ABBREVIATIONS AND SYMBOLS

ABBREVIATIONS:

BCW

GEN

ABOVE GRADE LEVEL BASE TRANSCEIVER STATION EXISTING **MINIMUM** REFERENCE REF RADIO FREQUENCY TO BE DETERMINED TO BE RESOLVED T.B.R. TYP TYPICAL REQ REQUIRED EQUIPMENT GROUND RING AMERICAN WIRE GAUGE MGB MASTER GROUND BAR EQUIPMENT GROUND

BARE COPPER WIRE

RADIO BASE STATION

INTERIOR GROUND RING (HALO)

GENERATOR

SYMBOLS:

SOLID NEUTRAL BUS BAR SUPPLEMENTAL GROUND CONDUCTOR 2-POLE THERMAL-MAGNETIC CIRCUIT BREAKER SINGLE-POLE THERMAL-MAGNETIC

SOLID GROUND BUS BAR

CIRCUIT BREAKER CHEMICAL GROUND ROD

TEST WELL

SMART INTEGRATED ACCESS DEVICE DISCONNECT SWITCH

> EXOTHERMIC WELD (CADWELD) (UNLESS OTHERWISE NOTED)

MECHANICAL CONNECTION

GROUNDING WIRE

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. SUBCONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC. HILTI EPOXY ANCHORS ARE REQUIRED BY CROWN CASTLE
- 4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 5. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- 6. FACH FND OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING AND T1 CONDUCTOR AND 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.
- 7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH PLASTIC TAPE PER COLOR SCHEDULE. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING. PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
- 8. PANEL BOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- 9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 10. POWER, CONTROL AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET & DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE
- 11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED UNLESS OTHERWISE SPECIFIED.
- 12. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90° C (WET AND DRY) OPERATION WITH OUTER JACKET LISTED OR LABELED FOR THE LOCATION USED 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 AT NO 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) OR RIGID NONMETALLIC CONDUIT (I.E. RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- 16. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT) OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) 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 NEC.
- 21. WIREWAYS SHALL BE EPOXY—COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER).
- 22. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES 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 BUSHIN ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- 23. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL; SHALL MEET OR EXCEED UL 50 AND RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS.
- 24. 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 RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- 25. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- 26. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 27. THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
- 28. INSTALL PLASTIC LABEL ON THE METER CENTER TO SHOW "T-MOBILE".
- 29. ALL CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD

GREENFIELD GROUNDING NOTES:

- 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 SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
- 3. THE SUBCONTRACTOR 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.
- . METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG 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, SHALI BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS
- 6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 AWG SOLID TINNED COPPER FOR OUTDOOR BTS.
- 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 AWG 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
- 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 WIRES WITH 1-#2 AWG TIN-PLATED COPPER GROUND CONDUCTOR.
- 19. GROUND CONDUCTORS USED IN THE FACILITY GROUND 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 PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., 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 TINNED SOLID IN 3/4" LIQUID TIGHT CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE LIQUID TIGHT CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).

NEC INSULATOR COLOR CODE				
DESCRIPTION	PHASE/CODE LETTER	WIRE COLOR		
240/120 10	LEG 1	BLACK		
240/120 10	LEG 2	RED		
AC NEUTRAL	N	WHITE		
GROUND (EGC)	G	GREEN		
VDC POS	+	*RED-POLARITY MARK AT TERMINATION		
VDC NEG	-	*BLACK-POLARITY MARK AT TERMINATION		
-	PHASE A	BLACK		
240V OR 208V, 3Ø	PHASE B	RED(ORG. IF HI LEG)		
	PHASE C	BLUE		
	PHASE A	BROWN		
480V, 3Ø	PHASE B	ORANGE		
	PHASE C	YELLOW		

* SEE NEC 210.5(C)(1) AND (2)

1330 WEST SOUTHERN AVE, STE. A-102 **TEMPE, AZ 85282**



CHANDLER, AZ 85286

T-MOBILE SITE NUMBER: PH10240E

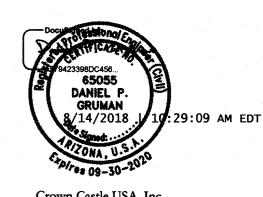
BU #: 822272 ADOT UNIVERSITY

2245 E. UNIVERSITY DR **TEMPE, AZ 85281**

EXISTING 50'-0" MONOPALM

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./C
A	07/05/18	EAJ	PRELIMINARY	KK
В	07/31/18	EAJ	PRELIMINARY	LMR
0	08/13/18	EAJ	CONSTRUCTION	DG



Daniel P. Gruman, P.E. Professional Engineer License: #65055 Crown Castle USA Inc. Firm Registration #14842

Firm Registration #14842

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.

SHEET NUMBER:

E. UNIVERSITY DR APPROXIMATE LOCATION OF PROPERTY LINE APN. 135-40-071A ZONING: CSS APN. 135-40-014A APN. 135-40-041C ZONING: R1-6 Z NING: CSS APN. 135-40-041-B ZONING: CSS (E) BUILDING -APN. 135-40-065 APN. 135-40-071A ZONING: R1-6 ZONING: CSS (E) T-MOBILE SHELTER (E) CMU WALL (E) CROWN CASTLE USA INC. (E) 50'-0" | ONOPALM-(E) UTILITY POLE, —/ TYP — (E) CONCRETE PAD (E) CMU WALL APPROXIMATE LOCATION OF PROPERTY LINE APN. 135-40-087 ZONING: RO

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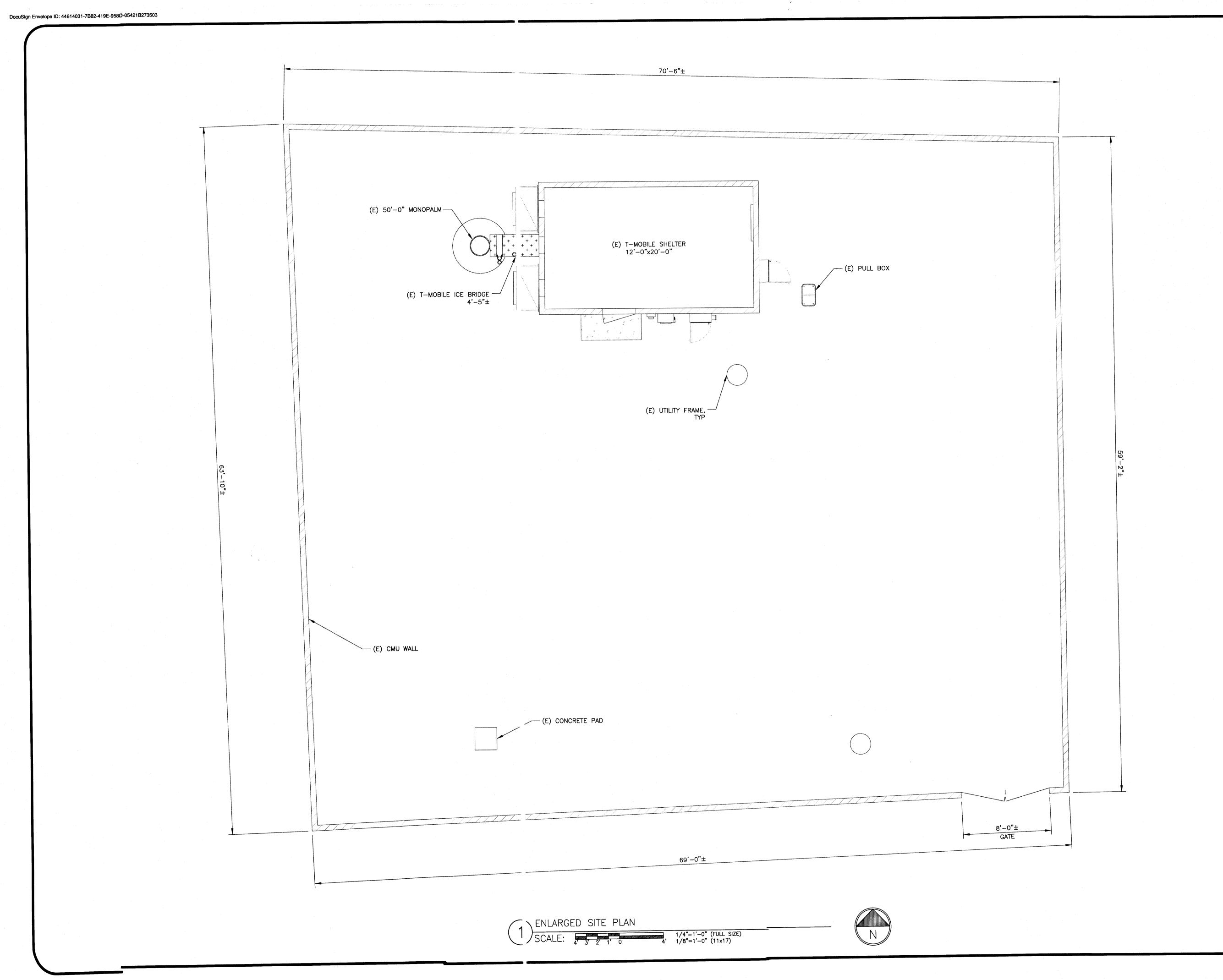


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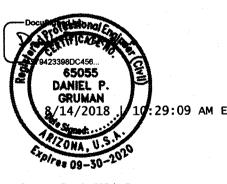
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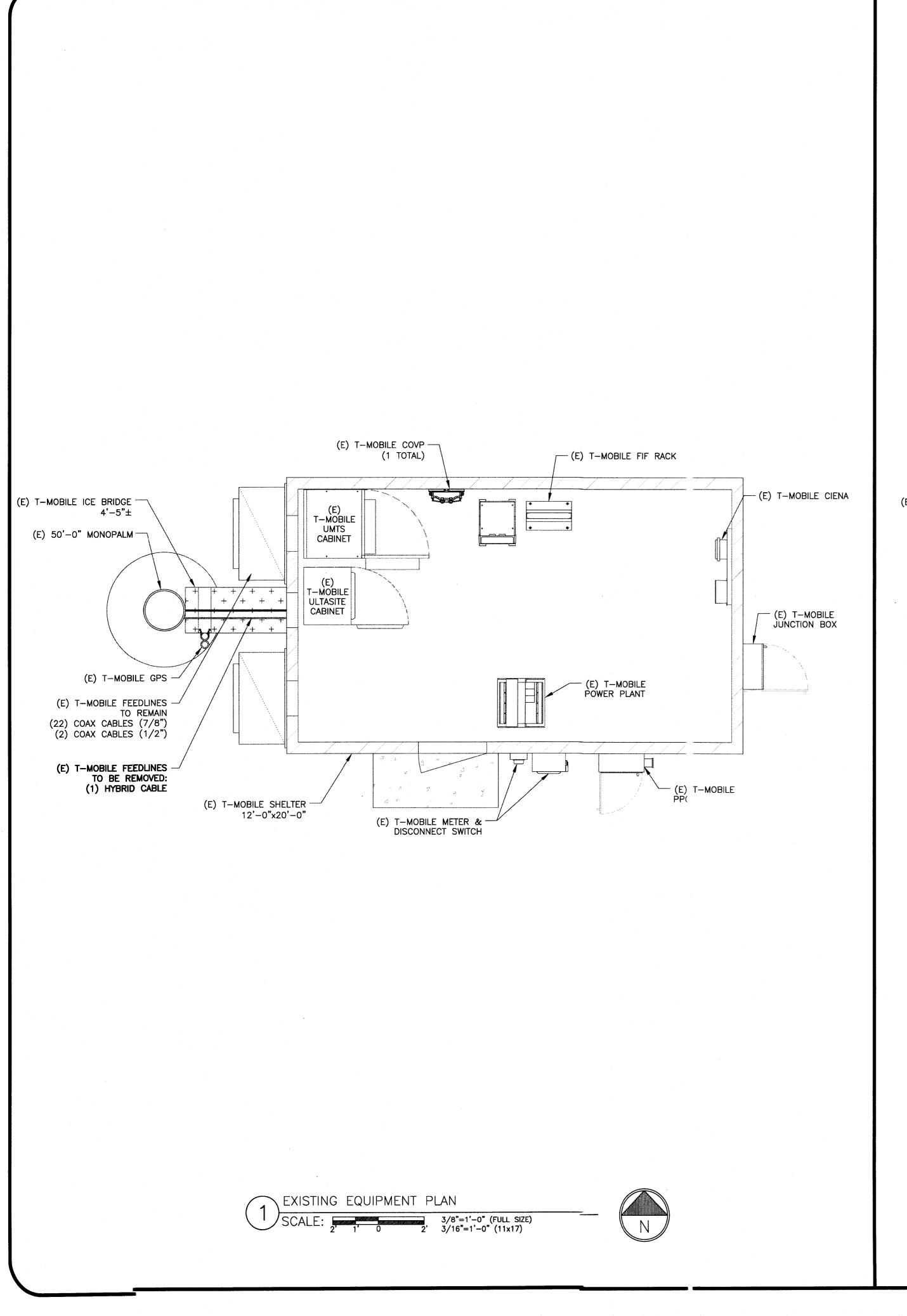
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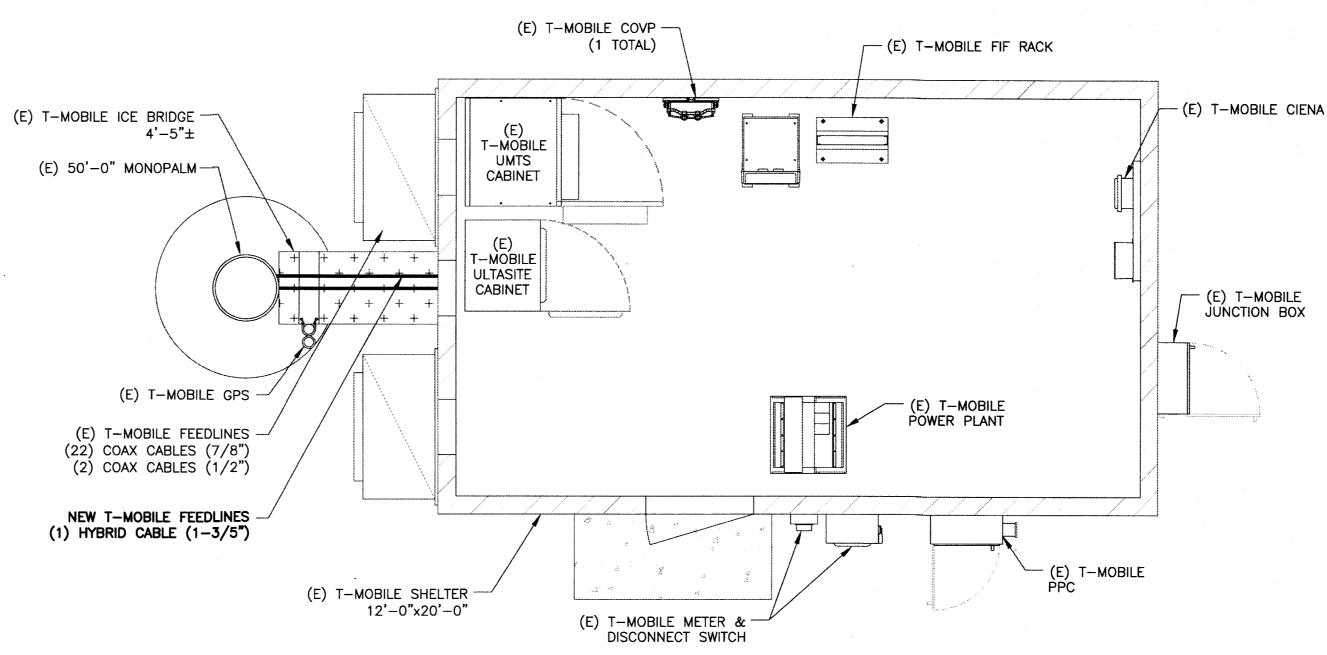
Crown Castle USA, Inc. Firm Registration #14842

Daniel P. Gruman, P.E.
Professional Engineer License: #65055
Crown Castle USA Inc. Firm
Registration #14842

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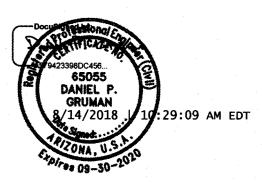
T-MOBILE SITE NUMBER: PH10240E

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0	08/13/18	EAJ	CONSTRUCTION	DG		
		1				



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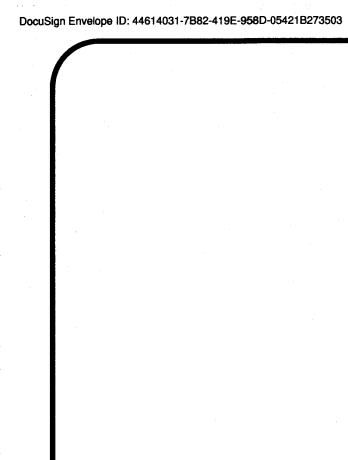
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REVISION:

FINAL EQUIPMENT PLAN

SCALE: 2, 1, 0 2,



(E) T-MOBILE ANTENNA TO BE REMOVED

(E) T-MOBILE M.W. DISH

TO REMAIN (1 TOTAL)

(M.W. DISH)

240° AZIMUTH

(E) ANTENNA T-ARM

TO REMAIN

(E) T-MOBILE TMA TO BE REMOVED -

(6 TOTAL, 2 PER SECTOR)

(3 TOTAL, POSITION A,D,G)

(E) T-MOBILE RADIO MODULE -

TO BE REMOVED

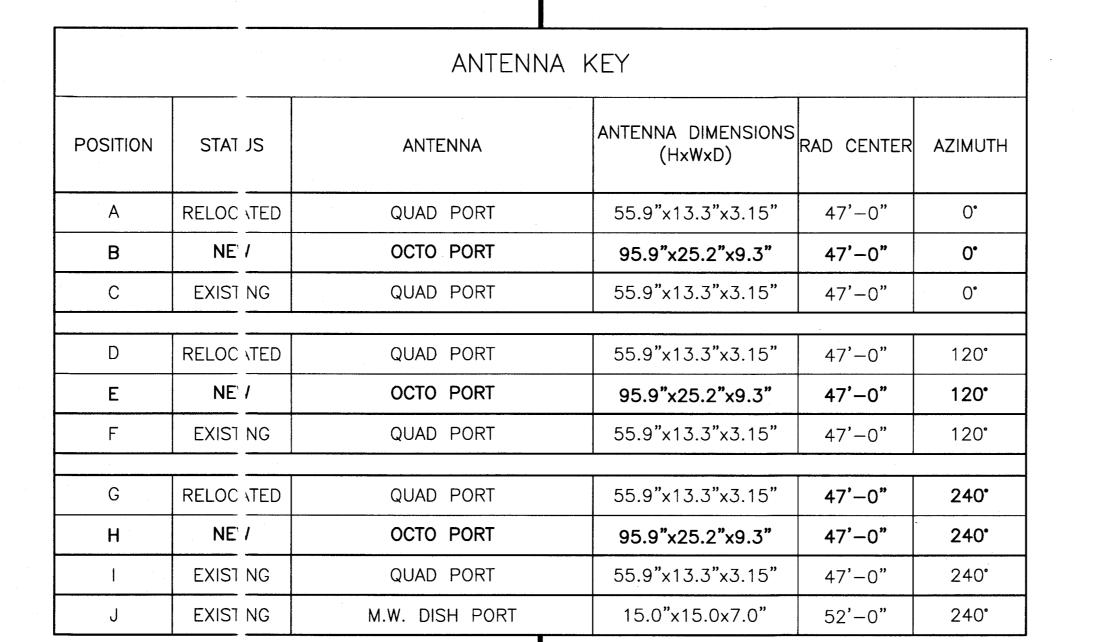
(1 TOTAL)

240° AZIMÚTH

(E) T-MOBILE TIE BACK -

(6 TOTAL, 2 PER SECTOR)

TO BE RELOCATED



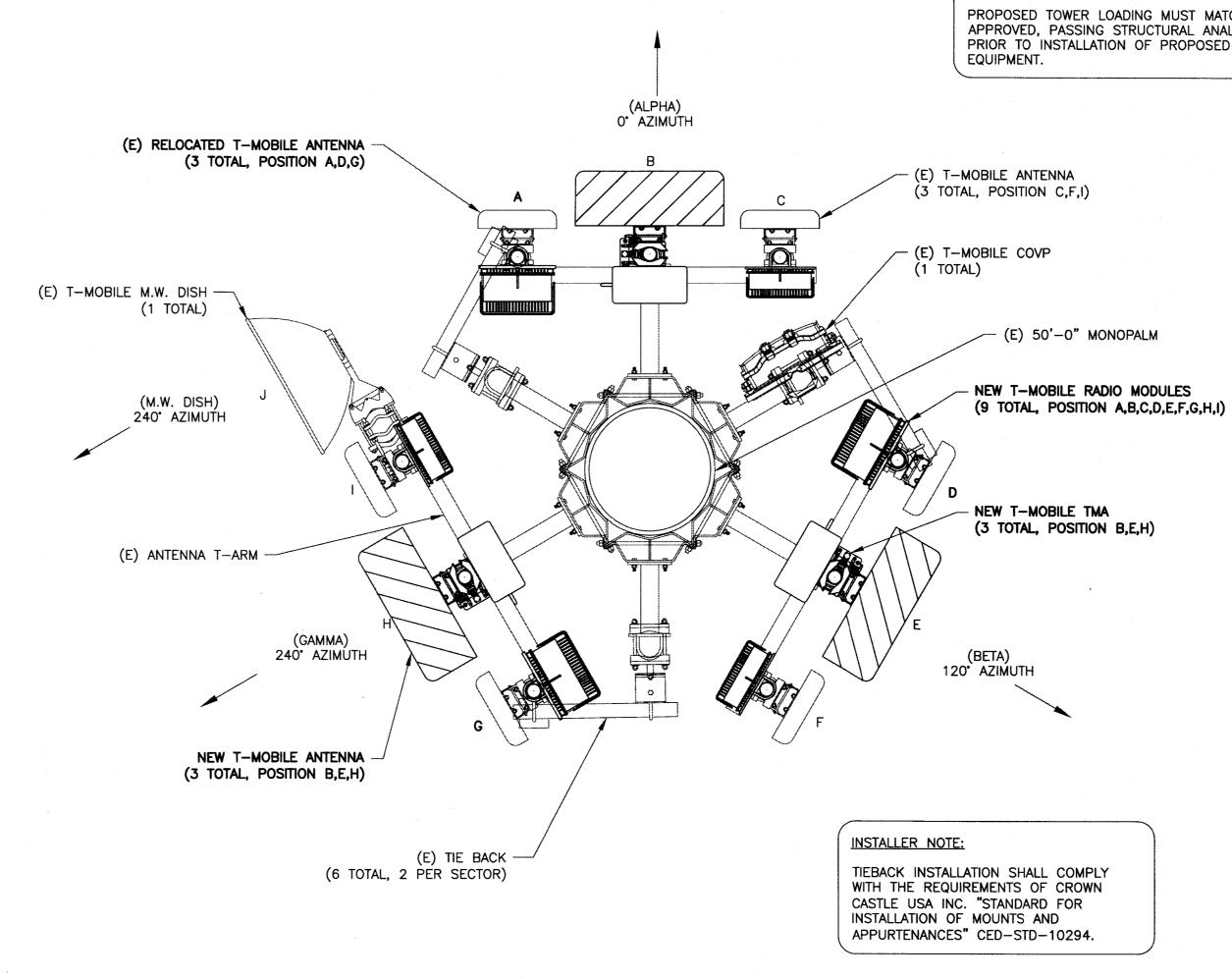
INSTALLER NOTE:

TOWER DOES NOT HAVE CLIMBING FACILITIES — MANLIFT REQUIRED FOR ELEVATED WORK.

NEW EQUIPMENT TO BE PAINTED WITH RF TRANSPARENT, UV RESISTANT, OUTDOOR

INSTALLER NOTE:

PRIOR TO INSTALLATION OF PROPOSED



INSTALLER NOTE:

RATED PAINT TO MATCH EXISTING.

PROPOSED TOWER LOADING MUST MATCH APPROVED, PASSING STRUCTURAL ANALYSIS

ISSUED FOR:

	···-			
REV	DATE	DRWN	DESCRIPTION	DES./Q
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В	07/31/18	EAJ	PRELIMINARY	LMR
0	08/13/18	EAJ	CONSTRUCTION	DG
		 		

1330 WEST SOUTHERN AVE, STE. A-102

TEMPE, AZ 85282

2055 S. STEARMAN DRIVE

CHANDLER, AZ 85286

T-MOBILE SITE NUMBER:

PH10240E

BU #: **822272**

ADOT UNIVERSITY

2245 E. UNIVERSITY DR

TEMPE, AZ 85281

EXISTING 50'-0" MONOPALM

CROWN



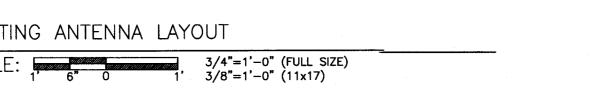
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SHEET NUMBER:

REVISION



- (E) T-MOBILE RADIO MODULE TO BE RELOCATED TO SHELTER

(ALPHA) 0° AZIMUTH



- (E) T-MO:ILE ANTENNA TO BE RELOCATED

(3 TOTAL, POSITION B,E,H)

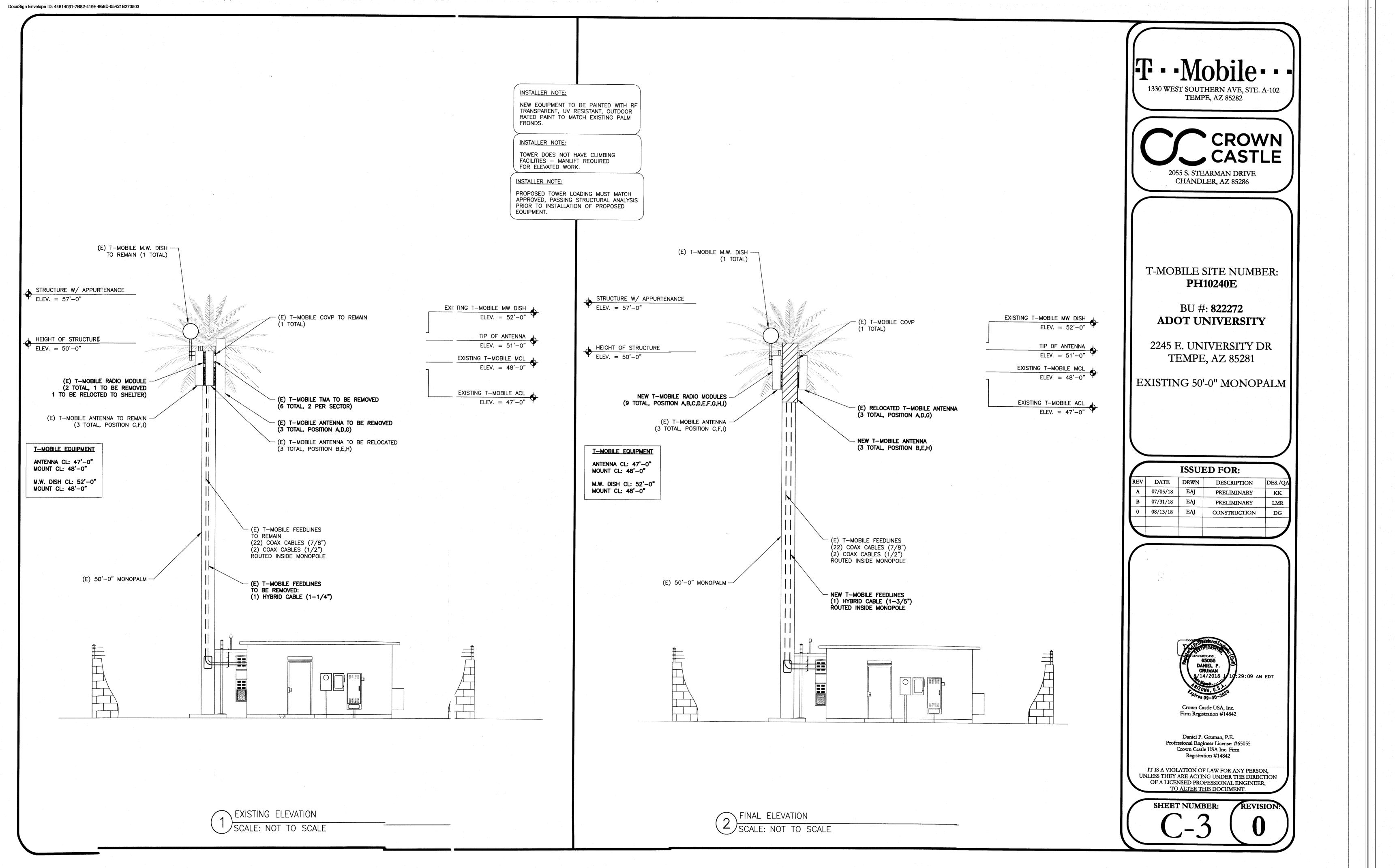
(E) T-MOBILE A TENNA TO REMAIN

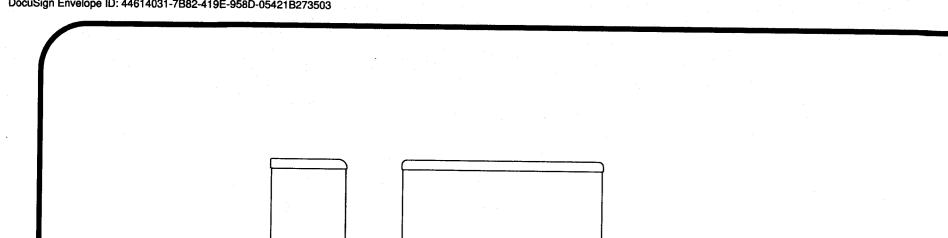
- (E) T-MOBILE COVP TO REMAIN

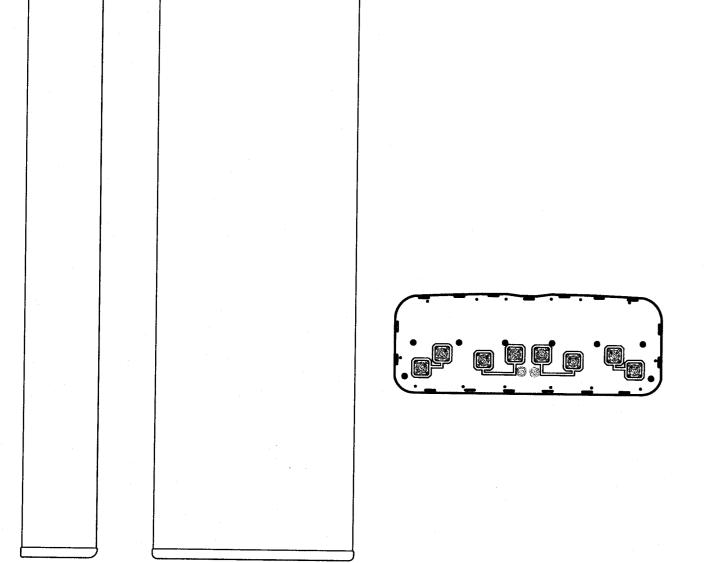
120° AZIN JTH

(3 TOTAL, POSIT)N C,F,I)

(1 TOTAL)







WEIGHT (WITHOUT MOUNTING HARDWARE): 125.7 LBS SIZE (HxWxD): 96.0x25.2x9.3 IN. RATED WIND VELOCITY: 150.0 MPH

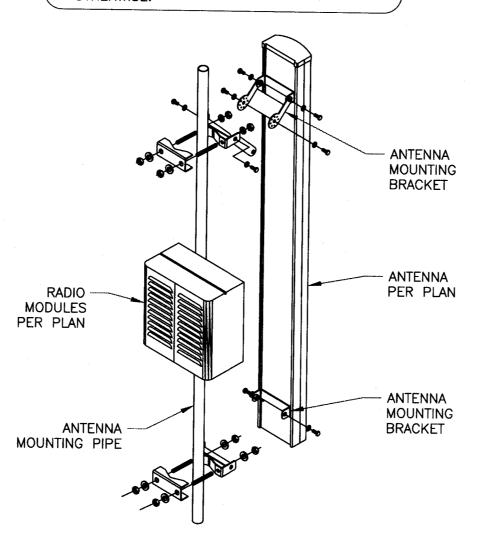
1 ANTENNA SPECIFICATION SCALE: NOT TO SCALE

INSTALLER NOTES:

- 1. COMPLY WITH MANUFACTURERS INSTRUCTIONS
 TO ENSURE THAT ALL RADIO MODULES
 RECEIVE ELECTRICAL POWER WITHIN 24 HOURS
 OF BEING REMOVED FROM THE
- MANUFACTURER'S PACKAGING.

 2. DO NOT OPEN RADIO MODULES PACKAGES IN THE RAIN.
- THE RAIN.

 3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



ANTENNA NOT SHOWN FOR CLARITY

NEW RADIO MODULES

RADIO MODULES

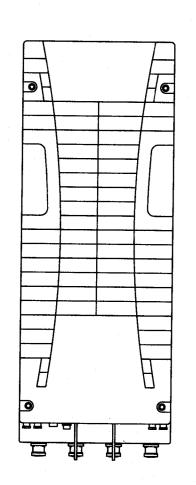
MOUNTING PLATE

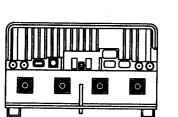
PIPE MOUNT BRACKET

ANTENNA
MOUNTING PIPE

NOTE:

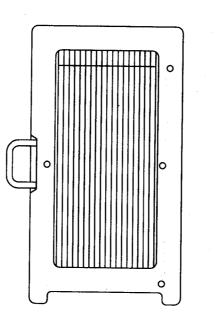
ANTENNA WITH RADIO MODULES MOUNTING DETAIL SCALE: NOT TO SCALE

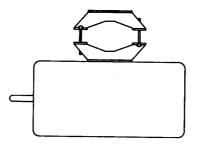




WEIGHT (FULLY EQUIPPED): 52.9 LBS SIZE (HxWxD): 34.3x12.6x7.8 IN.

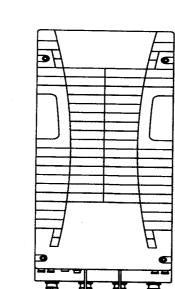
RADIO MODULES SPECIFICATION SCALE: NOT TO SCALE

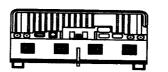




WEIGHT (FULLY EQUIPPED): 83.8 LBS SIZE (HxWxD): 22.1x12.1x7.4 IN. CONNECTOR TYPE: 4.3-1 FEMALE

RADIO MODULES SPECIFICATION SCALE: NOT TO SCALE



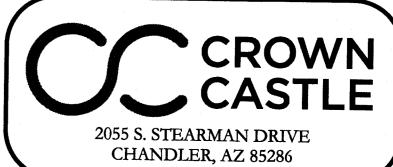


WEIGHT (FULLY EQUIPPED): 44.09 LBS SIZE (HxWxD): 21.45x11.41x4.84 IN.

FADIO MODULES SPECIFICATION SCALE: NOT TO SCALE

T - Mobile - -

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T-MOBILE SITE NUMBER:

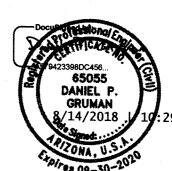
PH10240E

BU #: 822272 ADOT UNIVERSITY

2245 E. UNIVERSITY DR TEMPE, AZ 85281

EXISTING 50'-0" MONOPALM

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В	07/31/18	EAJ	PRELIMINARY	LMR
0	08/13/18	EAJ	CONSTRUCTION	DG



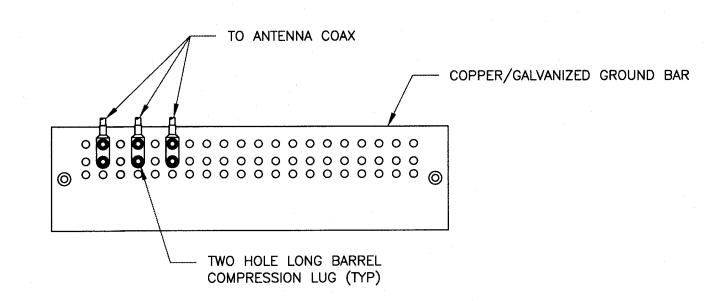
29:09 AM EDT

Crown Castle USA, Inc. Firm Registration #14842

Daniel P. Gruman, P.E.
Professional Engineer License: #65055
Crown Castle USA Inc. Firm
Registration #14842

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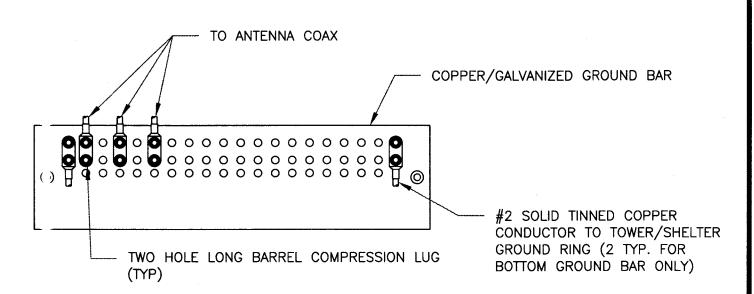
SHEET NUMBER:



NOTES:

- 1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
- 2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
- 3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL.

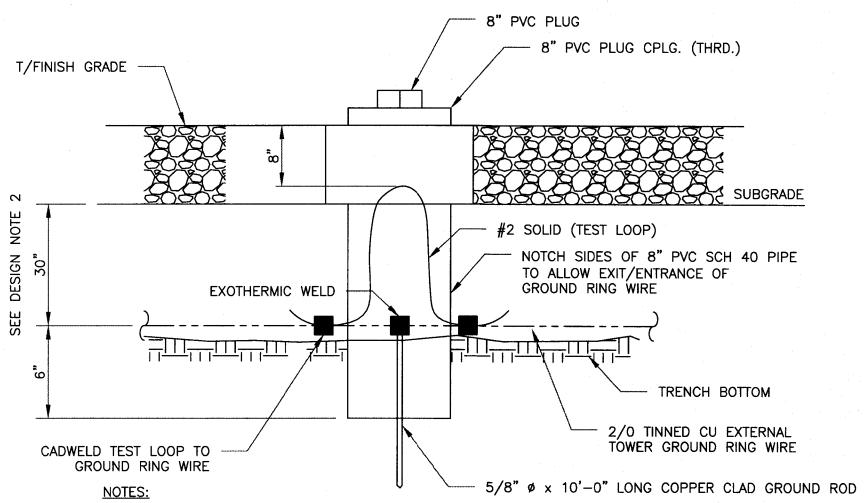
ANTENNA GROUND BAR DETAIL SCALE: NOT TO SCALE



NOTES:

- 1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
- 2. GROUND 3AR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
- 3. GROUND 3AR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

TOVER/SHELTER GROUND BAR DETAIL SC/ LE: NOT TO SCALE



- 1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE
- 2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)
- INSPECTION WELL DETAIL SCALE: NOT TO SCALE

T-MOBILE SITE NUMBER: PH10240E

1330 WEST SOUTHERN AVE, STE. A-102 **TEMPE, AZ 85282**

2055 S. STEARMAN DRIVE

CHANDLER, AZ 85286

CROWN

BU #: **822272 ADOT UNIVERSITY**

2245 E. UNIVERSITY DR **TEMPE, AZ 85281**

EXISTING 50'-0" MONOPALM

ISSUED FOR:

DESCRIPTION

PRELIMINARY

PRELIMINARY

CONSTRUCTION

DES./QA

KK

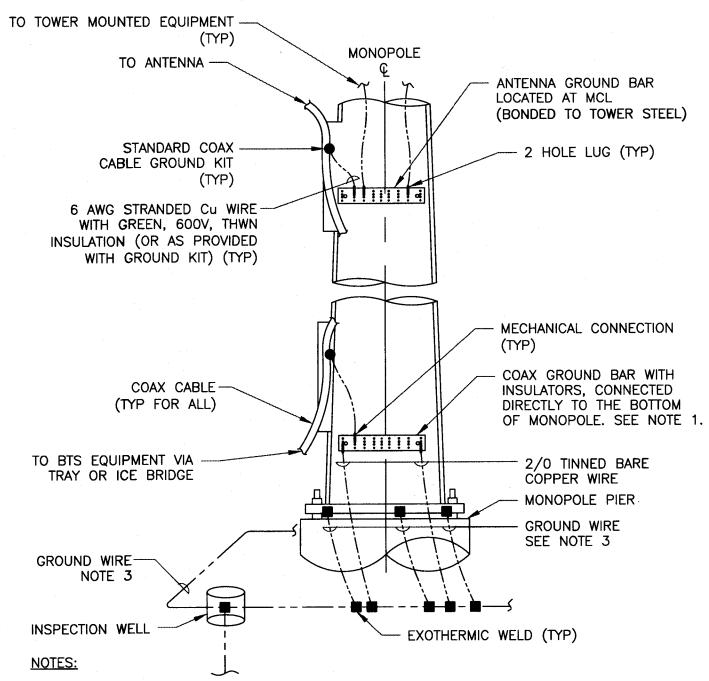
LMR

REV DATE DRWN

A | 07/05/18 | EAJ

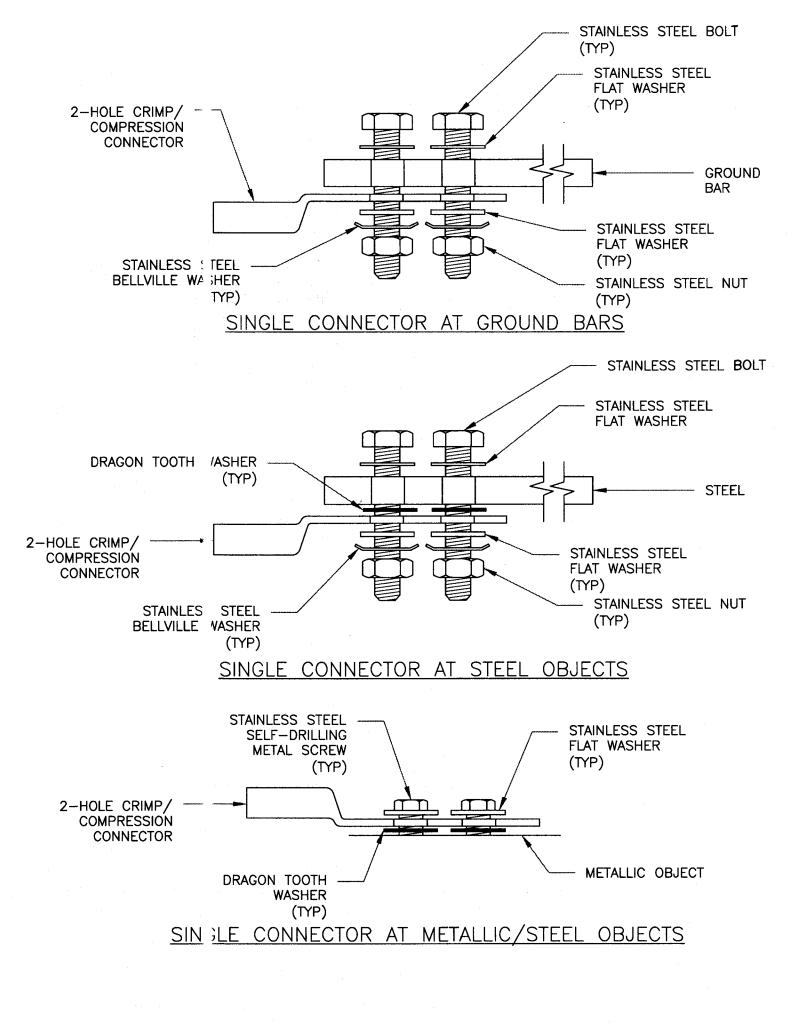
08/13/18 EAJ

B 07/31/18

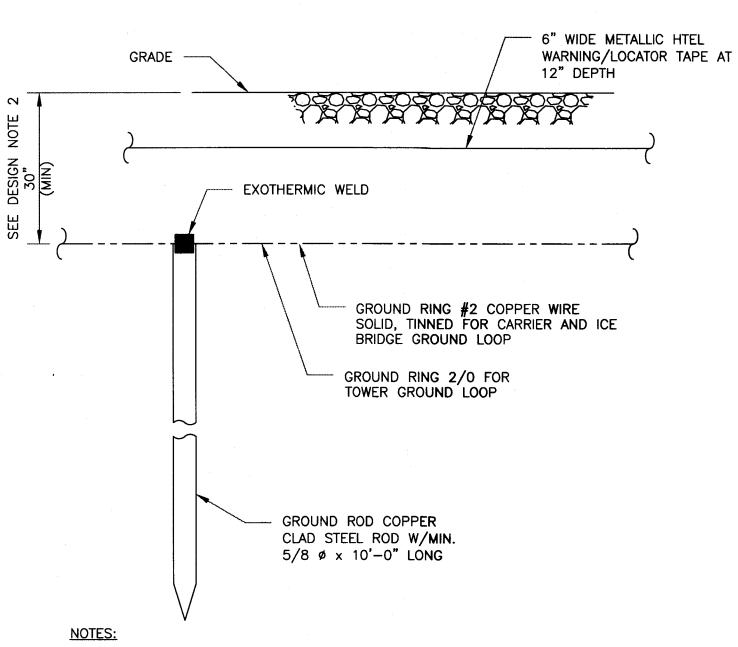


- NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
- 2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE USA INC. TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
- 3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

TYPICAL ANTENNA CABLE GROUNDING SCALE: NOT TO SCALE

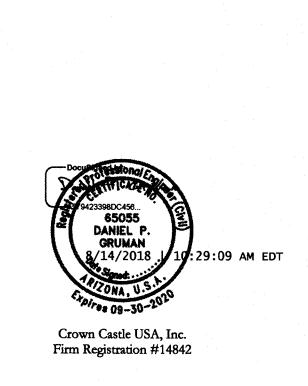


HARDWARE DETAIL FOR EXTERIOR CONNECTIONS 5) HA RUWAINE 2-SC. LE: NOT TO SCALE



- 1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE
- 2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

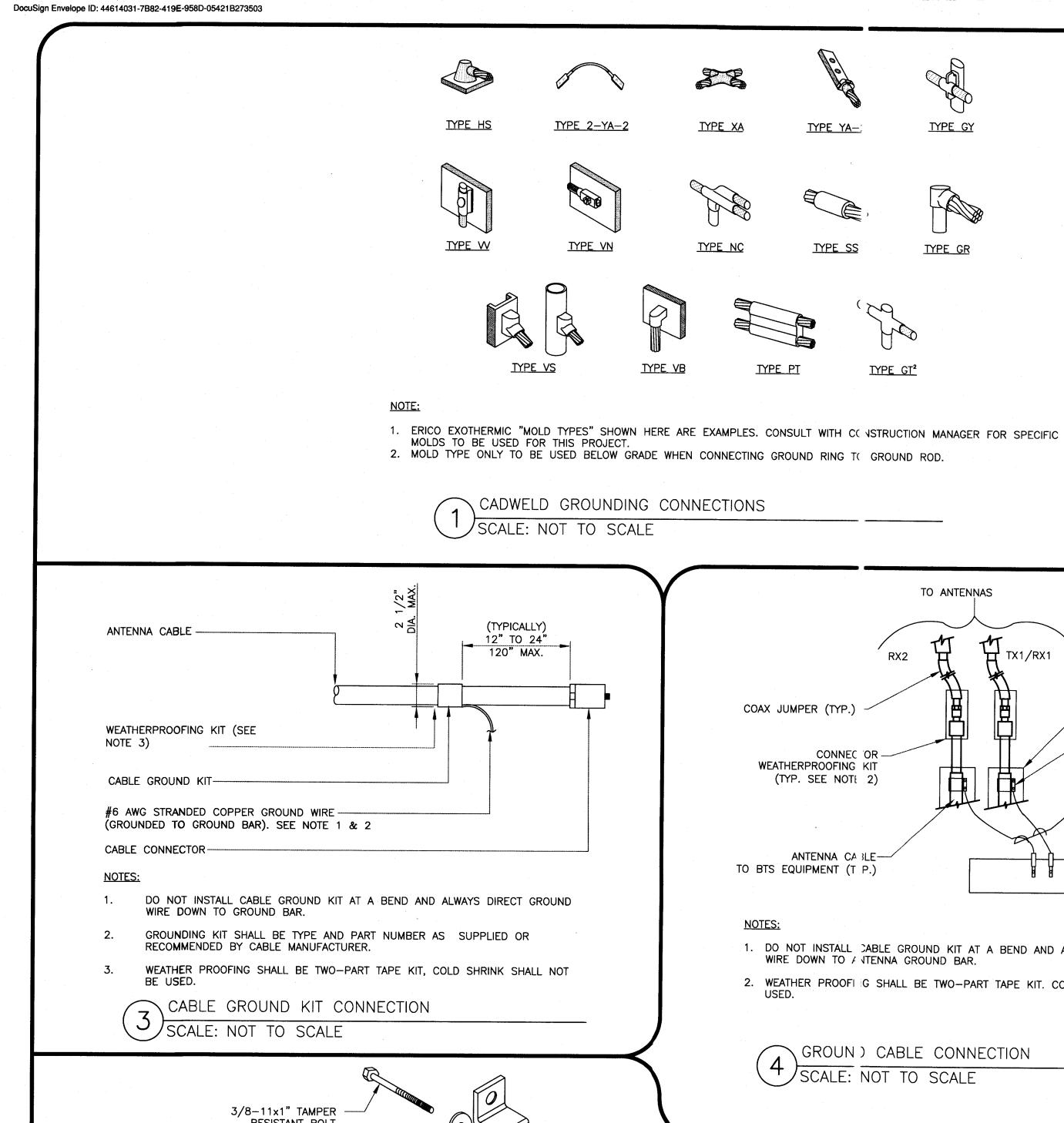
GROUND ROD DETAIL SCALE: NOT TO SCALE



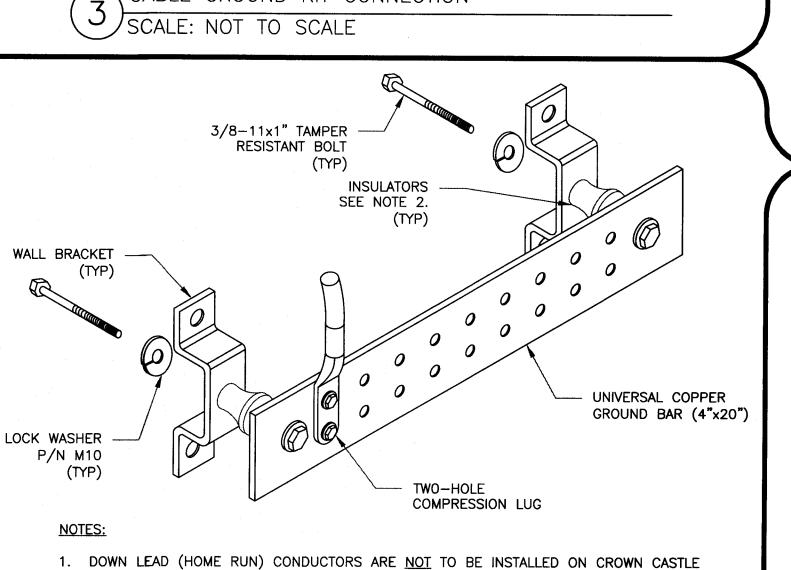
Daniel P. Gruman, P.E. Professional Engineer License: #65055 Crown Castle USA Inc. Firm Registration #14842

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SHEET NUMBER:



- 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND
- 2. WEATHER PROOFI G SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE
- GROUN) CABLE CONNECTION



USA INC. 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.

GROUND BAR DETAIL

SCALE: NOT TO SCALE

2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

NOTE: MINIMUM OF S/S NUT 3 THREADS TO BE (TYP) VIS 3LE (YP) S/S SPLIT WASHER 2 HOLE LONG (TYP) BARREL TINNED SOLID COPPER LUG S/S FLAT (TYP) WASHER TIN COATED SC .ID COPPER BUS FAR - S/S FLAT WASHER CHERRY VSULATOR INSTALLED IF REQUIRED S/S BOLT

LUG DETAIL SCALE: NOT TO SCALE

WEATHERPROOFING

(TYP)

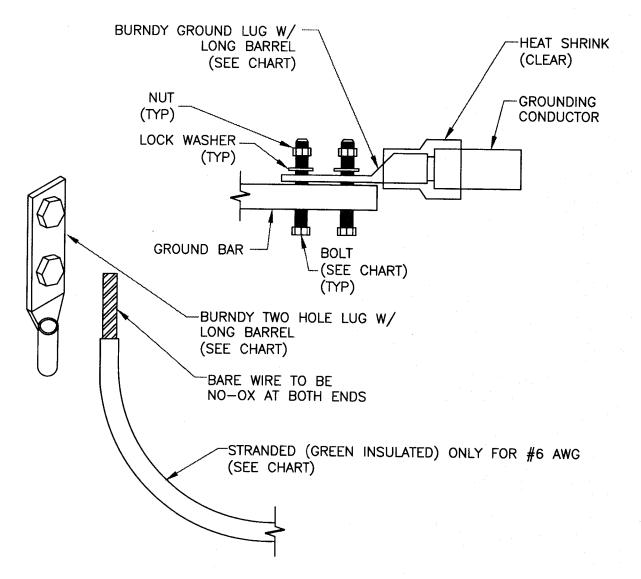
[—]#6 AWG

GROUND KIT

- COPPER/GALVANIZED COAX GROUND BAR

BONDED DIRECTLY TOWER

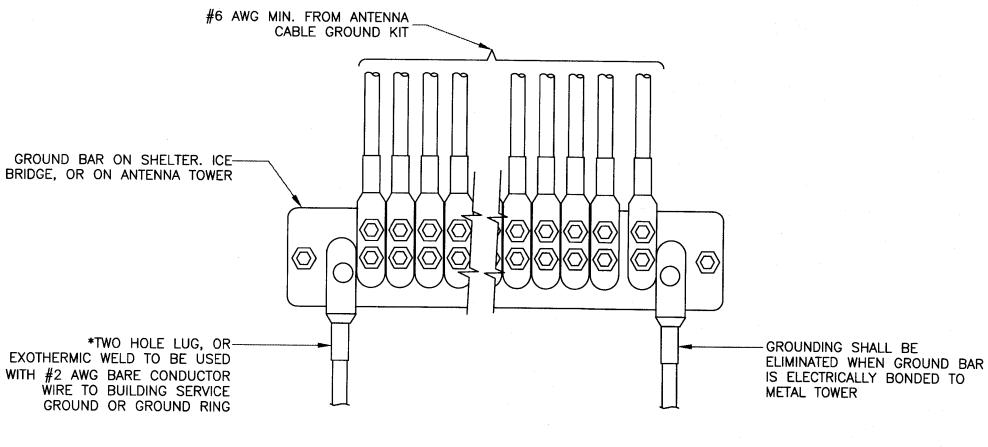
WIRE SIZE BURNDY LUG **BOLT SIZE** #6 AWG GREEN INSULATED YA6C-2TC38 3/8" - 16 NC S 2 BOLT #2 AWG SOLID TINNED YA3C-2TC38 3/8" - 16 NC S 2 BOLT #2 AWG STRANDED YA2C-2TC38 3/8" - 16 NC S 2 BOLT #2/0 AWG STRANDED YA26-2TC38 3/8" - 16 NC S 2 BOLT #4/0 AWG STRANDED 1/2" - 16 NC S 2 BOLT YA28-2N



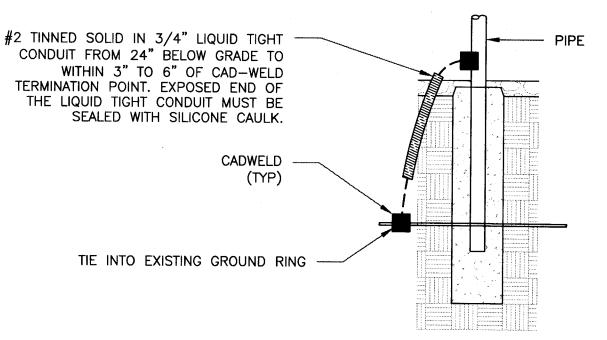
NOTES:

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 SCALE: NOT TO SCALE



GROUNDWIRE INSTALLATION SCALE: NOT TO SCALE



TRANSITIONING GROUND DETAIL (8) SCALE: NOT TO SCALE

TEMPE, AZ 85282



T-MOBILE SITE NUMBER: PH10240E

BU #: 822272 **ADOT UNIVERSITY**

2245 E. UNIVERSITY DR TEMPE, AZ 85281

EXISTING 50'-0" MONOPALM

	ISSUED FOR:					
REV	DATE	DRWN	DESCRIPTION	DES./QA		
A	07/05/18	EAJ	PRELIMINARY	KK		
В	07/31/18	EAJ	PRELIMINARY	LMR		
0	08/13/18	EAJ	CONSTRUCTION	DG		



Crown Castle USA, Inc. Firm Registration #14842

Daniel P. Gruman, P.E. Professional Engineer License: #65055 Crown Castle USA Inc. Firm Registration #14842

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CITY OF TEMPE APPLICATION FORM FOR WIRELESS PROJECTS

The provision and siting of wireless (macro and microcell, Wi-Fi, distributed antenna system ("DAS"), etc.) services are highly technical enterprises subject to various federal, state, and local regulations. This application is designed to elicit information for a proposed new or modified wireless communications site project ("Project") within the City of Tempe, whether on private or public property or in the right-of-way ("ROW").

Completion of this application is mandatory for such wireless Projects to comply with City of Tempe duties under its Code; the Communications Act of 1934 as amended; the FCC Shot Clock Order (FCC 09-99); and other local, state, and federal laws, regulations, and court rulings. This document contains information necessary to permit the City of Tempe's informed consideration of a request.

Determination of completeness: No application for a new or modified wireless Project shall be considered until <u>all</u> required responses to this application form and required Exhibits are completed and tendered to the City of Tempe.

If you do not believe that a specific item of information is necessary or applies to your application based on the type of wireless Project, mark the item on this form with the words, "Not Applicable" and attach a detailed written explanation as to the basis for your belief (e.g., "Question 94.7 does not apply to this application because the proposed Project has no microwave transmission element.") An unsupported statement such as "Question 94.7 does not apply" is insufficient, and the determination of completeness of your application will be delayed while you provide a meaningful and detailed explanation.

The City of Tempe will review the application for completeness within 30 days and return incomplete submittals to the applicant.

Every page of this form <u>including this page and the last page</u> must be returned to the City of Tempe. Each page <u>including this page and the last page</u> must be initialed where indicated. The last page must also be completed, signed, and dated. Please note that item numbers in this form are intentionally non-sequential.

Questions should be directed to:

For Projects in the ROW:

Land Services – Engineering Division 31 E. Fifth St. Tempe, AZ 85281 City Hall Municipal Complex Garden Level, West Wing 480-350-8200 For Projects on private or public property:

Planning Division – Community Development 31 E. Fifth St. Tempe, AZ 85281 City Hall Municipal Complex Garden Level, East Wing 480-350-8331

City of Tempe Supplemental Wireless Application March 2016 Page 1 of 15

Applicant's Representative in 1.00 Must Initial Here:

Please Identify the Type of Wireless Project Proposed

Ce PC Sat	nateur Radio Ilular Telephone S telephone tellite Uplink reless Router	Broadcast Radio Enhanced Specialized SMR/ESMR Satellite Downlink Other(s) (specify)	Mobile Radio _ - - -	Broadcast TV Microwave WiFi/WiMax Small Cell
1.00	Project Location an	nd Applicant Information	n	
Design	Submit Community nate this application a	Development Department s "Exhibit 1.01."	Project Submi	ttal Application.
	Initial heret	o indicate that Exhibit 1.0	1 is attached to	this form.
2.00	Project Owner and	Applicant Information		
form a	Submit Property Ow s "Exhibit 2.01"	ner/Business Owner/Appl	licant Informati	on Form. Designate this
	Initial here	to indicate that the Exhibi	it 2.01 is attach	ed to this form.
3.00	FCC License / RF S	afety Compliance / FAA	Compliance:	
3.01 (attach		l for each radio service, su mpleted Appendix A form		
transm wireles wireles	pposed project or the exissions, the DAS proves carrier or wireless sees site. Appendix A for FCC licensee for the	er applicants: Unless the Imissions from the site are rider must provide an Appervice provider to be transforms completed by a DAS particular wireless services	e solely for the locality for the locality A form of smitted through provider are u	DAS provider's own completed by each the Project at each nacceptable if they are
measui unders	re. Do not use effective tanding of this require	ix A forms must use effective isotropic radiated power the isotropic radiated power ment, you must append the indix A form you submit.	er (EIRP). To v	verify your
	Initial here to inc	licate that Exhibit 3.01 is	attached to this	form.
Bulleti	n 65 requires be evalu	nse above and any other is ated in connection with the rically excluded under F	nis Project, are	all portions of this
	Yes	No		/,/
Supple	City of Tempe emental Wireless Application March 2016	Page 2 of 15		ant's Representative Listed ust Initial Here:

	omp	olies/will cor	tten statement nply with all this (these) st	FCC and F	AA regulation	be using the Project site that the same of the Report 1.03."	he t if
	Ir	iitial here	to indi	cate that Ex	chibit 3.03 is	attached to this form.	
4.00:	P	roject Purp)) 986				
	nati	on in this se	olicants: For ection. If more person/legal e	e than one p	erson/legal e	sing the Project site, provide the ntity, provide separate te.	ne
4.02: directe			ominant purpo	ose of the P	roject (check	one or more, then proceed as	
	1 to	Add netwo Section 4.04	rk capacity <u>w</u> 4.	ithout addir	ng significant	new RF coverage area; Proce	ed
	by		nificant new ency coverage			e in an area <u>not</u> already served 4.	
			e existing RF ceed to Sectio		l in an area w	ith existing radio frequency	
		Other; Proc	eed to Section	n 4.03.			
4.03 of the	At "Ot	ttach a writte ther" domina	n statement f int purpose of	ully and exp this Projec	pansively des t. Designate	cribing all portions or element this exhibit as "Exhibit 4.03."	ts
	In	itial here	to indic	cate that Ex	hibit 4.03 is a	attached to this form.	
4.04 telecor	Is nm	this Project i	intended to cl etwork?	ose or reduc Yes	ce an asserted _ No	l "significant gap" in a wireles	S
4.05	If	the answer to	o 4.04 is NO j	proceed to S	Section 4.07.	If YES, proceed to Section 4.	06.
4.06	At	tach a writte	n statement fi	ully and exp	oansively des	cribing the following:	
	a.	A clear des	cription of the	e geographi	c boundary o	f the claimed significant gap	
	b.	Attach a str	eet-level map			boundary of the claimed	
	c.					les, of the claimed significant	
	d.		eet-level map	showing th	ne geographic	boundary that would be serve	ed
Supple		City of Tempe	olication	Page 3 of 1	15	Applicant's Representative Listed in 1.00 <u>Must</u> Initial Here:	_

March 2016

by the Project if approved; and

e. Provide all other relevant information that the City of Tempe should consider when evaluating your claim of a significant gap.

Designate this exhibit as "Exhibit 4.06."

Initial here _____ to indicate that Exhibit 4.06 is attached to this form.

4.07 If applying for a Use Permit:

A Use Permit shall be granted only upon a finding by the decision-making body, that the use covered by the permit, the manner of its conduct, and any building which is involved, will not be detrimental to persons residing or working in the vicinity, to adjacent property, to the neighborhood, or to the public welfare in general, and that the use will be in full conformity to any conditions, requirements, or standards prescribed therefore by this Code.

In arriving at the above determination, the following factors shall be considered, but not be limited to:

- a. Any significant increase in vehicular or pedestrian traffic;
- b. Nuisance arising from the emission of odor, dust, gas, noise, vibration, smoke, heat, or glare at a level exceeding that of ambient conditions;
- c. Contribution to the deterioration of the neighborhood or to the downgrading of property values which, is in conflict with the goals, objectives or policies for rehabilitation, redevelopment or conservation as set forth in the city's adopted plans or General Plan;
- d. Visual compatibility with existing surrounding structures and uses, including compliance with any stealth and concealment requirements; and
- e. Adequate control of disruptive behavior both inside and outside the premises, which may create a nuisance to the surrounding area or general public.

Attach a letter of explanation that addresses the above Approval Criteria. Designate this exhibit as "Exhibit 407."

Initial here ______ to indicate that Exhibit 4.07 is attached to this form.

- 4.08 Attach a written statement fully and expansively describing at a minimum:
 - a. Why this Project is the least intrusive means to close the significant gap claimed and described in 4.06.
 - b. Identify and discuss all alternative sites and means considered to close the

City of Tempe Supplemental Wireless Application March 2016

Page 4 of 15

Applicant's Representative listed in 1.00 <u>Must</u> Initial Here:

significant gap claimed and described in 4.06.

- c. Whether two or more sites in lieu of the site proposed in Section 1 could close the significant gap claimed and described in 4.06, or to reduce the significant gap to be less than significant, with less impact on the community as compared with a single site? If the answer is no, please explain in narrative format the basis for that answer.
- d. Whether the City of Tempe requiring two or more sites in place of the site proposed in Section 1 would prohibit or have the effect of prohibiting the Applicant from providing any interstate or intrastate telecommunications service. If the response asserts that a prohibition or effective prohibition would occur, explain in detail in narrative form all of the reasons why it would.

Include any other information you believe would assist the City of Tempe in making findings regarding whether the proposed Project is the least intrusive means of closing the significant gap claimed and described in 4.06.

Designate this	exhibit	as "Exhibit	4.08.
----------------	---------	-------------	-------

Initial here to indicate that Exhibit 4.08 is attached to this form.

- 5.00 Project Base Photographs and Photo Simulations
- 5.01 The Applicant shall submit photo simulations consistent with the following standards:
 - 1. Minimum size of each base (existing) photo <u>and</u> each photo simulation must be 10 inches by 8 inches. Each base photo and matching photo simulation must be the same size.
 - 2. All elements of the Project as proposed by the Applicant which can be seen from any point at ground level, or from any level within or on buildings within a ½ mile radius of the Project must be shown in one or more close-in photo simulations (i.e., panel antennas, omni-directional antennas, GPS antennas, antenna camouflage devices, cable trays, equipment cabinets, working lights, etc.).
 - 3. The overall Project as proposed by the Applicant must be shown in three or more area photo simulations. Base photographs must, at a minimum, be taken from widely scattered positions of 120 degrees. A map detail showing each location where a photograph was taken, the proposed site, and the direction to the site from each photo location must be included. Base photographs taken from locations that have some physical feature obscuring the Project site, and the photo simulations associated with those same base photographs, are not acceptable.

Attach all base photographs and photo simulations to this application marked as "Exhibit 5.01."

City of Tempe Supplemental Wireless Application March 2016 Page 5 of 15

Applicant's Representative Listed in 1.00 Must Initial Here:

The purpose of the photo simulations is to allow the City of Tempe to visualize the wireless Project as completed, therefore the number of site photos, and photo simulations, and the actual or simulated camera location of these photos and photo simulations are subject to City of Tempe determination. The Applicant should submit photos and photo simulations consistent with these instructions, and be prepared to provide additional photos and photo simulations should they be requested by the City of Tempe.

The Applicant certifies by initialing in the space at the end of this paragraph that all of the photos and photo simulations provided for Exhibit 5.01 are accurate and reliable photographic representations of the current Project site and the proposed Project to be constructed or modified, and that the Applicant is fully aware that the City of Tempe will rely on all of the photos and photo simulations provided in Exhibit 5.01 when it considers approval of this Project, and later when determining Project completion.

Appli	cant's initials:
6.00	Minimization of Visual Impact
	Provide documentation of the steps that will be taken to minimize visual impact of the sed wireless attachment or facility to comply with any stealth and concealment rements. Designate this exhibit as "Exhibit 6.01."
	Initial here to indicate that Exhibit 6.08 is attached to this form.
7.00	Landscape Plan
	Provide a landscape plan, drawn to scale, that is consistent with the need for

- 7.01 Provide a landscape plan, drawn to scale, that is consistent with the need for screening at the site. Any existing vegetation that is to be removed must be clearly indicated and provision for mitigation included where appropriate. Designate this exhibit as "Exhibit 7.01."
- 8.00 Feasibility Study for Co-Location
- 8.01 Provide a feasibility study for the co-location of telecommunication facilities as an alternative to new structures. The study shall include:
 - a. An inventory, including the location, ownership, height, and design of existing Wireless Telecommunication Facilities within one-half (1/2) mile of the proposed location of a new Wireless Telecommunication Facilities. The city may share such information with other applicants seeking permits for WTFs, but shall not, by sharing such information, in any way represent or warrant that such sites are available or suitable.
 - b. Applicant shall document efforts made to co-locate on existing verticality. Each applicant shall make a good faith effort to contact the owner(s) of existing or approved structures and shall provide a list of all owners contacted in the area,

City of Tempe Supplemental Wireless Application March 2016 Page **6** of **15**

Applicant's Representative Listed in 1.00 Must Initial Here:

including the date, form and content of such contact. Co-location shall not be precluded simply because a fee for shared use is charged, or because of reasonable costs necessary to adapt the existing and proposed uses to a shared site.

Designate this study as "Exhibit 8.01."
Initial here to indicate that Exhibit 8.01 is attached to this form.
9.00 Alternative Candidate Sites
9.01 Amateur radio applicants proceed to Section 10.00.
9.02 Has the Applicant or Owner or anyone working on behalf of the Applicant or Owner secured or attempted to secure any leases or lease-options or similar formal or informal agreements in connection with this Project for any sites other than the proposed Project site? Yes No
9.03 If the answer to 9.02 is NO proceed to Section 9.05. If the answer is YES, proceed to Section 9.04.
9.04 Provide the physical address of each such other location, and provide an expansive technical explanation as to why each such other site was disfavored over the Project site. Designate this exhibit as "Exhibit 9.04."
Initial here to indicate that Exhibit 8.04 is attached to this form.
9.05 Considering this proposed site, is it the <u>one and only one location</u> within or outside of the City of Tempe that can possibly meet the objectives of the Project? Yes No
9.06 If the answer to 9.05 is NO, proceed to Section 10.00. If the answer is YES, proceed to Section 9.07.
9.07 Provide a technically expansive and detailed explanation supported as required by comprehensive radio frequency data and all other necessary information fully describing why the proposed site is the one and only one location within or outside of the City of Tempe that can possibly meet the radio frequency objectives of the Project. Explain, in exact and expansive technical detail, all of the objectives of this Project that can be achieved only at this Project site, and why.
Designate this exhibit as "Exhibit 9.07."
Initial here to indicate that Exhibit 9.07 is attached to this form.

City of Tempe Supplemental Wireless Application March 2016 Page **7** of **15**

Applicant's Representative Li in 1.00 <u>Must</u> Initial Here:

10.00 Identification of Key Persons

March 2016

10.01 Identify by name, title, corextension, and email address of the Project so that the City of Tempe	e key person or persons	most knowledgeable regarding this
Name Title Company Affiliation Work Address	TRAVIS SCHEN	uk agee
Name: Title: Company Affiliation: Work Address: Telephone / Ext.: Email Address:		gineering of the Project;
Title: Company Affiliation:	CRAWN CAST	gel-
11.00 Additional Information P	rovided by Applicant	
11.01 You are invited and encour kind that you wish the City of Tem		ditional written information of any ection with your proposed Project.
If you wish to attach additional wr	itten information, desig	nate this exhibit as "Exhibit 11.01"
Initial here to indicate the or initial here to indicate	at Exhibit 11.01 is attacl that there is no Exhibit	ned to this form, 11.01 attached.
12.00 Certification of Accuracy	and Reliability	
12.01 The undersigned certifies of the Property Owner (if property overovided in this form and its contembrity and knowledge, and that information in the contembrity and knowledge, and that information in the contembrity and knowledge.	vner is other than the Cints are true and complete	ty of Tempe) that the information
City of Tempe Supplemental Wireless Application	Page 8 of 15	Applicant's Representative Lister in 1.00 <u>Must</u> Initial Here:

the City of Tempe as being accurate and c	complete as the City of Tempe evaluates this
Project.	
A 111	
() Was failes	Beal Estate Specialist
Signature Signature	Title
Signature p. 04	
Sally Natalino	Sally Ustolino @ CROWN CASTRE
Print Name	Provide Email Address
GROWN CASTLE	602-845-1704
Print Company Name	Provide Telephone Number
1/4/19	
Date Signed	

<Last Page: Remember to sign above and initial below>

City of Tempe Supplemental Wireless Application March 2016 Page **9** of **15**

Applicant's Representative Listed in 1.00 Must Initial Here:

Appendix A

Checklist to Determine Whether a Facility is Categorically Excluded From Determination of Compliance

The FCC has determined that many wireless facilities are unlikely to cause human exposures in excess of RF exposure guidelines. Operators of those facilities are exempt from routinely having to determine their compliance. These facilities are termed "categorically excluded." Section 1.1307(b)(1) of the FCC's rules defines those categorically excluded facilities.

This checklist will assist the City in identifying those wireless facilities that are categorically excluded, and thus are highly unlikely to cause exposure in excess of the FCC's guidelines. Provision of the information identified on this checklist may also assist FCC staff in evaluating any inquiry regarding a facility's compliance with the RF exposure guidelines.

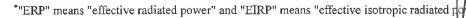
BACKGROUND INFORMATION	
- MIL WIT 111	
1. Facility Operator's Legal Name: T- Mabile West Tower LLC	
2. Facility Operator's Mailing Address: 2055 5. Stepenson De CHandle AZ	852S
3. Facility Operator's Contact Name/Title: Selly Motoling, Red Estate Specialist	
4. Facility Operator's Office Telephone: 603-845-1704	
5. Facility Operator's Fax: 124-416-6972	
6. Facility Name: ADOT UNIVERSILLE	T
7. Facility Address: 2245 E. University De.	T
8. Facility City/Community: Temps	T
9. Facility State and Zip Code: 4Z, 85281	
10. Latitude: 33°25′ 17. 10"	
11. Longitude: - //1. 53' 23. 30	

City of Tempe Supplemental Wireless Application March 2016 Page **10** of **15**

Applicant's Representative Listed in 1.00 Must Initial Here:

Checklist (page 2)

EVALUATION OF CATEGORICAL EXCLUSION				
12. Licensed Radio Service (see attached Table 1):				
13. Structure Type (free-standing or building/roof-mounted): Face Standing				
14. Antenna Type [omnidirectional or directional (includes sectored)]:				
15. Height above ground of the lowest point of the antenna (in meters):				
16. ☐ Check if <u>all</u> of the following are true:				
(a) This facility will be operated in the Multipoint Distribution Service, Paging and Radiotelephone Service, Cellular Radiotelephone Service, Narrowband or Broadband Personal Communications Service, Private Land Mobile Radio Services Paging Operations, Private Land Mobile Radio Service Specialized Mobile Radio, Local Multipoint Distribution Service, or service regulated under Part 74, Subpart I (see question 12).				
(b) This facility will <u>not</u> be mounted on a building (see question 13).				
(c) The lowest point of the antenna will be at least 10 meters above the ground (see				
question				
15).				
If box 16 is checked, this facility is categorically excluded and is unlikely to cause exposure in excess of the FCC's guidelines. The remainder of the checklist need not be completed. If box 16 is not checked, continue to question 17.				
17. Enter the power threshold for categorical exclusion for this service from the attached Table 1 in watts ERP or EIRP* (note: EIRP = (1.64) X ERP):				
18. Enter the total number of channels if this will be an omnidirectional antenna, or the maximum number of channels in any sector if this will be a sectored antenna: 19. Enter the ERP or EIRP per channel (using the same units as in question 17):				
20. Multiply answer 18 by answer 19:				
21. Is the answer to question 20 less than or equal to the value from question 17 (yes or no)?				
If the answer to question 21 is YES, this facility is categorically excluded. It is unlikely to cause exposure in excess of the FCC's guidelines.				
If the answer to question 21 is NO, this facility is not categorically excluded. The City will need further information to verify whether the facility may cause exposure in excess of the FCC's guidelines.				



City of Tempe Supplemental Wireless Application March 2016 Page **11** of **15**

Applicant's Representati in 1.00 <u>Must</u> Initial Here:

$\underline{\text{TABLE 1}}\textsc{:}$ TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Experimental Radio Services (part 5)	power > 100 W ERP (164 W EIRP)
Multipoint Distribution Service (subpart K of part 21)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1640 W EIRP building-mounted antennas: power > 1640 W EIRP
Paging and Radiotelephone Service (subpart E of part 22)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1000 W ERP (1640 W EIRP) building-mounted antennas: power > 1000 W ERP (1640 W EIRP)
Cellular Radiotelephone Service (subpart H of part 22)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 1000 W ERP (1640 W EIRP) building-mounted antennas: total power of all channels > 1000 W ERP (1640 W EIRP)

Page **12** of **15**

City of Tempe Supplemental Wireless Application March 2016 Applicant's Representative lists in 1.00 Must Initial Here:

TABLE 1 (cont.)

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Personal Communications Services (part 24)	(1) Narrowband PCS (subpart D): non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 1000 W ERP (1640 W EIRP) building-mounted antennas: total power of all channels > 1000 W ERP (1640 W EIRP) (2) Broadband PCS (subpart E): non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 2000 W ERP (3280 W EIRP) building-mounted antennas: total power of all channels > 2000 W ERP (3280 W EIRP)
Satellite Communications (part 25)	all included
General Wireless Communications Service (part 26)	total power of all channels > 1640 W EIRP
Wireless Communications Service (part 27)	total power of all channels > 1640 W EIRP
Radio Broadcast Services (part 73)	all included

TABLE 1 (cont.)

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Experimental, auxiliary, and special broadcast and other program distributional services (part 74)	subparts A, G, L: power > 100 W ERP subpart I: non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1640 W EIRP building-mounted antennas: power > 1640 W EIRP
Stations in the Maritime Services (part 80)	ship earth stations only
Private Land Mobile Radio Services Paging Operations (part 90)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1000 W ERP (1640 W EIRP) building-mounted antennas: power > 1000 W ERP (1640 W EIRP)
Private Land Mobile Radio Services Specialized Mobile Radio (part 90)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and total power of all channels > 1000 W ERP (1640 W EIRP) building-mounted antennas: total power of all channels > 1000 W ERP (1640 W EIRP)

TABLE 1 (cont.)

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
Amateur Radio Service (part 97)	transmitter output power > levels specified in § 97.13(c)(1) of this chapter
Local Multipoint Distribution Service (subpart L of part 101)	non-building-mounted antennas: height above ground level to lowest point of antenna < 10 m and power > 1640 W EIRP building-mounted antennas: power > 1640 W EIRP LMDS licensees are required to attach a label to subscriber transceiver antennas that: (1) provides adequate notice regarding potential radiofrequency safety hazards, e.g., information regarding the safe minimum separation distance required between users and transceiver antennas; and (2) references the applicable FCC-adopted limits for radiofrequency exposure specified in § 1.1310 of this chapter.

Main Special Inspection Categories and Subcategories

- 1. Fabricator
 - · Fabrication and implementation procedures.
 - Fabricator approval.
- 2. Steel construction. See Table.
 - Structural steel.
 - Steel construction other than structural steel.
 - Welding.
 - Cold-formed steel.
 - Reinforcing steel.
 - Cold-formed steel trusses spanning 60 feet or greater.
- 3. Concrete construction. See Table.
 - Materials.
- 4. Masonry construction. See Table.
 - Empirically designed masonry, glass unit masonry and masonry veneer in Risk Category IV.
 - Vertical masonry foundation elements.
- 5. Wood construction.
 - · High-load diaphragms.
 - Metal-plate-connected wood trusses spanning 60 feet or greater.
- 6. Soils. See Table.
- 7. Driven deep foundations/Cast-in-place deep foundations/ Helical pile foundations See Tables.
- 8. Special inspections for wind resistance Seismic Design Category C, D, E or F
 - Structural wood.
 - Cold-formed steel light-frame construction.
 - Wind-resisting components.
- 9. Special inspections for seismic resistance.
 - Structural steel.
 - Structural wood.
 - Cold-formed steel light-frame construction.
 - Designated seismic systems.
 - Architectural components Seismic Design Category D, E or F
 - Access floors Seismic Design Category D, E or F
 - Mechanical and electrical components Seismic Design Category C, D, E or F
 - Storage racks Seismic Design Category D, E or F
 - Seismic isolation systems.
- 10. Testing and qualification for seismic resistance.
 - Concrete reinforcement.
 - Structural steel.
 - Seismic certification of nonstructural components.
 - Seismic isolation systems.
- 11. Sprayed fire-resistant materials.
 - Physical and visual tests.
 - Structural member surface conditions.
 - Application.

- Thickness.
 - Minimum allowable thickness.
 - Floor, roof and wall assemblies.
 - Cellular decks.
 - Fluted decks.
 - Structural members.
 - Beams and girders.
 - Joists and trusses.
 - Wide-flanged columns.
 - Hollow structural section and pipe columns.
- Density.
- Bond strength.
 - Floor, roof and wall assemblies.
 - Structural members.
 - Primer, paint and encapsulant bond tests.
- 12. Mastic and intumescent fire-resistant coatings.
- 13. Exterior insulation and finish systems (EIFS).
 - Water-resistive barrier coating.
- 14. Fire-resistant penetrations and joints.
 - Penetration firestops.
 - · Fire-resistant joint systems.
- 15. Special inspection for smoke control.
 - Testing scope.
 - Qualifications.
- 16. 17, 18 & 19. Special cases. Special inspections shall be required for proposed work that is, in the opinion of the building official, unusual in its nature, such as, but not limited to, the following examples:
 - Adhesive/expansion anchors or other special anchoring systems.
 - Construction materials and systems that are alternatives to materials and systems prescribed by this code.
 - Unusual design applications of materials described in this code.
 - Materials and systems required to be installed in accordance with additional manufacturer's
 instructions that prescribe requirements not contained in this code or in standards referenced by
 this code.
 - Mechanical, Electrical or Plumbing systems or components as required by the building official

DBS 414.03 Revised 10/14/2015



Nationwide Programmatic Agreement Co-location Criteria Verification Form

Site Name:	ADOT	Uni	versity
D II.		L	022272

Business Unit Number: 822272 App ID: 443055

Site Address: 2245 E. University Dr Tempe, AZ 85281

Carrier Name: T- Customer Site II				
Tower was built	on or before 3/16/	01? YES □ NO ⊠		
Criteria for Pro	grammatic Agre	ement Eligibility for Towers Built on or before March 16, 2001		
YES □	NO □	The mounting of the antenna will result in a substantial increase in the size of the tower ¹ .		
YES □	NO □	The tower has been found by the FCC to have an adverse or potentially adverse effect that has not been resolved through an MOA or other mechanism.		
YES □	NO □	The tower is the subject of a pending environmental review or proceeding before the FCC involving compliance with Section 106 of the NHPA.		
YES □	NO □	The tower owner has received written or electronic notice from the FCC that the FCC is in receipt of a complaint from a member of the public, a SHPO or the Council that the co-location has an adverse effect on one or more historic properties.		
Criteria for Pro	grammatic Agre	ement Eligibility for Towers Built after March 16, 2001		
YES □	NO ⊠	No Section 106 review (SHPO review) or any associated environmental (NEPA) review required by the FCC has been completed for this tower.		
YES □	NO ⊠	The mounting of the antenna will result in a substantial increase in the size of the tower. ¹		
YES □	NO 🛮	The tower is the subject of a pending environmental review or proceeding before the FCC involving compliance with Section 106 of the NHPA.		
YES □	NO ⊠	The tower owner has received written or electronic notice from the FCC that the FCC is in receipt of a complaint from a member of the public, a SHPO or the Council that the co-location has an adverse effect on one or more historic properties.		
If any of the above answers are "YES," consultation with the SHPO is required prior to placement of the antenna on the tower.				
Approved By	Nicole L	Carsen 6/23/2018		

A COPY OF THIS COMPLETED FORM MUST BE PROVIDED TO THE CARRIER AND TO THE CROWN CASTLE REGULATORY DEPARTMENT.

¹ Substantial increase in size of the tower" means: 1) an increase in the tower height of more than 10% or by the height of one antenna array with a separation distance from the nearest existing array not to exceed 20 feet, whichever is greater; 2) the installation of more than 4 new equipment cabinets or more than 1 new equipment building; 3) the addition of an appurtenance that would protrude from the edge of the tower more than 20 feet or more than the width of the tower at the level of the appurtenance, whichever is greater; or 4) the mounting of the antenna would involve excavation outside the current boundaries of the site and any access or utility easements currently related to the site.





January 3, 2019

City of Tempe | Planning Department 31 E. Fifth Street | Tempe, AZ 85280

RE:

ZUP Use Permit

BU# 822272 - ADOT University - ADOT (Property Owner)

2245 E. University Dr., Tempe, AZ 85281

To Whom It May Concern,

Crown Castle is requesting your approval to amend the original zoning conditions (ZUP #06056) prescribed to the cellular tower site on University Dr. The project goal of the proposed Crown Castle site #822272 (ADOT UNIVERISTY) is to continue providing the existing carrier (T-Mobile) the location and the opportunity to upgrade equipment without interruption or loss of coverage due to landscaping conditions prescribed. At this point, T-Mobile is unable to upgrade the existing antennas currently on the tower due to the current landscaping stipulation, which is keeping them from providing coverage in the location.

The initial application submitted by T-Mobile in 2006 to build the tower, contained misinformation regarding the lease area. The initial application submitted in 2006 for the installation of the cell tower erroneously displayed the entire parcel as the lease area, when in fact the lease area was, and still is 660 sq. ft. T-Mobile nor Crown can obtain rights at this time outside this area to accommodate the landscape requirement. The current lease area is not sufficient to accommodate (2) twenty foot brown trunk Phoenix Date Palm trees and a 24" box Chilean Mesquite tree.

Crown Castle has made a good faith effort to rectify the outstanding zoning conditions as outlined and approved during the November 11, 2006 hearing. In addition, there was never any irrigation equipment installed at this site. Crown Castle made an additional request to ADOT to obtain a utility easement to bring in the irrigation to the site. ADOT has denied our request and did not grant the easement.

The WCF does not contribute to an increase in pedestrian or vehicular traffic in the area. There is no visible negative impact. One vehicle may access the wireless communication facility approximately once or twic a month, or in the event of a technical breakdown. This vehicle will use the existing access and parking at the site.

The WCF is unmanned and does not require any water, or solid waste services. There are no negatives to the existence of this WCF operating at the current location.

Please do not hesitate to contact me for any additional information or clarification at 602-845-1704 or at sally.natalino@crowncastle.com.

Patalino

Best Regards

Sally Natalino

Real Estate Specialist

E. UNIVERSITY DR APPROXIMATE LOCATION OF PROPERTY LINE APN. 135-40-071A ZONING: CSS APN. 135-40-014A APN. 135-40-041C ZONING: R1-6 Z NING: CSS APN. 135-40-041-B ZONING: CSS (E) BUILDING -APN. 135-40-065 APN. 135-40-071A ZONING: R1-6 ZONING: CSS (E) T-MOBILE SHELTER (E) CMU WALL (E) CROWN CASTLE USA INC. (E) 50'-0" | ONOPALM-(E) UTILITY POLE, —/ TYP — (E) CONCRETE PAD (E) CMU WALL APPROXIMATE LOCATION OF PROPERTY LINE APN. 135-40-087 ZONING: RO

DocuSign Envelope ID: 44614031-7B82-419E-958D-05421B273503

1330 WEST SOUTHERN AVE, STE. A-102 TEMPE, AZ 85282



T-MOBILE SITE NUMBER: PH10240E

BU #: **822272 ADOT UNIVERSITY**

2245 E. UNIVERSITY DR TEMPE, AZ 85281

EXISTING 50'-0" MONOPALM

ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
A	07/05/18	EAJ	PRELIMINARY	KK
В	07/31/18	EAJ	PRELIMINARY	LMR
0	08/13/18	EAJ	CONSTRUCTION	DG

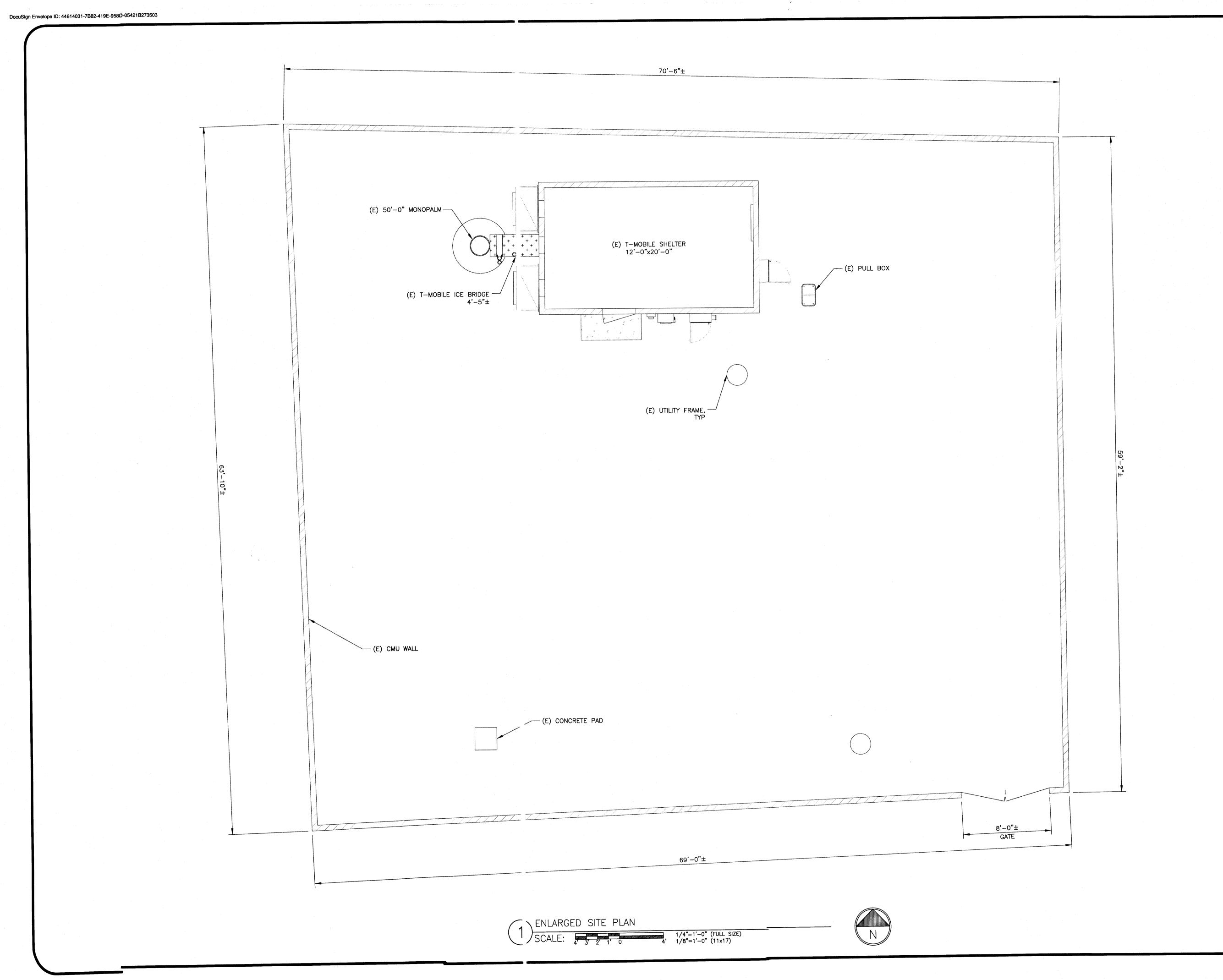


Crown Castle USA, Inc. Firm Registration #14842

Daniel P. Gruman, P.E. Professional Engineer License: #65055 Crown Castle USA Inc. Firm Registration #14842

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.





1330 WEST SOUTHERN AVE, STE. A-102 TEMPE, AZ 85282



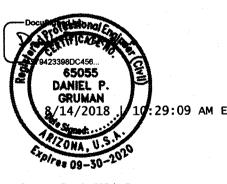
T-MOBILE SITE NUMBER: PH10240E

BU #: **822272 ADOT UNIVERSITY**

2245 E. UNIVERSITY DR TEMPE, AZ 85281

EXISTING 50'-0" MONOPALM

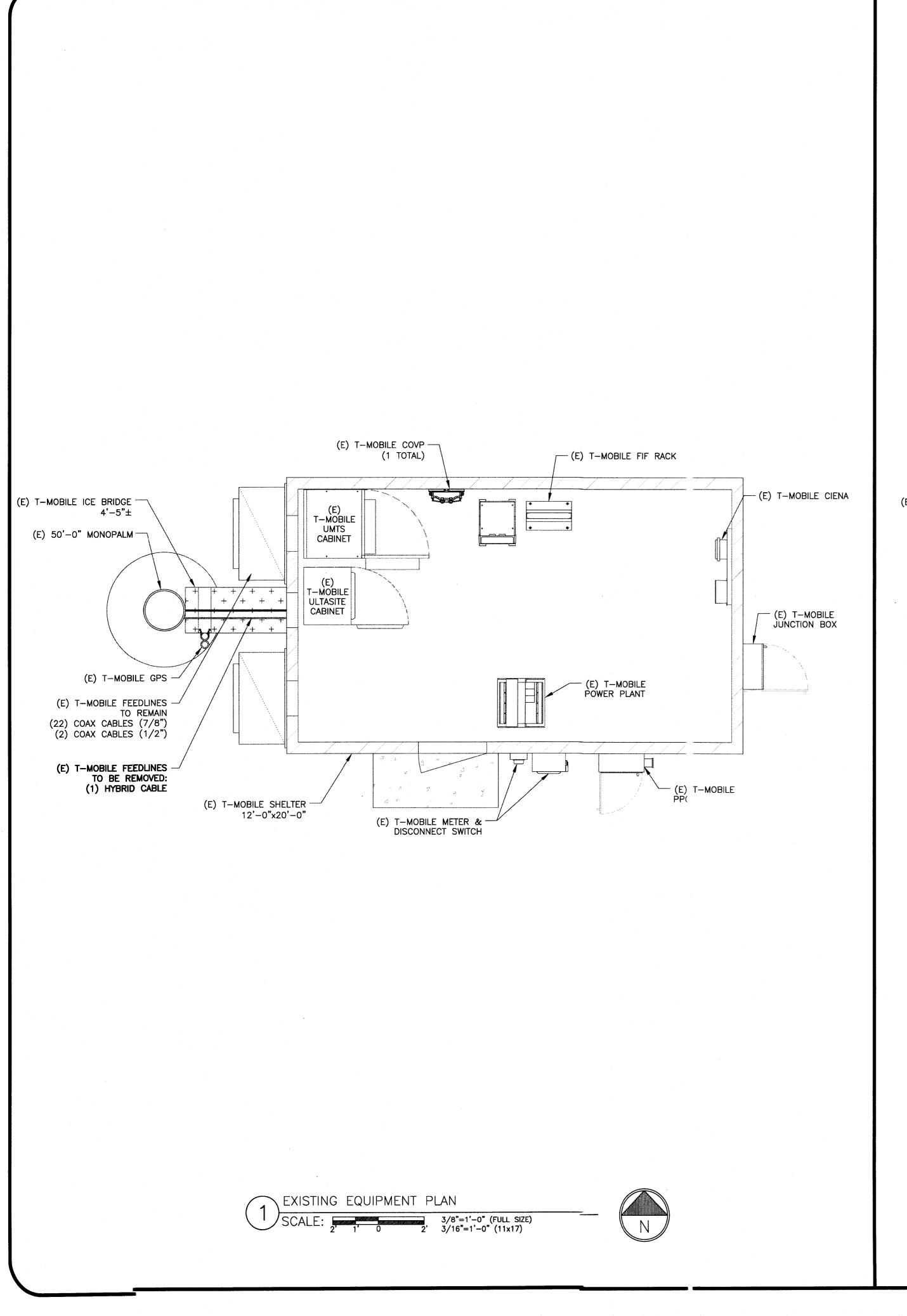
ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
A	07/05/18	EAJ	PRELIMINARY	KK
В	07/31/18	EAJ	PRELIMINARY	LMR
0	08/13/18	EAJ	CONSTRUCTION	DG
	, '' , "			



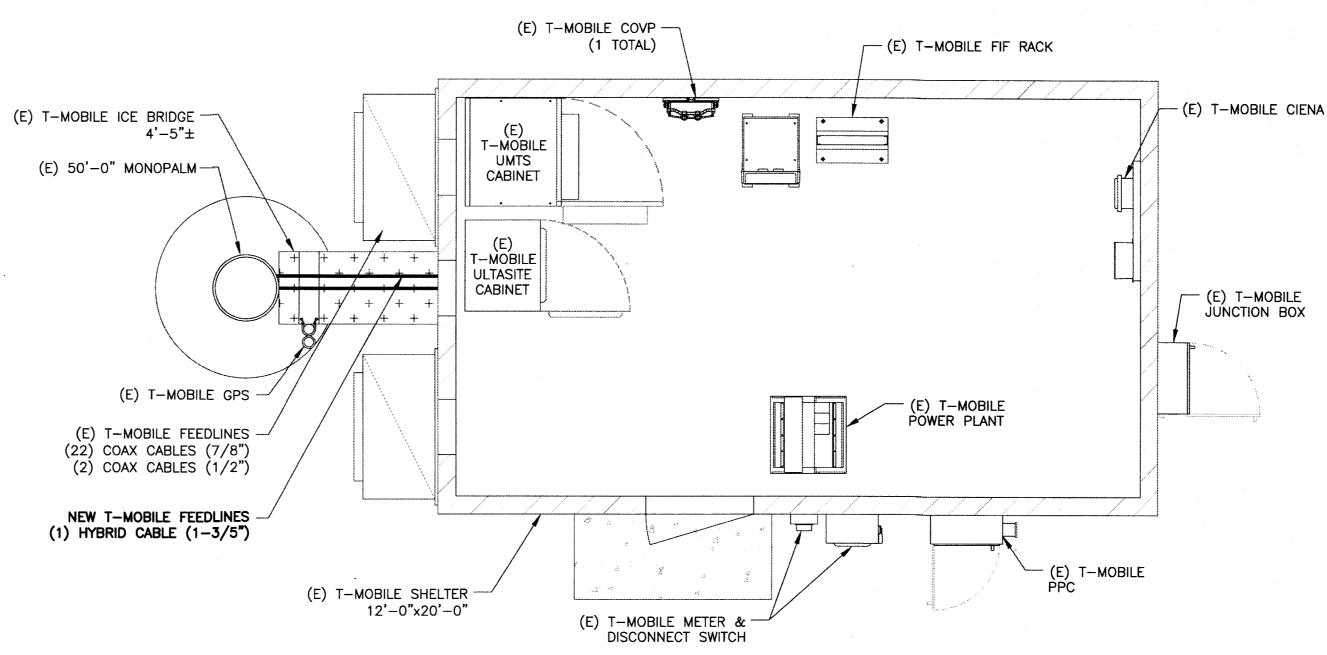
Crown Castle USA, Inc. Firm Registration #14842

Daniel P. Gruman, P.E.
Professional Engineer License: #65055
Crown Castle USA Inc. Firm
Registration #14842

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TEMPE, AZ 85282



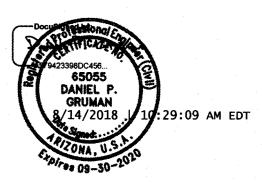
T-MOBILE SITE NUMBER: PH10240E

BU #: **822272 ADOT UNIVERSITY**

2245 E. UNIVERSITY DR TEMPE, AZ 85281

EXISTING 50'-0" MONOPALM

ISSUED FOR:				
REV	DATE	DRWN	DESCRIPTION	DES./QA
A	07/05/18	EAJ	PRELIMINARY	KK
В	07/31/18	EAJ	PRELIMINARY	LMR
0	08/13/18	EAJ	CONSTRUCTION	DG
		1		



Crown Castle USA, Inc. Firm Registration #14842

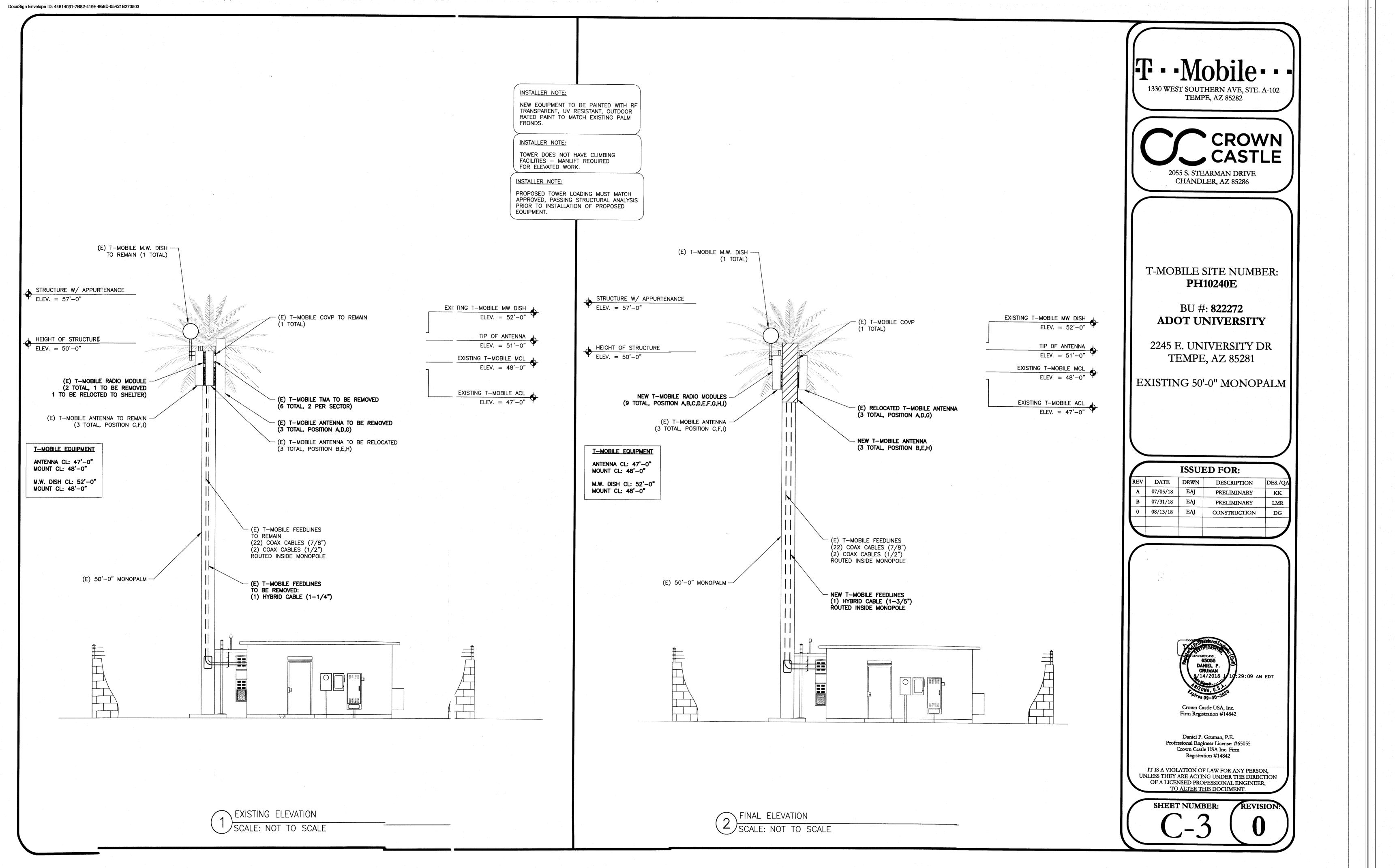
Daniel P. Gruman, P.E. Professional Engineer License: #65055 Crown Castle USA Inc. Firm Registration #14842

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REVISION:

FINAL EQUIPMENT PLAN

SCALE: 2, 1, 0 2,









EXISTING: POSITION A













EXISTING: POSITION B













EXISTING: POSITION C















Infrastructure Delivery and Operations

Douglas A. Ducey, Governor John S. Halikowski, Director Dallas Hammit, State Engineer Steve Boschen, Division Director

January 11, 2019

Shawn Daffara
Sr. Planner/Inspector
City of Tempe: Community Development Department
31 E. Fifth Street
Tempe, Arizona 85281
Shawn_Daffara@Tempe.gov

Subject:

Cell Site University Drive and SR101 Price Freeway

Mr. Daffara:

Thank you and your team for meeting with us last week to discuss the issues related to a Use Permit granted to Crown Castle/T-Mobile at the above-referenced site.

As my staff and I explained last week, Arizona Revised Statutes and State Transportation Board guidelines generally dictate ADOT's maintenance and leasing practices within state-owned right-of-way. This same set of rules determines how we might eventually sell or otherwise dispose of state-owned land that is no longer needed for a transportation purpose. Given these constraints, we hope that you will understand our concerns.

With regards to the subject property, we are in the process of determining whether the balance of the property on which the current cell site is leased can be sold. Central to the discussions was ADOT maintaining the leasehold area and selling the balance of the property. Concurrent with these internal discussions T-Mobile, through Crown Castle applied for approval of the City of Tempe to trade out equipment currently on the existing stealth monopalm with new 5G equipment for the purpose of providing enhanced wireless coverage to the surrounding area and the State Highway nearby.

During their inquiries with the City, it was determined that errors had been made when the wireless site first obtained its Use Permit. Central to the issue was representation and approval of landscaping on non-leased property. The proposed additional landscaping is not something ADOT approves on non-leased land specifically because it runs in conflict with State of Arizona gifting clauses in our governing Statutes.

During our discussions the City asked whether we would be willing to increase the leased area to accommodate additional landscaping. After reviewing this it may be possible to lease a small portion of our property directly to the west of the leased area for potential future collocation. However, to lease any other additional property on the site has the potential to destroy the viability of selling the remainder property for future development, which is not in the best interests of the State, nor the City.

Based on the information and interactions related above, we wish to express our support for the Lessee's Use Permit to be revisited by the City, with the landscape provisions removed.

Michael Craig

Manager

Right of Way Property Management

Schimke, Blake

From: Dennis Haley

Sent: Thursday, January 31, 2019 8:53 AM

To: Schimke, Blake

Cc:

Subject: PL190002 ADOT University

RE: PL190002

ADOT University 2245 E. University Dr.

Attn: Blake Schimke

Thank you for your notice for the above-referenced development. ADOT is neutral on zoning matters. As such, ADOT has no comment.

Please feel free to contact me should you have any further questions. We appreciate the opportunity to review and comment.

Dennis Haley, SR/WA

Consultant
ADOT ROW Project Coordinator
Federal Lands Liaison
205 S. 17th Ave MD: 612E

Phoenix, AZ 85007 602-712-7432 WWW.AZDOT.GOV



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1







COMMENTS

T-MOBILE TOWERCOM RIAZZI (PL180092) will be the second monopalm facility on this property. The existing monopalm stands 65 feet tall (top-of-frond) and is located directly north of the proposed monompalm. It was approved by the Hearing Officer on September 15, 2009. Staff recommended installation of new Mexican Fan Palms to help conceal the monopalms.

PUBLIC INPUT

One email in opposition has been received by staff.

USE PERMIT

According to Section 3-421, *Wireless Telecommunication Facilities* of the Zoning & Development Code, wireless telecommunication towers and related equipment facilities shall be allowed upon approval with a use permit.

Section 6-308 E Approval criteria for Use Permit (in italics):

- 1. *Any significant increase in vehicular or pedestrian traffic;* the new facility will not generate any traffic other than routine maintenance or events of a technical breakdown.
- 2. *Nuisance arising from the emission of odor, dust, gas, noise, vibration, smoke, heat or glare at a level exceeding that of ambient conditions;* the nature of this use will not emit emissions at a level exceeding ambient conditions.
- 3. Contribution to the deterioration of the neighborhood or to the downgrading of property values, which is in conflict with the goals, objectives or policies for rehabilitation, redevelopment or conservation as set forth in the city's adopted plans or General Plan; wireless communication facilities are permitted with a use permit by the Zoning & Development Code and consistent with the City's adopted plans and General Plan.
- 4. *Compatibility with existing surrounding structures and uses;* palm trees of similar height currently exist along South Mill Avenue and another monopalm facility exists on the same property. The applicant will provide four (4), 24-inch box Mexican Fan Palms with this project to help the facility blend in with the area.
- 5. Adequate control of disruptive behavior both inside and outside the premises which may create a nuisance to the surrounding area or general public; the proposed facility will be unmanned and will therefore will not contribute to any disruptive behavior or create any nuisance to the surrounding area.

REASONS FOR APPROVAL:

Based on the information provided by the applicant, the public input received and the above analysis staff supports approval of the requested Use Permit. This request meets the required criteria and will conform to the conditions.

SHOULD AN AFFIRMATIVE ACTION BE TAKEN ON THIS REQUEST, THE FOLLOWING NUMBERED CONDITIONS OF APPROVAL SHALL APPLY, BUT MAY BE AMENDED BY THE DECISION-MAKING BODY.

CONDITION(S) OF APPROVAL:

- 1. The Use Permit is valid only after a Building Permit has been obtained and the required inspections have been completed and a Final Inspection has been passed. As part of the Building Permit process, on-site storm water retention may be required to be verified or accomplished on this Site.
- 2. The Use Permit is valid for the plans as submitted within this application. Any additions or modifications may be submitted for review during building plan check process.
- 3. All required Federal, State, County, and Municipal permits, licenses, and clearances shall be obtained or the Use Permit is void.
- 4. The monopalm shall be no greater than sixty-five feet (65'-0") in height to top of frond and fifty-five feet (55'-0") top of pole/structure.

- 5. The monopalm shall be anatomically correct and provide a minimum of fifty-five (55) palm fronds, evenly distributed to conceal the entire length of antennae and equipment.
- 6. The pole structure shall be cladded with faux bark from the base to the height of the first palm fond.
- 7. All antennae and equipment shall be finished to match palm fronds or faux bark.
- 8. All cables shall be concealed within the pole structure.
- 9. No climbing pegs are permitted on the pole structure.
- 10. To further conceal the monopalm, relocate and disburse the four (4) new Mexican Fan Palm trees along the perimeter of the equipment enclosure. All new palm trees shall be a minimum of 25 feet in height. Details to be approved during Building Safety Plan Review.
- 11. Maintain a minimum of 20 feet separation from the new shade tree to light post. Details to be approved during Building Safety Plan Review.
- 12. The proposed equipment enclosure shall be constructed of similar material and color to match the existing building. Details to be approved during Building Safety Plan Review.
- 13. A weather resistant emergency contact information sign shall be posted on the site and shall be visible to the public.
- 14. Any addition to the existing height or change in appearance of the monopalm, as determined by the Community Development Director, or designee, to facilitate possible co-location shall require a use permit.
- 15. The monopalm shall be removed within thirty (30) days of discontinuance of the tower.

CODE/ORDINANCE REQUIREMENTS:

THE BULLETED ITEMS REFER TO EXISTING CODE OR ORDINANCES THAT PLANNING STAFF OBSERVES ARE PERTINENT TO THIS CASE. THE BULLET ITEMS ARE INCLUDED TO ALERT THE DESIGN TEAM AND ASSIST IN OBTAINING A BUILDING PERMIT AND ARE NOT AN EXHAUSTIVE LIST.

- Specific requirements of the Zoning and Development Code (ZDC) are not listed as a condition of approval, but will apply to any application. To avoid unnecessary review time and reduce the potential for multiple plan check submittals, become familiar with the ZDC. Access the ZDC through http://www.tempe.gov/zoning or purchase from Development Services.
- SITE PLAN REVIEW: Verify all comments by all departments on each Preliminary Site Plan Review. If questions arise related to specific comments, they should be directed to the appropriate department, and any necessary modifications coordinated with all concerned parties, prior to application for building permit. Construction Documents submitted to the Building Safety Division will be reviewed by planning staff to ensure consistency with this Design Review approval prior to issuance of building permits

HISTORY & FACTS:

September 15, 2009

Hearing Officer approved Use Permit to allow a sixty-five (65) foot high monopalm for RIAZZI'S ITALIAN GARDEN – A. T. AND T. MOBILITY (PL090277), located at 2700 South Mill Avenue in the CSS, Commercial Shopping & Services District.

ZONING AND DEVELOPMENT CODE REFERENCE:

Section 3-202 Permitted Uses in Commercial and Mixed-Use Districts Section 3-421 Wireless Telecommunication Facilities Section 6-308 Use Permit

COMMENTS

Verizon is proposing to address a coverage gap in the Verizon network voice and data coverage via a new telecommunications facility. The new wireless telecommunication facility will be disguised as a faux palm tree (monopalm) and will be located near existing mature trees and palms which will help buffer the visual impact of the facility. In addition, Verizon is proposing to install new landscaping around the perimeter of the site and equipment area.

The applicants Feasibility Study consisted of two (2) possible co-location sites for the proposed Wireless Telecommunication Facility; American Tower at 1414 W Broadway Rd and Crown Castle at 1910 S Priest Rd. Both sites rejected Verizon's proposal due to a lack of compatibility with their existing equipment.

PUBLIC INPUT

To date, staff has not received any public input.

USE PERMIT

According to Section 3-421, *Wireless Telecommunication Facilities* of the Zoning & Development Code, wireless telecommunication towers and related equipment facilities shall be allowed upon approval with a use permit.

Section 6-308 E Approval criteria for Use Permit (in italics):

- 1. Any significant increase in vehicular or pedestrian traffic; the new facility will not generate any traffic other than routine maintenance or events of a technical breakdown.
- 2. Nuisance arising from the emission of odor, dust, gas, noise, vibration, smoke, heat or glare at a level exceeding that of ambient conditions; the nature of this use will not emit emissions at a level exceeding ambient conditions.
- 3. Contribution to the deterioration of the neighborhood or to the downgrading of property values, which is in conflict with the goals, objectives or policies for rehabilitation, redevelopment or conservation as set forth in the city's adopted plans or General Plan; wireless communication facilities are permitted with a Use Permit by the Zoning & Development Code and consistent with the City's adopted plans and General Plan.
- 4. Compatibility with existing surrounding structures and uses; Similar palm trees exist within the area and the applicant will provide four (4), 25' high Mexican Fan Palms and one (1) 24" box Thorn-less Palo Verde to help blend this project with the surrounding area.
- 5. Adequate control of disruptive behavior both inside and outside the premises which may create a nuisance to the surrounding area or general public; the proposed facility will be unmanned and will therefore will not contribute to any disruptive behavior or create any nuisance to the surrounding area.

REASONS FOR APPROVAL:

Based on the information provided by the applicant, the public input received and the above analysis staff supports approval of the requested Use Permit. This request meets the required criteria and will conform to the conditions.

SHOULD AN AFFIRMATIVE ACTION BE TAKEN ON THIS REQUEST, THE FOLLOWING NUMBERED CONDITIONS OF APPROVAL SHALL APPLY, BUT MAY BE AMENDED BY THE DECISION-MAKING BODY.

CONDITION(S) OF APPROVAL:

- The Use Permit is valid only after a Building Permit has been obtained and the required inspections have been completed and a Final Inspection has been passed. As part of the Building Permit process, on-site storm water retention may be required to be verified or accomplished on this Site.
- 2. The Use Permit is valid for the plans as submitted within this application. Any additions or modifications may be submitted for review during building plan check process.

COMMENTS

On August 4, 2015 the Hearing Officer approved a use permit to allow a 75-foot-tall wireless communications facility (monopine) for VERIZON WIRELESS – PHO STAR WOMAN / SUN STATE TOWERS – HANCOCK AZ01-013 (PL150279) at the subject site. However, the project never reached construction and the use permit approval eventually expired. Therefore, a new use permit is required.

In addition to constructing the new monopine and equipment enclosure, the site requires modifications to maintain proper site circulation for fire and refuse vehicles while conforming to the development standards required by the Zoning & Development Code. The site modifications include relocating the refuse enclosure, widening the north drive aisle, shifting parking lot landscape islands, and extending landscape areas. Landscape work is also required to aid in concealing the monopine facility. This work includes installation of the pine trees along the street front and landscape buffer as well as installation of trees and ground cover in the relocated landscape islands.

PUBLIC INPUT

To date, one (1) phone call in opposition was received by neighbor who lives directly behind the site. He believes Verizon already provides adequate service in this area and does not believe a new tower is necessary. He also added that visually speaking, the tower is too close to his property and nothing taller than the utility poles should be allowed.

At the March 6, 2018 Hearing Officer public hearing, three members from the adjacent neighborhood, including the Chair of the Cavalier Hills Neighborhood Association and a retired planner from the City, spoke in opposition to the use permit request. The consensus was that the proposed location of the monopine is too close to residential lots and would be aesthetically unpleasing to nearby homes. Nevertheless, they can support the project if the proposed monopine was setback to an equal or greater rear setback distance than what was originally approved at the August 4, 2015 Hearing Officer.

USE PERMIT

According to Section 3-421, *Wireless Telecommunication Facilities* of the Zoning & Development Code, wireless telecommunication towers and related equipment facilities shall be allowed upon approval with a use permit.

Section 6-308 E Approval criteria for Use Permit (in italics):

- 1. Any significant increase in vehicular or pedestrian traffic; the new facility will not generate any traffic other than routine maintenance or events of a technical breakdown.
- 2. Nuisance arising from the emission of odor, dust, gas, noise, vibration, smoke, heat or glare at a level exceeding that of ambient conditions; the nature of this use will not emit emissions at a level exceeding ambient conditions.
- 3. Contribution to the deterioration of the neighborhood or to the downgrading of property values, which is in conflict with the goals, objectives or policies for rehabilitation, redevelopment or conservation as set forth in the city's adopted plans or General Plan; wireless communication facilities are permitted with a use permit by the Zoning & Development Code and consistent with the City's adopted plans and General Plan.
- 4. Compatibility with existing surrounding structures and uses; new pine trees will be provided in the landscape areas at the rear and street frontages. Other stealth facilities exist in the general area.
- Adequate control of disruptive behavior both inside and outside the premises which may create a nuisance to the surrounding area or general public; the proposed facility will be unmanned and will therefore will not contribute to any disruptive behavior or create any nuisance to the surrounding area.

REASONS FOR APPROVAL:

Based on the information provided by the applicant, the public input received, and the above analysis, staff recommends approval of the requested Use Permit. This request meets the required criteria and will conform to the conditions.

SHOULD AN AFFIRMATIVE ACTION BE TAKEN ON THIS REQUEST, THE FOLLOWING NUMBERED CONDITIONS OF APPROVAL SHALL APPLY, BUT MAY BE AMENDED BY THE DECISION-MAKING BODY.

CONDITION(S) OF APPROVAL:

- This Use Permit is valid only after a Building Permit has been obtained and the required inspections have been completed and a Final Inspection has been passed. As part of the Building Permit process, on-site storm water retention may be required to be verified or accomplished on this Site.
- The Use Permit is valid for the plans as submitted within this application. Any additions or modifications may be submitted for review during building plan check process.
- All required Federal, State, County and Municipal permits, licenses, and clearances shall be obtained or the Use Permit is void.
- 4. The monopine shall be no greater than seventy-five feet (75'-0") in height (top of antenna/tower structure).
- 5. The monopine shall provide a density of four branches per linear foot with variations of length to closely match the foliage and canopy of a natural pine tree. Details to be reviewed and approved during building plan check process.
- 6. The proposed equipment cabinet shall be constructed of similar material and color to match the existing building.
- 7. The proposed monopine shall maintain a twenty-foot (20'-0") separation from any existing tree.
- A weather resistant emergency contact information sign shall be posted on the site and shall be visible to the public.
- 9. In addition to the proposed pine trees within the landscape buffer, provide three (3) 36-inch box pine trees within the new landscape area east of the monopine as well as three (3) 36-inch box pine trees within the East Hancock Avenue street frontage landscape area. Details to be reviewed and approved during building plan check process.
- 10. All required site modifications to accommodate the installation of the monopine shall comply with all applicable development standards set forth in the Zoning & Development Code. Details to be reviewed and approved during building plan check process.

CODE/ORDINANCE REQUIREMENTS:

THE BULLETED ITEMS REFER TO EXISTING CODE OR ORDINANCES THAT PLANNING STAFF OBSERVES ARE PERTINENT TO THIS CASE. THE BULLET ITEMS ARE INCLUDED TO ALERT THE DESIGN TEAM AND ASSIST IN OBTAINING A BUILDING PERMIT AND ARE NOT AN EXHAUSTIVE LIST.

- Specific requirements of the Zoning and Development Code (ZDC) are not listed as a condition of approval, but will apply to any application. To avoid unnecessary review time and reduce the potential for multiple plan check submittals, become familiar with the ZDC. Access the ZDC through http://www.tempe.gov/zoning or purchase from Development Services.
- SITE PLAN REVIEW: Verify all comments by all departments on each Preliminary Site Plan Review. If questions arise related to specific comments, they should be directed to the appropriate department, and any necessary modifications coordinated with all concerned parties, prior to application for building permit. Construction Documents submitted to the Building Safety Division will be reviewed by planning staff to ensure consistency with this Design Review approval prior to issuance of building permits
- Any intensification or expansion of use, including co-location of additional antennas, will require a new use permit.
- The wireless device shall be removed within 30 days of discontinuance of use.