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1300 CONCORD TERRACE, SUITE 200 SUNRISE FL, 33323

# 6FB1007A-TRADEWINDS AT&T TOWER (BU# 842800)

4472 NW 39TH AVENUE COCONUT CREEK, FL 33073

LATITUDE 26°17'05.40"N, LONGITUDE 80°10'22.50"W



THIS IS AN APPLICATION FOR A: MODIFICATION TO AN EXISTING UNMANNED WIRELESS TELECOMMUNICATION SITE.

PROJECT DESCRIPTION

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

5TH EDITION (2014) FLORIDA BUILDING CODE 1. 51H EDITION (2014) FLORING BUILDING CUDE
2. NATIONAL ELECTRIC CODE. (NEC) WITH
LOCAL AMENDMENTS LATEST ED.
3. ANS/TIA/EDA APPLICABLE STANDARDS
4. LIFE SAFETY CODE NPA-101-2015
5. 5TH EDITION (2014) FLORIDA FIRE PREVENTION CODE

 AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS (AISC)
 UNDERWRITERS LABORATORIES (U.L.) APPROVED FLECTRICAL PRODUCTS 10. NFPA 55 AND 70 (2013)

CODE COMPLIANCE

#### APPLICANT/LESSEE

### PROPERTY INFORMATION

CROWN CASTLE INTERNATIONAL 6420 CONGRESS AVE. SUITE 2000 BOCA RATON, FL 33487

DEREK J. SMITH (717) 856-0045

HANDICAP REQUIREMENTS:

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.

PARCEL ID-

CITY OF COCONUT CREEK 4842-17-02-0010

PROJECT INFORMATION

ANTENNA LOCATION:

SELF SUPPORT TOWER

☐ MONOPOLE

☐ NEW TOWER

PROJECT SUMMARY

#### **CIVIL ENGINEER:**

KIMLEY-HORN AND ASSOCIATES, INC. WEST PALM BEACH, FL 33407

STRUCTURAL ENGINEER:

**ELECTRICAL ENGINEE** KIMLEY-HORN AND ASSOCIATES IN

(561) 845-0665

SURVEYOR:

**TOWER ENGINEER:** 

PROJECT TEAM

ADMINISTRATIVE APPROVAL 0410512016

L700/L1900 UPGRADE

SHEET DESCRIPTION

COVER SHEET

GENERAL NOTES

SITE PLAN & T-MOBILE EQUIPMENT LAYOUT

C-2 TOWER ELEVATION AND ANTENNA LAYOUT

EQUIPMENT MOUNTING DETAIL

GROUNDING DETAILS E-2 DC WIRING DIAGRAM

> 5TH EDITION (2014) FLORIDA BUILDING CODE WIND LOADS (ASCE 7-10)
> ULTIMATE WIND SPEED = 170 MPH
> NOMINAL WIND SPEED = 132 MPH
> RISK CATEGORY II
> WIND EXPOSURE = C

T - Mobile

SUNRISE FL, 33323

=PROJECT INFORMATION:=

TRADEWINDS AT&T TOWER 6FB1007A

4472 NW 39TH AVENUE COCONUT CREEK, FL 33073 BROWARD COUNTY

CURRENT ISSUE DATE:

FEBRUARY 2016

L700/L1900 UPGRADE

REV.:=DATE:====DESCRIPTION:=

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-PLANS PREPARED BY:

1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FLORIDA 33411 (561) 845-0665

=APV.:= =DRAWN BY:===CHK.:=

MVM MVM

LICENSURE:=

KEVIN K. MARAJH ARNOLDO A. ARTILES

PF 72397 PE 70645

SHEET TITLE:

COVER SHEET

=SHEET NUMBER:== =REVISION:=

044290105

FROM T-MOBILE OFFICE PROCEED NORTHWEST ON CONCORD TERRACE TOWARD FROM I-MODILE OFFICE PROVED NOW HIWEST ON CONCORD TERRACE TOWARD SAWGRASS CORPORATE PKWY, USE THE 2ND FROM THE RIGHT LANE TO TURN LEFT ONTO SAWGRASS CORPORATE PKWY, USE THE 2ND FROM THE RIGHT 2 LANES TO MERGE ONTO FL—869 N VIA THE RAMP TO W PALM BEACH, MERGE ONTO FL—869 N, USE THE RIGHT 2 LANES TO TAKE EXIT 19 FOR LYONS RD, TURN RIGHT—ONTO LYONS RD, USE THE LEFT 2 LANES TO TURN LEFT ONTO WILES RD, TURN RIGHT ONTO NW 39TH AVE, TURN LEFT, THE SITE WILL BE ON THE RIGHT.

**DRIVING DIRECTIONS** 

#### STANDARD PROVISIONS

#### INTENT

- A. THESE SPECIFICATIONS AND CONSTRUCTION DRAWINGS ACCOMPANYING THEM DESCRIBE THE WORK TO BE PERFORMED AND THE MATERIALS TO BE FURNISHED FOR THE CONSTRUCTION OF
- B. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO BE FULLY EXPLANATORY AND COMPLEMENTARY. HOWEVER, SHOULD ANYTHING BE SHOWN, INDICATED OR SPECIFIED ON ONE AND NOT THE OTHER, IT SHALL BE THE SAME AS IF SHOWN, INDICATED OR SPECIFIED ON BOTH.
- C. THE INTENTION OF THE DOCUMENTS IS TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS INDICATED IN
- D. THE PURPOSE OF THE SPECIFICATIONS IS TO SUPPLEMENT THE INTENT OF THE DRAWINGS AND TO DESIGNATE A PROCEDURE, TYPE OR QUALITY OF MATERIALS REQUIRED TO COMPLETE THE
- E. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK HOWEVER, NO CHANGES THAT ALTER THE CHARACTER INTENT OF THE DESIGN WILL BE MADE OR PERMITTED BY T-MOBILE, WITHOUT A CHANGE ORDER.

#### CONFLICTS

- A THE CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE THE CONTRACTOR AND EACH SUBCONTRACTOR ANALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR PERFORMING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY SUCH DISCREPANCY IN DIMENSION WHICH MAY INADVERTENTLY OCCUR SHALL BE SUBMITTED TO THE T-MOBILE CONSTRUCTION PROJECT MANAGER (CPM) FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE
- THE CONTRACTOR, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING ABOUT WHICH THE CONTRACTOR MIGHT NOT HAVE FULLY INFORMED HIMSELF PRIOR TO BIDDING.

#### CONTRACTS AND WARRANTIES

A. EACH CONTRACTOR IS RESPONSIBLE FOR HELPING TO OBTAIN THE BUIDING PERMIT AT THE LOCAL JURISDICTION AS THE CONTRACTOR OF RECORD, AND PROVIDE SAID JURISDICTION WITH ALL PROOF REQUIRED TO OPERATE AS A CONTRACTOR IN THAT

#### STORAGE:

- A. DO NOT USE THE EXISTING BUILDING SPACE FOR STORAGE OF TOOLS OR MATERIALS WITHOUT THE CONSTRUCTION PROJECT MANAGER AND/OR BUILDING OWNER APPROVAL
- B. ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY LOCATION AND IN A MANNER THAT WILL NOT OBSTRUCT THE FLOW OF OTHER WORK. ANY EQUIPMENT OR MATERIAL STORAGE METHOD MUST MEET ALL RECOMMENDATIONS OF THE

#### PROTECTION:

- A. PROTECT FINISHED SURFACES, INCLUDING JAMBS AND HEADS OF OPENINGS USED AS PASSAGEWAYS THROUGH WHICH EQUIPMENT AND MATERIALS WILL PASS.
- B PROVIDE PROTECTION FOR FOLIPMENT ROOM SURFACES PRIOR TO ALLOWING EQUIPMENT OR MATERIALS TO BE MOVED OVER SUCH SURFACES.
- C. MAINTAIN FINISHED SURFACES CLEAN, UNMARRED AND SUITABLY PROTECTED UNTIL JOB SITE IS ACCEPTED BY CPM.

#### REPAIRS AND REPLACEMENTS:

A. IN EVENT OF DAMAGE, THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS AND REPAIRS AND AT NO ADDITIONAL COST TO T-MOBILE AND/OR BUILDING OWNER

#### TEMPORARY FACILITIES:

- A. WATER: WATER IS NOT AVAILABLE TO THE CONTRACTORS ON SITE.
- B. LIGHT AND POWER:

LIGHT AND POWER ARE AVAILABLE ON SITE

- C. TELEPHONE:
  - EACH CONTRACTOR TO PROVIDE HIS OWN TELEPHONE ACCESS IF REQUIRED.
- IF PERMANENT POWER IS COMPLETED, ALL CONTRACTORS MAY USE THE SERVICE CONNECTION FOR PRODUCTION WORK ONLY, PROVIDED THAT ELECTRICAL CORDS AND CONNECTIONS ARE FURNISHED BY THE CONTRACTORS AND ARE DISCONNECTED AND PROPERLY STORED DURING NON-WORKING HOURS.

#### CLEAN UP:

- THE CONTRACTORS SHALL AT ALL TIMES KEEP THE SITE FREE FROM ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY THEIR EMPLOYEES AT WORK, AND AT THE COMPLETION OF THE WORK, THEY SHALL REMOVE ALL RUBBISH FROM AND ABOUT THE BUILDING INCLUDING ALL TOOLS SCAFFOLDING AND SURPLUS MATERIALS, AND SHALL LEAVE THE WORK CLEAN AND
- EXTERIOR: VISUALLY INSPECT EXTERIOR SURFACES AND REMOVE ALL TRACES OF SOIL, WATER MATERIALS, SMUDGES AND OTHER FOREIGN MATTER.
  - REMOVE ALL TRACES OF SPLASHED MATERIALS FROM ADJACENT SURFACES.
- INTERIOR: VISUALLY INSPECT INTERIOR SURFACE AND REMOVE ALL TRACES OF SOIL, WASTE MATERIALS, SMUDGES AND OTHER FOREIGN MATTER.
- REMOVE ALL TRACES OF SPLASHED MATERIAL FROM ADJACENT SURFACES.
- REMOVE PAINT DROPPINGS, SPOTS, STAINS AND DIRT FROM FINISHED SURFACES.
- CONTRACTOR SHALL WASH AND WAX FLOOR PRIOR TO FINAL ACCEPTANCE. FLOOR WAX SHALL BE OF THE ANTI-STATIC

#### CHANGE ORDER PROCEDURE:

CHANGE ORDER MAY BE INITIATED BY THE CPM, AND/OR THE CONTRACTOR, THE CONTRACTOR, UPON VERBAL REQUEST FROM CONTRACTOR. THE CONTRACTOR OF ON YERBAL REQUEST FROM THE CPM SHALL PREPARE A WRITTEN PROPOSAL DESCRIBING THE CHANGE IN WORK OR MATERIALS AND ANY CHANGES IN THE CONTRACT AMOUNT AND PRESENT TO THE CPM FOR APPROVAL. SUBMIT REQUESTS FOR SUBSTITUTIONS IN THE FORM AND IN ACCORDANCE WITH PROCEDURES REQUIRED FOR CHANGE ORDER PROPOSALS. ANY CHANGES TO THE SCOPE OF WORK OR MATERIALS WHICH ARE PERFORMED BY THE CONTRACTOR WITHOUT A WRITTEN CHANGE ORDER AS DESCRIBED AND APPROVED BY THE CPM, SHALL BECOME THE SOLE RESPONSIBILITY OF THE CONTRACTOR

#### RELATED DOCUMENTS AND COORDINATION:

GENERAL CARPENTRY, ELECTRICAL, AND ANTENNA DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK, EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. ALL COORDINATION TO BE THE RESPONSIBILITY OF THE GENERAL

#### SHOP DRAWINGS:

- CONTRACTORS TO SUBMIT SHOP DRAWINGS AS REQUIRED AND LISTED IN THESE SPECIFICATIONS THROUGH THE GENERAL CONTRACTOR TO THE CPM. FOR REVIEW
- ALL SHOP DRAWINGS TO BE REVIEWED, CHECKED, CORRECTED, STAMPED AND SIGNED BY GENERAL CONTRACTOR PRIOR TO SUBMITTAL TO THE CPM.

#### PRODUCTS AND SUBSTITUTIONS:

- SUBMIT 3 COPIES OF EACH REQUEST FOR SUBSTITUTION. IN EACH REQUEST IDENTIFY THE PRODUCT FABRICATION OR INSTALLATION METHOD TO BE REPLACED BY THE SUBSTITUTION. INCLUDE RELATED SPECIFICATION SECTION AND DRAWING NUMBERS, AND COMPLETE DOCUMENTATION SHOWING COMPLIANCE WITH THE REQUIREMENTS FOR SUBSTITUTIONS.
- ALL NECESSARY PRODUCT DATA AND CUT SHEETS SHALL PROPERLY INDICATE AND DESCRIBE THE ITEMS, PRODUCTS, AND MATERIALS BEING INSTALLED. THE CONTRACTOR SHALL, IF DEEMED NECESSARY BY THE CPM, SUBMIT ACTUAL SAMPLES TO THE CPM FOR APPROVAL IN LIEU OF CUT SHEETS.

#### COMPLIANCE

ALL MATERIALS, DESIGN, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES (SOME OF WHICH ARE LISTED BELOW), ORDINANCES, AND AUTHORITES HAVING
JURISDICTION OVER THE WORK. UPON THE COMPLETION OF THE
WORK, THE CONTRACTOR SHALL PROVIDE T-MOBILE WITH A CERTIFICATE OF OCCUPANCY (IF REQUIRED) AND OTHER LEGAL DOCUMENTS TO VERIFY SUCH COMPLIANCE. WHERE NO CODES FLORIDA BUILDING CODE, AND/OR THE SPECIFICATIONS HEREIN, WHICHEVER IS MORE STRINGENT, AND A DOCUMENT STATEMENT SHALL BE FURNISHED TO THIS FEFFCT.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY COMPLIANCE WITH THE GOVERNING CODES AND TO NOTIFY THE CPM OF ANY DISCREPANCIES PRIOR TO PERFORMING WORK.

SPECIFICATION SHALL BE DEEMED TO MEAN THE EDITION CURRENT AT THE TIME OF AWARD OF THE CONTRACT. THE CONTRACT SHALL COMPLY WITH ALL ZONING AND SITE ACQUISITION SPECIAL STIPULATIONS AS OUTLINED IN THE JOB SPECIFICATIONS, OR AS DIRECTED BY THE CPM.

ANSI/TIA/EIA APPLICABLE STANDARDS 5TH EDITION (2014) FLORIDA BUILDING CODE BUILDING OFFICIALS & CODE ADMINISTRATORS NATIONAL ELECTRICAL CODE (NEC) WITH LOCAL AMENDMENTS UNDERWRITERS LABORATORIES (U.L.) APPROVED ELECTRICAL PRODUCTS AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS (AISC) LIFE SAFETY CODE NFPA - 101-2015 FEDERAL AVIATION REGULATIONS NFPA 55 AND 70 (2013)

#### PERMITS AND LICENSES

THE SITE ACQUISITION SPECIALIST SHALL OBTAIN, AT HIS OWN EXPENSE, ALL REQUIRED LOCAL, STATE, AND/OR COUNTY CONSTRUCTION PERMITS AND LICENSES. COPIES OF ALL PERMITS SHALL BE SENT TO CPM. APPROVALS FROM RELEVANT PLANNING BOARDS, ENVIRONMENTAL BOARDS, AND/OR OTHER COMMITTEES WILL BE SUPPLIED BY OTHERS, BUT MUST BE CONFIRMED BY THE SITE ACQUISITION SPECIALIST PRIOR TO THE APPLICATION FOR CONSTRUCTION PERMITS.

FAA APPROVAL WILL BE SUPPLIED BY OTHERS, BUT MUST BE CONFIRMED BY THE CONTRACTOR WITH THE CPM PRIOR TO THE COMMENCEMENT OF WORK.

- PRIOR TO COMMENCING THE WORK. THE CPM SHALL SCHEDULE AN ON-SITE MEETING WITH ALL MAJOR
  PARTIES TO THE PROJECT. THIS WOULD INCLUDE (THOUGH NOT
  LIMITED TO) THE DESIGNATED ELECTRICIAN, LOCAL TELEPHONE COMPANY, CARPENTRY FOREMAN (IF SUBCONTRACTED), A REPRESENTATIVE FROM THE LOCAL SPECIFIED WAREHOUSE AND CPM OR HIS DESIGNATED REPRESENTATIVE.
- 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 ENGINEER FOR RESOLUTION AND INSTRUCTION AND NO FURTHER WORK SHALL BE PERFORMED UNTIL DISCREPANCY IS CHECKED AND CORRECTED BY THE ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT HIS OWN RISK AND EXPENSE
- THE CONTRACTOR SHALL BE EQUIPPED WITH A MEANS OF CONSTANT COMMUNICATIONS, SUCH AS A CELLULAR PHONE OR A
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SITE SAFETY INCLUDING BUT NOT LIMITED TO PROTECTION OF ALL SITE PERSONNEL AND THE GENERAL PUBLIC DURING THE ENTIRE SITE CONSTRUCTION PERIOD. HE SHALL TAKE ALL REASONABLE PRECAUTIONS TO PLACE AND MAINTAIN BARRICADES, LAMPS, SIGNS, AND THE LIKE IN ACCORDANCE WITH OSHA SAFETY ACT AND ANSI OCCUPATIONAL GUIDELINES
- PROVIDE DAILY UPDATES ON SITE PROGRESS, EITHER VERBAL
- COMPLETE INVENTORY OF CONSTRUCTION MATERIALS AND
- COORDINATION WITH PUBLIC UTILITY AUTHORITIES THE CONTRACTOR SHALL COORDINATE WITH RELEVANT AUTHORITIES THE WORKS THEY ARE TO BE CARRIED OUT. HE SHALL CONDUCT HIS OPERATIONS SO AS TO NOT INTERFERE WITH THE OPERATIONS OF PUBLIC AND/OR PRIVATE UTILITY AUTHORITIES, INSTALLING SERVICES ON THE SITE,

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROTECTION OF SUCH FACILITIES AND STRUCTURES DURING CONSTRUCTION OF THIS SITE.

#### I. INSPECTIONS

THE CONTRACTOR SHALL NOTIFY THE CPM AT LEAST 24 HOURS IN ADVANCE OF REQUIRED INSPECTIONS, INSPECTIONS THAT WILL BE REQUIRED BY THE CPM OR OTHER DESIGNATED T-MOBILE REPRESENTATIVE ARE:

- INSPECTION OF GROUNDING SYSTEM
- 2. PRACTICAL COMPLETION

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ENSURING THAT ALL RELEVANT AUTHORITY INSPECTIONS ARE CARRIED OUT IN A TIMELY MANNER. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF ALL INSPECTIONS.

THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH T-MOBILE'S' DESIGNATED ENGINEERING FIRM TO OBTAIN ALL REQUIRED INSPECTIONS AND TESTING. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF ALL INSPECTIONS.

#### J. ENVIRONMENTAL PROTECTION

NOISE LEVEL: THE CONTRACTOR SHALL ENSURE THAT STATE AND LOCAL REGULATIONS ARE COMPLIED WITH IN REGARD TO NOISE LEVELS PRODUCED BY HIS OR HIS SUB-CONTRACTOR'S EQUIPMENT OR METHODS OF CONSTRUCTION.

DUST CONTROL: THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO LIMIT THE CREATION OF ANY DUST NUISANCE THAT MIGHT ARISE DURING CONSTRUCTION TO THE SATISFACTION OF THE LOCAL AUTHORITIES AND THE BUILDING OWNER. THE CPM
MAY DIRECT THAT WORK CEASE UNTIL SUCH TIME AS ANY
PARTICULAR DUST NUISANCE IS CONTROLLED TO THE SATISFACTION OF THE CPM, LOCAL AUTHORITIES, AND BUILDING OWNERS.

#### K. REINSTATEMENT

ANY PAVEMENT, FOOTPATH, CURB, GUTTERS, WALLS, FLOORS, SERVICES, AND EXISTING FEATURES OR OTHER PROPERTIES, DISTURBED OR DESTROYED DURING CONSTRUCTION SHALL BE EXISTING BEFORE COMMENCEMENT OF OPERATIONS.

THE CONTRACTOR SHALL PREPARE A RED LINED SET OF ASBUILT DRAWINGS. THE FORM OF MARKED UP CONSTRUCTION
PLANS SHALL BE STANDARD ACCEPTABLE TO THE T-MOBILE. SUCH
DRAWINGS SHALL BE SUBMITTED TO T-MOBILE WITHIN TWO WEEKS FROM PRACTICAL COMPLETION AND PRIOR TO APPROVAL OF THE CONTRACTOR'S

#### M. PRACTICAL COMPLETION

THE FOI LOWING DOCUMENTATION SHALL BE PROVIDED TO T-MOBILE

- 1. ALL QUALITY ASSURANCE CHECKLISTS AS OUTLINED IN THE PREVIOUS SECTIONS
- 2. WARRANTIES AND MAINTENANCE MANUALS, IF APPLICABLE
- 3. GROUND SYSTEM RESISTANCE TEST
- 4. CERTIFICATE OF OCCUPANCY

#### INSURANCE AND BONDS:

A. EACH CONTRACTOR SHALL AT HIS OWN EXPENSE CARRY AND MAINTAIN FOR THE DURATION OF THE PROJECT ALL INSURANCE AS REQUIRED AND LISTED AND SHALL NOT COMMENCE WITH HIS WORK UNTIL HE HAS PRESENTED A CERTIFICATE OF INSURANCE STATING ALL COVERAGES TO THE GENERAL CONTRACTOR WHO SHALL, IN TURN, FORWARD A COPY OF ALL CERTIFICATES TO THE CPM.



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PROJECT INFORMATION:

TRADEWINDS AT&T TOWER 6FB1007A 4472 NW 39TH AVENUE COCONUT CREEK, FL 33073 BROWARD COUNTY

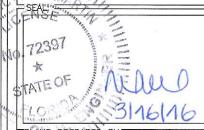
CURRENT ISSUE DATE:

FEBRUARY 2016

=ISSUED FOR:=

L700/L1900 UPGRADE

=REV.:=DATE:====DESCRIPTION:==



PLANS PREPARED BY:



1920 WEKIVA WAY SUITE 200 WEST PALM BEACH, FLORIDA 33411 (561) 845-0665

PROVIL	JER: —			

DRAWN	BY:=	=CHK.:====	APV.:	
G	D	MVM	MVM	

PE 72397

PE 70645

=RFVISION:=

LICENSURE:

KEVIN K. MARAJH MARIA VICTORIA MARTIN ARNOLDO A. ARTILES

SHEET TITLE-

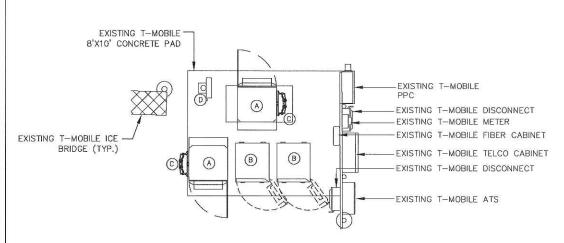
GENERAL NOTES

SHEET NUMBER:

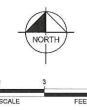
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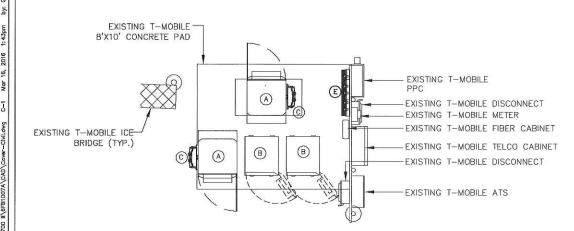


### EXISTING T-MOBILE EQUIPMENT LAYOUT PLAN



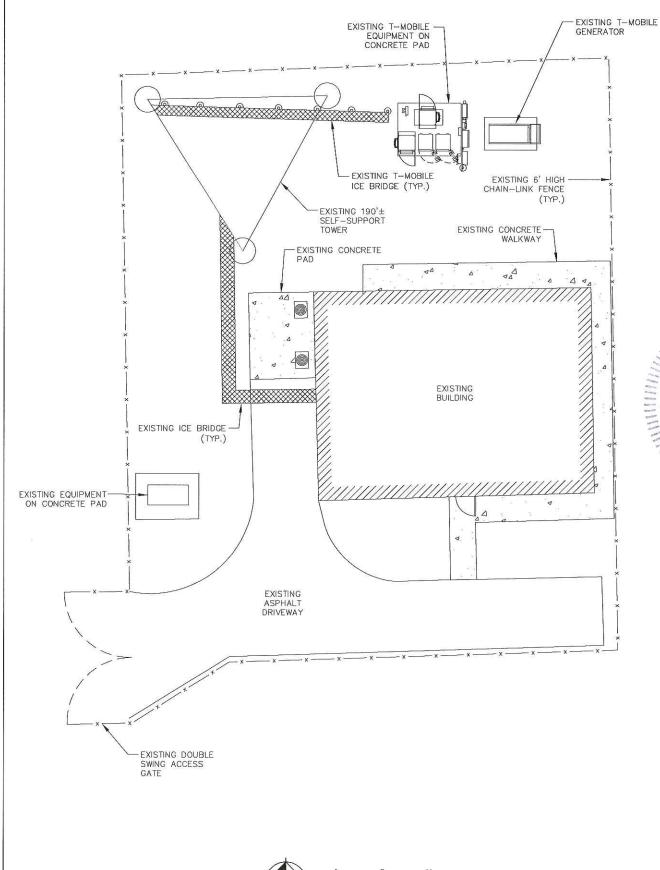
### LEGEND

- (A) EXISTING T-MOBILE FCOA CABINET
- (B) EXISTING T-MOBILE SSC
- (C) EXISTING T-MOBILE COVP
- D EXISTING T-MOBILE PCS/AWS DIPLEXERS TO BE DECOMMISSIONED
- PROPOSED T-MOBILE (3) FRLB MOUNTED TO EXISTING RACK (SEE SHEET C-3)



PROPOSED T-MOBILE EQUIPMENT LAYOUT PLAN

NOTE: THE CONTRACTOR SHALL VERIFY CABLES/REINFORCEMENT LOCATION BEFORE ANY CONCRETE ANCHOR INSTALLATION



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STATE OF

PLANS PREPARED BY:=

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DRAWN BY: CHK .: =APV.:= MVM MVM

LICENSURE:

KEVIN K. MARAJH MARIA VICTORIA MARTIN ARNOLDO A. ARTILES

PE 71455 PE 72397 PE 70645

==REVISION:==

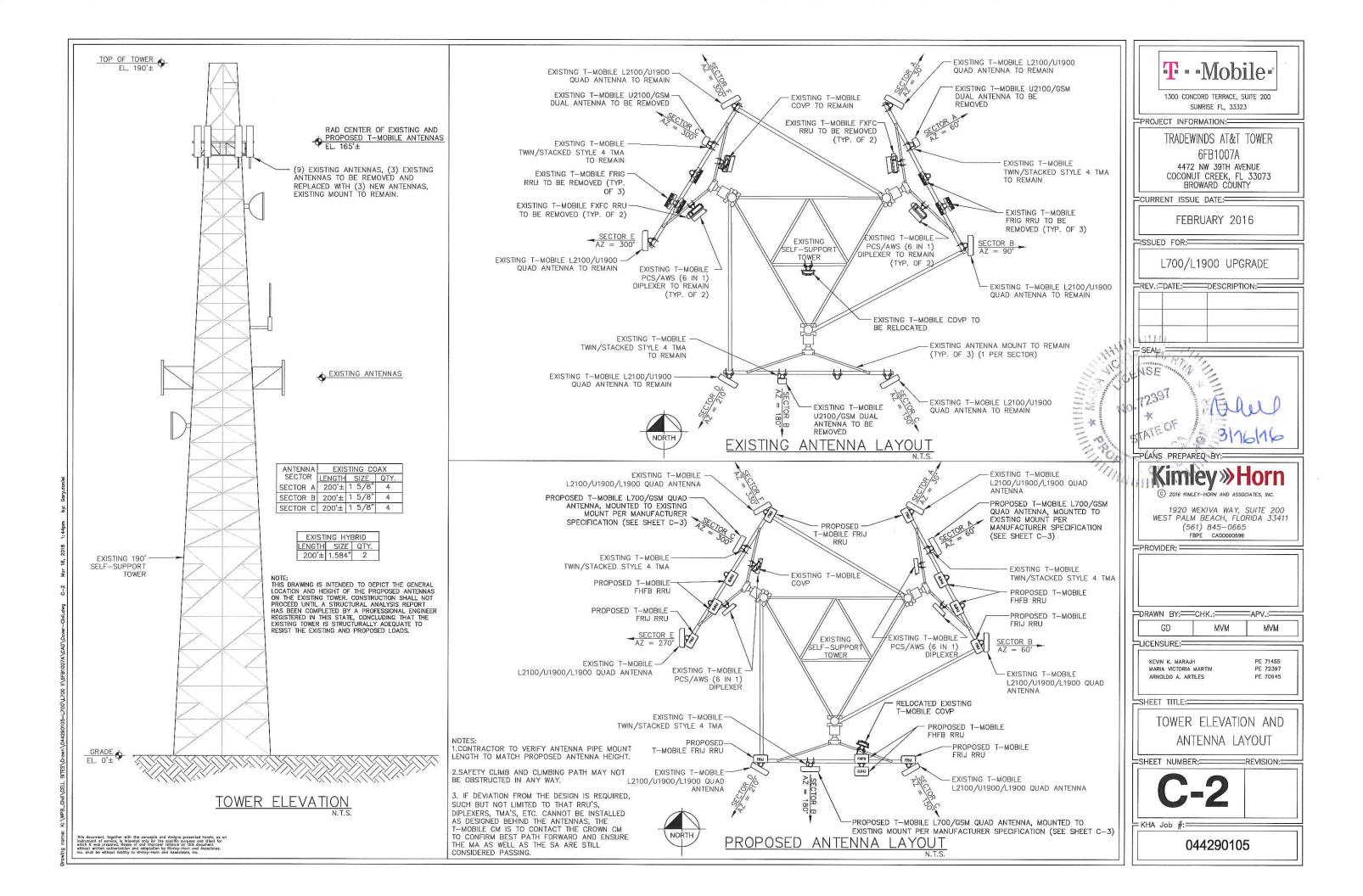
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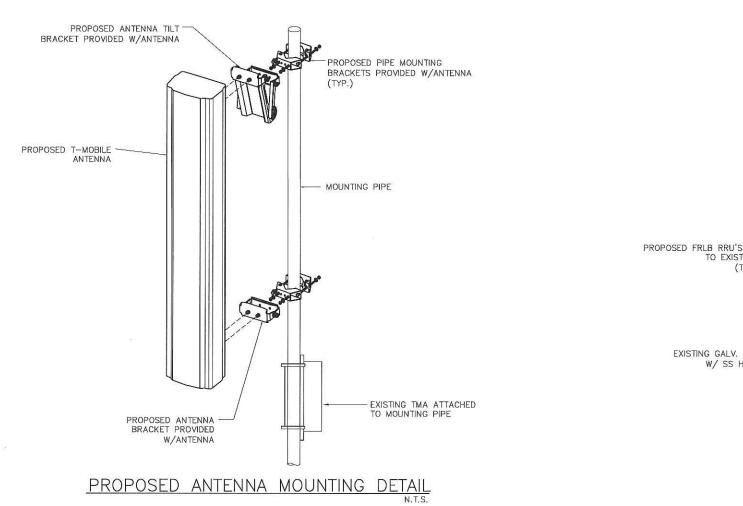
SITE PLAN & T-MOBILE EQUIPMENT LAYOUT

SHEET NUMBER:

SITE PLAN

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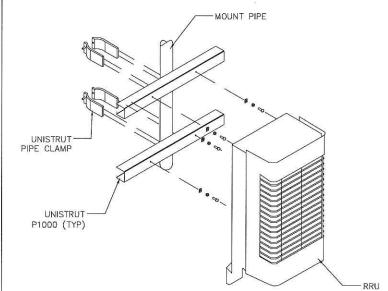


PROPOSED FRLB RRU'S MOUNTED
TO EXISTING RACK.
(TYP. OF 3)

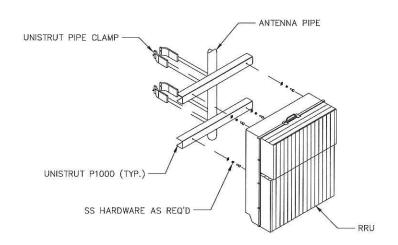
EXISTING GALV. UNISTRUT
W/ SS HARDWARE

EXISTING GRADE

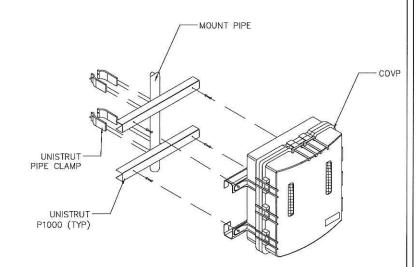
RRU FRAME DETAIL N.T.S.



FRIJ/FHFB RRU PIPE MOUNT DETAIL



RRU PIPE MOUNT DETAIL N.T.S.



COVP MOUNTING DETAIL

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PLANS PREPARED BY:

# Kimley » Horn © 2016 KIMLEY-HORN AND ASSOCIATES, INC.

1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FLORIDA 33411 (561) 845-0665 FBPE CA00000695

PROVIDER:

LICENSURE:

KEVIN K. MARAJH PE 71455 MARIA VICTORIA MARTIN PE 72397 ARNOLDO A. ARTILES PE 70645

SHEET TITLE:

EQUIPMENT MOUNTING DETAILS

SHEET NUMBER: REVISION:

**C-3** 

⊢KHA Job #:=

044290105

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e: K:\WPB\_CIWI\CELL SITE

## GROUNDING PROTECTION SYSTEM NOTES: PROVIDE "CABLE ENTRANCE GROUND BAR" (CEGB), 3"H $\times$ 6"L $\times$ 1/4"D. MOUNT AT TELCO CABINET. COORD. INSTALLATION WITH CPM. 2. PROVIDE A GND RING BURIED A MINIMUM OF 18" BELOW GRADE, THE GROUND RING SHALL BE INSTALLED A MINIMUM OF 2'-0" AWAY FROM THE FOUNDATION UNLESS SHOWN ON DRAWING. BOND FENCE POST TO GND RING USING AN EXOTHERMIC WELD. BOND FENCE GATE TO POST WITH A FLEXIBLE COPPER JUMPER STRAP MECHANICALLY OR EXOTHERMICALLY, TYPICAL FOR ALL FENCE PLANES WITHIN 12 FEET OF TOWER. FOUNDATION. FOR FENCE PLANES BEYOND 12', EXTEND 1#2 TO EACH FENCE PLANE TO ANY PLANES WITHIN 50'. BOND DISCONNECT SWITCH, METER, TELEPHONE CABINET AND SERVICE CONDUITS TO BURIED GND RING AS THEY CROSS.

REMOVABLE COVER

#2 AWG BARE TINNED SOLID

COPPER WIRE FOR MEGGER TESTS

SLOT FOR GROUND WIRE

- CADWELD CONNECTION

#2 AWG BARE

TINNED SOLID

TO GND RING, TYP.

CADWELD TO ROD

- EACH LEG OF THE WAVEGUIDE STRUCTURE SHALL BE INDIVIDUALLY BONDED TO THE BURIED GND RING, EXOTHERMICALLY WELD CONNECTIONS AT POST FOR WAVEGUIDE STRUCTURE AND BURIED GND RING, PLACE 5/8"X10" COPPERCIAD GND ROD AT 10" INTERVALS ALONG WAVEGUIDE PATH.
- bond rebar in concrete for communication structure and equipment pad to buried gnd ring. Exothermically weld a  $\sharp 2$  tinned solid copper conductor to the rebar and connect to the buried gnd ring.
- 7. PROVIDE INSPECTION SLEEVE AT MAIN SERVICE GROUNDS. EXOTHERMIC CONNECTIONS.
- PROVIDE BONDING CONDUCTOR(S) FROM THE BURIED GND RING TO THE ANTENNA CABLE BUS BAR AT POINT JUST INSIDE OF THE COMMUNICATION STRUCTURE EXIT. VERIFY EXACT LOCATION OF COPPER BUS BAR FOR PROPER CONDUCTOR LENGTH. FINAL EXOTHERMIC WELDS TO COPPER BUS BAR BY THE ANTENNA CABLE INSTALLER.
- EXOTHERMICALLY WELD BONDING CONDUCTOR TO COMMUNICATION STRUCTURE LEG AT 1'-O" ABOVE PAD AND BOND TO BURIED GND RING. PROVIDE A 3/4" PVC SLEEVE WITH A GRADUAL BEND IN THE CONCRETE FOUNDATION.
- 10. 5/8"X10"-0" LONG COPPER CLAD GND ROD. 15' SPACING BETWEEN RODS (NON-LINEAR). TYPICAL FOR ALL GND RODS SHOWN. USE STAINLESS STEEL HARDWARE

- ELECTRICAL CONTRACTOR SHALL TAKE MEGGER READINGS OF GND. THE RESULTS SHALL NOT BE GREATER THAN 5 OHMS.
- 12. ALL CONNECTIONS TO GND SYSTEM SHALL BE MADE IN LINE WITH BENDS NOMINAL 2" RADIUS IN THE DIRECTION OF CURRENT FLOW, T-CONNECTIONS WILL NOT BE
- 13. ALL BENDS IN GND WIRES SHALL BE NOMINAL 12" RADIUS.
- ANTENNA CABLES SHALL BE BONDED AT EACH END. RUNS GREATER THAN 150' SHALL BE BONDED TOWARDS MIDDLE OF LENGTH, COORDINATE LOCATION WITH-WIRELESS CARRIER'S PROJECT MANAGER.
- WHEN APPLICABLE, CONTRACTOR SHALL BOND FRAMES TO EACH OTHER AND TO GND RING VIA TWO PATHS. COORDINATE WITH WIRLLESS CARRIER PROJECT MANAGER.
- CONTRACTOR CAN PROVIDE ONE OF THE FOLLOWING AS DIRECTED BY THE PROJECT MANAGER: THE SECOND OPTION IS PREFERRED.

  A. CADWELD EACH CABINET GND WIRE TO GND RING AS SHOWN IN EQUIPMENT GND DETAIL.

  - B. CADWELD EACH WIRE TO A 1/4"X4"X24" MIN. COPPER BUS BAR LOCATED BEHIND RADIO CABINET, EXTEND A #2 WIRE FROM EACH END OF COPPER BUS BAR TO GND RING.
- PROVIDED BRAIDED BONDING JUMPERS BETWEEN EACH GATE AND POST (OPTIONAL).
- CONTRACTOR SHALL PROVIDE EXOTHERMIC BONDING AT ALL BURIED GROUND RING CONNECTIONS, STRUCTURAL EQUIPMENT FRAME, SERVICE RACK(S), EXISTING TOWER, GROUND RINGS, AND AS INSTRUCTED BY T-MOBILE CPM.
- CONTRACTOR SHALL PROVIDE MECHANICAL BONDING AT ALL ANTENNA SECTOR GROUND BARS, ALL ELECTRICAL EQUIPMENT DISCONNECTS, TRANSFORMERS, J-BOXES, PANEL-BOARDS, CABINETS, AND MAIN GROUND BAR AS DIRECTED BY T-MOBILE OPM. ALL MECHANICAL CONNECTIONS SHALL BE PROPERLY TERMINATED MY, LUSS, NUTS & BOLTS.
- 21. CONTRACTOR SHALL COAT WITH NOX-OX ALL POINTS OF CONTACT BETWEEN

#### ALL EXPOSED CONDUCTORS ON EQUIP. SLAB SHALL INSTALLED INSIDE A 1/2" SCHED 80 PVC CONDUIT, WHETHER OR NOT CALLED OUT HERE NOTE: ALL BONDING TO ANTENNA SECTOR GROUND BAR IS MECHANICAL, FURNISH LUGS AND HARDWARE #2 AWG GREEN JACKETED COPPER WIRE FOR BONDING OF RF COAX CABLE SHIELD ANTENNA (TYP) ANTENNAS SECTORS WITH SECTOR GROUND BARS MOUNTED AT TOP OF TOWER. OR AS CALLED OUT IN PLANS ANTENNA SUPPORT \*\*\* 1000 STRUCTURE (TYP) NOTE: SECTOR GROUND BARS ARE TO BE MOUNTED RF COAX CABLE TO RF ANTENNA DIRECTLY TO TOWER, WITH NO INSULATORS. PER PANELBOARD SCHEDULE —BOND TO EXIST, GROUNDING FXISTING FXISTING SSC CABINET (TYPICAL) POWER CABINET-(TYPICAL TELCO CABINET NOTE: IRREVERSABLE CRIMPING RE COAX CARLE #2CU TINNED SOLID GROUND COMDUCTOR EXTEND TO ICEBRIDGE SUPPORT STRUCTURE & CADWELD AT TWO LOCATIONS MINIMUM #2 BARE TINNED SOLID COPPER BOND 1#2 BARE TINNED SOLID COPPER MECHANICAL BOND MAIN GROUND EXISTING TOWER. 2 TINNED SOLID COPPER GROUND ROD WITH— INSPECTION SLEEVE (TYPICAL) - 6FT MIN:-TIF INTO EXISTING EXISTING TOWER TOWER GROUND RING (COORDINATE WITH CPM) GROUNDING GROUND ROD #2 BARE TINNED SOUD COPPER



6"(w) x 20"(I) PVC

CRUSHED ROCK-AT BASE

5/8"X10' COPPERCLAD-STEEL ROD

INSPECTION SLEEVE

VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM, ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 50 FOOT STRAIGHT RUN OF FERCE.

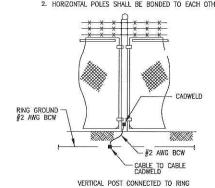
2. HORIZONTAL POLES SHALL BE BONDED TO EACH OTHER.

NTS

3

NTS

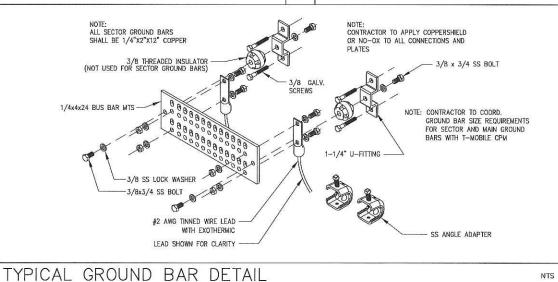
NTS



OR TELEPHONE GROUND IS TIED INTO

NOTE: CONTRACTOR TO MARK ON INTERIOR OF SLEEVE WHICH BUILDING GROUND

FENCE GROUNDING



GROUNDING RISER DIAGRAM

5 NTS

T - Mobile

1300 CONCORD TERRACE, SUITE 200 SUNRISE FL. 33323

PROJECT INFORMATION:

TRADEWINDS AT&T TOWFR 6FB1007A 4472 NW 39TH AVENUE COCONUT CREEK, FL 33073 BROWARD COUNTY

CURRENT ISSUE DATE:

FEBRUARY 2016

⊨ISSUED FOR:=

L700/L1900 UPGRADE



Co PLANS PREPARED BY:

# Kimley » Horn

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PROVIDER:

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GD MVM

LICENSURE:

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SHFFT TITLE:

GROUNDING DETAILS

SHEET NUMBER:

KHA Job #:

044290105

