



# FL01

FA NO: 10070109 - CCI NO: 842800 - APP. NO: 499229 3601 VINKEMULDER ROAD **COCONUT CREEK, FL 33073** 

> LTE 5G NR UPGRADE 4TX4RX SOFTWARE RETROFIT PACE JOB NO: MRSFL019383



**₹** 

#### **ENGINEER**

DEWBERRY ENGINEERS INC. 800 NORTH MAGNOLIA AVENUE SUITE 1000 ORLANDO, FL 32803 PHONE # (407) 843-5120

CONTACT: JULIE ANDREWS

# SITE ACQUISITION

**SMARTLINK** 1997 ANNAPOLIS EXCHANGE PARKWAY SUITE 200 ANNAPOLIS, MD 21401

PHONE # (941) 374-9249

## **CONSULTANT TEAM**

- FLORIDA BUILDING CODE, 2017 6TH EDITION ANSI/EIA/TIA-222-H
- NATIONAL ELECTRICAL CODE 2014, NFPA 70-2014
- FLORIDA FIRE PREVENTION CODE 2018 6TH EDITION
- A.D.A. COMPLIANCE: FACILITY IS UNMANNED AND NOT FOR HUMAN HARITATION

# **APPLICABLE CODES**

SITE NAME:

PARCEL ID: 4842 17 02 0010

SITE ADDRESS: 3601 VINKEMULDER ROAD COCONUT CREEK, FL 33073

PROPERTY OWNER: NCWPCS MPL 27 YEAR SITES TOWER 909 CHESNUT ST RM 36-M-1 ST. LOUIS, MO 63101

> TOWER OWNER: CROWN CASTLE 6420 CONGRESS AVE. SUITE 2000 BOCA RATON, FL 33487

APPLICANT/DEVELOPER: AT&T MOBILITY CORP. 8601 W SUNRISE BLVD PLANTATION, FL 33322

# COORDINATES\*

LATITUDE: 26.2849944\* (NAD83) LONGITUDE: -80.1727722' (NAD83) • PER RFDS #2988646 DATED 05/28/19

**PROJECT SUMMARY** 

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CONTRACTOR SHALL CONTACT AT&T IMPLEMENTATION PM OR SITE FE FOR ACCESS

THE PROJECT CONSISTS OF THE INSTALLATION OF: (2) ANTENNAS, (3) RRUS-4449 B5/B12

## SCOPE OF WORK

SMARTLINK RF	DATE
SMARTLINK RF	UATE

THIS DOCUMENT WAS DEVELOPED TO REFLECT A SPECIFIC SITE AND ITS SITE CONDITIONS AND IS NOT TO BE USED FOR ANOTHER SITE OR WHEN OTHER CONDITIONS PERTAIN. REUSE OF THIS DOCUMENT IS AT THE SOLE RISK OF THE USER.

SHT. NO.	DESCRIPTION
T-1	TITLE SHEET
	·
G-1	GENERAL NOTES
C-1	PROPOSED ELEVATION & SITE PLAN
C-2	EXISTING & PROPOSED ANTENNA LAYOUTS
C-3	ANTENNA & CABLE SCHEDULE
C-4	CONSTRUCTION DETAILS I
C-5	CONSTRUCTION DETAILS II
E-1	ONE LINE DIAGRAM
	SHEET INDEX

- ULTIMATE DESIGN WIND SPEED: 170 MPH (3-SECOND GUST, Vult)
- RISK CATEGORY: II WIND EXPOSURE: C
- APPLICABLE CODES: ANSI/TIA-222-H/2017 FLORIDA BUILDING CODE

**LOADING CRITERIA** 



smartlink

1997 ANNAPOLIS EXCHANGE PARKWAY SUITE 200 ANNAPOLIS, MD 21401

> FL01 FA NO.: 10070109

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# Dewberry

Dewberry Engineers Inc. 800 NORTH MAGNOLIA AVE PHONE: 407.843.5120 AX: 407.649.8684



DRAWN BY:	нмР
RÉVIEWED BY:	NRK
CHECKED BY:	JAA
PROJECT NUMBER:	50065214
JOB NUMBER:	50108842
SITE ADDRESS	

3601 VINKEMULDER ROAD COCONUT CREEK. FI 33073

SHEET TITLE

TITLE SHEET

SHEET NUMBER

**LOCUS MAP** DEPART AT&T OFFICE IN PLANTATION: START OUT GOING WEST ON W SUNRISE BLVD/FL-838. TURN SLIGHT LEFT ONTO FL-838. MAKE A U-TURN AT N PINE ISLAND RD ONTO W SUNRISE BLVD/FL-838. TURN LEFT ONTO FLORIDA'S TURNPIKE/FL-91 N (PORTIONS TOLL). KEEP RIGHT AT THE FORK TO GO ON FLORIDA'S TURNPIKE (PORTIONS TOLL). TAKE THE FL-834 W EXIT, EXIT 69, TOWARD CORAL SPRINGS. TURN LEFT ONTO W SAMPLE RD/FL-834. TURN RIGHT ONTO LYONS RD. TURN RIGHT ONTO WILES RD. TURN RIGHT ONTO NW 39TH AVE. TAKE THE 2ND LEFT ONTO VINKEMULDER RD. DESTINATION IS ON THE LEFT.

#### **GENERAL NOTES:**

- 1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY PROJECT MANAGEMENT SMARTLINK CONTRACTOR GENERAL CONTRACTOR (CONSTRUCTION) OWNER AT&T MOBILITY
  - OEM ORIGINAL EQUIPMENT MANUFACTURER
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF PROJECT MANAGEMENT.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.
- ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS
- 5. DRAWINGS PROVIDED HERE ARE NOT TO SCALE UNLESS OTHERWISE NOTED AND ARE INTENDED TO SHOW OUTLINE
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY PROJECT MANAGEMENT.
- CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. CONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY, CONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH PROJECT MANAGEMENT.
- 10. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
- 11. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- 12. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
- 13. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- 14. CONTRACTOR SHALL NOTIFY DEWBERRY 48 HOURS IN ADVANCE OF POURING CONCRETE, OR BACKFILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS & POST DOWNS, FINISHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEER REVIEW
- 15. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWNINGS MUST BE VERIFIED CONTRACTOR SHALL NOTIFY PROJECT MANAGEMENT OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION
- 16 THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION ANY CONSTRUCTION WORK BY CONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH LAND LORD, ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
- 17 SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

#### SITE WORK GENERAL NOTES:

- 1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- 2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO
- A) FALL PROTECTION
- B) CONFINED SPACE
  C) FLECTRICAL SAFFTY
- D) TRENCHING & EXCAVATION
- 3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.
- 4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES, TOP SOIL AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY
- 5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
- 6 CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION
- 7. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE AT&T SPECIFICATION FOR SITE SIGNAGE.
- 8 THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE TRANSMISSION EQUIPMENT AND TOWER AREAS.
- 9. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND, FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION, SEE SOIL COMPACTION NOTES.
- 11. THE AREAS OF THE OWNER'S PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION.
- 12. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL JURISDICTION'S GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

#### **ELECTRICAL INSTALLATION NOTES:**

- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
- 2. CONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT, CONTRACTOR SHALL SUBMIT MODIFICATIONS TO PROJECT MANAGEMENT FOR APPROVAL
- CONDUIT ROUTINGS ARE SCHEMATIC CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- 4. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- 5. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC
- 6. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS
- EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS ALL
  EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER
  OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E. PANELBOARD AND CIRCUIT ID'S).
- PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS
- 10. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- 11. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION, LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- 12. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL.) PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
- 13. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (SIZE 6 AWG OR LARGER), 600Y, OIL RESISTANT THHN OR THWN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 90'C (WET AND DRY) OPERATION, LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- 14. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #2 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED
- 15. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (SIZE 14 AWG OR LARGER), 600V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; WITH OUTER JACKET, LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
- 16. ALL POWER AND POWER GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIREDUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIREDUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- 17. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- 18. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- 20. ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- 21. GALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE
- 22. RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND, DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- 23. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- 24. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION—TYPE AND APPROVED FOR THE LOCATION USED SETSCREW FITTINGS ARE NOT ACCEPTABLE.
- 25. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- 26 CABINETS, BOXES, AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.
- 27. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD, SHALL BE PANDUIT TYPE E (OR EQUAL), AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- 28 EOUIPMENT CABINETS, IERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY—COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- 29 METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY—COATED, OR NON—CORRODING, SHALL MEET OR EXCEED UL 514A AND NEMA OS 1, AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS
- 30. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- 31. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM PROJECT MANAGEMENT BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- 32. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
- 33. ALL ELECTRICAL WORK SHALL BE PERFORMED IN THE DE-ENERGIZED STATE. ANY ELECTRICAL WORK THAT IS REQUIRED INSIDE THE ELECTRICAL PANEL LOCATED INSIDE THE CELL SITE EQUIPMENT ROOM SHALL BE COORDINATED WITH BUILDING MANAGEMENT, IF A MEANS OF ELECTRICAL DISCONNECT IS NOT PRESENT WITHIN THIS ROOM. (NOTETHE CHIEF ENGINEER'S TIME WILL BE BILLABLE IF POWER SHUT-DOWN NEEDED.

#### STRUCTURAL STEEL NOTES:

- ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS UNLESS NOTED
  OTHERWISE STRUCTURAL STEEL SHALL BE ASTM-A-35 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS
  STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF
  STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".
- ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC WHERE
  FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL
  CONSTRUCTION" PAINTED SURFACES SHALL BE TOUCHED UP.
- BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE (3/4"0) CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
- NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.
- 5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS NO REBAR SHALL BE CUT WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE PERFORMED IN ORDER TO MAINTAIN MANUFACTURER'S MAXIMUM ALLOWABLE LOADS ALL EXPANSION/WEDGE ANCHORS SHALL BE STAINLESS STEEL OR HOT DIPPED GALVANIZED EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL.
- 7. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS
- 8 ANY WELDING ON SITE WILL REQUIRE A HOT WORK PERMIT THAT WILL BE COORDINATED AND ISSUED BY BUILDING MANAGEMENT.

#### **CONSTRUCTION NOTES:**

1 FIELD VERIFICATION
CONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, AT&T ANTENNA PLATFORM LOCATION AND ANTENNAS TO BE REPLACED.

CONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BTS LOCATION

- 2 COORDINATION OF WORK CONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH PROJECT MANAGEMENT.
- CONTRACTOR SHALL COORDINATE RE WORK AND PROCEDURES WITH PROJECT MANAGEMENT.



8601 W SUNRISE BLVD PLANTATION, FL 33322



SUITE 200

ANNAPOLIS, MD 21401

FL01 FA NO.: 10070109

С	ONSTRUC	TION	DRAWINGS
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CHECKED BY

REVIEWED BY: NRK

HMP

JAA

50108842

CIVIL ENGINEER FLORIDA P.E. LICENSE 31588

PROJECT NUMBER: 50065214

JOB NUMBER:

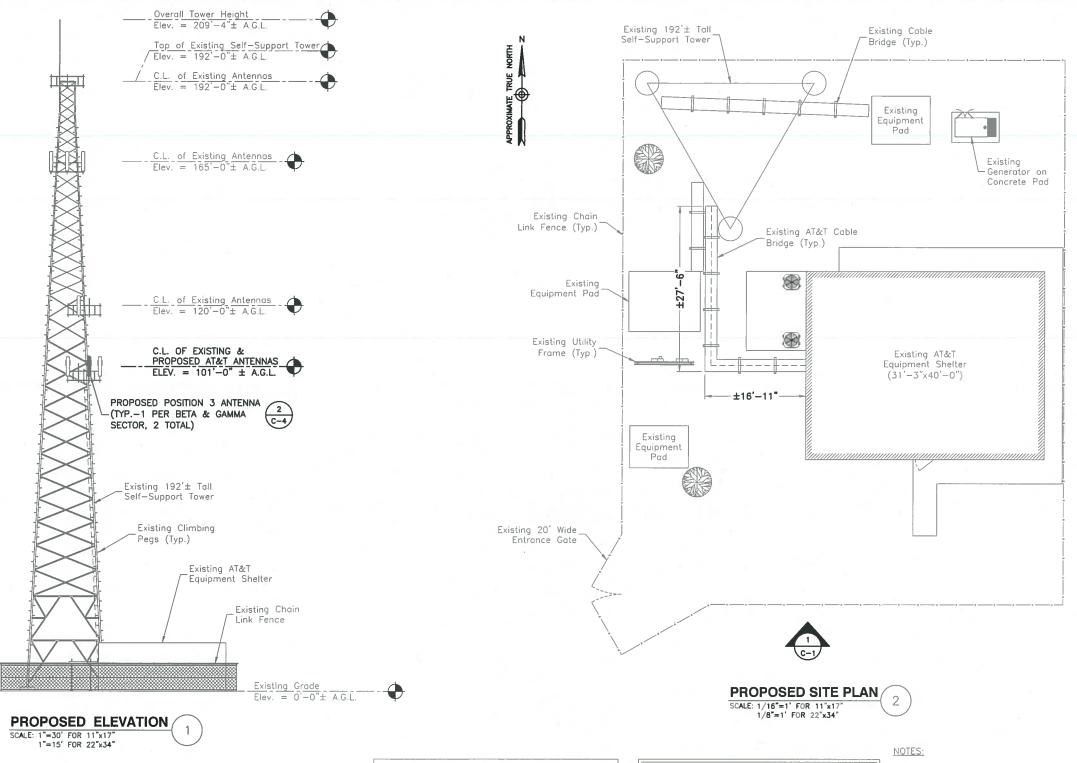
3601 VINKEMULDER ROAD COCONUT CREEK, FL 33073

SHEET TITL

GENERAL NOTES

SHEET NUMBER

G-1



A.G.L. = ABOVE GRADE LEVEL

. = CENTER LINE

### CROWN CASTLE NOTE:

- 1. DO NOT TRAP OR BLOCK THE SAFETY CLIMB,
- ALL INSTALLED EQUIPMENT IS NOT TO EXCEED 200'-0" A.G.L. PER FAA DETERMINATION.

CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND IDENTIFYING ANY EXISTING CONFLICTS (INCLUDING BUT NOT LIMITED TO EXISTING COAXIAL CABLES, SAFETY CLIMBS, ETC) AND DETERMINING TEMPORARY BRACING OR RELOCATION REQUIRED FOR INSTALLATION OF THE PROPOSED EQUIPMENT. THE CONTRACTOR SHALL RESTORE ALL RELOCATED ITEMS TO PREVIOUS CONDITIONS.

- 1. NORTH ARROW SHOWN AS APPROXIMATE.
- SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
- 3. DEWBERRY WAS NOT CONTRACTED TO PERFORM A STRUCTURAL ANALYSIS ON THIS TOWER. TOWER RELATED IMPROVEMENTS ARE NOT TO BE INSTALLED WITHOUT A PASSING STRUCTURAL ANALYSIS.
- ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, SURGE ARRESTORS, RRU'S, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE STRUCTURAL OPINION LETTER BY TOWER ENGINEERING PROFESSIONALS, DATED 06/28/19.
- PLANS BASED ON CONSTRUCTION DRAWINGS BY USA ENGINEERING, REV 0, DATED 06/04/18 AND INFORMATION OBTAINED FROM CROWN CASTLE WEBSITE (CCISITES.COM).



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1997 ANNAPOLIS EXCHANGE PARKWAY SUITE 200 ANNAPOLIS, MD 21401

> FL01 FA NO.: 10070109

	C	ONSTRUC	TION DRAWINGS
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# Dewberry

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FLORIDA P.E. LICER	A2F 31288
DRAWN BY:	НМР
REVIEWED BY:	NRK
CHECKED BY:	JAA
PROJECT NUMBER:	50065214
JOB NUMBER:	50108842
SITE ADDRESS	

3601 VINKEMULDER ROAD COCONUT CREEK, FL 33073

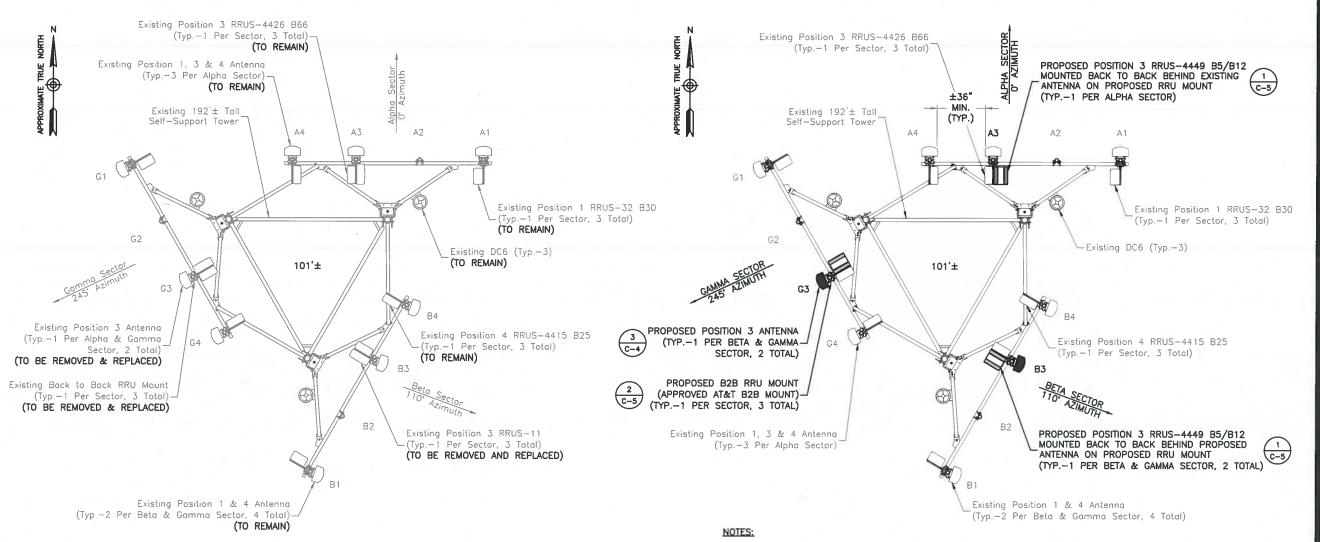
SHEET TITLE

PROPOSED ELEVATION & SITE PLAN

SHEET NUMBER

C-1

CROWN CASTLE NOTE: TRAP OR BLOCK THE SAFETY CLIMB



**EXISTING ANTENNA LAYOUT** 

SCALE: 1"=6' FOR 11"x17" 1"=3' FOR 22"x34"

MAINTAIN TYPICAL 3' MINIMUM ANTENNA SEPARATION.

MAINTAIN MINIMUM OF 36" EDGE TO EDGE SEPARATION BETWEEN THE 700 B12, B17, B29 AND 700 B14 ANTENNAS PER SECTOR AND THE ANTENNA BACKPLANES OF SAME ON DIFFERENT FACE'S (ADJACENT SECTORS ON SAME RAD CENTER). ANTENNA SEPARATION BETWEEN 700 B17 AND B29 IS 6 FEET.

> PROPOSED ANTENNA LAYOUT SCALE: 1"=6' FOR 11"x17" 1"=3' FOR 22"x34"

PLEASE REFER TO A CURRENT RFDS FOR EQUIPMENT DETAILS.

CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS AND IDENTIFYING ANY EXISTING CONFLICTS (INCLUDING BUT NOT LIMITED TO EXISTING COAXIAL CABLES, SAFETY CLIMBS, ETC) AND DETERMINING TEMPORARY BRACING OR RELOCATION REQUIRED FOR INSTALLATION OF THE PROPOSED EQUIPMENT. THE CONTRACTOR SHALL RESTORE ALL RELOCATED ITEMS TO PREVIOUS CONDITIONS

### NOTES:

- 1. PRIOR TO START OF ANY WORK, A PASSING STRUCTURAL ANALYSIS SHALL BE PROVIDED BY A FLORIDA LICENSED P.E. CONTRACTOR TO OBTAIN A COPY BEFORE STARTING ANY WORK.
- ALL ANTENNAS, COAX, SURGE ARRESTORS, RRUS, ETC. TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY OTHERS AND FINAL AT&T RF DATA SHEET.
- DEWBERRY ENGINEERS, INC. MAKES NO GUARANTEE THAT THE NUMBER, TYPE AND LOCATION OF RRHS, SURGE ARRESTORS, DC TRUNK CABLES, FIBER CABLES, RET CABLES AND FLEX CONDUITS SHOWN ON PLANS ARE CORRECT. THE CONTRACTOR SHALL VERIFY EXACT NUMBER, TYPE AND LOCATION OF MENTIONED ITEMS WITH AT&T PRIOR TO CONSTRUCTION.



PLANTATION, FL 33322 smartlink

1997 ANNAPOLIS EXCHANGE PARKWAY SUITE 200 ANNAPOLIS, MD 21401

> FL01 FA NO.: 10070109

	С	ONSTRUC	TION	DRAWINGS
	_	- 85		
	L			
	0	09/09/19	FOR	CONSTRUCTION
_	_	100/00/00		001101110011011

# Dewberry\*

Dewberry Engineers Inc. 800 NORTH MAGNOLIA AVE. SUITE 1000 ORLANDO, FL 32803 PHONE: 407.843.5120 FAX: 407.649.8664



CIVIL ENGINEER FLORIDA P.E. LICENSE 31588

DRAWN BY:	НМР
REVIEWED BY:	NRK
CHECKED BY:	JAA

PROJECT NUMBER 50065214

JOB NUMBER: 50108842

SITE ADDRESS

3601 VINKEMULDER ROAD COCONUT CREEK, FL 33073

SHEET TITLE

**EXISTING & PROPOSED** ANTENNA LAYOUTS

SHEET NUMBER

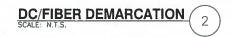
				ANTENNA				CABL	LES				RRU			TMA		DIF	PLEXER		
SECTOR	AZIMUTH	RAD CENTER	ANTENNA MAKE	ANTENNA MODEL	ANTENNA	A MECHANICAL DOWNTILT	ELECTRICAL			# OF CABLES	CABLE LENGTH	COLOR CODE	MODEL	ROOF	SHELTER QTY.		QTY.		TOWER	GRO!	
		CENTER	MARE	FUTILITY IN COMM	(4)1)	DUWNILI	DUWNILL	LDF5-50A	7/8"	2	183'			QIT.	QIT.		+		QUANTITY	QUAN	
								ROSENBERGER FIBER JUMPER (DC6 TO RRU)	3/8"	1	15'	-						1	(	1	
ALPHA (A1)	0,	101'-0"	ANDREW	SBNHH-1D85A	1	120		ROSENBERGER SINGLE PAIR DC CABLES (DC6 TO RRU)	7/16"		15'	1 RED	RRUS-32 B30	1	-	= -	-	*DBC0108F1V92-1	1773	1	
					Ly		1	1/2" COAX JUMPER (RRU TO ANTENNA)	1/2"	4	10'	-						1	1		
ALPHA (A2)		1-1	-	-	1 =: 1	-	_	1/2 COM COMPLET (MICE TO PARTERING)	1/2	-	- 10	2 950		-	-			_	_	124	
MELTIN VILL	177	(70)	000	=				POSESIDED FIDED HIMDED (DOS TO PRII)	3/8"	4	V5	2 RED	-				(27)	<del> </del>		+	
** DUA (A3)	0.	-011 05	ANDDEW	CONILL IDESA	,			ROSENBERGER FIBER JUMPER (DC6 TO RRU)	+		15'	3 950	RRUS-4426 B66	1	ST.				1		
ALPHA (A3)		101'-0"	ANDREW	SBNHH-1D85A	1			ROSENBERGER SINGLE PAIR DC CABLES (DC6 TO RRU)	_	3	15'	3 RED	RRUS-4449 B5/B12	1	-	-	FT-		1		
			+		-	-	<del></del> '	1/2" COAX JUMPER (RRU TO ANTENNA)	1/2"	6	10'	-	11100			+	+		<del></del>	+-	
							- '	LDF5-50A	7/8"	2	183'	_	RRUS-4478 B14	-	10			1	1		
ALPHA (A4)	0,	101'-0"	ANDREW	SBNHH-1D85A	1	-	-	ROSENBERGER FIBER JUMPER (DC6 TO RRU)	3/8"	2	15'	4 RED				4 -		DBC0108F1V92-1	-	7	
W 100		79880 //48	*					ROSENBERGER SINGLE PAIR DC CABLES (DC6 TO RRU)	7/16"	1	15'	_	RRUS-4415 B25	1	-	1		1	1	1	
				9	<u> </u>			1/2" COAX JUMPER (RRU TO ANTENNA)	1/2"	4	10'					1			-	1_	
2=		-	-		-		-	-	-	-	~	-	:=:	-	-	= .	191	-	-		
							1	LDF5-50A	7/8"	2	183'								1	1	
BETA (B1)	110	101"-0"	KMW	ET-X-UW-68-14-65-18-IR-AT	т 1	_	_	ROSENBERGER FIBER JUMPER (DC6 TO RRU)	3/8"	1	15'	1 BLUE	RRUS-32 B30	1		<u>=</u>		DBC0108F1V92-1	-		
U.S. Lier	afenso	MAN SAME		EI-A-011 00 11 00	(39)			ROSENBERGER SINGLE PAIR DC CABLES (DC6 TO RRU)	7/16"	1- 1-	15'	in the seco	KK03-02 000	0(53)				D500.00.	1	2	
		<u> </u>			<u> </u>			1/2" COAX JUMPER (RRU TO ANTENNA)	1/2"	4	10'		2 17 7 7			1			l'	$\perp$	
BETA (B2)	50	- 1	1.5	N-11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	==	= ==	(20)	<u> </u>	-	-		2 BLUE	= =	:=::	137	E=1	()				
								ROSENBERGER FIBER JUMPER (DC6 TO RRU)	3/8"	4	15'		RRUS-4426 B66	1					· '		
BETA (B3)	110	101'-0"	KATHREIN	800372965	1	72.5	77.0	ROSENBERGER SINGLE PAIR DC CABLES (DC6 TO RRU)	7/16"	3	15'	3 BLUE					-	(77)		1 = '	
					'	'		1/2" COAX JUMPER (RRU TO ANTENNA)	1/2"	8	10'	1	RRUS-4449 B5/B12	1	1 - 1		!	(	i ='	1_	
								LDF5-50A	7/8"	2	183'		50UC 4479 D14	Lag					( '		
200	****		- VIIII				ſ	ROSENBERGER FIBER JUMPER (DC6 TO RRU)	3/8"	2	15'		RRUS-4478 B14	-	1	1		1-222-225-1102	1	1	
BETA (B4)	110	101'-0"	KMW	ET-X-UW-68-14-65-18-IR-AT	- 1	-	-	ROSENBERGER SINGLE PAIR DC CABLES (DC6 TO RRU)	7/16"	1	15'	4 BLUE	505	10		_	-	DBC0108F1V92-1	1	2	
		1		,	'			1/2" COAX JUMPER (RRU TO ANTENNA)	1/2"	4	10'	1	RRUS-4415 B25	- 23	1	1		1	(	1	
-	÷	-	-	-	-	-	-	- L	-	-	_	-		-	-	-	7= 1	147	-		
		1						LDF5-50A	7/8"	2	183					D. D			(		
(4.1)		1			1		1	ROSENBERGER FIBER JUMPER (DC6 TO RRU)	3/8"	1	15'	†						1	1		
GAMMA (G1)	245	101'-0"	KMW	ET-X-UW-68-14-65-18-IR-AT	1	-	-	ROSENBERGER SINGLE PAIR DC CABLES (DC6 TO RRU)	7/16"	1	15'	1 GREEN	RRUS-32 B30	1	100	1	-	DBC0108F1V92-1	- 1		
		1			1		+	1/2" COAX JUMPER (RRU TO ANTENNA)	1/2"	4	10'	-							'		
GAMMA (G2)	_	-	-	-	-	-	-		- 1	-	-	2 GREEN	=	-	1	_				+	
				100				ROSENBERGER FIBER JUMPER (DC6 TO RRU)	3/8"	4	15'	2 0112211					+	1.20			
GAMMA (G3)	245*	101'-0"	KATHREIN	800372965	1	'		ROSENBERGER SINGLE PAIR DC CABLES (DC6 TO RRU)	_	3	15'	3 GREEN	RRUS-4426 B66	1	UTC.	1			1		
Braum (no.)	2.70	101 -0	IVIII III EII	000372400	* 1	2	1		1/2"	8		- 3 6,,,,,,	RRUS-4449 B5/B12	1	100		5172		1	1	
	-	<del></del>	<del></del>		+	<del></del>	+	1/2" COAX JUMPER (RRU TO ANTENNA)  LDF5-50A	7/8"		10'	-			$\vdash$		+	<del></del>		-	
		1 '		'	1 '	'		ROSENBERGER FIBER JUMPER (DC6 TO RRU)	3/8"	2	183'	-	RRUS-4478 B14		1	1		1	, ,	Í	
GAMMA (G4)	245*	101'-0"	KMW	ET-X-UW-68-14-65-18-iR-AT	3	-	2=2			2	15'	4 GREEN			$\vdash$	= 7	-	DBC0108F1V92-1	en i	1	
		1		1	1 '	1		ROSENBERGER SINGLE PAIR DC CABLES (DC6 TO RRU)		- 1	15'	-	RRUS-4415 B25	1	-	f			,	1	
		<u> </u>			<b></b> '	<u> </u>		1/2" COAX JUMPER (RRU TO ANTENNA)	1/2"	4	10'	<del></del>			$\vdash$		$\perp$		<u>'</u>	+	
				TOTAL EXISTING	7		J	1	FIBER	21	315'		TOTAL	12	3	TOTAL	20	TOTAL	=		
				TOTAL PROPOSED	2		J	1	POWER	15	225'										
				OVERALL TOTAL	9		J	1	JUMPERS	48	480'	1									
								TOTAL	7/8" ACTIVE	12	2,196										
								1	COAX			-								=	
							,	(	5/16								4 141	VACTIVE FOUIPMEN	'NIT TO F	200	

\* INACTIVE EQUIPMENT TO REMAIN.

# BILL OF MATERIALS SCALE: N.T.S.

549"

DC/FIBER DEMARCATION BOX									
RAYCAP	ES								
MOUNTING HEIGHT	MODEL	QUANTITY	MODEL	SIZE	QUANTITY	LENGTH PER LINE			
2224 224	200 42 50 42 05	140	ROSENBERGER (18) PAIR FIBER TRUNK	3/8"	3	183'-0"			
101'-0"	DC6-48-60-18-8F	3	(6) #8 AWG TINNED COPPER CONDUCTORS	3/4"	6	183'-0"			





smartlink

1997 ANNAPOLIS EXCHANGE PARKWAY SUITE 200 ANNAPOLIS, MD 21401

> FL01 FA NO.: 10070109

	CONSTRUCTION			DRAWINGS	
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	0	09/09/19	FOR	CONSTRUCTION	



Dewberry Engineers Inc.
800 NORTH MAGNOLIA AVE.
SUITE 1000
ORLANDO, FI, 32803
PHONE: 407.843.5120
FAK BOT, 349.8684
ELORIDA C. 6. 1004



DRAWN BY:	HMP
REVIEWED BY:	NRK
CHECKED BY:	JAA
PROJECT NUMBER:	50065214
JOB NUMBER:	50108842

3601 VINKEMULDER ROAD COCONUT CREEK, FL 33073

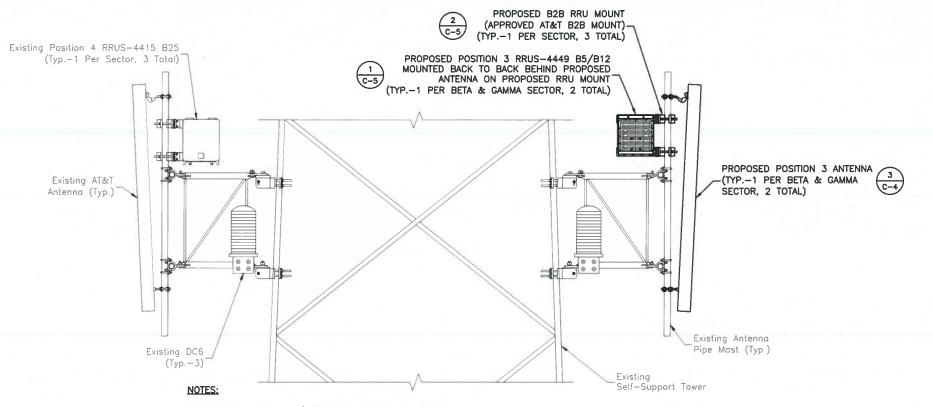
SHEET TITLE

SITE ADDRESS

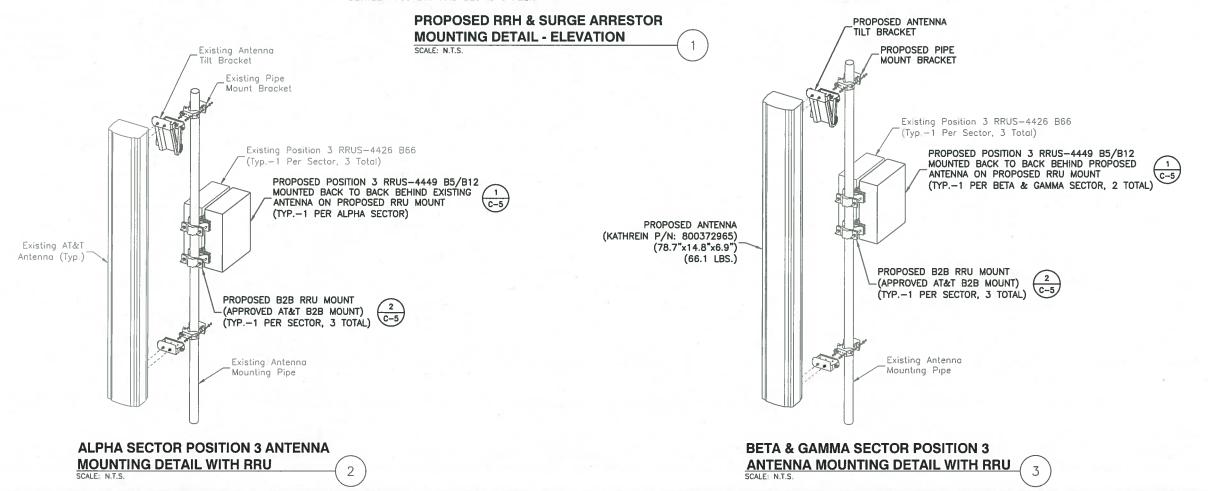
ANTENNA & CABLE SCHEDULE

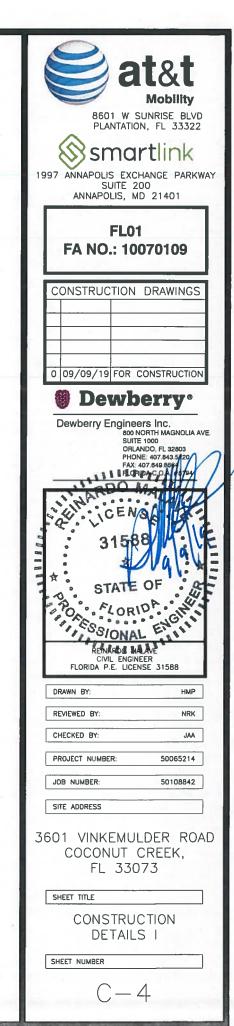
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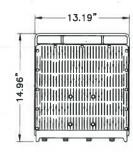
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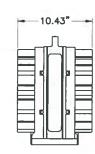


- . MAINTAIN TYPICAL 3' MINIMUM ANTENNA SEPARATION.
- MAINTAIN MINIMUM OF 36" EDGE TO EDGE SEPARATION BETWEEN THE 700 B12, B17, B29
  AND 700 B14 ANTENNAS PER SECTOR AND THE ANTENNA BACKPLANES OF SAME ON
  DIFFERENT FACE'S (ADJACENT SECTORS ON SAME RAD CENTER). ANTENNA SEPARATION
  BETWEEN 700 B17 AND B29 IS 6 FEET.









RRUS-4449 B5/B12

MANUFACTURER: ERICSSON

MODEL NUMBER: RRUS-4449 B5/B12

DIMENSIONS: WEIGHT:

73 I RS

14.96"Hx13.19"Wx10.43"D

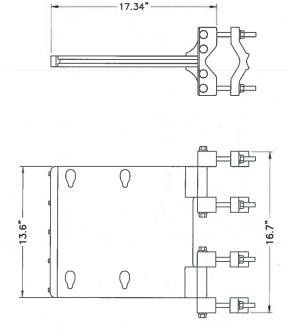
(EXCL. MOUNT)

NOTES:

- GROUND EQUIPMENT AND MOUNTS PER MANUFACTURER'S RECOMMENDATIONS AND AT&T STANDARDS.
- MOUNT EQUIPMENT PER
   MANUFACTURER'S
   RECOMMENDATIONS.
- 3. CONFIRM REQUIRED EQUIPMENT WITH LATEST RFDS.

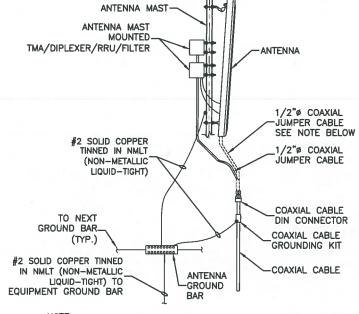
RRUS-4449 B5/B12 DETAIL





ERICSSON B2B RRU MOUNT DETAIL (AT&T APPROVED B2B MOUNT)

E: N.T.S.

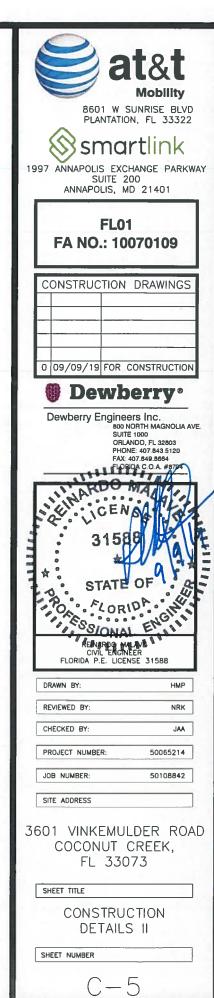


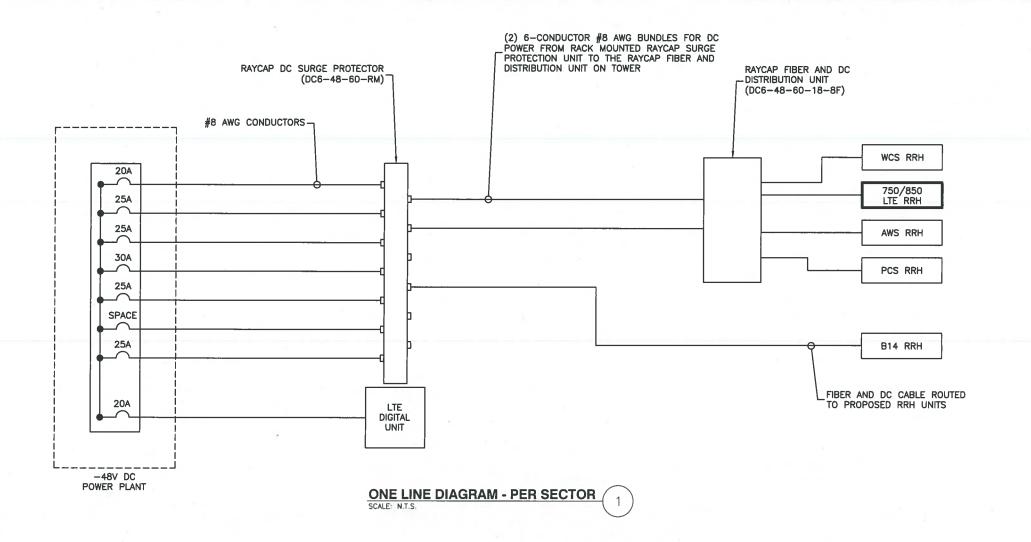
### NOTE:

- IF ANTENNA DOES NOT REQUIRE TMA OR DIPLEXER ROUTE 1/2" JUMPER CABLE DIRECTLY TO ANTENNA.
- 2. REFERENCE AT&T BONDING & GROUNDING PRACTICE TP76416.

TYPICAL ANTENNA GROUNDING DETAIL

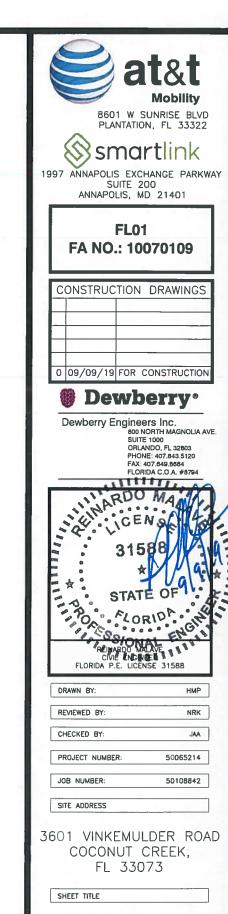
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		ERICSSON RRU
ERICSSON RADIO	SIZE BREAKER	TECHNOLOGY
RRUS-32 B66	30 AMP	AWS (2100)
RRUS-32 B30	20 AMP	WCS (2300)
RRUS-32 B2	30 AMP	PCS (1900)
RRUS-11	25 AMP	VARIOUS BANDS (700 [B12], 850 [B5], 1900 [B2], 2100 [B4]
RRUS-12 + A2	25 AMP	VARIOUS BANDS (850 [B5], 1900 [B2], 2100 [B4]
RRU-4415 B25	25 AMP	1900
RRU-4426 B66	30 AMP	2100
RRU-4478 B14	25 AMP	700
RRU-4478 B5	25 AMP	850
RRUS-E2 B29	25 AMP	700
RRUS-4449 B5/B12	2/25 AMP	700/850
RRUS-8843 B2/B66	2/30 AMP	1900/2100
RRUS-2203 B5	10 AMP	850
RRUS-2205 B46	10 AMP	5 GHz





ONE LINE DIAGRAM

SHEET NUMBER