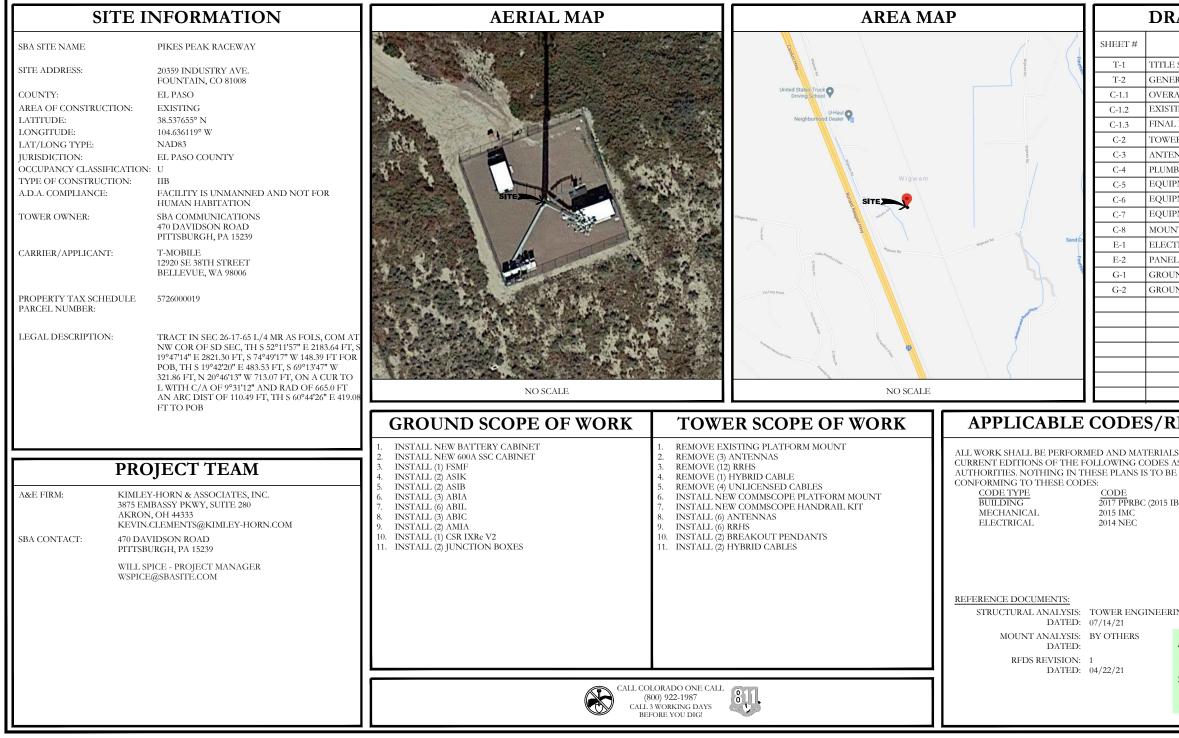
- Mobile -

T-MOBILE SITE NUMBER: DN06266A T-MOBILE SITE NAME: CO46077-A **T-MOBILE PROJECT:**

SPRINT RETAIN

SBA SITE ID: SITE ADDRESS: **JURISDICTION:** CO46077-A 20359 INDUSTRY AVE. FOUNTAIN, CO 81008 **EL PASO COUNTY**



| | T • • Mobile • • • 12920 SE 38TH STREET BELLEVUE, WA 98006 |
|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | 470 DAVIDSON ROAD PITTSBURGH, PA 15239 TEL: (740) 260-9710 |
| RAWING INDEX | PLANS PREPARED D1: |
| SHEET DESCRIPTION | |
| E SHEET | Kimley »Horn |
| E SHEE I ERAL NOTES | |
| RALL SITE PLAN | 421 FAYETTEVILLE ST, SUITE 600 |
| TING EQUIPMENT PLAN | RALEIGH, NC 27601 |
| L EQUIPMENT PLAN | |
| ER ELEVATION & ANTENNA PLANS | REV: DATE: BY: |
| IBING DIAGRAM | |
| PMENT SPECIFICATIONS | |
| PMENT SPECIFICATIONS | |
| PMENT SPECIFICATIONS | 2 08/30/21 REVISED PER COUNTY LMS |
| NTING DETAIL TRICAL ROUTING | 1 08/30/21 REVISED PER CLIENT DLF 0 07/28/21 ISSUED FOR CONSTRUCTION SGO |
| EL SCHEDULE & ONE-LINE DIAGRAM | A 07/22/21 ISSUED FOR REVIEW SGO |
| UNDING DIAGRAM | DRAWN BY: |
| UNDING DETAILS | SGO DLF |
| | KHCLE- 7486 |
| | ENGINEER SEAL: |
| REFERENCE DOCS | CONTRADO LICENSE |
| LS INSTALLED IN ACCORDANCE WITH THE AS ADOPTED BY THE LOCAL GOVERNING E CONSTRUED TO PERMIT WORK NOT 01/17/22 IBC) Exp. 10/31/23 | PROJECT INFORMATION: |
| RING SOLUTIONS (PROJECT #: 110631) | DN06266A CO46077-A SBA #: CO46077-A 20359 INDUSTRY AVE. FOUNTAIN, CO 81008 |
| Add PCD file # | SHEET TITLE: |
| PPR-21-074 to all sheets | |
| | T-1 |
| | T-1 |

GENERAL NOTES:

- OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE A. SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - AC/TELCO INTERFACE BOX(PPC)
 - ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - TOWERS, MONOPOLE TOWER LIGHTING
 - GENERATORS & LIQUID PROPANE TANK
 - ANTENNA STANDARD BRACKETS, FRAMES, AND PIPES FOR MOUNTING
 - ANTENNAS (INSTALLED BY OTHERS)
 - TRANSMISSION LINE
 - TRANSMISSION LINE JUMPERS TRANSMISSION LINE CONNECTORS WITH
 - WEATHERPROOFING KITS TRANSMISSION LINE GROUND KITS
 - HANGERS
 - HOISTING GRIPS
 - BTS EQUIPMENT 0
- 2. CONTRACTOR TO FURNISH AND INSTALL THE FOLLOWING

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS. TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS.

IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS

- T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATED, PROTECTED AND INSTALLED BY THE
- CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING UP.
- ALL EQUIPMENT FURNISHED AND WORK PERFORMED UNDER THE CONTRACT DOCUMENTS SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS OR WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE, UNLESS NOTED OTHERWISE, ANY FAILURE OF EQUIPMENT OR WORK DUE TO DEFECTS IN MATERIALS OR WORKMANSHIP SHALL BE CORRECTED BY THE CONTRACTOR AT NO COST TO THE OWNER
- ALL WORK, MATERIAL, AND EQUIPMENT SHALL COMPLY WITH ALL REQUIREMENTS 5. OF THE LATEST EDITIONS AND INTERIM AMENDMENTS OF THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL ELECTRICAL SAFETY CODE, OSHA, AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES. ALL ELECTRICAL EQUIPMENT PROVIDED UNDER THIS CONTRACT SHALL BE NEW (EXCEPT WHERE OTHERWISE NOTED) AND SHALL COMPLY WITH THE REQUIREMENTS OF THE UNDERWRITERS' LABORATORIES (U.L.) AND BEAR THE U.L. LABEL
- T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO THE OWNER OR HIS ARCHITECT/ENGINEER
- THE CONTRACTOR SHALL SUPPORT, BRACE AND SECURE EXISTING STRUCTURE AS REQUIRED, CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF ANY EXISTING STRUCTURES DURING CONSTRUCTION, FIELD VERIEY ALL EXISTING DIMENSIONS WHICH AFFECT THE NEW CONSTRUCTION.
- THE CONTRACTOR SHALL NOT ALLOW OR CAUSE ANY OF THE WORK TO BE COVERED UP OR ENCLOSED UNTIL IT HAS BEEN INSPECTED BY THE GOVERNING AUTHORITIES. ANY WORK THAT IS ENCLOSED OR COVERED UP BEFORE SUCH INSPECTION AND TEST SHALL BE UNCOVERED AT THE CONTRACTOR'S EXPENSE; AFTER IT HAS BEEN INSPECTED, THE CONTRACTOR SHALL RESTORE THE WORK TO ITS ORIGINAL CONDITION AT HIS OWN EXPENSE.
- ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT/ENGINEER AND OWNER (T-MOBILE) ASSUME NO RESPONSIBILITY WHATEVER AS TO THE PROFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL SAID UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING AFFECTED UTILITIES.

GENERAL NOTES (CONT'D):

- 10 CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION, ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHOULD BE IMMEDIATELY REPORTED TO THE PROJECT MANAGER FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS OWN RISK AND EXPENSE
- 11. CONTRACTORS SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO PAPERS, TRASH, DEBRIS, WEEDS, BRUSH, OR ANY OTHER DEPOSITS REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE PROPERLY DISPOSED OF OFF-SITE BY THE CONTRACTOR.
- 12. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY THE CONTRACTOR WITH LOCAL GAS, ELECTRIC, TELEPHONE, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.
- 13. DURING CONSTRUCTION, THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN THE UTILITIES OF THE BUILDING/SITE WITHOUT INTERRUPTION. SHOULD IT BE NECESSARY TO INTERRUPT ANY SERVICE OR UTILITY. THE CONTRACTOR SHALL SECURE PERMISSION IN WRITING FROM THE BUILDING/PROPERTY OWNER FOR SUCH INTERRUPTION, AT LEAST 72 HOURS IN ADVANCE. ANY INTERRUPTION SHALL BE MADE WITH A MINIMUM AMOUNT OF INCONVENIENCE TO THE BUILDING/PROPERTY OWNER AND ANY SUCH SHUTDOWN TIME SHALL BE COORDINATED WITH THE BUILDING/PROPERTY OWNER
- 14. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION
- 15. CONTRACTOR SHALL SUBMIT AT THE END OF THE PROJECT A COMPLETE SET OF AS BUILT DRAWINGS TO T-MOBILE'S PROJECT ENGINEER
- 16. GC WILL NOT START THE CONSTRUCTION UNTIL AFTER THEY RECEIVE THE PRE CON PACKAGE AND HAVE A PRE CON WALK WITH THE PROJECT MANAGER

DIVISION 2 - SITE WORK:

- THE CONTRACTOR SHALL CALL UTILITIES PRIOR TO THE START OF CONSTRUCTION. 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 THE PROJECT MANAGER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR LITILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT LIMITED TO:
 - FALL PROTECTION
 - B. CONFINED SPACE
 - ELECTRICAL SAFETY
 - TRENCHING AND EXCAVATION D.
- 2. REMOVE FROM SITE/OWNER'S PROPERTY ALL WASTE MATERIALS. UNUSED EXCAVATED MATERIAL INCLUDING MATERIAL CLASSIFIED UNSATISFACTORY CONTAMINATED OR DANGEROUS TRASH AND DEBRIS, AND DISPOSE OF IN A LEGAL MANNER
- 3. 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 ENGINEERING
- 4. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE BUILDING OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED, AND COVERED WITH MULCH
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION, EROSION CONTROL MEASURES, AS REQUIRED DURING CONSTRUCTION

CONTRACTOR IS RESPONSIBLE FOR LAYOUT AND CONSTRUCTION STAKING. CONTRACTOR SHALL ESTABLISH GRADE AND LINE STAKES PRIOR TO CONSTRUCTION.

KIMLEY-HORN DOES NOT GUARANTEE OR WARRANT THAT THE AFOREMENTIONED EASEMENTS ARE SUFFICIENT FOR CONSTRUCTION TRAFFIC. GC SHALL CONSULT WITH A T-MOBILE REPRESENTATIVE AND LANDLORD WITH EXACT LOGISTICS TO FACILITATE CONTRACTIBILITY OF THE SITE AND DELIVERY OF CRITICAL MATERIALS SUCH AS THE TOWER, STEEL, CONCRETE AND CRANES TO THE PROPOSED LEASE AREA. GC SHALL RESTORE SITE TO ORIGINAL CONDITIONS AND REPLACE ANY AND ALL DISTURBED TREES OR LANDSCAPING

KIMLEY-HORN IS NOT RESPONSIBLE FOR THE MAINTENANCE AND/OR OPERATIONAL FEASIBILITY.

SCOPE OF WORK FOR THESE PLANS DOES NOT INVOLVE VALUE ENGINEERING AS WELL AS MAINTAINABILITY OPERATIONS OF THE SITE, ACCESS OR UTILITIES.

DIVISION 3 - CONCRETE:

- 1. MINIMUM ALLOWABLE CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH THE AMERICAN SOCIETY FOR TESTING AND MATERIALS METHODS STANDARDS ASTM C172, ASTM C31 AND ASTM C39 UNLESS OTHERWISE NOTED.
- 2 CONCRETE FOR ALL FOUNDATIONS: 540 LBS PER CUBIC YARD OF CONCRETE MINIMUM CEMENT CONTENT FOR 1-INCH MAXIMUM SIZE AGGREGATE, SLUMP RANGE 3 INCHES TO 5 INCHES, TOTAL AIR CONTENT 4 PERCENT TO 7 PERCENT BY VOLUME, AIR ENTRAINING ADMIXTURE REQUIRED TO CONTROL TOTAL AIR CONTENT, WATER REDUCING ADMIXTURE PERMITTED TO OBTAIN SLUMP OVER 3-INCHES.
- 3. ALL CONCRETE CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI 318) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND (ACI 301) STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE
- 4. REBARS SHALL BE ASTM A-615 DEFORMED TYPE WITH MINIMUM YIELD STRENGTH OF 60.000 PSI (40.000 PSI GRADE MAY BE USED FOR TIES & STIRRUPS).
 - WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
- 5 DETAILING SHALL BE IN ACCORDANCE WITH MANUAL OF STANDARD PRACTICE OF DETAILING REINFORCED CONCRETE STRUCTURES (ACI STD-315 LATEST EDITION).
- 6. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4".UNLESS OTHERWISE NOTED.
- 7. REINFORCING STEEL SHALL BE ACCURATELY PLACED AND ADEQUATELY SECURED IN POSITION. LOCATION OF REINFORCEMENT SHALL BE INDICATED ON THE DRAWINGS, THE FOLLOWING MINIMUM COVER (INCHES) FOR REINFORCEMENT SHALL BE PROVIDED, EXCEPT AS NOTED ON DRAWINGS.
 - MINIMUM COVER (INCHES) EXPOSED TO EARTH OR WEATHER: #6 THROUGH #18 ... 2" #5 BAR AND SMALLER ... 1-1/2"

8. TESTS

CONCRETE MATERIALS AND OPERATIONS SHALL BE TESTED AND INSPECTED BY THE ENGINEER AS THE WORK PROGRESSES. FAILURE TO DETECT ANY DEFECTIVE WORK OR MATERIAL SHALL NOT IN ANY WAY PREVENT LATER REJECTION WHEN SUCH DEFECT IS DISCOVERED NOR SHALL IT OBLIGATE THE ENGINEER FOR FINAL ACCEPTANCE

- A, FIVE CONCRETE TEST CYLINDERS SHALL BE TAKEN OF THE TOWER PIER FOUNDATION TWO SHALL BE TESTED @ THREE DAYS, TWO @ TWENTY-EIGHT DAYS. THE FIFTH CYLINDER SHALL BE KEPT SEPARATELY, IF REQUIRED TO BE USED IN THE FUTURE
- B. ONE ADDITIONAL TEST CYLINDER SHALL BE TAKEN DURING COLD WEATHER AND CURED ON SITE UNDER SAME CONDITIONS AS CONCRETE IT REPRESENTS.
- C. ONE SLUMP TEST SHALL BE TAKEN FOR EACH SET OF TEST CYLINDERS TAKEN.

9. PLACING CONCRETE

A. THE ENGINEER SHALL BE NOTIFIED NOT LESS THAT 24 HOURS IN ADVANCE OF CONCRETE PLACEMENT, UNLESS INSPECTION IS WAIVED IN EACH CASE, PLACING OF CONCRETE SHALL BE PERFORMED ONLY IN THE PRESENCE OF THE ENGINEER. CONCRETE SHALL NOT BE PLACED UNTIL ALL FORMWORK, EMBEDDED PARTS, STEEL REINFORCEMENT, FOUNDATION SURFACES AND JOINTS INVOLVED IN THE PLACING HAVE BEEN APPROVED, AND UNTIL FACILITIES ACCEPTABLE TO THE T-MOBILE REPRESENTATIVE HAVE BEEN PROVIDED AND MADE READY FOR ACCOMPLISHMENT OF THE WORK AS SPECIFIED, CONCRETE MAY NOT BE ORDERED FOR PLACEMENT LINTIL ALL ITEMS HAVE BEEN APPROVED AND T-MOBILE HAS PERFORMED A FINAL INSPECTION AND GIVEN APPROVAL TO START PLACEMENT IN WRITIN

B. PLACEMENT OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 301.

10. PROTECTION

- A. IMMEDIATELY AFTER PLACEMENT. THE CONTRACTOR SHALL PROTECT THE CONCRETE FROM PREMATURE DRYING EXCESSIVELY HOT OR COLD TEMPERATURES AND MECHANICAL INJURY, FINISHED WORK SHALL BE PROTECTED.
- B. CONCRETE SHALL BE MAINTAINED WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR A PERIOD NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
- C. ALL CONCRETE SHALL BE WATER CURED BY CONTINUOUS (NOT PERIODIC) FINE MIST SPRAYING OR SPRINKLING ALL EXPOSED SURFACES. WATER SHALL BE CLEAN AND FREE FROM ACID, ALKALI, SALTS, OIL SEDIMENT, AND ORGANIC MATTER. SUCCESSFUL CURING SHALL BE OBTAINED BY USE OF AN AMPLE WATER SUPPLY UNDER PRESSURE IN PIPES, WITH ALL NECESSARY APPLIANCES OF SPRINKLERS, AND SPRAYING DEVICES

ELECTRICAL NOTES:

1. ELECTRICAL DESIGN SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. STRUCTURAL DESIGN SHALL BE PERFORMED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL

2. ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL OF KIMLEY-HORN. IT IS THE RESPONSIBILITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF KIMLEY-HORN. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

3. CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUND LINES AND UTILITY LINES PRIOR TO CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUND LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION

DIVISION 5 - STRUCTURAL STEEL:

- DETAIL, FABRICATE AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH THE LATEST AISC MANUAL OF STEEL CONSTRUCTION (ASD) AWS D1.1 AND THE BASIC BUILDING CODE. STRUCTURAL STEEL SHALL BE AS FOLLOWS: A. ASTM A36. GRADE 36: ROLLED STEEL, RODS, PLATES.
- U-BOLTS AND ANCHOR BOLTS. B. ASTM A325 BOLTS, BEARING TYPE
- C. ALL STEEL SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123. 2. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE
- REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE 3. ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE
 - ENGINEER, AND T- MOBILE PROJECT MANAGER IN WRIT
- 4. TIGHTEN HIGH STRENGTH BOLTS TO A SNUG TIGHT CONDITION WHERE ALL PLIES IN A JOINT ARE IN FIRM CONTACT BY EITHER
- A. A FEW IMPACTS OF A IMPACT WRENCH B. THE FULL EFFORT OF A PERSON USING A SPUD WRENCH.
- 5. WELDING A. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS. CERTIFICATION DOCUMENTS SHALL BE MADE AVAILABLE FOR ENGINEER'S AND/OR OWNER'S REVIEW IF REQUESTED
- B. WELDING ELECTRODES FOR MANUAL SHIELDED METAL ARC WELDING SHALL CONFORM TO ASTM A-233, E70 SERIES, BARE ELECTRODES AND GRANULAR FLUX USED IN THE SUBMERGED ARC PROCESS SHALL CONFORM TO AISC SPECIFICATIONS.
- C. FIELD WELDING SHALL BE DONE AS PER AWSD1.1 REQUIREMENTS VISUAL INSPECTION IS ACCEPTABLE.

A. UPON COMPLETION OF ERECTION INSPECT ALL GALVANIZED STEEL AND PAINT ANY FIELD CUTS. WELDS, OR GALVANIZED BREAKS WITH ZINC BASED PAINT, COLOR TO MATCH THE GALVANIZING PROCESS.

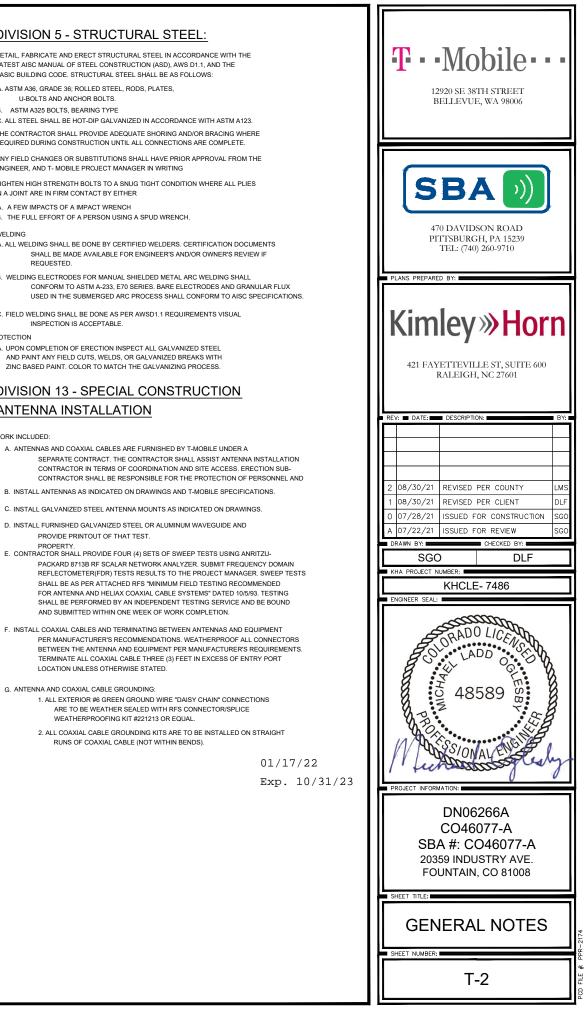
DIVISION 13 - SPECIAL CONSTRUCTION ANTENNA INSTALLATION

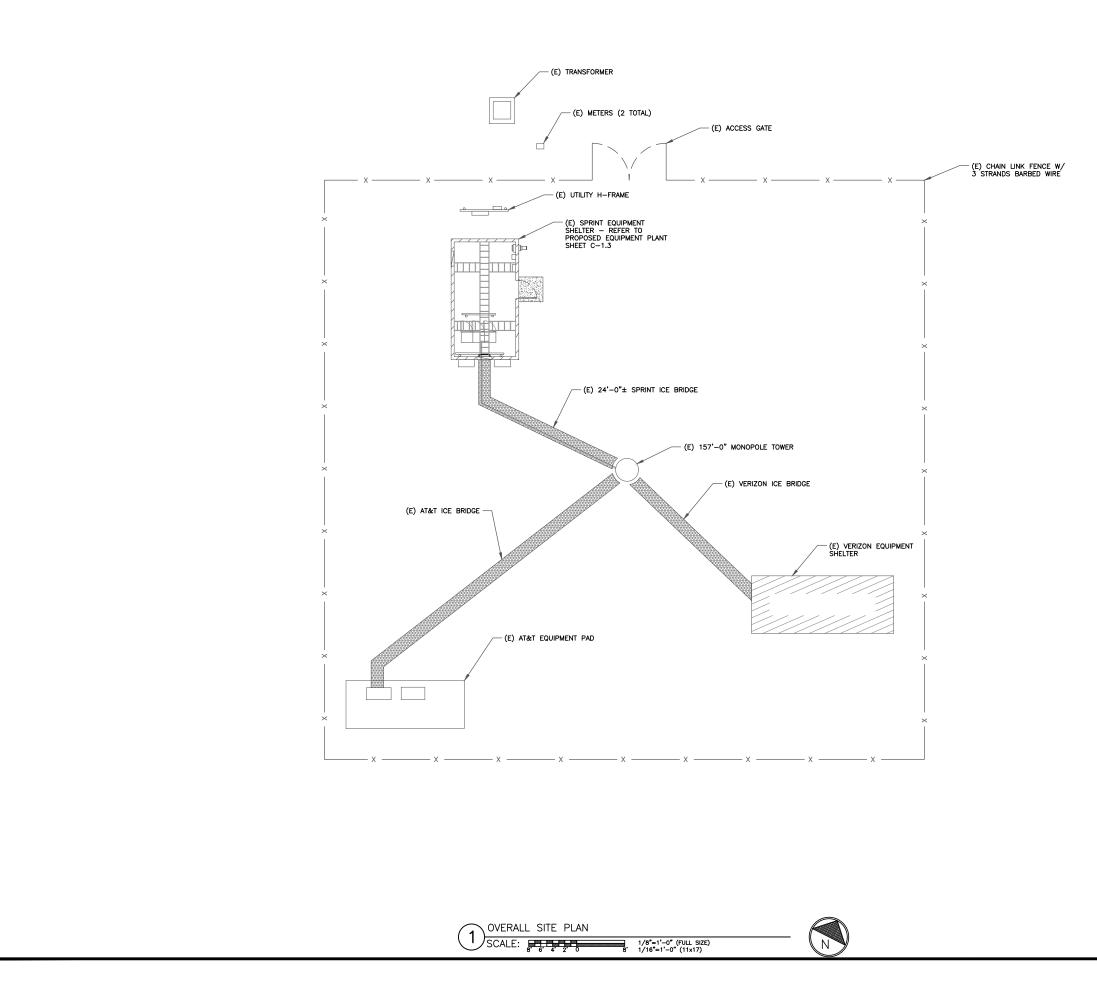
1. WORK INCLUDED:

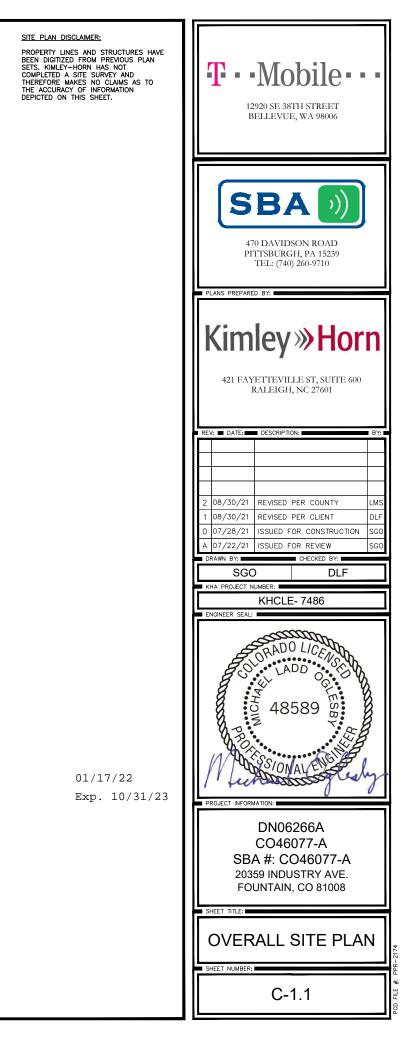
- A. ANTENNAS AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUB-

D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.

- PROPERTY E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RE SCALAR NETWORK ANALYZER, SUBMIT FREQUENCY DOMAIN SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION
- F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
- G. ANTENNA AND COAXIAL CABLE GROUNDING: 1. ALL EXTERIOR #6 GREEN GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RES CONNECTOR/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL
 - 2. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)







11'-6" ± - (E) SPRINT EQUIPMENT SHELTER - (E) CEILING RACK (TYP.) - (E) SPRINT MTS TO REMAIN - (E) SPRINT GENERATOR PLUG TO REMAIN - (E) SPRINT SPD TO REMAIN - (E) SPRINT AC PANEL TO REMAIN 44 4 . 4 (E) SPRINT H-FRAME (TYP.) -- (E) ACCESS DOOR \bigcirc \bigcirc (E) SPRINT Equipment Rack To remain (E) SPRINT MMBS RACK TO REMAIN (E) SPRINT BBU RACK TO REMAIN HVAC HVAC (E) SPRINT FEEDLINES TO REMAIN (3) HYBRID CABLES (1.76") (2) CAT5e CABLES (3/16") - (E) 24'-0"± SPRINT ICE BRIDGE (E) SPRINT FEEDLINES TO BE REMOVED

 (1) HYBRID CABLE (1.76")
 (4) UNLICENSED CABLES (1.25")

EXISTING EQUIPMENT PLAN

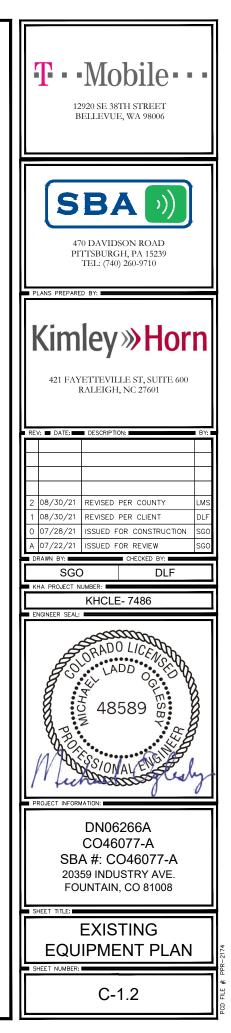
3/4"=1'-0" (FULL SIZE) 1' 3/8"=1'-0" (11x17)

、N [™]

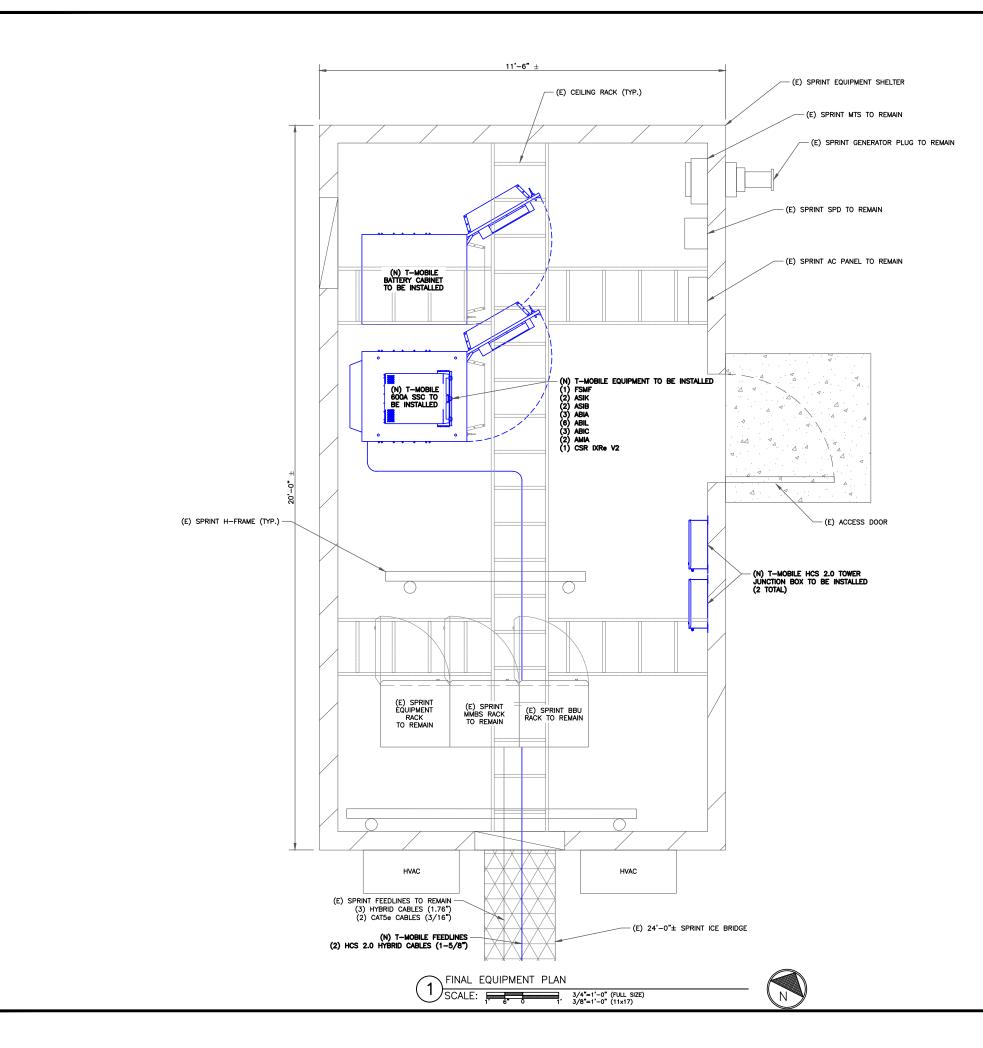
(1) SCALE: 1 6

INSTALLER NOTE:

- 1. AMIAS ARE TO BE INSTALLED INTERNALLY IN THE 600A SSC CABINET. IF NO 600A SSC CABINET IS ON SITE, AMIAS ARE TO BE SUBSTITUTED WITH AMOBS. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING APPROPRIATE LOCATION WITHIN T-MOBILE LEASE AREA FOR AMOB MOUNTING AND PROVIDE TO CONSTRUCTION MANAGER. AMOB LOCATIONS MUST BE APPROVED BY CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- 2. ALL IN SHELTER EQUIPMENT LOCATIONS WERE ASSUMED. IN THE EVENT OF FIT/SPACING ISSUES CONTRACTOR SHALL CONTACT OWNER AND ENGINEER.

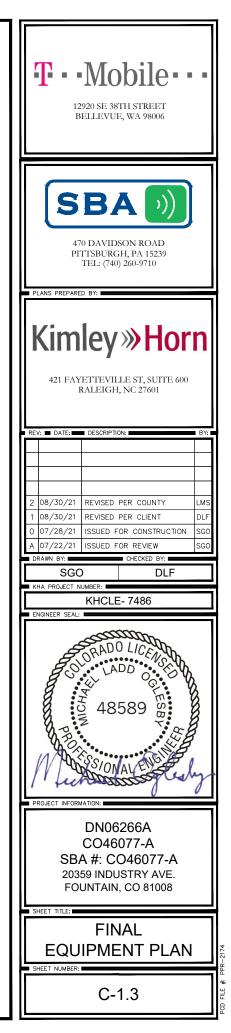


01/17/22 Exp. 10/31/23

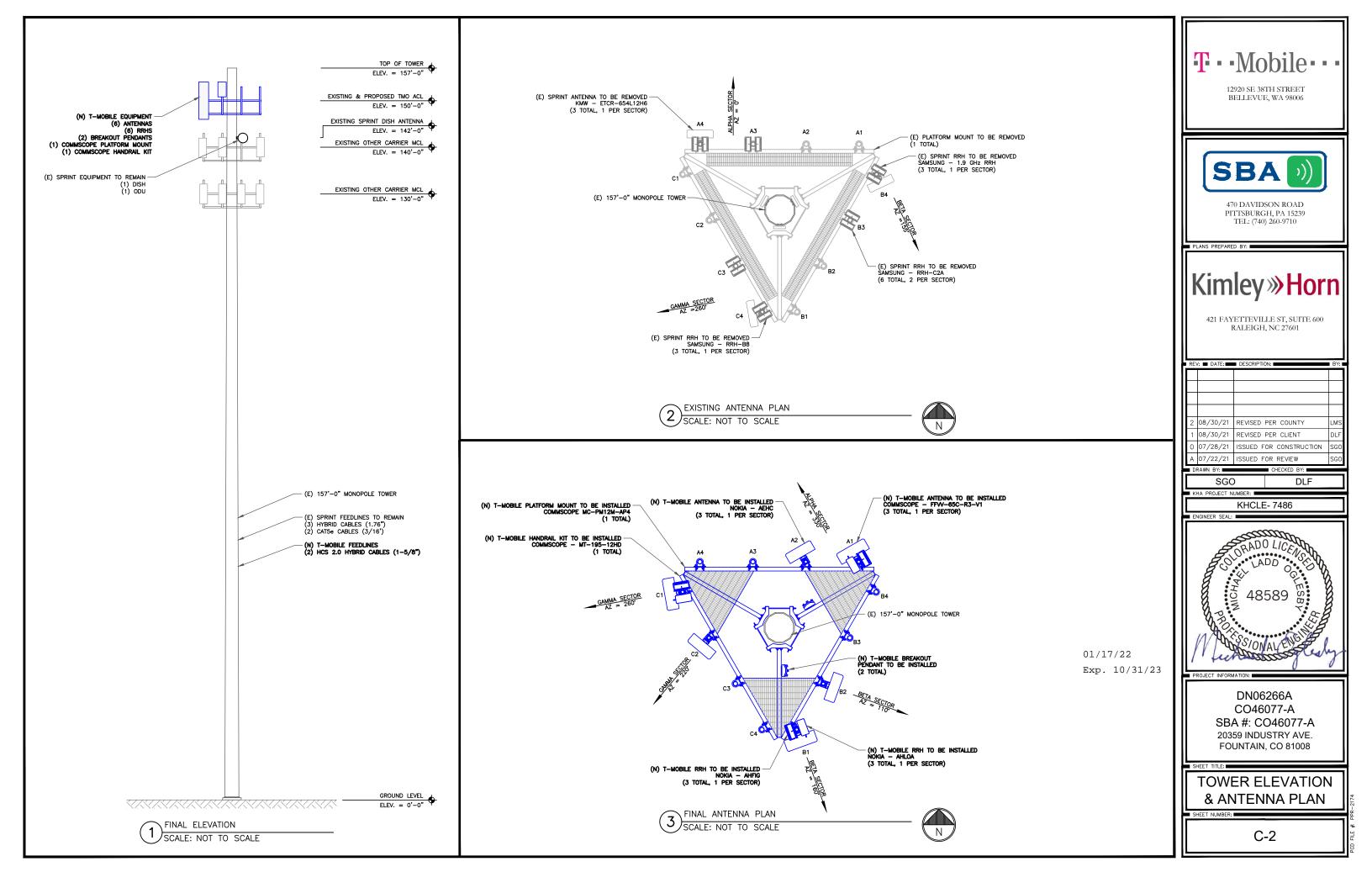


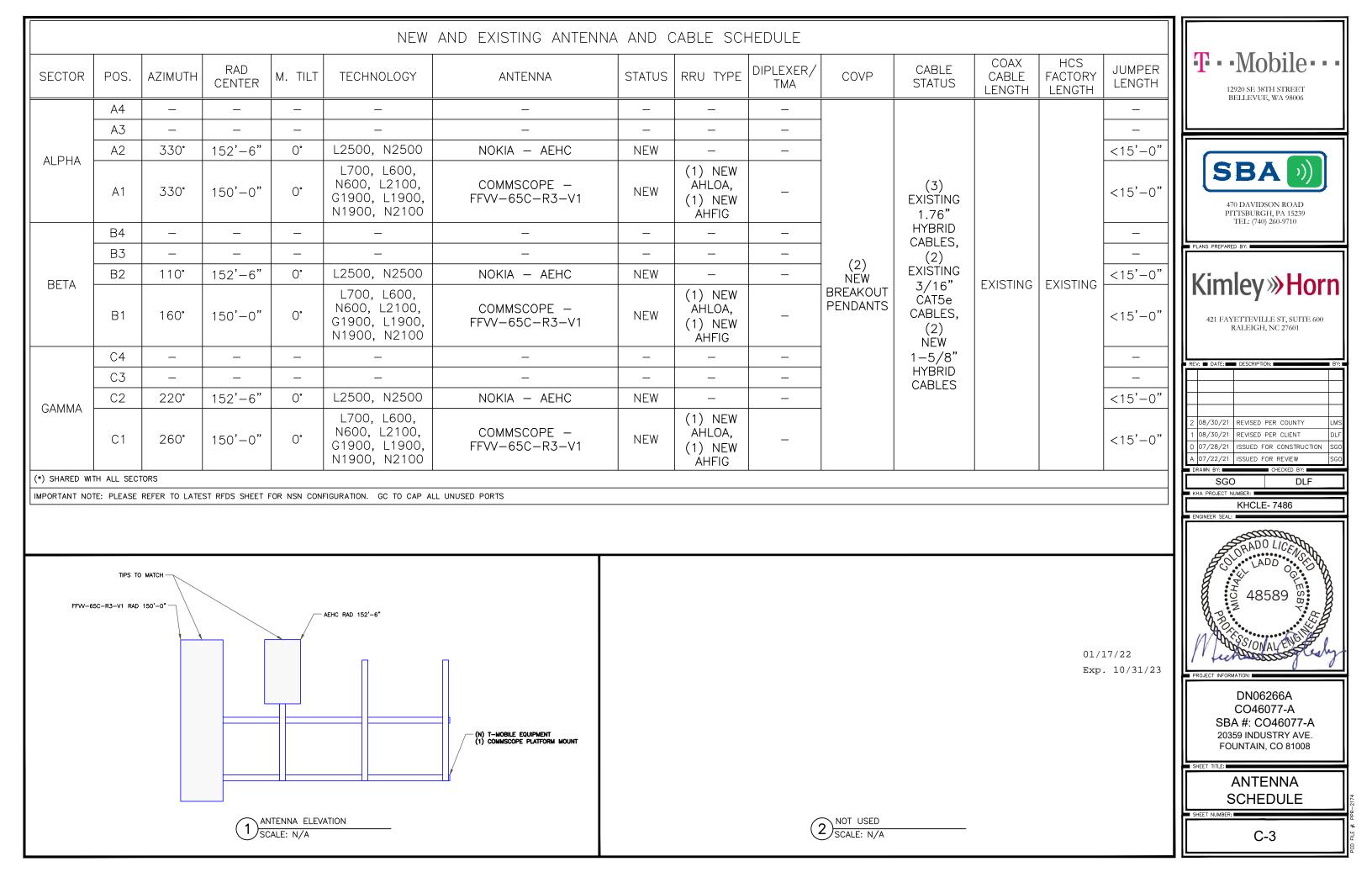
INSTALLER NOTE:

- 1. AMIAS ARE TO BE INSTALLED INTERNALLY IN THE 600A SSC CABINET. IF NO 600A SSC CABINET IS ON SITE, AMIAS ARE TO BE SUBSTITUTED WITH AMOBS. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING APPROPRIATE LOCATION WITHIN T-MOBILE LEASE AREA FOR AMOB MOUNTING AND PROVIDE TO CONSTRUCTION MANAGER. AMOB LOCATIONS MUST BE APPROVED BY CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- 2. ALL IN SHELTER EQUIPMENT LOCATIONS WERE ASSUMED. IN THE EVENT OF FIT/SPACING ISSUES CONTRACTOR SHALL CONTACT OWNER AND ENGINEER.



01/17/22 Exp. 10/31/23



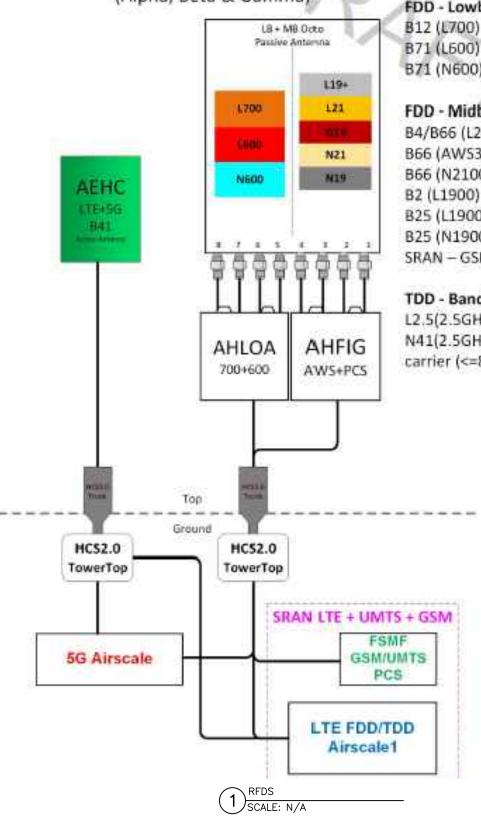


56791EZ_SR_N21_N19.jpg

Configuration 56791EZ_SR

* For 5G and LTE Airscale BB dimensioning refer to Fiber Port matrices.

(Alpha, Beta & Gamma)



FDD - Lowband

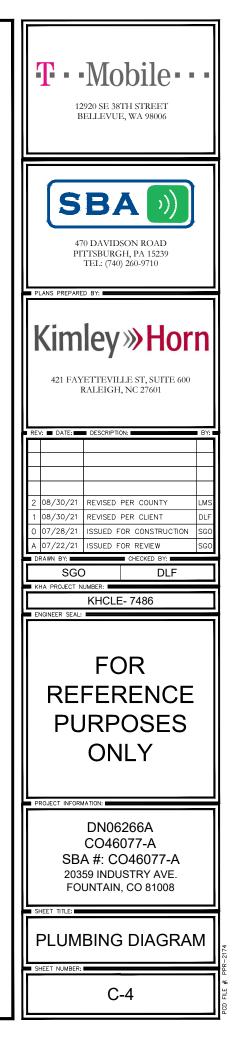
B12 (L700) - 5 MHz B71 (L600) - 10 MHz B71 (N600) - 15 MHz

FDD - Midband

B4/B66 (L2100) - 20 MHz B66 (AWS3) - 5MHz B66 (N2100) - 20MHz B2 (L1900) - 20 MHz B25 (L1900) - 20 MHz B25 (N1900) - 20MHz SRAN - GSM/UMTS PCS

TDD - Band 41

L2.5(2.5GHz)- 60 MHz N41(2.5GHz) - 100MHz +2nd carrier (<=80MHz)



| 8-port sector a 3x RET | ntenna, 4x 617-894 and 4x 1695–2690 MHz, 65° HPB\ |
|-----------------------------------------------|-------------------------------------------------------------------------------------|
| | |
| General Specifications | |
| Antenna Type | Sector |
| Band | Multiband |
| Color | Light gray |
| Grounding Type | RF connector inner conductor and body grounded to reflector and mounting bracket |
| Performance Note | Outdoor usage |
| Radome Material | Fiberglass, UV resistant |
| Radiator Material | Low loss circuit board |
| Reflector Material | Aluminum |
| RF Connector Interface | 4.3-10 Female |
| RF Connector Location | Bottom |
| RF Connector Quantity, high band | 4 |
| RF Connector Quantity, low band | 4 |
| RF Connector Quantity, total | 8 |
| Remote Electrical Tilt (RET) Informa | ition |
| RET Interface | 8-pin DIN Female 8-pin DIN Male |
| RET Interface, quantity | 1 female 1 male |
| Input Voltage | 10-30 Vde |
| Internal RET | High band (2) Low band (1) |
| Power Consumption, idle state, maximum | 1W |
| Power Consumption, normal conditions, maximum | 16 W |
| Protocol | 3GPP/AISG 2.0 (Single RET) |
| Dimensions | |
| Width | 640 mm 25.197 in |
| Depth | 235 mm 9.252 in |
| Length | 2437 mm 95.945 in |
| Net Weight, without mounting kilt | 56.5 kg 124.561 lb |
| | SPECIFICATIONS |
| (1) | DT TO SCALE |

FFVV-65C-R3-V1

AEHC AirScale MAA 64T64R 192AE n41 240W

Preliminary Technical datasheet

| Specification | 3GPP/FCC compliant, TDD | | | | |
|---------------------------------|------------------------------------------------------------------------------------------------|--|--|--|--|
| Frequency range | 2496 - 2690 MHz | | | | |
| Max. supported modulation | 256 QAM | | | | |
| Number of TX/RX paths | 647 / 64R | | | | |
| MIMO streams | 16 | | | | |
| Instantaneous bandwidth IBW | 194 MHz | | | | |
| Occupied bandwidth OBW | 194 MHz | | | | |
| Total average EIRP | 79.3 dBm | | | | |
| Max. output power per TRX | 3.75 W / TRX (240 W total) | | | | |
| Antenna configuration | 12 rows, 8 columns, 2 (±45* X-polarized) | | | | |
| Max. Antenna gain | 25.5dBi | | | | |
| Horizontal beamwidth | 15* (boresight) | | | | |
| Vertical beamwidth | 6* (boresight) | | | | |
| Horizontal coverage angle | ±45* (3 dB), ±60* (5 dB) | | | | |
| Vertical steering angle | ±6* | | | | |
| Dimensions | TBD-900 mm (H) x 580 mm (W) x 210 mm (D) | | | | |
| Volume /Windward area | TBD:<110 L /<0.6m2 | | | | |
| Weight | <45kg (without mounting brackets) | | | | |
| Supply voltage / Connector type | DC -40.5 V57 V / 2 pole connector | | | | |
| Power consumption | 900 W typical (75% DL duty cycle, 30% RF load) 1300 W max (75% DL duty cycle, 100% RF load) | | | | |

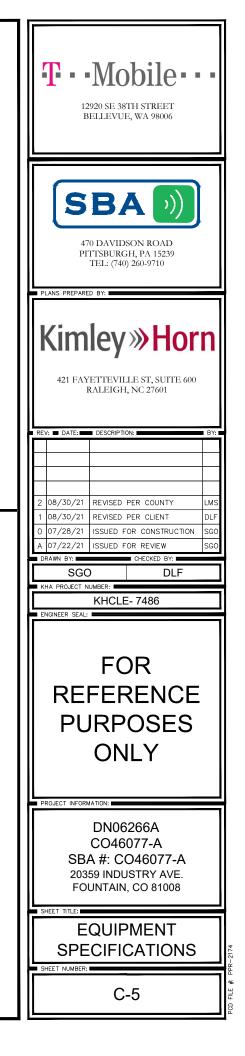


| Optical ports | 4 x SFP28, 10/25GE e CPRI (with R2CT) | | | | | |
|-----------------------------------|---------------------------------------------------------------------------------------|--|--|--|--|--|
| Other interfaces / Connector type | Control AISG RF monitor port / SMA Female External Alarms / MDR26 status LED | | | | | |
| Operational temperature range | -40 °C +55 °C | | | | | |
| Cooling | Natural convection cooling | | | | | |
| Ingress protection class | IP65 | | | | | |
| Installation options | Fole / Wall, ± 5° vertical adjustment | | | | | |
| Surge protection | Class II 20 kA | | | | | |

Confidential © Nokia 2018

NOKIA

ANTENNA SPECIFICATIONS SCALE: NOT TO SCALE



AirScale Dual RRH 4T4R B12/71 240W AHLOA

AHLOA AirScale Dual RRH 4T4R B12/71 240W

1 @ Nokia 2017 Confidential

| roduct Code: 474331A | |
|-----------------------------|-------------------------------------------------------------------------------------------------------------|
| Supported Frequency bands | 3GPP Band 12/71 |
| Frequencies | Band 12 adjusted: UL 698 - 716 MHz, DL 728 - 746 MHz Band 71: UL 663 MHz - 698 MHz, DL 617 MHz - 652 MHz |
| Number of TX/RX paths/pipes | 4 pipes, 2T2R, 2T4R, 4T4R for both bands |
| Instantaneous Bandwidth IBW | 17 MHz for B12 and 35MHz for B71 1 MHz below B12 NB IoT future use |
| Occupied Bandwidth OBW | UL 53MHz contiguous DL 812 17MHz + 1 MHz NB IoT future use: 871 35MHz |
| Output Power | 60W per TX shared between bands |
| Supply Voltage / Range | DC-48 V / -36 V to -60 V |
| Typical Power Consumption | 640W [ETSI Busy Hour Load at 4TX@60W |
| | 450W [ETSI Busy Hour Load at 4TX@20W |
| Antenna Ports | 4 ports, 4.3-10+ |
| Optical Ports | 2 x CPRI 9.8 Gbps |
| ALD Control Interfaces | AI5G3.0 and RET IDC on ANT1 & ANT3) |
| Other Interfaces | External Alarm MDR-26 (4 inputs, 1 Output) DC Circular Power Connector |
| Physical | 560 mm x 308 mm x 189 mm Approximately 38kg with no covers or brackets |
| Operating Temperature Range | -40°C to 55°C (with no solar load) |
| Surge Protection | Class II 5A |
| Installation Options | Pole, Wall, Book Mount |

1)NOKIA – AHLOA SCALE: NOT TO SCALE

AirScale System Module Installation Guidelines - AMIA

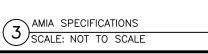
AMIA is primary for indoor sites (environmentally controlled) or site support cabinets

- For a 19" rack installation 3U of space is needed (adapters/support required for 23" rack)
- For Medium/Large HP/ Large Delta SSC Fan/filter kit required (SKU# 32168) to support medium config
- For Medium Purcell SSC Nothing required to support minimal config (single LTE layer)
- For Medium Purcell SSC Door upgrade kit required (SKU# 33401) to support full config

| Item Description | 3U space* | 4U Space |
|------------------------------------------|-----------|----------|
| 19 to 23 inch adaptor bracket, 3U w/slot | x | |
| 19 to 23 inch adaptor bracket; 4U w/slot | | x |
| ASSY, SHELF | | x |



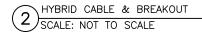
T.Mobile.

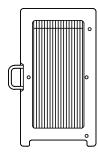


Trunk Cable General Specifications 1.48" 1.46" 1.55" Outer Diam. Weight 1.61 lb/ft 1.71 lb/ft 1.61 lb/ft 14.6" 18.6" 21.5" 12 x 6AWG 12 x 6AWG 12 x 6AWG Conductors Corrugated Cu tape, PVC Armor Corrugated Conductor None Non None Single-Mode LC pair Fiher LC pair LC pair

Breakout Feature General Specifications

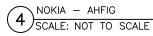
| Characteristics | Alliance | CommScope | NWS |
|--------------------------|-------------------|--------------|---------------|
| Dimensions, in. | 9.3x14.9x5.8 | 6.7x16.9x4.7 | 10.2x16.0x3.2 |
| Weight | 1.61 <u>lb/ft</u> | 0.970 lb/ft | 1.61 lb/ft |
| Port Interface | Senko U | Senko U | Senko U |
| Hybrid Ports | 12 | 12 | 12 |
| Conductor Termination | None | None | None |
| Single Mode Fibers | 48 | 48 | 48 |
| Fiber Termination | LC pair | LC pair | LC pair |
| Max BBU | 12 | 12 | 12 |

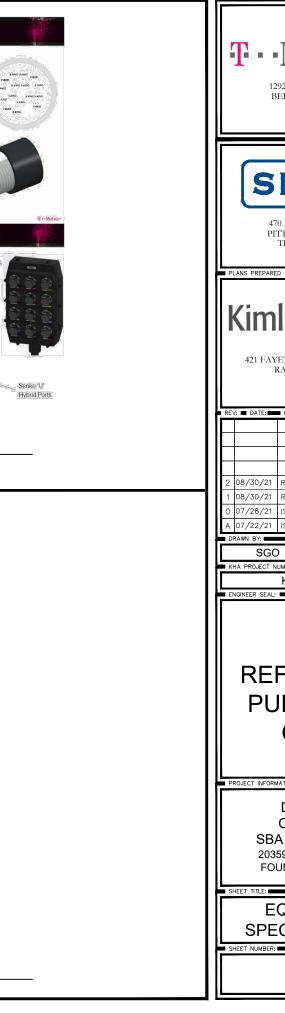


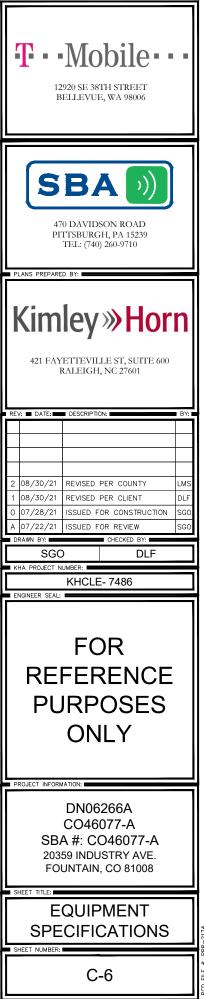




NOKIA – AHFIG WEIGHT (FULLY EQUIPPED): 79.4 LBS SIZE (HxWxD): 27.6x13.4x5.6 IN. CONNECTOR TYPE: 4.3-1 FEMALE







Cell Site Solutions Ordering Guide for T-Mobile Issue 1.1



Cell Site Solutions Ordering Guide for T-Mobile Issue 1.1

Outdoor Power & Battery Enclosures for AAV Equipment

The following products are described in this section. Please refer to Shelf power section for rectifiers, controllers and circuit breakers.

Products: Small SSC, LP Small SSC, Medium SSC, Large SSC, HP Large SSC, Battery Enclosure

Advantage 1kW, Advantage 2kW & Advantage 6U







| Basic Overview | | | | | | | | | | |
|--------------------------|--------------|-----------|------------------------|-----------|-----------------|--|--|--|--|--|
| Pad Mount Power Cabinets | | | | | | | | | | |
| Parameter | LP Small SSC | Small SSC | Medium SSC | Large SSC | HP Large SSC | | | | | |
| Max Output (@-54V) | 150 | 200 | 200 | 200 | 400 | | | | | |
| Height | 37" | 37" | 54" | 72" | 72" | | | | | |
| Width | 26" | 26" | 30" | 30" | 30" | | | | | |
| Depth | 27" | 27" | 35" | 35" | 35" | | | | | |
| Weight (w/ Rectifiers) | 196 | 198 | 320 | 419 | 470 | | | | | |
| Open Rack Space | 7RU | 6RU | 10RU | 10RU | 12RU | | | | | |
| Max Eqmt Depth | 15" | 15" | 20" | 20" | 20 ^o | | | | | |
| No. Battery Strings | 1 x 100Ah | 1 x 100Ah | 1 x 100Ah 1 x 185Ah | 3 x 185Ah | 2 x 185Ah | | | | | |
| Load Circuit Positions | 17 | 17 | 17 | 17 | 52 | | | | | |



HP Large Site Support Cabinet

HP Large SSC

- Construction
- Gore filter upgrade Compact design for power,
- battery, and equipment = 72"H x 30"W x 36"D
- 400A/48V Power System
- Supports 2 Battery strings of 185 Ahr each
- = 12RU/19" or 23" rack for Equipment

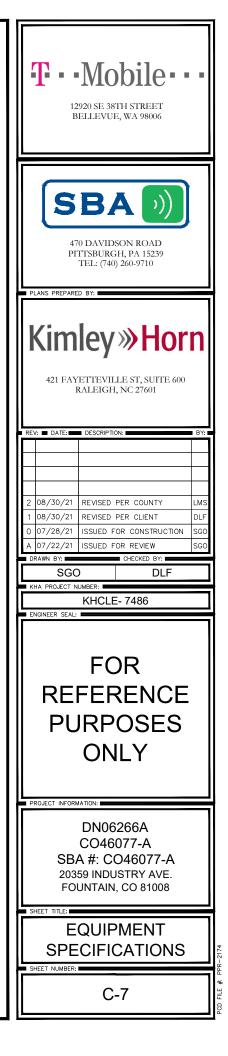
| T-Mobile SAP Number | Delta Part Number | Product Description |
|---------------------|-------------------|--------------------------------------------------|
| 33112 | ESOA400-CCU01 | HP Large SS Cabinet w/ (3) 2900W rectifiers |
| 33113 | 3799442800-S | Optional Mounting Plinth, 6" |
| 30068 | ESR-48/40C F-A | DPR2000 Rectifier Module, -48V, 2000W, 96% e |
| 31910 | ESR-48/56C F-A | DPR2900 Rectifier Module, -48V, 2900W, 96% e |
| See Page 27 | See Page 27 | Load Circuit Breakers, DIN rail type |
| 14502 | 0999142300 | -48V String (4 batteries) of PYL12V185FT with in |
| 32186 | 3799252800-S | Gore filter upgrade kit w/ fan |
| | CU-19C A13 | CSU502 Controller (FRU) |

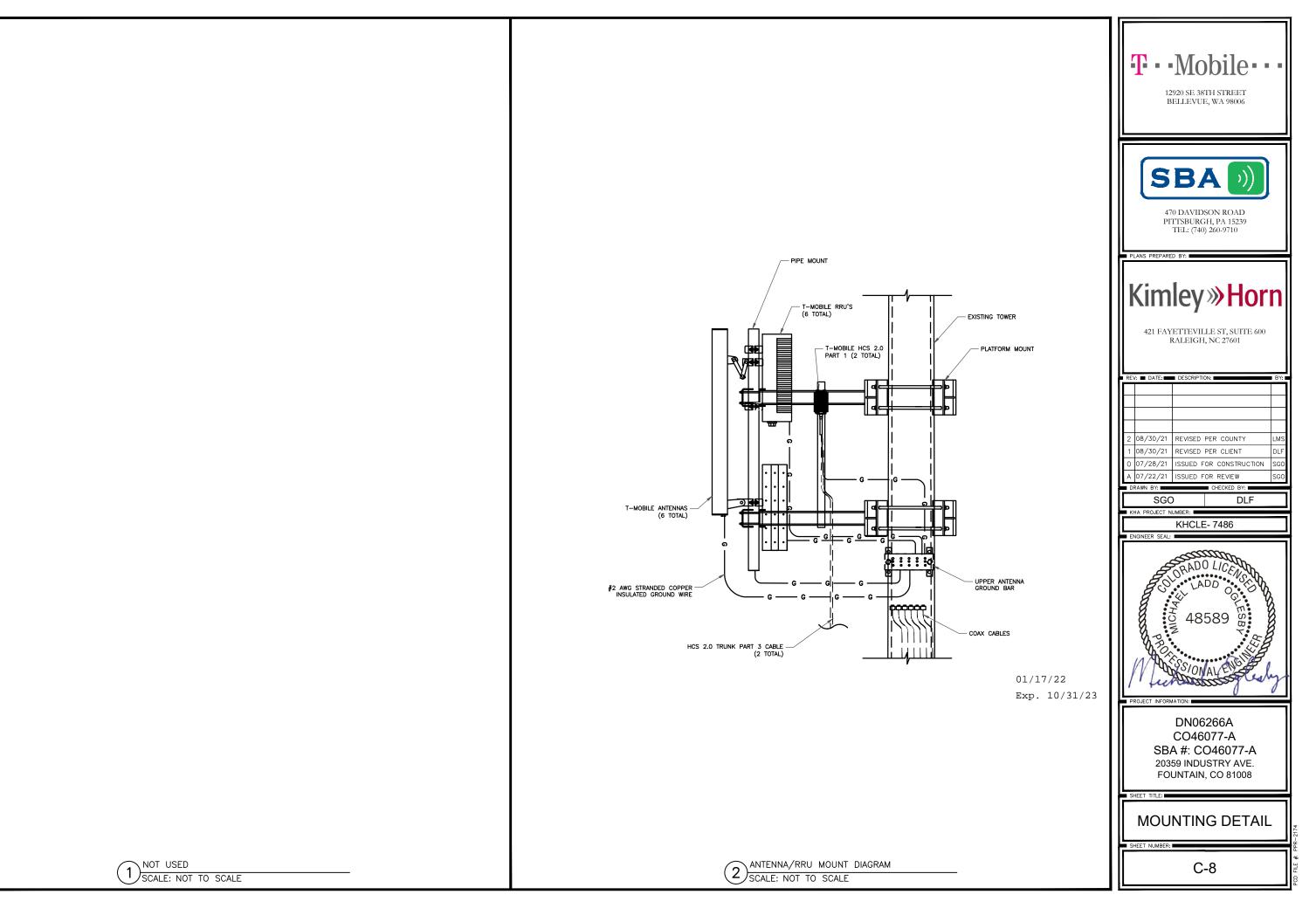
HP Large SS SAP number includes: enclosure with thermal management (fans & heaters), AC load center 10.5RU power system with CSU502 controller, power system equipped with (1) 200A 4-pole breaker f pole breaker for load, (3) 10A 1-pole breakers for load, (2) thermal probes for battery strings. In addition 50A rectifiers.

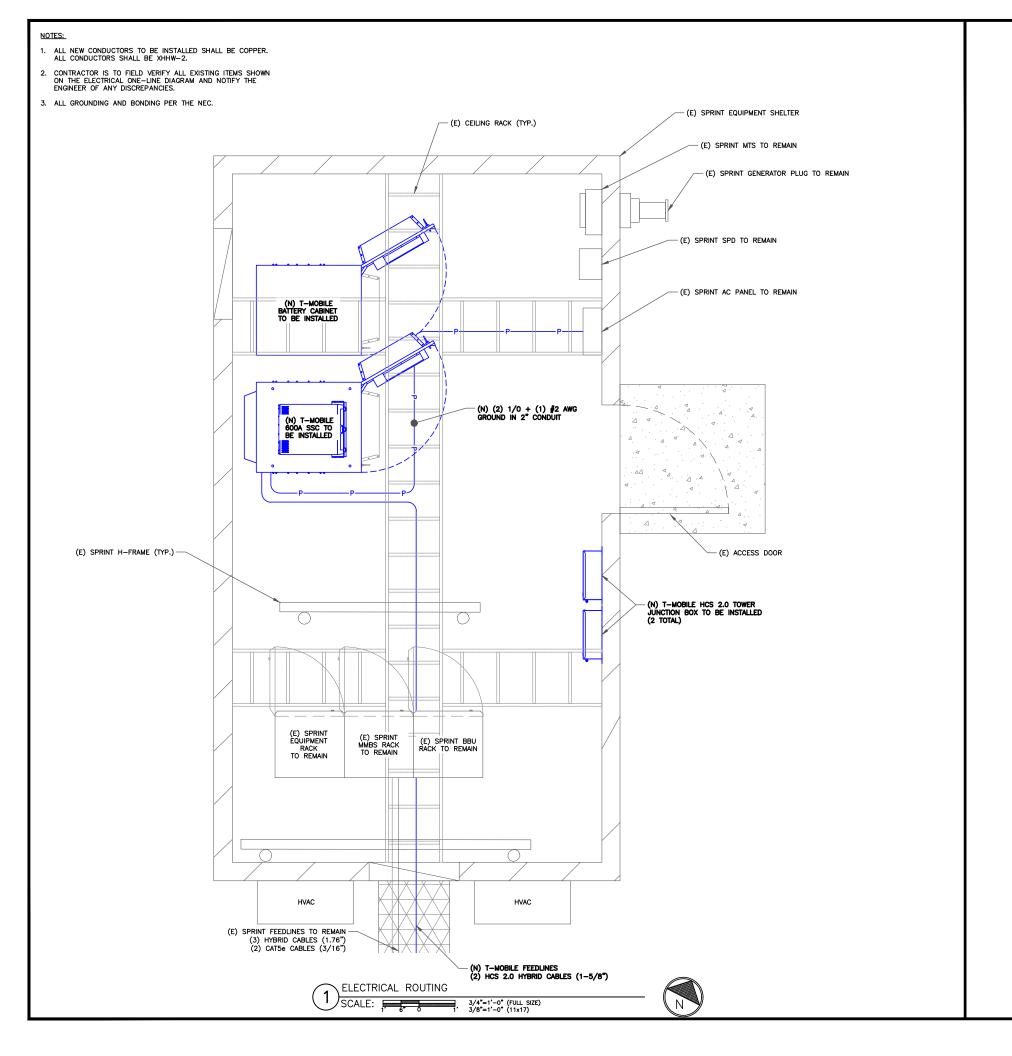


- Corrosion Resistant Aluminum
- Direct Air Cooling with optional

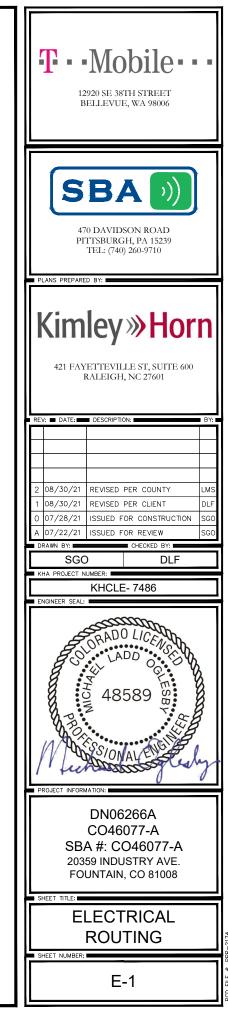
| 6 efficiency |
|----------------------------------------------------------------------------------------------------|
| 6 efficiency |
| |
| intercell connectors |
| |
| |
| er with surge protection, 23" for battery string, (1) 150A 3- on, HP Large SS ships with (3) |
| |
| |
| |
| |
| 8 P a g. |
| |
| |







2 NOT USED SCALE: NOT TO SCALE



01/17/22 Exp. 10/31/23

| VOLTA | AGE | 120/240V AIC RATING | | 22,000 AN | IPS | | | | | | | | | | |
|-------|------------------|---------------------|---------|-------------|----------|--------|---------|---------|--------|---------|---------|---------|---------|------------------|-----|
| MAIN | BREAKER | 200 AMP BUSS RATING | | 200 AMPS | | | | | | | | | | | |
| MOUN | NT | SURFACE | | | NEUTRALI | BAR | | YES | | | | | | | |
| ENCLO | SURE TYPE | NEMA 3R | | | GROUND | BAR | | YES | | | | | | | |
| PANE | STATUS | EXISTING | | | N TO GRO | | D | YES | | | | | | | |
| PHASE | , WIRES | SINGLE, 3 | | | INTERNAL | TVSS | | TBD | | | | | | | |
| | | BREAKER | BREAKER | BREAKER | SERVICE | | | | USAGE | | BREAKER | BREAKER | BREAKER | | |
| CKT | LOAD DESCRIPTION | AMPS | POLES | STATUS | LOAD VA | FACTOR | VA | VA | FACTOR | LOAD VA | STATUS | POLES | AMPS | LOAD DESCRIPTION | CKT |
| 1 | GENERATOR MAIN | 200 | 2 | OFF | 0 | 1.25 | 0 | | 1.25 | 0 | OFF | 1 | - | TV\$\$ | 2 |
| 3 | | 200 | 2 | O FF | 0 | 1.25 | | 0 | 1.25 | 0 | OFF | 1 | - | | 4 |
| 5 | SPACE | - | 1 | N/A | 0 | 1.25 | 0 | | 1.25 | 0 | N/A | 1 | - | SPACE | 6 |
| 7 | SPACE | - | 1 | N/A | 0 | 1.25 | | 625 | 1.25 | 500 | ON | 1 | 20 | LIGHT | 8 |
| 9 | SUB PANEL | 100 | 2 | ON | 9,150 | 1.25 | 11687.5 | | 1.25 | 200 | ON | 1 | 10 | FAN | 10 |
| 11 | | 100 | 2 | ON | 9,150 | 1.25 | | 11617.5 | 1.00 | 180 | ON | 1 | 20 | TELCO GFI | 12 |
| 13 | NEW SSC CABINET | 150* | 2 | ON | 9,600 | 1.25 | 12000 | | 1.25 | 0 | N/A | 1 | - | SPACE | 14 |
| 15 | | 150* | 2 | ON | 9,600 | 1.25 | | 12000 | 1.25 | 0 | N/A | 1 | - | SPACE | 16 |
| 17 | SPACE | - | 1 | N/A | 0 | 1.25 | 0 | | 1.25 | 0 | N/A | 1 | - | SPACE | 18 |
| 19 | SPACE | - | 1 | N/A | 0 | 1.25 | | 0 | 1.25 | 0 | N/A | 1 | - | SPACE | 20 |
| 21 | SPACE | - | 1 | N/A | 0 | 1.25 | 0 | | 1.25 | 0 | N/A | 1 | - | SPACE | 22 |
| 23 | SPACE | - | 1 | N/A | 0 | 1.25 | | 0 | 1.25 | 0 | N/A | 1 | - | SPACE | 24 |
| | | | | | | | 23687.5 | 24243 | | | | | | | |

| OVERALL LOAD SUM | | |
|------------------------|--------|---------|
| TOTAL SERVICE LOAD kVA | 47.93 | |
| AMPS | 199.71 | |

= Loading provided by T-Mobile.

= New 150A Breaker

ELECTRICAL PANEL SCHEDULE

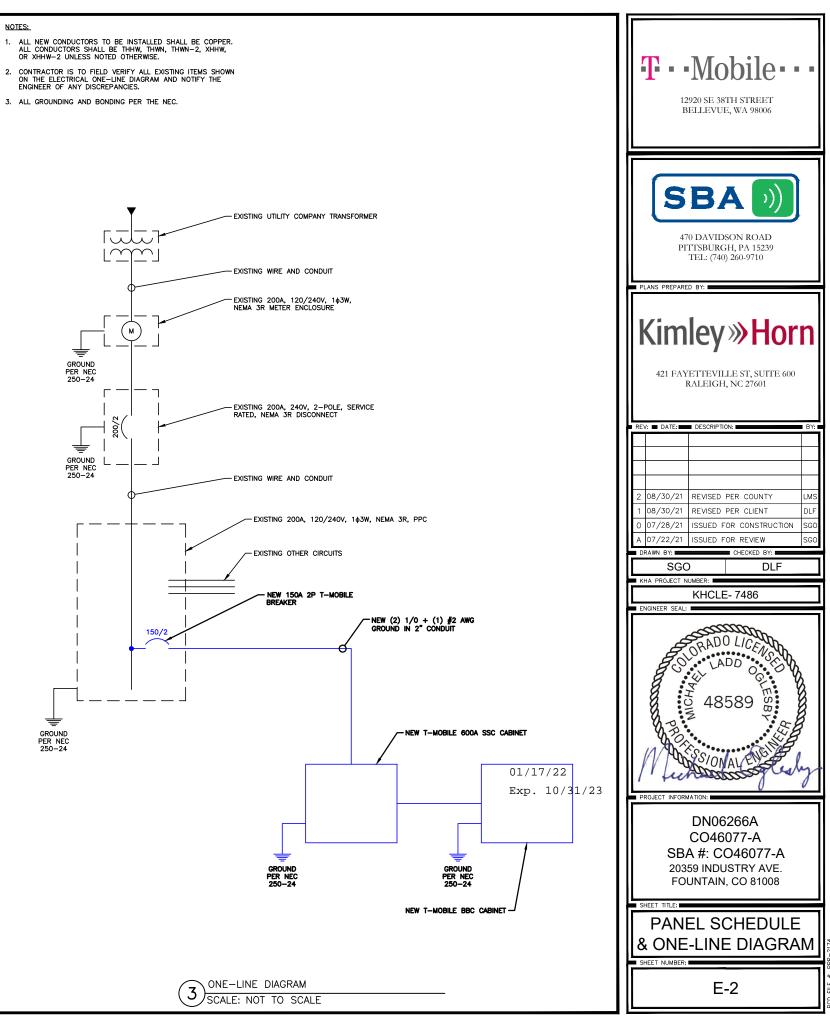
- CONTRACTOR SHALL INSPECT THE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. ANY QUESTIONS ARISING DURING THE BID PERIOD IN REGARDS OT THE CONTRACTORS FUNCTIONS, THE SCOPE OF WORK OR ANY OTHER ISSUE RELATED TO THIS PROJECT SHALL BE BROUGHT UP DURING THE BID PERIOD WITH THE PROJECT MANAGER FOR CLARIFICATION, NOT AFTER THE CONTRACT HAS BEEN AWARDED. LOCATION OF EQUIPMENT, CONDUIT AND DEVICES SHOWN ON THE DRAWINGS ARE APPROXIMATE AND SHALL BE COORDINATED WITH FIELD CONDITIONS PRIOR TO ROUGH-IN. THE CONDUIT RUNS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXACT LOCATION AND ROUTING SHALL BE PER EXISTING FIELD CONDITIONS. PROVIDE PULL BOXES AND JUNCTION BOXES WHERE SHOWN OR REQUIRED BY NEC. ALL CONDUITS SHALL BE MET WITH BENDS MADE IN ACCORDANCE WITH NEC TABLE 346-10. NO RIGHT ANGLE DEVICE OTHER THAN STANDARD CONDUIT ELBOWS WITH 12" MINIMUM INSIDE SWEEPS FOR ALL CONDUITS 2" OR LARGER.

- CONDUITS 2" OR LARGER.
- 6. ALL CONDUIT TERMINATION'S SHALL BE PROVIDED WITH PLASTIC THROAT INSULATING GROUNDING BUSHINGS.

- ALL CONDIT TERMINATION'S SHALL BE PROVIDED WITH PEASITE THROAT INSUDATING GROUNDING BUSHINGS.
 ALL WIRE SHALL BE TYPE THHN/THWN, SOLID ANNEALED COPPER UP TO SIZE #10 (#8 AND LARGER SHALL BE CONCENTRIC STRANDED) 75 DEGREE C (164 DEGREES F). 98% CONDUCTIVITY, MINUMUM #12.
 ALL WIRES SHALL BE TAGGED AT ALL PULL BOXES, J-BOXES, EQUIPMENT BOXES AND CABINETS WITH APPROVED PLASTIC TAGS, ACTION CRAFT, BRADY, OR APPROVED EQUAL.
 ALL NEW MATERIAL SHALL HAVE A U.L. LABEL.
 CONDUIT ROUGH-IN SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT TO AVOID LOCATION TO CONFLICTS. VERIFY WITH MECHANICAL CONTRACTOR AND COMPLY AS REQUIRED.
 ALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL CONDUITS PER THE SPECIFICATIONS AND NEC. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDED AT ALL JUNCTION BOXES, PULL BOXES, AND ALL DISCONNECT SWITCHES, STATERS, AND EQUIPMENT TO AVOID BOXES, PULL BOXES, AND ALL DISCONNECT SHALL REFORE AS-BUILT DRAWINGS, DOCUMENT ANY AND ALL WIRING AND EQUIPMENT CONDITIONS AND CHANCES WITHE COMPLETING THIS CONTRACT. SUBMIT A SUBSTANTIAL COMPLETION.
 ALL NE EQUIPMENTE INDICATING EQUIPMENT CONTROLLED, BRANCH CIRCUITS INSTALLED ON, AND PANEL FIELD LOCATIONS FED FROM (NO EXCEPTIONS).
 ALL DEVICES AND INSTALLATIONS OF THE DEVICES SHALL COMPLY WITH (ADA) AMERICANS
- FIELD LOCATIONS FED FROM (NO EXCEPTIONS). 15. ALL ELECTRICAL DEVICES AND INSTALLATIONS OF THE DEVICES SHALL COMPLY WITH (ADA) AMERICANS WITH DISABILITIES ACT AS ADOPTED BY THE APPLICABLE STATE. 16. PROVIDE CORE DRILLING AS NECESSARY FOR PENETRATIONS OR RISERS THROUGH BUILDING. DO NOT PENETRATE STRUCTURAL MEMBERS WITHOUT CONSTRUCTIONS MANAGERS APPROVAL. SLEEVES AND/OR PENETRATIONS IN FIRE RATED CONSTRUCTION SHALL BE PACKED WITH FIRE RATED MATERIAL WHICH SHALL MAINTAIN THE FIRE RATING OF THE WALL OR STRUCTURE. FILL FOR FLOOR PENETRATIONS SHALL PREVENT PASSAGE OF WATER, SMOKE, FIRE AND FUMES. ALL MATERIAL SHALL BE UL APPROVED FOR THIS DIPROSF. THIS PROPOSE. 17. ELECTRICAL CHARACTERISTICS OF ALL EQUIPMENT (NEW AND EXISTING) SHALL BE FIELD VERIFIED WITH
- THE OWNER'S REPRESENTATIVE AND EQUIPMENT (VIET AND ENGINED STOLED THE DATE TO A DATE OF A DATE O

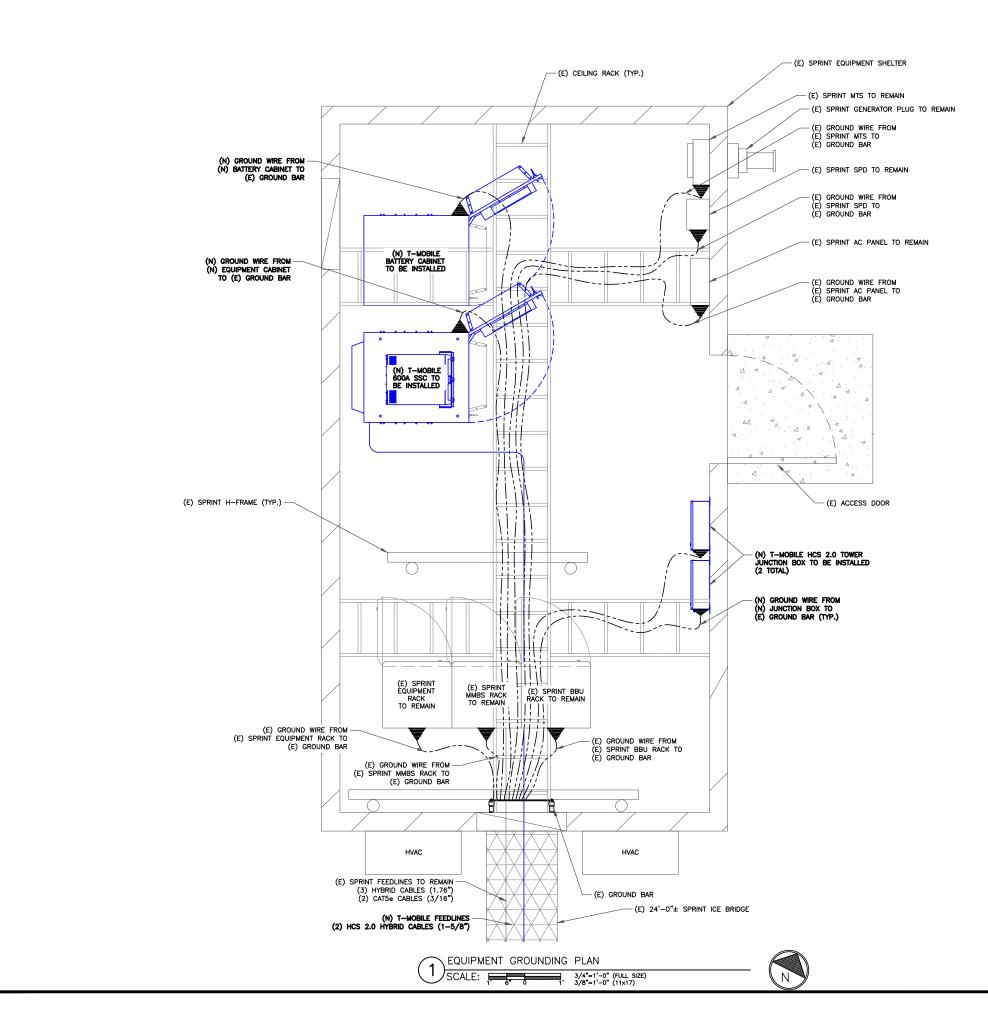
- TIME COUNCENT AND SOME EQUIPMENT CHARACTERISTICS MAY VARY FROM DESIGN AS SHOWN ON THESE DRAWINGS. LOCATION OF ALL OUTLET, BOXES, ETC., AND THE TYPE OF CONNECTION (PLUG OR DIRECT) SHALL BE CONFIRMED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROUGH-IN.
 FOR FLEXIBLE LIQUID TIGHT CONDUIT PROVIDE GLAND TYPE COMPRESSION FITTINGS. SET SCREW OR QUICK-CONNECT FITTINGS SHALL NOT BE ACCEPTABLE.
 FLEXIBLE CONDUITS SHALL BE USED FOR CONNECTION OF EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION OR MOVEMENT AND ALL MOTORS, RECESSED AND SEMI-RECESSED LIGHT FIXTURES. MAXIMUM LENGTH OF FLEXIBLE CONDUITS SHALL BE USED FOR CONNECTION OF EQUIPMENT SUBJECT TO NECLIMITATIONS. FLEXIBLE CONDUITS SHALL BE USED WHERE SUBJECT TO MECHANICAL DAMAGE.
 CONDUITS SHALL BE RIGDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
 RIGD GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
 RIGD GALVANIZED STELL (RGS) CONDUIT SHALL BE USED FOR EXTERIOR LOCATIONS ABOVE GROUND AND IN UNFINISHED INTERIOR LOCATIONS. RIGID CONDUIT SHALL BE STEELL COATED WITH ZINC EXTERIOR AND INTERIOR BY THE HOT DIP GALVANIZED PROCESS. CONDUIT SHALL BE USED FOR EXTERIOR LOCATIONS ABOVE GROUND AND INTERIOR BY THE HOT DIP GALVANIZED MORCESS. CONDUIT SHALL BE USED FOR EXTERIOR TO SHALL BE USED FOR EXTERIOR SHALL BE PRODUCED TO ANSI SPECIFICATIONS C80.1, FEDERAL SPECIFICATION WW-C-581 AND SHALL BE CUSTED WITH THE UNDERWRITERS' LABORATORIES. EXTERIOR UNDERGROUND CONDUIT AND CONDUIT IN CONCRETE SHALL BE POLYNING CHUCHT ON CONCRETE SHALL BE POLYNING CHUCHT SHALL BE DISCED TO AND SHALL BE DISCED TO AND THE THE UNDERWRITERS' LABORATORIES. EXTERIOR UNDERGROUND CONDUIT AND CONDUIT IN CONCRETE SHALL BE POLYNING CHUCHT ONCE SHALL BE DISCED TO AND THE THE POLYNE (CHUCHTOR ESS. CONDUIT SHALL BE DELLED, AND FLUSH SULVENT WELDED IN THE PLATED IN DIVERTING CHUCHTOR (CYCON SCHEDULE 40. JOINTS SHALL BE DELLED, AND FLUSH SULVENT WELDED IN POLYNINIL CHLORIDE (PVC) SCHEDULE 40. JOINTS SHALL BE BELLED, AND FLUSH SOLVENT WELDED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. UNDERGROUND ELBOW SWEEPS, AND TRANSITIONS TO ABOVE GROUND SHALL BE SCHEDULE 80 PVC OR SCHEDULE 40 GALVANIZED.

ELECTRICAL NOTES 2



NOTES:

IN AL BE



| ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITIZZ ALTITI | INSTALLER NOTE: | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EST WELL EXCITEMENTACE VELD GROUND CONDUCTOR OUTURE CONDUCTOR FUNCTION ROAD CONTROL DONDUCTOR FUNCTION F | ALL TRENCHING REQUIRED WITHIN COMPOUND SHALL BE PERFORMED BY HAND-DIGGING ONLY. | 12920 SE 38TH STREET |
| Δ1/17/22 The State | EXTEST WELL | 470 DAVIDSON ROAD PITTSBURGH, PA 15239 TEL: (740) 260-9710 |
| 01/17/22 Exp. 10/31/23 01/17/22 Exp. 10/31/23 | | Kimley » Horn 421 FAYETTEVILLE ST, SUITE 600 RALEIGH, NC 27601 |
| 01/17/22 Exp. 10/31/23 | | 2 08/30/21 REVISED PER COUNTY LMS 1 08/30/21 REVISED PER CLIENT DLF 0 07/28/21 ISSUED FOR CONSTRUCTION SGO A 07/22/21 ISSUED FOR REVIEW SGO DRAWN BY: CHECKED BY: CHECKED BY: SGO DLF KHA PROJECT NUMBER: CHECKED BY: |
| CO46077-A SBA #: CO46077-A | | A8589 B |
| FOUNTAIN, CO 81008 | | DN06266A CO46077-A SBA #: CO46077-A 20359 INDUSTRY AVE. FOUNTAIN, CO 81008 |
| SHEET TITLE: GROUNDING DIAGRAM SHEET NUMBER: | | GROUNDING DIAGRAM |
| G-1 | | G-1 |

