

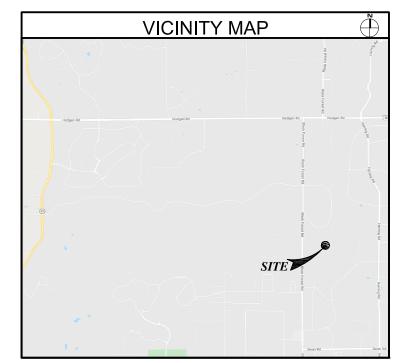
BLACK FOREST 7113 MARSHBERN COURT atet ■ COLORADO SPRINGS, COLORADO 80908 FA#: 10093683 **NOVA PROJECT ID: WES-MW-06907**

MW PTN: 3755A0LF7E | MW PACE: MRUTH038364 COU2037

SPECIAL INSPECTIONS

- CONCRETE
 BOLTS INSTALLED IN CONCRETE
 CONCRETE MOMENT-RESISTING SPACE FRAME
 REINFORCING STEEL AND PRESTRESSING STEEL
 ALL STRUCTURAL WELDING
 WELD TESTING DUCTILE MOMENT-RESISTING STEEL FRAME
 WELD TESTING DUCTILE MOMENT-RESISTING STEEL FRAME
 WELD REPURPOSEDANCE STEET.
- WELDING REINFORCING STEEL HIGH-STRENGTH BOLTING STRUCTURAL MASONRY
- REINFORCED GYPSUM CONCRETE
- INSULATING CONCRETE FILL SPRAY-APPLIED FIREPROOFING
- DEEP FOUNDATIONS (PILING, DRILLED & CAISSONS)

NO. DESCRIPTION OF TYPE OF INSPECTION REQUIRED, LOCATION, REMARKS



CONSULTANT TEAM

CLIENTS REPRESENTATIVE:

MASTEC NETWORK SOLUTIONS

507 AIRPORT BLVD, SUITE 111 MORRISVILLE, NORTH CAROLINA 27560 CONTACT: RAPHAEL MOHAMED

13.1 VERIFY SOIL CONDITIONS ARE SUBSTANTIALLY IN CONFORMANCE WITH THE SOIL INVESTIGATION REPORT 13.2 VERIFY THAT FOUNDATION EXCAVATIONS EXTEND TO PROPER DEPTH AND BEARING STRATA 13.3 PROVIDE SOIL COMPACTION TEST RESULTS, DEPTH OF FILL, RELATIVE DENSITY, BEARING VALUES 13.4 PROVIDE SOIL EXPANSION TEST RESULTS, EXPANSION INDEX, RECOMMENDATIONS FOR FOUNDATIONS, ON-CRADE ELOOPS JUAN DESCRIP FACUL BUILDING STIE GRADE FLOOR SLAB DESIGN FOR EACH BUILDING SIT SMOKE CONTROL SYSTEM
SPECIAL CASES (DESCRIBE)
OFF-SITE FABRICATION OF BUILDING COMPONENTS
OTHER SPECIAL INSPECTIONS AS REQUIRED BY
DESIGNER PHONE: (919) 674-5895 (305) 925-8514

RAPHAEL.MOHAMED@MASTEC.COM

PROJECT MANAGEMENT:

MASTEC NETWORK SOLUTIONS

7025 SOUTH REVERE PARKWAY, SUITE 100 CENTENNIAL, COLORADO 80112 CONTACT: ALLAN WALKER

PHONE: (903) 571-0760

SITE ACQUISITION:

MASTEC NETWORK SOLUTIONS

330 EAST GERMANN ROAD, SUITE 101

GILBERT, ARIZONA 85297 CONTACT: CHRISTINA MICHAUD (480) 477-4165

CHRISTINA.MICHAUD@MASTEC.COM EMAIL:

DEVELOPMENT SUMMARY

APPLICANT:

188 IVERNESS DRIVE WEST, SUITE 400 ENGLEWOOD, COLORADO 80112

PROPERTY OWNER:

GEORGE GLINASTIS 651 CORPORATE CIRCLE GOLDEN, COLORADO 80401

TOWER OWNER:

AMERICAN TOWER CORPORATION

OTHER ON-SITE TELECOM FACILITIES: YES

ASSESSORS PARCEL NUMBER: 51320-00-002

39° 02'46.50"N LATITUDE: 39.04625 LONGITUDE: -104.69439

LAT/LONG TYPE: NAD-83

ELEVATION: ±7618.0' AMSL

EXISTING ZONING A-3

NO INCREASE IN S.F. PROPOSED PROJECT AREA: EXISTING TYPE OF CONSTRUCTION: TYPE V-B

PROPOSED TYPE OF CONSTRUCTION TYPE V-B U-2 PROPOSED OCCUPANCY U-2

TITLE SHEET SPECIFICATIONS AND NOTES

SITE PLAN ENLARGED SITE PLAN AND EQUIPMENT PLAN

EXISTING AND PROPOSED ELEVATIONS ANTENNA DETAILS

A-3.1 DETAILS
A-4.2 SPECIFICATIONS
A-5.1 ANTENNA MOUNTING DETAILS
A-5.1 ANTENNA MOUNTING DETAILS

APPLICABLE CODES

SHEET INDEX

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

2015 INTERNATIONAL BUILDING CODE

2015 INTERNATIONAL ENERGY CONSERVATION CODE

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

PRECON NOTES

CONTACT AMERICAN TOWER FIELD TECHNICIAN TO SCHEDULE PRE-CON 48 HOURS PRIOR TO REQUESTED MOBILIZATION ON SITE.

PROJECT DESCRIPTION

FI PASO

AT&T MOBILITY PROPOSES TO MODIFY AN EXISTING UNMANNED WIRELESS COMMUNICATIONS FACILITY. THIS MODIFICATION WILL CONSIST OF THE FOLLOWING:

JURISDICTION

INSTALL NEW AT&T 6'-0"Ø MICROWAVE ANTENNA AT 272'-0" RAD-CENTER.

INSTALL NEW (1) AT&T EW-63 WAVEGUIDE.

Approved

By:Craig Dossey, Executive Director Date: 10/07/2020

El Paso County Planning & Community Development

FINAL DESIGN TO BE (1) EW-63 WAVEGUIDE.

ACCESSIBILITY DISCLAIMER

THIS PROJECT IS AN UNOCCUPIED WIRELESS PCS TELECOMMUNICATIONS FACILITY AND IS EXEMPT FROM DISABLED ACCESS REQUIREMENTS.

SCALE

THE DRAWING SCALES SHOWN IN THIS SET REPRESENT THE CORRECT SCALE ONLY WHEN THESE DRAWINGS ARE PRINTED IN A 11"X17" OR 24"X36" FORMAL DRAWING SET IS NOT 11"X17" OR 24"X36", THIS SET IS NOT TO SCALE.

MasTec 3350 E BIRCH ST, SUITE 101 BREA, CALIFORNIA 92821

PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AT&T WIRELESS IS STRICTLY PROHIBITED.



PREPARED FOR



APPROVALS	
GAMALIEL AGUILAR	03/04/20
90% CDS	DATE
GAMALIEL AGUILAR	04/10/20
100% CDS	DATE
GAMALIEL AGUILAR	04/10/20
100% CDS WITH STRUCTURALS	DATE

ALLAN WALKER 03/23/20 CONSTRUCTION DATE

SITE ACQUISITION

PROJECT NAME MICROWAVE UPGRADE

BLACK FOREST/COU2037

10093683

7113 MARSHBERN COURT COLORADO SPRINGS, COLORADO 80908

90% CD REVIEW (P1-R1) 100% FINAL CDS (P1-B2) COUNTY COMMENTS (P1-B3)

SHEET TITLE

TITLE SHEET

T-1

GENERAL SPECIFICATIONS

- THE LATEST EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS DOCUMENT A201 "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION" ARE INCLUDED IN THESE SPECIFICATIONS AS IF COMPLETELY REPRODUCED HEREIN.
- THIS FACILITY IS AN UNOCCUPIED PCS TELECOMMUNICATIONS SITE AND IS EXEMPT FROM DISABLED ACCESS REQUIREMENTS.
- AND IS EXEMPT FROM DISABLED ACCESS REQUIREMENTS.

 PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS
 PARTICIPATING SHALL VISIT THE JOB SITE AND FAMILIARIZE
 THEMSELVES WITH ALL FIELD CONDITIONS AFFECTING THE PROPOSED
 PROJECT INCLUDING DEMOLITION, ELECTRICAL, MECHANICAL AND
 SIRUCTURAL INSTALLATIONS, AS WELL AS WITH THE CONSTRUCTION
 AND CONTRACT DOCUMENTS AND SHALL CONFIRM THAT THE PROJECT
 CAN BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH
 CONSTRUCTION, SHOULD ANY ERPORS, OMISSION, OR DISCREPANCIES
 BE FOUND, THE GENERAL CONTRACTOR SHALL IMMEDIATELY NOTIFY
 AT&T MOBILITY CONSTRUCTION MANAGER AND THE ARCHITECT IN
 WRITING. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL
 INCLUDE THE MORE COSTLY OR EXTENSIVE WORK IN THE BID,
 UNLESS SPECIFICALLY DIRECTED OTHERWISE. IF A DISCREPANCY
 EXISTS AND THE FONDER MANAGER AND ARCHITECT ARE NOT
 NOTIFIED, THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE NOTIFIED, THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR OR CORRECT ALL PROBLEMS
- DRAWINGS SHALL NOT BE SCALED, THESE DRAWINGS ARE INTENDED TO BE DIAGRAMMATIC ONLY. FIGURED DIMENSIONS HAVE PRECEDENCE OVER DRAWING SCALE AND DETAIL DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS, CONTRACTOR SHALL CHECK ACCURACY F ALL DIMENSIONS IN THE FIELD. UNLESS SPECIFICALLY NOTED, DO OT FABRICATE ANY MATERIALS, OR BEGIN ANY CONSTRUCTION UNTIL THE ACCURACY OF DRAWING DIMENSIONS HAS BEEN VERIFIED AGAINST
- THE CONTRACTOR SHALL INCLUDE IN HIS OR HER BID ALL MATERIALS. EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE THE WORK AS INDICATED OR IMPLIED BY THESE DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY CONSTRUCTION MANAGER, THE PROPERTY OWNER AND THE ARCHITECT IF ANY DETAILS ARE CONSIDERED IMPRACTICAL, UNSUITABLE, UNSAFE, NOT WATERPROOF, OR NOT WITHIN CUSTOMARY TRADE PRACTICE. IF WORK IS PERFORMED, IT WILL BE ASSUMED THAT THERE IS NO OBJECTION TO ANY DETAIL. DETAILS ARE INTENDED TO SHOW THE END RESULT OF THE DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS, AND SHALL BE INCLUDED AS PART OF THE WORK.
- EXISTING ELEVATIONS AND LOCATIONS TO BE JOINED SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IF THEY DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY CONSTRUCTION MANAGER AND THE ARCHITECT SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK.
- THE CONTRACTOR SHALL VERIFY ALL TELEPHONE & RADIO EQUIPMENT LAYOUTS, SPECIFICATIONS, PERFORMANCE, INSTALLATION AND FINAL LOCATIONS WITH AT&T MOBILITY CONSTRUCTION MANAGER PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING HIS WORK WITH ERICSSON RADIO SYSTEMS.
- ALL SYMBOLS & ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS RECARDING THEIR EXACT MEANING, THE ATAT MOBILITY CONSTRUCTION MANAGER AND THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION BEFORE THE CONTRACTOR PROCEEDS WITH THE
- IO. THE CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS. LICENSES. AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK AND INCLUDE THOSE IN THE COST OF THE WORK TO AT&T MOBILITY.
- 1 THE CONTRACTOR SHALL PROVIDE CONTINUOUS SUPERVISION WHILE THE CONTRACTOR SHALL PROVIDE CONTINUOUS SUPERVISION WHILE ANY SUBCONTRACTORS OR WORKMEN ARE IN THE SITE AND SHALL SUPERVISE AND DIRECT ALL WORK, USING HIS BEST SKILL AND ATTENTION, HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- 12. WORKMANSHIP THROUGHOUT SHALL BE OF THE BEST QUALITY OF THE TRADE INVOLVED, AND SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REFERENCE STANDARDS FOR QUALITY AND PROFESSIONAL CONSTRUCTION, PRACTICE.
- TION PRACTICE: NATIONAL ROOFING CONTRACTORS ASSOCIATION O'HARE INTERNATIONAL CENTER 10255 W. HIGGENS ROAD, SUITE 600 ROSEMONT, IL 60018
- SHEET METAL AND AIR CONDITIONING CONTRACTORS SMACNA 4201 LAFAYETTE CENTER DRIVE CHATILLY, VA 22021-1209
- INTERNATIONAL INSTITUTE FOR LATH AND PLASTER ITLP 820 TRANSFER ROAD ST. PAUL, MN 55114-1406
- 13. INSTALL ALL FOUIPMENT AND MATERIALS PER THE LATEST EDITION OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- 14. THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGARS OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING THE SAME.
- 15. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL GIVE ALL NOTICES AND SHALL COMPLY WITH ALL APPLICABLE LOCAL CODES, REGULATIONS, LAWS AND ORDINANCES AS WELL AS STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.
- 16. THE CONTRACTOR SHALL PROTECT THE PROPERTY OWNERS, AND . THE CONTRACTOR SHALL PROTECT THE PROPERTY OWNERS, AND ATA'T MOBILITY PROPERTY FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING FINISHES, CONSTRUCTION, STRUCTURE, LANDSCAPING, CURBS, STAIRS, OR EQUIPMENT, ETC. SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF AT&T MOBILITY, AND THE PROPERTY OWNER'S REPRESENTATIVE, AT THE EXPENSE OF THE CONTRACTOR.

- 17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL REPLACE OR REMEDY, ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE YEAR AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK BY AT&T MOBILITY UNDER THIS CONTRACT.
- 18. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, OR CONTACT AN OUTSIDE AGENCY TO LOCATE ALL EXISTING UTILITIES, WHETHER SHOWN HEREIN OR NOT. AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR THE REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.
- 19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE PROJECT SITE WHILE THE JOB IS IN PROG AND UNTIL THE JOB IS COMPLETED AND ACCEPTED BY AT&T
- 20. THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER, AT&T MOBILITY, AND THE CITY OR GOVERNING AGENCY.
- 21. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REDLINING THE CONSTRUCTION DOCUMENTS TO ILLUSTRATE THE AS—BUILT CONDITION OF THE SITE. THIS SHALL BE DONE AFTER THE SITE HAS BEEN AWARDED FINAL INSPECTION BY THE RESPONSIBLE BUILDING AGENCY. ONE SET OF REDLINED DRAWINGS SHALL BE PROVIDED TO THE AT&T MOBILITY CONSTRUCTION MANAGER.
- . INE. DATES! EDITION OF ALL PERMITTED AND APPROVED PLANS PERTAINING TO THIS PROJECT SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKERS. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE JOB SUPERINTEDIATY.
- 23. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS ON A DAILY BASIS, EXCEPT FOR THAT SPECIFIED AS REMAINING THE PROPERTY OF THE BUILDING OR PROPERTY OWNER AND SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING THROUGHOUT OF WORK. ALL AREAS ARE TO BE LEFT IN A BROOM CLEAN CONDITION, FIRE THE END OF EACH DAY AND VACUUM CLEAN CONDITION, FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE AT
- 24. THE GENERAL CONTRACTOR MUST PERFORM WORK DURING PROPERTY OWNER'S PREFERRED HOURS TO AVOID DISRUPTION OF NORMAL ACTIVITY.
- 25. ALL EXPOSED METAL SHALL BE HOT-DIPPED GALVANIZED
- 26. SEAL ALL PENETRATIONS THROUGH FIRE—RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL APPROVED MATERIALS IF AND WHERE APPLICABLE TO THIS FACILITY AND PROJECT SITE.
- 27. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA CONSTRUCTION.
- 28. ELECTRICAL POWER SYSTEM SHALL BE GROUNDED PER NEC ARTICLES
- 29. ALL NEW OPENINGS IN THE EXTERIOR ENVELOPE OF CONDITIONED SPACES SUCH AS AT WALL AND ROOF PENETRATIONS SHALL BE CAULKED OR SEALED TO LIMIT INFILTRATION OF AIR AND MOISTURE.
- 30. UPON COMPLETION OF CONSTRUCTION, AT&T MOBILITY CONSTRUCTION MANAGER SHALL CONDUCT A WALK-THRU WITH PROPERTY OWNER OR REPRESENTATIVE OF PROPERTY OWNER.
- 31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SYSTEM EQUIPMENT IN A CLEAN WORKING ORDER UNTIL ACCEPTANCE OF THE PROJECT BY AT&T MOBILITY.
- 32 INSTALL ALL FOLLIPMENT AND MATERIALS PER THE LATEST EDITION OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS UNLESS
 SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR
 REGULATION TAKE PRECEDENCE.

ROOFING & WATERPROOFING NOTES

- 1. CONTRACTOR SHALL CONTACT BUILDING OWNER TO DETERMINE IF ROOF IS UNDER WARRANTY. CONTRACTOR SHALL GUARANTEE THAT ANY AND ALL NEW ROOFING WORK MEETS THE SPECIFICATION OF ANY EXISTING ROOFING WARRANTIES SUCH THAT THE WARRANTY IS NOT MADE INVALID AS A RESULT OF THIS WORK. IF IT IS DETERMINED THAT THE ARCHITECT'S DETAILING IS INADEQUATE OR IMPROPER OR ANY OTHER DISCREPANCY IS FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT AND THE AT&T MOBILITY PROJECT MANAGER IN WRITING. ULTIMATELY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE ORIGINAL ROOF MANUFACTURER'S SPECIFICATIONS.
- CONTRACTOR SHALL USE METHODS AND MATERIALS SIMILIAR AND COMPATIBLE WITH EXISTING MATERIALS & CONDITIONS FOR ROOF PATCHING, NEW PENETRATIONS, ETC.
- 3. THE CONTRACTOR SHALL PROPERLY SEAL ALL NEW ROOF & BUILDING ENVELOPE PENETRATIONS SUCH THAT THE INTEGRITY OF THE ORIGINAL BUILDING ASSEMBLY AND ALL APPLICABLE WARRANTIES ARE MAINTAINED.
- 4. IF IT DEEMED NECESSARY TO REMOVE EXISTING FINISHES AND/OR MATERIALS, THE CONTRACTOR SHALL BE RESPONSIBLE FORRECONSTRUCTING FINISHES AND MATERIALS TO LIKE-NEW CONDITION.
 CONTRACTOR SHALL MAINTAIN THE ORIGINAL COLORS, TEXTURES &
 FINISHES UNLESS SPECIFICALLY NOTED TO THE CONTRARY OR
 APPROVED BY THE AT&T MOBILITY CONSTRUCTION MANAGER IN
- 5. AT THE AT&T MOBILITY CONSTRUCTION MANAGER'S DIRECTION, THE CONTRACTOR SHALL PROVIDE RODFTOP WALK PADS TO ALL NEW EQUIPMENT INCLUDING ANTENNAS AND BTS UNITS AND ALONG COAX CABLE ROUTING, ON CONVENTIONAL ROOFING, THE WALK PADS SHALL BE "DUCK BOARDS" AS MANUFACTURED BY APC OR EQUAL. ON SPECIAL ROOFING SYSTEMS SUCH AS SINGLE MEMBRANE ROOFS WILL REQUIRE A SPECIFIC PRODUCT AS NOTED ON PLANS OR AS REQUIRED BY NOTES 1 & 2 ABOVE.

PENETRATION AT FIRE RATED ASSEMBLIES

- 1. AT THE AT&T MOBILITY PROJECT MANAGER'S DIRECTION, THE AI THE ACT MUBBLITY PROJECT MANGER'S DIRECTION, THE CONTRACTOR SHALL PROVIDE "HILT" HIGH PERFORMANCE FIRE STOP SYSTEM #FS801 AT ALL FIRE RATED PENETRATIONS INSTALLED PER MANUFACTURER'S LATEST INSTALLATION SPECIFICATIONS.
 ALL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES SHALL BE CONSTRUCTED SO AS TO MAINTAIN AN EQUAL OR GREATER FIRE RATING.

PAINTING NOTES & SPECIFICATIONS

- 1. ALL PAINT PRODUCT LINES SHALL BE SHERWIN WILLIAMS UNLESS SPECIFICALLY
- 2. CONTRACTOR SHALL PREPARE ALL SURFACES AND APPLY ALL FINISHES PER LATEST EDITION OF MANUFACTURER'S SPECIFICATIONS.
- 3. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS REGARDING SUFFICIENT DRYING TIME BETWEEN COATS WITH PROVISIONS AS RECOMMENDED BY MANUFACTURER FOR EXISTING WEATHER CONDITIONS.
- 4. FINISH COLOR AND TEXTURE OF ALL PAINTED SURFACES SHALL MATCH EXISTING ADJACENT SURFACES UNLESS OTHERWISE NOTED.
- 5. ALL PAINT MATERIAL DATA SHEETS SHALL BE PROVIDED TO THE AT&T MOBILITY
- SANDPAPER AND NON-HYDROCARBON WASH. PREPARE GALVANIZED SURFACES BY ACID ETCH OR SOLVENT CLEANING IN ACCORDANCE WITH SSPC-SP1.
- 7. FURNISH DROP CLOTHES, SHIELDS, MASKING AND PROTECTIVE METHODS PREVENT SPRAY OR DROPPINGS FROM DAMAGING ADJACENT SURFACES AND 8. APPLY PAINT BY AIRLESS SPRAY, SANDING LIGHTLY BETWEEN EACH SUCCEEDING
- ENAMEL COAT ON FLAT SURFACES. APPLY MATERIAL TO ACHIEVE A COATING NO THINNER THAN THE DRY FILM THICKNESS INDICATED. 9. APPLY BLOCK FILTER TO CONCRETE BLOCK CONSTRUCTION AT A RATE TO

ENSURE COMPLETE COVERAGE WITH PORES COMPLETELY FILLED.

10 CONTRACTOR SHALL CORRECT RUNS SAGS MISSES AND OTHER DEFECTS CONTROL TO STATE THE TOTAL TO STATE THE TOTAL THE TOTAL TO STATE THE TOTAL THE T

PAINT THE FOLLOWING MATERIALS AND SYSTEMS CHECKED BELOW WITH THE COATING SYSTEM INDICATED.

PAINTING	SCOPE			
SURFACE TO BE PAINTED	COATING SYSTEM	PAINT	DO NOT PAINT	N/A
BTS UNIT				
ALL EQUIPMENT & CABINETS OTHER THAN THE BTS UNIT				
ANTENNA COVERS, TILT BRACKETS, MOUNTING BRACKETS AND ASSOCIATED HARDWARE, CABLE AND CABLE COVERS EXPOSED TO VIEW, EXPOSED CONDUIT AND HANGERS, ETC.				
FLASHING UNITS, METAL TRIM AND OTHER METAL SURFACES				
STUCCO, CONCRETE, CONCRETE BLOCK AND CEMENTIOUS TYPE FINISH SYSTEMS.				
PLYWOOD, LUMBER AND WOOD TRIM INCLUDING THE BACK SIDE OF ALL SCREENWALLS				
DRYWALL				
CONCRETE POLES				
METAL POLES AND METAL POLE STAND-OFF				

C. COATING SYSTEM SPECIFICATIONS

- 1. DTM ACRYLIC COATING (SERIES B66) BY SHERWIN WILLIAMS CO. 1MIL DFT PER COAT APPLIED IN TWO COATS OVER DTM BONDING PRIMER (B66A50
- 2. 100% ACRYLIC, LATEX COATING EQUIVALENT TO A-100 (SERIES A-82) BY SHERWIN WILLIAMS CO. 1 MIL DFT PER COAT APPLIED IN TWO COATS OVER

ANTENNAS PRIMER - KEM AQUA E61-W525 TOPCOAT - COROTHANE II B65W200/B60V22

BTS CABINET PRIMER - KEM AQUA F61-W525

TOPCOAT - COROTHANE II B65W200/B60V22

COAXIAL JUMPER CABLES
PRIMER - AS REQUIRED FOR ADHESION. APPLY6 ONE COAT OF KEM AQUA WATER
REDUCIBLE PRIMER E61W25 REDUCED 25%
TOPCOAT - 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

RAW STEEL
PRIMER - KEM BOND HS B50WZ4, DMT ACRYLIC PRIMER TOPCOAT - 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

ACID FTCH WITH COMMERCIAL FTCH OR VINEGAR PRIMER COAT AND FINISH COAT

STAINLESS STEEL
PRIMER - OTM WASH PRIMER, B71Y1
TOPCOAT - 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

PRE-PRIMED STEEL TOUCH UP ANY RUST OR UN-PRIMED STEEL WITH KEM BOND HS, SSOWZ4 ALUMINUM & COPPER

PRIMER - DTM WASH PRIMER, B71Y1

TOPCOAT - 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

CONCRETE MASONRY PRIMER - PRO MAR EXTERIOR BLOCK FILLER TOPCOAT - 2 COATS A-100 LATEX HOUSE & TRIM, SHEEN TO MATCH

CONCRETE STUCCO(EXISTING) 2 COATS A-100 LATEX HOUSE & TRIM, SHEEN TO MATCH

TOPCOAT - SUPERPAINT A-80 SERIES A-89 SATIN A-84 GLOSS

WOUDT - A-100 EXTERIOR ALKYD WOO9D PRIMER Y-24W20
TOPCOAT - 2 COATS A-100 LATEX HOUSE & TRIM SHEEN TO MATCH ADJACENT
SURFACES

PRIMER - A-100 EXTERIOR ALKYD WOOD PRIMER Y-24W20 TWO COATS SHOP APPLIED PER GLU-LAM MANUFACTURER'S SPECIFICATIONS
TOPCOAT - SUPERPAINT A-80 SERIES A-89 SATIN A-84 GLOSS TWO COATS
P
OR FIELD APPLIED AT CONTRACTOR'S OPTION

FIELD CUTS/DAMAGE(PRIOR TO PRIME & PAINT)

FIRST & SECOND COAT - CUPRINOL CLEAR WOOD PRESERVATIVE #158-0356 ALL PENETRATIONS INTO FINISHED CLU-LAMS SHALL BE CAULKED WITH

STEEL TOUCH UP STEEL THAT HAS BEEN WELDED, CUT OR SCRATCHED IN THE FIELD SHALL BE TOUCHED UP WITH COLD GALVANIZED PAINT

STRUCTURAL SPECIFICATIONS

PRECEDENCE: UNLESS OTHERWISE SHOWN OR SPECIFIED, THE FOLLOWING GENERAL NOTES SHALL APPLY. INFORMATION ON THESE DRAWINGS SHALL HAVE THE FOLLOWING PRECEDENCE.

GENERAL NOTES AND TYPICAL DETAILS.

- A. ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON
- B. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER
- C. MATERIAL NOTES AND SPECIFICATIONS ON THE DRAWINGS SHALL
- TAKE PRECEDENCE OVER THE SPECIFICATIONS 2. OTHER TRADES: SEE THE ARCHITECTURAL DRAWINGS FOR ALL
- GENERAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.
- SHORING: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL ALL TEMPORARY BRACING AND SHORING TO INSURE THE SAFETY OF THE WORK UNTIL IT IS IN IT'S COMPLETED FORM. THIS INCLUDES UNDERPINNING EXISTING FOOTINGS WHERE APPLICABLE.
- STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.
- SPECIFICATIONS, ALTHOUGH SOMETIMES SHOWN ON STRUCTURAL DRAWING ARE OF GENERAL INFORMATION PURPOSES ONLY. WATERPROOFING AND DRAINAGE ARE SOLELY THE DESIGN RESPONSIBILITY OF THE ARCHITECT.

- 1 ALL STRUCTURAL STEEL SECTIONS AND WELDED PLATE MEMBERS SHALL CONFORM TO ASTM A-36 AND BE FABRICATED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE AISC.
- ALL BOLTS SHALL CONFORM TO ASTM A-307 UNLESS OTHERWISE NOTED ON PLANS.
- 3. STEEL PIPE COLUMNS SHALL BE GRADE "B" CONFORMING TO ASTM
- 4. STEEL TUBING SHALL BE GRADE "B" CONFORMING TO ASTM A500.
- 5. ALL WELDING SHALL BE DONE BY THE SHIELDED ARC METHOD. ALL WELDERS SHALL BE PROPERLY QUALIFIED AND BE PRE-APPROVED. SURPLUS METAL SHALL BE DRESSED OFF TO SMOOTH, EVEN SURFACES WHERE WELDS ARE NOT EXPOSED TO VIEW. ALL WELDING SHALL COMPLY WITH THE LATEST A.W.S. SPECIFICATIONS
- 6. THE FOLLOWING WELDING EQUIPMENT MUST BE USED:
- 250 AMP WELDERS ROD OVENS.
- GRINDERS
- 7. NO BUZZ BOXES SHALL BE USED.
- 8. ALL STRUCTURAL STEEL SHALL MILL CERTIFICATION. MILL CERTIFICATION SHALL BE KEPT ON THE JOB SITE FOR EXAMINATION BY THE DESIGN ENGINEER AND THE CITY INSPECTOR.
- STEEL THAT HAD BEEN WELDED, CUT OR SCRATCHED IN THE FIELD SHALL BE TOUCHED UP WITH COLD GALVANIZING PAINT.
- 10 WELDING INDICATED IN THESE DRAWINGS IS DESIGNED FOR ONE HALE OF ALLOWABLE CODE STRESSES UNLESS SPECIFICALL NOTED "FULL STRESS" AT END OF WELD SYMBOL.

1. STRENGTH: CONCRETE FOR THE PROJECT SHALL HAVE THE FOLLOWING ULTIMATE COMPRESSIVE STRENGTH AT AGE OF 28 DAYS

LOCATION STRENGTH WT. SLUMP ADMIXTURE

- A. SLAB&FOOTING 3000PSI 150PCF 4"
- INSPECTION: CONCRETE WITH SPECIFIED STRENGTH GREATER THAN 2500PSI SHALL BE CONTINUOUSLY INSPECTED DURING PLACEMENT BY A DEPUTY INSPECTOR EMPLOYED BY A TESTING LABORATORY APPROVED BY THE BUILDING DEPT.
- REBAR GRADES: REINFORCING STEEL SHALL BE CLEAN PREFORMED BARS CONFORMING TO ASTM A615 AS FOLLOWS:
- & SMALLER BARS.....GRADE 40 #5 & LARGER BARS......GRADE 60 ALL BARS AT CAISSON FOOTING...GRADE 60
- FOUNDATIONS & SLABS: TYPE V, LOW ALKALI, CONFORMING TO ASTM C-150. PIER/CAISSON FOOTINGS: TYPE V, LOW ALKALI, CONFORMING TO ASTM C-150.
- AGGREGATE: USED IN THE CONCRETE SHALL CONFORM TO ASTM C-33. USE ONLY AGGREGATES KNOWN NOT TO CAUSE EXCESSIVE SHRINKAGE. THE MAXIMUM SIZE AGGREGATE IN CONCRETE WORK SHALL BE THE
- FOUNDATIONS & SLABS 9" OR LESS: 3/4" GRAVEL
- PIER/CAISSON FOOTING: 1" GRAVEL.
- 6. SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNT OF ACIDS, ALKALIS, ORGANIC MATERIALS AND SHALL BE SUITABLE FOR HUMAN
- MIXING: PREPARATION OF CONCRETE SHALL CONFORM TO ASTM C-94. NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY A TESTING AGENCY.
- SEGREGATION OF AGGREGATES: CONCRETE SHALL NOT BE FLOPPED THROUGH REINFORCING STEEL (AS IN WALLS, COLUMNS, CAISSON, AND DROP CAPITALS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. USE HOPPERS, CHUTES, TRUNKS OR PUMP HOSE SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED 5 FT.

- 9. SPLICES OF REINFORCING STEEL SHALL BE LAPPED A MINIMUM OF 30 DIAMETERS AND SECURELY WIRED TOGETHER. SPLICES OF ADJACENT REINFORCING BARS SHALL BE STAGGERED WHEREVER POSSIBLE.
- 10. REAR CLEARANCE: MINIMUM COVERAGE FOR JOISTS, BEAMS, GIRDERS AND COLUMNS SHALL BE TO FACE OF STIRRUPS OR TIES. UNLESS OTHERWISE NOTED, CONCRETE COVERAGE FOR REINFORCING BARS TO FACE OF BAR SHALL BE AS FOLLOWS:
- CONCRETE IN CONTACT WITH EARTH, UNFORMED
- CONCRETE IN CONTACT WITH EARTH, FORMED WALL, EXTERIOR FACE
- 1-1/2" WALL. INTERIOR FACE STRUCTURAL SLABS
- BEAMS, GIRDERS & COLUMNS 1-1/2" 11. PENETRATIONS: NO SLEEVES OR CHASES SHALL BE PLACED IN BEAMS, SLABS, WALLS AND COLUMNS, EXCEPT THOSE SHOWN ON THE CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATIONS OF ANY ADDITIONAL SLEEVES OR CHASES. ALL PLUMBING, ELECTRICAL AND MECHANICAL OPENINGS SHALL BE SLEEVES. CORING IS NOT ALLOWED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE STRUCTURAL
- 12 EMBEDDED ITEMS: CONDUIT PLACED IN A CONCRETE SLAB SHALL NOT EMBEDUED HEMS: CONDOIN FACUED IN A CONCRETE SJAB SHALL NO HAVE AN OUTSIDE DIAMETER GREATER THAN 1/4 THE THICKNESS OF THE SLAB. CONDUIT SHALL NOT BE EMBEDDED IN A SLAB THAT IS LESS THAN 3-1/2" THICK, UNLESS SLAB IS LOCALLY THICKENED. MINIMUM CLEAR DISTANCE BETWEEN CONDUITS SHALL BE SIX INCHES.
- INSERTS, ETC., SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE. NO REPOSITIONING DURING CONCRETE POUR IS
- 14. CURING: SLABS SHALL BE SPRAYED WITH A CURING COMPOUND IMMEDIATELY AFTER FINISHING. CURING COMPOUNDS USED ON CONCRETE WHERE TILE OF FLOOR COVERING IS TO BE BONDED TO THE CONCRETE SURFACE SHALL BE APPROVED BY THE TILE OR FLOOR COVERING MANUFACTURER. KEEP SLAB WET FOR 7 DAY MINIMUM
- 15. CONSOLIDATION: ALL CONCRETE SHALL BE VIBRATED AS IT IS BEING PLACED WITH ELECTRICALLY OPERATED VIBRATING EQUIPMENT
- 1. ALL FRAMING LUMBER FOR 4X AND LARGER BEAMS SHALL BE NO. 1 GRADE DOUGLAS FIR., S45, UNLESS NOTED OTHERWISE ON THE
- 2. ALL FRAMING LUMBER FOR 2X RAFTERS AND JOISTS SHALL BE NO.2
- STRIPPING, BLOCKING, BACKING AND OTHER NON-STRUCTURAL LUMBER SHALL BE NO. 2 OR STD & BTR GRADE DOUGLAS FIR, S4S. 2X4 STUD WALLS SHALL BE D.F. STANDARD & BTR. 4. ALL BEAMS, JOISTS AND RAFTERS SHALL BE INSTALLED WITH CROWN
- 5. ROOF PLYWOOD SHALL MATCH EXISTING PLYWOOD SHEATHING WITH A SPAN INDEX RATIO 32/16. EDGE NAIL WITH8D AT 6" O.C. UNLESS

NOTED OTHERWISE ON PLANS. FGIELD NAIL WITH 8D AT 12" O.C.

- 6 PLYWOOD SHEETS SHALL BE LAID WITH THE FACE GRAIN PERPINDICULAR TO SUPPORTS AND WITH THE EDGES STAGGERED, UNLESS NOTED OTHERWISE ON THE PLANS.
- 7. PLYWOOD SHALL BE GRADE MARKED BY DFPA, TECO, OR PTL AND SHALL CONFORM TO PS 1-83.
- 8. THE MAXIMUM MOISTURE CONTENT OF ALL LUMBER SHALL NOT EXCEED 24% AT THE TIME OF INSTALLATION.
- 9. MINIMUM NAILING SHALL COMPLY WITH TABLE 23-1-Q OF BUILDING ALL NAILS SHALL BE COMMON WIRE NAILS.

AND/OR NUTS WHERE IN CONTACT WITH WOOD.

- 11. LAG BOLTS SHALL BE SCREWED INTO PLACE, NOT DRIVEN, LAG BOLTS SHALL BE INSTALLED IN PRE-DRILLED HOLES WITH A DIAMETER EQUAL TO 75% DIAMETER OF BOLT.
- 12. CONNECTORS: ALL SHEET METAL FRAMING CONNECTORS SHOWN IN THE PLANS SHALL BE STRONG CONNECTORS AS MANUFACTURED BY THE SAMSON COMPANY, SUBSTITUTIONS MAY BE MADE WHEN APPROVED BY THE STRUCTURAL ENGINEER. 13. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY OF
- CONCRETE SHALL BE WOLMANIZED PRESSURE TREATED LUMBER OR A NATURALLY DECAY RESISTANT LUMBER SUCH AS REDWOOD CEDAR.
- 14. ALASKAN YELLOW CEDAR GLUE-LAMINATED BEAMS
- LASKAN YELLOW CEDAR GLUE-LAMINATED BEAMS
 LUMBER SPECIES: ALASKAN YELLOW CEDAR (A.C.) CONFORMING TO
 20F-V12
 STRENGTH PROPERTIES:
 FB BOTTOM FIBER BENDING STRESS 2000PSI MIN.
 FB TOP FIBER BENDING STRESS 1000PSI MIN.
 FC COMPRESSION STRESS PERPENDICULAR TO GRAIN 560PSI MIN.
 FC COMPRESSION STRESS PERPENDICULAR TO GRAIN 560PSI MIN.
 CAMBER TO RADIUS OF 1600° U.O.N.
 ALL CH'S SHALL BE FABRICATED WITH EXTERIOR GILIE
- ALL GLB'S SHALL BE FABRICATED WITH EXTERIOR GLUE.
- MANUFACTURE OF GLB'S SHALL CONFORM TO THE UBC.
 GLU-LAM MATERIAL SHALL BE IN ACCORDANCE WITH ANSI/AITC
 A190.1 AND ASTM D3737.

Network Solutions 3350 E BIRCH ST, SUITE 101 BREA, CALIFORNIA 92821

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APPROVALS

ı	GAMALIEL AGUILAR	03/04/20
ı	90% CDS	DATE
ı	GAMALIEL AGUILAR	04/10/20

100% CDS GAMALIFI AGUILAR 04/10/20

100% CDS WITH STRUCTURALS DATE 03/23/20 ALLAN WALKER

CONSTRUCTION SITE ACQUISITION

DATE

MICROWAVE UPGRADE BLACK FOREST/COU2037

> 10093683 7113 MARSHBERN COURT

COLORADO SPRINGS, COLORADO 80908

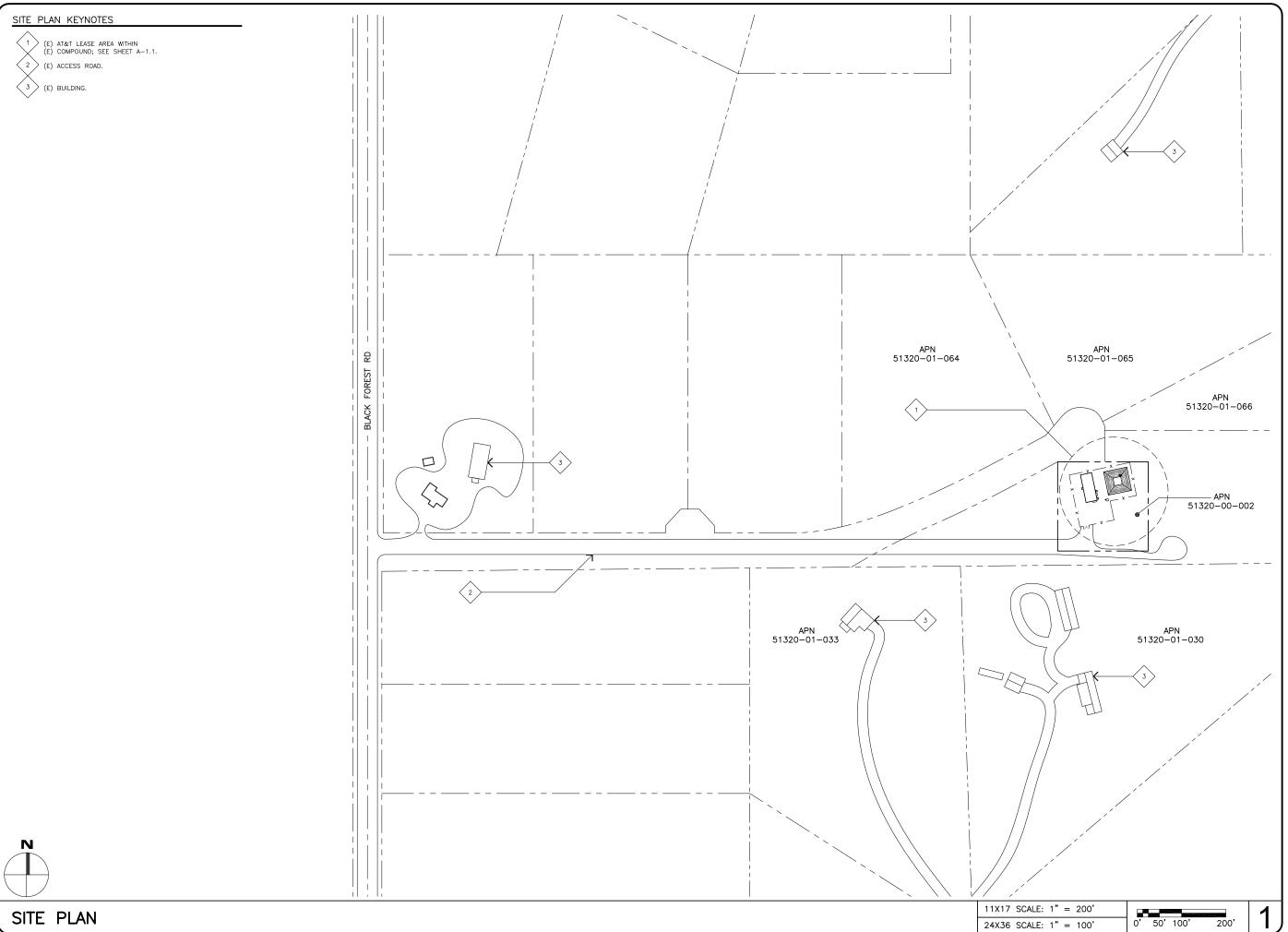
09/28/20

DRAWING DATES 90% CD REVIEW (P1-R1) 03/04/20 100% FINAL CDS (P1-B2) 04/10/20

COUNTY COMMENTS (P1-B3)

SHEET TITLE

SPECIFICATIONS AND NOTES





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100% CDS	DATE
GAMALIEL AGUILAR	04/10/20
100% CDS WITH STRUCTURALS	DATE
ALLAN WALKER	03/23/20

CONSTRUCTION

SITE ACQUISITION

PROJECT NAME
MICROWAVE UPGRADE

DATE

BLACK FOREST/COU2037

FA NUMBER 10093683

7113 MARSHBERN COURT COLORADO SPRINGS, COLORADO 80908

DRAWING DATES

03/04/20 90% CD REVIEW (P1-B1)

04/10/20 100% FINAL CDS (P1-B2)

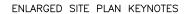
09/28/20 COUNTY COMMENTS (P1-B3)

SHEET TITLE

SITE PLAN

A-1

JOB NUMBER: 21253



(N) AT&T 6'-0"Ø MICROWAVE ANTENNA MOUNTED TO (E) LATTICE TOWER; SEE DETAIL 2/A-3.

(E) LATTICE TOWER.

(E) AT&T ICE BRIDGE

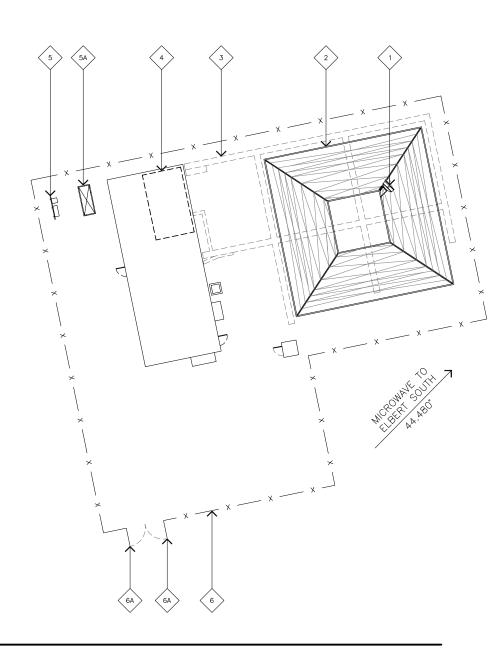
(E) AT&T EQUIPMENT AREA WITHIN (E) BUILDING; SEE DETAIL 1/A-1.1.

(E) H-FRAME.

(E) GENERATOR.

(E) CHAIN-LINK FENCE ENCLOSURE WITH BARBED WIRE.

(E) CHAIN-LINK ACCESS GATE.

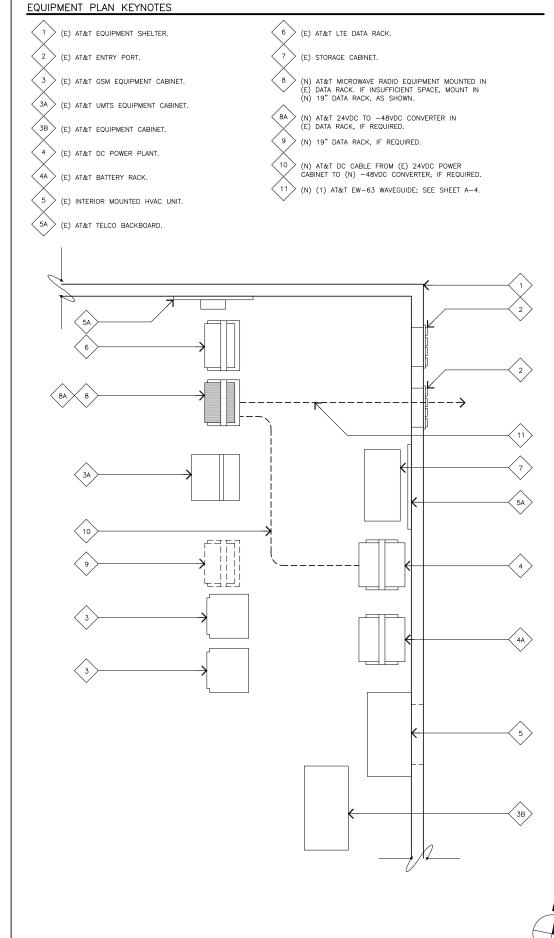


ENLARGED SITE PLAN GENERAL NOTES

- A. OTHER CARRIER ANTENNAS NOT SHOWN FOR CLARITY.
- B. GROUND ALL (N) EQUIPMENT AND COAX PER DETAIL 3/A-3.
- C. OTHER CARRIER ANTENNAS NOT SHOWN FOR CLARITY.
- D. CONTRACTOR TO PROVIDE ALL LABOR TO INSTALL COAX, RETS AND ANTENNAS.
- E. CONTRACTOR TO PROVIDE ALL COAX, CONNECTORS, ANCILLARY EQUIPMENT (INCLUDING WEATHER STRIPPING, GROUND KITS, FTC.).
- F. CONTRACTOR TO COLOR CODE ALL COAX. COLORED BANDS OF TAPE ON COAX IDENTIFY SECTOR, FREQUENCY, TECHNOLOGY, AND TRANSMIT GROUP AS FOLLOWS ON ALL COAX MODIFIED OR INSTALLED ONLY.
- G. WHEN ANTENNA LINES ARE DIPLEXED, THE COLOR CODE OF THE HIGHEST FREQUENCY PREVAILS (I.E. UMTS DIPLEXED WITH TDMA SHOULD HAVE COLOR 4 BANDS).
- H. ALL ANTENNAS AND ANTENNA CABLE SHALL BE FURNISHED BY CONTRACTOR AND INSTALLED BY ANTENNA INSTALLATION CONTRACTOR.
- PRIOR TO PLACEMENT OF ANTENNA POLE MOUNTS, THE CONTRACTOR SHALL VERIFY THAT THE AZIMUTH AND DIMENSIONS SHOWN ON THE PLANS MATCH ACTUAL FIELD CONDITIONS. ALLOWABLE TOLERANCE: HORIZONTAL ALIGNMENT = ±5°; VERTICAL ALIGNMENT = ±1°.
- J. ANTENNA INSTALLATION CONTRACTOR SHALL PROVIDE ALL CONDUIT, CABLE TRAY, GROUNDS, ETC. FOR COMPLETE INSTALLATION OF ANTENNAS AND CABLES SHOWN AND INTENDED AS REQUIRED FOR A COMPLETE OPERATING SYSTEM IN ACCORDANCE WITH CONTRACTOR STANDARDS.
- K. IN NO CASE SHALL THERE BE ANY MORE THAN TWO (2) 90' TURNS (OR EQUIVALENT) IN ANY CONTINUOUS LENGTH OF CONDUIT BETWEEN PULL BOXES OR SIMILAR FEATURES.

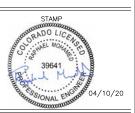
- L. ANTENNA CONDUIT SHALL ONLY INCLUDE FACTORY-MADE LARGE RADIUS SWEEPS AT ALL CHANGES IN DIRECTION. SWEEP RADIUS SHALL BE 18" MINIMUM ABOVE GROUND AND 36" MINIMUM BELOW GROUND.
- M. CONDUIT SHALL BE 3"Ø MINIMUM. ALL UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ALL EXPOSED CONDUIT ABOVE GRADE LEVEL SHALL BE IMC OR RIGID GALVANIZED. ALL EXPOSED CONDUIT PROTECTED IN A BUILDING OR ON A ROOF SHALL BE EMT OR UV STABILIZED PAINTED SCHEDULE 80 PVC.
- N. IN HIGH TRAFFIC AREAS OR WHERE SUSCEPTIBLE TO DAMAGE CONTRACTOR SHALL PROVIDE FORMED 14 GA. GALVANIZED SHEET METAL COVER OVER COAXIAL CABLE ROUTES. WHERE CABLE IS RUN ON THE WALL, ATTACH UNISTRUT TO WALL AND COVER WITH 14 GA. GALVANIZED FORMED SHEET METAL COVER OR MATERIAL AS DIRECTED BY CONTRACTOR CONSTRUCTION MANAGER.
- O. VERIFY ROUTE AND LENGTH OF CABLE PRIOR TO CUTTING. ADJUST INDICATED ROUTE AS REQUIRED TO CLEAR (E) EQUIPMENT AT FACILITIES.
- P. MAXIMUM LENGTH OF 7/8" COAX CABLE SHALL BE 140'-0". MAXIMUM LENGTH OF 1-1/4" COAX CABLE SHALL BE 190'-0". MAXIMUM LENGTH OF 1-5/8" COAX CABLE SHALL BE 235'-0".
- Q. VERIFY MODEL NUMBERS OF ANTENNAS WITH CONTRACTOR SERVICES.
- R. THE CONTRACTOR SHALL PROVIDE TESTING OF ANTENNAS AND SHALL PROVIDE DOCUMENTATION TO THE CONTRACTOR PROJECT MANAGER.
- S. GENERAL CONTRACTOR TO VERIFY ALL TORQUE TOLERANCES PER THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.







PROPRIETARY INFORMATION
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APF	PRO	VAL	

GAMALIEL AGUILAR	03/04/20
90% CDS	DATE
GAMALIEL AGUILAR	04/10/20
100% CDS	DATE
GAMALIEL AGUILAR	04/10/20
100% CDS WITH STRUCTURALS	DATE

ALLAN WALKER 03/23/20
CONSTRUCTION DATE

SITE ACQUISITION

PROJECT NAME
MICROWAVE UPGRADE

SITE NAME
BLACK FOREST/COU2037

FA NUMBER 10093683

7113 MARSHBERN COURT COLORADO SPRINGS, COLORADO 80908

DDAWING DATE

DRAWING DATES

03/04/20 90% CD REVIEW (P1-B1)

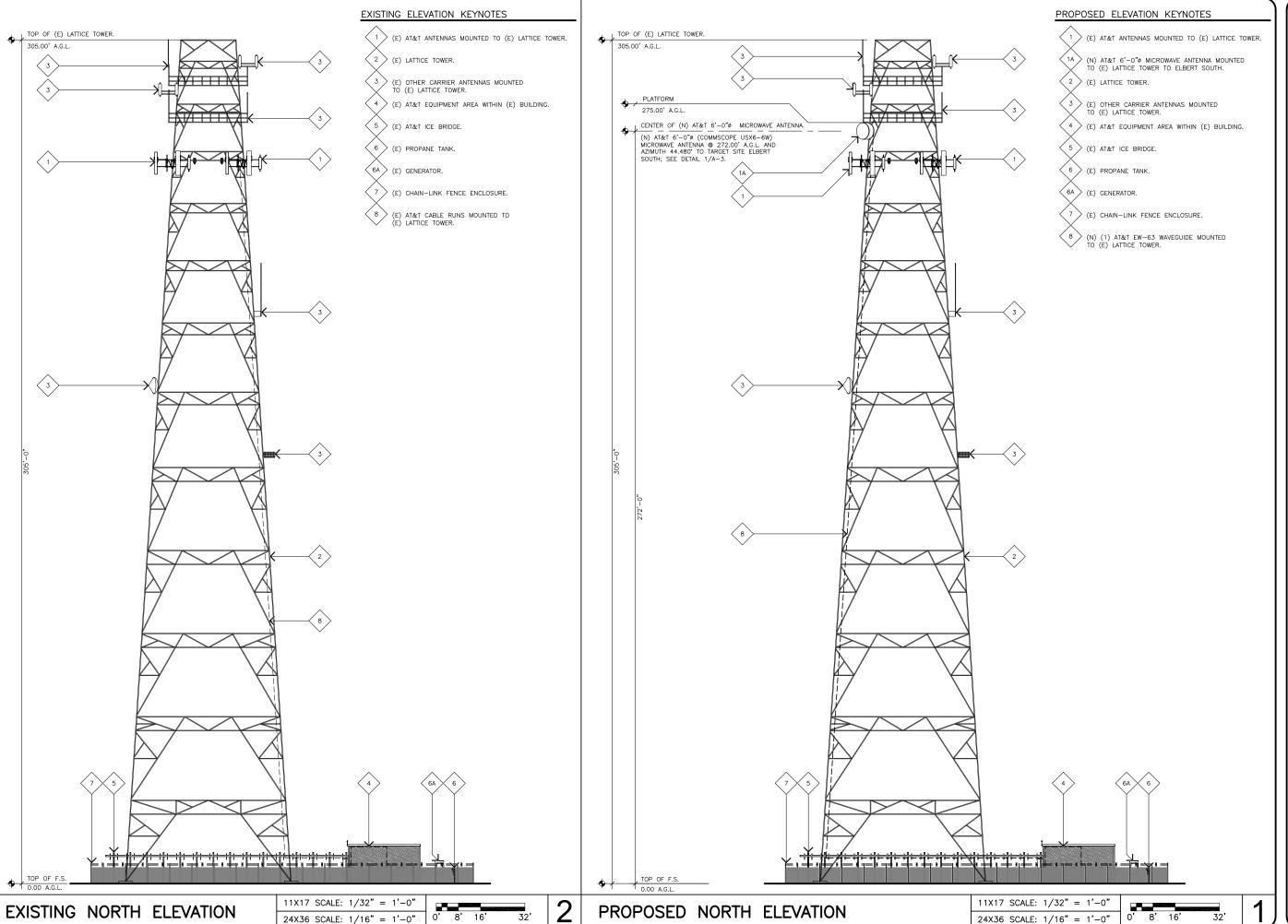
04/10/20 100% FINAL CDS (P1-B2)

09/28/20 COUNTY COMMENTS (P1-B3)

SHEET TITLE

ENLARGED SITE AND EQUIPMENT PLAN

A-1.1





3350 E BIRCH ST, SUITE 101 BREA, CALIFORNIA 92821

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GAMALIEL	AGUILAR	

APPROVALS

03/04/20

90% CDS DATE GAMALIEL AGUILAR 04/10/20 100% CDS

GAMALIEL AGUILAR 04/10/20 100% CDS WITH STRUCTURALS DATE

03/23/20 ALLAN WALKER CONSTRUCTION DATE

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BLACK FOREST/COU2037

10093683

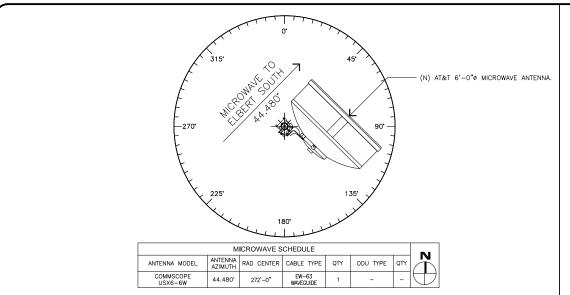
7113 MARSHBERN COURT COLORADO SPRINGS, COLORADO 80908

DRAWING DATES

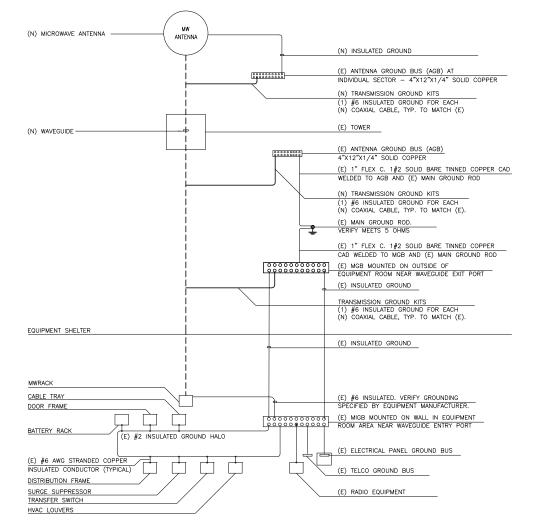
03/04/20 90% CD REVIEW (P1-B1) 04/10/20 100% FINAL CDS (P1-B2) 04/10/20 09/28/20 COUNTY COMMENTS (P1-B3)

SHEET TITLE

EXISTING & PROPOSED **ELEVATIONS**



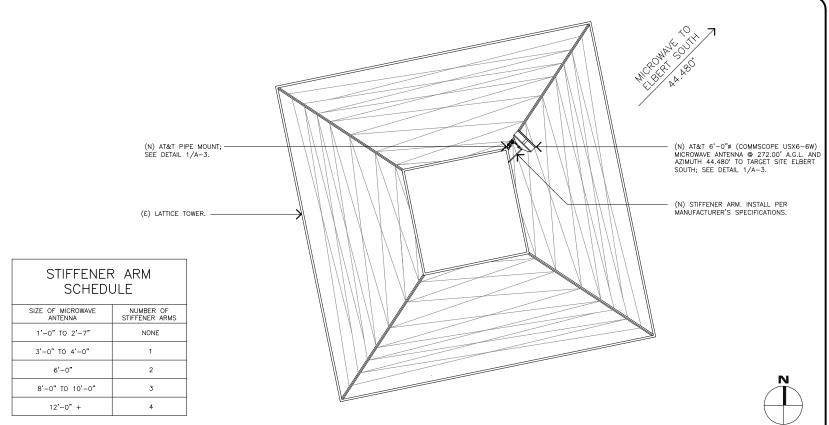




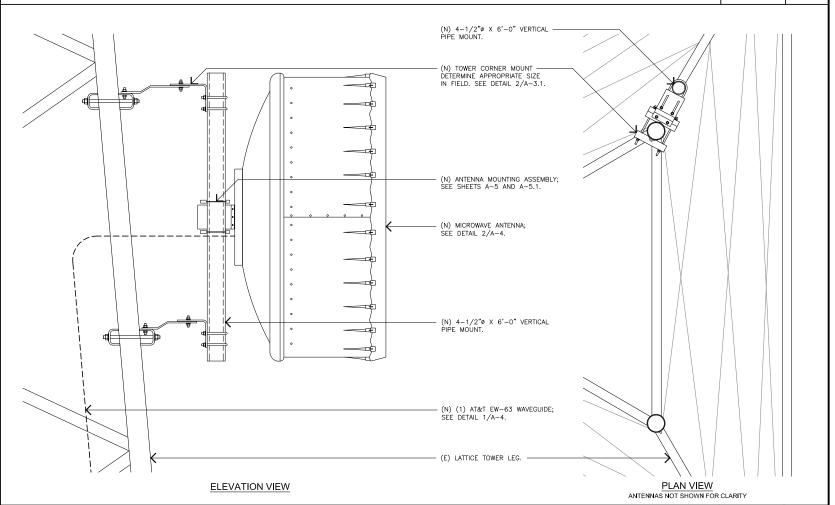
GENERAL NOTES:

- 1 SPLICE GROUND CONNECTIONS
- 2. FOLLOW COAXIAL CABLE MANUFACTURES RECOMMENDATIONS (TYPICAL)
- 3. ALL INSULATED GROUND WIRES TO BE STRANDED, AWG WIRE UNLESS NOTED OTHERWISE. 4. THIS IS TYPICAL FOR ONE SECTOR OF ANTENNAS. SEE PLANS FOR NUMBER OF SECTORS.
- 6. EXISTING DIPLEXER'S AND EXISTING TMA'S NOT SHOWN FOR CLARITY.

GROUNDING SYSTEM SCHEMATIC



ANTENNA PLAN



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7113 MARSHBERN COURT COLORADO SPRINGS, COLORADO 80908

03/04/20 90% CD REVIEW (P1-B1) 04/10/20 100% FINAL CDS (P1-B2) 09/28/20 COUNTY COMMENTS (P1-B3)

SHEET TITLE

ANTENNA DETAILS

SCALE:

MICROWAVE ANTENNA DETAIL

SCALE:

SCALE:

NONE

Universal Sliding Pipe Mount Kits

Application: Lattice towers

Size: 2-3/8" (60.3 mm) OD or 4-1/2" (114.3 mm) OD Design: Pipe with saddle mount and adjustable clamps

Universal sliding bracket with up to 7° of taper Feature: Mounts to: Straight or tapered legs up to 16" (406.4 mm)

OD, 16" (406.4 mm) angle 60°,

or 12" (304.8 mm) angle 90°

Material: Hot dip galvanized steel

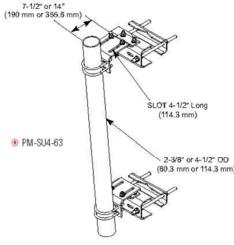
Includes: Universal saddle mount, sliding pipe mount

brackets, with or without pipe

Order Separately: Pipes for base kits

Wind Rating*: 120 mph (BWS) per latest revision of TIA/EIA-222

*Typical installation of one 8' microwave antenna with stiff arm





Part Number Description Weight, lb (kg)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs, 2-3/8" (60.3 mm) **Antenna Mounting Pipe**

PM-SU2-B Base Kit, Order Pipe Separately, Kit of 2 80 (32.3) PM-SU2-72 2-3/8" OD x 72" (60.3 mm OD x 1.8 m) 101 (45.8) 2-3/8" OD x 96" (60.3 mm OD x 2.4 m) 114 (51.7)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 16" (406.4 mm), or 12" (304.8 mm) 90° Angle Legs, 2-3/8" (60.3 mm) **Antenna Mounting Pipe**

PML-SU2-B	Base Kit, Order Pipe Separately, Kit of 2	80 (32.3)
PML-SU2-72	2-3/8" OD x 72" (60.3 mm OD x 1.8 m)	101 (45.8)
PML-SU2-96	2-3/8" OD x 96" (60.3 mm OD x 2.4 m)	114 (51.7)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs, 14" (355.6 mm) Stand-off, 2-3/8" (60.3 mm) Antenna Mounting Pine

otalia-on, z-c	to (00.0 min) Antenna mounting ripe	
PM-SU2L-B	Base Kit, Order Pipe Separately, Kit of 2	90 (40.9)
PM-SU2L-72	2-3/8" OD x 72" (60.3 mm OD x 1.8 m)	110 (49.9)
PM-SU2L-96	2-3/8" OD x 96" (60.3 mm OD x 2.4 m)	121 (54.9)

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PML-SU2L-B	Base Kit, Order Pipe Separately, Kit of 2	90 (40.9)
PML-SU2L-72	2-3/8" OD x 72" (60.3 mm OD x 1.8 m)	110 (49.9)
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Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 8" (203.2 mm), or 6" (152.4 mm) 90° Angle Legs, 4-1/2" (114.3 mm) **Antenna Mounting Pipe**

PM-SU4-B	Base Kit, Order Pipe Separately, Kit of 2	81 (36.8)
PM-SU4-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m)	138 (62.6)
PM-SU4-96	4-1/2" OD x 96" (114.3 mm 0D x 2.4 m)	169 (76.7)

Universal Sliding Pipe Mount Kits, for Round or 60° Angle Legs up to 16" (406.4 mm), or 12" (304.8 mm) 90° Angle Legs, 4-1/2" (114.3 mm) **Antenna Mounting Pipe**

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PM-SU4L-B	Base Kit, Order Pipe Separately, Kit of 2	90 (40.9)
PM-SU4L-63	4-1/2" OD x 63" (114.3 mm OD x 1.6 m)	145 (65.8)
PM-SU4L-96	4-1/2" OD x 96" (114.3 mm OD x 2.4 m)	175 (79.4)

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otalid-on, 4-172 (114.0 lilli) Anteinia mounting 1 ipe		
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GAMALIEL AGUILAR 04/10/20 100% CDS GAMALIEL AGUILAR 04/10/20

100% CDS WITH STRUCTURALS DATE ALLAN WALKER 03/23/20

DATE

CONSTRUCTION

SITE ACQUISITION

PROJECT NAME
MICROWAVE UPGRADE

BLACK FOREST/COU2037

10093683

7113 MARSHBERN COURT COLORADO SPRINGS, COLORADO 80908

DRAWING DATES

03/04/20 90% CD REVIEW (P1-B1) 04/10/20 100% FINAL CDS (P1-B2) COUNTY COMMENTS (P1-B3)

SHEET TITLE

DETAILS

A-3.1

SCALE:

NONE

SCALE: NONE

USX6-6W-6GR



1.8m | 6ft Sentinel® Ultra High Performance, Super High XPD Antenna

Product Classification

Brand Sentinel®

Product Type Microwave antenna

General Specifications

USX - Sentinel® Ultra High Performance, Super High XPD Antenna Antenna Type

Diameter, nominal 1.8 m | 6 ft Packing Standard pack Radome Color Gray Radome Material Fabric

One-piece reflector **Reflector Construction** CPR137G Antenna Input

Antenna Color

Antenna Type USX - Sentinel® Ultra High Performance, Super High XPD Antenna

Diameter, nominal 1.8 m | 6 ft **Polarization** Dual

Mechanical Specifications

Fine Azimuth Adjustment ±5° Fine Elevation Adjustment

Mounting Pipe Diameter 50 mm-115 mm | 2.0 in-4.5 in

Net Weight 90 kg | 198 lb

Side Struts, Included Side Struts, Optional

Wind Velocity Operational 180 km/h | 112 mph Wind Velocity Survival Rating 200 km/h | 124 mph

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Join the Evolution

SCALE:

NONE

EW63

EW63, HELIAX® Standard Elliptical Waveguide



CHARACTERISTICS

Construction Materials

Jacket Material Conductor Material Corrugated copper Jacket Color Black

Dimensions

Cable Volume 855.0 L/km | 9.2 ft³/kft Cable Weight 0.76 kg/m | 0.51 lb/ft Diameter Over Jacket (E Plane) 51.10 mm | 2.01 in Diameter Over Jacket (H Plane) 29.50 mm | 1.16 in

Environmental Specifications

Installation Temperature -40 °C to +60 °C (-40 °F to +140 °F) Operating Temperature -55 °C to +85 °C (-67 °F to +185 °F) -70 °C to +85 °C (-94 °F to +185 °F) Storage Temperature

General Specifications

HELIAX® Brand

Mechanical Specifications

Maximum Twist 3.00 °/m | 1.00 °/ft Minimum Bend Radius, Multiple Bends (E Plane) 260.00 mm | 10.00 in Minimum Bend Radius, Multiple Bends (H Plane) 740.00 mm | 29.00 in Minimum Bend Radius, Single Bend (E Plane) 180.00 mm | 7.00 in Minimum Bend Radius, Single Bend (H Plane) 510.00 mm | 20.00 in

Standard Conditions

Attenuation, Ambient Temperature 24 °C | 75 °F 40 °C | 104 °F Average Power, Ambient Temperature Average Power, Temperature Rise 42 °C | 76 °F

www.commscope.com/andrew

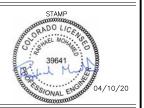
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order online today at www.talleycom.com

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PREPARED FOR



APPROVALS	
GAMALIEL AGUILAR	03/04/20
90% CDS	DATE
GAMALIEL AGUILAR	04/10/20
100% CDS	DATE
GAMALIEL AGUILAR	04/10/20

100% CDS WITH STRUCTURALS DATE ALLAN WALKER 03/23/20 CONSTRUCTION DATE

SITE ACQUISITION

PROJECT NAME
MICROWAVE UPGRADE

BLACK FOREST/COU2037

10093683

7113 MARSHBERN COURT COLORADO SPRINGS, COLORADO 80908

03/04/20 90% CD REVIEW (P1-B1) 100% FINAL CDS (P1-B2) COUNTY COMMENTS (P1-B3)

SHEET TITLE

SPECIFICATIONS

SCALE:

Tower Mount for 6ft (1.8m) Antennas

Description
The following pages show the steps required to assemble and fit the antenna mount to a vertical tower pipe of diameter 48 to 115 mm (1.9 to 4.5").
This mount provides ±20" azimuth or ±15" elevation adulstment.

Andrew installation instructions have been written for such personnel. Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment.

Warning: Use protective wear to avoid skin contact with the pre-applied conductive grease on threads. Keep away from mouth. Wash thoroughly after use with liberal amounts of liquid soap and rinse with water. Do not store open near food of food sources. Dispose of empty or partially filled containers according to governmental regulations for petroleum products. Contents: oil, clay,

TABLE 1- ANTENNA PARTS LIST REFLECTOR ASSY BRACKET AZIMUTH ADJUSTER M12x35mm HEX HEAD BOLT SPRING WASHER* MOUNTING ANGLE SAFETY BRACKET

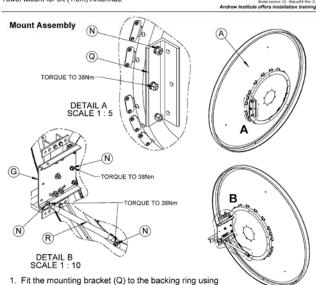
* = PART OF ACCESSORY KIT

Q

Installation Instructions

ANDREW Bulletin 102344 page 4 of 12

Tower Mount for 6ft (1.8m) Antennas



1. Fit the mounting bracket (Q) to the backing ring using fixing (N) tighten bolts to the recommended torque.
2. Fit the panning frame assy (G) to the mounting bracket (Q) using the fixings (N) tighten the bolts to the recommended torque.

L.H.S. Mount only.
3. Fit the Strengthening Strut (R) to Mount using fixings (N) tighten the bolts to the recommended torque.

Installation Instructions

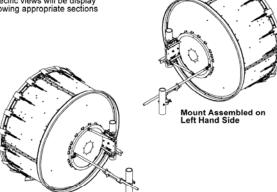
ANDREW Bulletin 102344 page 2 of 1

Tower Mount for 6ft (1.8m) Antennas

Assembling the Mount

the antenna may be assembled with the mounts on the right or the left side of the poles as shown

The image shown can vary from product to product. Specific views will be display showing appropriate sections



only the left side assembly is described the right side assembly is identical except or the orientation of the strengthening strut - alternate steps and views will be shown.

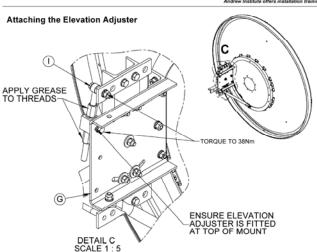
Certain views have the antenna shields omitted for clarity.

Installation Instructions

ANDREW

Tower Mount for 6ft (1.8m) Antennas

Bulletin 102344 page 5 of 1



- Fit elevation adjuster (I) to the position shown on the mount (G). Tighten all bolts and nuts to the elevation adjuster securely enough to allow

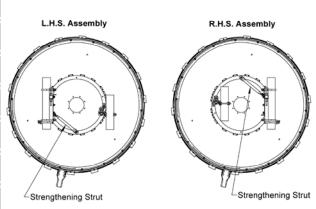
Installation Instructions

ANDREW

Tower Mount for 6ft (1.8m) Antennas

Bulletin 102344 page 3 of 1 Version 03 Status RE Rev C

Orientation of Strengthening Strut Pipe on Mount



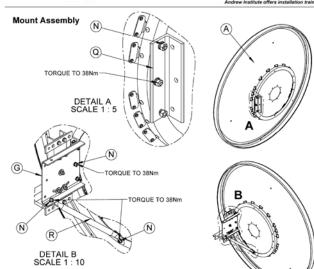
- For mounts assembled on the Left Hand Side the strengthening strut item (R) is fitted to the Bottom of Reflector Backing Ring, as shown.
- For mounts assembled on the Right Hand Side the strengthening strut item (R) is fitted to the Top of the Reflector Backing Ring, as shown.

Installation Instructions

ANDREW

Tower Mount for 6ft (1.8m) Antennas

Bulletin 102344 page 4 of



1. Fit the mounting bracket (Q) to the backing ring using

fixing (N) tighten bolts to the recommended torque.

Fit the panning frame assy (G) to the mounting bracket (Q) using the fixings (N) tighten the bolts to the recommended torque.

L.H.S. Mount only.

Fit the Strengthening Strut (R) to Mount using fixings (N) tighten the bolts to the recommended torque.

SCALE:

Network Solutions 3350 E BIRCH ST, SUITE 101 BREA, CALIFORNIA 92821

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GAMALIEL AGUILAR	03/04/2
90% CDS	DATE
GAMALIEL AGUILAR	04/10/2
100% CDS	DATE

GAMALIEL AGUILAR 04/10/20 100% CDS WITH STRUCTURALS DATE

ALLAN WALKER 03/23/20 CONSTRUCTION DATE

SITE ACQUISITION

PROJECT NAME
MICROWAVE UPGRADE

BLACK FOREST/COU2037 10093683

7113 MARSHBERN COURT COLORADO SPRINGS, COLORADO 80908

DRAWING DATES 03/04/20 90% CD REVIEW (P1-B1)

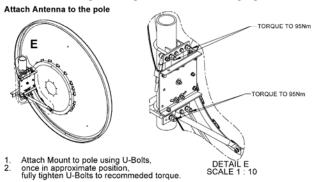
100% FINAL CDS (P1-B2) 04/10/20 09/28/20 COUNTY COMMENTS (P1-B3)

SHEET TITLE

ANTENNA MOUNTING DETAILS

Lifting the Antenna Mount on L.H.S. DETAIL D SCALE 1 : 15 WARNING

1. Lift the Antenna using the hoisting hole located on the backing ring

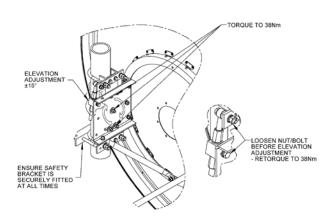


Installation Instructions

ANDREW Bulletin 102344 page 10

Antenna set-up and alignment Adjusting the Antenna in Elevation

Tower Mount for 6ft (1.8m) Antennas



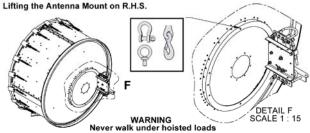
- Loosen the 5 bolts on the Panning Frame Assembly enough to allow for rotational movement while remaining securley attached.
 Loosen the nuts on the Fine Elevation Adjuster and adjust the antennas signal, until the optimum signal is found. Tighten the nut on the Fine Adjuster by hand.
 Re-torque fixings once adjustemnt is complete.

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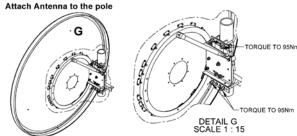
Installation Instructions

ANDREW Bulletin 102344

Tower Mount for 6ft (1.8m) Antennas



1. Lift the Antenna using the hoisting hole located on the backing ring



- Attach Mount to pole using U-Bolts, once in approximate position, fully tighten U-Bolts to recommeded torque.

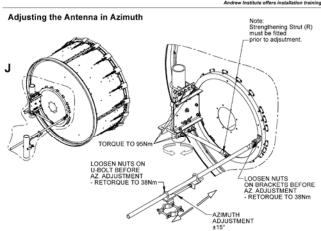
 Attach Strenthening Strut (R) to Mount using Fixings (N) tighten the bolts to the recommended torque.

Tower Mount for 6ft (1.8m) Antennas

Installation Instructions

Bulletin 102344

ANDREW

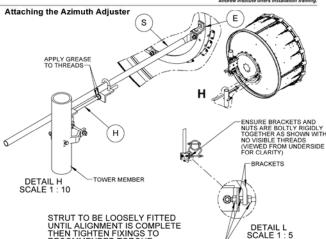


- Loosen the U-Bolts enough to allow for rotational movement around the pole, while remaining securley attached.
 Loosen the nuts on the Azimuth adjuster and adjust the antennas signal, until the optimum signal is found. Tighten the nut on the fine adjuster by hand.
 Retorque fixings once adjustemnt is complete.
 Repeat ELEVATION and AZIMUTH adjustments until optimum signal is found.

Installation Instructions

Bulletin 102344 Tower Mount for 6ft (1.8m) Antennas.

ANDREW

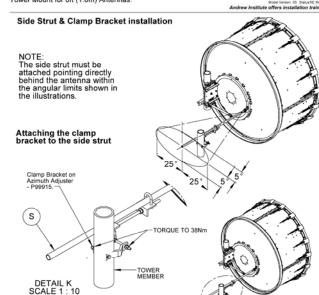


Assemble Brackets (E) together with Fixings (N), attach to Reflector Assembly, as shown with Fixings (N).
Attach Strut Pipe (S) to Bracket with Fixing (N)
Attach the Azimuth Adjuster (H) to the Strut Pipe (S).
Attach the Azimuth Adjuster (H) to Tower member using the Pipe Clamp Bracket fitted on Azimth Adjuster

Installation Instructions

ANDREW

Bulletin 102344 page 13 Tower Mount for 6ft (1.8m) Antennas.



Tighten M12 U-Bolt sufficiently to allow for movement whilst remaining securely attached

SCALE: NONE

MasTec Network Solutions 3350 E BIRCH ST, SUITE 101 BREA, CALIFORNIA 92821

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APPROVALS GAMALIEL AGUILAR 03/04/20 90% CDS DATE

GAMALIEL AGUILAR 04/10/20 100% CDS DATE GAMALIEL AGUILAR 04/10/20

100% CDS WITH STRUCTURALS DATE 03/23/20 ALLAN WALKER CONSTRUCTION DATE

SITE ACQUISITION

PROJECT NAME

MICROWAVE UPGRADE

BLACK FOREST/COU2037

10093683

7113 MARSHBERN COURT COLORADO SPRINGS, COLORADO 80908

DRAWING DATES

03/04/20 90% CD REVIEW (P1-B1) 100% FINAL CDS (P1-B2) 04/10/20 COUNTY COMMENTS (P1-B3)

SHEET TITLE

ANTENNA MOUNTING DETAILS

A-5.1

Microwave Path Data Sheet COMSEARCH

(703)726-5810 www.comsearch.com

19700 Janelia Farm Boulevard, Ashburn, VA, 20147

PCN Date: 04/08/2020

Job Number: 200408COMSKN01

Prev Job Num: 190830COMSKN01 RCN Number: 20040803

ELBERT SOUTH CO

Page 1 of 1

BLACK FOREST CO Administrative Information

Black Forest/El Paso Status / License Basis Engineering Proposal / PRIMARY OPERATION

Engineering Proposal / PRIMARY OPERATION

Call Sign Licensee Code

City/County

Licensee Name

P2705A New Cingular Wireless PCS LLC -Colo New Cingular Wireless PCS LLC -Colo

Radio Service / Station Class CF -- Point-to-Point Microwave, Common Carrier FXO -- Fixed

39 ° 10' 37.6" N

104 ° 31' 44.9" W

2132.69 / 6997.0

224.584

57373A

Commscope

TEET54

30M0D7W

WVCE61-L2-512F30S-208

1 CH DIG 208000.000

34.0

-35.7 67.0

Wavence MPT-HLC Fixed Modulation

512 QAM

Coordinated Maximum

Nokia

0.001

Nominal

0.0 / 5.8

USX6-6W

38.8 / 1.80 / 0.44

89.92 / 295.0

Site Information

Path Azimuth (°)

Manufacturer

Model

Transmit Antenna

Latitude (NAD 83) 39 ° 2' 46.5" N Longitude (NAD 83) 104 ° 41' 39.8" W Ground Elevation (m/ft-AMSL) 2321.97 / 7618.0 Antenna Structure Registration # 1024235

44.480

20.380 / 12.663

Path Length (km / miles)

57373A Commscope USX6-6W Gain(dBi) / Beamwidth(°) / Tilt(°) 38.8 / 1.80 / -0.58 82.91 / 272.0

Receive Antenna

Centerline (m / ft - AGL)

Same As Transmit

Manufacturer Model

Gain (dBi) / Beamwidth (°) Centerline (m / ft - AGL)

Diversity Receive Antenna

Manufacturer Model

Stability (%)

EIRP (dBm)

Gain (dBi) / Beamwidth (°) Centerline (m / ft - AGL)

Radio Information TEET54

Manufacturer Model WVCE61-L2-512F30S-208 Model Description Wavence MPT-HLC Fixed Modulation Emission Designator / Modulation 30M0D7W 512 QAM 1 CH DIG 208000.000 Loading

0.001

Nominal Coordinated Maximum Power (dBm) 34.0 Received Level (dBm)

-35.7 65.8

Fixed Loss: Tx / Common (dB) 0.0 / 7.0 Free Space Loss (dB)

134.5

Transmit Frequencies (MHz) 6004.5000V(13T) 6063.8000V(15T)

6256.5400V(23T)

6315.8400V(25T)

3350 E BIRCH ST, SUITE 101 BREA, CALIFORNIA 92821

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SHEET TITLE

PCN SHEET