



AT&T

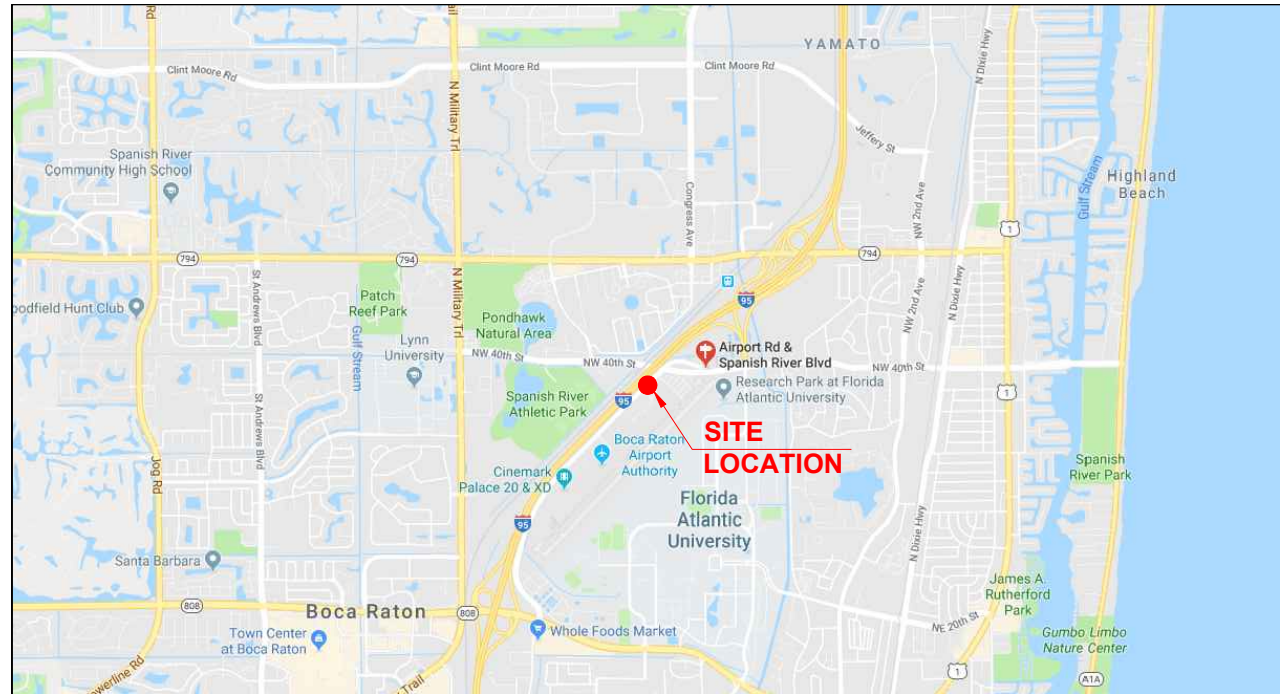
NODE NAME
CRAN_RTFL_PBC27_593

PACE NUMBER
MRSFL018250

PTN NUMBER
2551A0MLNS

STRUCTURE TYPE
STANDALONE CONCRETE POLE

REGIONAL MAP



AT&T

3210 Lake Emma Road, Lake Mary, FL 32746



Engineering Office
4461 Parkbreeze Ct
Orlando, FL 32808

PROFESSIONAL LICENSURE

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDG THEY COMPLY WITH THE REQUIREMENT OF ALL APPLICABLE CODES AND ORDINANCES

REVISIONS

BY	DESCRIPTION	DATE



Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
Check positive response codes before you dig!

PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC
CHECK BY:	DRAFTPROS LLC
ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_593
TITLE:	COVER
SCALE:	NTS
PAGE:	01
OF:	24

INDEX OF SHEET

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- 07 OF 24 - NEW EQUIPMENT ELEVATION
- 08 OF 24 - NEW POLE ELEVATION
- 09 OF 24 TO 12 OF 24 - PHOTO SIM
- 13 OF 24 - RF SCHEMATIC's
- 14 OF 24 - ANTENNA DETAIL
- 15 OF 24 TO 16 OF 24 - BRACKET FOR ANTENNA & RRU'S
- 17 OF 24 - RRU'S DETAIL
- 18 OF 24 - TRANSECTOR DETAIL
- 19 OF 24 - METERBASE DETAIL
- 20 OF 24 - RISER / GROUNDING DETAILS
- 21 OF 24 - GENERAL NOTES
- 22 OF 24 - ROW CONSTRUCTION NOTES
- 23 OF 24 TO 24 OF 24 - STRUCTURAL ANALYSIS

PROJECT INFORMATION

AT&T ADDRESS : 3210 LAKE EMMA ROAD
LAKE MARY, FL 32746

PROPERTY OWNER : PUBLIC RIGHT OF WAY

APPLICANT : NEW CINGULAR WIRELESS PCS LLC

AT&T CONTACT 1: SAM ABS (205) 616-7473

AT&T CONTACT 2: KEVIN HARRISON (321) 388-9513

SITE ID : PENDING

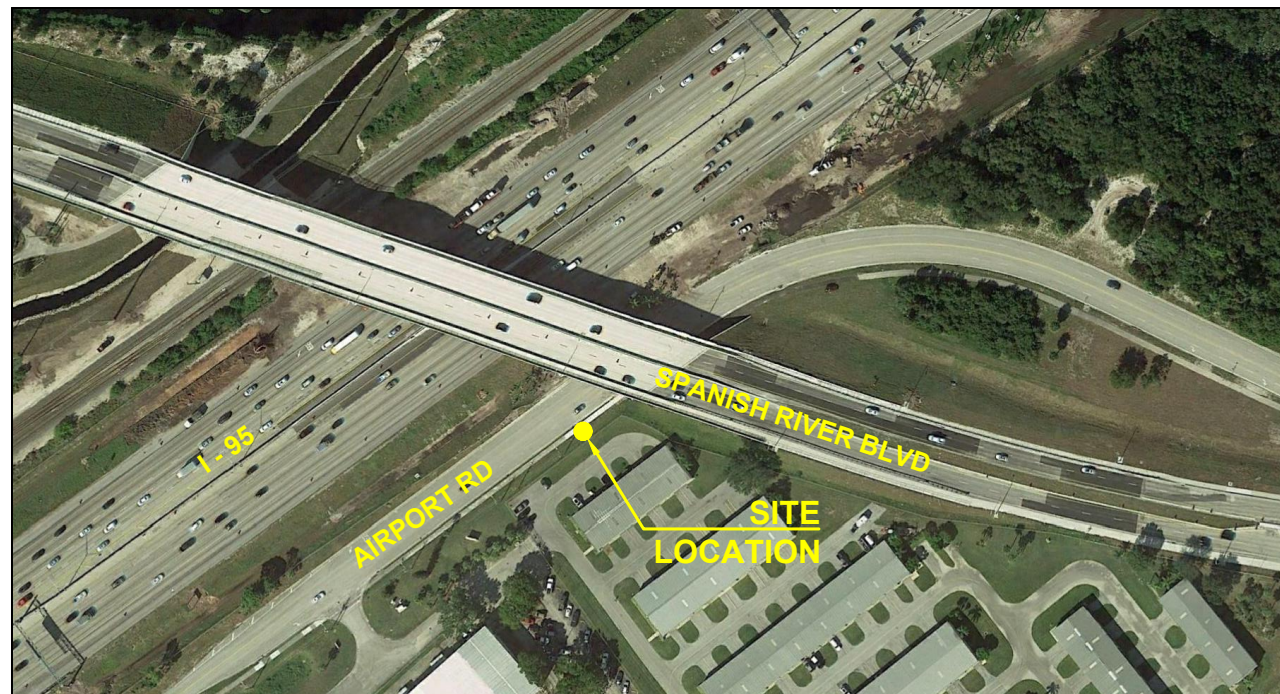
PACE NUMBER : MRSFL018250

PTN NUMBER : 2551A0MLNS

USID NUMBER : 243121

FA CODE : 14848745

VICINITY MAP



PERMITTING

JURISDICTION : CITY OF BOCA RATON

PROJECT SUMMARY

INSTALLATION OF NEW
SMALL CELL EQUIPMENT ON
NEW CONCRETE POLE
FIBER OPTIC CABLE AND POWER CABLE
VIA NEW CONDUIT

PROJECT CONTACTS

AT&T:

Professional – Tech Vendor Management (Wireless Engineering) SAM ABS
3210 LAKE EMMA ROAD
LAKE MARY, FL 32746
PHONE: (205) 616-7473
EMAIL: MC002D@att.com

DRAFTPROS LLC:

ENGINEERING & SURVEYING CONTACT: TIM HEWITT
PHONE: (317) 903 - 7521
EMAIL: thewitt@draftprosinc.com

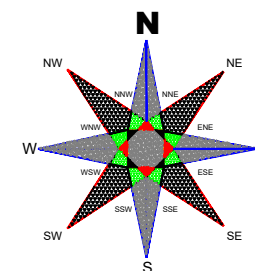
DRIVING DIRECTIONS

DRIVING DIRECTIONS FROM 329 NW DIXIE HIGHWAY , STUART, FL 34994 :

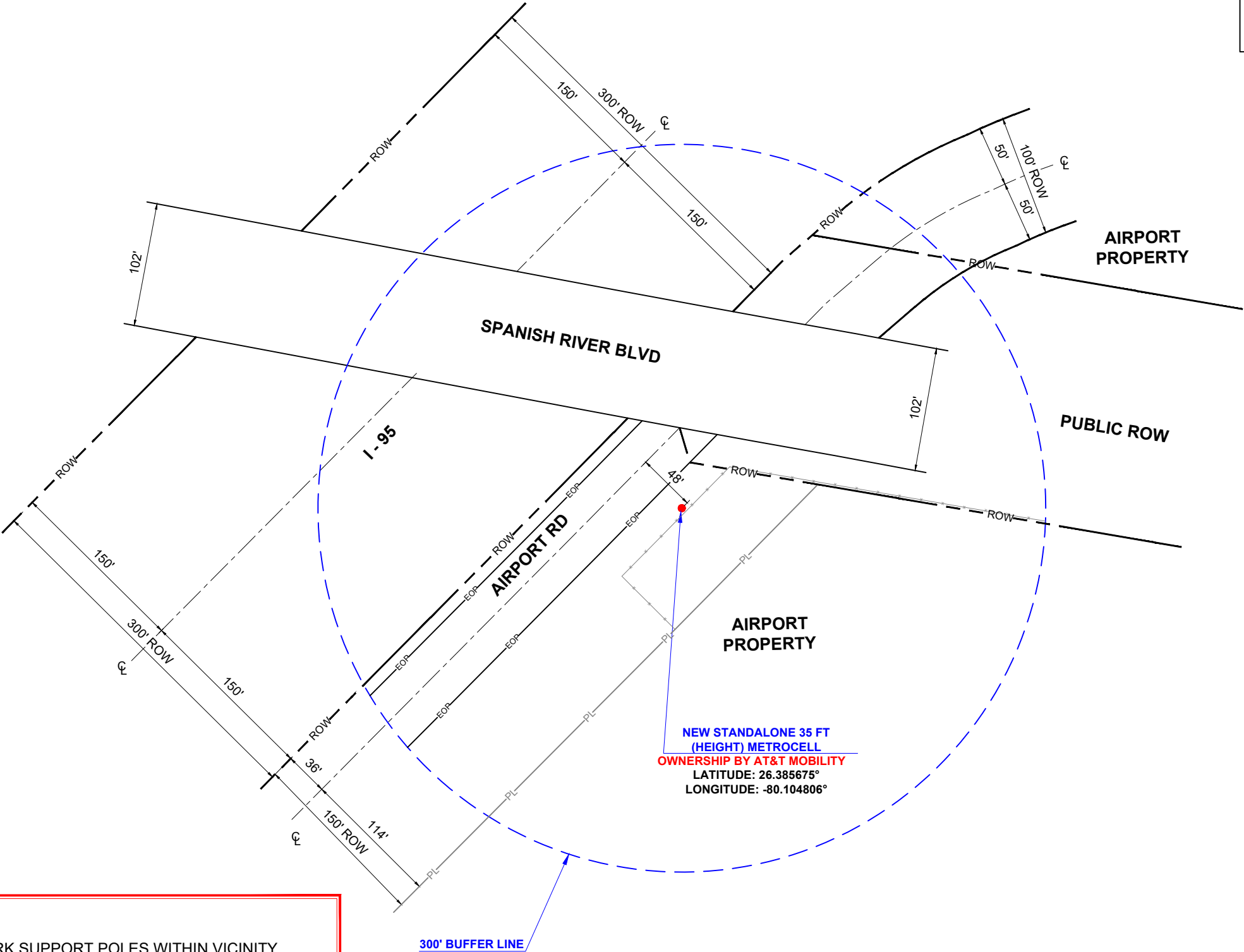
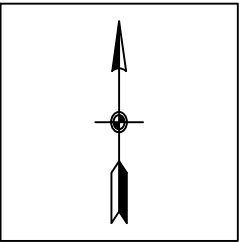
1. HEAD SOUTHWEST ON NW DIXIE HWY TOWARD NW WRIGHT BLVD - 366ft
2. TURN RIGHT ONTO NW WRIGHT BLVD THEN USE ANY LANE TO TURN LEFT ONTO US-1 S - 1.8 mi
3. SLIGHT RIGHT ONTO SW PALM CITY RD THEN TURN RIGHT ONTO FL-714 W THEN TURN LEFT ONTO SW HIGH MEADOW AVE -7.6 mi
4. MERGE ONTO I-95 S THEN TAKE EXIT 48 FOR FL-794/YAMATO RD - 54.3 mi
5. KEEP RIGHT TO CONTINUE TOWARD NW 40TH ST/SPANISH RIVER BLVD THEN CONTINUE ONTO EXIT 48A - 1 mi
6. TURN RIGHT ONTO NW 40TH ST/SPANISH RIVER BLVD - 0.2 mi
7. TURN RIGHT AT THE 1ST CROSS STREET ONTO AIRPORT RD - 0.3 mi
8. TURN LEFT THEN TURN RIGHT - 405 ft
9. TURN LEFT - 89 ft

LATITUDE : 26.385675°

LONGITUDE: -80.104806°



NO NETWORK SUPPORT NODES AND NO USABLE UTILITY POLE WITHIN 300' OF PROPOSED POLE



NOTES:

- * NO OTHER NETWORK SUPPORT POLES WITHIN VICINITY
- * NO MUNICIPAL PARK IN AREA
- * AREA IS COMMERCIAL ZONE
- * AIRPORT ROAD ROW IS OVER 50' WIDE

PROFESSIONAL LICENSURE

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REVISIONS

BY	DESCRIPTION	DATE

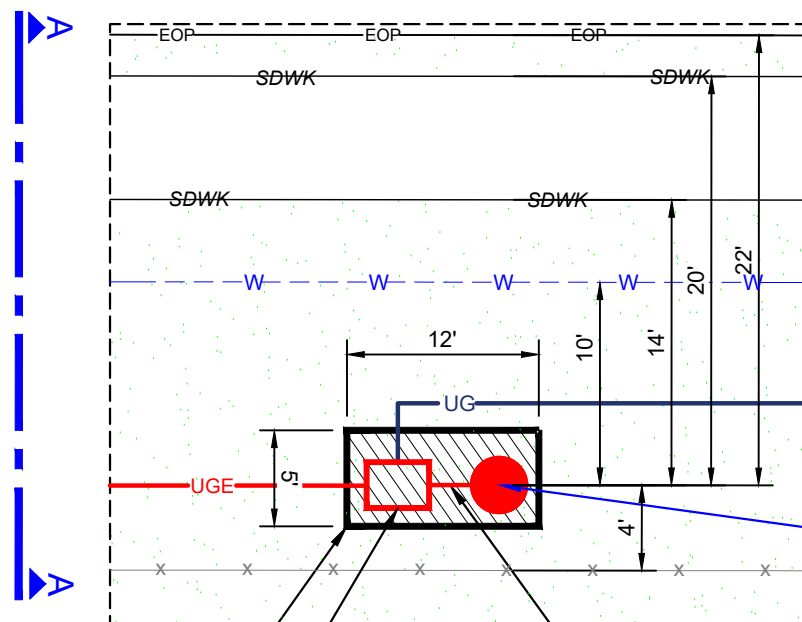


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Check positive response codes before you dig!

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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_593	
TITLE:	OVERALL SITE PLAN	
SCALE:	PAGE:	OF:
1" = 100'	02	24

SCALE 1:10

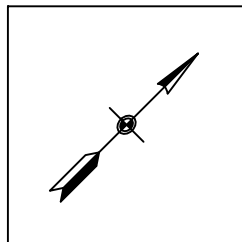


REMOVE & RESTORE 60
OF SOD TO EQUAL OR
BETTER CONDITION.

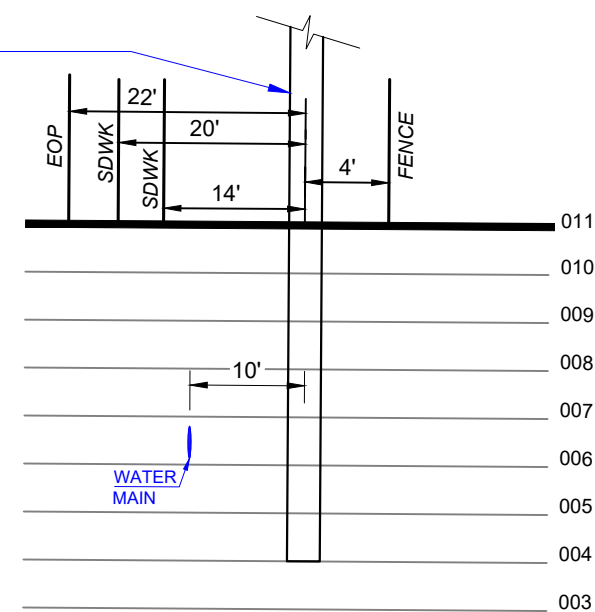
HANDHOLE
"FCA173024T-0006"
 INSTALL NEW HH (17"x30"x24").
 REMOVE & RESTORE 44 SF OF SOD
 TO EQUAL OR BETTER CONDITION.

TRENCH
INSTALL (1) 2" CONDUIT AT 12" OF
DEPTH FOR POWER CABLE

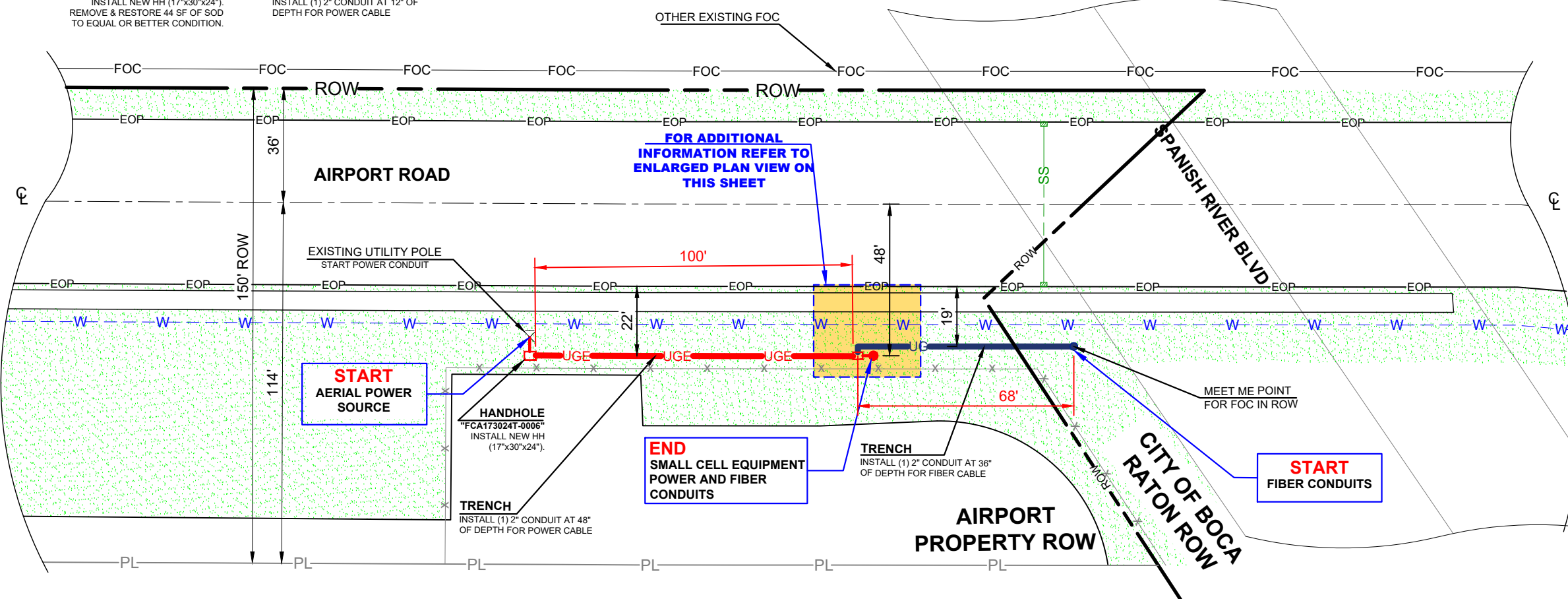
**NEW STANDALONE
35 FT (HEIGHT)
METROCELL
OWNERSHIP BY
AT&T MOBILITY**








































**NEW STANDALONE
35 FT (HEIGHT)
METROCELL
OWNERSHIP BY
AT&T MOBILITY**



HORIZONTAL SCALE: 1"= 16'
VERTICAL SCALE: 1"= 10'



REVIEW & LEGEND																		
LABOR SUMMARY THIS PAGE		QTY		LINETYPES							SYMBOLGY							
D-BORE, INSTALL (1) 2" CONDUITS		LF		PROPOSE AERIAL		CENTER LINE		GAS		SANITARY SEWER		CONCRETE POLE		POWER MANHOLE		TRAFFIC SIGNAL HANDHOLE		STREET LIGHT
TRENCH, INSTALL (1) 2" CONDUITS	175	LF		PROPOSE POWER UNDERGROUND		EASEMENT		OTHER FOC		STORM DRAIN		WOOD POLE		POWER HANDHOLE		TELCO MANHOLE		TRAFFIC SIGNAL POLE
REMOVE & RESTORE ASPHALT	-	SF		PROPOSED FIBER ROUTE		EDGE OF PAVEMENT		POWER UNDERGROUND		WATER		QUAZITE PULLBOX		SANITARY SEWER HANDHOLE		WATER VALVE/SPRINKLER		SOD
REMOVE & RESTORE SOD	60	SF		RIGHT OF WAY		STREET LIGHT		TELCO				NEW STREET LIGHT POLE		STORM SEWER HANDHOLE		FIRE HYDRANT		ASPHALT RESTORATION
INSTALL HANDHOLE (17"x30"x24")	1	EA		SIDEWALK		TRAFIC		FENCE				GAS VALVE/HANDHOLE		STORM DRAIN/CATCH BASIN/ DRAIN/OUT.		TREE		CONCRETE RESTORATION



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REVISIONS

[illegible]

Sunshine811

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CHECK BY: **DRAFTPROS LLC**

ORIGINAL SUBMITTAL: FEB 20, 2019

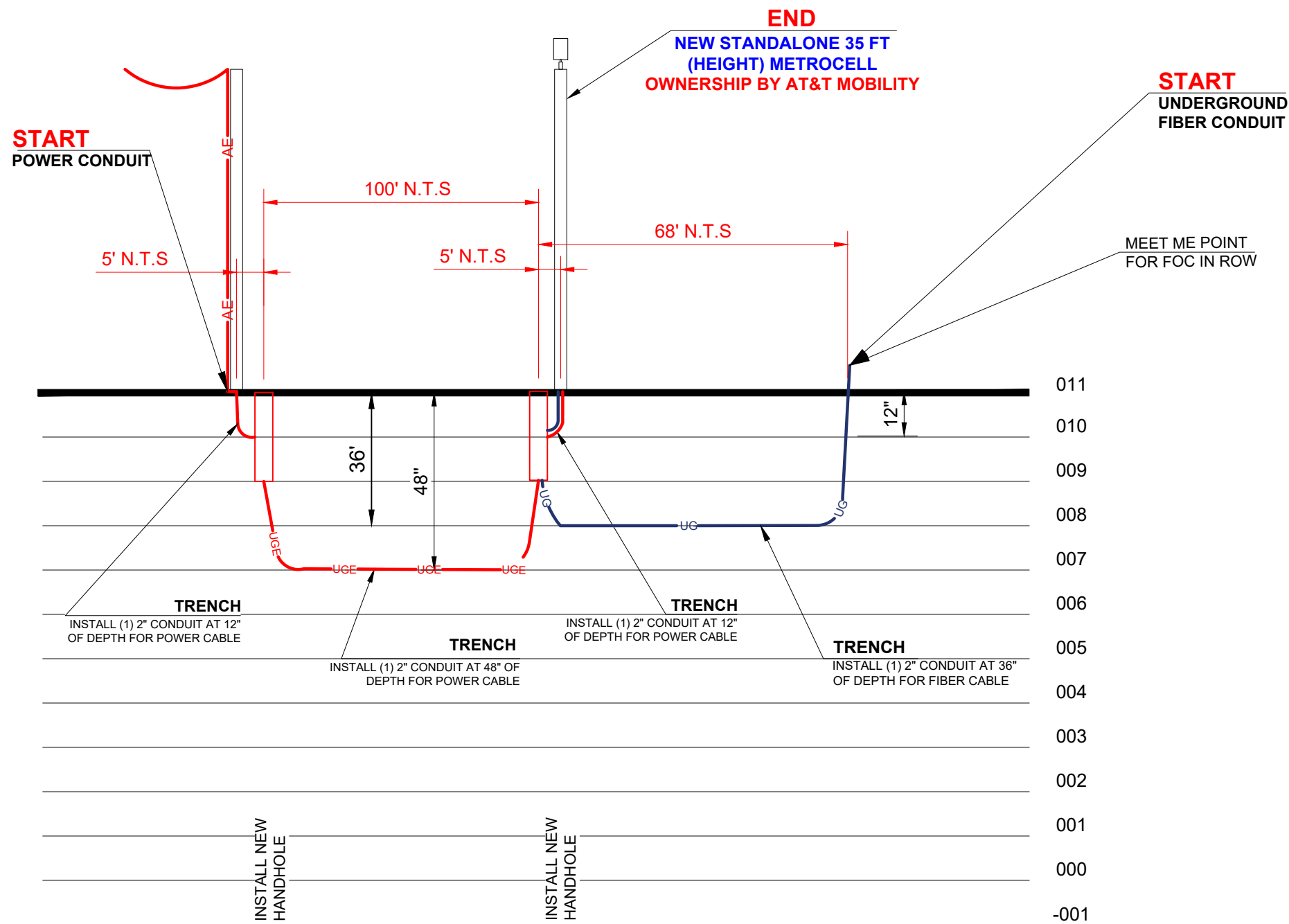
NODE NAME #: CRAN RTFL PBC27 593

TITLE: _____

SCALE:	PAGE:	OF:
1" = 100'	03	24

24

"UNKNOWN ELEVATION"
NO ELEVATION RECORDS AVAILABLE,
CONTRACTOR SHALL VERIFY DEPTH
BEFORE TRENCHING OR BORING



PROFILE VIEW

HORIZONTAL SCALE: 1"= 30' N.T.S
VERTICAL SCALE: 1"= 3'



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BY	DESCRIPTION	DATE

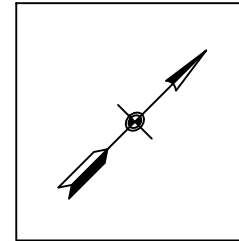
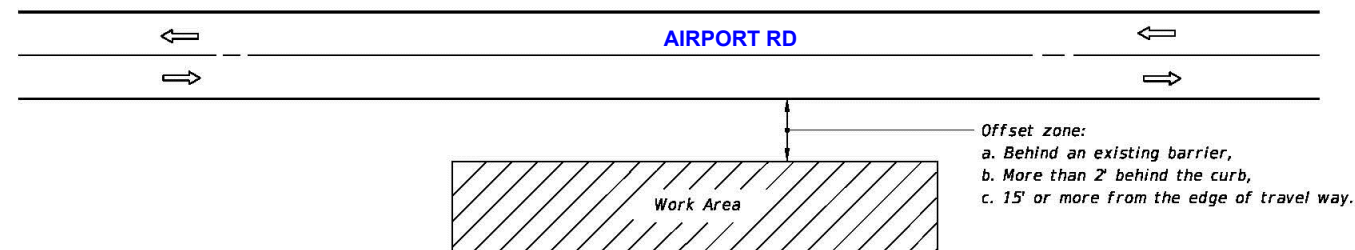


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NODE NAME #:	CRAN_RTFL_PBC27_593	
TITLE:	PROFILE VIEW	
SCALE:	NTS	PAGE: 04 OF: 24

10/16/2017 8:03:41 AM



SYMBOLS

-  Work Area
-  Lane Identification + Direction of Traffic

GENERAL NOTES

1. If the work operation (excluding establishing and terminating the work area) requires that two or more work vehicles cross the offset zone in any one hour, traffic control will be in conformance with Index 102-602.
2. No special signing is required.
3. When a side road intersects the highway within the work area, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. When construction activities encroach on a sidewalk refer to Index 102-660.
5. For general TCZ requirements and additional information, refer to Index 102-600.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE BEHIND AN EXISTING BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF TRAVEL WAY.



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NODE NAME #:	CRAN_RTFL_PBC27_593	
TITLE:	TRAFFIC CONTROL PLAN	
SCALE:	NTS	PAGE: 05 OF: 24

LAST REVISION	DESCRIPTION:	FDOT	FY 2018-19 STANDARD PLANS	TWO-LANE, TWO-WAY, WORK OUTSIDE SHOULDER	INDEX 102-601	SHEET 1 of 1
11/01/17						

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REVISIONS

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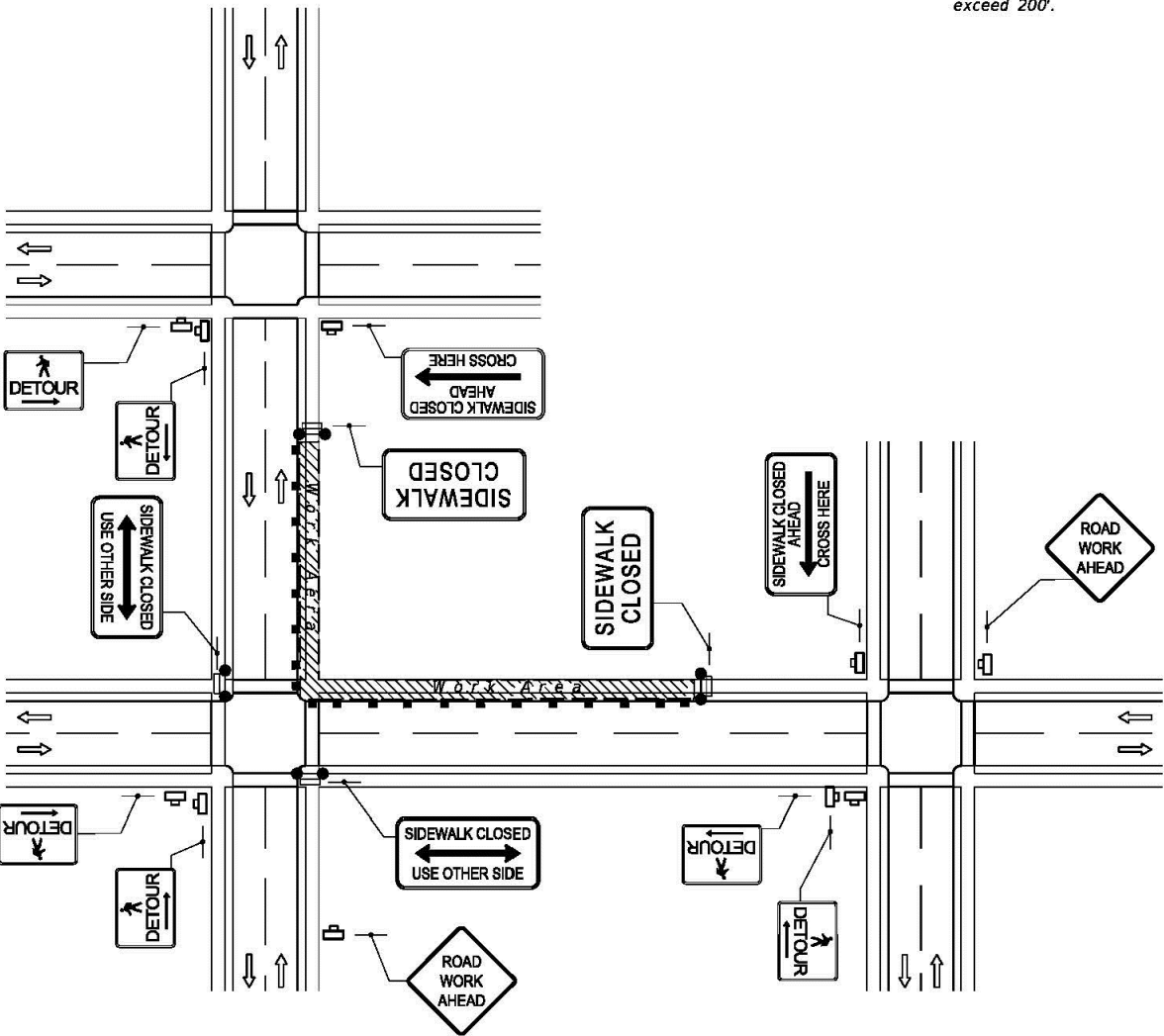
DRAWING BY:	DRAFTPROS LLC
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ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_593
TITLE:	TRAFFIC CONTROL PLAN
SCALE:	NTS
PAGE:	06
OF:	24

GENERAL NOTES:

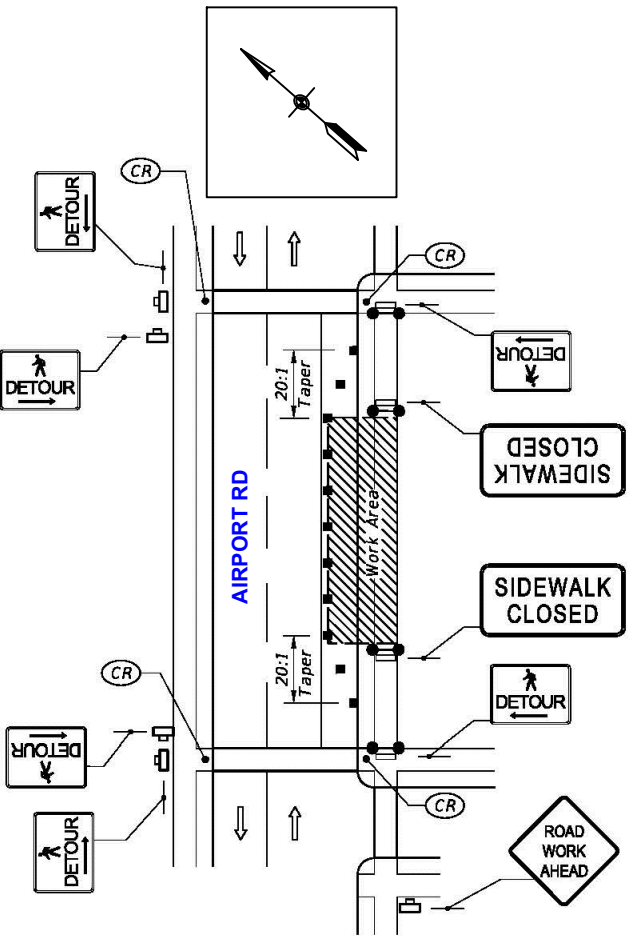
- When encroaching work requires a sidewalk closure for 60 minutes or greater, provide an alternate pedestrian route.
- For spacing of vehicular Channelizing Devices, see applicable vehicular temporary traffic control Indexes.
- Cover or deactivate pedestrian traffic signal display(s) controlling closed crosswalks.
- For post mounted signs located near or adjacent to a sidewalk, maintain a minimum 7' clearance from the bottom of the sign panel to the surface of the sidewalk.
- Provide a 5' wide temporary walkway, except where space restrictions warrant a minimum width of 4'. Provide a 5' x 5' passing space for temporary walkways less than 5' in width at intervals not to exceed 200'.
- Provide a cross-slope with a maximum value of 0.02 for all temporary walkways.
- Maintain temporary walkway surfaces and ramps that are stable, firm, slip-resistant, and free of any obstructions or hazards such as holes, debris, mud, construction equipment, and stored material.
- Remove temporary walkways immediately after reopening of the sidewalk, unless otherwise noted in the plans.
- Meet the requirements of Index 522-002 for temporary curb ramps.
- Place pedestrian longitudinal channelizing device(s) across the full width of the closed sidewalk. For temporary walkways, similar to the Sidewalk Diversion, place LCDs to delineate both sides of the temporary walkway.
- For sidewalk diversions, ensure that there is sufficient R/W for placement of temporary sidewalk and pedestrian longitudinal channelizing devices.

SYMBOLS

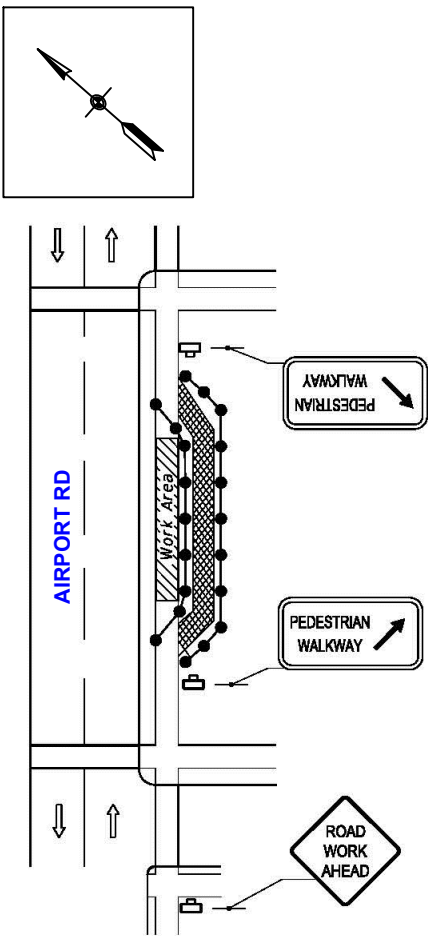
- Work Area
- Channelizing Device
- Work Zone Sign
- Required Locations For Either Temporary Or Permanent Curb Ramps.
- Lane Identification + Direction of Traffic
- Pedestrian Longitudinal Channelizing Device (LCD) with Mounted Work Zone Sign or separate Work Zone Sign
- Pedestrian Longitudinal Channelizing Device (LCD)
- Temporary Sidewalk



CROSSWALK CLOSURE AND PEDESTRIAN DETOUR



SIDEWALK DETOUR



SIDEWALK DIVERSION

PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS

INDEX
102-660
SHEET
1 of 1

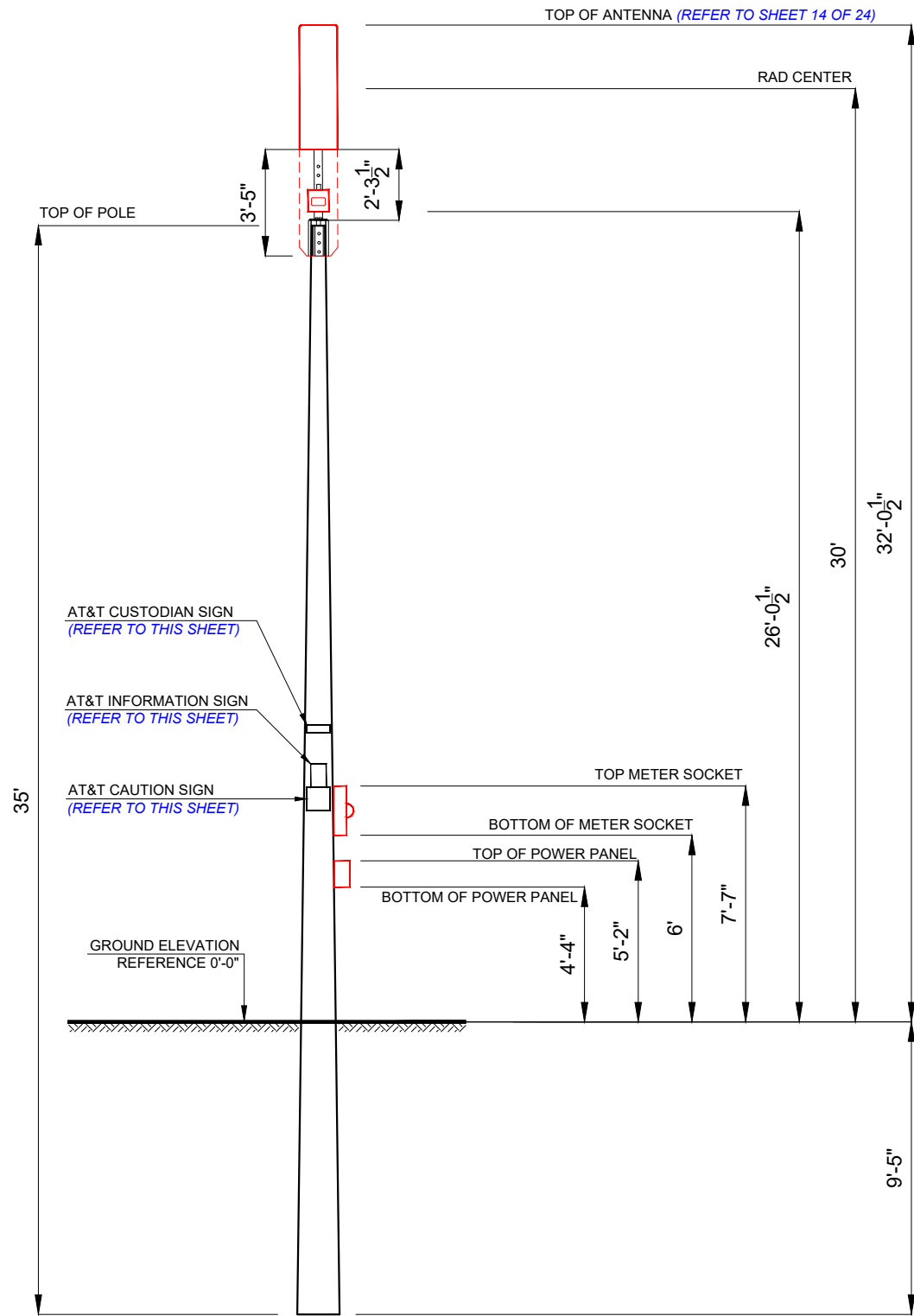


FY 2018-19
STANDARD PLANS

LAST
REVISION
11/01/17

10/16/2017 8:17:22 AM

NEW "AT&T MOBILITY" POLE

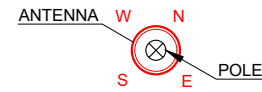


FROM SOUTHEAST LOOKING NORTHWEST

SCALE 3/16" = 1'-0"

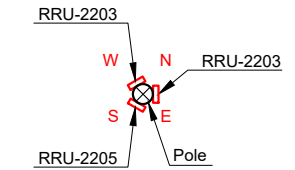
11"x17" PRINT IS THE FULL SCALE
FORMAT. ANY SIZE OTHER THAN THAT
IS AT REDUCED SCALE.

TOP VIEW @ ELEVATION 32'-0 1/2"



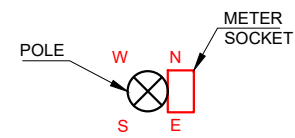
AMPHENOL
OMNI ANTENNA
MODEL C2U3MT360X12Fxs0
48.0"(H) x 14.6" (Ø) - 36.2 lbs
900091 SHROUD POLE TOP
WIDE DIAMETER MOUNT WITH
RADIO MOUNTING
65" approx.(H) x 16"(Ø)
(REFER TO SHEET 15 & 16 OF 24)

BOTTOM VIEW @ ELEVATION 26'-0 1/2"



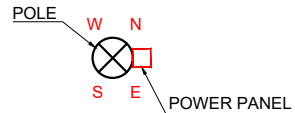
(2) - ERICSSON RRU-2203
RADIO UNIT
MINIMUM AC FUSE RATING (4 AMP)
7.87"(H)x7.87"(W)x3.94"(D),
10 lbs ea,
(1) - ERICSSON RRU-2205
RADIO UNIT
MINIMUM AC FUSE RATING (6 AMP)
7.87"(H)x7.87"(W)x3.94"(D),
11 lbs ea,
(REFER TO SHEET 17 OF 24)

BOTTOM VIEW @ ELEVATION 6'-0"



METER SOCKET
UTE4213CCH
19"(H)x13"(W)x4.94"(D) - 25 lbs,

BOTTOM VIEW @ ELEVATION 4'-4"

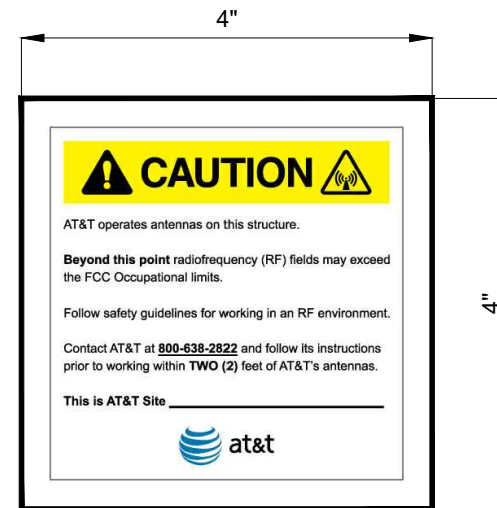
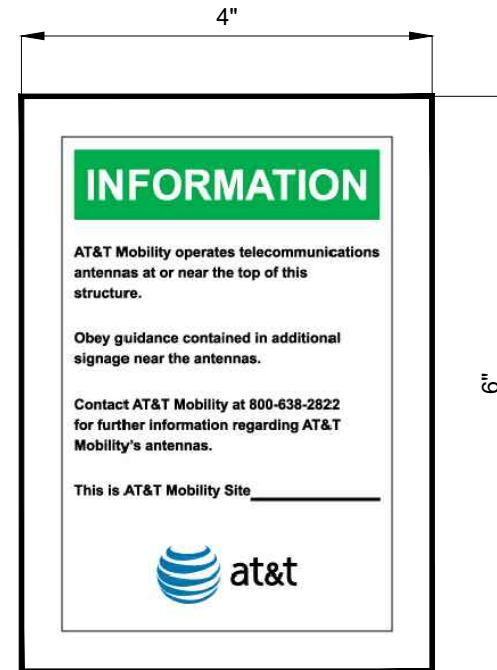
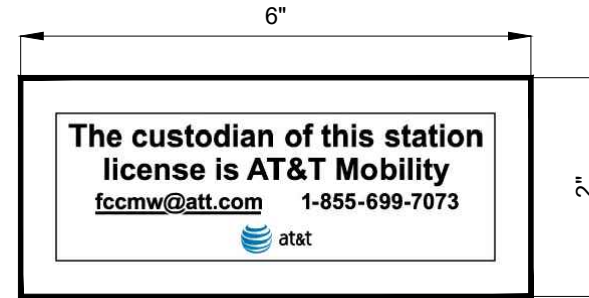


AC DISTRIBUTION PANEL
WITH POWER PROTECTION -
SC-MM08-001
120 VAC SINGLE PHASE / 60A
8.0"(H)x12.0"(W)x4.0"(D) - 15 lbs,
sq in. VOLUME = 384 cu in

OTHERS (CABLES)

COAXIAL CABLE:
O.D. = 0.50" - LENGHT = 8x6'
O.D. = 0.50" - LENGHT = 4x6'

POWER CABLE:
O.D. = 0.25" - LENGHT = 1x27'
O.D. = 0.25" - LENGHT = 2x25'



AT&T WARNING SIGNS

SCALE = NTS



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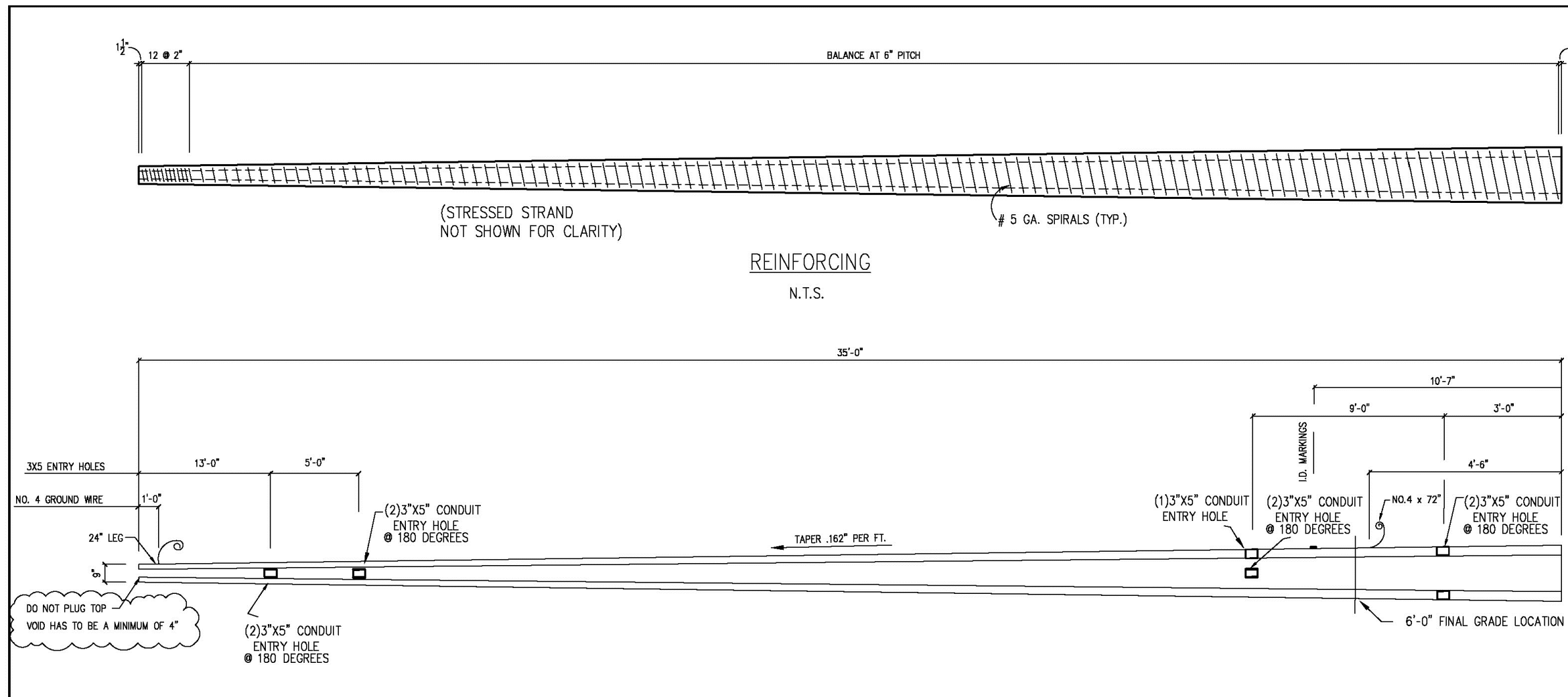
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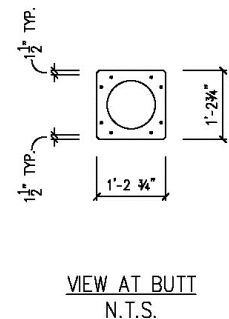
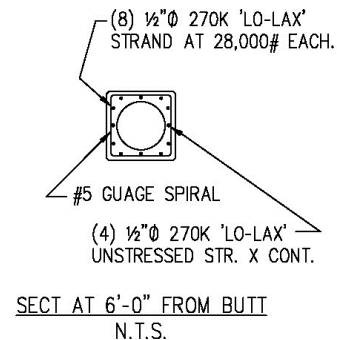
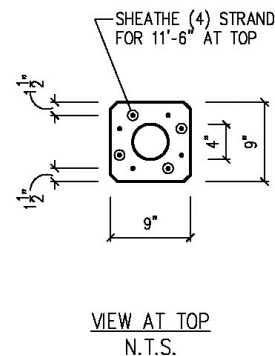
TITLE:
NEW EQUIPMENT ELEVATION

SCALE:	PAGE:	OF:
3/16" = 1'-0"	07	24



NOTE:
THIS POLE SHALL MEET OR EXCEED REQUIREMENTS
SET FORTH BY F.D.O.T. SPECIFICATIONS


NOTE:
POLE MUST BE PICKED UP AND STORED
AT TWO POINTS, APPROX. 10'-0" FROM TOP AND
7'-0" FROM BUTT. CAUTION: LIFTING THIS POLE
WITH A SINGLE POINT PICK-UP WILL RESULT IN
DAMAGE TO THE POLE.



MATERIALS SPECIFICATION

A) $F'_C = 6,000$ PSI (DAYS)
B) $F'_{CI} = 3,500$ PSI (RELEASE)
C) $FS = 250$ KSI OR 270 KSI FOR
PRESTRESSING STRANDS
COMPLYING WITH ASTM A416
D) $FY = 60$ KSI FOR STIRRUPS AND
REINFORCING BARS PER
ASTM A615

IVB-35'



DATE: _____ BY: _____
DESCRIPTION: _____
REV: _____

DURA-STRESS Inc.
P.O. BOX 480779 LEESBURG, FL 34749-0779
PHONE (352) 787-1422 FAX (352) 787-0080
STRUCTURAL PRESTRESSED AND ARCHITECTURAL PRECAST CONCRETE PRODUCTS

JOB NAME: _____
LOCATION: _____
ARCHITECT: _____
ENGINEER: _____
CONTRACTOR: _____
PROJ. NO: _____

DRAWN: _____
CHK'D: _____
APPR: _____
DATE: _____
RELEASED: _____

DS JOB NO: _____
SHT: _____ OF: _____

**STRUCTURAL PRESTRESSED CONCRETE POLE
ELEVATION DETAIL**
SCALE = NTS

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TITLE:	NEW POLE ELEVATION
SCALE:	N.T.S.
PAGE:	08
OF:	24

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



CURRENT VIEW-FROM NORTHEAST LOOKING SOUTHWEST
SCALE = NTS



PROPOSED VIEW-FROM NORTHEAST LOOKING SOUTHWEST
SCALE = NTS



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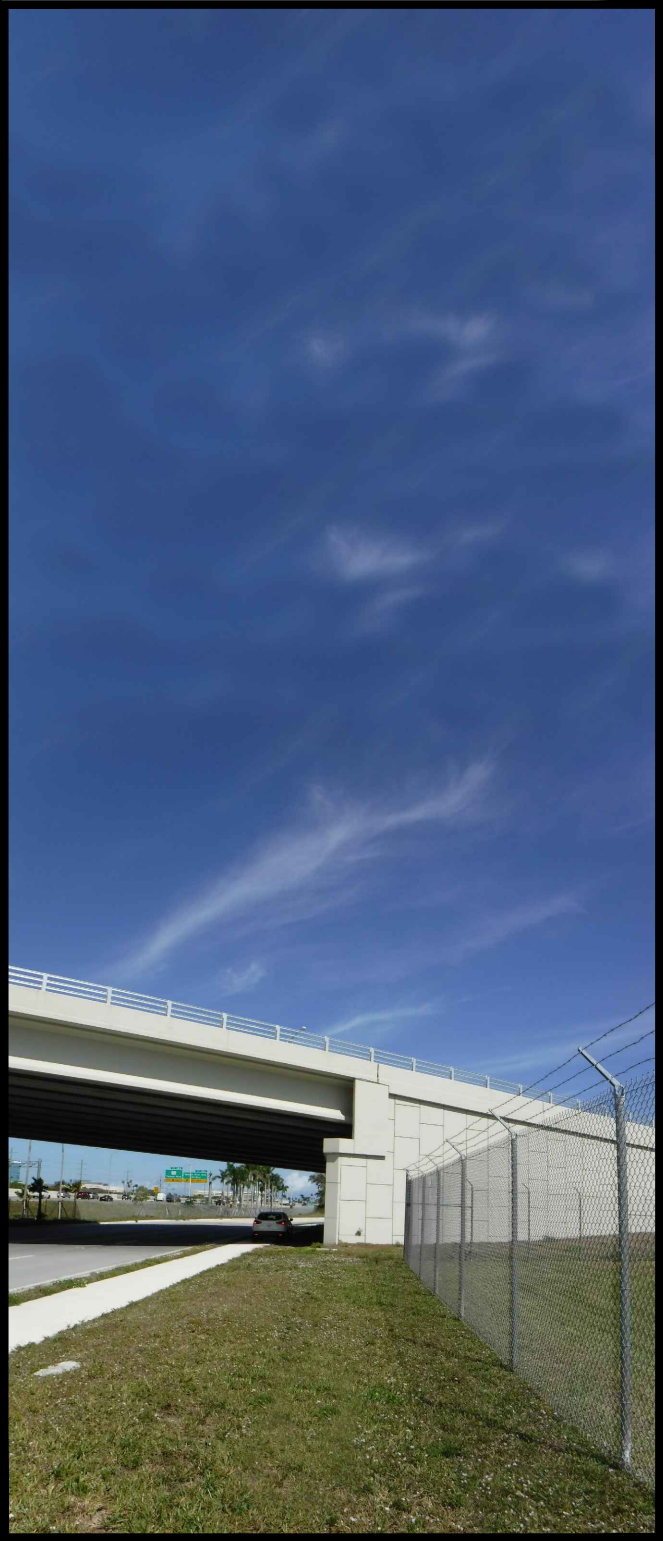


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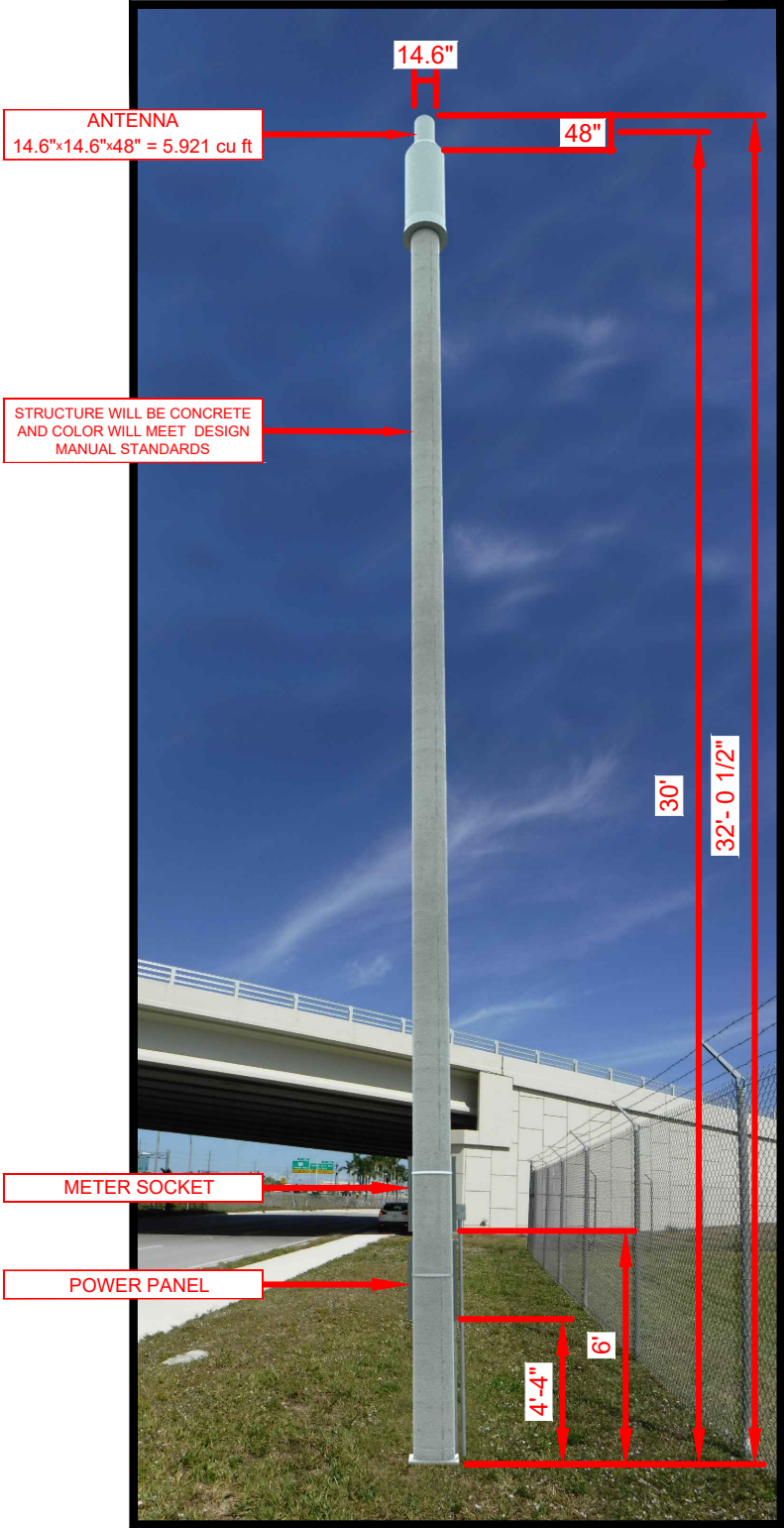
PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_593	
TITLE:	PHOTO SIM	
SCALE:	NTS	PAGE: 09 OF: 24

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



CURRENT VIEW-FROM SOUTHWEST LOOKING NORTHEAST
SCALE = NTS



PROPOSED VIEW-FROM SOUTHWEST LOOKING NORTHEAST
SCALE = NTS



3210 Lake Emma Road, Lake Mary, FL 32746



PROFESSIONAL LICENSURE

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REVISIONS

BY	DESCRIPTION	DATE



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SCALE:	NTS	PAGE: 10 OF: 24

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



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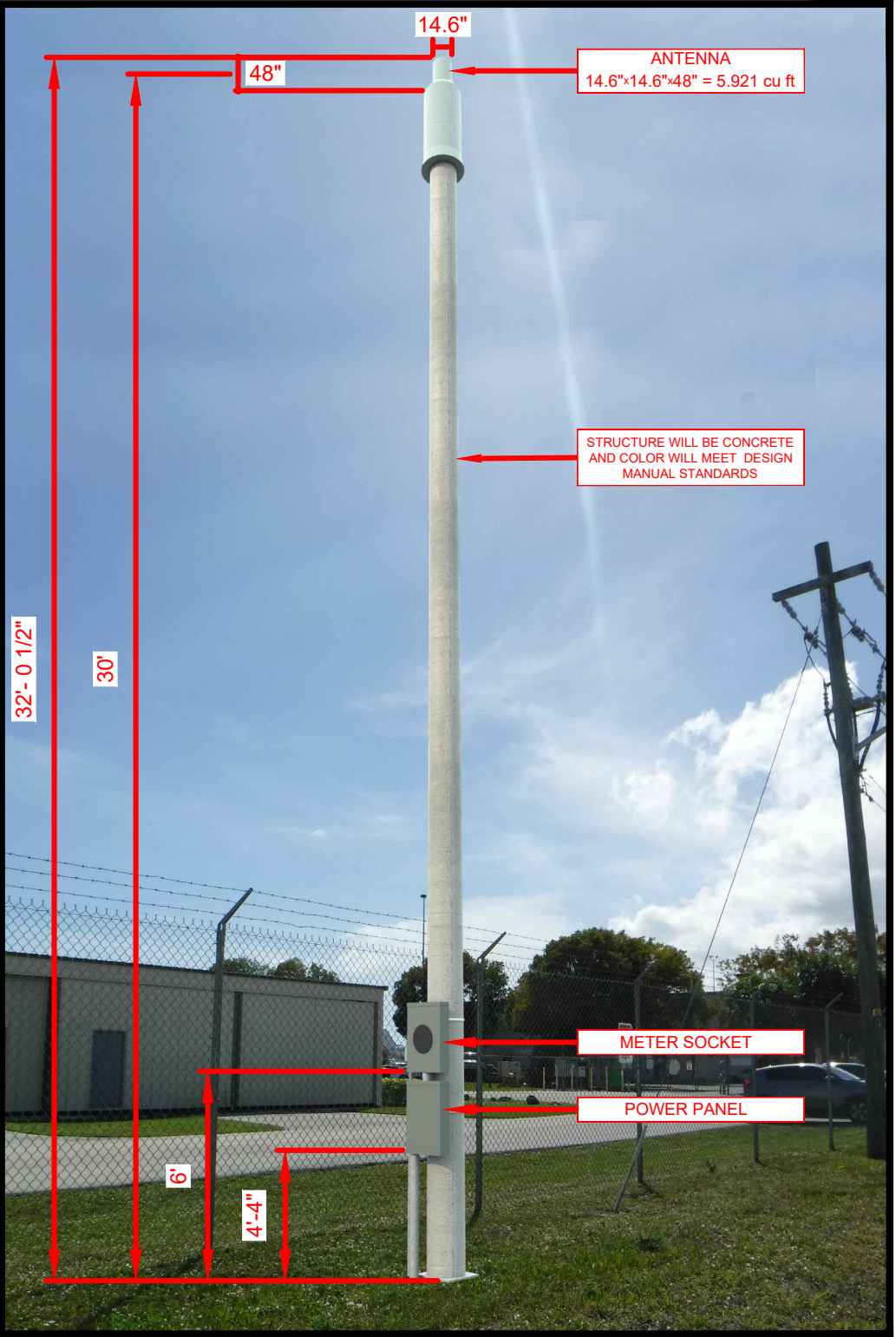
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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_593	
TITLE:	PHOTO SIM	
SCALE:	NTS	PAGE: 11 OF: 24



CURRENT VIEW-FROM NORTH LOOKING SOUTH
SCALE = NTS

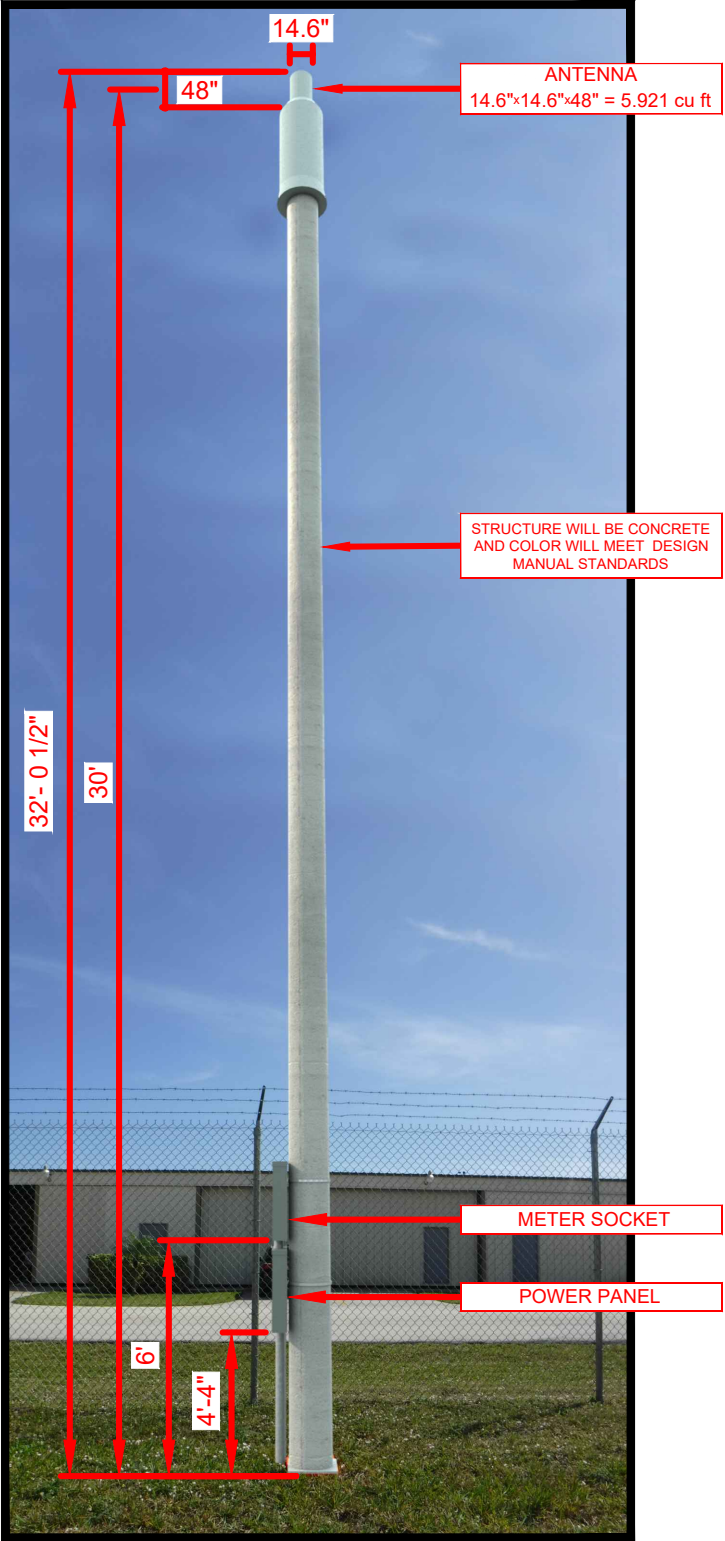


PROPOSED VIEW-FROM NORTH LOOKING SOUTH
SCALE = NTS

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



CURRENT VIEW-FROM NORTHWEST LOOKING SOUTHEAST
SCALE = NTS



PROPOSED VIEW-FROM NORTHWEST LOOKING SOUTHEAST
SCALE = NTS

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SCALE:	NTS	PAGE: 12 OF: 24



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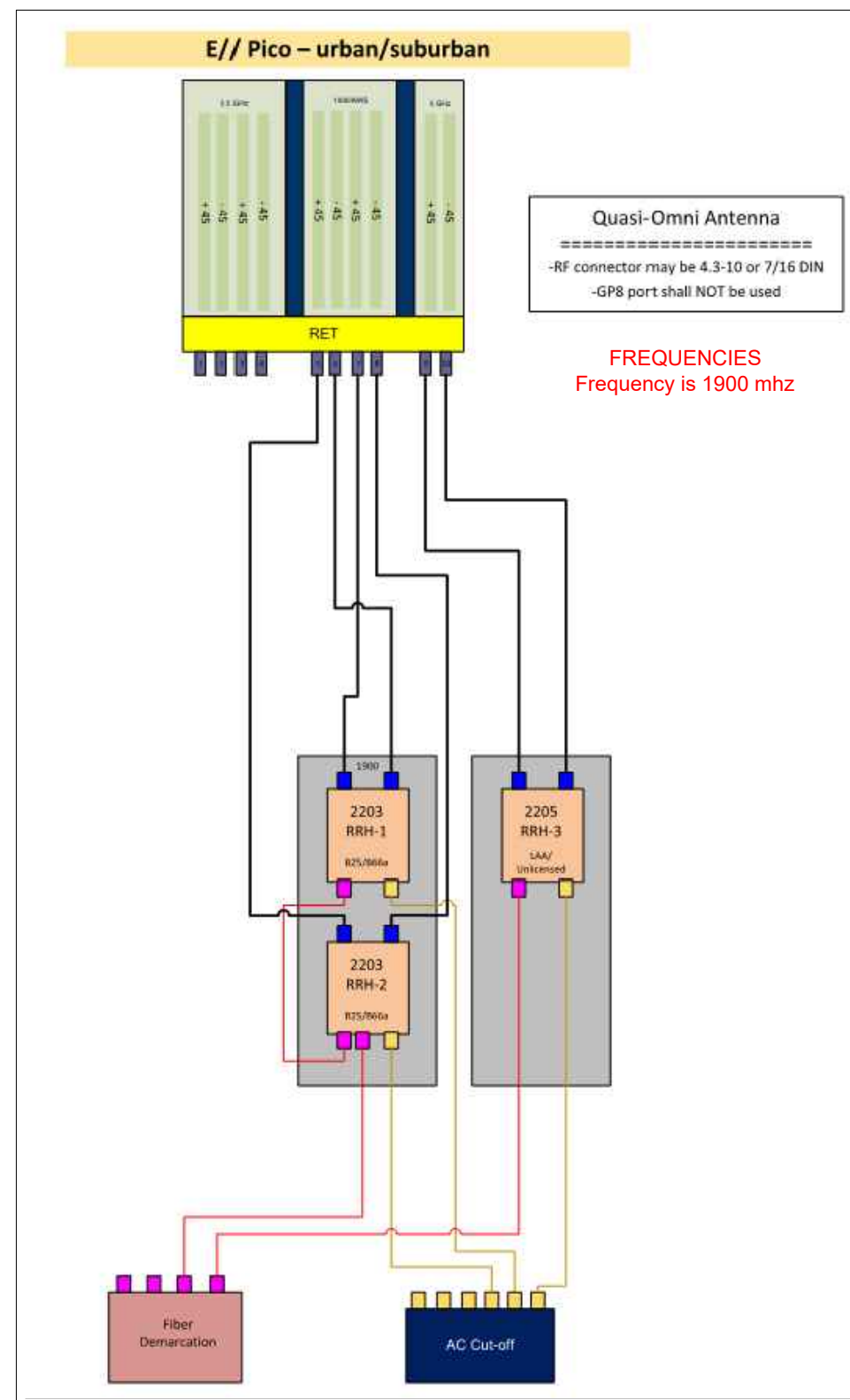
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NODE NAME #:	CRAN_RTFL_PBC27_593	
TITLE:	RF SCHEMATIC's	
SCALE:	PAGE:	OF:
NTS	13	24



SMALL CELL ONE LINE SCHEMATIC
SCALE = NTS



696-960 / (2x) 1695-2700 / (2x) 3550-3700 / 5150-5925 MHz

C2U3MT360X12FxyS0

HEX BAND | OMNI | CANISTER ANTENNA | X-POL | FIXED TILT | 1219 MM (48.0 IN)

Features

- Omni configuration with 12 connectors
- Ideal for Small Cell / DAS applications
- Available with 4.3-10 connectors
- Four unique mounting options
- Available for order with a grey, brown or black radome

Connector Description

The antenna has 12 connectors located at the bottom.

Low Band #1	R1	696-960 MHz	(2x) 4.3-10 Female
Mid Band #1	Y1	1695-2700 MHz	(2x) 4.3-10 Female
Mid Band #2	Y2	1695-2700 MHz	(2x) 4.3-10 Female
High Band #1	Y3	3550-3700 MHz	(2x) 4.3-10 Female
High Band #2	Y4	3550-3700 MHz	(2x) 4.3-10 Female
High Band #3	V1	5150-5925 MHz	(2x) 4.3-10 Female

Electrical Characteristics	R1	Y1 Y2	Y3 Y4	V1
Frequency Bands (MHz)	696-960	(2x) 1695-2700	(2x) 3550-3700	5150-5925
	696-806 806-900	1695-1880 1850-1990 1920-2200 2300-2700		
Polarization	±45°	(2x) ±45°	(2x) ±45°	±45°
Horizontal Beamwidth	360° 360°	360° 360° 360° 360°	360°	360°
Vertical Beamwidth	21.2° ±1.2° 18.3° ±1.6°	18.5° ±1.3° 17.2° ±1.0° 16.1° ±1.7° 13.5° ±1.4°	37.1° ±4.8°	20.2° ±3.1°
Gain (dBi)	7.6 ±0.5 8.2 ±0.7	9.1 ±1.4 9.4 ±1.1 9.3 ±1.0 9.4 ±1.2	4.3 ±0.6	4.1 ±0.8
Electrical Downtilt (°)	(x) 0, 5	(y) 0, 6	0	0
Impedance	50Ω	50Ω	50Ω	50Ω
VSWR	≤ 1.5:1	≤ 1.5:1	≤ 1.5:1	≤ 1.5:1
Upper Sidelobe Suppression	> 14 dB	> 14 dB	> 9 dB	> 16 dB
Isolation Between Ports	20 dB	25 dB	25 dB	25 dB
IM3 (2x20W carrier)	< -153 dBc	< -153 dBc	N/A	N/A
Input Power	(2x) 500 W	(4x) 300 W	(4x) 300 W	(2x) 300 W
Diplexed	No			
Number of Sectors, Sector Spacing and/or Pattern Shape	Omni			
Lightning Protection	Direct Ground			

Mechanical Characteristics

Antenna Dimensions (Height x Diameter)	1219 x 371 mm	48.0 x 14.6 in
Weight without Mounting Bracket Kit	16.4 kg	36.2 lbs
Antenna Volume	0.13 m³	4.7 ft³
Survival Wind Speed	241 km/hr	150 mph
Wind Area	0.47 m²	5.0 ft²
Wind Load (160 km/hr or 100 mph)	391 N	88 lbf

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

REV041718NA

www.amphenol-antennas.com

1 of 4

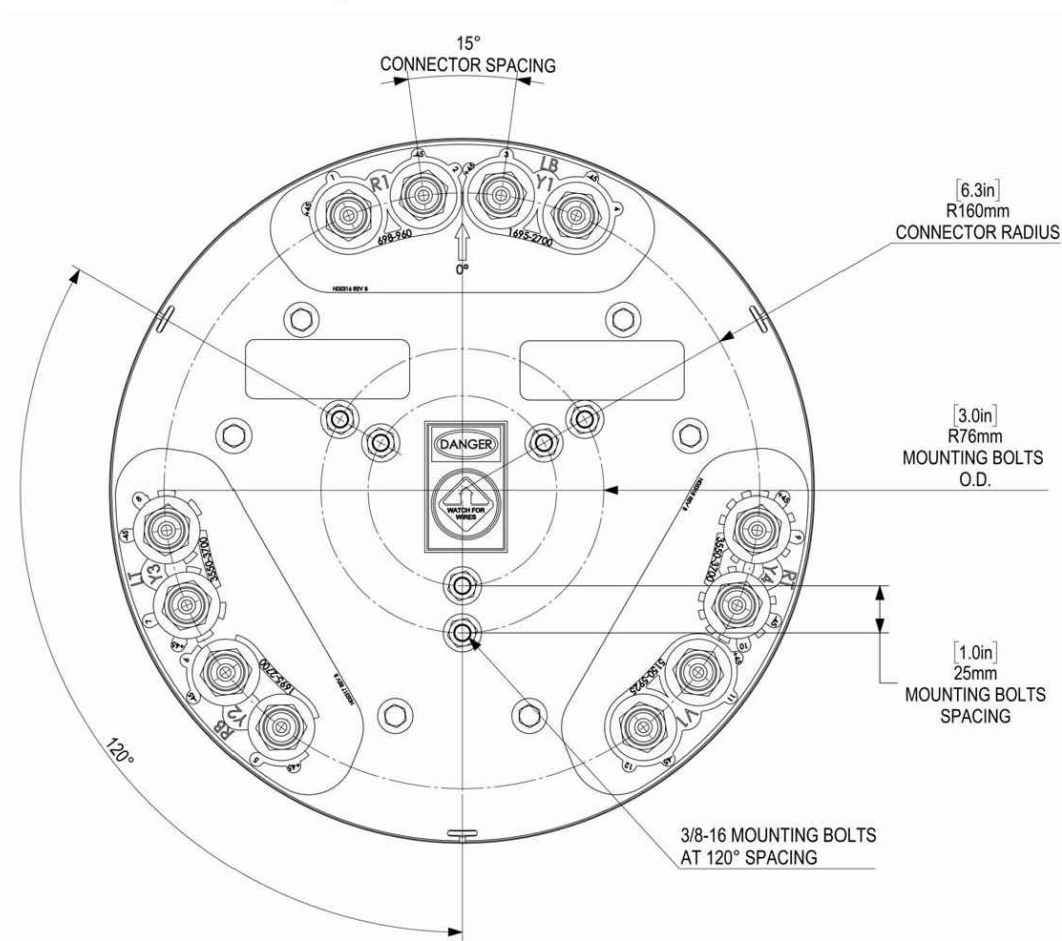


696-960 / (2x) 1695-2700 / (2x) 3550-3700 / 5150-5925 MHz

C2U3MT360X12FxyS0

HEX BAND | OMNI | CANISTER ANTENNA | X-POL | FIXED TILT | 1219 MM (48.0 IN)

Bottom View - Connector Diagram



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ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_593
TITLE:	ANTENNA DETAIL
SCALE:	NTS
PAGE:	14
OF:	24

ANTENNA DETAIL
SCALE = NTS



INSTALLATION MANUAL

900091

SHROUD POLE TOP WIDE DIAMETER MOUNT
WITH RADIO MOUNTING



Amphenol/Kathrein Configuration



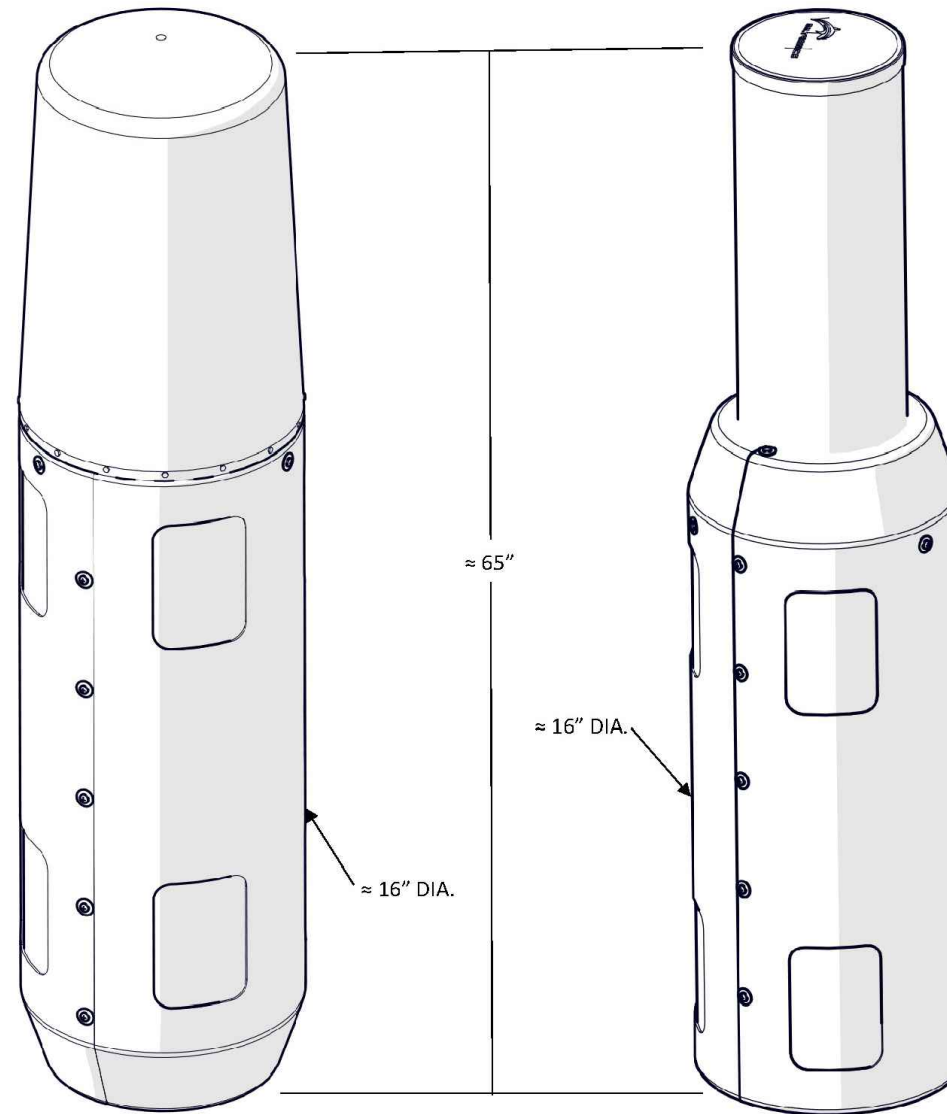
Galtronics Configuration

719.599.3400
www.concealfab.com
sales@concealfab.com
10205 Federal Drive, Building B
Colorado Springs, CO 80908

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING



SPECIFICATIONS



Amphenol/Kathrein Configuration

Galtronics Configuration



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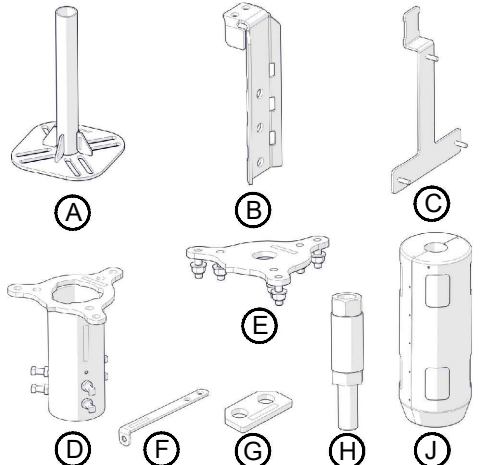
PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC
CHECK BY:	DRAFTPROS LLC
ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_593
TITLE:	BRACKET FOR ANTENNA-RRU'S
SCALE:	NTS
PAGE:	15
OF:	24

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

SUPPLIED PARTS



ITEM	QTY	DESCRIPTION	DESCRIPTION
A	1	WIDE DIAMETER MAST	104381
B	4	SHORT POLE TOP LEG	101624
C	3	220X RADIO MOUNTING BRACKET	104586
D	1	UNIVERSAL ANTENNA SLEEVE	101687
E	1	SINGLE BOLT ADAPTER	008166
F	3	SHROUD ARM	100319
G	4	ACCENTRIC WASHER	009887
H	1	SINGLE BOLT EXTENSION*	009632
J	1	POLE TOP SHROUD	104594

*Single Bolt Extension used in Galtronics configuration only.

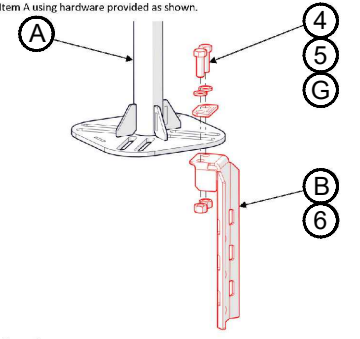
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900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

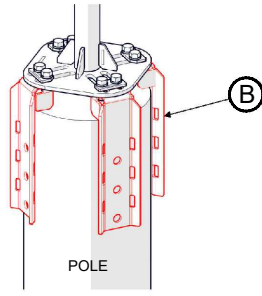
ConcealFab Corporation

ASSEMBLY

Mount Item B to Item A using hardware provided as shown.



Bolt or band Item B to pole.
(Bolts or bands by others).

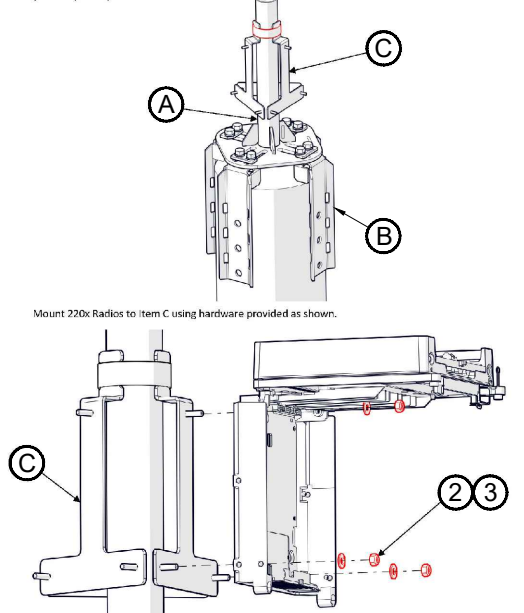


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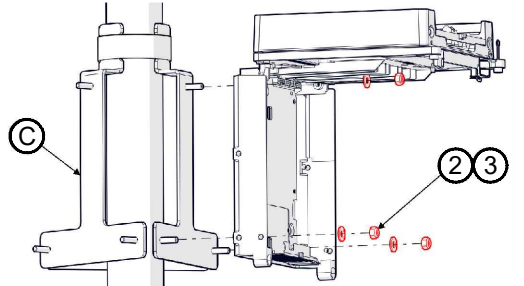
900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

Band Item C to Item A as shown.
(Bands by other).



Mount 220x Radios to Item C using hardware provided as shown.

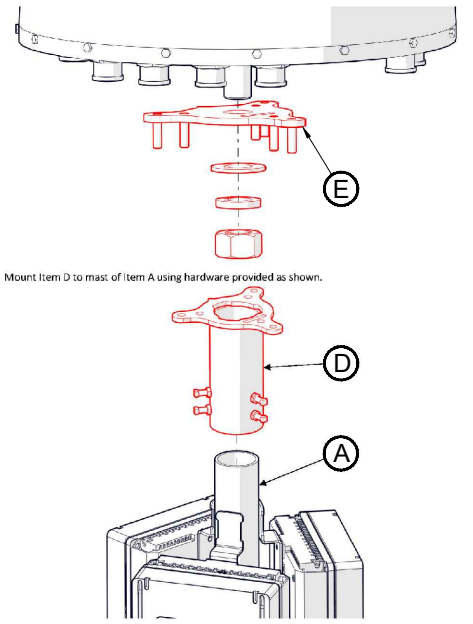


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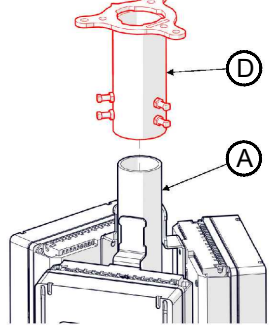
900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

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If using a Galtronics antenna, skip to page 11. If using Amphenol or Kathrein antenna continue below.
Mount Amphenol or Kathrein antenna to Item E using hardware provided as shown.



Mount Item D to mast of Item A using hardware provided as shown.

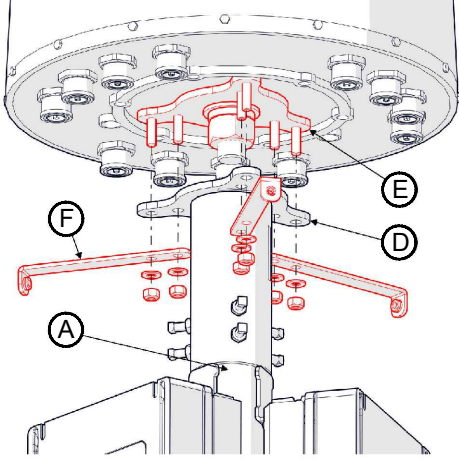


8

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

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Mount antenna with Item E to Item D using hardware provided as shown.

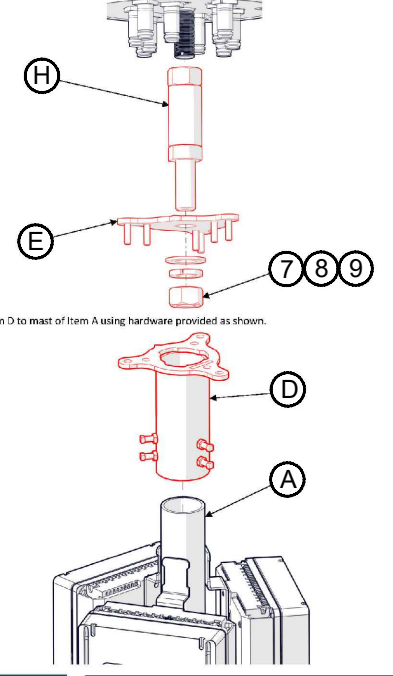


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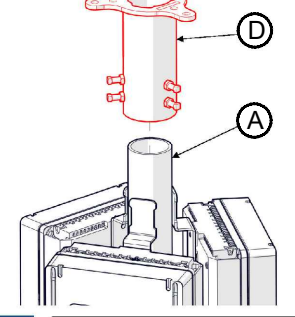
900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

Mount Galtronics antenna to Item H and Item E using hardware provided as shown.



Mount Item D to mast of Item A using hardware provided as shown.

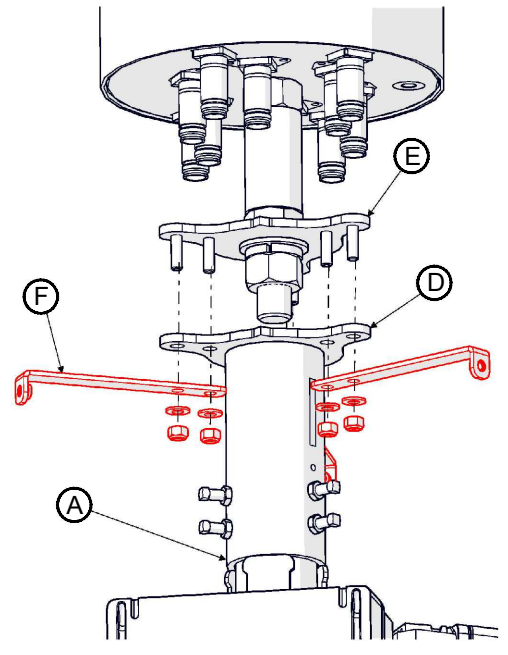


11

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

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Mount antenna with Item E to mast of Item D using hardware provided as shown.

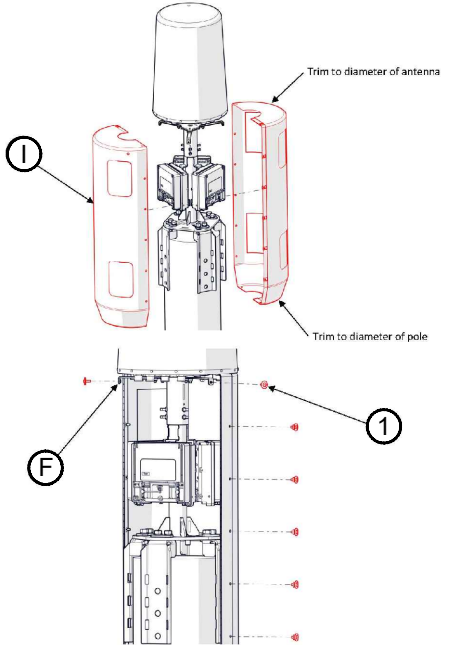


12

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation


Cover equipment and other hardware with Item J. Bolt together with Item F using hardware provided as shown.




Trim to diameter of antenna

Trim to diameter of pole

10



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Engineering Office
4461 Parkbreeze Ct
Orlando, FL 32808

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REVISIONS

BY	DESCRIPTION	DATE



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PROJECT INFORMATION

DRAWING BY:
DRAFTPROS LLC

CHECK BY:
DRAFTPROS LLC

ORIGINAL SUBMITTAL:
FEB 20, 2019

NODE NAME #:
CRAN_RTFL_PBC27_593

TITLE:
BRACKET FOR ANTENNA-RRU'S

SCALE: NTS

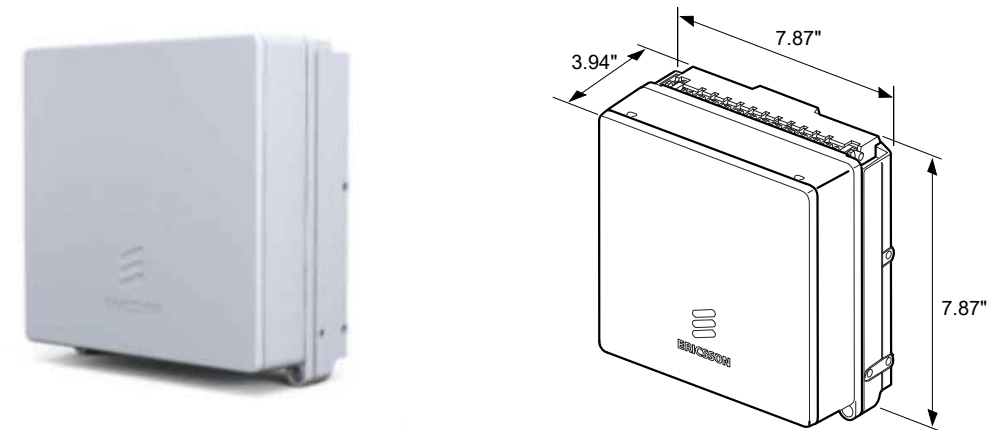
PAGE: 16

OF: 24

900091 - BRACKET FOR ANTENNA & RRU'S
SCALE = NTS

TECHNICAL SPECIFICATIONS

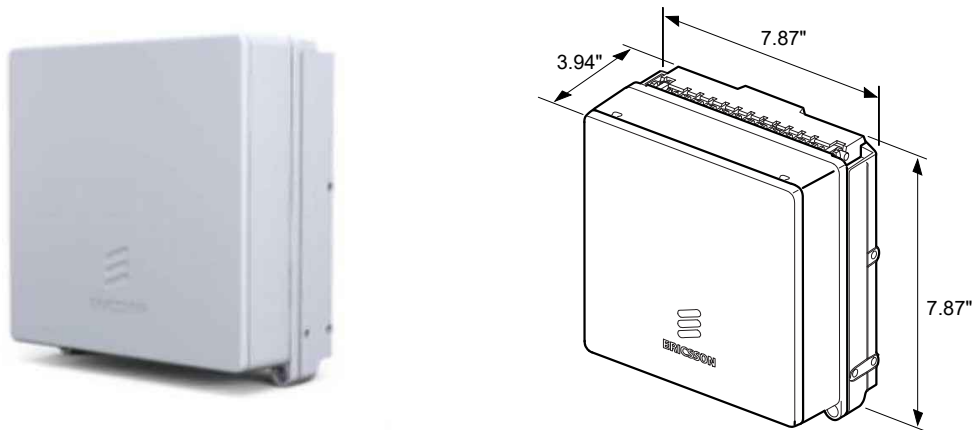
FREQUENCY BANDS	
Bands:	3GPP Bands B1 (W/L), B3 (L), B3C (W/L), B8 (W/L), B66A (W/L), B5 (W/L), B2/B25 (W/L), B12 (L), B13 (L) and B7 (L)
HW CAPACITY	
Carrier capacity WCDMA:	Up to 4 carriers
Carrier capacity LTE:	Up to 40 MHz
IBW:	B1, B3 and B66A 45 MHz. B2/B25 and B7 40 MHz. B3C, B8, B5, B12 and B13 Full band
MIMO:	Yes, 2T/2R
Output power:	Up to 2 x 5 W
INTERFACE SPECIFICATIONS	
Antenna Ports:	2 x 4.3-10 (f)
CPRI:	2 x 2.5/5/10 Gbps (exchangeable SFP modules)
Optical indicators	6
External alarms	2
Field ground	1
MECHANICAL SPECIFICATIONS	
W x H x D:	200 mm x 200 mm x 100 mm, including mounting bracket and esthetic front cover
Weight:	< 4.5 kg
Volume:	4 l
Mounting:	Wall and pole mount
ELECTRICAL SPECIFICATIONS	
Power Supply:	-48 VDC or 100 - 250 VAC
ENVIRONMENTAL SPECIFICATIONS	
Normal operating temp.:	-40 °C to +55 °C (cold start at -40 °C)
Relative Humidity	5 - 100%
Environment:	Outdoor class with IP65



ERICSSON RRU-2203 DETAIL
SCALE = NTS

TECHNICAL SPECIFICATIONS

FREQUENCY BANDS:		3GPP bands B41
HW CAPACITY:		
Carrier capacity LTE:		Up to 40 MHz
IBW:		40 MHz TDD
MIMO:		Yes, 2T/2R
Output power:		Up to 2 x 5W
INTERFACE SPECIFICATIONS:		
Power supply:		-48VDC or 100-250 VAC
Antenna Ports:		2 x 4.3-10(f)
CPRI:		2 x 10 Gbps (exchangeable SFP modules)
		6 x optical indicators
		2 x external alarms
		Field Ground
MECHANICAL SPECIFICATIONS:		
WxDxH:		200mm x 100mm x 200mm, including m
Weight:		< 5kg
Volume:		< 4l
Mounting:		Wall and , pole mount.
ENVIRONMENTAL SPECIFICATIONS:		
Environment:		Outdoor class with IP65
Normal operating temp.:		-40 - +55 °C (cold start at -40 °C)



ERICSSON RRU-2205 DETAIL (FUTURE)
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TITLE:	RRU'S DETAIL	
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NTS	17	24



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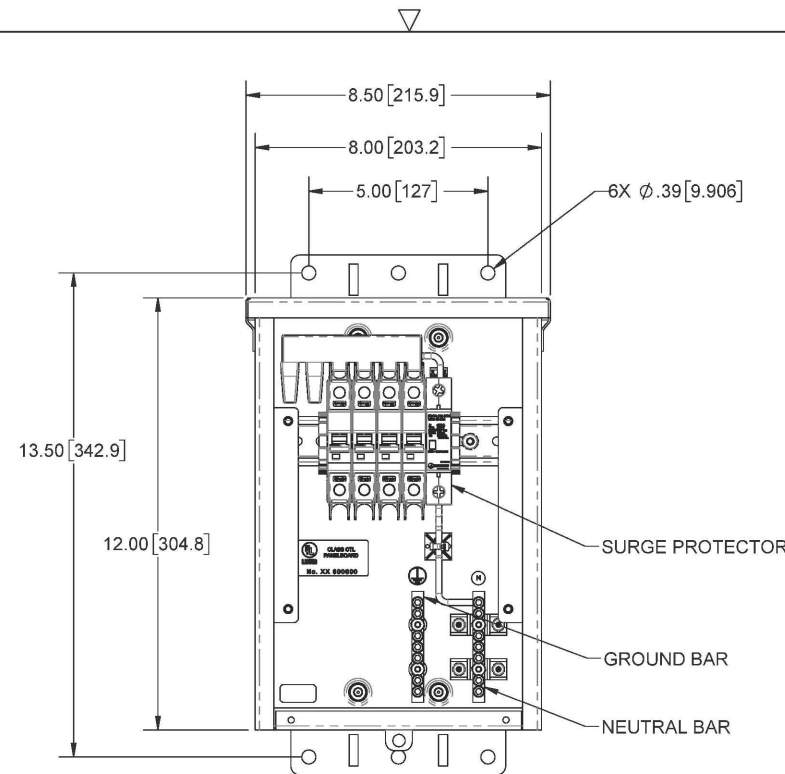
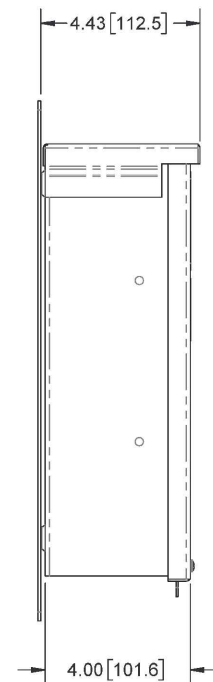


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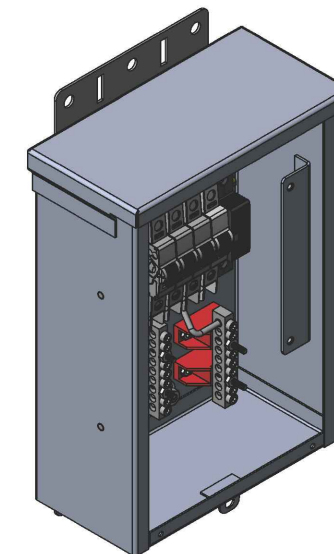
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TITLE:	TRANSECTOR DETAIL	
SCALE:	NTS	PAGE: 18 OF: 24

REVISIONS				
REV.	DESCRIPTION	ECN	DATE	APPROVED
01	PRE-PRODUCTION RELEASE			



FRONT VIEW
WITHOUT DEADFRONT



PRODUCT SPECIFICATIONS

ELECTRICAL:
UL 67 Listed (Pending)
Service: 120 Vac, 60 A
Short Circuit Current Rating: 10 kAIC
Branch Circuit Breakers:
Main: 60 A
Accessory: 3x 10 A, 1x 5 A
Surge Protection: UL 1449, Type 2 Recognized, Transtector I2R SA 120-50M
Nominal Discharge Surge Current: 20 kA
Voltage Protection Rating (VPR): 600 V
Terminal Block Wire Range: 6-14 AWG

PHYSICAL:
Cabinet Type: UL 50, Type 3R
Material: 16-Gauge Steel, Powder Coat Finish
Dimensions: 8" x 12" x 4"
Mounting: Pole Mount or Wall Mount
Weight: Approx. 15 lbs.
Operating temperature: -20°C to 55°C
Humidity: 90% Non-Condensing

CUSTOMER APPROVAL: _____ DATE: _____

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS TOLERANCES: FRACTIONS: ± 1/32 .XX ± .01 ANGLES: ± 1° .XXX ± .005 MATERIAL NOTED THIRD-ANGLE PROJECTION 	DRAWN DPM DATE 8/15/16			
	ENG APPD			
	PRODUCT MGR	TITLE MINI-MACRO COMPACT 60A/10A/10A/10A/5A, W/DEADFRONT CUSTOMER SPECIFICATION		
	MARKETING APPD			
NOTICE: THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF TRANSECTOR SYSTEMS. ALL RIGHTS RESERVED.	PROJECT NO.	SIZE B	CAGE 30992	PART NUMBER SC-MM08-001
		SCALE 1:4	PROD CAT CBT	REV 01
		DOCUMENT NAME SC-MM08-001-C	SHEET 1	OF 2

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REVISIONS

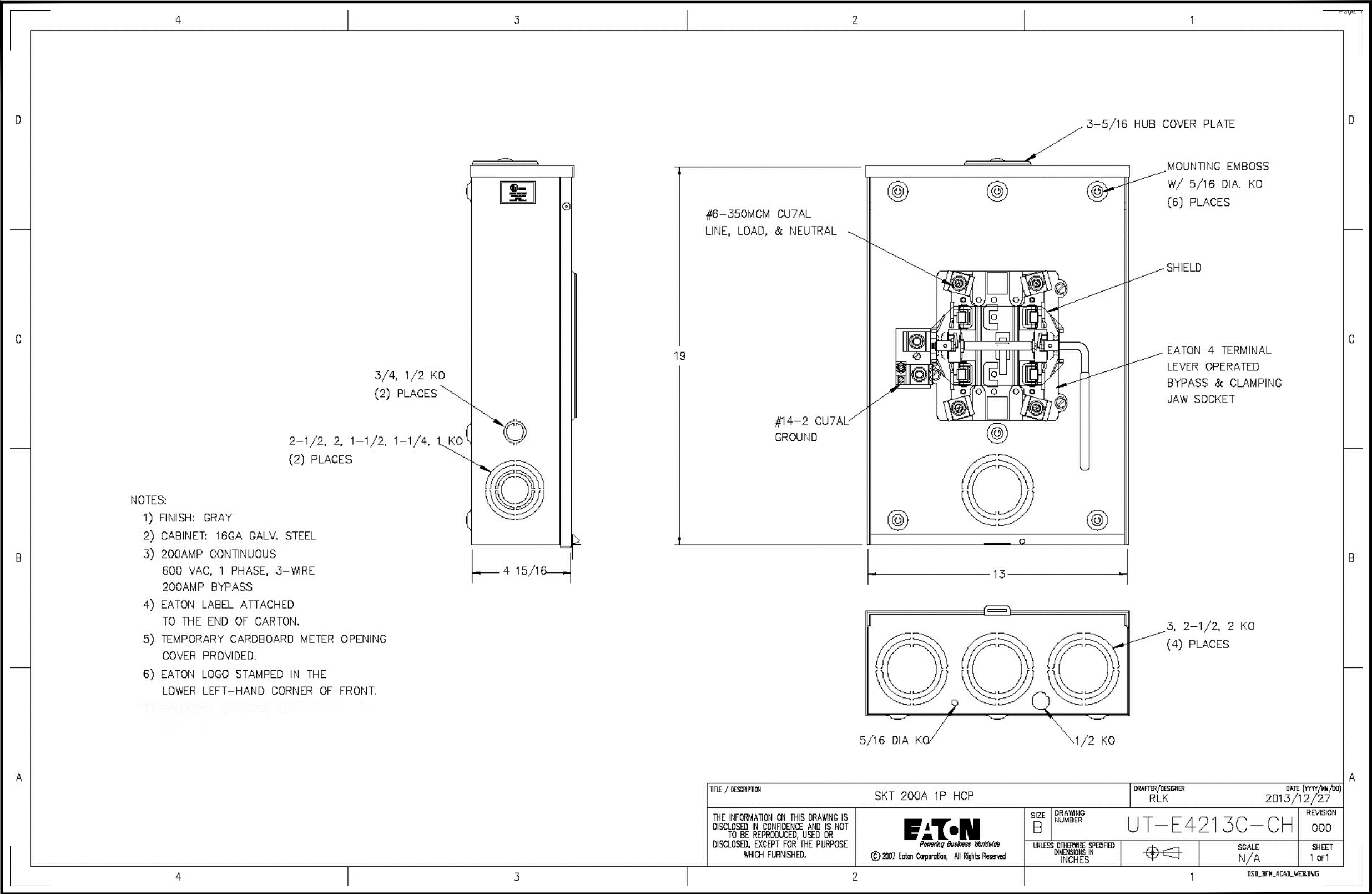
BY	DESCRIPTION	DATE



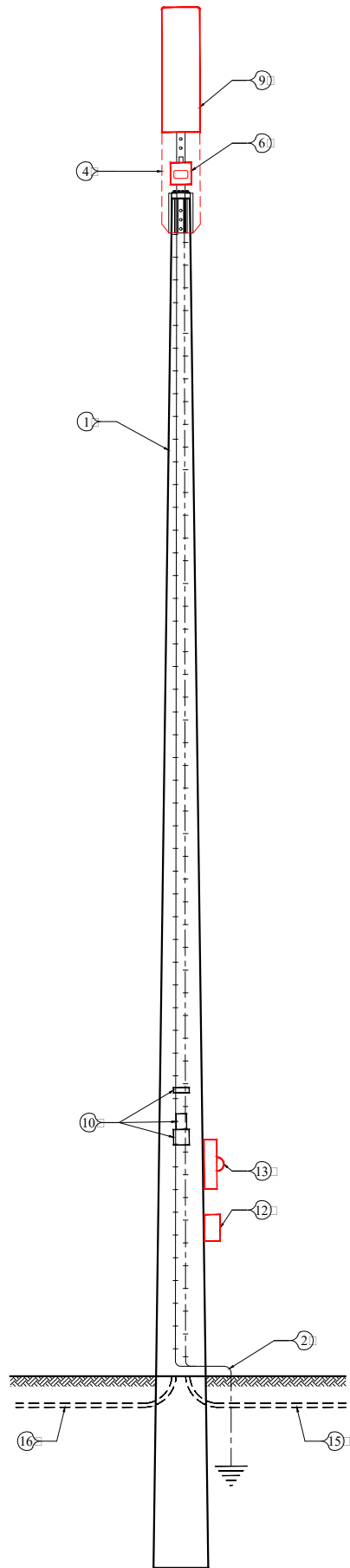
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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC		
CHECK BY:	DRAFTPROS LLC		
ORIGINAL SUBMITTAL:	FEB 20, 2019		
NODE NAME #:	CRAN_RTFL_PBC27_593		
TITLE:	METERBASE DETAIL		
SCALE:	NTS	PAGE: 19	OF: 24

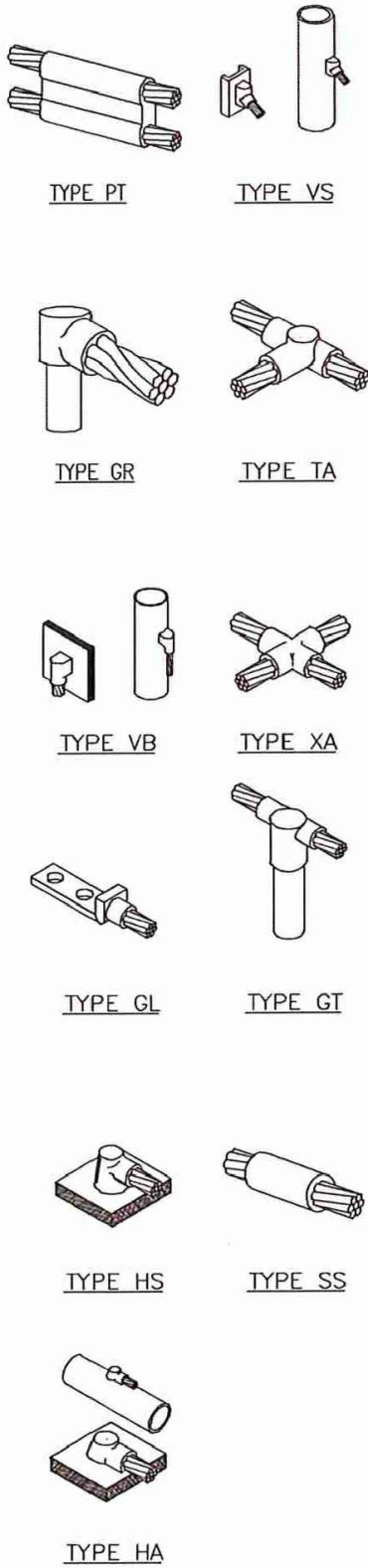


METERBASE DETAIL
SCALE = NTS



RISER DETAIL
SCALE = NTS

ITEM	QTY	DESCRIPTION
1	1	CONCRETE POLE
2	1	GROUND, DRIVEN
3	-	DUAL BAND RADIO SHROUD
4	1	SHROUD POLE WITH RADIO MOUNTING
5	-	LOWER EQUIPMENT GROUND BAR
6	3	RRU'S
7	-	FIBER MANAGEMENT BOX
8	-	STREET LIGHT
9	1	ANTENNA
10	3	RF WARNING SIGN
11	-	PSU AC 02
12	1	POWER PANEL
13	1	METER SOCKET
14	-	NEW GROUND WIRE
15	1	FOC CONDUIT INSTALLED BY OTHERS
16	1	ELECTRICAL CONDUIT INSTALLED BY OTHERS



GROUNDING DETAILS
SCALE = NTS

PROFESSIONAL LICENSURE

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REVISIONS

BY	DESCRIPTION	DATE



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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_593	
TITLE:	RISER & GROUNDING DETAIL	
SCALE:	NTS	PAGE: 20 OF: 24

GENERAL NOTES	
1.	FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY: GENERAL CONTRACTOR CONTRACTOR: (CONSTRUCTION) OWNER - AT&T
2.	ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
3.	GENERAL CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4.	ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL 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 WORK.
5.	ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
6.	UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7.	PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
8.	THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9.	IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
10.	GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFIRM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
11.	GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
12.	ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
13.	SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. CONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
14.	THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
15.	CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
16.	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.

GENERAL NOTES	
17.	THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
18.	GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND CONTRACTORS TO THE SITE AND/OR BUILDING.
19.	THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
20.	THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
21.	THE GENERAL CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OT 2-A:10-B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
22.	ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. 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 SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
23.	ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
24.	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.
25.	CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
26.	NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
27.	THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
28.	ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
29.	ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
30.	CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31.	CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32.	STRUCTURE IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
33.	NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
34.	ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING". IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.

GENERAL NOTES	
35.	CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
36.	CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
37.	INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
38.	ALL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
ANTENNA MOUNTING	
39.	DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.
40.	ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
41.	ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS NOTED OTHERWISE.
42.	DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
43.	ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
44.	CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
45.	NOT USED.
46.	PRIOR TO SETTING ANTENNA AZIMUTHS AND DOWNTILTS, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR TIGHTNESS AND ENSURE THAT THEY ARE PLUMB. ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND BE ORIENTED WITHIN +/- 5% AS DEFINED BY THE RFDS. ANTENNA DOWNTILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00246.
TORQUE REQUIREMENTS	
47.	ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.
48.	ALL RF CONNECTIONS, GROUNDING HARDWARE AND ANTENNA HARDWARE SHALL HAVE A TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION. A. RF CONNECTION BOTH SIDES OF THE CONNECTOR. B. GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET METAL.
49.	ALL 8M ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (12 NM).
50.	ALL 12M ANTENNA HARDWARE SHALL BE TIGHTENED TO 43 LB-FT (58 NM).
51.	ALL GROUNDING HARDWARE SHALL BE TIGHTENED UNTIL THE LOCK WASHER COLLAPSES AND THE GROUNDING HARDWARE IS NO LONGER LOOSE.
52.	ALL DIN TYPE CONNECTIONS SHALL BE TIGHTENED TO 18-22 LB-FT (24.4 - 29.8 NM).
53.	ALL N TYPE CONNECTIONS SHALL BE TIGHTENED TO 15-20 LB-IN (1.7 - 2.3 NM).




3210 Lake Emma Road, Lake Mary, FL 32746



Engineering Office
4461 Parkbreeze Ct
Orlando, FL 32808

PROFESSIONAL LICENSURE		
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REVISIONS		
BY	DESCRIPTION	DATE



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PROJECT INFORMATION		
DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_593	
TITLE:	GENERAL NOTES	
SCALE:	PAGE:	OF:
NTS	21	24

COAXIAL CABLE NOTES

54. TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS. PRIOR TO ORDERING CABLE, CONTRACTOR SHALL VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY THE PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
55. CONTRACTOR SHALL VERIFY THE DOWN-TILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
56. CONTRACTOR SHALL CONFIRM COAX COLOR CODING PRIOR TO CONSTRUCTION. REFER TO "ANTENNA SYSTEM LABELING STANDARD" ND-00027 LATEST VERSION.
57. ALL JUMPERS TO THE ANTENNAS SHALL BE 1/2" DIA. LDF AND SHALL NOT EXCEED 6'-0".
58. ALL COAXIAL CABLE SHALL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE, IN AN APPROVED MANNER, AT DISTANCES NOT TO EXCEED 4'-0" OC.
59. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS REGARDING BOTH THE INSTALLATION AND GROUNDING OF ALL COAXIAL CABLES, CONNECTORS, ANTENNAS, AND ALL OTHER EQUIPMENT.
60. CONTRACTOR SHALL WEATHERPROOF ALL ANTENNA CONNECTORS WITH SELF AMALGAMATING TAPE. WEATHERPROOFING SHALL BE COMPLETED IN STRICT ACCORDANCE WITH AT&T STANDARDS.

GENERAL CABLE & EQUIPMENT NOTES

61. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ANTENNA, TMAS, DIPLEXERS, AND COAX CONFIGURATION, MAKE AND MODELS PRIOR TO INSTALLATION.
62. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
63. CONTRACTOR SHALL REFERENCE THE STRUCTURAL ANALYSIS / DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION / ROUTING.
64. ALL OUTDOOR RF CONNECTORS/CONNECTIONS SHALL BE WEATHERPROOFED, EXCEPT THE RET CONNECTORS, USING BUTYL TAPE AFTER INSTALLATION AND FINAL CONNECTIONS ARE MADE. BUTYL TAPE SHALL HAVE A MINIMUM OF ONE-HALF TAPE WIDTH OVERLAP ON EACH TURN AND EACH LAYER SHALL BE WRAPPED THREE TIMES. WEATHERPROOFING SHALL BE SMOOTH WITHOUT BUCKLING. BUTYL BLEEDING IS NOT ALLOWED.
65. IF REQUIRED TO PAINT ANTENNAS AND/OR COAX:

A. TEMPERATURE SHALL BE ABOVE 50° F.

B. PAINT COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.

C. FOR REGULATED TOWERS, FAA/FCC APPROVED PAINT IS REQUIRED.

D. DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS.
66. ALL PROPOSED GROUND BAR DOWNLEADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUND BAR DOWNLEADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUND BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.
67. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATION & RECOMMENDATIONS.

ROW CONSTRUCTION NOTES STANDALONE

68. NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2" [.038M].
69. 90 SHORT SWEEPS UNDER ANTENNA ARM. ALL CABLES MUST ONLY TRANSITION ON THE INSIDE OR BOTTOM OF ARMS (NO CABLE ON TOP OF ARMS).
70. USE 90 CONNECTOR AT CABLE CONNECTION TO ANTENNAS.
71. PLACE GPS ON ARM WITH SOUTHERN SKY EXPOSURE AT MINIMUM 6' [1.83] FROM TRANSMIT ANTENNA, WHICH IS 24" [.61M] AWAY FROM CENTER OF POLE.
72. USE 1/2" [.013M] CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
73. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

* DISCONNECT, METER, AND ANTENNA BOXES MUST BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD 103-235, "SUPPLY AND COMMUNICATION EQUIPMENT"

* ANTENNAS SHALL BE INSTALLED ON TANGENT POLES ONLY. ANTENNAS SHALL NOT BE INSTALLED ON EQUIPMENT POLES.
ALL POLES MUST BE BUCKET TRUCK ACCESSIBLE.

THE MINIMUM SIZE OF ALL ANTENNA POLE WILL BE ANSI CLASS 3.



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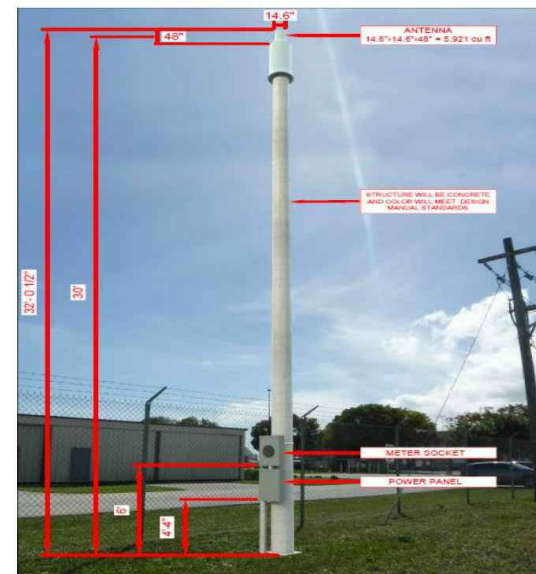
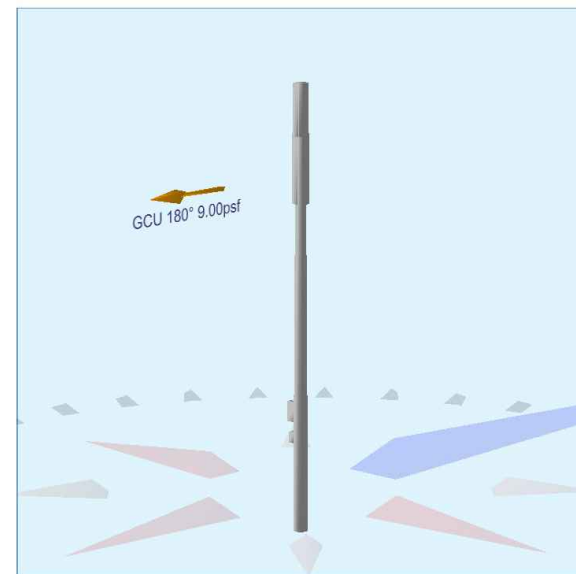


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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_593	
TITLE:	ROW CONSTRUCTION NOTES	
SCALE:	NTS	PAGE: 22 OF: 24

Pole Num:	CRAN_RTFL_PBC27_593	Pole Length / Class:	35 / E	Code:	NESC	Structure Type:	Unguyed Tangent
Aux Data 1	BOCA RATON	Material:	Concrete	NESC Rule:	Rule 250B	Status	Unguyed
Aux Data 2	FL	Setting Depth (ft):	2.96	Construction Grade:	C	Pole Strength Factor:	1.00
Aux Data 3	3980 AIRPORT ROAD	G/L Circumference (in):	42.63	Loading District:	Light	Transverse Wind LF:	1.75
Aux Data 4	AT&T	--	--	Ice Thickness (in):	0.00	Wire Tension LF:	1.00
Aux Data 5	Unset	--	--	Wind Speed (mph):	59.29	Vertical LF:	1.90
Aux Data 6	Unset	--	--	Wind Pressure (psf):	9.00		
Latitude:	26.385675 Deg	Longitude:	-80.104806 Deg	Elevation:	11 Feet		



Pole Capacity Utilization (%)	Height (ft)	Wind Angle (deg)
Maximum	25.7	0.0
Groundline	25.7	0.0
Vertical	0.2	3.0

Pole Moments (ft-lb)	Load Angle (deg)	Wind Angle (deg)
Max Cap Util	13,282	180.0
Groundline	13,282	180.0
GL Allowable	53,277	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 180.0°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
GenericEquipments	245	34.0	5,519	41.6	10.4	273	154	1	274	10.5
ConcretePoles	475	66.0	7,763	58.5	14.6	384	2,571	18	402	15.4
Pole Load	719	100.0	13,282	100.0	24.9	657	2,725	19	676	25.9
Pole Reserve Capacity			39,995		75.1	1,949			1,930	74.1



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ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_593
TITLE:	STRUCTURAL ANALYSIS
SCALE:	NTS
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Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 180.0°										
	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
AT&T	719	100.0	13,282	100.0	24.9	657	2,725	19	676	25.9
General Statement	0	0.0	0	0.0	0.0	0	0	0	0	0.0
Totals:	719	100.0	13,282	100.0	24.9	657	2,725	19	676	25.9

Detailed Load Components:

Generic Equipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Cylinder	ANTENNA	AT&T	30.04	0.06	0.0	0.0	36.20	48.00	--	14.60	--	0	2,303	2,303
Cylinder	SHROUD	AT&T	25.54	0.04	0.0	0.0	19.00	65.00	--	16.00	--	0	2,905	2,905
Box	Power Meter	AT&T	6.67	8.78	180.0	0.0	25.00	19.00	4.94	--	13.00	35	288	323
Box	MAIN DISCONNECT	AT&T	4.67	9.45	180.0	0.0	0.83	10.13	6.00	--	6.15	1	51	52
Totals:												36	5,547	5,583

Notes

Date	Author	Description
4/17/2015	General Statement	General Statement
General Statement: Non-AT&T facilities may not be accurately identified pending attachment information from attaching party.		



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AT&T

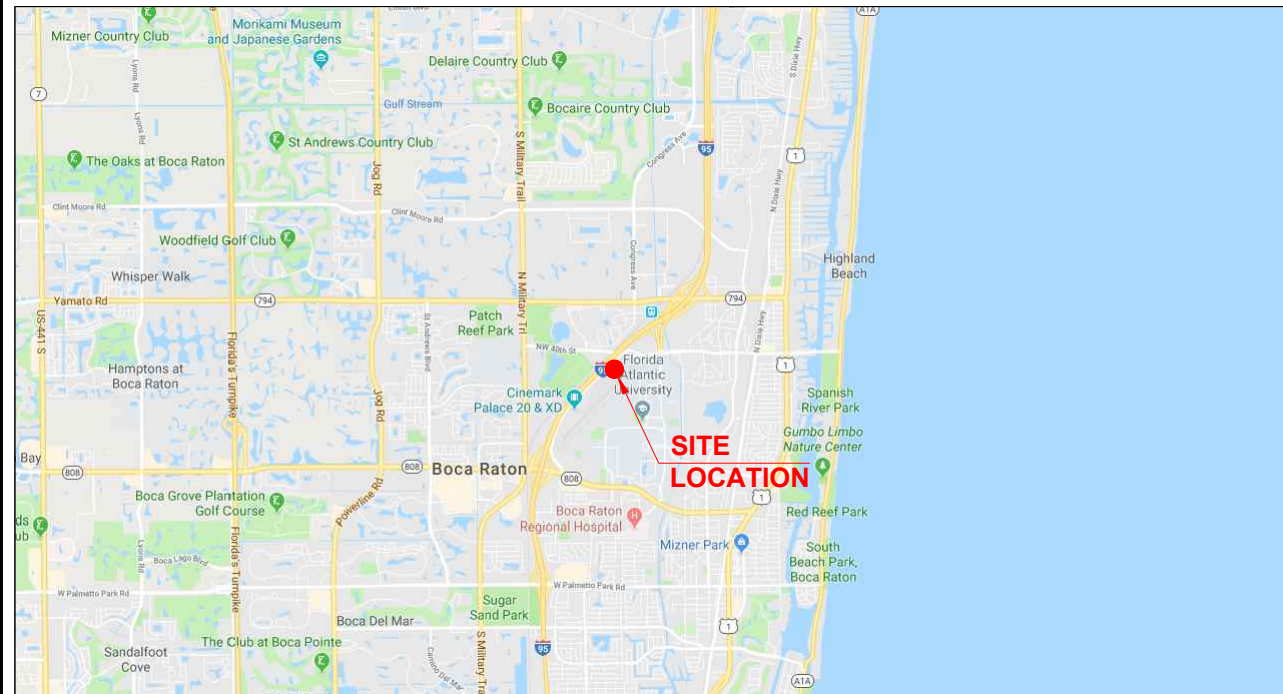
NODE NAME
CRAN_RTFL_PBC27_594

PACE NUMBER
MRSFL018407

PTN NUMBER
2551A0MM4Z

STRUCTURE TYPE
STANDALONE CONCRETE POLE

REGIONAL MAP



3210 Lake Emma Road, Lake Mary, FL 32746



Engineering Office
4461 Parkbreeze Ct
Orlando, FL 32808

PROFESSIONAL LICENSURE

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDG THEY COMPLY WITH THE REQUIREMENT OF ALL APPLICABLE CODES AND ORDINANCES

REVISIONS

BY	DESCRIPTION	DATE



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Check positive response codes before you dig!

PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC
CHECK BY:	DRAFTPROS LLC
ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_594
TITLE:	COVER
SCALE:	NTS
PAGE:	01
OF:	26

INDEX OF SHEET

- 01 OF 26 - COVER
- 02 OF 26 - OVERALL SITE PLAN
- 03 OF 26 TO 05 OF 26 - PLAN VIEW
- 06 OF 26 - PROFILE VIEW
- 07 OF 26 TO 08 OF 26 - TRAFFIC CONTROL PLAN
- 09 OF 26 - NEW EQUIPMENT ELEVATION
- 10 OF 26 - NEW POLE ELEVATION
- 11 OF 26 TO 14 OF 26 - PHOTO SIM
- 15 OF 26 - RF SCHEMATIC's
- 16 OF 26 - ANTENNA DETAIL
- 17 OF 26 TO 18 OF 26 - BRACKET FOR ANTENNA & RRU'S
- 19 OF 26 - RRU'S DETAIL
- 20 OF 26 - TRANSTECTOR DETAIL
- 21 OF 26 - METERBASE DETAIL
- 22 OF 26 - RISER / GROUNDING DETAILS
- 23 OF 26 - GENERAL NOTES
- 24 OF 26 - ROW CONSTRUCTION NOTES
- 25 OF 26 TO 26 OF 26 - STRUCTURAL ANALYSIS

PROJECT INFORMATION

AT&T ADDRESS : 3210 LAKE EMMA ROAD, LAKE MARY, FL 32808

PROPERTY OWNER : PUBLIC RIGHT OF WAY

APPLICANT : NEW CINGULAR WIRELESS PCS LLC

AT&T CONTACT 1: SAM ABS (205) 616-7473

AT&T CONTACT 2: KEVIN HARRISON (321) 388-9513

SITE ID : PENDING

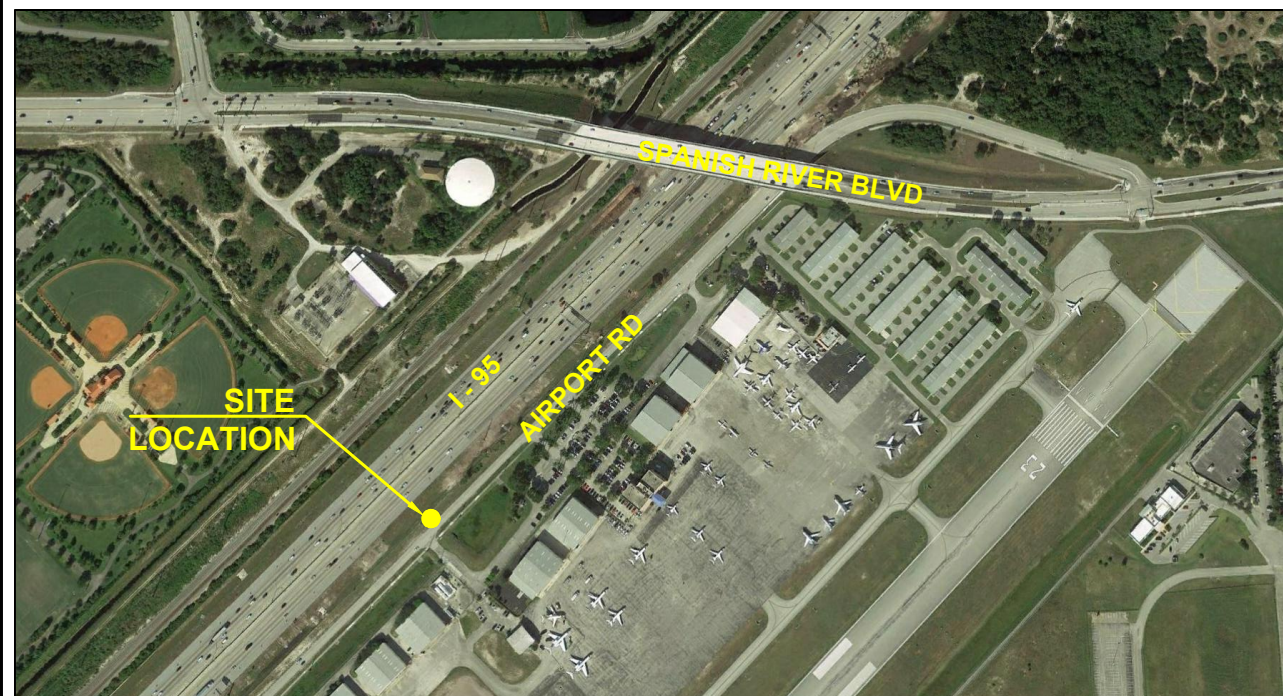
PACE NUMBER : MRSFL018407

PTN NUMBER : 2551A0MM4Z

USID NUMBER : 243121

FA CODE : 14848744

VICINITY MAP



PERMITTING

JURISDICTION : CITY OF BOCA RATON

PROJECT SUMMARY

INSTALLATION OF NEW SMALL CELL EQUIPMENT ON NEW CONCRETE POLE FIBER OPTIC CABLE AND POWER CABLE VIA NEW CONDUIT

PROJECT CONTACTS

AT&T:

Professional – Tech Vendor Management (Wireless Engineering) SAM ABS
3210 LAKE EMMA ROAD
LAKE MARY, FL 34994
PHONE: (205) 616-7473
EMAIL: MC002D@att.com

DRAFTPROS LLC:

ENGINEERING & SURVEYING CONTACT: TIM HEWITT
PHONE: (317) 903 - 7521
EMAIL: thewitt@draftprosinc.com

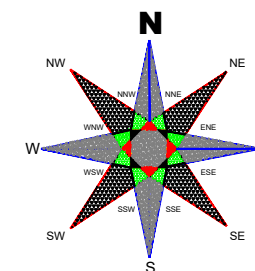
DRIVING DIRECTIONS

DRIVING DIRECTIONS FROM 329 NW DIXIE HIGHWAY, STUART, FL 34994 :

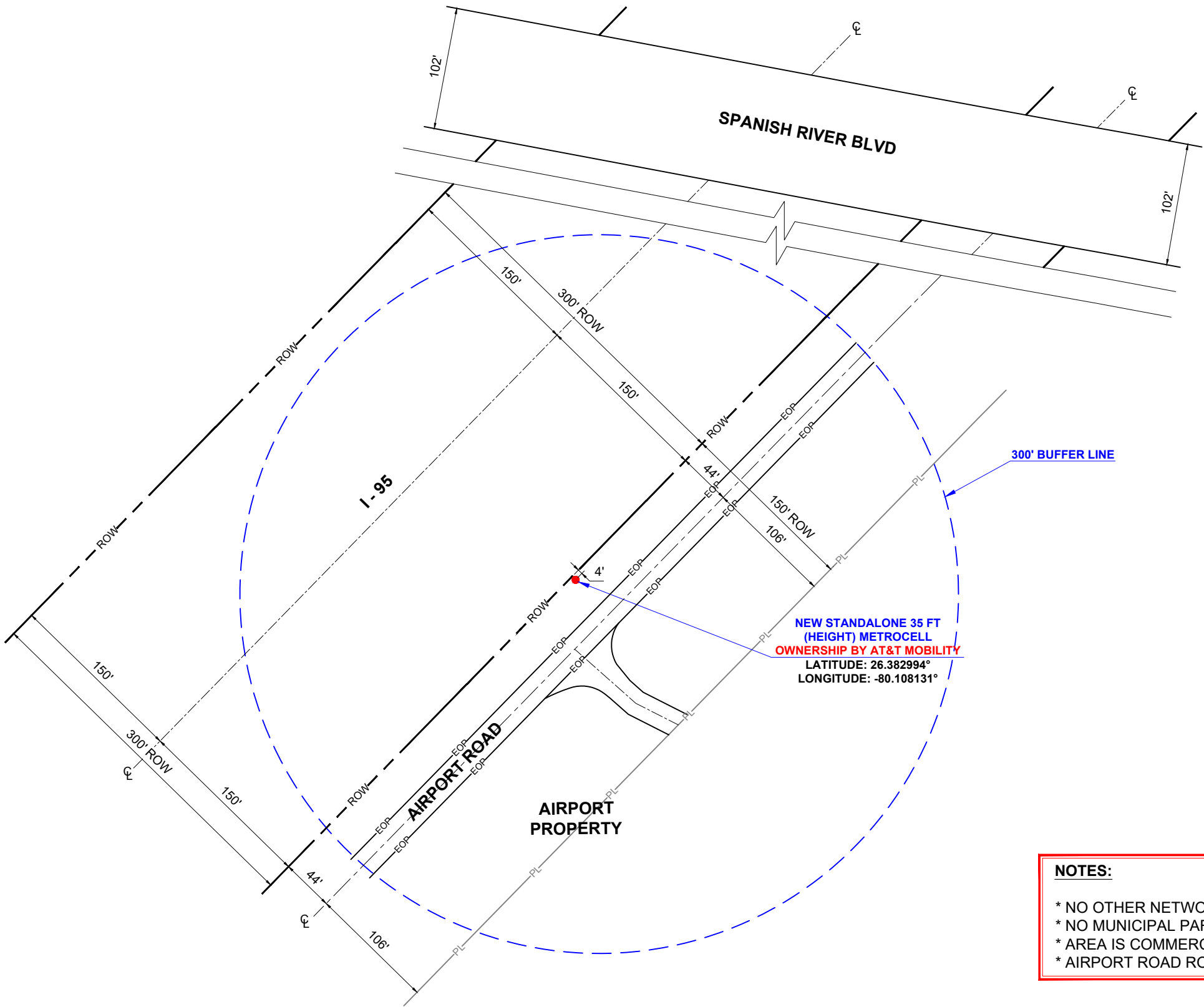
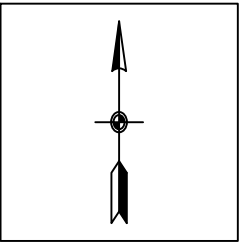
1. HEAD SOUTHWEST ON NW DIXIE HWY TOWARD NW WRIGHT BLVD THEN TURN RIGHT ONTO NW WRIGHT BLVD - 0.2mi
2. USE ANY LANE TO TURN LEFT ONTO US-1 S THEN TURN RIGHT ONTO FL-76 - 7.9mi
3. USE THE RIGHT LANE TO MERGE ONTO I-95 S VIA THE RAMP TO PALM BEACH - 0.4mi
4. MERGE ONTO I-95 S THEN TAKE EXIT 48 FOR FL-794/YAMATO RD - 52.9mi
5. KEEP RIGHT TO CONTINUE TOWARD NW 40TH ST/SPANISH RIVER BLVD THEN CONTINUE ONTO EXIT 48A - 1.0mi
6. TURN RIGHT ONTO NW 40TH ST/SPANISH RIVER BLVD - 0.2mi
7. TURN RIGHT AT THE 1ST CROSS STREET ONTO AIRPORT RD - 0.3mi
8. TURN LEFT THEN TURN RIGHT - 310ft
9. TURN LEFT THEN TURN RIGHT - 502ft

LATITUDE : 26.382994°

LONGITUDE: -80.108131°



NO NETWORK SUPPORT NODES AND NO USABLE UTILITY POLE WITHIN 300' OF PROPOSED POLE



NOTES:

- * NO OTHER NETWORK SUPPORT POLES WITHIN VICINITY
- * NO MUNICIPAL PARK IN AREA
- * AREA IS COMMERCIAL ZONE
- * AIRPORT ROAD ROW IS OVER 50' WIDE

PROFESSIONAL LICENSURE

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REVISIONS

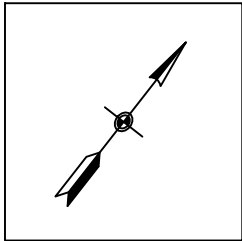
BY	DESCRIPTION	DATE



Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
Check positive response codes before you dig!

PROJECT INFORMATION

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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	OVERALL SITE PLAN	
SCALE:	PAGE:	OF:
1" = 100'	02	26



3210 Lake Emma Road, Lake Mary, FL 32746



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BY	DESCRIPTION	DATE



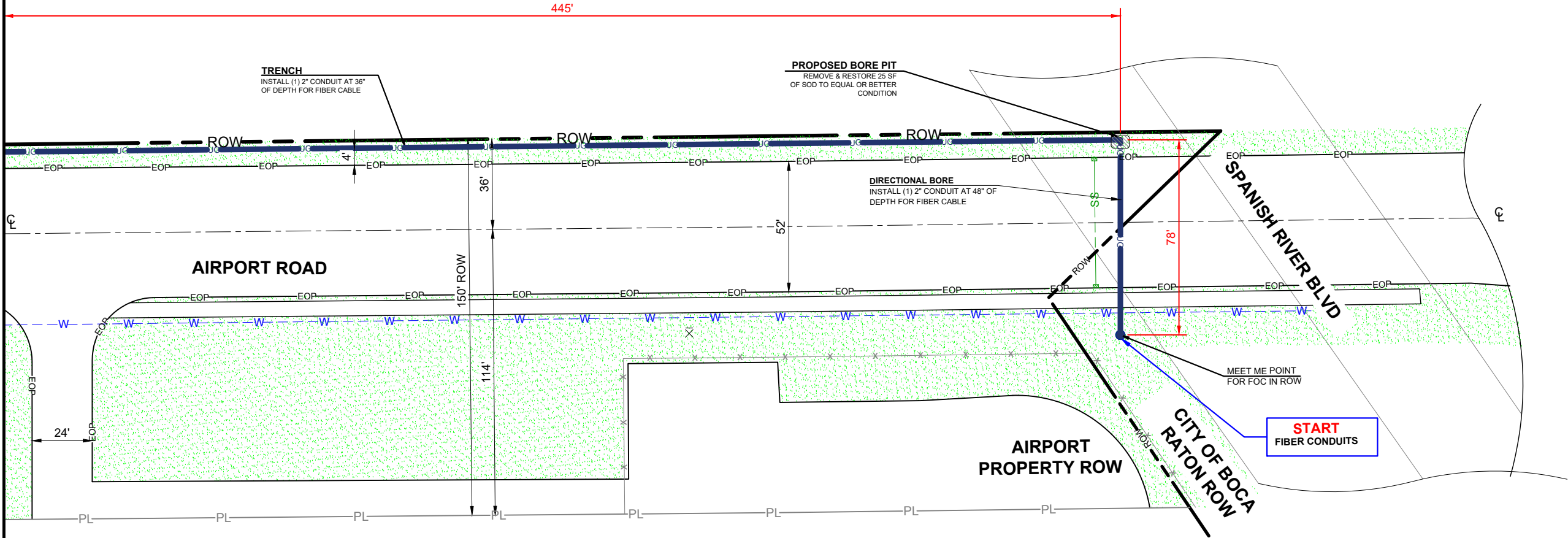
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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	PLAN VIEW	
SCALE:	1" = 100'	PAGE: 03 OF: 26

SEE SHEET: 04 OF 26

MATCH LINE STATION: 05+23



REVIEW & LEGEND

LABOR SUMMARY THIS PAGE		QTY		LINETYPES										SYMBOLOLOGY									
D-BORE, INSTALL (1) 2" CONDUITS	78	LF	AE	PROPOSE AERIAL	Center Line	G	GAS	S	SANITARY SEWER	Concrete Pole	P	POWER MANHOLE	Handhole	Traffic Signal Handhole	Street Light								
TRENCH, INSTALL (1) 2" CONDUITS	445	LF	UGE	PROPOSE POWER UNDERGROUND	EASEMENT	FOC	OTHER FOC	SS	STORM DRAIN	Wood Pole	E	POWER HANDHOLE	Handhole	Telco Manhole	Traffic Signal Pole								
REMOVE & RESTORE ASPHALT	-	SF	UG	PROPOSED FIBER ROUTE	EDGE OF PAVEMENT	E	POWER UNDERGROUND	W	WATER	Quazite Pullbox	O	SANITARY SEWER HANDHOLE	Handhole	Water Valve/Sprinkler	SOD								
REMOVE & RESTORE SOD	25	SF	ROW	RIGHT OF WAY	STREET LIGHT	T	TELCO			New Street Light Pole	D	STORM SEWER HANDHOLE	Handhole	Fire Hydrant	Asphalt Restoration								
INSTALL HANDHOLE (17"x30"x24")	-	EA		SIDEWALK	TRAFIC		FENCE			Gas Valve/Handhole	Z	STORM DRAIN/CATCH BASIN/ DRAIN INLET		Tree	Concrete Restoration								



PROFESSIONAL LICENSURE

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REVISIONS

BY	DESCRIPTION	DATE

Sunshine 811 

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PROJECT INFORMATION

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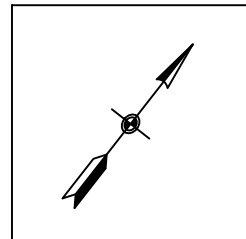
CHECK BY: **DRAFTPROS LLC**

ORIGINAL SUBMITTAL: FEB 20, 2019

NODE NAME #: CRAN RTFL PBC27 594

TITLE: **PLAN VIEW**

N	SCALE:	PAGE:	OF:
ON	1" = 100'	04	26



SEE SHEET: 05 OF 26

MATCH LINE STATION: 11+48

SEE SHEET 03 OF 26

MATCHLINE STATION: 05+23

625'






































TRENCH
INSTALL (1) 2" CONDUIT AT 36"
OF DEPTH FOR FIBER CABLE

TRENCH
INSTALL (1) 2" CONDUIT AT 36"
OF DEPTH FOR FIBER CABLE

AIRPORT ROAD

AIRPORT ROAD

AIRPORT PROPERTY

REVIEW & LEGEND																		
LABOR SUMMARY THIS PAGE		QTY		LINETYPES						SYMBOLGY								
D-BORE, INSTALL (1) 2" CONDUITS		LF		PROPOSE AERIAL		CENTER LINE		GAS		SANITARY SEWER		CONCRETE POLE		POWER MANHOLE		TRAFFIC SIGNAL HANDHOLE		STREET LIGHT
TRENCH, INSTALL (1) 2" CONDUITS	625	LF		PROPOSE POWER UNDERGROUND		EASEMENT		OTHER FOC		STORM DRAIN		WOOD POLE		POWER HANDHOLE		TELCO MANHOLE		TRAFFIC SIGNAL POLE
REMOVE & RESTORE ASPHALT	-	SF		PROPOSED FIBER ROUTE		EDGE OF PAVEMENT		POWER UNDERGROUND		WATER		QUAZITE PULLBOX		SANITARY SEWER HANDHOLE		WATER VALVE/SPRINKLER		SOD
REMOVE & RESTORE SOD	-	SF		RIGHT OF WAY		STREET LIGHT		TELCO				NEW STREET LIGHT POLE		STORM SEWER HANDHOLE		FIRE HYDRANT		ASPHALT RESTORATION
INSTALL HANDHOLE (17"x30"x24")	-	EA		SIDEWALK		TRAFFIC		FENCE				GAS VALVE/HANDHOLE		STORM DRAIN/CATCH BASIN/ DRAIN/INLET		TREE		CONCRETE RESTORATION



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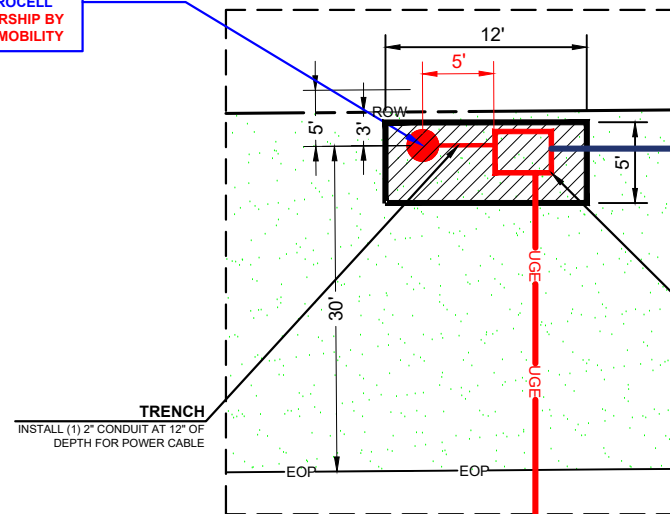
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NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	PLAN VIEW	
SCALE:	1" = 100'	PAGE: 05 OF: 26

ENLARGED PLAN VIEW

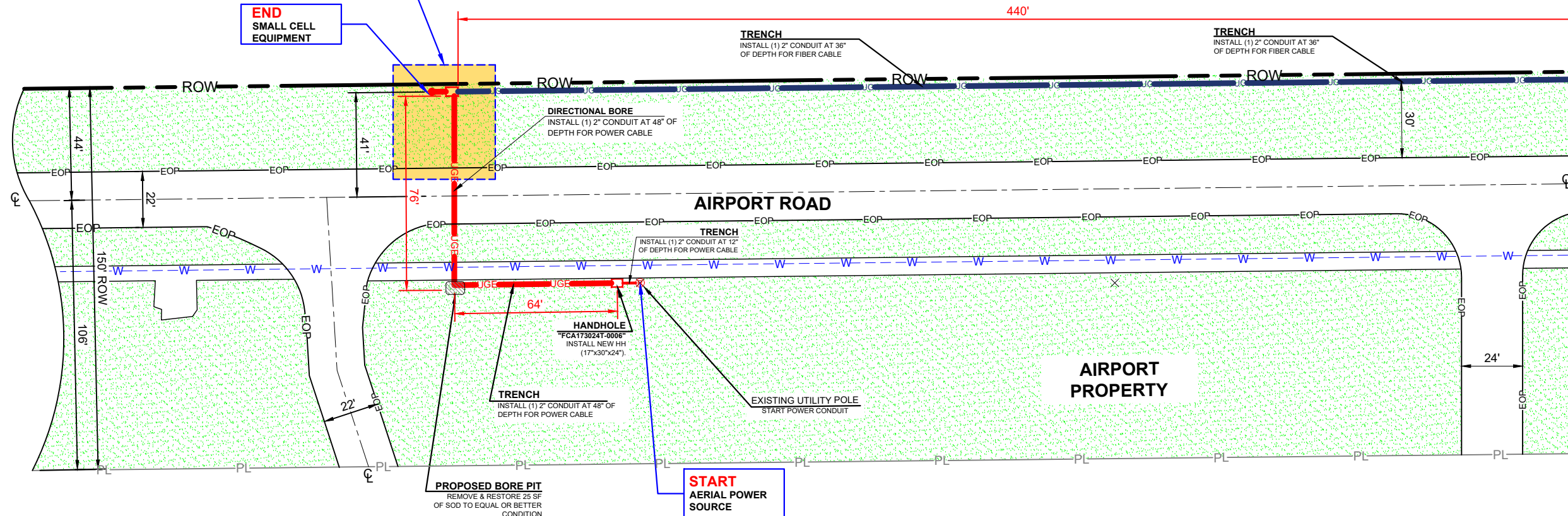
SCALE 1:10

NEW STANDALONE
35 FT (HEIGHT)
METROCELL
OWNERSHIP BY
AT&T MOBILITY








































FOR ADDITIONAL
INFORMATION REFER TO
ENLARGED PLAN VIEW ON
THIS SHEET

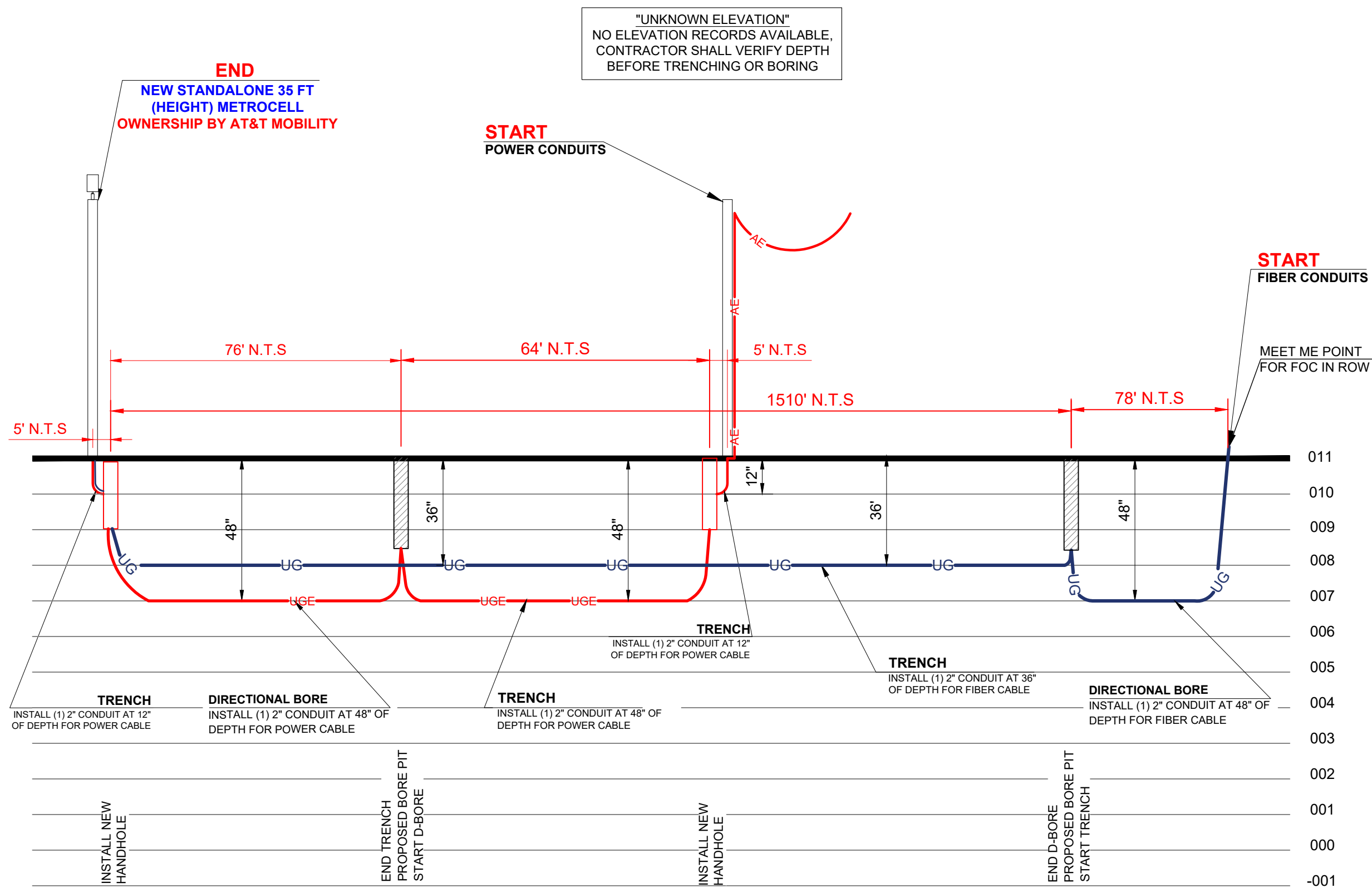
END
SMALL CELL
EQUIPMENT



SEE SHEET: 04 OF 26
MATCH LINE STATION: 11+48

REVIEW & LEGEND

LABOR SUMMARY THIS PAGE			QTY		LINETYPES										SYMBOLOGY					
D-BORE, INSTALL (1) 2" CONDUITS	76	LF		PROPOSE AERIAL		CENTER LINE		GAS		SANITARY SEWER		CONCRETE POLE		POWER MANHOLE		TRAFFIC SIGNAL HANDHOLE		STREET LIGHT		
TRENCH, INSTALL (1) 2" CONDUITS	514	LF		PROPOSE POWER UNDERGROUND		EASEMENT		OTHER FOC		STORM DRAIN		WOOD POLE		POWER HANDHOLE		TELCO MANHOLE		TRAFFIC SIGNAL POLE		
REMOVE & RESTORE ASPHALT	-	SF		PROPOSED FIBER ROUTE		EDGE OF PAVEMENT		POWER UNDERGROUND		WATER		QUAZITE PULLBOX		SANITARY SEWER HANDHOLE		WATER VALVE/SPRINKLER		SOD		
REMOVE & RESTORE SOD	85	SF		RIGHT OF WAY		STREET LIGHT		TELCO				NEW STREET LIGHT POLE		STORM SEWER HANDHOLE		FIRE HYDRANT		ASPHALT RESTORATION		
INSTALL HANDHOLE (17"x30"x24")	2	EA		SIDEWALK		TRAFFIC		FENCE				GAS VALVE/HANDHOLE		STORM DRAIN/CATCH BASIN/ DRAIN INLET		TREE		CONCRETE RESTORATION		



PROFILE VIEW

HORIZONTAL SCALE: 1"= 30' N.T.S
VERTICAL SCALE: 1"= 3'

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SCALE:	NTS	PAGE: 06 OF: 26

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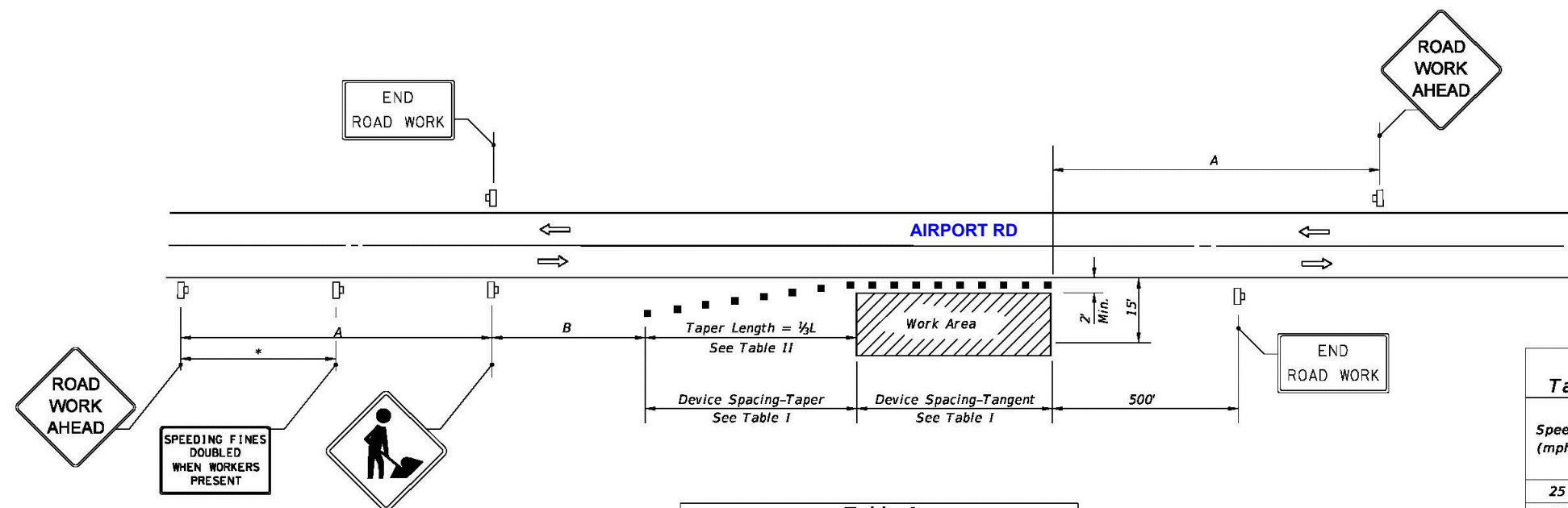
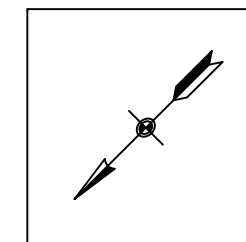
BY	DESCRIPTION	DATE



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NODE NAME #:	CRAN_RTFL_PBC27_594
TITLE:	TRAFFIC CONTROL PLAN
SCALE:	NTS
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DISTANCE BETWEEN SIGNS		
Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350
50 mph or greater	500	500

*Midway between signs.

Table I Device Spacing				
Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

Table II Taper Length - Shoulder				
Speed (mph)	1/2 L (ft.)			Notes
	8' Shldr.	10' Shldr.	12' Shldr.	
25	28	35	42	$L = \frac{WS^2}{60}$
30	40	50	60	
35	55	68	82	
40	72	90	107	
45	120	150	180	$L = WS$
50	133	167	200	
55	147	183	220	
60	160	200	240	
65	173	217	260	
70	187	233	280	

8' minimum shoulder width

1/2 L = Length of shoulder taper in feet

W = Width of total shoulder in feet (combined paved and unpaved width)

S = Posted speed limit (mph)

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

SYMBOLS

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification + Direction of Traffic

GENERAL NOTES

- When four or more work vehicles enter the through traffic lanes in a one hour period or less (excluding establishing and terminating the work area), the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs, see Index 102-603.
- SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign only on the side where the shoulder work is being performed.
- When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
- For general TCZ requirements and additional information, refer to Index 102-600.

DURATION NOTES

- Signs and channelizing devices may be omitted if all of the following conditions are met:
 - Work operations are 60 minutes or less.
 - Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

FY 2018-19
STANDARD PLANS

TWO-LANE, TWO-WAY, WORK ON SHOULDER

INDEX
102-602

SHEET
1 of 1

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REVISIONS

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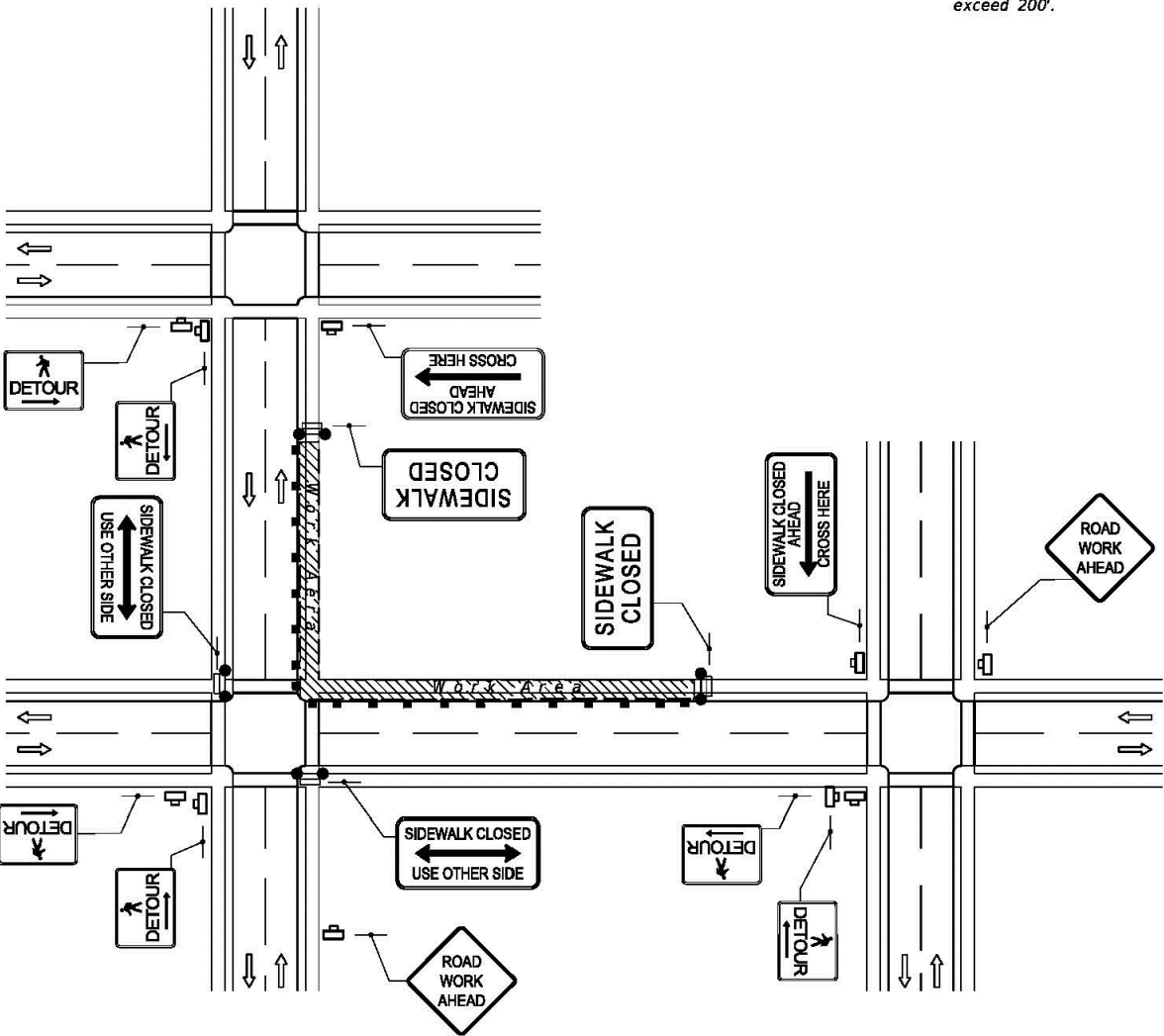
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SCALE:	NTS
PAGE:	08
OF:	26

GENERAL NOTES:

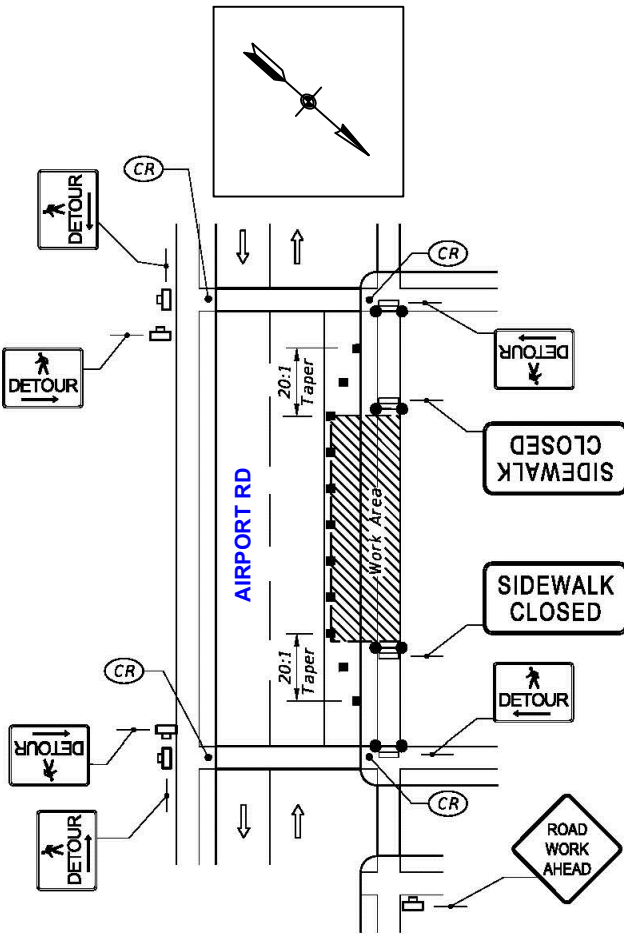
- When encroaching work requires a sidewalk closure for 60 minutes or greater, provide an alternate pedestrian route.
- For spacing of vehicular Channelizing Devices, see applicable vehicular temporary traffic control Indexes.
- Cover or deactivate pedestrian traffic signal display(s) controlling closed crosswalks.
- For post mounted signs located near or adjacent to a sidewalk, maintain a minimum 7' clearance from the bottom of the sign panel to the surface of the sidewalk.
- Provide a 5' wide temporary walkway, except where space restrictions warrant a minimum width of 4'. Provide a 5' x 5' passing space for temporary walkways less than 5' in width at intervals not to exceed 200'.
- Provide a cross-slope with a maximum value of 0.02 for all temporary walkways.
- Maintain temporary walkway surfaces and ramps that are stable, firm, slip-resistant, and free of any obstructions or hazards such as holes, debris, mud, construction equipment, and stored material.
- Remove temporary walkways immediately after reopening of the sidewalk, unless otherwise noted in the plans.
- Meet the requirements of Index 522-002 for temporary curb ramps.
- Place pedestrian longitudinal channelizing device(s) across the full width of the closed sidewalk. For temporary walkways, similar to the Sidewalk Diversion, place LCDs to delineate both sides of the temporary walkway.
- For sidewalk diversions, ensure that there is sufficient R/W for placement of temporary sidewalk and pedestrian longitudinal channelizing devices.

SYMBOLS

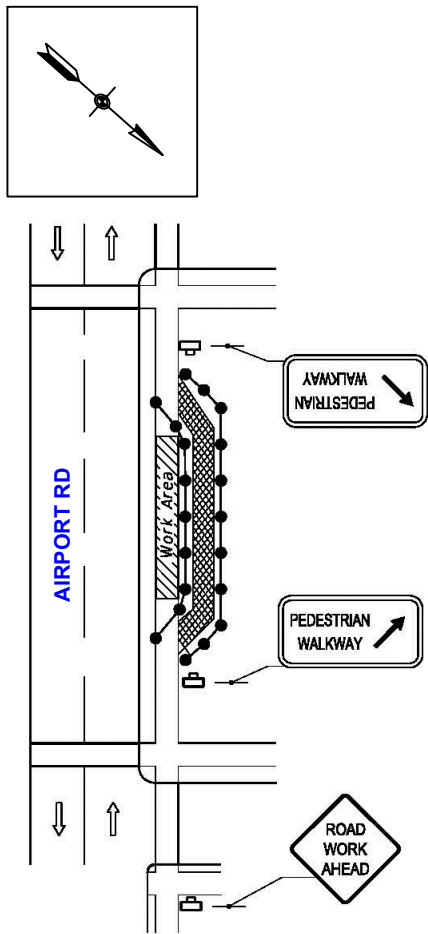
- Work Area
- Channelizing Device
- Work Zone Sign
- Required Locations For Either Temporary Or Permanent Curb Ramps.
- Lane Identification + Direction of Traffic
- Pedestrian Longitudinal Channelizing Device (LCD) with Mounted Work Zone Sign or separate Work Zone Sign
- Pedestrian Longitudinal Channelizing Device (LCD)
- Temporary Sidewalk



CROSSWALK CLOSURE AND PEDESTRIAN DETOUR



SIDEWALK DETOUR



SIDEWALK DIVERSION

PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS

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102-660
SHEET
1 of 1

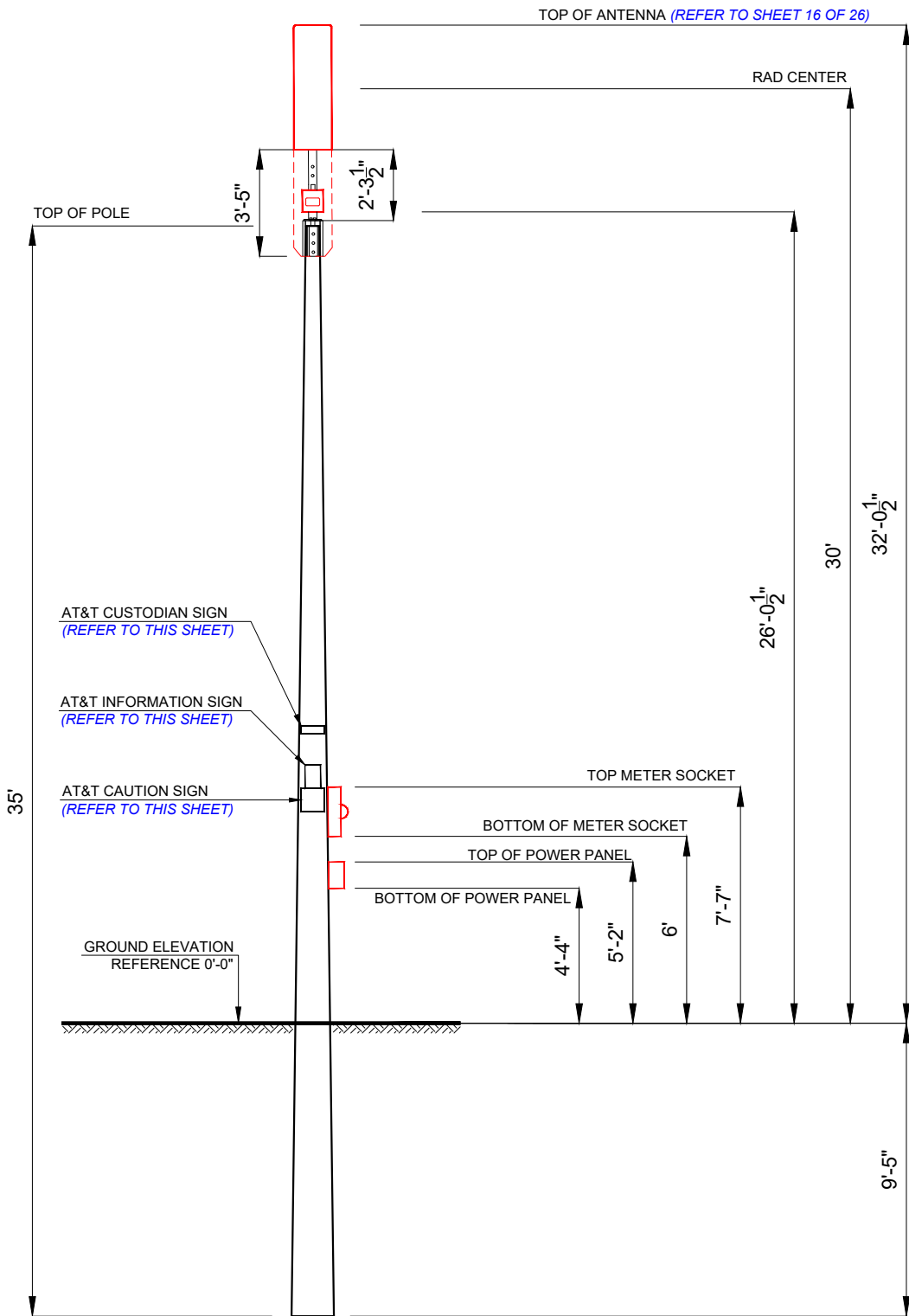


FY 2018-19
STANDARD PLANS

LAST
REVISION
11/01/17

10/16/2017 8:17:22 AM

NEW "AT&T MOBILITY" POLE

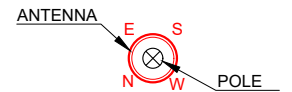


FROM NORTHWEST LOOKING SOUTHEAST

SCALE 3/16" = 1'-0"

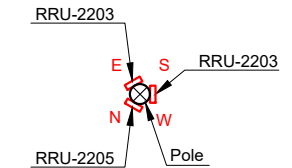
11"x17" PRINT IS THE FULL SCALE
FORMAT. ANY SIZE OTHER THAN THAT
IS AT REDUCED SCALE.

TOP VIEW @ ELEVATION 32'-0 1/2"



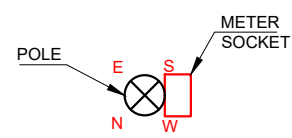
AMPHENOL
OMNI ANTENNA
MODEL C2U3MT360X12FxyS0
48.0"(H) x 14.6" (Ø) - 36.2 lbs
900091 SHROUD POLE TOP
WIDE DIAMETER MOUNT WITH
RADIO MOUNTING
65" approx.(H) x 16"(Ø)
(REFER TO SHEET 17 & 18 OF 26)

BOTTOM VIEW @ ELEVATION 26'-0 1/2"



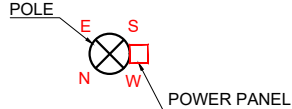
(2) - ERICSSON RRU-2203
RADIO UNIT
MINIMUM AC FUSE RATING (4 AMP)
7.87"(H)x7.87"(W)x3.94"(D),
10 lbs ea,
(1) - ERICSSON RRU-2205
RADIO UNIT
MINIMUM AC FUSE RATING (6 AMP)
7.87"(H)x7.87"(W)x3.94"(D),
11 lbs ea,
(REFER TO SHEET 19 OF 26)

BOTTOM VIEW @ ELEVATION 6'-0"



METER SOCKET
UTE4213CCH
19"(H)x13"(W)x4.94"(D) - 25 lbs,

BOTTOM VIEW @ ELEVATION 4'-4"

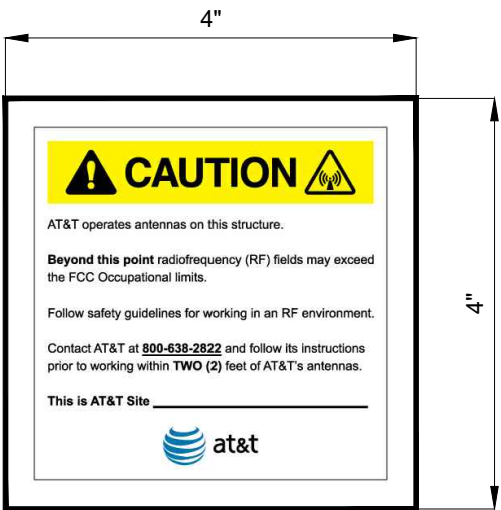
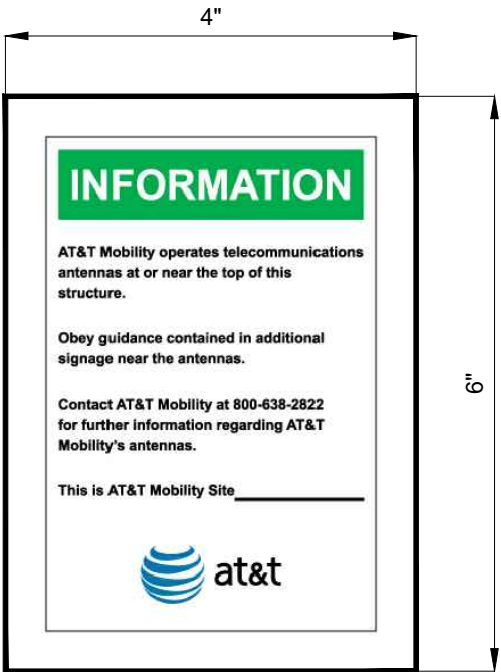
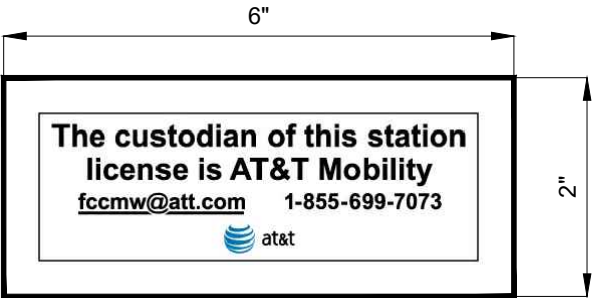


AC DISTRIBUTION PANEL
WITH POWER PROTECTION -
SC-MM08-001
120 VAC SINGLE PHASE / 60A
8.0"(H)x12.0"(W)x4.0"(D) - 15 lbs,
sq in. VOLUME = 384 cu in

OTHERS (CABLES)

COAXIAL CABLE:
O.D. = 0.50" - LENGHT = 8x6'
O.D. = 0.50" - LENGHT = 4x6'

POWER CABLE:
O.D. = 0.25" - LENGHT = 1x27'
O.D. = 0.25" - LENGHT = 2x25'



AT&T WARNING SIGNS

SCALE = NTS



3210 Lake Emma Road, Lake Mary, FL 32746



Engineering Office
4461 Parkbreeze Ct
Orlando, FL 32808

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APPLICABLE CODES AND ORDINANCES

REVISIONS

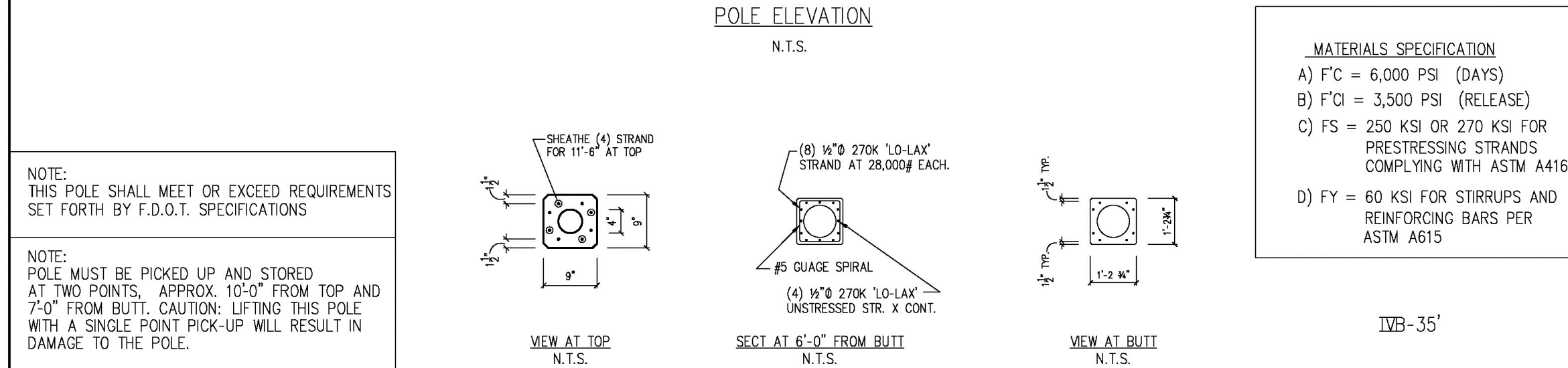
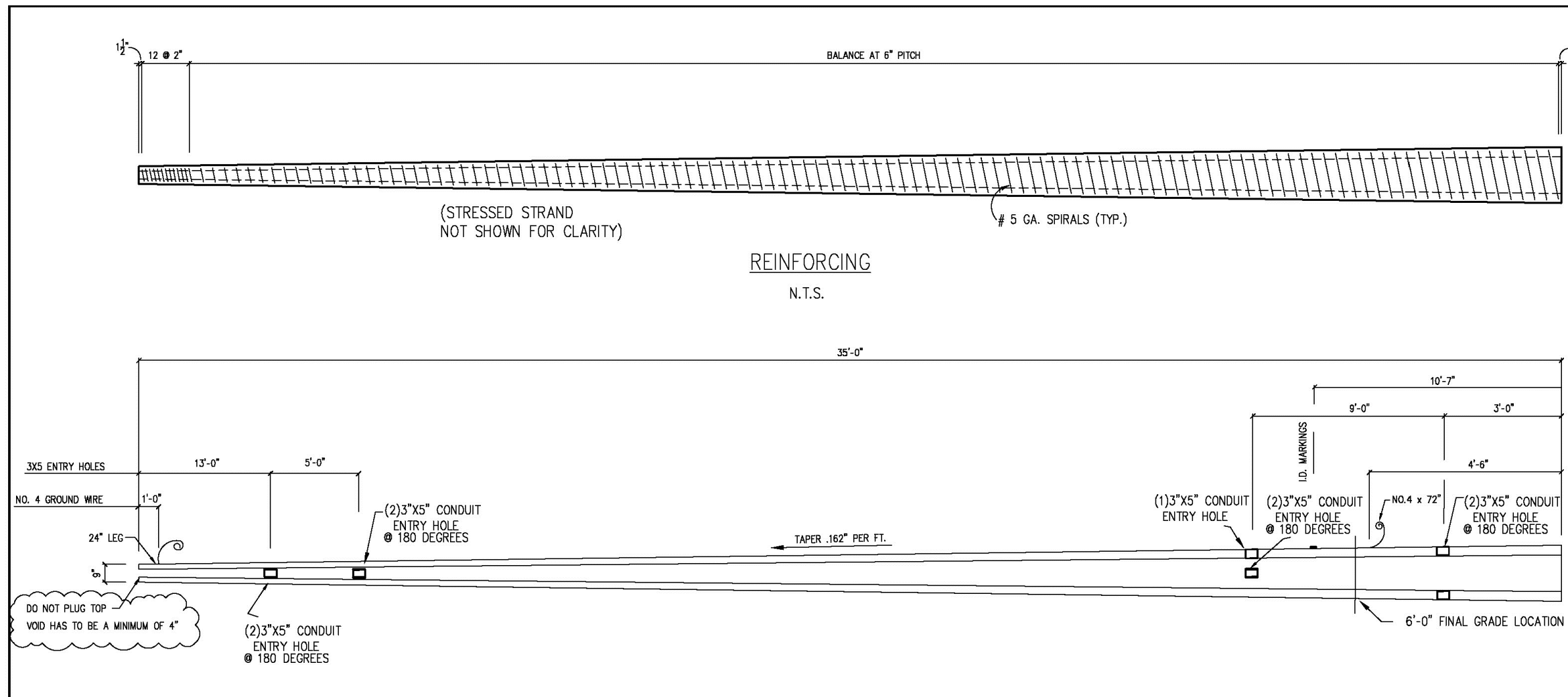
BY	DESCRIPTION	DATE



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business days before digging to have utilities
located and marked.
Check positive response codes before you dig!

PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC
CHECK BY:	DRAFTPROS LLC
ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_594
TITLE:	NEW EQUIPMENT ELEVATION
SCALE:	3/16" = 1'-0"
PAGE:	09
OF:	26



DATE: _____ BY: _____
DESCRIPTION: _____
REV: _____

DURA-STRESS Inc.
P.O. BOX 480779 LEESBURG, FL 34749-0779
PHONE (352) 787-1422 FAX (352) 787-0080
STRUCTURAL PRESTRESSED AND ARCHITECTURAL PRECAST CONCRETE PRODUCTS

JOB NAME: _____
LOCATION: _____
ARCHITECT: _____
ENGINEER: _____
CONTRACTOR: _____
PROJ. NO: _____

DRAWN: _____
CHK'D: _____
APPR: _____
DATE: _____
RELEASED: _____

DS JOB NO: _____
SHT: _____ OF: _____

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Orlando, FL 32808

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REVISIONS

BY	DESCRIPTION	DATE

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PROJECT INFORMATION

DRAWING BY: **DRAFTPROS LLC**

CHECK BY: **DRAFTPROS LLC**

ORIGINAL SUBMITTAL: **FEB 20, 2019**

NODE NAME #: **CRAN_RTFL_PBC27_594**

TITLE: **NEW POLE ELEVATION**

SCALE: N.T.S.	PAGE: 10	OF: 26
----------------------	-----------------	---------------

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



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REVISIONS

BY	DESCRIPTION	DATE



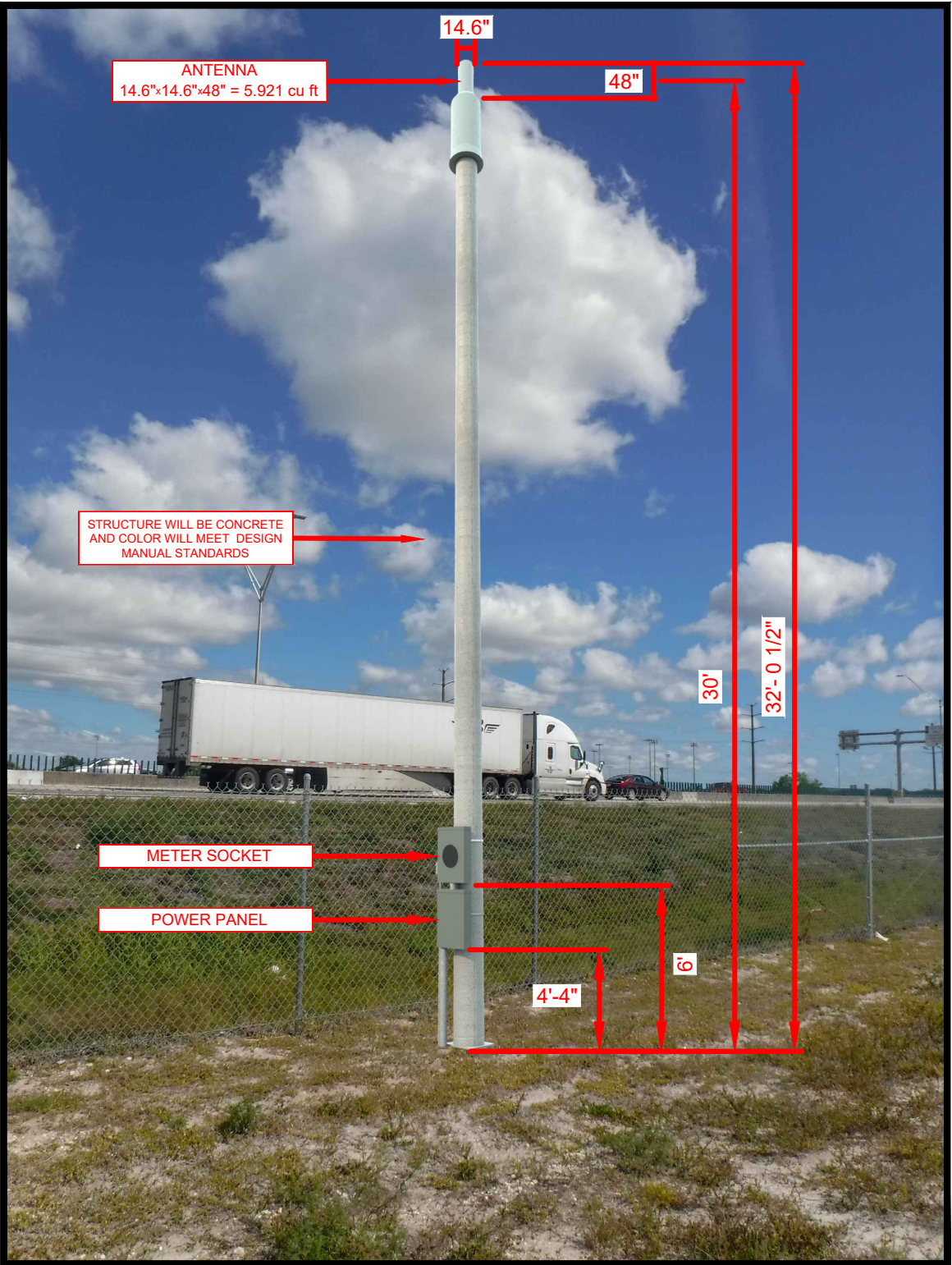
Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	PHOTO SIM	
SCALE:	NTS	PAGE: 11 OF: 26



CURRENT VIEW-FROM SOUTH LOOKING NORTH
SCALE = NTS

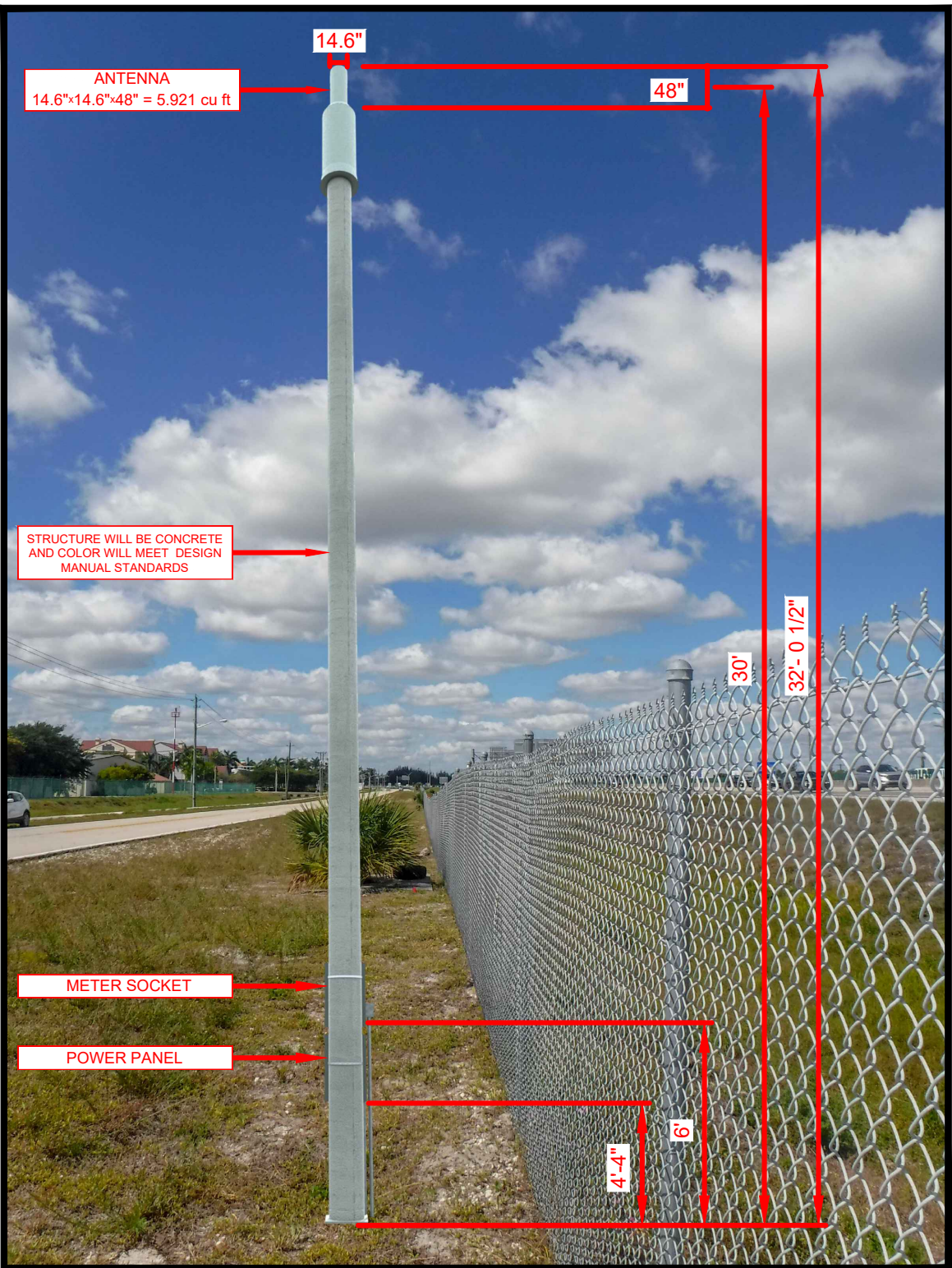


PROPOSED VIEW-FROM SOUTH LOOKING NORTH
SCALE = NTS

POLE LOCATION MEETS OR EXCEEDS ADA
COMPLIANCE STANDARDS AS REQUIRED BY
CITY OF BOCA RATON



CURRENT VIEW-FROM NORTHEAST LOOKING SOUTHWEST
SCALE = NTS



PROPOSED VIEW-FROM NORTHEAST LOOKING SOUTHWEST
SCALE = NTS



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REVISIONS

BY	DESCRIPTION	DATE



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PROJECT INFORMATION

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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	PHOTO SIM	
SCALE:	PAGE:	OF:
NTS	12	26

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



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BY	DESCRIPTION	DATE



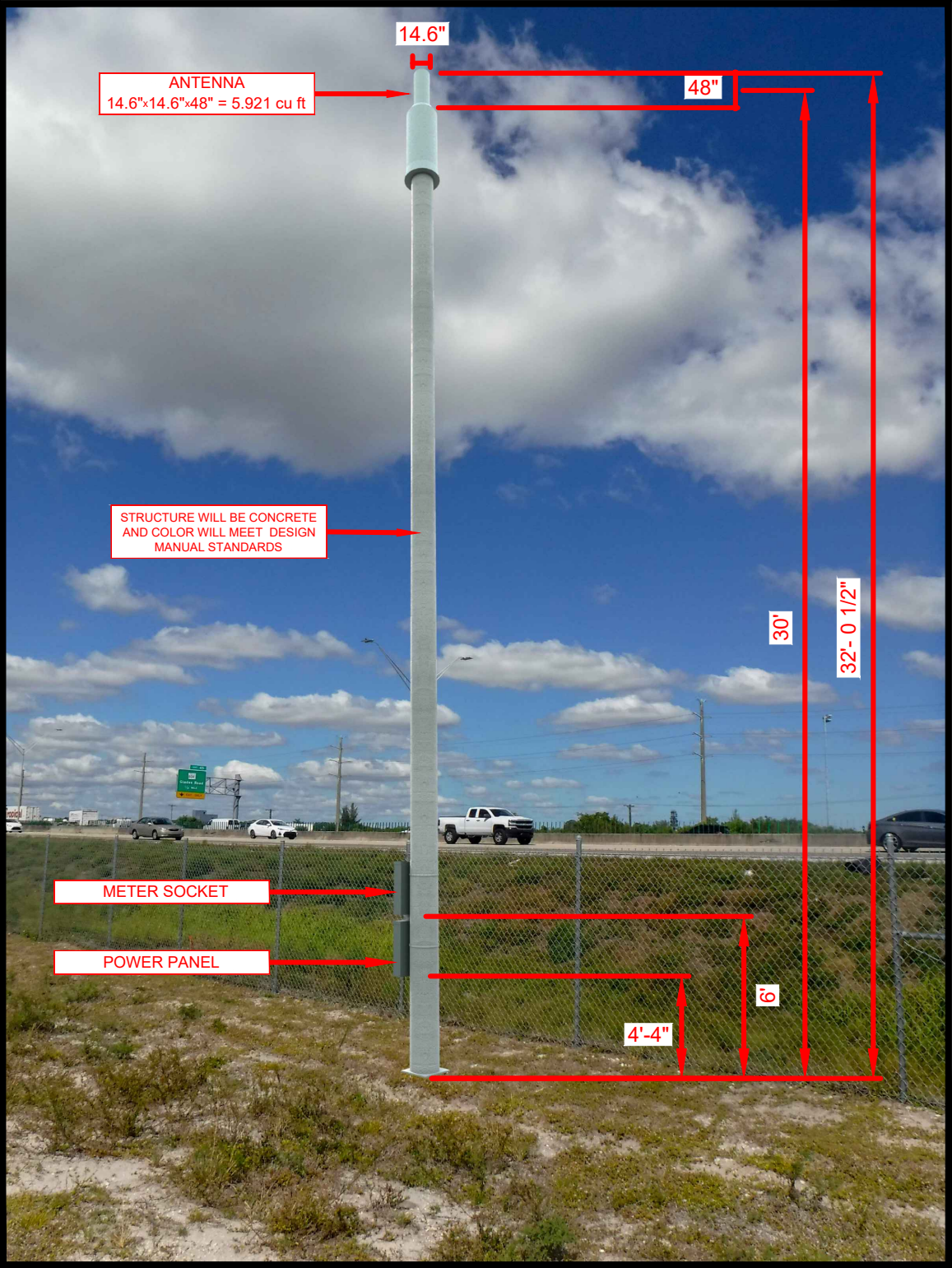
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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	PHOTO SIM	
SCALE:	NTS	PAGE: 13 OF: 26

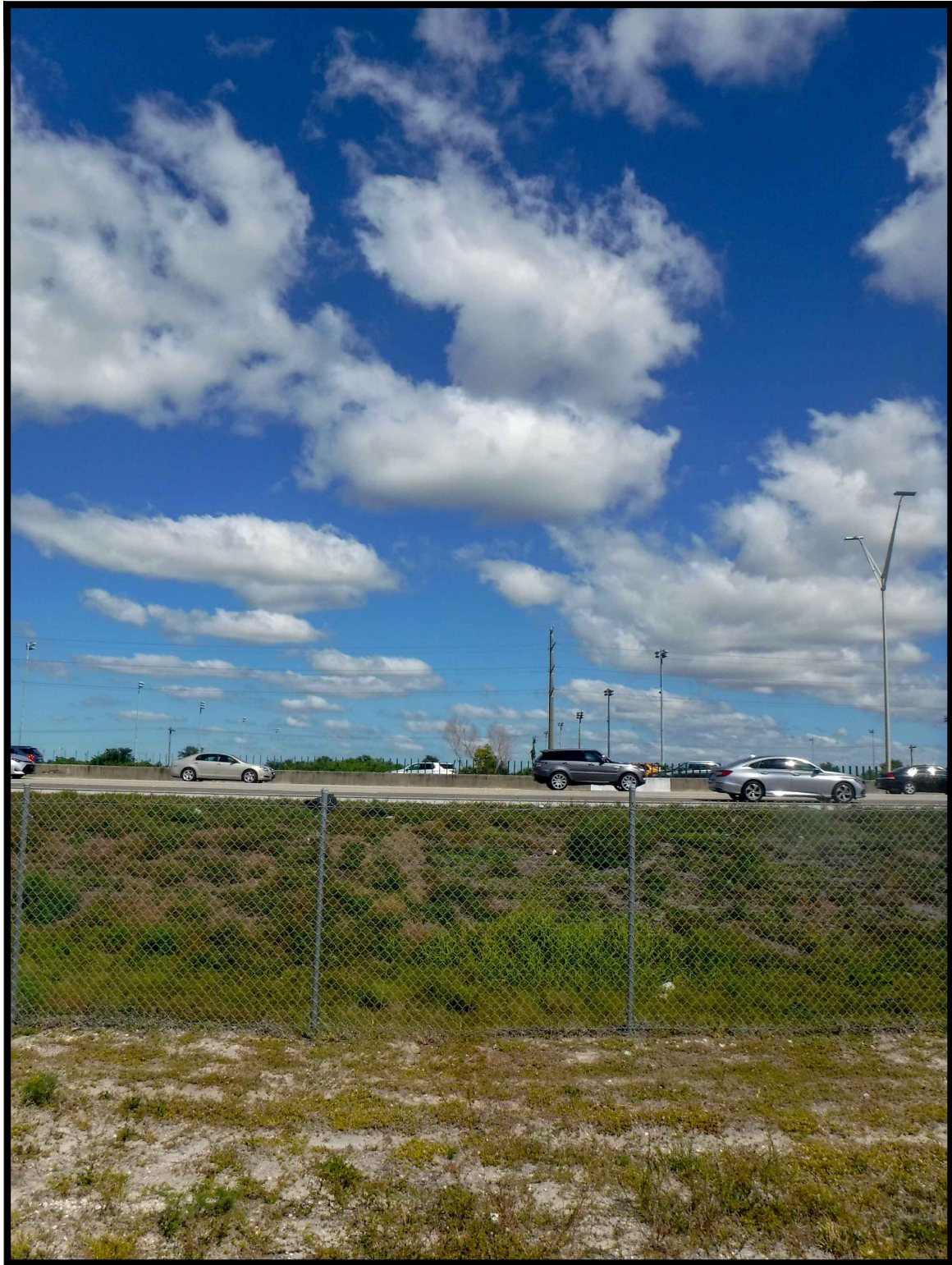


CURRENT VIEW-FROM EAST LOOKING WEST
SCALE = NTS

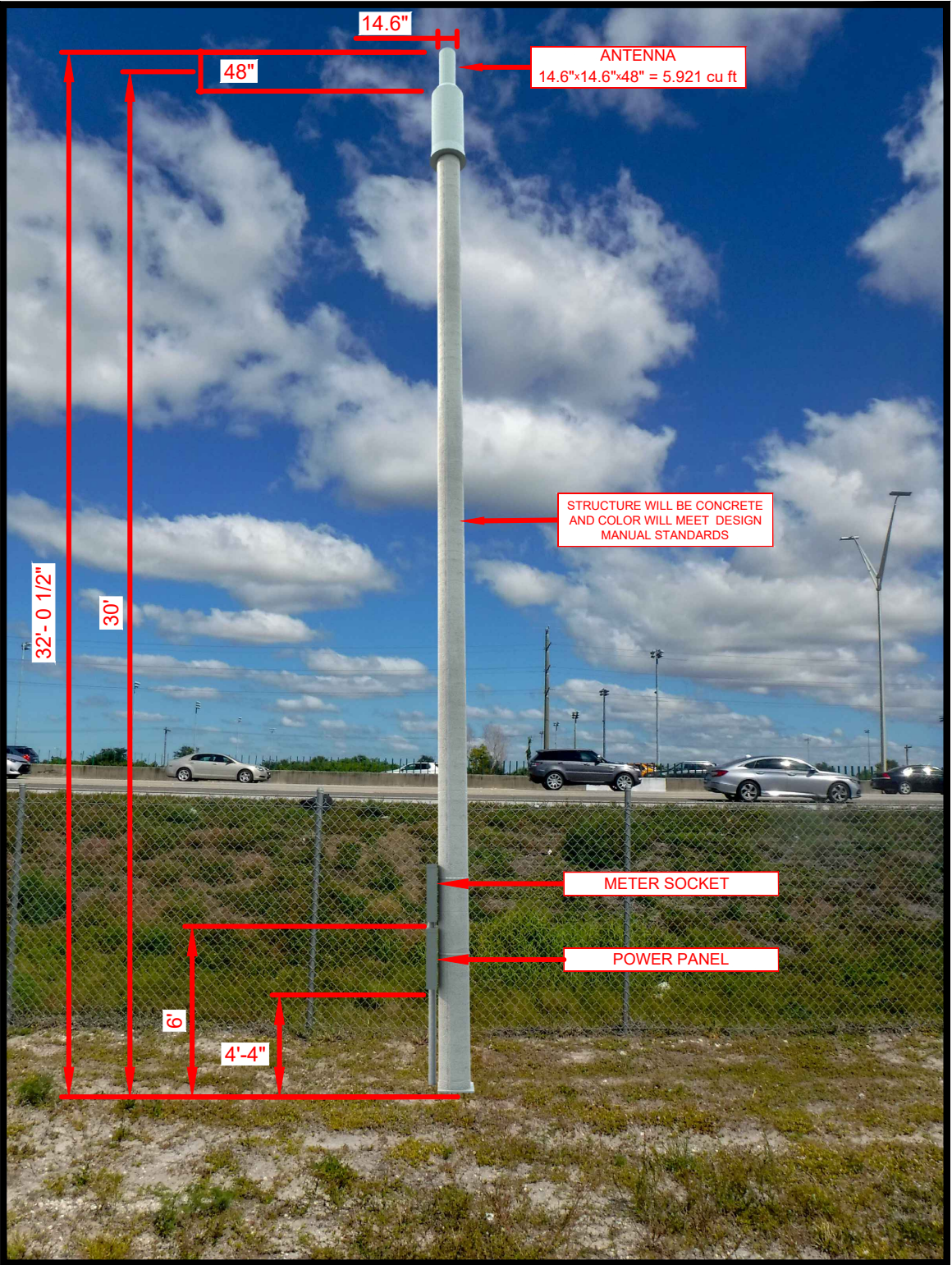


PROPOSED VIEW-FROM EAST LOOKING WEST
SCALE = NTS

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



CURRENT VIEW-FROM SOUTHEAST LOOKING NORTHWEST
SCALE = NTS



PROPOSED VIEW-FROM SOUTHEAST LOOKING NORTHWEST
SCALE = NTS



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REVISIONS

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NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	PHOTO SIM	
SCALE:	NTS	PAGE: 14 OF: 26



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REVISIONS

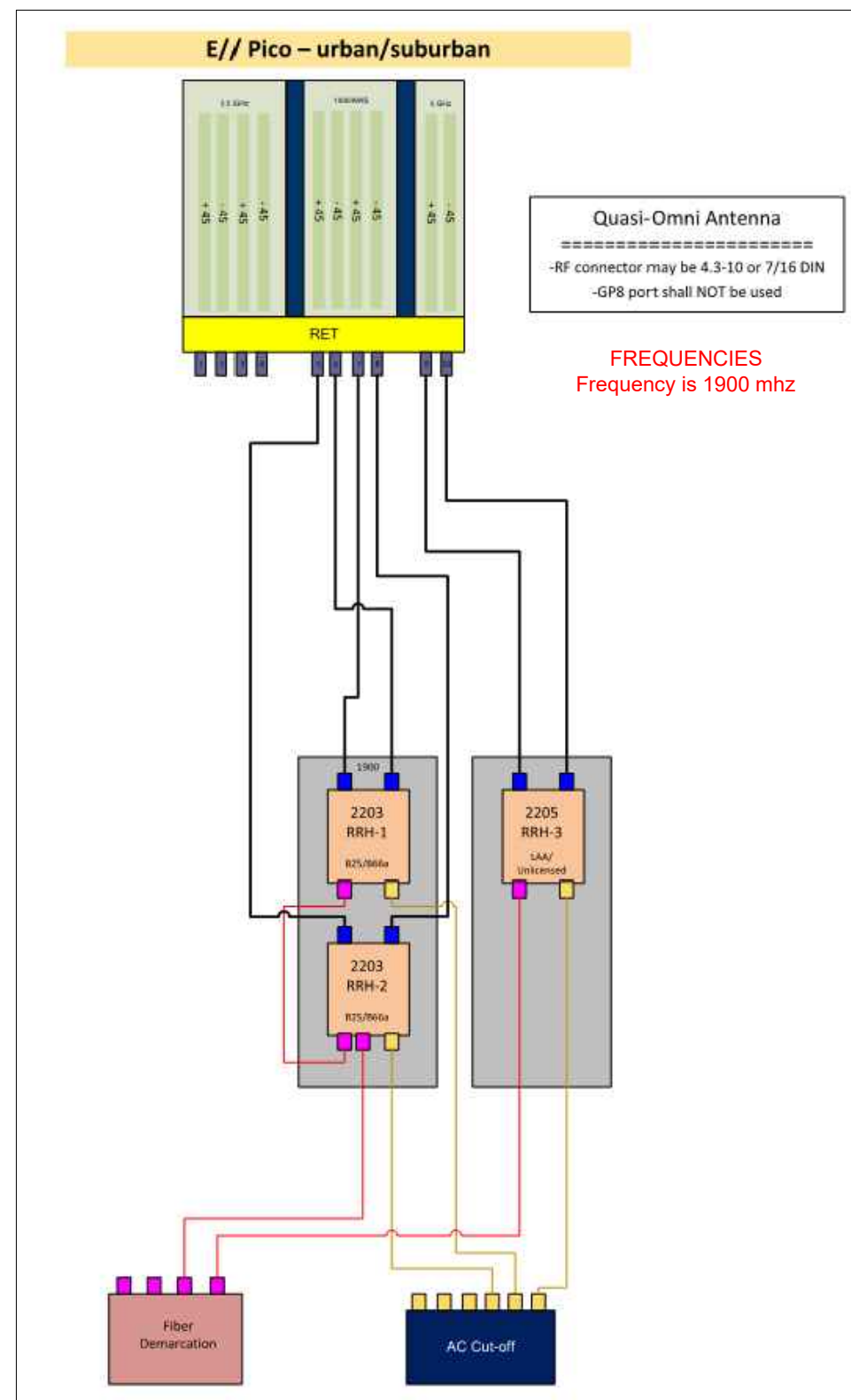
BY	DESCRIPTION	DATE



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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	RF SCHEMATIC's	
SCALE:	PAGE:	OF:
NTS	15	26



SMALL CELL ONE LINE SCHEMATIC
SCALE = NTS



696-960 / (2x) 1695-2700 / (2x) 3550-3700 / 5150-5925 MHz

C2U3MT360X12FxyS0

HEX BAND | OMNI | CANISTER ANTENNA | X-POL | FIXED TILT | 1219 MM (48.0 IN)

Features

- Omni configuration with 12 connectors
- Ideal for Small Cell / DAS applications
- Available with 4.3-10 connectors
- Four unique mounting options
- Available for order with a grey, brown or black radome

Connector Description

The antenna has 12 connectors located at the bottom.

Low Band #1	R1	696-960 MHz	(2x) 4.3-10 Female
Mid Band #1	Y1	1695-2700 MHz	(2x) 4.3-10 Female
Mid Band #2	Y2	1695-2700 MHz	(2x) 4.3-10 Female
High Band #1	Y3	3550-3700 MHz	(2x) 4.3-10 Female
High Band #2	Y4	3550-3700 MHz	(2x) 4.3-10 Female
High Band #3	V1	5150-5925 MHz	(2x) 4.3-10 Female

Electrical Characteristics	R1	Y1 Y2	Y3 Y4	V1
Frequency Bands (MHz)	696-960	(2x) 1695-2700	(2x) 3550-3700	5150-5925
	696-806 806-900	1695-1880 1850-1990 1920-2200 2300-2700		
Polarization	±45°	(2x) ±45°	(2x) ±45°	±45°
Horizontal Beamwidth	360° 360°	360° 360° 360° 360°	360°	360°
Vertical Beamwidth	21.2° ±1.2° 18.3° ±1.6°	18.5° ±1.3° 17.2° ±1.0° 16.1° ±1.7° 13.5° ±1.4°	37.1° ±4.8°	20.2° ±3.1°
Gain (dBi)	7.6 ±0.5 8.2 ±0.7	9.1 ±1.4 9.4 ±1.1 9.3 ±1.0 9.4 ±1.2	4.3 ±0.6	4.1 ±0.8
Electrical Downtilt (°)	(x) 0, 5	(y) 0, 6	0	0
Impedance	50Ω	50Ω	50Ω	50Ω
VSWR	≤ 1.5:1	≤ 1.5:1	≤ 1.5:1	≤ 1.5:1
Upper Sidelobe Suppression	> 14 dB	> 14 dB	> 9 dB	> 16 dB
Isolation Between Ports	20 dB	25 dB	25 dB	25 dB
IM3 (2x20W carrier)	< -153 dBc	< -153 dBc	N/A	N/A
Input Power	(2x) 500 W	(4x) 300 W	(4x) 300 W	(2x) 300 W
Diplexed	No			
Number of Sectors, Sector Spacing and/or Pattern Shape	Omni			
Lightning Protection	Direct Ground			

Mechanical Characteristics

Antenna Dimensions (Height x Diameter)	1219 x 371 mm	48.0 x 14.6 in
Weight without Mounting Bracket Kit	16.4 kg	36.2 lbs
Antenna Volume	0.13 m³	4.7 ft³
Survival Wind Speed	241 km/hr	150 mph
Wind Area	0.47 m²	5.0 ft²
Wind Load (160 km/hr or 100 mph)	391 N	88 lbf

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

REV041718NA

www.amphenol-antennas.com

1 of 4

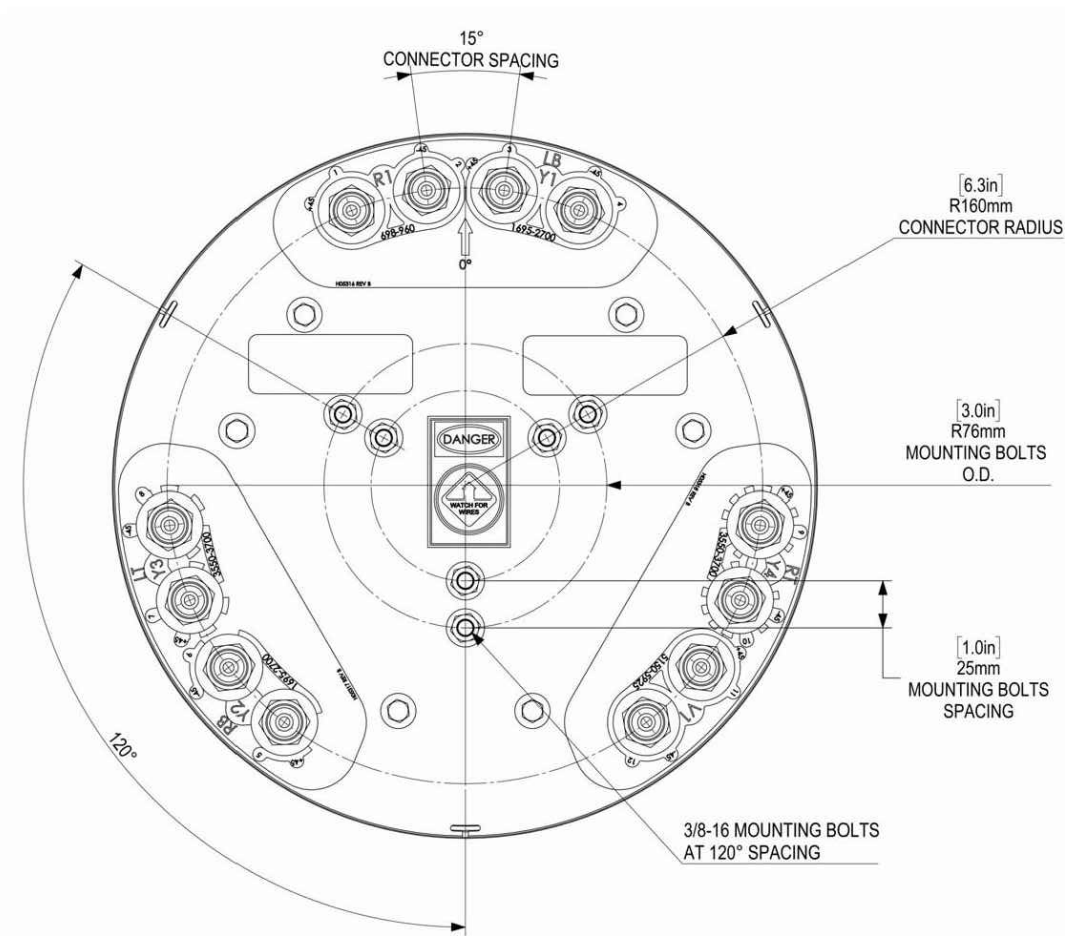


696-960 / (2x) 1695-2700 / (2x) 3550-3700 / 5150-5925 MHz

C2U3MT360X12FxyS0

HEX BAND | OMNI | CANISTER ANTENNA | X-POL | FIXED TILT | 1219 MM (48.0 IN)

Bottom View - Connector Diagram



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REV041718NA

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REVISIONS

BY	DESCRIPTION	DATE



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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC
CHECK BY:	DRAFTPROS LLC
ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_594
TITLE:	ANTENNA DETAIL
SCALE:	NTS
PAGE:	16
OF:	26

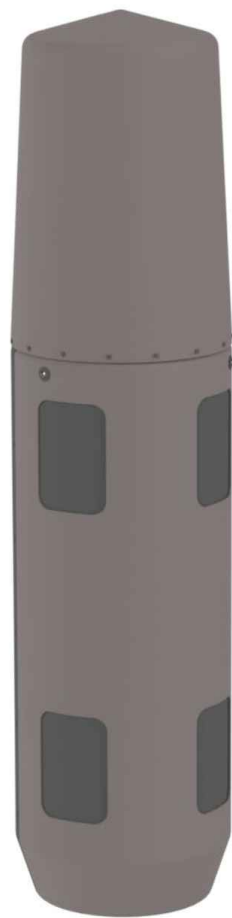
ANTENNA DETAIL
SCALE = NTS



INSTALLATION MANUAL

900091

SHROUD POLE TOP WIDE DIAMETER MOUNT
WITH RADIO MOUNTING



Amphenol/Kathrein Configuration



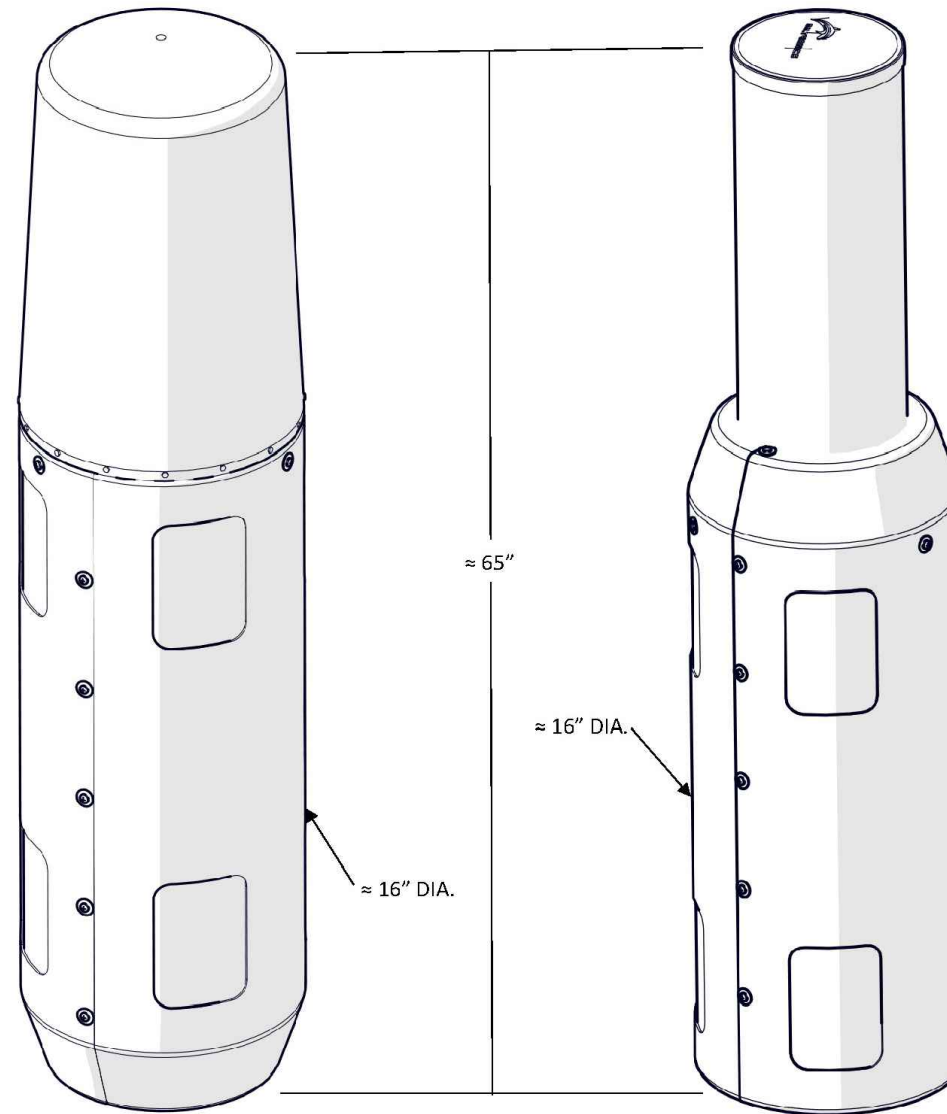
Galtronics Configuration

719.599.3400
www.concealfab.com
sales@concealfab.com
10205 Federal Drive, Building B
Colorado Springs, CO 80908

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING



SPECIFICATIONS



Amphenol/Kathrein Configuration

Galtronics Configuration



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PROJECT INFORMATION

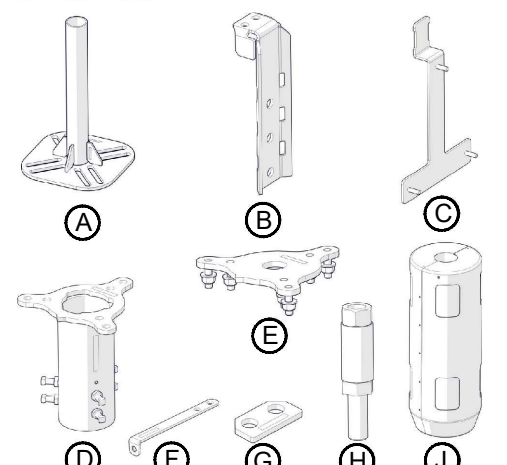
DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	BRACKET FOR ANTENNA-RRU'S	
SCALE:	PAGE:	OF:
NTS	17	26

900091 - BRACKET FOR ANTENNA & RRU'S
SCALE = NTS

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

SUPPLIED PARTS



ITEM	QTY	DESCRIPTION	DESCRIPTION
A	1	WIDE DIAMETER MAST	104381
B	4	SHORT POLE TOP LEG	101624
C	3	220X RADIO MOUNTING BRACKET	104586
D	1	UNIVERSAL ANTENNA SLEEVE	101687
E	1	SINGLE BOLT ADAPTER	008166
F	3	SHROUD ARM	100319
G	4	ACCENTRIC WASHER	009887
H	1	SINGLE BOLT EXTENSION*	009632
J	1	POLE TOP SHROUD	104594

*Single Bolt Extension used in Galtronics configuration only.

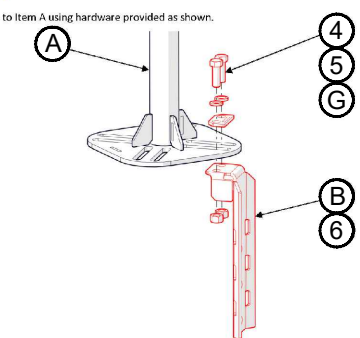
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900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

ASSEMBLY

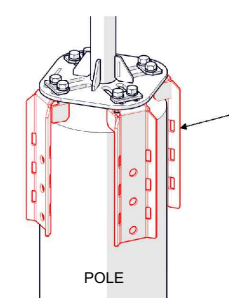
Mount Item B to Item A using hardware provided as shown.



4
5
G

B
6

Bolt or band Item B to pole.
(Bolts or bands by others).



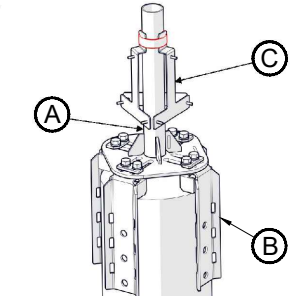
POLE

6

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

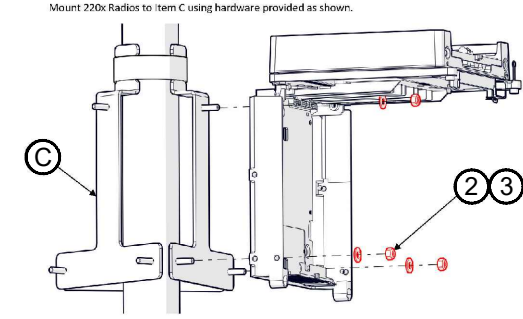
Band Item C to Item A as shown.
(Bands by other).



A
C

B

Mount 220x Radios to Item C using hardware provided as shown.



C

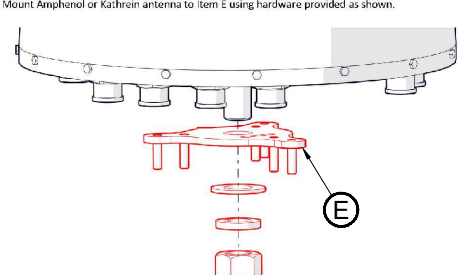
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7

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

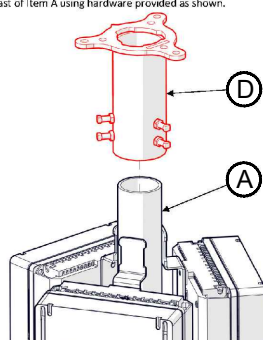
ConcealFab Corporation

If using a Galtronics antenna, skip to page 11. If using Amphenol or Kathrein antenna continue below.
Mount Amphenol or Kathrein antenna to Item E using hardware provided as shown.



E

Mount Item D to mast of Item A using hardware provided as shown.



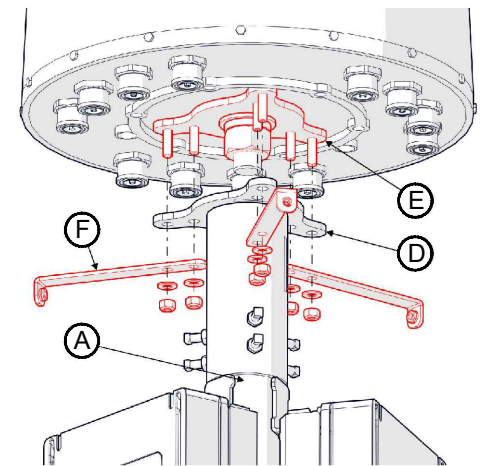
D
A

8

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

Mount antenna with Item E to Item D using hardware provided as shown.



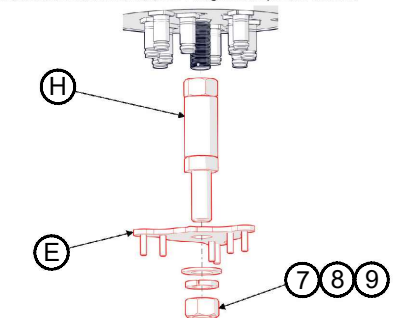
F
E
D
A

9

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

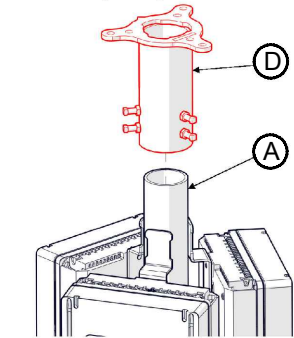
Mount Galtronics antenna to Item H and Item E using hardware provided as shown.



H
E

7
8
9

Mount Item D to mast of Item A using hardware provided as shown.



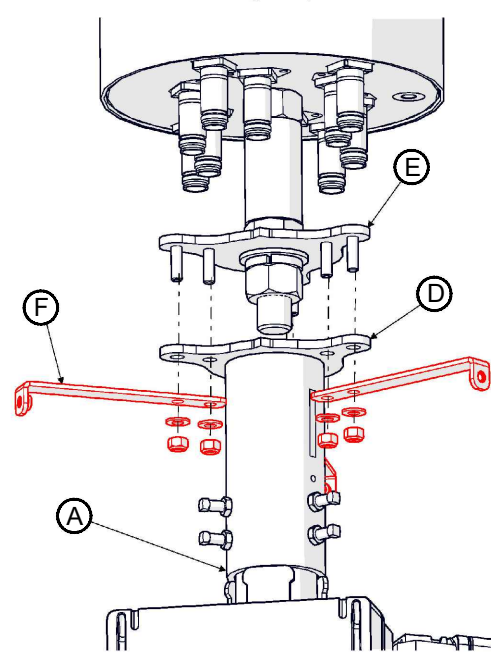
D
A

11

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

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Mount antenna with Item E to mast of Item D using hardware provided as shown.



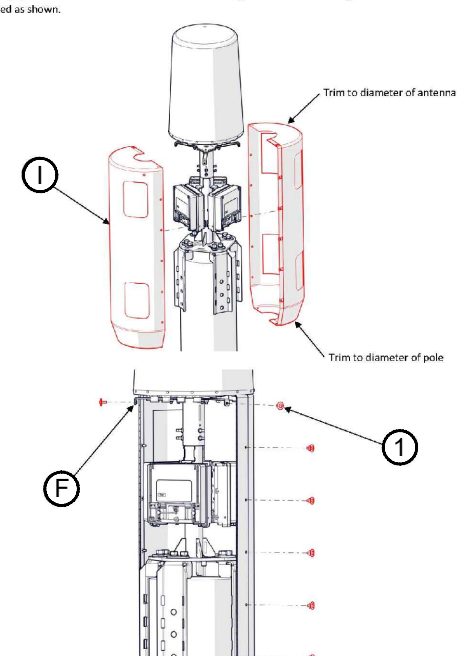
F
E
D
A

12

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

Cover equipment and other hardware with Item J. Bolt together with Item F using hardware provided as shown.




I
F

Trim to diameter of antenna


Trim to diameter of pole

1

10



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Orlando, FL 32808

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REVISIONS

BY	DESCRIPTION	DATE



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PROJECT INFORMATION

DRAWING BY: DRAFTPROS LLC

CHECK BY: DRAFTPROS LLC

ORIGINAL SUBMITTAL: FEB 20, 2019

NODE NAME #: CRAN_RTFL_PBC27_594

TITLE: BRACKET FOR ANTENNA-RRU'S

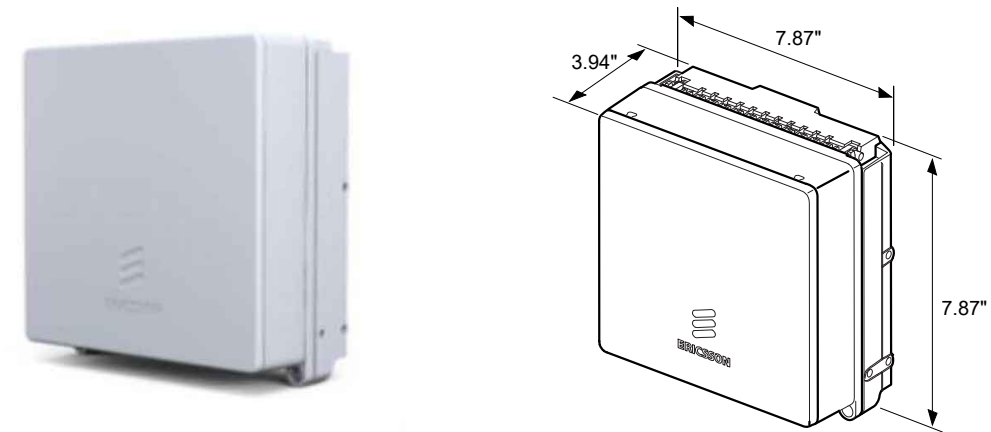
SCALE: NTS

PAGE: 18

OF: 26

TECHNICAL SPECIFICATIONS

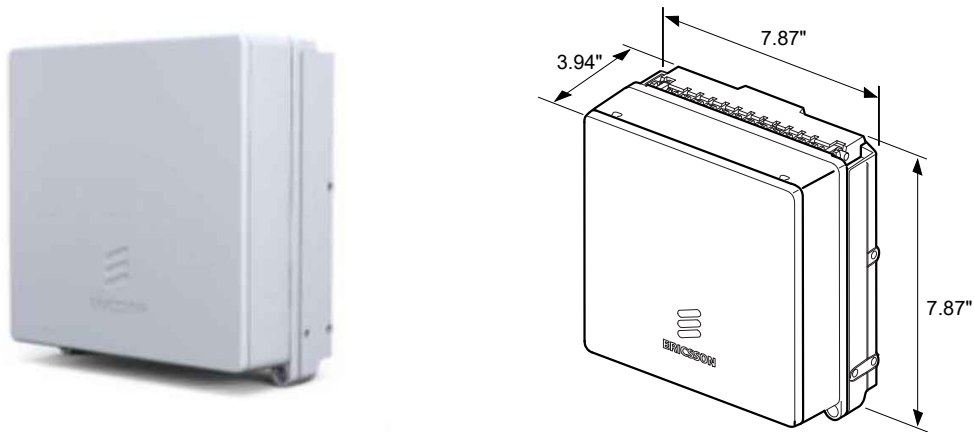
FREQUENCY BANDS	
Bands:	3GPP Bands B1 (W/L), B3 (L), B3C (W/L), B8 (W/L), B66A (W/L), B5 (W/L), B2/B25 (W/L), B12 (L), B13 (L) and B7 (L)
HW CAPACITY	
Carrier capacity WCDMA:	Up to 4 carriers
Carrier capacity LTE:	Up to 40 MHz
IBW:	B1, B3 and B66A 45 MHz. B2/B25 and B7 40 MHz. B3C, B8, B5, B12 and B13 Full band
MIMO:	Yes, 2T/2R
Output power:	Up to 2 x 5 W
INTERFACE SPECIFICATIONS	
Antenna Ports:	2 x 4.3-10 (f)
CPRI:	2 x 2.5/5/10 Gbps (exchangeable SFP modules)
Optical indicators	6
External alarms	2
Field ground	1
MECHANICAL SPECIFICATIONS	
W x H x D:	200 mm x 200 mm x 100 mm, including mounting bracket and esthetic front cover
Weight:	< 4.5 kg
Volume:	4 l
Mounting:	Wall and pole mount
ELECTRICAL SPECIFICATIONS	
Power Supply:	-48 VDC or 100 - 250 VAC
ENVIRONMENTAL SPECIFICATIONS	
Normal operating temp.:	-40 °C to +55 °C (cold start at -40 °C)
Relative Humidity	5 - 100%
Environment:	Outdoor class with IP65



ERICSSON RRU-2203 DETAIL
SCALE = NTS

TECHNICAL SPECIFICATIONS

FREQUENCY BANDS:		3GPP bands B41
HW CAPACITY:		
Carrier capacity LTE:		Up to 40 MHz
IBW:		40 MHz TDD
MIMO:		Yes, 2T/2R
Output power:		Up to 2 x 5W
INTERFACE SPECIFICATIONS:		
Power supply:		-48VDC or 100-250 VAC
Antenna Ports:		2 x 4.3-10(f)
CPRI:		2 x 10 Gbps (exchangeable SFP modules) 6 x optical indicators 2 x external alarms Field Ground
MECHANICAL SPECIFICATIONS:		
WxDxH:		200mm x 100mm x 200mm, including m
Weight:		< 5kg
Volume:		< 4l
Mounting:		Wall and , pole mount.
ENVIRONMENTAL SPECIFICATIONS:		
Environment:		Outdoor class with IP65
Normal operating temp.:		-40 - +55 °C (cold start at -40 °C)



ERICSSON RRU-2205 DETAIL (FUTURE)
SCALE = NTS



3210 Lake Emma Road, Lake Mary, FL 32746



Engineering Office
4461 Parkbreeze Ct
Orlando, FL 32808

PROFESSIONAL LICENSURE

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REVISIONS

BY	DESCRIPTION	DATE



Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
Check positive response codes before you dig!

PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	RRU'S DETAIL	
SCALE:	PAGE:	OF:
NTS	19	26



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REVISIONS

BY	DESCRIPTION	DATE

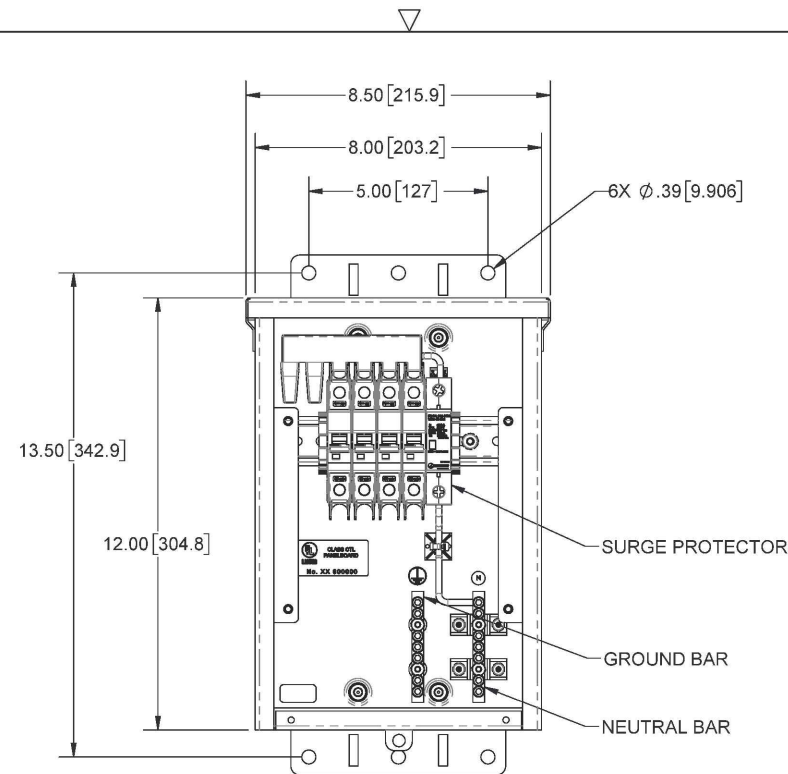
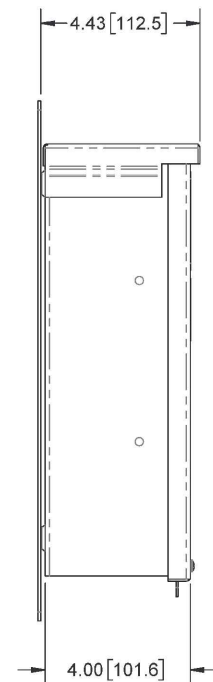


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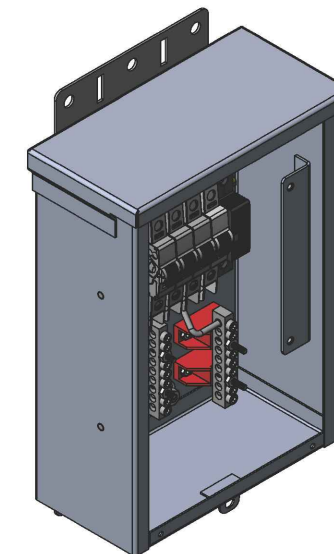
PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	TRANSTECTOR DETAIL	
SCALE:	NTS	PAGE: 20 OF: 26

REVISIONS				
REV.	DESCRIPTION	ECN	DATE	APPROVED
01	PRE-PRODUCTION RELEASE			



FRONT VIEW
WITHOUT DEADFRONT



PRODUCT SPECIFICATIONS

ELECTRICAL:
UL 67 Listed (Pending)
Service: 120 Vac, 60 A
Short Circuit Current Rating: 10 kAIC
Branch Circuit Breakers:
Main: 60 A
Accessory: 3x 10 A, 1x 5 A
Surge Protection: UL 1449, Type 2 Recognized, Transtector I2R SA 120-50M
Nominal Discharge Surge Current: 20 kA
Voltage Protection Rating (VPR): 600 V
Terminal Block Wire Range: 6-14 AWG

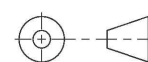
PHYSICAL:
Cabinet Type: UL 50, Type 3R
Material: 16-Gauge Steel, Powder Coat Finish
Dimensions: 8" x 12" x 4"
Mounting: Pole Mount or Wall Mount
Weight: Approx. 15 lbs.
Operating temperature: -20°C to 55°C
Humidity: 90% Non-Condensing

CUSTOMER APPROVAL: _____ DATE: _____

ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS	DRAWN	DATE		
	DPM	8/15/16		
TOLERANCES: FRACTIONS: ± 1/32 .XX ± .01 ANGLES: ± 1° .XXX ± .005	ENG APPD		TITLE MINI-MACRO COMPACT 60A/10A/10A/10A/5A, W/DEADFRONT	
	PRODUCT MGR			
MATERIAL NOTED	MARKETING APPD		CUSTOMER SPECIFICATION SIZE B CAGE 30992 PART NUMBER SC-MM08-001 REV 01 SCALE 1:4 PROD CAT CBT DOCUMENT NAME SC-MM08-001-C SHEET 1 OF 2	
	PROJECT NO.			
THIRD-ANGLE PROJECTION	NOTICE: THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF TRANSTECTOR SYSTEMS. ALL RIGHTS RESERVED.			

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TRANSTECTOR DETAIL
SCALE = NTS



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REVISIONS

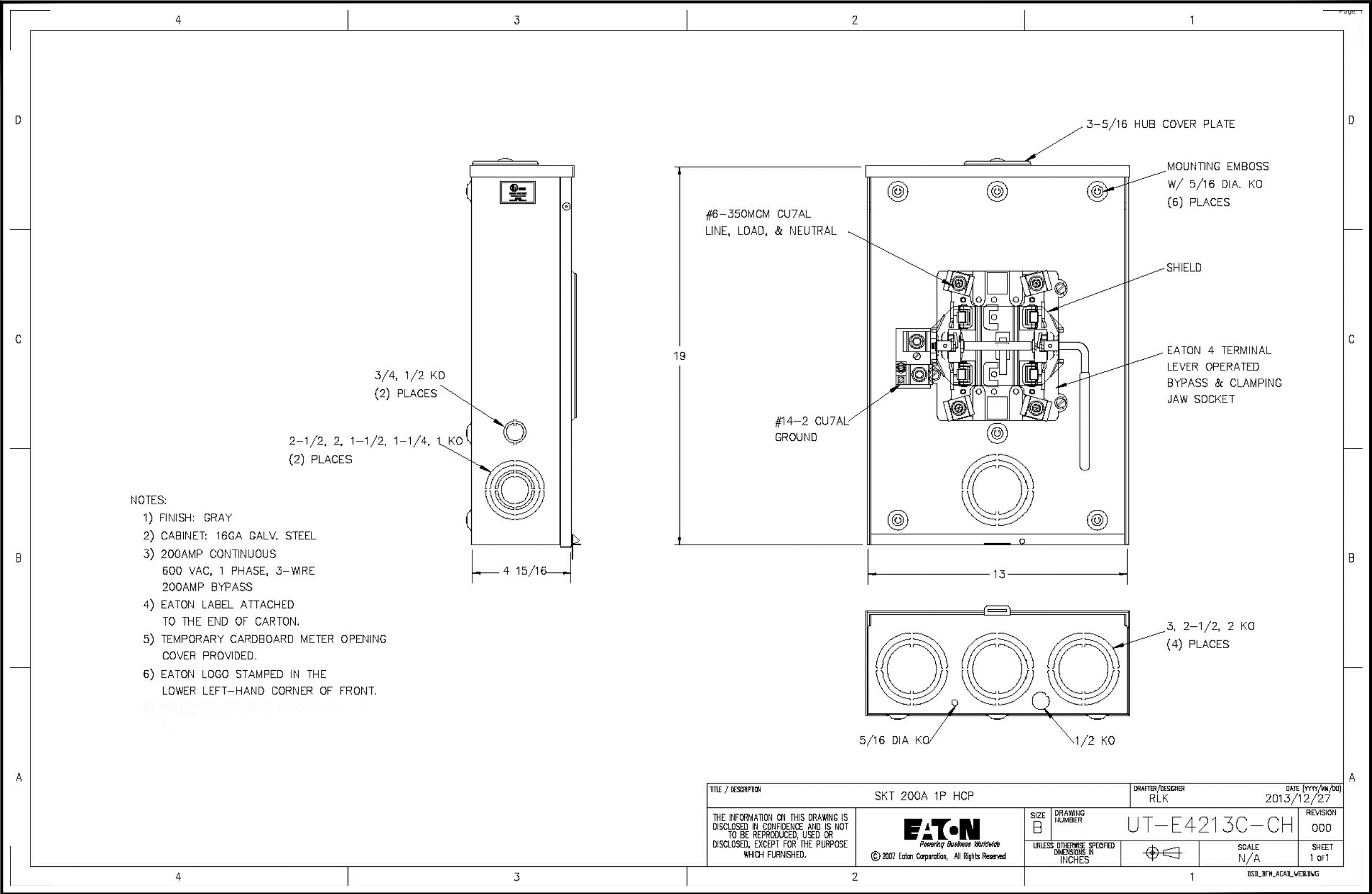
BY	DESCRIPTION	DATE



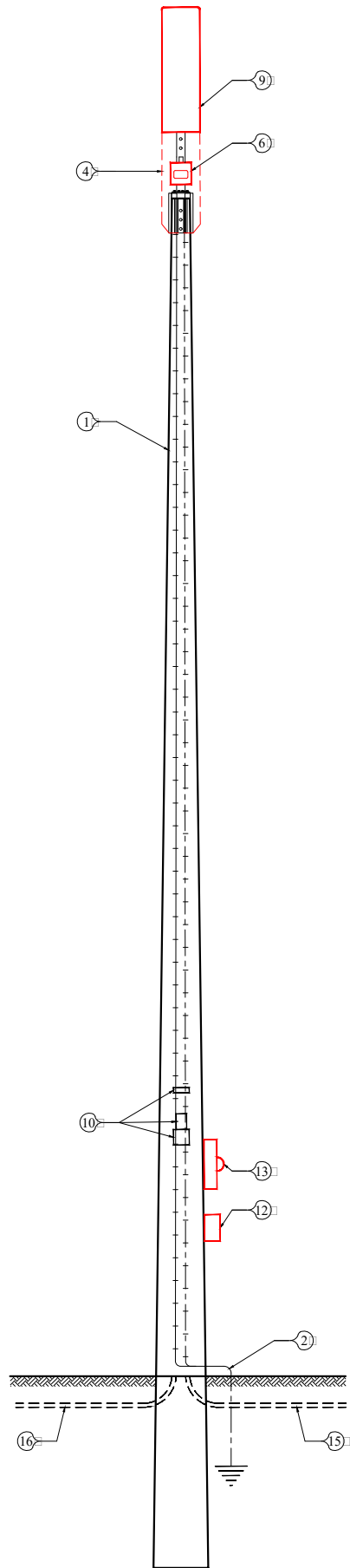
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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	METERBASE DETAIL	
SCALE:	NTS	PAGE: 21 OF: 26

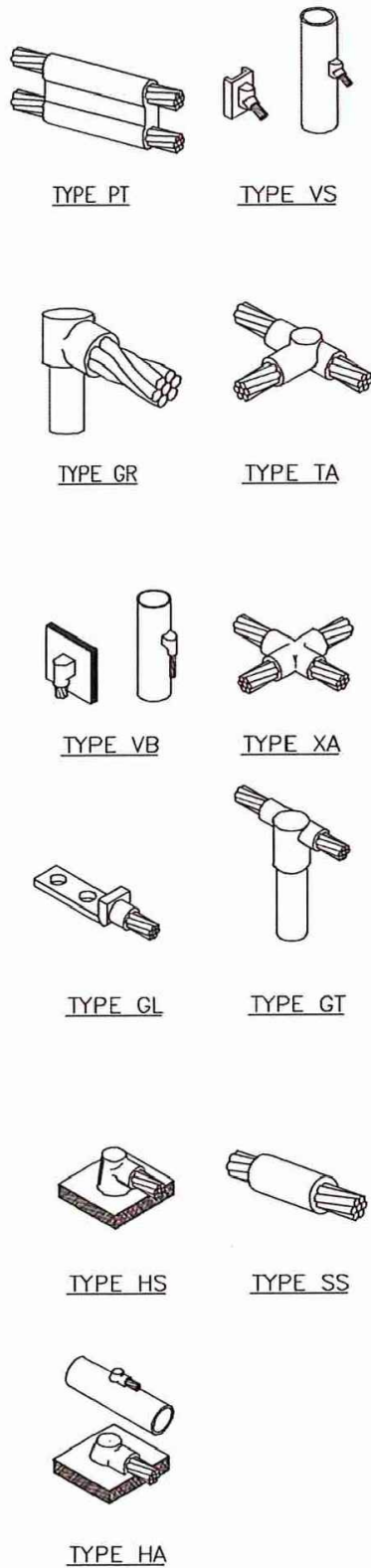


METERBASE DETAIL
SCALE = NTS



RISER DETAIL
SCALE = NTS

ITEM	QTY	DESCRIPTION
1	1	CONCRETE POLE
2	1	GROUND, DRIVEN
3	-	DUAL BAND RADIO SHROUD
4	1	SHROUD POLE WITH RADIO MOUNTING
5	-	LOWER EQUIPMENT GROUND BAR
6	3	RRU'S
7	-	FIBER MANAGEMENT BOX
8	-	STREET LIGHT
9	1	ANTENNA
10	3	RF WARNING SIGN
11	-	PSU AC 02
12	1	POWER PANEL
13	1	METER SOCKET
14	-	NEW GROUND WIRE
15	1	FOC CONDUIT INSTALLED BY OTHERS
16	1	ELECTRICAL CONDUIT INSTALLED BY OTHERS



GROUNDING DETAILS
SCALE = NTS

PROFESSIONAL LICENSURE

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ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	RISER & GROUNDING DETAIL	
SCALE:	NTS	PAGE: 22 OF: 26

GENERAL NOTES	
1.	FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY: GENERAL CONTRACTOR CONTRACTOR: (CONSTRUCTION) OWNER - AT&T
2.	ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
3.	GENERAL CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4.	ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL 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 WORK.
5.	ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
6.	UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7.	PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
8.	THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9.	IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
10.	GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFIRM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
11.	GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
12.	ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
13.	SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. CONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
14.	THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
15.	CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
16.	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.

GENERAL NOTES	
17.	THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
18.	GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND CONTRACTORS TO THE SITE AND/OR BUILDING.
19.	THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
20.	THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
21.	THE GENERAL CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OT 2-A:10-B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
22.	ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. 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 SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
23.	ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
24.	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.
25.	CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
26.	NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
27.	THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
28.	ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
29.	ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
30.	CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31.	CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32.	STRUCTURE IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
33.	NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
34.	ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING". IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.

GENERAL NOTES	
35.	CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
36.	CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
37.	INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
38.	ALL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
ANTENNA MOUNTING	
39.	DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.
40.	ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
41.	ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS NOTED OTHERWISE.
42.	DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
43.	ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
44.	CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
45.	NOT USED.
46.	PRIOR TO SETTING ANTENNA AZIMUTHS AND DOWNTILTS, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR TIGHTNESS AND ENSURE THAT THEY ARE PLUMB. ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND BE ORIENTED WITHIN +/- 5% AS DEFINED BY THE RFDS. ANTENNA DOWNTILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00246.
TORQUE REQUIREMENTS	
47.	ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.
48.	ALL RF CONNECTIONS, GROUNDING HARDWARE AND ANTENNA HARDWARE SHALL HAVE A TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION. A. RF CONNECTION BOTH SIDES OF THE CONNECTOR. B. GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET METAL.
49.	ALL 8M ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (12 NM).
50.	ALL 12M ANTENNA HARDWARE SHALL BE TIGHTENED TO 43 LB-FT (58 NM).
51.	ALL GROUNDING HARDWARE SHALL BE TIGHTENED UNTIL THE LOCK WASHER COLLAPSES AND THE GROUNDING HARDWARE IS NO LONGER LOOSE.
52.	ALL DIN TYPE CONNECTIONS SHALL BE TIGHTENED TO 18-22 LB-FT (24.4 - 29.8 NM).
53.	ALL N TYPE CONNECTIONS SHALL BE TIGHTENED TO 15-20 LB-IN (1.7 - 2.3 NM).



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REVISIONS		
BY	DESCRIPTION	DATE



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PROJECT INFORMATION		
DRAWING BY: DRAFTPROS LLC		
CHECK BY: DRAFTPROS LLC		
ORIGINAL SUBMITTAL: FEB 20, 2019		
NODE NAME #: CRAN_RTFL_PBC27_594		
TITLE: GENERAL NOTES		
SCALE: NTS	PAGE: 23	OF: 26

COAXIAL CABLE NOTES

54. TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS. PRIOR TO ORDERING CABLE, CONTRACTOR SHALL VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY THE PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
55. CONTRACTOR SHALL VERIFY THE DOWN-TILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
56. CONTRACTOR SHALL CONFIRM COAX COLOR CODING PRIOR TO CONSTRUCTION. REFER TO "ANTENNA SYSTEM LABELING STANDARD" ND-00027 LATEST VERSION.
57. ALL JUMPERS TO THE ANTENNAS SHALL BE 1/2" DIA. LDF AND SHALL NOT EXCEED 6'-0".
58. ALL COAXIAL CABLE SHALL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE, IN AN APPROVED MANNER, AT DISTANCES NOT TO EXCEED 4'-0" OC.
59. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS REGARDING BOTH THE INSTALLATION AND GROUNDING OF ALL COAXIAL CABLES, CONNECTORS, ANTENNAS, AND ALL OTHER EQUIPMENT.
60. CONTRACTOR SHALL WEATHERPROOF ALL ANTENNA CONNECTORS WITH SELF AMALGAMATING TAPE. WEATHERPROOFING SHALL BE COMPLETED IN STRICT ACCORDANCE WITH AT&T STANDARDS.

GENERAL CABLE & EQUIPMENT NOTES

61. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ANTENNA, TMAS, DIPLEXERS, AND COAX CONFIGURATION, MAKE AND MODELS PRIOR TO INSTALLATION.
62. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
63. CONTRACTOR SHALL REFERENCE THE STRUCTURAL ANALYSIS / DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION / ROUTING.
64. ALL OUTDOOR RF CONNECTORS/CONNECTIONS SHALL BE WEATHERPROOFED, EXCEPT THE RET CONNECTORS, USING BUTYL TAPE AFTER INSTALLATION AND FINAL CONNECTIONS ARE MADE. BUTYL TAPE SHALL HAVE A MINIMUM OF ONE-HALF TAPE WIDTH OVERLAP ON EACH TURN AND EACH LAYER SHALL BE WRAPPED THREE TIMES. WEATHERPROOFING SHALL BE SMOOTH WITHOUT BUCKLING. BUTYL BLEEDING IS NOT ALLOWED.
65. IF REQUIRED TO PAINT ANTENNAS AND/OR COAX:

A. TEMPERATURE SHALL BE ABOVE 50° F.

B. PAINT COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.

C. FOR REGULATED TOWERS, FAA/FCC APPROVED PAINT IS REQUIRED.

D. DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS.
66. ALL PROPOSED GROUND BAR DOWNLEADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUND BAR DOWNLEADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUND BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.
67. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATION & RECOMMENDATIONS.

ROW CONSTRUCTION NOTES STANDALONE

68. NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2" [.038M].
69. 90 SHORT SWEEPS UNDER ANTENNA ARM. ALL CABLES MUST ONLY TRANSITION ON THE INSIDE OR BOTTOM OF ARMS (NO CABLE ON TOP OF ARMS).
70. USE 90 CONNECTOR AT CABLE CONNECTION TO ANTENNAS.
71. PLACE GPS ON ARM WITH SOUTHERN SKY EXPOSURE AT MINIMUM 6' [1.83] FROM TRANSMIT ANTENNA, WHICH IS 24" [.61M] AWAY FROM CENTER OF POLE.
72. USE 1/2" [.013M] CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
73. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

* DISCONNECT, METER, AND ANTENNA BOXES MUST BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD 103-235, "SUPPLY AND COMMUNICATION EQUIPMENT"

* ANTENNAS SHALL BE INSTALLED ON TANGENT POLES ONLY. ANTENNAS SHALL NOT BE INSTALLED ON EQUIPMENT POLES.
ALL POLES MUST BE BUCKET TRUCK ACCESSIBLE.

THE MINIMUM SIZE OF ALL ANTENNA POLE WILL BE ANSI CLASS 3.



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REVISIONS

BY	DESCRIPTION	DATE



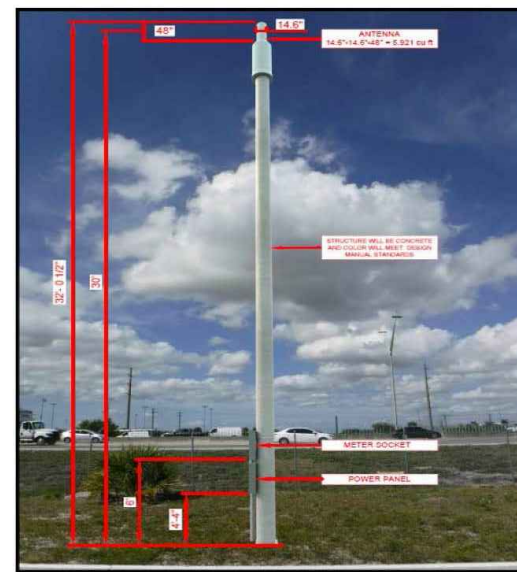
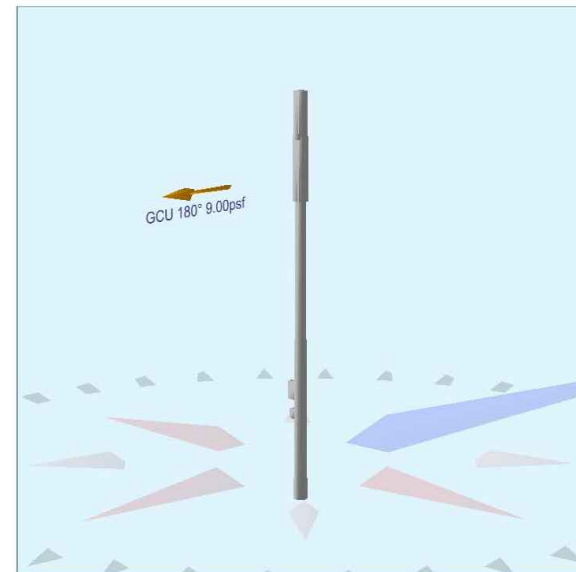
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PROJECT INFORMATION

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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	ROW CONSTRUCTION NOTES	
SCALE:	NTS	PAGE: 24 OF: 26

Pole Num:	CRAN_RTFL_PBC27_594	Pole Length / Class:	35 / C	Code:	NESC	Structure Type:	Unguyed Tangent
Aux Data 1	BOCA RATON	Material:	Concrete	NESC Rule:	Rule 250B	Status	Unguyed
Aux Data 2	FL	Setting Depth (ft):	2.96	Construction Grade:	C	Pole Strength Factor:	1.00
Aux Data 3	3700 AIRPORT ROAD	G/L Circumference (in):	42.63	Loading District:	Light	Transverse Wind LF:	1.75
Aux Data 4	AT&T	--	--	Ice Thickness (in):	0.00	Wire Tension LF:	1.00
Aux Data 5	Unset	--	--	Wind Speed (mph):	59.29	Vertical LF:	1.90
Aux Data 6	Unset	--	--	Wind Pressure (psf):	9.00		
Latitude:	26.382994	Deg	Longitude:	-80.108131	Deg		11 Feet

Elevation:



Pole Capacity Utilization (%)	Height (ft)	Wind Angle (deg)
Maximum	41.5	0.0
Groundline	41.5	0.0
Vertical	0.2	3.0

Pole Moments (ft-lb)	Load Angle (deg)	Wind Angle (deg)
Max Cap Util	13,282	180.0
Groundline	13,282	180.0
GL Allowable	32,906	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 180.0°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
GenericEquipments	245	34.0	5,519	41.6	16.8	273	154	1	274	17.0
ConcretePoles	475	66.0	7,763	58.5	23.6	384	2,571	18	402	25.0
Pole Load	719	100.0	13,282	100.0	40.4	657	2,725	19	676	42.0
Pole Reserve Capacity			19,624		59.6	952			934	58.0



3210 Lake Emma Road, Lake Mary, FL 32746



PROFESSIONAL LICENSURE

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY PROFESSIONAL KNOWLEDG THEY COMPLY WITH THE REQUIREMENT OF ALL APPLICABLE CODES AND ORDINANCES

REVISIONS

BY	DESCRIPTION	DATE



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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC
CHECK BY:	DRAFTPROS LLC
ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_594
TITLE:	STRUCTURAL ANALYSIS
SCALE:	NTS
PAGE:	25
OF:	26

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 180.0°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
AT&T	719	100.0	13,282	100.0	40.4	657	2,725	19	676	42.0
General Statement	0	0.0	0	0.0	0.0	0	0	0	0	0.0
Totals:	719	100.0	13,282	100.0	40.4	657	2,725	19	676	42.0

Detailed Load Components:

Generic Equipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Cylinder	ANTENNA	AT&T	30.04	0.06	0.0	0.0	36.20	48.00	--	14.60	--	0	2,303	2,303
Cylinder	SHROUD	AT&T	25.54	0.04	0.0	0.0	19.00	65.00	--	16.00	--	0	2,905	2,905
Box	Power Meter	AT&T	6.67	8.78	180.0	0.0	25.00	19.00	4.94	--	13.00	35	288	323
Box	MAIN DISCONNECT	AT&T	4.67	9.45	180.0	0.0	0.83	10.13	6.00	--	6.15	1	51	52
Totals:												36	5,547	5,583

Notes

Date	Author	Description
4/17/2015	General Statement	General Statement
General Statement: Non-AT&T facilities may not be accurately identified pending attachment information from attaching party.		



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NODE NAME #:	CRAN_RTFL_PBC27_594	
TITLE:	STRUCTURAL ANALYSIS	
SCALE:	NTS	PAGE: 26 OF: 26



AT&T

PROJECT NAME

ADVANCED WIRELESS INFRASTRUCTURE

NODE NAME

CRAN_RTFL_PBC27_592

PACE NUMBER

MRSFL018259

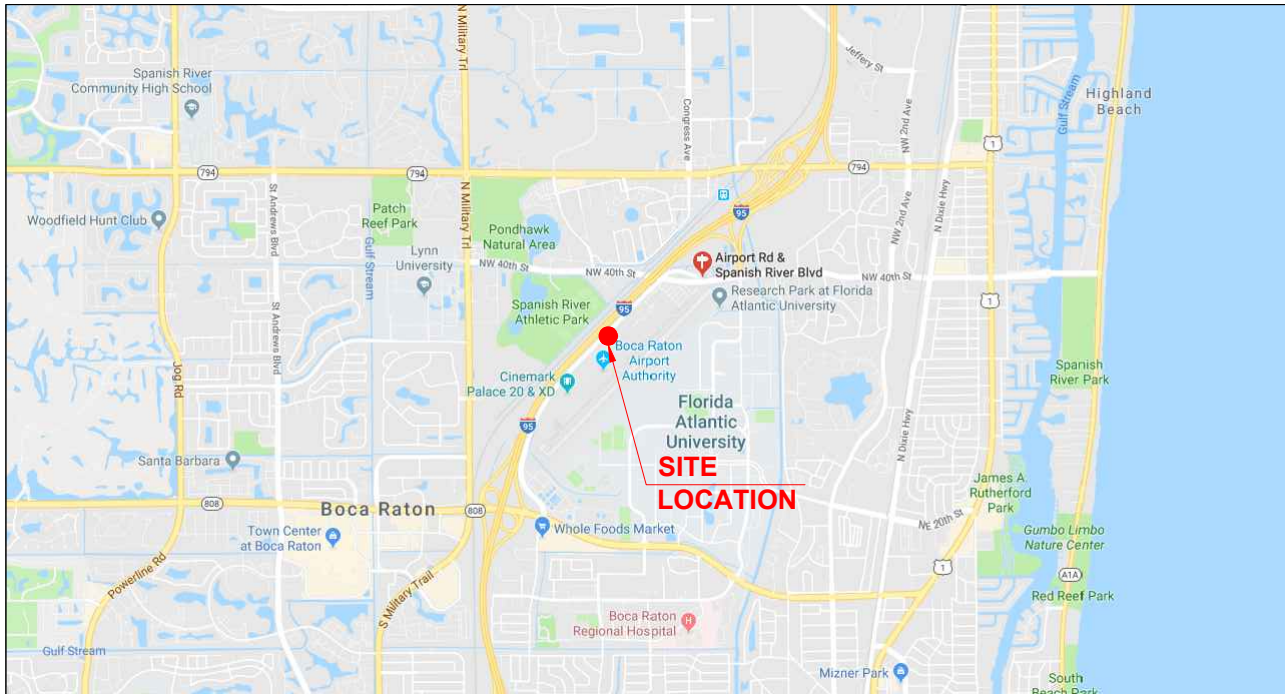
PTN NUMBER

2551A0MMGE

STRUCTURE TYPE

STANDALONE CONCRETE POLE

REGIONAL MAP



AT&T

3210 Lake Emma Road, Lake Mary FL 32746



Engineering Office
4461 Parkbreeze Ct Orlando,
FL 32808

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CHECK BY:			DRAFTPROS LLC		
ORIGINAL SUBMITTAL:			FEB 20, 2019		
NODE NAME #:			CRAN_RTFL_PBC27_592		
TITLE:			COVER		
SCALE:		PAGE:		OF:	
NTS		01		25	

INDEX OF SHEET

PROJECT INFORMATION

VICINITY MAP

- 01 OF 25 - COVER
- 02 OF 25 - OVERALL SITE PLAN
- 03 OF 25 TO 04 OF 25 - PLAN VIEW
- 05 OF 25 TO 07 OF 25 - PROFILE VIEW
- 08 OF 25 TO 09 OF 25 - CUSTOM MOT
 - NEW EQUIPMENT ELEVATION
- 10 OF 25
 - NEW POLE ELEVATION
- 11 OF 25
- 12 OF 25 TO 15 OF 25 - PHOTO SIM
- 16 OF 25 - RF SCHEMATIC's
- 17 OF 25 - ANTENNA DETAIL
- 18 OF 25 TO 19 OF 25 - BRACKET FOR ANTENNA & RRU'S
- 20 OF 25 - RRU'S DETAIL
- 21 OF 25 - TRANSECTOR DETAIL
- 22 OF 25 - METERBASE DETAIL
- 23 OF 25 - RISER / GROUNDING DETAILS
- 24 OF 25 - GENERAL NOTES
- 25 OF 25 - ROW CONSTRUCTION NOTES
- 26 OF 25 TO 27 OF 25 - STRUCTURAL ANALYSIS

AT&T ADDRESS : 3210 LAKE EMMA ROAD,
LAKE MARY. FL 32746

PROPERTY OWNER : PUBLIC RIGHT OF WAY

APPLICANT : NEW CINGULAR WIRELESS PCS LLC

AT&T CONTACT 1: MICHAEL CAMERON (772) 332-8918

AT&T CONTACT 2: KEVIN HARRISON (321) 388-9513

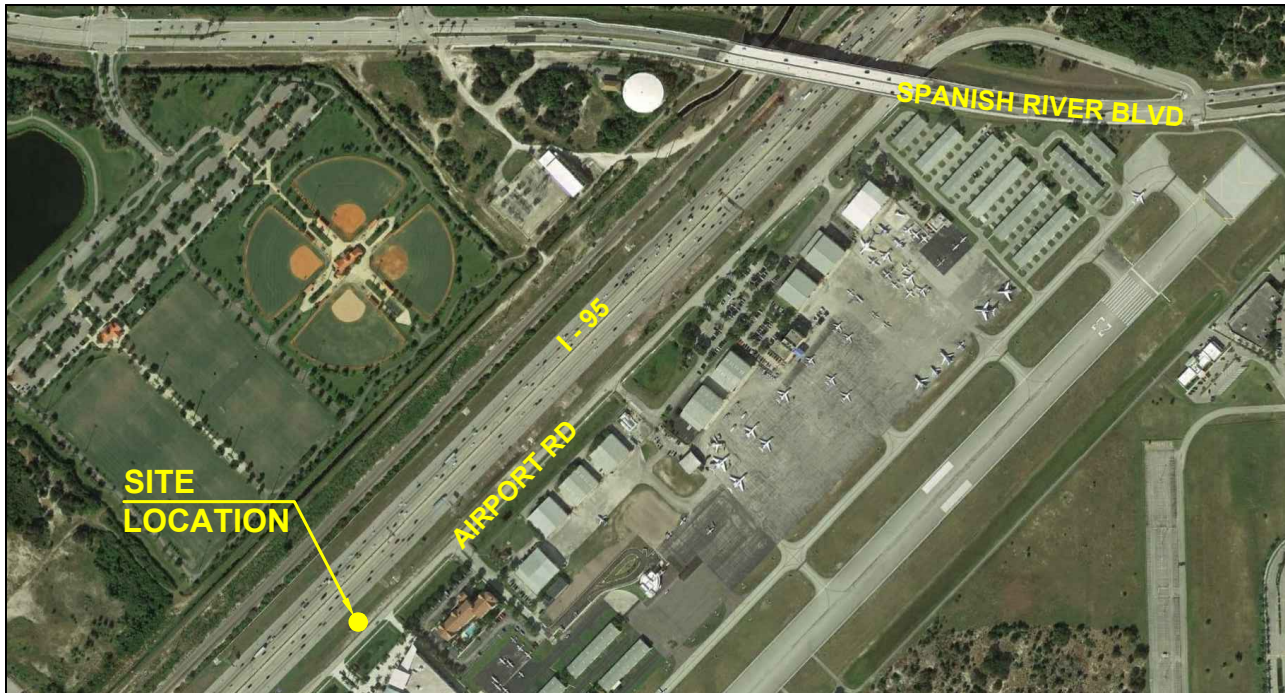
SITE ID : PENDING

PACE NUMBER : MRSFL018259

PTN NUMBER : 2551A0MMGE

USID NUMBER : 243121

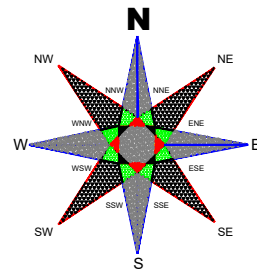
FA CODE : 14848746



PERMITTING

PROJECT CONTACTS

DRIVING DIRECTIONS



JURISDICTION : CITY OF BOCA RATON

AT&T:

Professional – Tech Vendor
Management (Wireless Engineering)

MICHAEL CAMERON
329 NW DIXIE HIGHWAY
STUART, FL 34994
PHONE: (772) 332-8918
EMAIL: MC002D@att.com

DRAFTPROS LLC:

ENGINEERING & SURVEYING
CONTACT:

TIM HEWITT
PHONE: (317) 903 - 7521
EMAIL: thewitt@draftprosinc.com

DRIVING DIRECTIONS FROM 329 NW DIXIE HIGHWAY , STUART, FL 34994 :

1. HEAD SOUTHWEST ON NW DIXIE HWY TOWARD NW WRIGHT BLVD - 1.4mi
2. CONTINUE ONTO SW AKRON AVE - 226 ft
3. AT THE TRAFFIC CIRCLE, TAKE THE 3RD EXIT ONTO S DIXIE HWY - 0.2mi
4. TURN RIGHT ONTO S COLORADO AVE - 0.1 mi
5. TURN LEFT ONTO FLORIDA A1A S/SE 5TH ST - 2.0mi
6. TURN LEFT ONTO SE AIRPORT RD - 0.4mi
7. TURN LEFT TO STAY ON SE AIRPORT RD - 59 ft

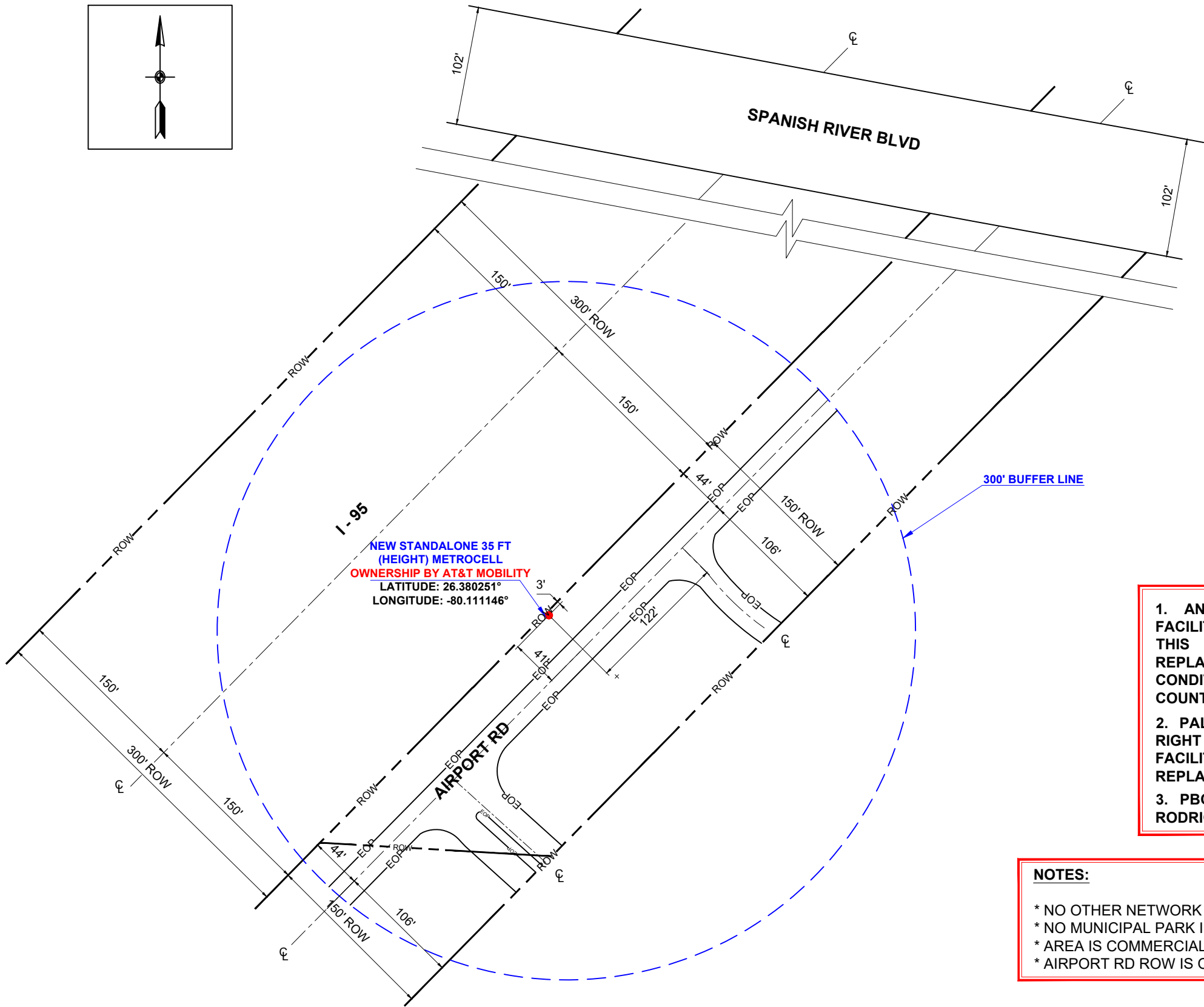
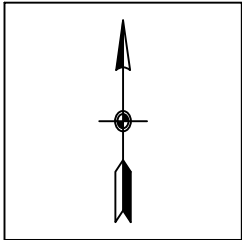
LATITUDE : 26.380251°

LONGITUDE: -80.111146°

PROJECT SUMMARY

INSTALLATION OF NEW
SMALL CELL EQUIPMENT ON
NEW CONCRETE POLE
FIBER OPTIC CABLE AND POWER CABLE
VIA NEW CONDUIT

NO NETWORK SUPPORT NODES AND NO USABLE UTILITY POLE WITHIN 300' OF PROPOSED POLE



PALM BEACH COUNTY
CONSTRUCTION NOTES:

- SHOULD ANY STORM DRAIN PIPE / STRUCTURES BE AFFECTED DURING PROPOSED CONSTRUCTION SITE, THE CONTRACTOR WILL RESTORE THE AFFECTED AREA TO LIKE OR BETTER THAN LIKE CONDITION AND TO MEET PB COUNTY / FDOT STANDARDS.
- ANY AFFECTED ROADWAYS WILL BE RESTORED FROM EOP TO EOP LANE WIDTH MINIMUM AND 50' IN EITHER DIRECTION FOR THOROUGHFARES AND 25' MINIMUM RESTORATION IF NON-THOROUGHFARE.
- SHOULD ANY ADDITIONAL LANES BE AFFECTED DURING CONSTRUCTION FOR ANY REASON, THE CONTRACTOR WILL COMPLETE RESTORATIONS TO LIKE OR BETTER THAN LIKE CONDITIONS AND TO EQUAL DIMENSIONS AS THE ADJACENT LANES.
- SHOULD ANY PB COUNTY SIDEWALK / PATHWAY / C&G / AND OR ADA FACILITIES BE AFFECTED BY CONSTRUCTION THE CONTRACTOR WILL RESTORE A MINIMUM OF 10' TO LIKE OR BETTER THAN LIKE CONDITION AND TO MEET PBC AND FDOT STANDARDS.
- SHOULD SIDEWALKS BE AFFECTED DURING CONSTRUCTION THE CONTRACTOR MUST BE RESTORE THE AREA BY REPLACING: TWO FLAGS IF THE POINT OF CONSTRUCTION IS LOCATED AT A CONTROL JOINT, AND THREE FLAGS IF THE POINT OF CONSTRUCTION IS LOCATED BETWEEN CONTROL JOINTS, NO PARTIAL JOINS ARE ACCEPTED.

1. ANY DAMAGE TO PBC-TRAFFIC ITS FACILITIES CAUSED BY CONSTRUCTION OF THIS PROJECT MUST BE REPAIRED OR REPLACED TO ORIGINAL OR BETTER CONDITION AT NO COST TO PALM BEACH COUNTY.
2. PALM BEACH COUNTY RESERVES THE RIGHT TO DETERMINE IF DAMAGED FACILITIES WILL BE REPAIRED OR REPLACED.
3. PBC-TRAFFIC ITS CONTACT IS DANIEL RODRIGUEZ 561-681-4365.

NOTES:

- * NO OTHER NETWORK SUPPORT POLES WITHIN VICINITY
- * NO MUNICIPAL PARK IN AREA
- * AREA IS COMMERCIAL ZONE
- * AIRPORT RD ROW IS OVER 50' WIDE



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REVISIONS

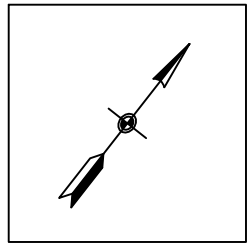
BY	DESCRIPTION	DATE



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Check positive response codes before you dig!

PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	OVERALL SITE PLAN	
SCALE:	PAGE:	OF:
1" = 100'	02	25



PALM BEACH COUNTY CONSTRUCTION NOTES:

- Contractor shall contact PBC Traffic Operations at 561-233-3900 forty-eight (48) hours prior to construction if work is being done within 10 feet of any signal equipment.
- Any damage to loops or any signal equipment caused by construction of this project must be repaired or replaced to original or better condition at no cost to Palm Beach County.
- No excavation around PBC signal poles within a 6 ft. radius from the center of the pole. Please see "PBC Traffic Signal Installation and Details 2018" drawing T-5.3
- Any damage to PBC-Traffic-ITS facilities caused by construction of this project must be repaired or replaced to original or better condition at no cost to Palm Beach County Traffic ITS. PBC reserves the right to determine if damaged facilities will be repaired or replaced.

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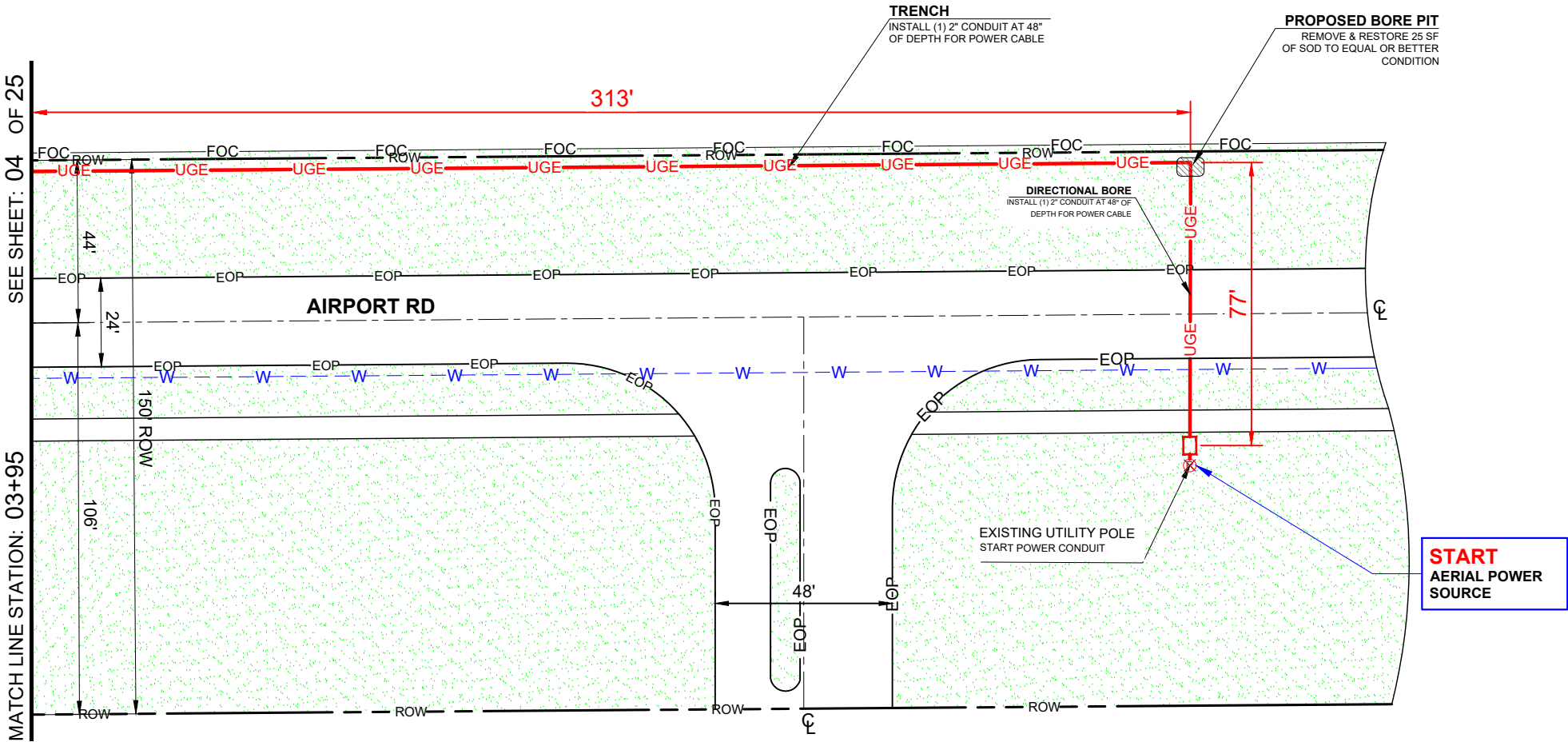
BY	DESCRIPTION	DATE



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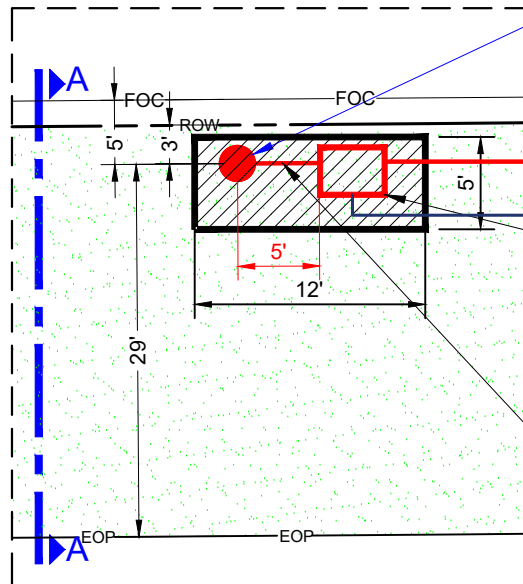
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NODE NAME #:	CRAN_RTFL_PBC27_592		
TITLE:	PLAN VIEW		
SCALE:	NTS	PAGE: 03	OF: 25



LABOR SUMMARY THIS PAGE				REVIEW & LEGEND											
QTY				LINETYPES											
D-BORE, INSTALL (1) 2" CONDUITS	74	LF	AE	PROPOSE AERIAL	---	CENTER LINE	G	GAS	S	SANITARY SEWER	CONCRETE POLE	P	POWER MANHOLE	TRAFFIC SIGNAL HANDHOLE	STREET LIGHT
TRENCH, INSTALL (1) 2" CONDUITS	318	LF	UGE	PROPOSE UNDERGROUND	---	EASEMENT	UG	OTHER FOC	SS	STORM DRAIN	WOOD POLE	E	POWER HANDHOLE	TELCO MANHOLE	TRAFFIC SIGNAL POLE
REMOVE & RESTORE ASPHALT	-	SF	EOP	EDGE OF PAVEMENT	---	WATER	E	POWER UNDERGROUND			QUAZITE PULLBOX	O	SANITARY SEWER HANDHOLE	WATER VALVE/SPRINKLER	SOD
REMOVE & RESTORE SOD	25	SQ	ROW	RIGHT OF WAY	---	STREET LIGHT	T	TELCO			NEW STREET LIGHT POLE	D	STORM SEWER HANDHOLE	FIRE HYDRANT	ASPHALT RESTORATION
INSTALL HANDHOLE (17"x30"x24")	1	EA		SIDEWALK	---	TRAFIC	*	FENCE			GAS VALVE/HANDHOLE	Z	STORM DRAIN/CATCH BASIN/ DRAIN INLET	TREE	CONCRETE RESTORATION

SCALE 1:10



HANDHOLE
"FCA173024T-0006"
INSTALL NEW HH (17"x30"x24").
REMOVE & RESTORE 44 SF OF SOD
TO EQUAL OR BETTER CONDITION.

TRENCH

INSTALL (1) 2" CONDUIT AT 12" OF
DEPTH FOR POWER CABLE

**FOR ADDITIONAL
INFORMATION REFER TO
ENLARGED PLAN VIEW ON
THIS SHEET**

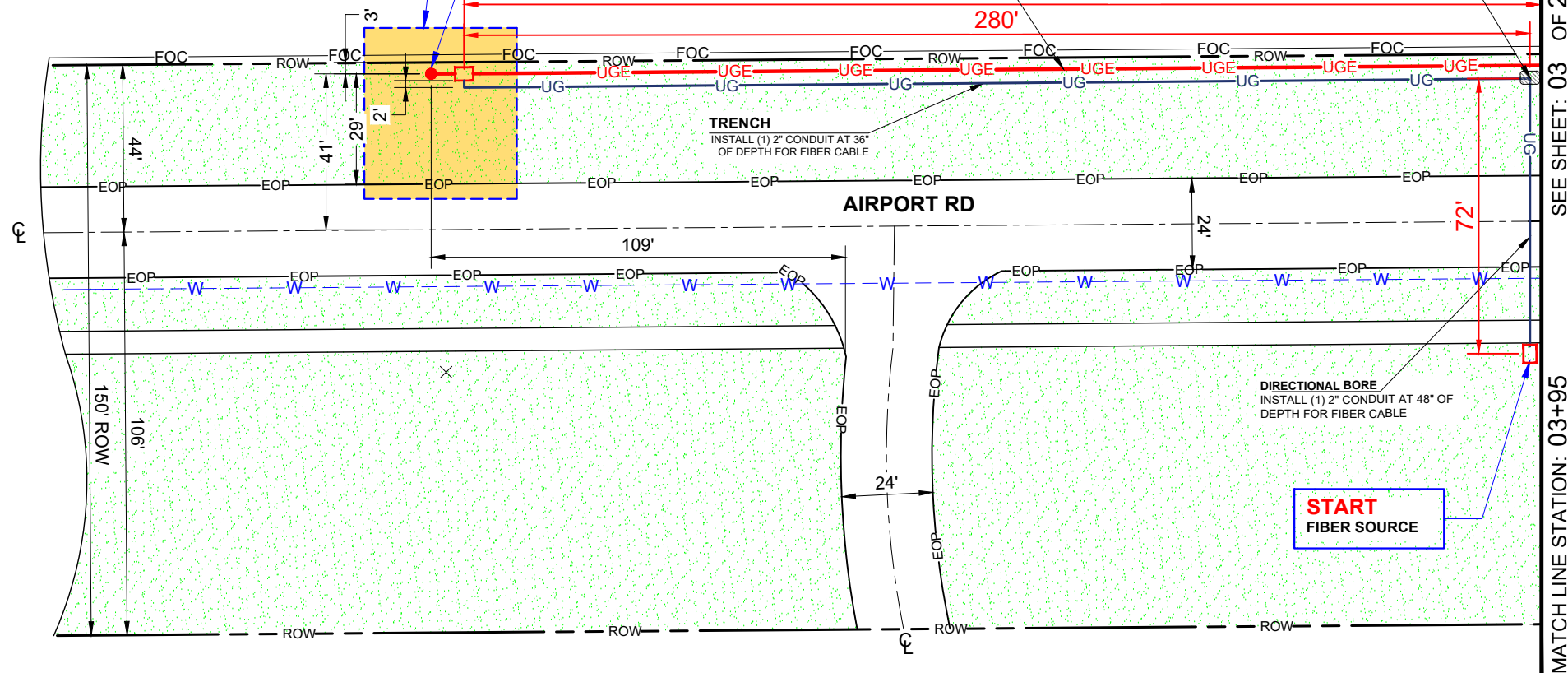
END
SMALL CELL EQUIPMENT
POWER AND FIBER
CONDUITS

TRENCH
INSTALL (1) 2" CONDUIT AT 48"
OF DEPTH FOR POWER CABLE

PROPOSED BORE PIT
REMOVE & RESTORE 25 SF
OF SOD TO EQUAL OR BETTER
CONDITION

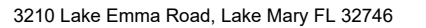
PALM BEACH COUNTY
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SEE SHEET: 03 OF 25

MATCH LINE STATION: 03+95



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TITLE: _____

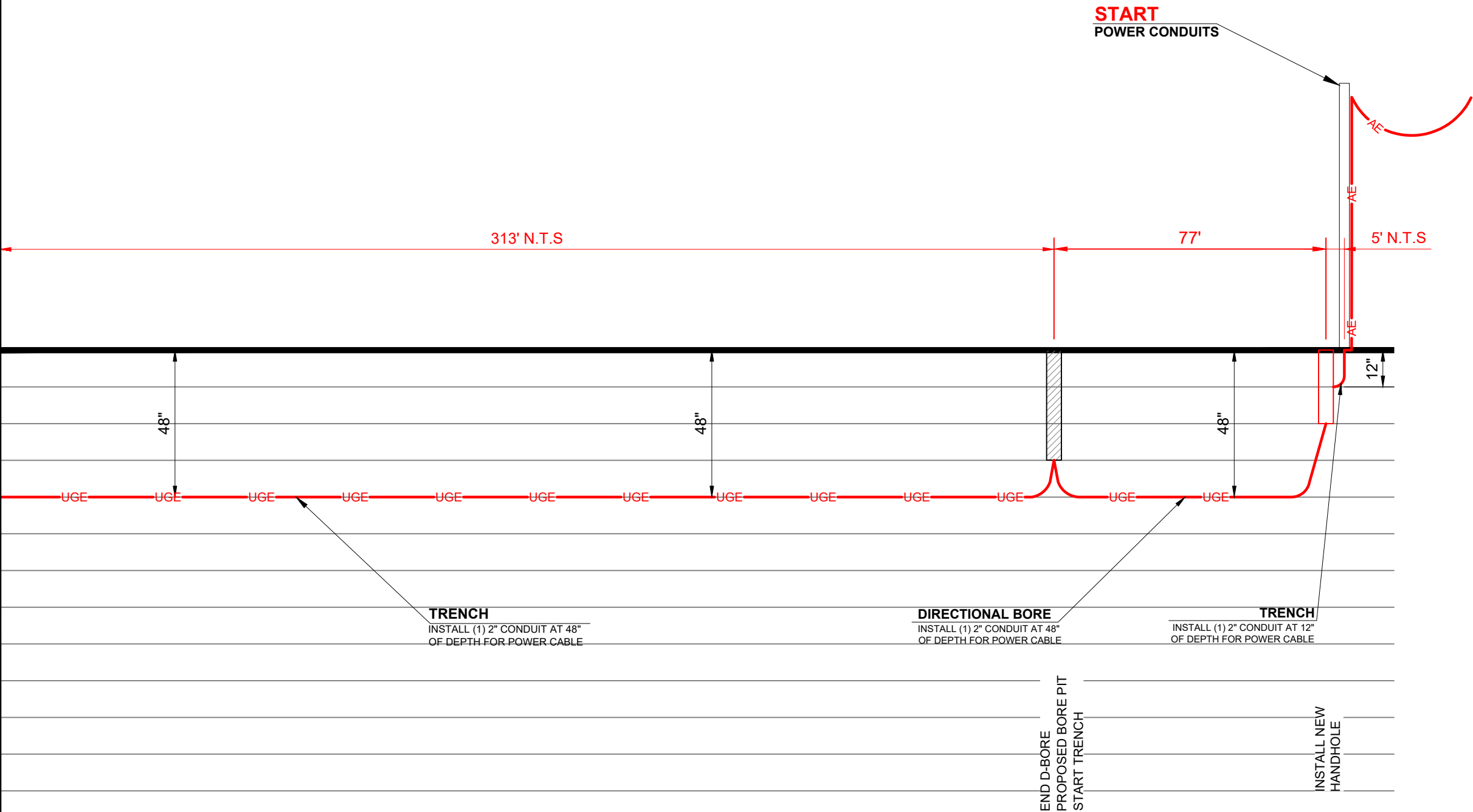
SCALE: NTS	PAGE: 04	OF: 25
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REVIEW & LEGEND																		
LABOR SUMMARY THIS PAGE		QTY		LINETYPES						SYMBOLOGY								
D-BORE, INSTALL (1) 2" CONDUITS	72	LF		PROPOSE AERIAL		CENTER LINE		GAS		SANITARY SEWER		CONCRETE POLE		POWER MANHOLE		TRAFFIC SIGNAL HANDHOLE		STREET LIGHT
TRENCH, INSTALL (1) 2" CONDUITS	286	LF		PROPOSE UNDERGROUND		EASEMENT		OTHER FOC		STORM DRAIN		WOOD POLE		POWER HANDHOLE		TELCO MANHOLE		TRAFFIC SIGNAL POLE
REMOVE & RESTORE ASPHALT	-	SF		EDGE OF PAVEMENT		WATER		POWER UNDERGROUND		QUAZITE PULLBOX		SANITARY SEWER HANDHOLE		WATER VALVE/SPRINKLER		SOD		
REMOVE & RESTORE SOD	-	SQ		RIGHT OF WAY		STREET LIGHT		TELCO		NEW STREET LIGHT POLE		STORM SEWER HANDHOLE		FIRE HYDRANT		ASPHALT RESTORATION		
INSTALL HANDHOLE (17"x30"x24")	2	EA		SIDEWALK		FENCE		GAS VALVE/HANDHOLE		STORM DRAIN/CATCH BASIN/ DRAIN/INLET		TREE			CONCRETE RESTORATION			

SEE SHEET: 06 OF 25

MATCH LINE STATION: 03+95

"UNKNOWN ELEVATION"
NO ELEVATION RECORDS AVAILABLE,
CONTRACTOR SHALL VERIFY DEPTH
BEFORE TRENCHING OR BORING



HORIZONTAL SCALE: 1"= 30'
VERTICAL SCALE: 1"= 3'

POWER PROFILE VIEW

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REVISIONS

BY	DESCRIPTION	DATE



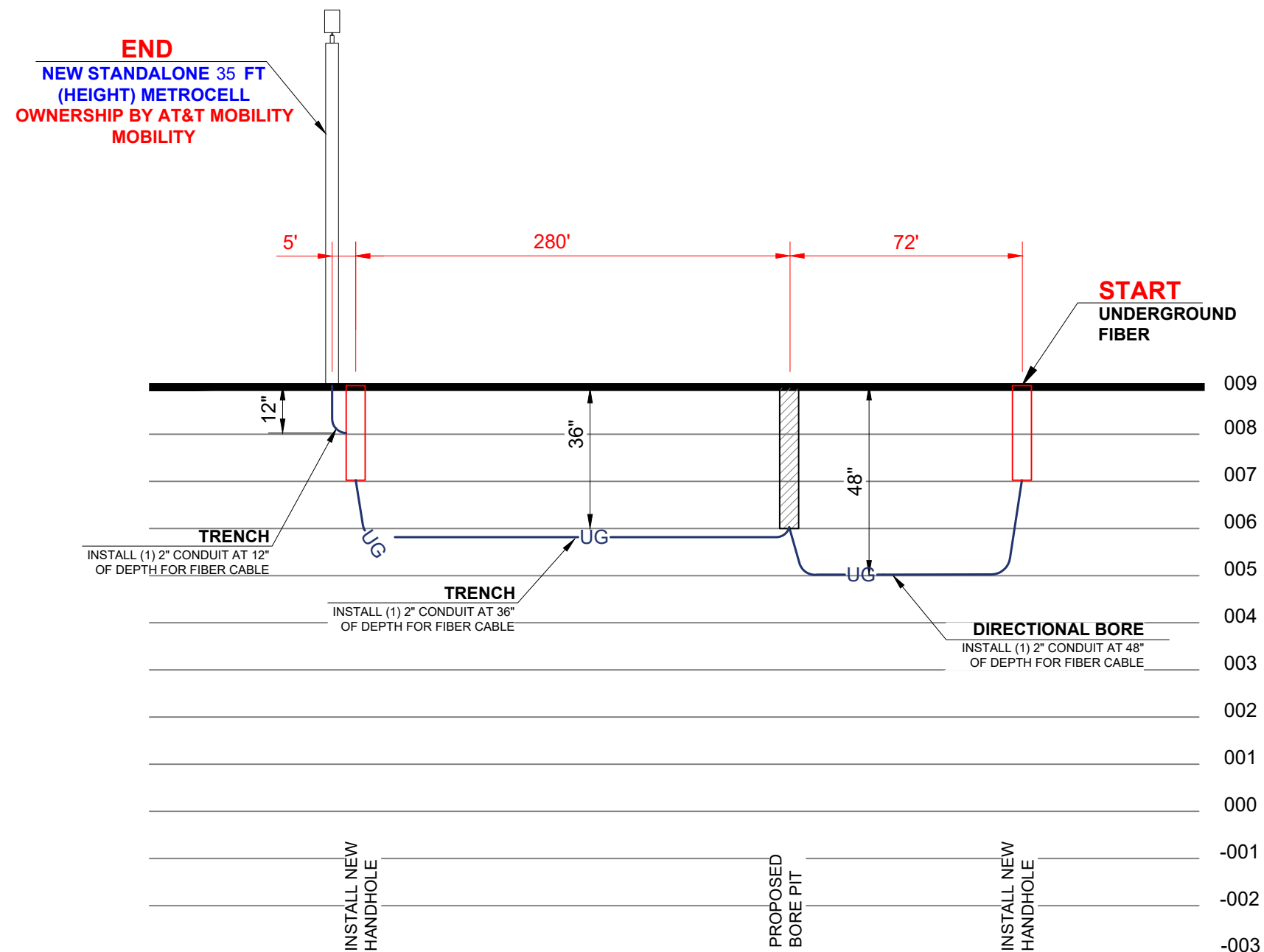
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CHECK BY:	DRAFTPROS LLC	
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NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	PROFILE VIEW	
SCALE:	1" = 100'	PAGE: 05
		OF: 25

HORIZONTAL SCALE: 1"= 30'
VERTICAL SCALE: 1"= 3'

"UNKNOWN ELEVATION"
NO ELEVATION RECORDS AVAILABLE,
CONTRACTOR SHALL VERIFY DEPTH
BEFORE TRENCHING OR BORING



HORIZONTAL SCALE: 1"= 30'
VERTICAL SCALE: 1"= 3'

FIBER PROFILE VIEW



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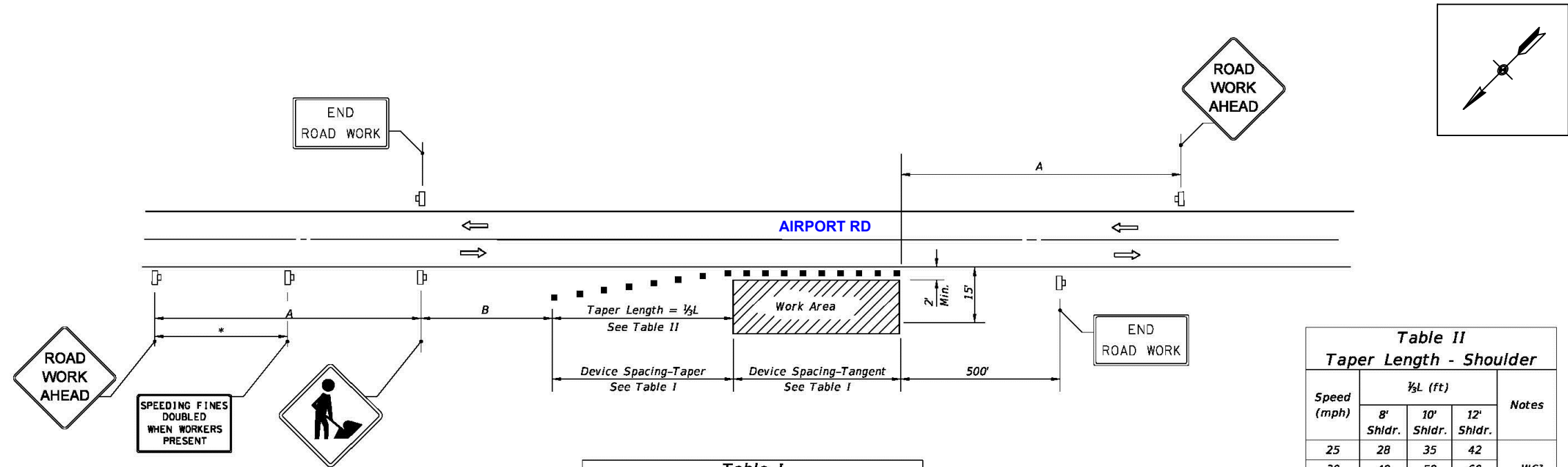
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NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	PROFILE VIEW	
SCALE:	1" = 100'	PAGE: 07 OF: 25

10/16/2017 8:03:56 AM



DISTANCE BETWEEN SIGNS		
Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350
50 mph or greater	500	500

*Midway between signs.

Table I Device Spacing				
Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

Table II Taper Length - Shoulder				
Speed (mph)	1/2 L (ft.)			Notes
	8' Shldr.	10' Shldr.	12' Shldr.	
25	28	35	42	$L = \frac{WS^2}{60}$
30	40	50	60	
35	55	68	82	
40	72	90	107	
45	120	150	180	$L = WS$
50	133	167	200	
55	147	183	220	
60	160	200	240	
65	173	217	260	
70	187	233	280	

8' minimum shoulder width

1/2 L = Length of shoulder taper in feet

W = Width of total shoulder in feet
(combined paved and unpaved width)

S = Posted speed limit (mph)

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT,
WORKERS OR THEIR ACTIVITIES
ENCROACH THE AREA CLOSER
THAN 15' BUT NOT CLOSER THAN
2' TO THE EDGE OF TRAVEL WAY.



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NODE NAME #:	CRAN_RTFL_PBC27_592
TITLE:	TRAFFIC CONTROL PLAN
SCALE:	NTS
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LAST
REVISION
11/01/17

DESCRIPTION:



FY 2018-19
STANDARD PLANS

TWO-LANE, TWO-WAY, WORK ON SHOULDER

INDEX
102-602

SHEET
1 of 1

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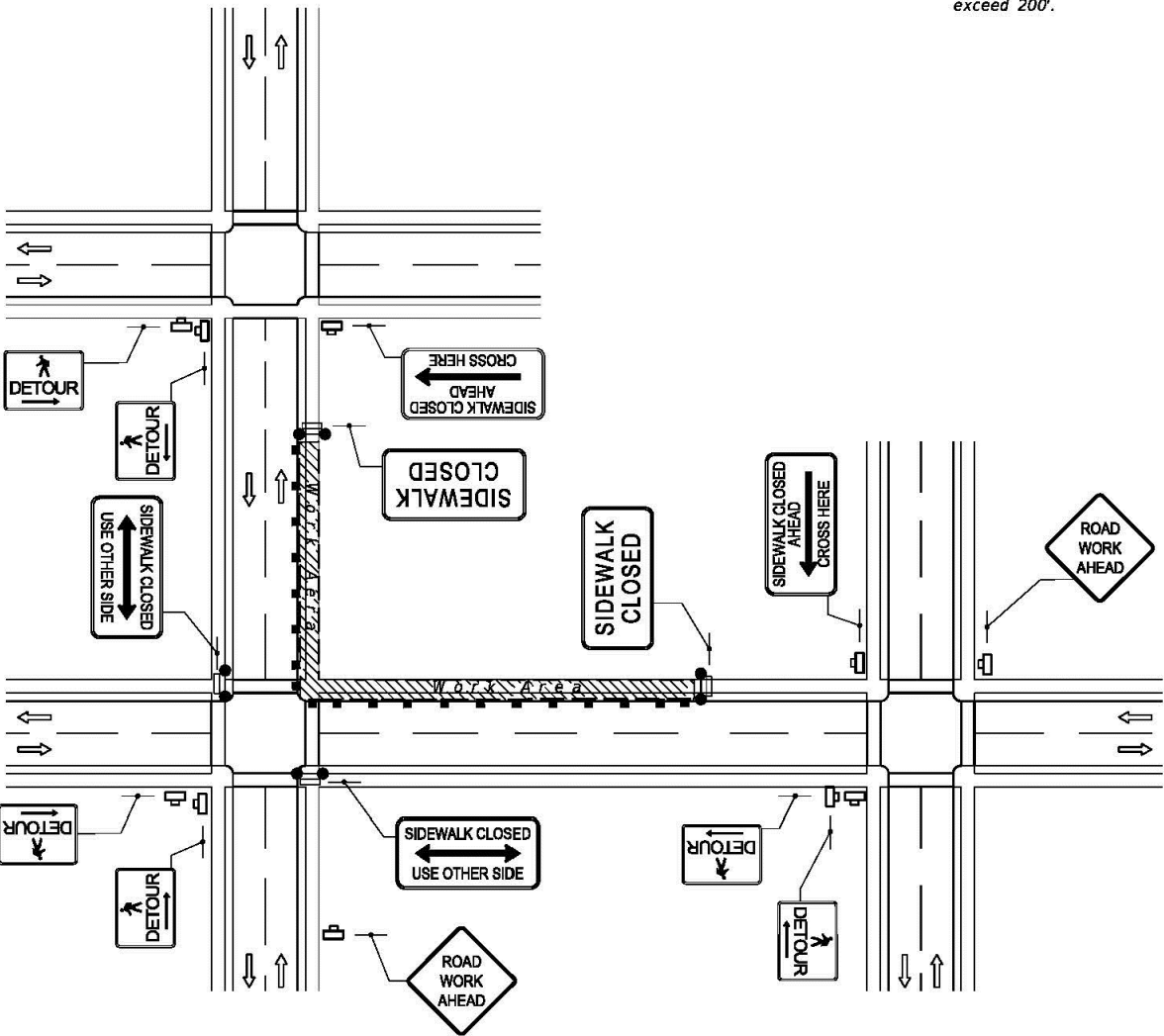
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TITLE:	TRAFFIC CONTROL PLAN
SCALE:	NTS
PAGE:	09
OF:	25

GENERAL NOTES:

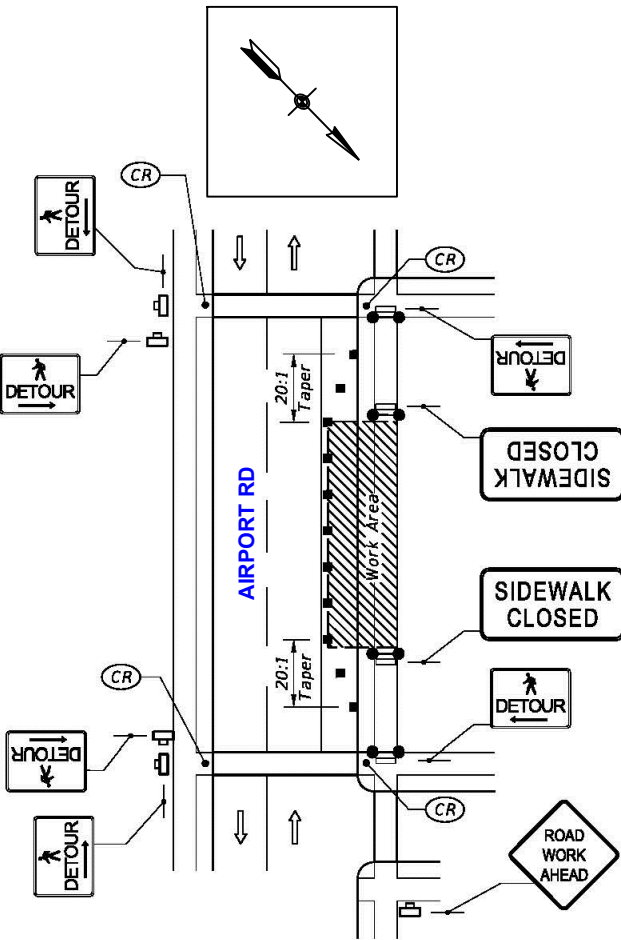
- When encroaching work requires a sidewalk closure for 60 minutes or greater, provide an alternate pedestrian route.
- For spacing of vehicular Channelizing Devices, see applicable vehicular temporary traffic control Indexes.
- Cover or deactivate pedestrian traffic signal display(s) controlling closed crosswalks.
- For post mounted signs located near or adjacent to a sidewalk, maintain a minimum 7' clearance from the bottom of the sign panel to the surface of the sidewalk.
- Provide a 5' wide temporary walkway, except where space restrictions warrant a minimum width of 4'. Provide a 5' x 5' passing space for temporary walkways less than 5' in width at intervals not to exceed 200'.
- Provide a cross-slope with a maximum value of 0.02 for all temporary walkways.
- Maintain temporary walkway surfaces and ramps that are stable, firm, slip-resistant, and free of any obstructions or hazards such as holes, debris, mud, construction equipment, and stored material.
- Remove temporary walkways immediately after reopening of the sidewalk, unless otherwise noted in the plans.
- Meet the requirements of Index 522-002 for temporary curb ramps.
- Place pedestrian longitudinal channelizing device(s) across the full width of the closed sidewalk. For temporary walkways, similar to the Sidewalk Diversion, place LCDs to delineate both sides of the temporary walkway.
- For sidewalk diversions, ensure that there is sufficient R/W for placement of temporary sidewalk and pedestrian longitudinal channelizing devices.

SYMBOLS

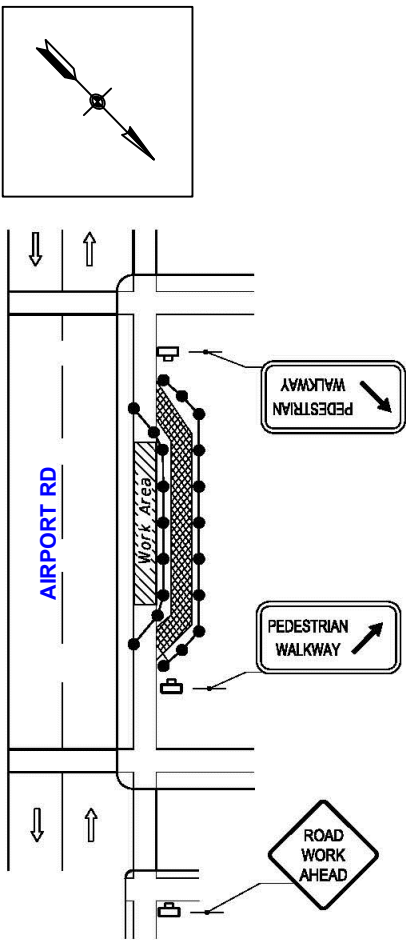
- Work Area
- Channelizing Device
- Work Zone Sign
- Required Locations For Either Temporary Or Permanent Curb Ramps.
- Lane Identification + Direction of Traffic
- Pedestrian Longitudinal Channelizing Device (LCD) with Mounted Work Zone Sign or separate Work Zone Sign
- Pedestrian Longitudinal Channelizing Device (LCD)
- Temporary Sidewalk



CROSSWALK CLOSURE AND PEDESTRIAN DETOUR



SIDEWALK DETOUR



SIDEWALK DIVERSION

PEDESTRIAN CONTROL FOR CLOSURE OF SIDEWALKS

INDEX 102-660
SHEET 1 of 1

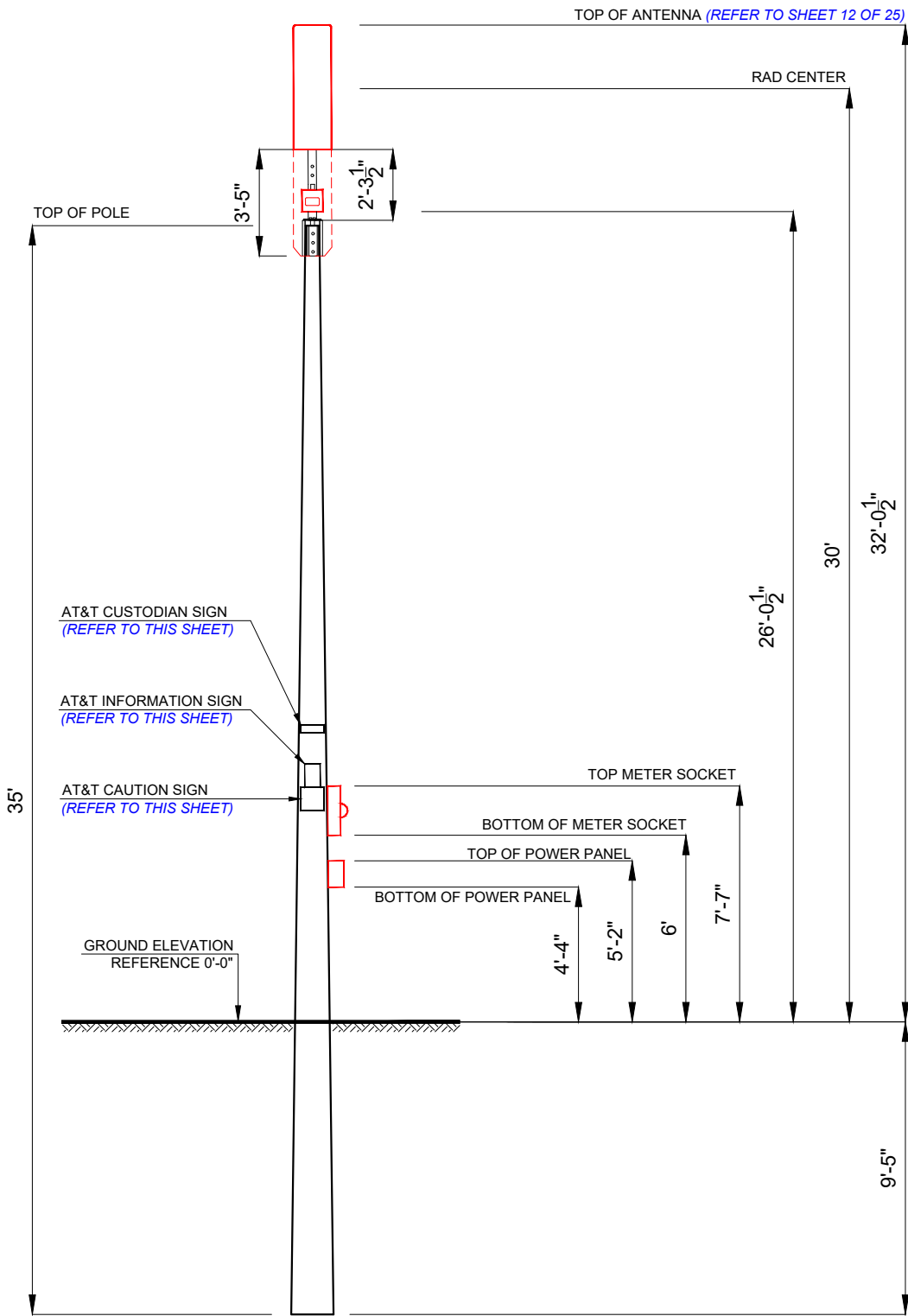
LAST REVISION 11/01/17

DESCRIPTION:



FY 2018-19
STANDARD PLANS

NEW "AT&T MOBILITY" POLE

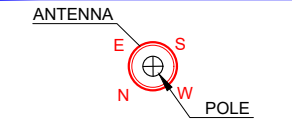


FROM NORTHWEST LOOKING SOUTHEAST

SCALE 3/16" = 1'-0"

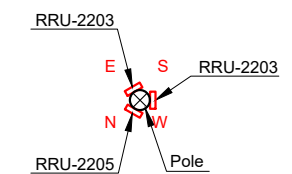
11"x17" PRINT IS THE FULL SCALE
FORMAT. ANY SIZE OTHER THAN THAT
IS AT REDUCED SCALE.

TOP VIEW @ ELEVATION 32'-0 1/2"



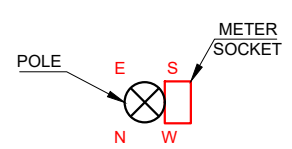
AMPHENOL
OMNI ANTENNA
MODEL C2U3MT360X12Fxs0
48.0"(H) x 14.6" (Ø) - 36.2 lbs
900091 SHROUD POLE TOP
WIDE DIAMETER MOUNT WITH
RADIO MOUNTING
65" approx.(H) x 16"(Ø)
(REFER TO SHEET 13 & 14 OF 25)

BOTTOM VIEW @ ELEVATION 26'-0 1/2"



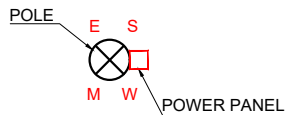
(2) - ERICSSON RRUS-2203
RADIO UNIT
MINIMUM AC FUSE RATING (4 AMP)
7.87"(H)x7.87"(W)x3.94"(D),
10 lbs ea,
(1) - ERICSSON RRUS-2205
RADIO UNIT
MINIMUM AC FUSE RATING (6 AMP)
7.87"(H)x7.87"(W)x3.94"(D),
11 lbs ea,
(REFER TO SHEET 15 OF 25)

BOTTOM VIEW @ ELEVATION 6'-0"



METER SOCKET
UTE4213CCH
19"(H)x13"(W)x4.94"(D) - 25 lbs,

BOTTOM VIEW @ ELEVATION 4'-4"

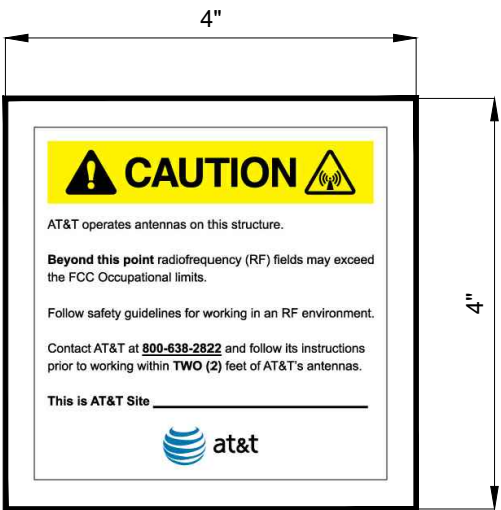
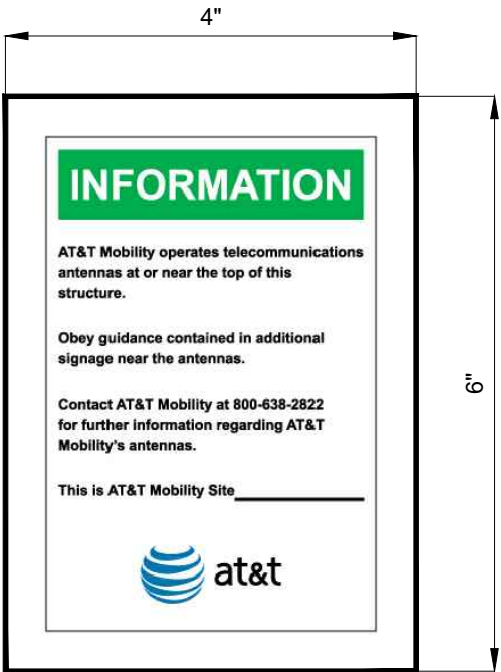
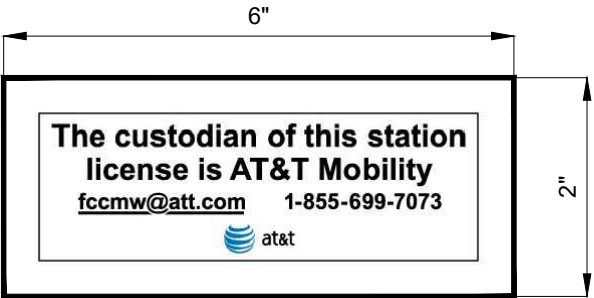


AC DISTRIBUTION PANEL
WITH POWER PROTECTION -
SC-MM08-001
120 VAC SINGLE PHASE / 60A
8.0"(H)x12.0"(W)x4.0"(D) - 15 lbs,
sq in. VOLUME = 384 cu in

OTHERS (CABLES)

COAXIAL CABLE:
O.D. = 0.50" - LENGHT = 8x6'
O.D. = 0.50" - LENGHT = 4x6'

POWER CABLE:
O.D. = 0.25" - LENGHT = 1x27'
O.D. = 0.25" - LENGHT = 2x25'



AT&T WARNING SIGNS

SCALE = NTS



3210 Lake Emma Road, Lake Mary FL 32746



PROFESSIONAL LICENSURE

I HEREBY CERTIFY THAT THESE PLANS WERE
PREPARED UNDER MY DIRECT SUPERVISION AND TO
THE BEST OF MY PROFESSIONAL KNOWLEDG THEY
COMPLY WITH THE REQUIREMENT OF ALL
APPLICABLE CODES AND ORDINANCES

REVISIONS

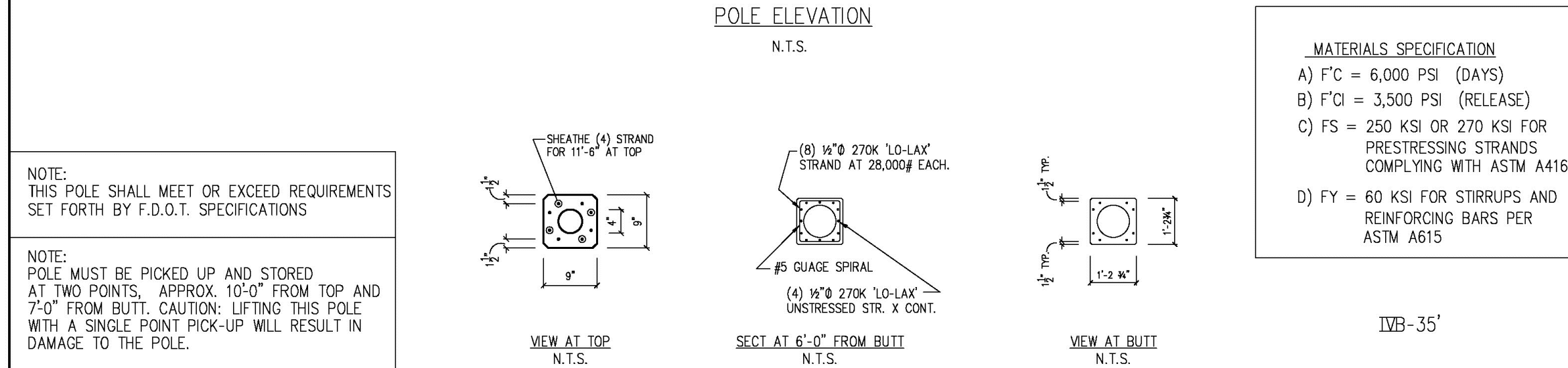
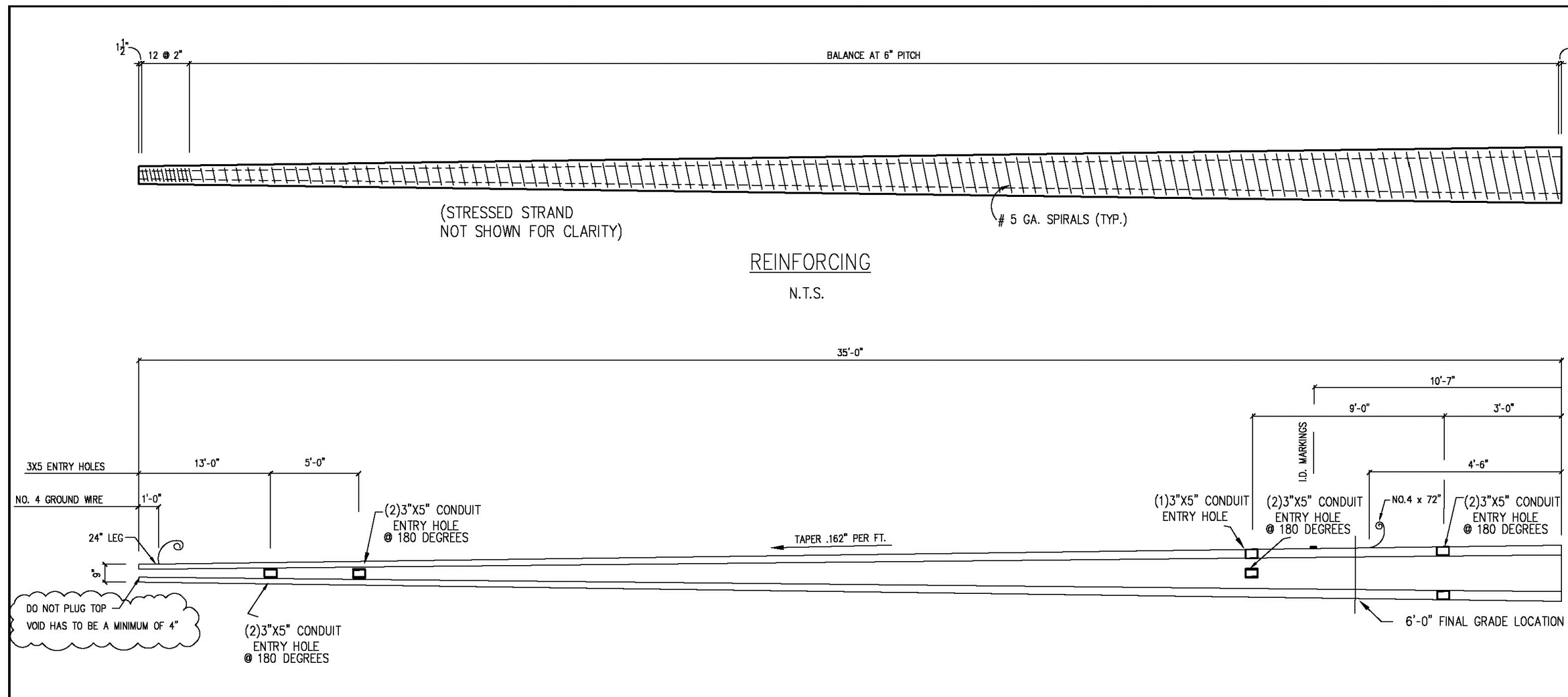
BY	DESCRIPTION	DATE



Call 811 or www.sunshine811.com two full
business days before digging to have utilities
located and marked.
Check positive response codes before you dig!

PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC
CHECK BY:	DRAFTPROS LLC
ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_592
TITLE:	NEW EQUIPMENT ELEVATION
SCALE:	3/16" = 1'-0"
PAGE:	10
OF:	25



PCI
CERTIFIED
PLANT

DATE: BY: CHK:

DESCRIPTION:

REV:

DURA-STRESS Inc.
P.O. BOX 480779, LEESBURG, FL 34749-0779
PHONE (352) 787-1422 FAX (352) 787-0080
STRUCTURAL PRESTRESSED AND ARCHITECTURAL PRECAST CONCRETE PRODUCTS

JOB NAME:
LOCATION:
ARCHITECT:
ENGINEER:
CONTRACTOR:
PROJ. NO:

DRAWN:
CHK'D.:
APPR.:
DATE:
RELEASED:

DS JOB NO:

SHT: OF:

3210 Lake Emma Road, Lake Mary FL 32746

Engineering Office
4461 Parkbreeze Ct Orlando, FL 32808

PROFESSIONAL LICENSURE

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REVISIONS

BY	DESCRIPTION	DATE

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PROJECT INFORMATION

DRAWING BY: **DRAFTPROS LLC**

CHECK BY: **DRAFTPROS LLC**

ORIGINAL SUBMITTAL: **FEB 20, 2019**

NODE NAME #: **CRAN_RTFL_PBC27_592**

TITLE: **NEW POLE ELEVATION**

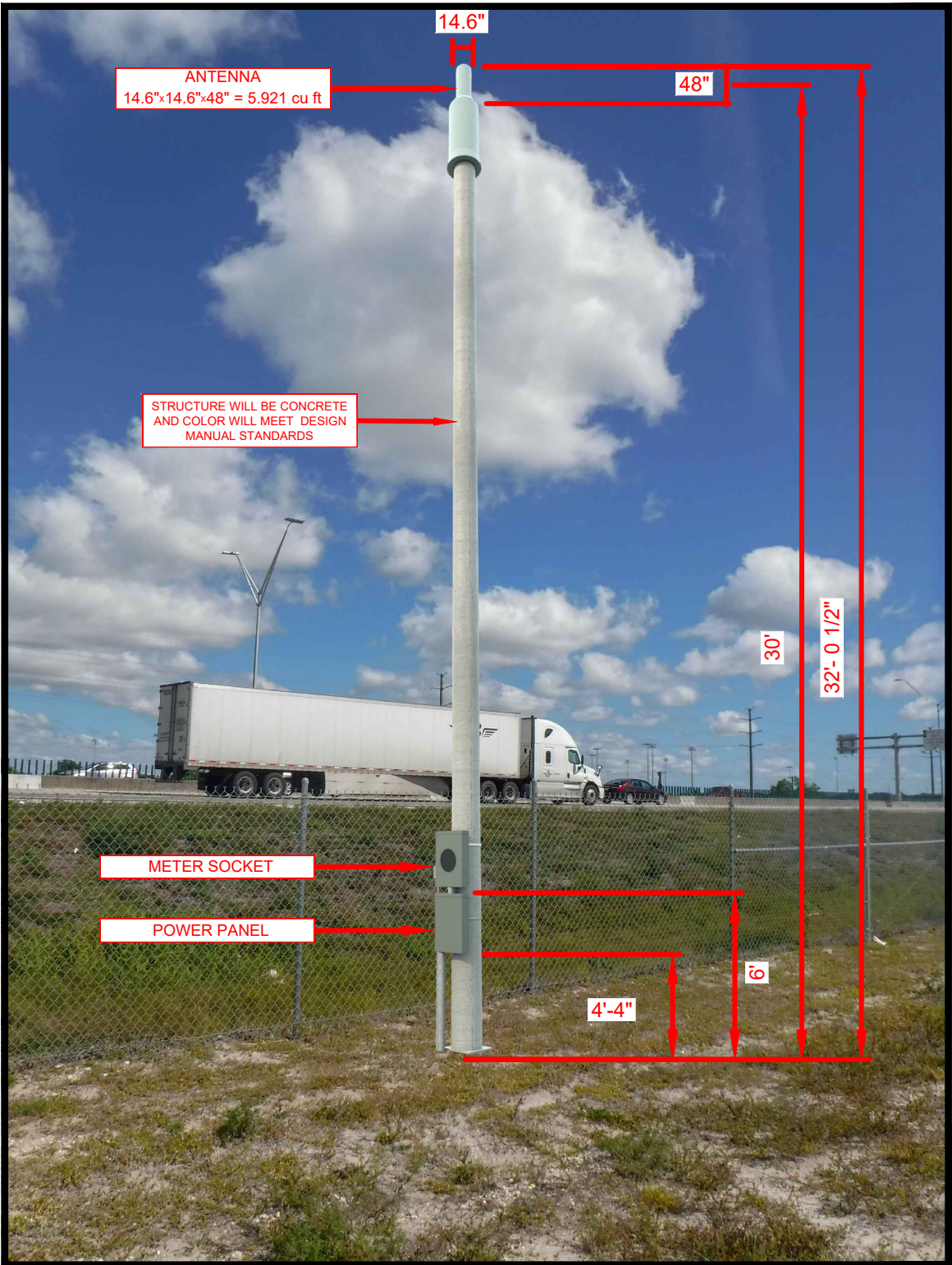
SCALE:	PAGE:	OF:
N..T.S.	11	25

**STRUCTURAL PRESTRESSED CONCRETE POLE
ELEVATION DETAIL**
SCALE = NTS

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



CURRENT VIEW-From South looking North
SCALE = NTS



PROPOSED VIEW-From South looking North
SCALE = NTS



3210 Lake Emma Road, Lake Mary FL 32746



PROFESSIONAL LICENSURE

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REVISIONS

BY	DESCRIPTION	DATE



Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.
Check positive response codes before you dig!

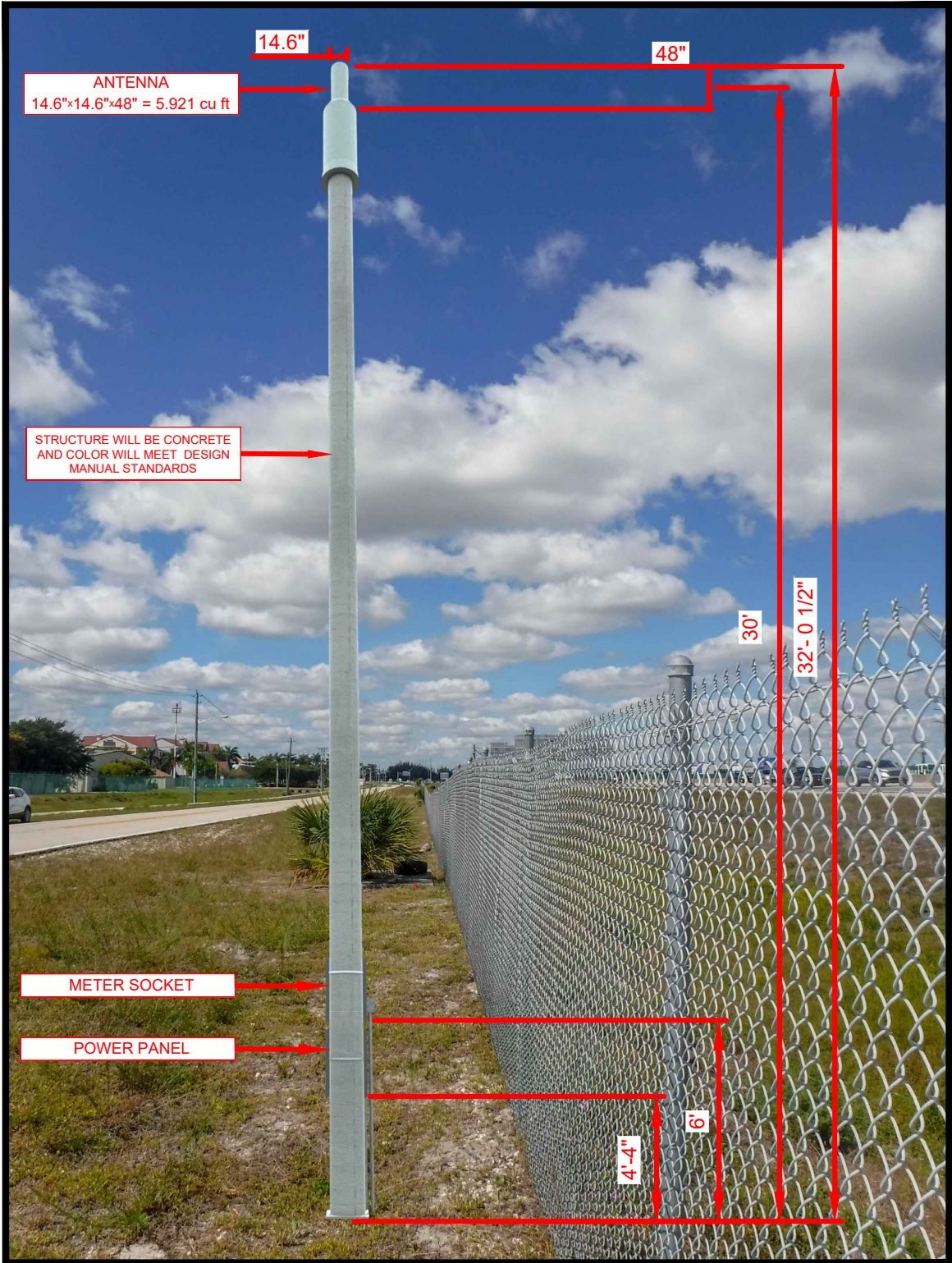
PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	PHOTO SIM	
SCALE:	PAGE:	OF:
NTS	12	25

POLE LOCATION MEETS OR EXCEEDS ADA
COMPLIANCE STANDARDS AS REQUIRED BY
CITY OF BOCA RATON



CURRENT VIEW-From Northeast looking Southwest
SCALE = NTS



PROPOSED VIEW-From Northeast looking Southwest
SCALE = NTS



3210 Lake Emma Road, Lake Mary FL 32746



PROFESSIONAL LICENSURE

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APPLICABLE CODES AND ORDINANCES

REVISIONS

BY	DESCRIPTION	DATE

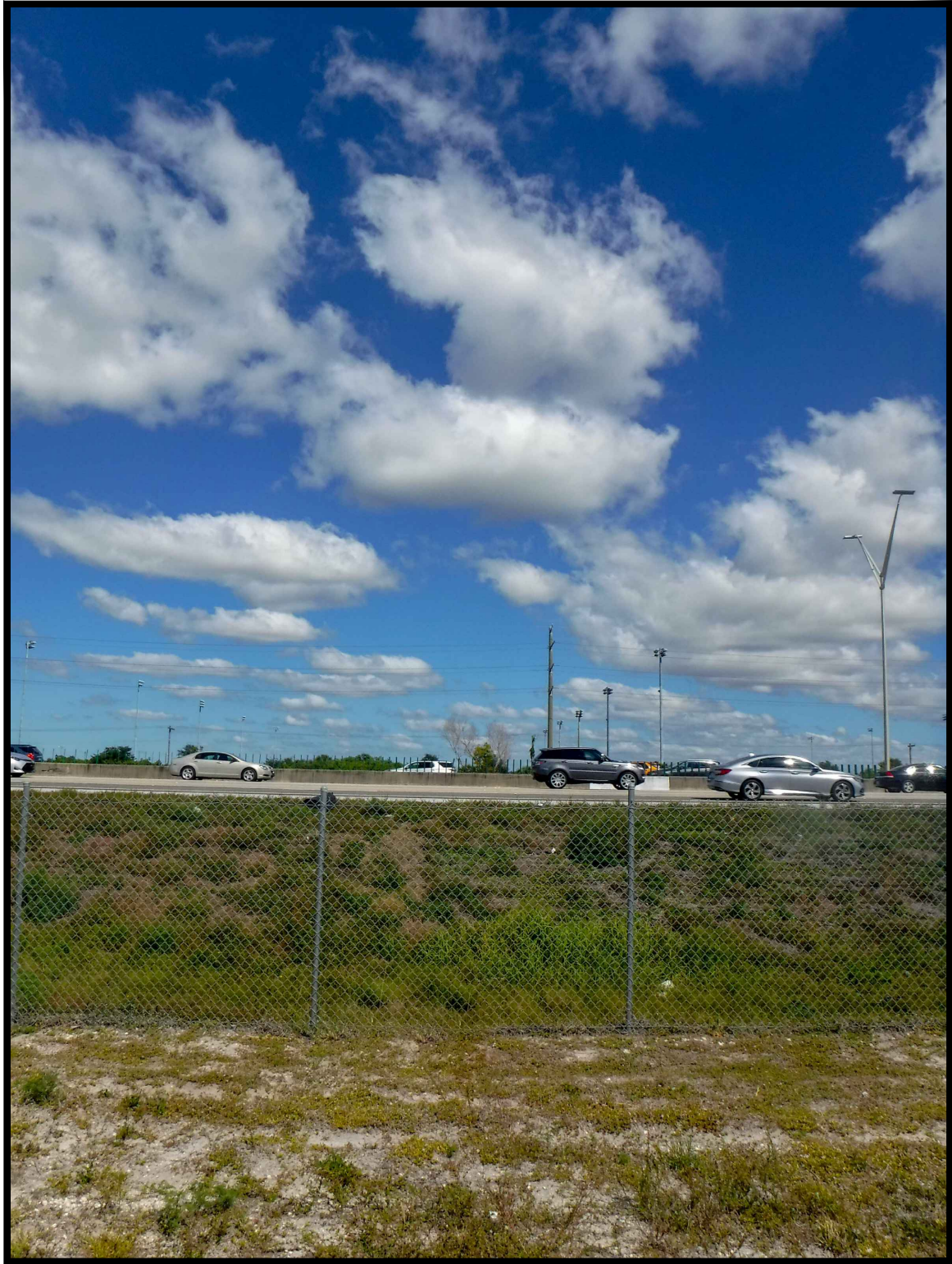


Call 811 or www.sunshine811.com two full
business days before digging to have utilities
located and marked.
Check positive response codes before you dig!

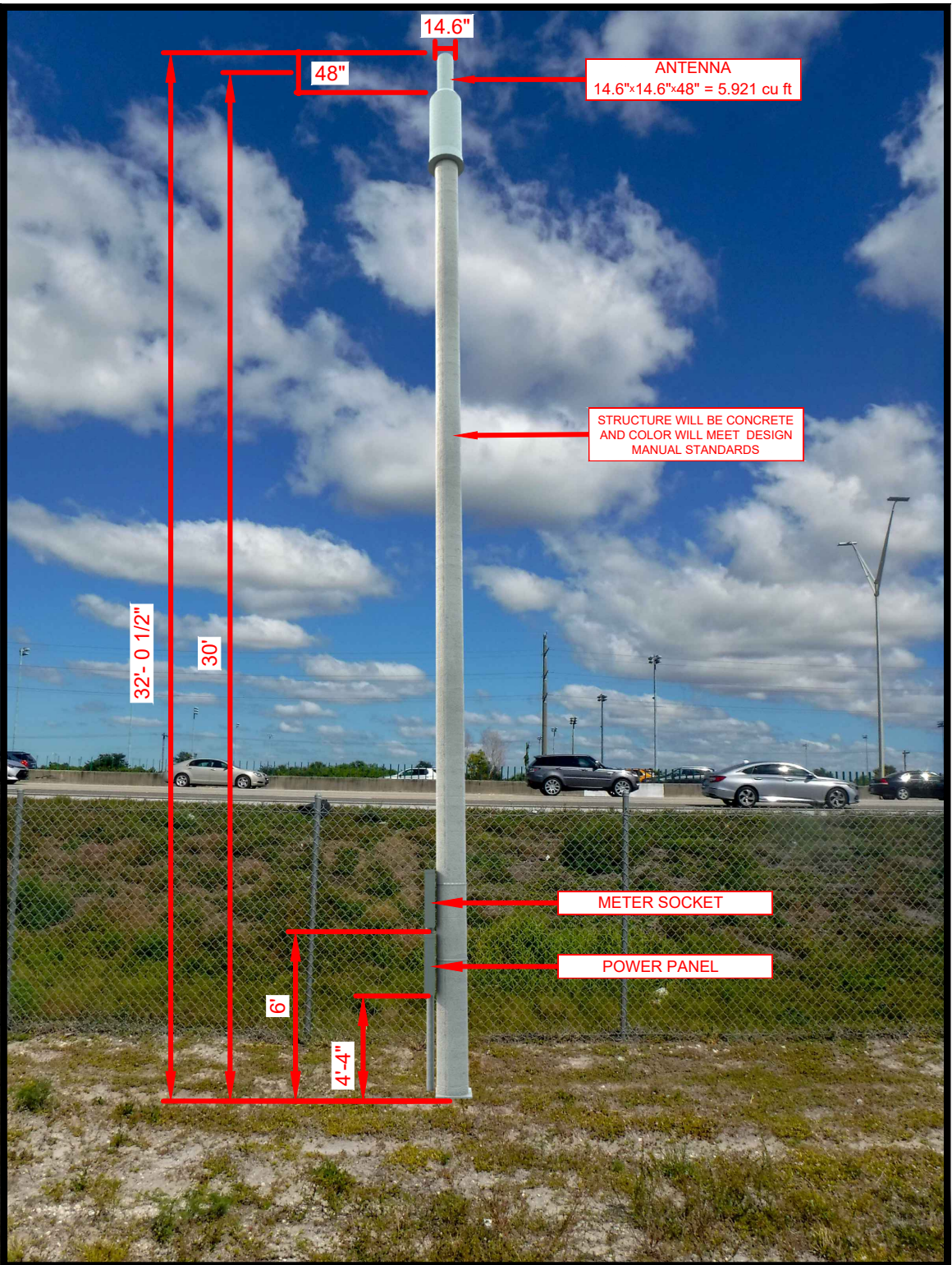
PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	PHOTO SIM	
SCALE:	PAGE:	OF:
NTS	13	25

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



CURRENT VIEW-From Southeast looking Northwest
SCALE = NTS



PROPOSED VIEW-From Southeast looking Northwest
SCALE = NTS



3210 Lake Emma Road, Lake Mary FL 32746



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REVISIONS

BY	DESCRIPTION	DATE



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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	PHOTO SIM	
SCALE:	NTS	PAGE: 14 OF: 25

POLE LOCATION MEETS OR EXCEEDS ADA COMPLIANCE STANDARDS AS REQUIRED BY CITY OF BOCA RATON



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REVISIONS

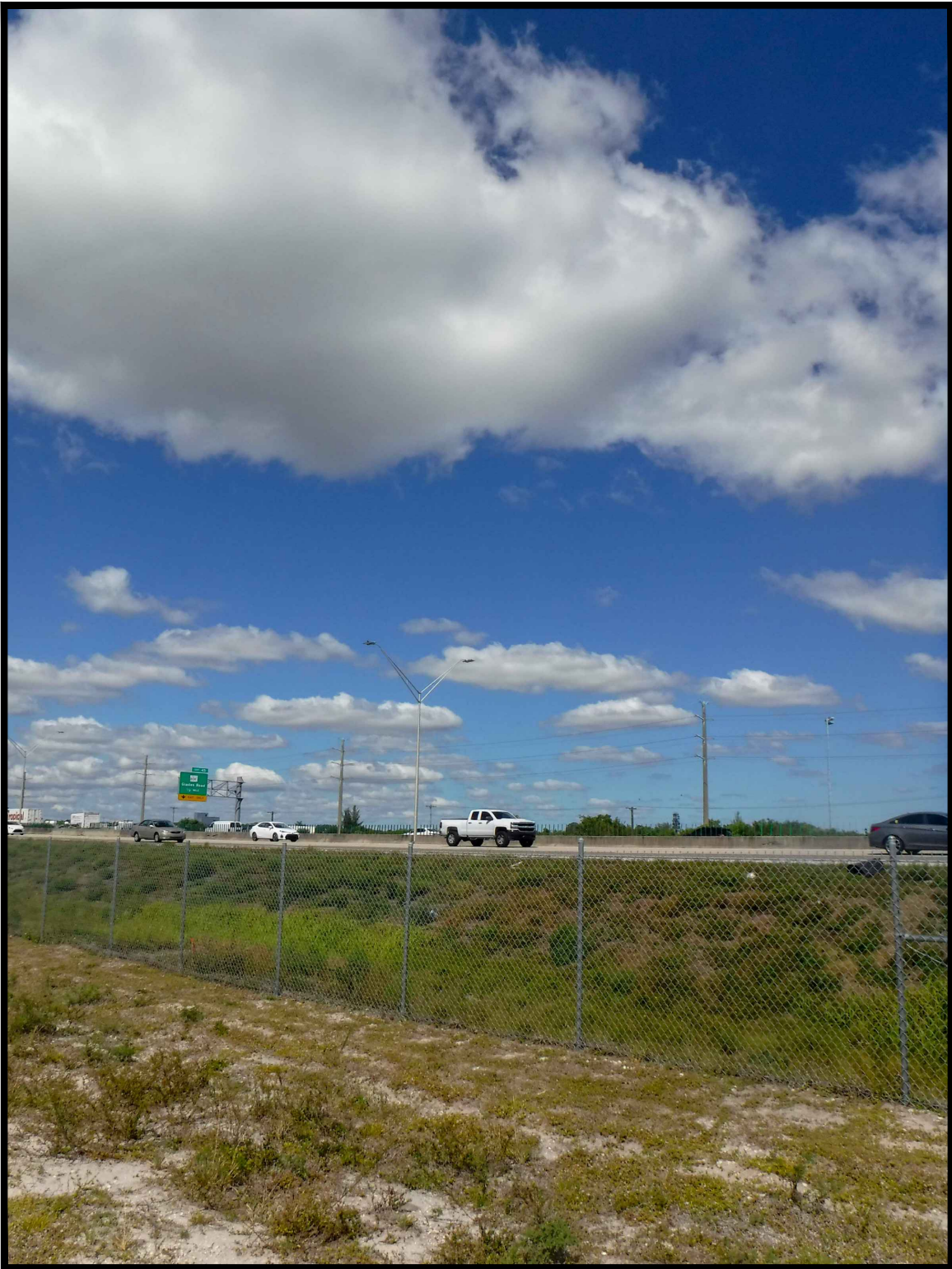
BY	DESCRIPTION	DATE



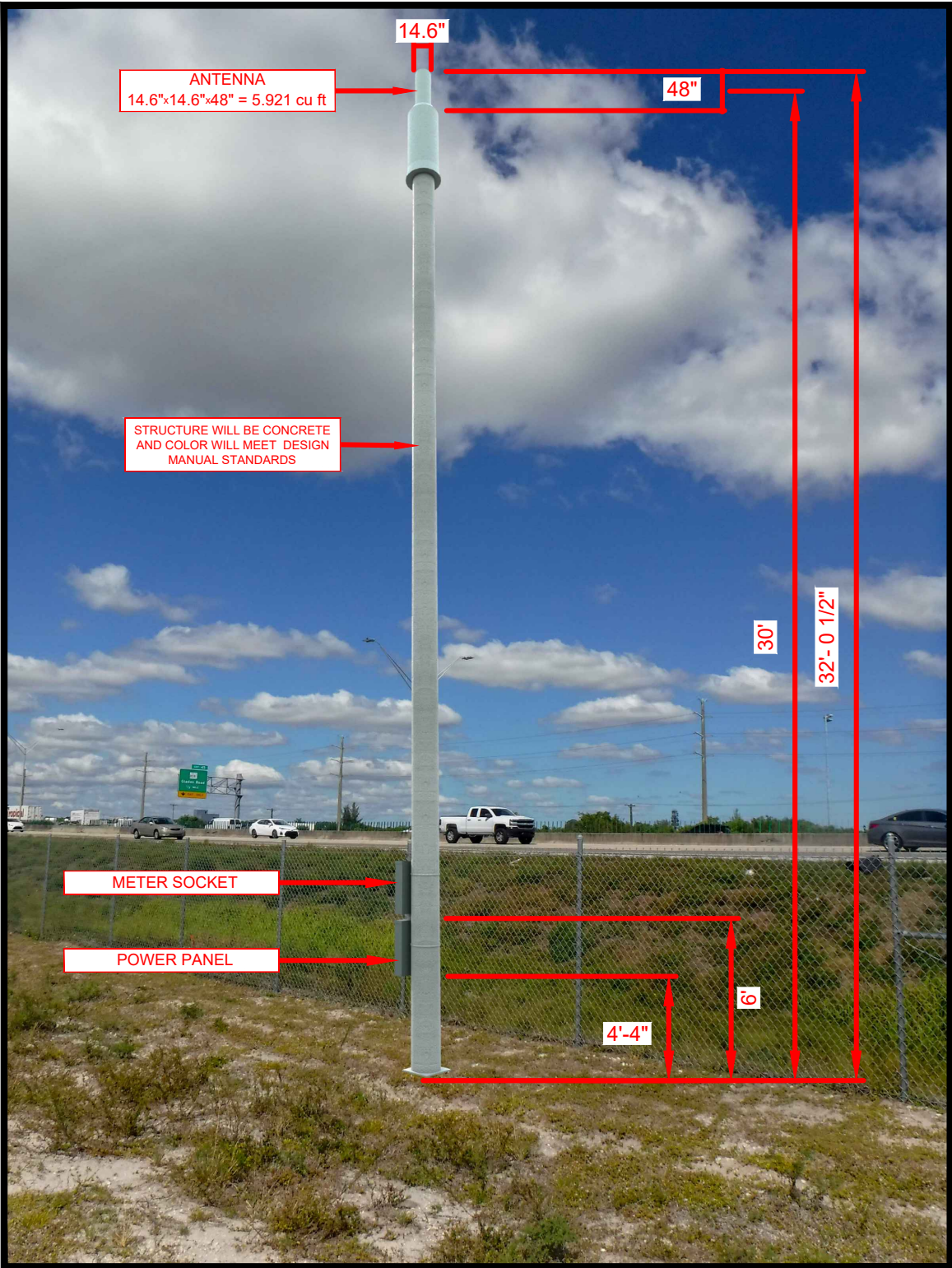
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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	PHOTO SIM	
SCALE:	PAGE:	OF:
NTS	15	25



CURRENT VIEW-From EAST looking WEST
SCALE = NTS



PROPOSED VIEW-From EAST looking WEST
SCALE = NTS



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REVISIONS

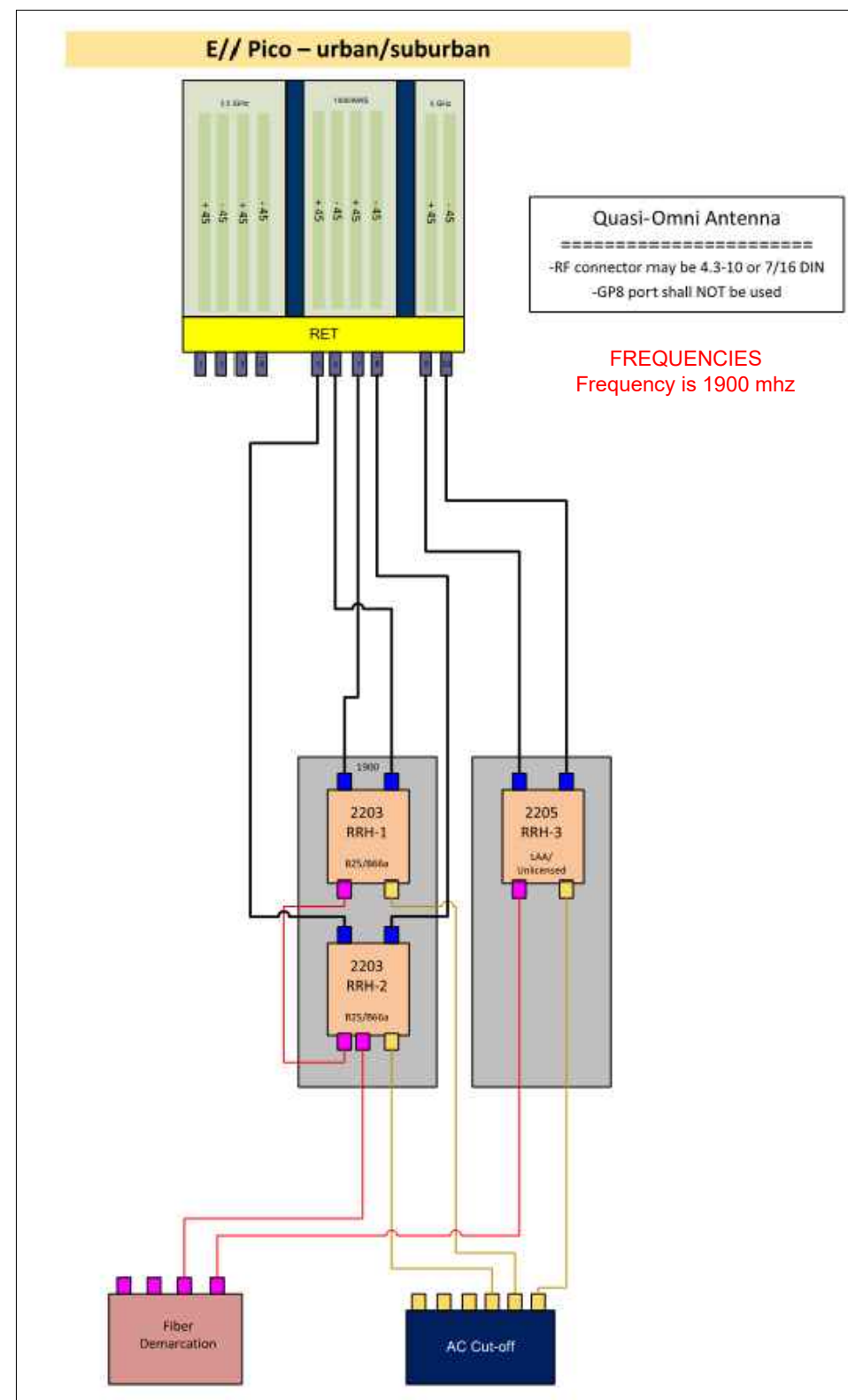
BY	DESCRIPTION	DATE



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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	RF SCHEMATIC's	
SCALE:	PAGE:	OF:
NTS	16	25



SMALL CELL ONE LINE SCHEMATIC
SCALE = NTS



696-960 / (2x) 1695-2700 / (2x) 3550-3700 / 5150-5925 MHz

C2U3MT360X12FxyS0

HEX BAND | OMNI | CANISTER ANTENNA | X-POL | FIXED TILT | 1219 MM (48.0 IN)

Features

- Omni configuration with 12 connectors
- Ideal for Small Cell / DAS applications
- Available with 4.3-10 connectors
- Four unique mounting options
- Available for order with a grey, brown or black radome

Connector Description

The antenna has 12 connectors located at the bottom.

Low Band #1	R1	696-960 MHz	(2x) 4.3-10 Female
Mid Band #1	Y1	1695-2700 MHz	(2x) 4.3-10 Female
Mid Band #2	Y2	1695-2700 MHz	(2x) 4.3-10 Female
High Band #1	Y3	3550-3700 MHz	(2x) 4.3-10 Female
High Band #2	Y4	3550-3700 MHz	(2x) 4.3-10 Female
High Band #3	V1	5150-5925 MHz	(2x) 4.3-10 Female

Electrical Characteristics	R1	Y1 Y2	Y3 Y4	V1
Frequency Bands (MHz)	696-960	(2x) 1695-2700	(2x) 3550-3700	5150-5925
	696-806 806-900	1695-1880 1850-1990 1920-2200 2300-2700		
Polarization	±45°	(2x) ±45°	(2x) ±45°	±45°
Horizontal Beamwidth	360° 360°	360° 360° 360° 360°	360°	360°
Vertical Beamwidth	21.2° ±1.2° 18.3° ±1.6°	18.5° ±1.3° 17.2° ±1.0° 16.1° ±1.7° 13.5° ±1.4°	37.1° ±4.8°	20.2° ±3.1°
Gain (dBi)	7.6 ±0.5 8.2 ±0.7	9.1 ±1.4 9.4 ±1.1 9.3 ±1.0 9.4 ±1.2	4.3 ±0.6	4.1 ±0.8
Electrical Downtilt (°)	(x) 0, 5	(y) 0, 6	0	0
Impedance	50Ω	50Ω	50Ω	50Ω
VSWR	≤ 1.5:1	≤ 1.5:1	≤ 1.5:1	≤ 1.5:1
Upper Sidelobe Suppression	> 14 dB	> 14 dB	> 9 dB	> 16 dB
Isolation Between Ports	20 dB	25 dB	25 dB	25 dB
IM3 (2x20W carrier)	< -153 dBc	< -153 dBc	N/A	N/A
Input Power	(2x) 500 W	(4x) 300 W	(4x) 300 W	(2x) 300 W
Diplexed	No			
Number of Sectors, Sector Spacing and/or Pattern Shape	Omni			
Lightning Protection	Direct Ground			

Mechanical Characteristics

Antenna Dimensions (Height x Diameter)	1219 x 371 mm	48.0 x 14.6 in
Weight without Mounting Bracket Kit	16.4 kg	36.2 lbs
Antenna Volume	0.13 m³	4.7 ft³
Survival Wind Speed	241 km/hr	150 mph
Wind Area	0.47 m²	5.0 ft²
Wind Load (160 km/hr or 100 mph)	391 N	88 lbf

Quoted performance parameters are provided to offer typical, peak or range values only and may vary as a result of normal testing, manufacturing and operational conditions. Extreme operational conditions and/or stress on structural supports is beyond our control. Such conditions may result in damage to this product. Improvements to products may be made without notice.

REV041718NA

www.amphenol-antennas.com

1 of 4

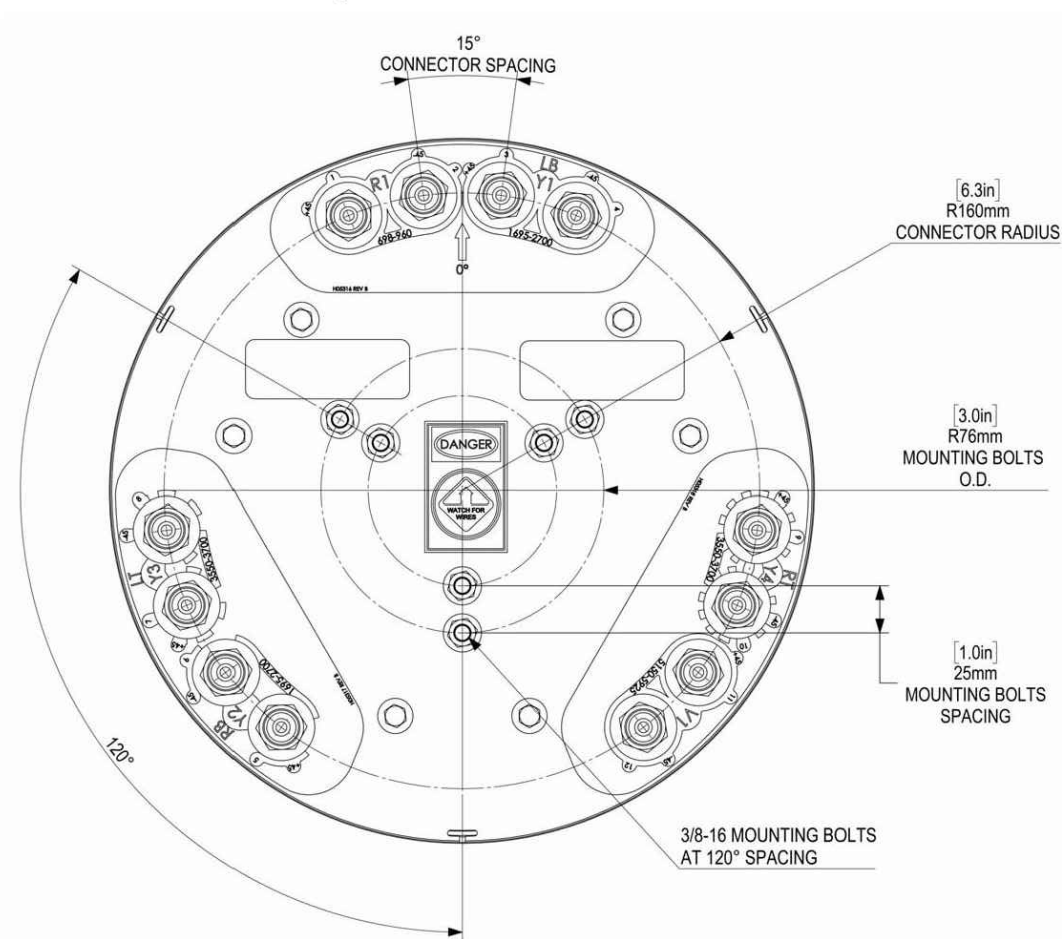


696-960 / (2x) 1695-2700 / (2x) 3550-3700 / 5150-5925 MHz

C2U3MT360X12FxyS0

HEX BAND | OMNI | CANISTER ANTENNA | X-POL | FIXED TILT | 1219 MM (48.0 IN)

Bottom View - Connector Diagram



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REV041718NA

www.amphenol-antennas.com

3 of 4



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REVISIONS

BY	DESCRIPTION	DATE



Call 811 or www.sunshine811.com two full business days before digging to have utilities located and marked.

Check positive response codes before you dig!

PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC
CHECK BY:	DRAFTPROS LLC
ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_592
TITLE:	ANTENNA DETAIL
SCALE:	NTS
PAGE:	17
OF:	25

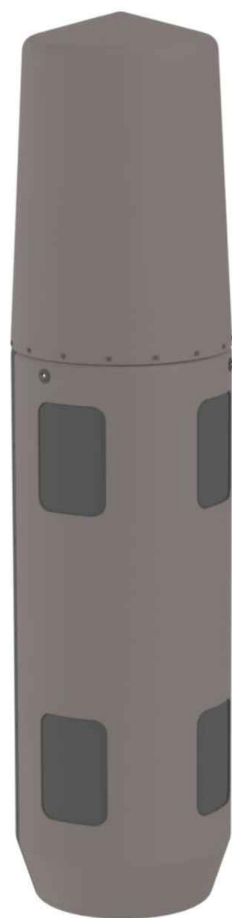
ANTENNA DETAIL
SCALE = NTS



INSTALLATION MANUAL

900091

SHROUD POLE TOP WIDE DIAMETER MOUNT
WITH RADIO MOUNTING



Amphenol/Kathrein Configuration



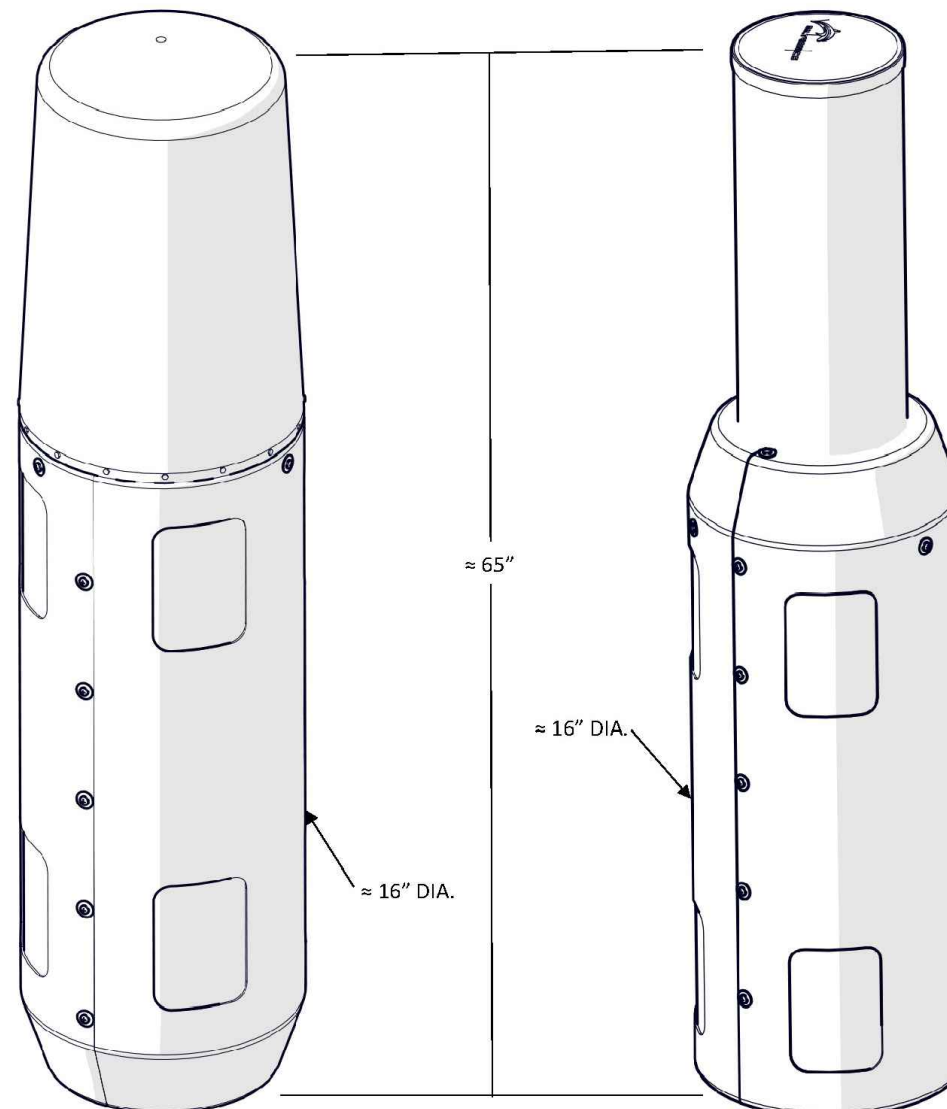
Galtronics Configuration

719.599.3400
www.concealfab.com
sales@concealfab.com
10205 Federal Drive, Building B
Colorado Springs, CO 80908

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING



SPECIFICATIONS



Amphenol/Kathrein Configuration

Galtronics Configuration



3210 Lake Emma Road, Lake Mary FL 32746



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REVISIONS

BY	DESCRIPTION	DATE



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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	BRACKET FOR ANTENNA-RRU'S	
SCALE:	PAGE:	OF:
NTS	18	25

900091 - BRACKET FOR ANTENNA & RRU'S
SCALE = NTS

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

SUPPLIED PARTS

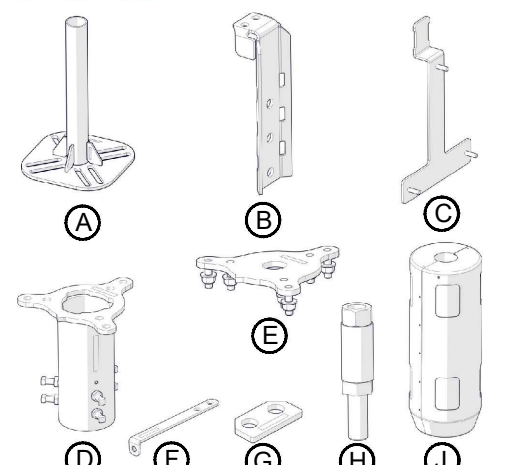


Diagram showing the exploded view of the supplied parts for the shroud pole top wide diameter mount with radio mounting. The parts are labeled A through J.

ITEM	QTY	DESCRIPTION	DESCRIPTION
A	1	WIDE DIAMETER MAST	104381
B	4	SHORT POLE TOP LEG	101624
C	3	220X RADIO MOUNTING BRACKET	104586
D	1	UNIVERSAL ANTENNA SLEEVE	101687
E	1	SINGLE BOLT ADAPTER	008166
F	3	SHROUD ARM	100319
G	4	ACCENTRIC WASHER	009887
H	1	SINGLE BOLT EXTENSION*	009632
J	1	POLE TOP SHROUD	104594

*Single Bolt Extension used in Galtronics configuration only.

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

ASSEMBLY

Mount Item B to Item A using hardware provided as shown.

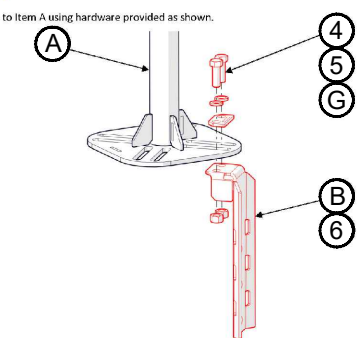


Diagram showing the assembly of Item B to Item A using hardware provided as shown. The parts are labeled A, B, 4, 5, 6, and G.

Bolt or band Item B to pole.
(Bolts or bands by others).

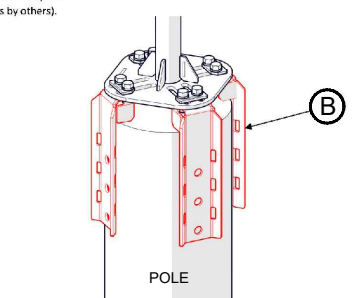


Diagram showing the assembly of Item B to the pole using hardware provided as shown. The parts are labeled B and POLE.

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

Band Item C to Item A as shown.
(Bands by other).

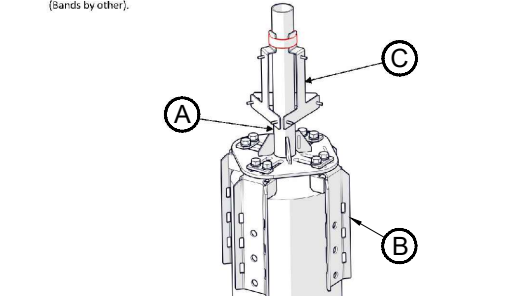


Diagram showing the assembly of Item C to Item A using hardware provided as shown. The parts are labeled A, B, C, and 2, 3.

Mount 220x Radios to Item C using hardware provided as shown.

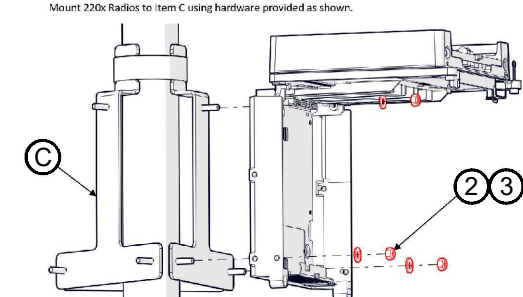


Diagram showing the assembly of 220x Radios to Item C using hardware provided as shown. The parts are labeled C, 2, and 3.

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

If using a Galtronics antenna, skip to page 11. If using
Amphenol or Kathrein antenna continue below.
Mount Amphenol or Kathrein antenna to Item E using hardware provided as shown.

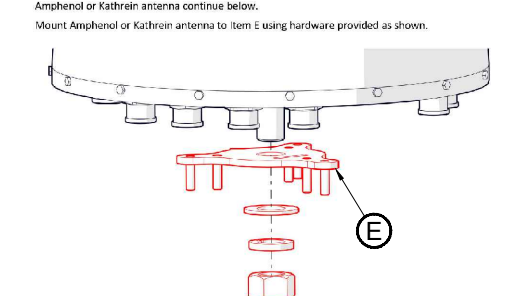


Diagram showing the assembly of Amphenol or Kathrein antenna to Item E using hardware provided as shown. The parts are labeled E and 2.

Mount Item D to mast of Item A using hardware provided as shown.

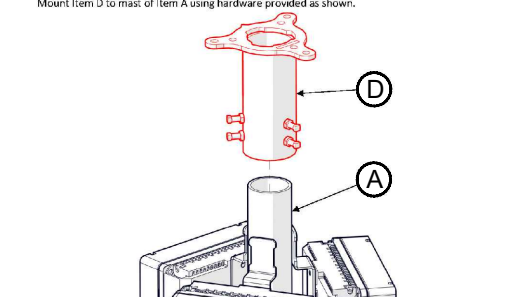


Diagram showing the assembly of Item D to the mast of Item A using hardware provided as shown. The parts are labeled A, D, and 2.

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

Mount antenna with Item E to Item D using hardware provided as shown.

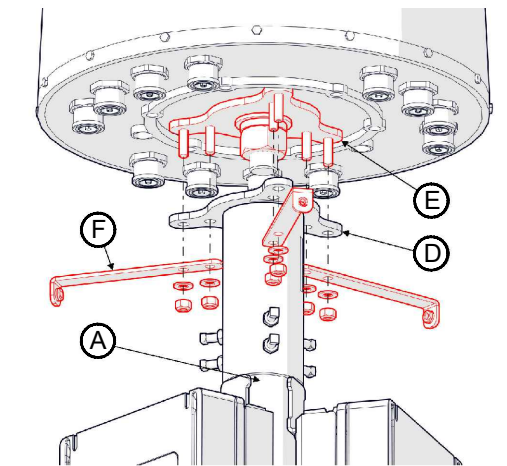


Diagram showing the assembly of antenna with Item E to Item D using hardware provided as shown. The parts are labeled A, D, E, and F.

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

Mount Galtronics antenna to Item H and Item E using hardware provided as shown.

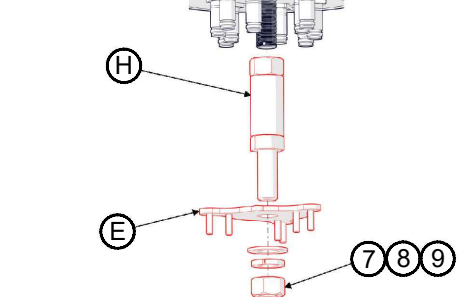


Diagram showing the assembly of Galtronics antenna to Item H and Item E using hardware provided as shown. The parts are labeled E, H, 7, 8, and 9.

Mount Item D to mast of Item A using hardware provided as shown.

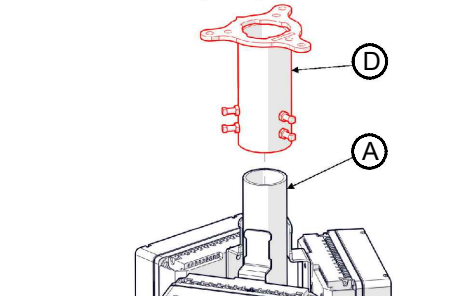


Diagram showing the assembly of Item D to the mast of Item A using hardware provided as shown. The parts are labeled A, D, and 1.

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

Mount antenna with Item E to mast of Item D using hardware provided as shown.

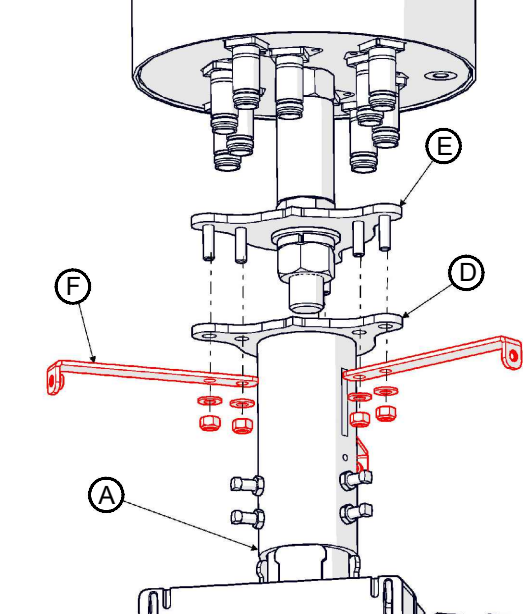


Diagram showing the assembly of antenna with Item E to mast of Item D using hardware provided as shown. The parts are labeled A, D, E, and F.

900091, SHROUD POLE TOP WIDE DIAMETER MOUNT WITH RADIO MOUNTING

ConcealFab Corporation

Cover equipment and other hardware with Item J. Bolt together with Item F using hardware
provided as shown.

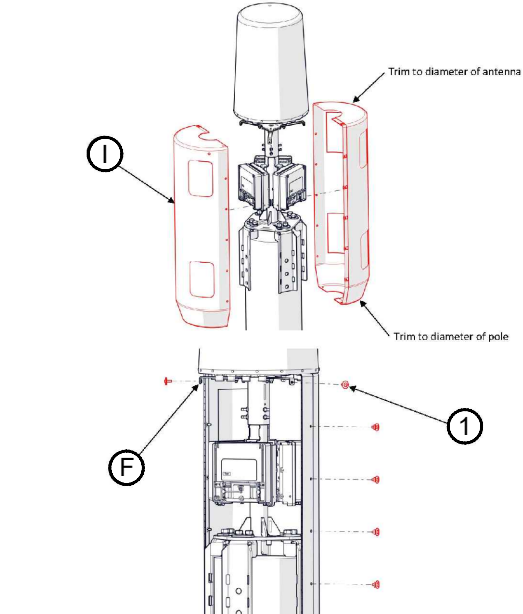




Diagram showing the assembly of Item J to Item F using hardware provided as shown. The parts are labeled F, I, and 1. Annotations include 'Trim to diameter of antenna' and 'Trim to diameter of pole'.



3210 Lake Emma Road, Lake Mary FL 32746




Engineering Office
4461 Parkbreeze Ct Orlando,
FL 32808

PROFESSIONAL LICENSURE

I HEREBY CERTIFY THAT THESE PLANS WERE
PREPARED UNDER MY DIRECT SUPERVISION AND TO
THE BEST OF MY PROFESSIONAL KNOWLEDG THEY
COMPLY WITH THE REQUIREMENT OF ALL
APPLICABLE CODES AND ORDINANCES

REVISIONS

BY	DESCRIPTION	DATE



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business days before digging to have utilities
located and marked.
Check positive response codes before you dig!

PROJECT INFORMATION

DRAWING BY:
DRAFTPROS LLC

CHECK BY:
DRAFTPROS LLC

ORIGINAL SUBMITTAL:
FEB 20, 2019

NODE NAME #:
CRAN_RTFL_PBC27_592

TITLE:
BRACKET FOR ANTENNA-RRU'S

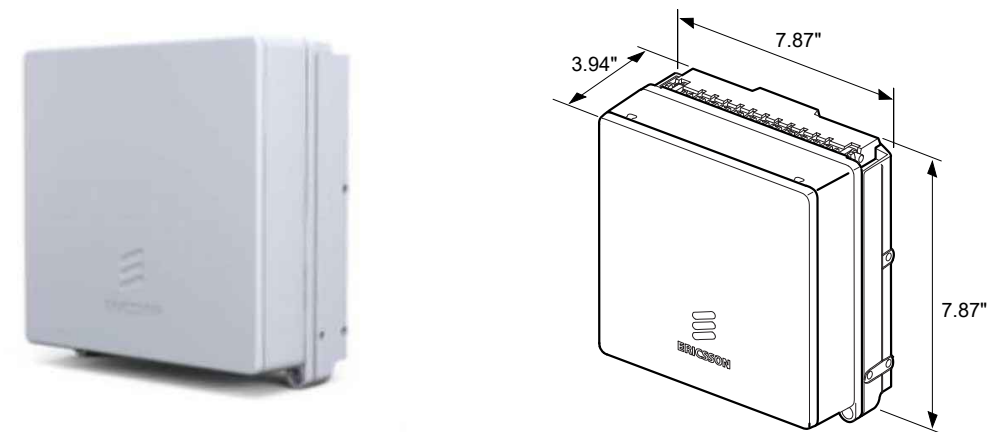
SCALE: NTS

PAGE: 19

OF: 25

TECHNICAL SPECIFICATIONS

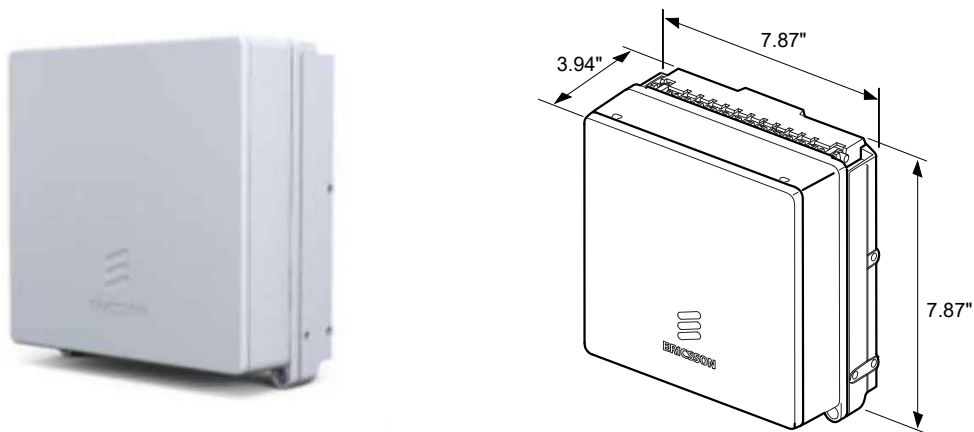
FREQUENCY BANDS	
Bands:	3GPP Bands B1 (W/L), B3 (L), B3C (W/L), B8 (W/L), B66A (W/L), B5 (W/L), B2/B25 (W/L), B12 (L), B13 (L) and B7 (L)
HW CAPACITY	
Carrier capacity WCDMA:	Up to 4 carriers
Carrier capacity LTE:	Up to 40 MHz
IBW:	B1, B3 and B66A 45 MHz. B2/B25 and B7 40 MHz. B3C, B8, B5, B12 and B13 Full band
MIMO:	Yes, 2T/2R
Output power:	Up to 2 x 5 W
INTERFACE SPECIFICATIONS	
Antenna Ports:	2 x 4.3-10 (f)
CPRI:	2 x 2.5/5/10 Gbps (exchangeable SFP modules)
Optical indicators	6
External alarms	2
Field ground	1
MECHANICAL SPECIFICATIONS	
W x H x D:	200 mm x 200 mm x 100 mm, including mounting bracket and esthetic front cover
Weight:	< 4.5 kg
Volume:	4 l
Mounting:	Wall and pole mount
ELECTRICAL SPECIFICATIONS	
Power Supply:	-48 VDC or 100 - 250 VAC
ENVIRONMENTAL SPECIFICATIONS	
Normal operating temp.:	-40 °C to +55 °C (cold start at -40 °C)
Relative Humidity	5 - 100%
Environment:	Outdoor class with IP65



ERICSSON RRU-2203 DETAIL
SCALE = NTS

TECHNICAL SPECIFICATIONS

FREQUENCY BANDS:		3GPP bands B41
HW CAPACITY:		
Carrier capacity LTE:		Up to 40 MHz
IBW:		40 MHz TDD
MIMO:		Yes, 2T/2R
Output power:		Up to 2 x 5W
INTERFACE SPECIFICATIONS:		
Power supply:		-48VDC or 100-250 VAC
Antenna Ports:		2 x 4.3-10(f)
CPRI:		2 x 10 Gbps (exchangeable SFP modules)
		6 x optical indicators
		2 x external alarms
		Field Ground
MECHANICAL SPECIFICATIONS:		
WxDxH:		200mm x 100mm x 200mm, including m
Weight:		< 5kg
Volume:		< 4l
Mounting:		Wall and , pole mount.
ENVIRONMENTAL SPECIFICATIONS:		
Environment:		Outdoor class with IP65
Normal operating temp.:		-40 - +55 °C (cold start at -40 °C)



ERICSSON RRU-2205 DETAIL (FUTURE)
SCALE = NTS



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REVISIONS

BY	DESCRIPTION	DATE



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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	RRU'S DETAIL	
SCALE:	PAGE:	OF:
NTS	20	25



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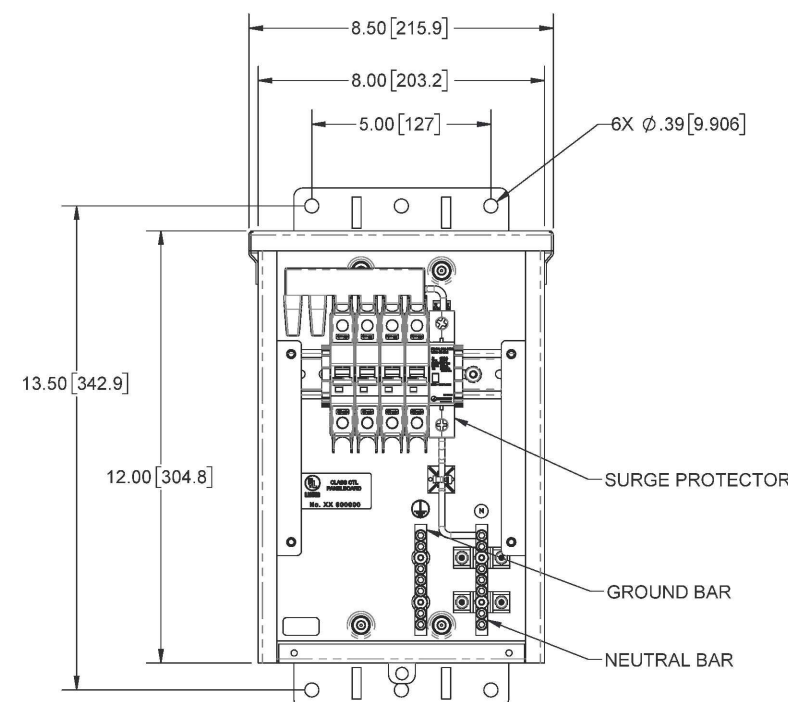
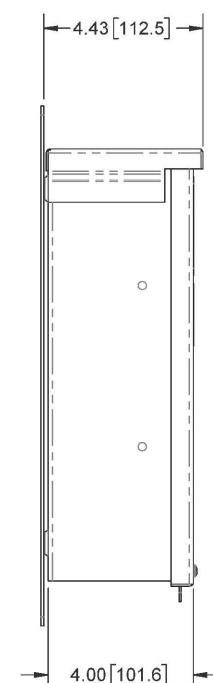


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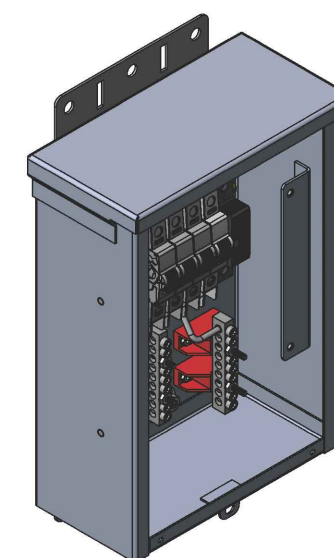
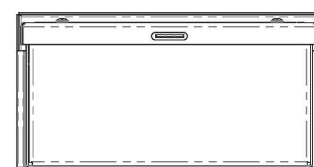
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TITLE:	RRU'S DETAIL
SCALE:	NTS
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REVISIONS				
REV.	DESCRIPTION	ECN	DATE	APPROVED
01	PRE-PRODUCTION RELEASE			



FRONT VIEW
WITHOUT DEADFRONT



PRODUCT SPECIFICATIONS

ELECTRICAL:
UL 67 Listed (Pending)
Service: 120 Vac, 60 A
Short Circuit Current Rating: 10 kAIC
Branch Circuit Breakers:
Main: 60 A
Accessory: 3x 10 A, 1x 5 A
Surge Protection: UL 1449, Type 2 Recognized, Transtector I2R SA 120-50M
Nominal Discharge Surge Current: 20 kA
Voltage Protection Rating (VPR): 600 V
Terminal Block Wire Range: 6-14 AWG

PHYSICAL:
Cabinet Type: UL 50, Type 3R
Material: 16-Gauge Steel, Powder Coat Finish
Dimensions: 8" x 12" x 4"
Mounting: Pole Mount or Wall Mount
Weight: Approx. 15 lbs.
Operating temperature: -20°C to 55°C
Humidity: 90% Non-Condensing

CUSTOMER APPROVAL: _____ DATE: _____
ALL DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.

UNLESS OTHERWISE SPECIFIED LEADING DIMENSIONS ARE INCHES DIMENSIONS IN [] ARE MILLIMETERS TOLERANCES: FRACTIONS: ± 1/32 .XX ± .01 ANGLES: ± 1° .XXX ± .005	DRAWN DPM	DATE 8/15/16		
	ENG APPD			
MATERIAL NOTED	PRODUCT MGR		TITLE MINI-MACRO COMPACT 60A/10A/10A/10A/5A, W/DEADFRONT	
	MARKETING APPD			
THIRD-ANGLE PROJECTION 	PROJECT NO.		CUSTOMER SPECIFICATION	
	NOTICE: THE INFORMATION AND DESIGN IN THIS DOCUMENT IS THE PROPERTY OF TRANSTECTOR SYSTEMS. ALL RIGHTS RESERVED.			
SIZE B		CAGE 30992	PART NUMBER SC-MM08-001	REV 01
SCALE 1:4		PROD CAT CBT	DOCUMENT NAME SC-MM08-001-C	SHEET 1 OF 2

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TRANSTECTOR DETAIL
SCALE = NTS

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REVISIONS

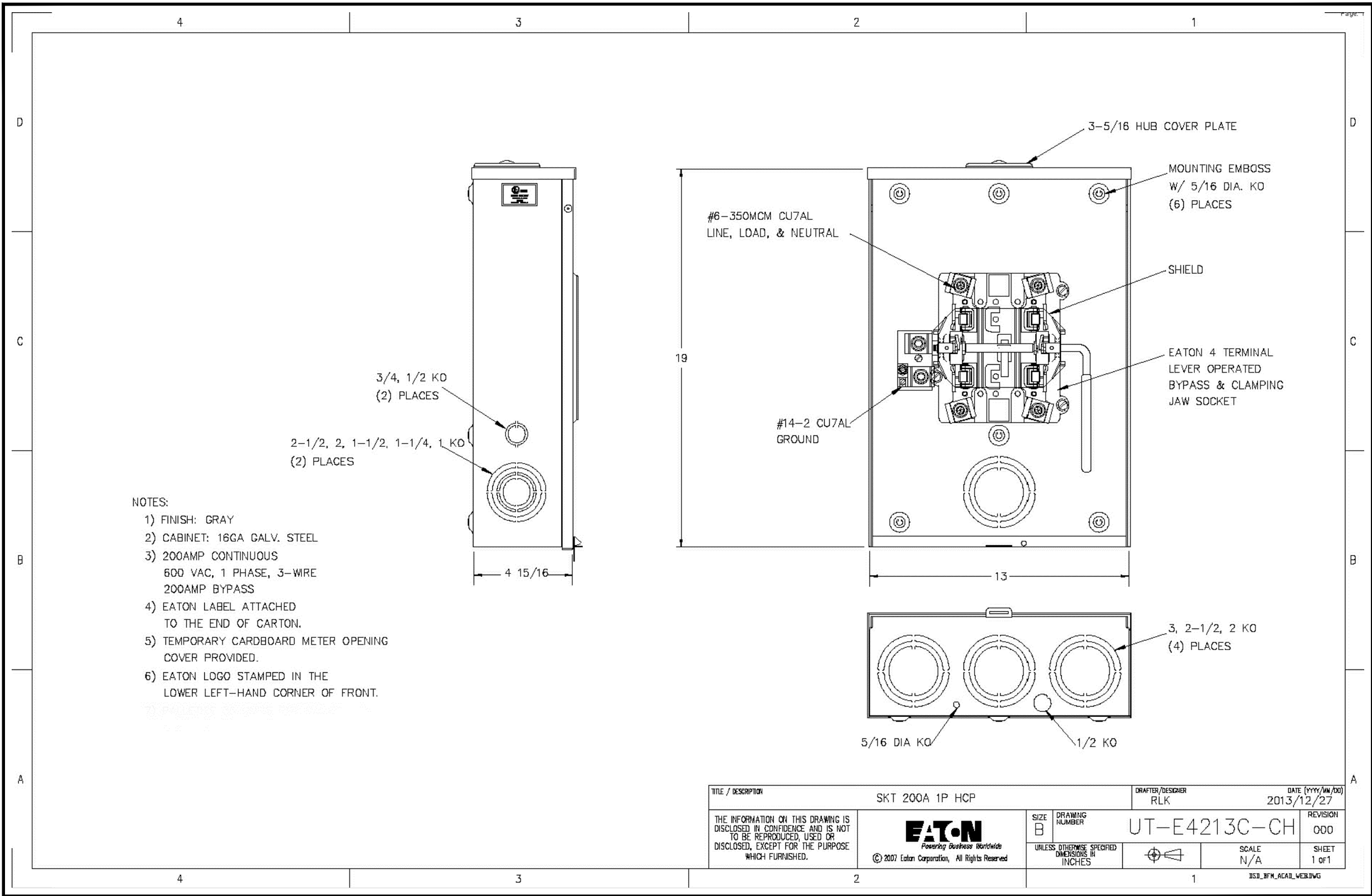
BY	DESCRIPTION	DATE



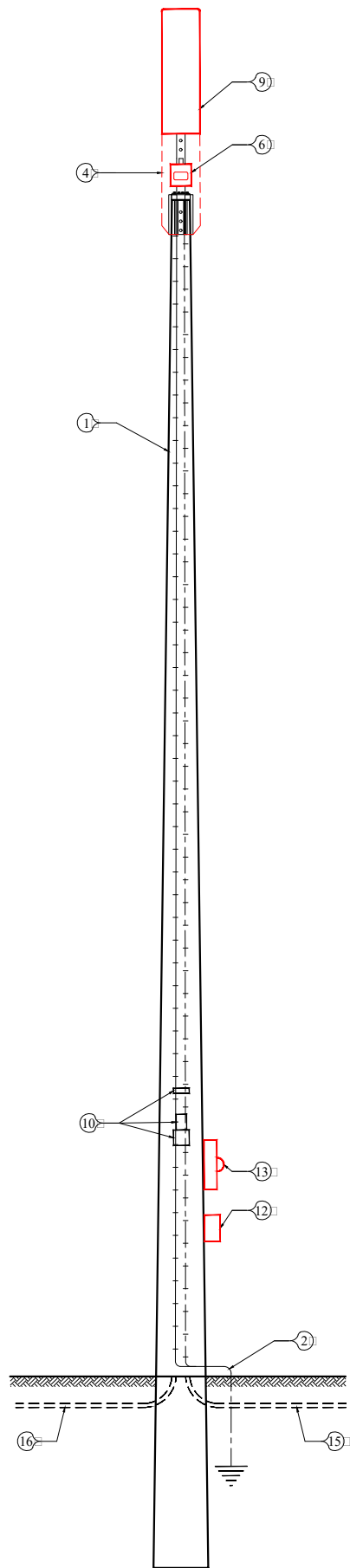
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ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	RRU'S DETAIL	
SCALE:	NTS	PAGE: 22 OF: 25

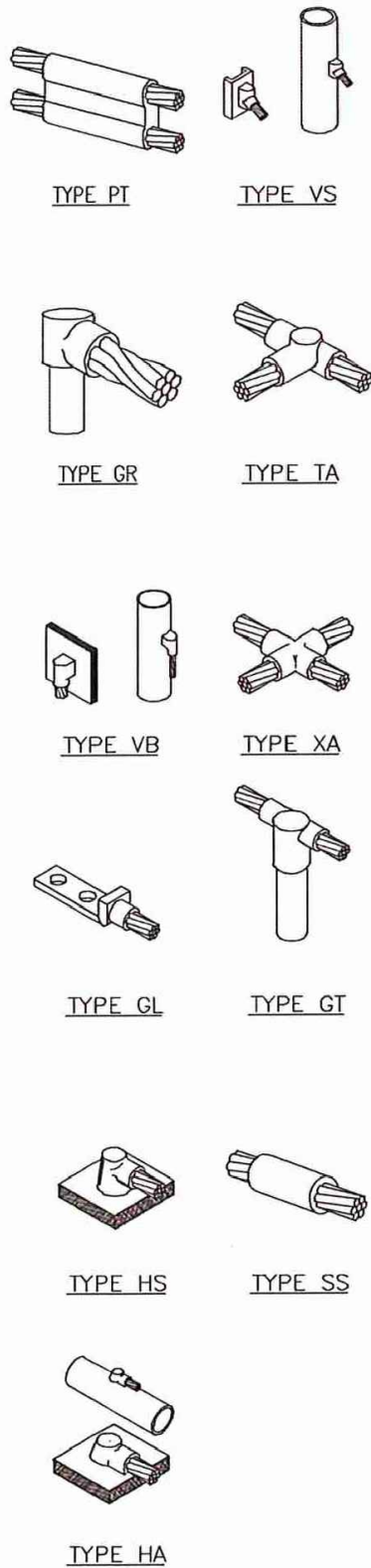


METERBASE DETAIL
SCALE = NTS



RISER DETAIL
SCALE = NTS

ITEM	QTY	DESCRIPTION
1	1	CONCRETE POLE
2	1	GROUND, DRIVEN
3	-	DUAL BAND RADIO SHROUD
4	1	SHROUD POLE WITH RADIO MOUNTING
5	-	LOWER EQUIPMENT GROUND BAR
6	3	RRU'S
7	-	FIBER MANAGEMENT BOX
8	-	STREET LIGHT
9	1	ANTENNA
10	3	RF WARNING SIGN
11	-	PSU AC 02
12	1	POWER PANEL
13	1	METER SOCKET
14	-	NEW GROUND WIRE
15	1	FOC CONDUIT INSTALLED BY OTHERS
16	1	ELECTRICAL CONDUIT INSTALLED BY OTHERS



GROUNDING DETAILS
SCALE = NTS

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REVISIONS

BY	DESCRIPTION	DATE



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Check positive response codes before you dig!

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CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	RISER & GROUNDING DETAIL	
SCALE:	NTS	PAGE: 23 OF: 25

GENERAL NOTES	
1.	FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY: GENERAL CONTRACTOR CONTRACTOR: (CONSTRUCTION) OWNER - AT&T
2.	ALL SITE WORK SHALL BE COMPLETED AS INDICATED ON THE DRAWINGS AND AT&T PROJECT SPECIFICATIONS.
3.	GENERAL CONTRACTOR SHALL VISIT THE SITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS, DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
4.	ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GENERAL 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 WORK.
5.	ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
6.	UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
7.	PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS THE MINIMUM REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS, SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A CLARIFICATION FROM THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK. DETAILS ARE INTENDED TO SHOW DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF WORK AND PREPARED BY THE ENGINEER PRIOR TO PROCEEDING WITH WORK.
8.	THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9.	IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE ENGINEER PRIOR TO PROCEEDING.
10.	GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFIRM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.
11.	GENERAL CONTRACTOR SHALL COORDINATE WORK AND SCHEDULE WORK ACTIVITIES WITH OTHER DISCIPLINES.
12.	ERECTION SHALL BE DONE IN A WORKMANLIKE MANNER BY COMPETENT EXPERIENCED WORKMAN IN ACCORDANCE WITH APPLICABLE CODES AND THE BEST ACCEPTED PRACTICE. ALL MEMBERS SHALL BE LAID PLUMB AND TRUE AS INDICATED ON THE DRAWINGS.
13.	SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED MATERIALS APPROVED BY LOCAL JURISDICTION. CONTRACTOR SHALL KEEP AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DEBRIS.
14.	THE SCOPE OF WORK FOR THIS PROJECT IS REPRESENTED BY DARK SHADED LINES AND NOTES. CONTRACTOR SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY EXISTING CONDITIONS THAT DEVIATE FROM THE DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
15.	CONTRACTOR SHALL PROVIDE WRITTEN NOTICE TO THE CONSTRUCTION MANAGER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
16.	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.

GENERAL NOTES	
17.	THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
18.	GENERAL CONTRACTOR SHALL COORDINATE AND MAINTAIN ACCESS FOR ALL TRADES AND CONTRACTORS TO THE SITE AND/OR BUILDING.
19.	THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY OF THE SITE FOR THE DURATION OF CONSTRUCTION UNTIL JOB COMPLETION.
20.	THE GENERAL CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.
21.	THE GENERAL CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OT 2-A:10-B:C AND SHALL BE WITHIN 25 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF WHERE THE WORK IS BEING COMPLETED DURING CONSTRUCTION.
22.	ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. 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 SHALL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION, B) CONFINED SPACE, C) ELECTRICAL SAFETY, AND D) TRENCHING & EXCAVATION.
23.	ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONNECTED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, AS DIRECTED BY THE RESPONSIBLE ENGINEER, AND SUBJECT TO THE APPROVAL OF THE OWNER AND/OR LOCAL UTILITIES.
24.	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.
25.	CONTRACTOR SHALL MINIMIZE DISTURBANCE TO THE EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE FEDERAL AND LOCAL JURISDICTION FOR EROSION AND SEDIMENT CONTROL.
26.	NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUNDING. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
27.	THE SUBGRADE SHALL BE BROUGHT TO A SMOOTH UNIFORM GRADE AND COMPACTED TO 95 PERCENT STANDARD PROCTOR DENSITY UNDER PAVEMENT AND STRUCTURES AND 80 PERCENT STANDARD PROCTOR DENSITY IN OPEN SPACE. ALL TRENCHES IN PUBLIC RIGHT OF WAY SHALL BE BACKFILLED WITH FLOWABLE FILL OR OTHER MATERIAL PRE-APPROVED BY THE LOCAL JURISDICTION.
28.	ALL NECESSARY RUBBISH, STUMPS, DEBRIS, STICKS, STONES, AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER.
29.	ALL BROCHURES, OPERATING AND MAINTENANCE MANUALS, CATALOGS, SHOP DRAWINGS, AND OTHER DOCUMENTS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR AT COMPLETION OF CONSTRUCTION AND PRIOR TO PAYMENT.
30.	CONTRACTOR SHALL SUBMIT A COMPLETE SET OF AS-BUILT REDLINES TO THE GENERAL CONTRACTOR UPON COMPLETION OF PROJECT AND PRIOR TO FINAL PAYMENT.
31.	CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION.
32.	STRUCTURE IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH, BY AT&T TECHNICIANS.
33.	NO OUTDOOR STORAGE OR SOLID WASTE CONTAINERS ARE PROPOSED.
34.	ALL MATERIAL SHALL BE FURNISHED AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST REVISION AT&T MOBILITY GROUNDING STANDARD "TECHNICAL SPECIFICATION FOR CONSTRUCTION OF GSM/GPRS WIRELESS SITES" AND "TECHNICAL SPECIFICATION FOR FACILITY GROUNDING". IN CASE OF A CONFLICT BETWEEN THE CONSTRUCTION SPECIFICATION AND THE DRAWINGS, THE DRAWINGS SHALL GOVERN.

GENERAL NOTES	
35.	CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS REQUIRED FOR CONSTRUCTION. IF CONTRACTOR CANNOT OBTAIN A PERMIT, THEY MUST NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY.
36.	CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
37.	INFORMATION SHOWN ON THESE DRAWINGS WAS OBTAINED FROM SITE VISITS AND/OR DRAWINGS PROVIDED BY THE SITE OWNER. CONTRACTORS SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
38.	ALL CABLE INSTALLATIONS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.
ANTENNA MOUNTING	
39.	DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/TIA-222 OR APPLICABLE LOCAL CODES.
40.	ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS NOTED OTHERWISE.
41.	ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS NOTED OTHERWISE.
42.	DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
43.	ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
44.	CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
45.	NOT USED.
46.	PRIOR TO SETTING ANTENNA AZIMUTHS AND DOWNTILTS, ANTENNA CONTRACTOR SHALL CHECK THE ANTENNA MOUNT FOR TIGHTNESS AND ENSURE THAT THEY ARE PLUMB. ANTENNA AZIMUTHS SHALL BE SET FROM TRUE NORTH AND BE ORIENTED WITHIN +/- 5% AS DEFINED BY THE RFDS. ANTENNA DOWNTILTS SHALL BE WITHIN +/- 0.5% AS DEFINED BY THE RFDS. REFER TO ND-00246.
TORQUE REQUIREMENTS	
47.	ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.
48.	ALL RF CONNECTIONS, GROUNDING HARDWARE AND ANTENNA HARDWARE SHALL HAVE A TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION. A. RF CONNECTION BOTH SIDES OF THE CONNECTOR. B. GROUNDING AND ANTENNA HARDWARE ON THE NUT SIDE STARTING FROM THE THREADS TO THE SOLID SURFACE. EXAMPLE OF SOLID SURFACE: GROUND BAR, ANTENNA BRACKET METAL.
49.	ALL 8M ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (12 NM).
50.	ALL 12M ANTENNA HARDWARE SHALL BE TIGHTENED TO 43 LB-FT (58 NM).
51.	ALL GROUNDING HARDWARE SHALL BE TIGHTENED UNTIL THE LOCK WASHER COLLAPSES AND THE GROUNDING HARDWARE IS NO LONGER LOOSE.
52.	ALL DIN TYPE CONNECTIONS SHALL BE TIGHTENED TO 18-22 LB-FT (24.4 - 29.8 NM).
53.	ALL N TYPE CONNECTIONS SHALL BE TIGHTENED TO 15-20 LB-IN (1.7 - 2.3 NM).



3210 Lake Emma Road, Lake Mary FL 32746



Engineering Office
4461 Parkbreeze Ct Orlando,
FL 32808

PROFESSIONAL LICENSURE

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REVISIONS		
BY	DESCRIPTION	DATE



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PROJECT INFORMATION		
DRAWING BY: DRAFTPROS LLC		
CHECK BY: DRAFTPROS LLC		
ORIGINAL SUBMITTAL: FEB 20, 2019		
NODE NAME #: CRAN_RTFL_PBC27_592		
TITLE: GENERAL NOTES		
SCALE: NTS	PAGE: 24	OF: 25

COAXIAL CABLE NOTES

54. TYPES AND SIZES OF THE ANTENNA CABLE ARE BASED ON ESTIMATED LENGTHS. PRIOR TO ORDERING CABLE, CONTRACTOR SHALL VERIFY ACTUAL LENGTH BASED ON CONSTRUCTION LAYOUT AND NOTIFY THE PROJECT MANAGER IF ACTUAL LENGTHS EXCEED ESTIMATED LENGTHS.
55. CONTRACTOR SHALL VERIFY THE DOWN-TILT OF EACH ANTENNA WITH A DIGITAL LEVEL.
56. CONTRACTOR SHALL CONFIRM COAX COLOR CODING PRIOR TO CONSTRUCTION. REFER TO "ANTENNA SYSTEM LABELING STANDARD" ND-00027 LATEST VERSION.
57. ALL JUMPERS TO THE ANTENNAS SHALL BE 1/2" DIA. LDF AND SHALL NOT EXCEED 6'-0".
58. ALL COAXIAL CABLE SHALL BE SECURED TO THE DESIGNED SUPPORT STRUCTURE, IN AN APPROVED MANNER, AT DISTANCES NOT TO EXCEED 4'-0" OC.
59. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS REGARDING BOTH THE INSTALLATION AND GROUNDING OF ALL COAXIAL CABLES, CONNECTORS, ANTENNAS, AND ALL OTHER EQUIPMENT.
60. CONTRACTOR SHALL WEATHERPROOF ALL ANTENNA CONNECTORS WITH SELF AMALGAMATING TAPE. WEATHERPROOFING SHALL BE COMPLETED IN STRICT ACCORDANCE WITH AT&T STANDARDS.

GENERAL CABLE & EQUIPMENT NOTES

61. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ANTENNA, TMAS, DIPLEXERS, AND COAX CONFIGURATION, MAKE AND MODELS PRIOR TO INSTALLATION.
62. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
63. CONTRACTOR SHALL REFERENCE THE STRUCTURAL ANALYSIS / DESIGN DRAWINGS FOR DIRECTIONS ON CABLE DISTRIBUTION / ROUTING.
64. ALL OUTDOOR RF CONNECTORS/CONNECTIONS SHALL BE WEATHERPROOFED, EXCEPT THE RET CONNECTORS, USING BUTYL TAPE AFTER INSTALLATION AND FINAL CONNECTIONS ARE MADE. BUTYL TAPE SHALL HAVE A MINIMUM OF ONE-HALF TAPE WIDTH OVERLAP ON EACH TURN AND EACH LAYER SHALL BE WRAPPED THREE TIMES. WEATHERPROOFING SHALL BE SMOOTH WITHOUT BUCKLING. BUTYL BLEEDING IS NOT ALLOWED.
65. IF REQUIRED TO PAINT ANTENNAS AND/OR COAX:

A. TEMPERATURE SHALL BE ABOVE 50° F.

B. PAINT COLOR MUST BE APPROVED BY BUILDING OWNER/LANDLORD.

C. FOR REGULATED TOWERS, FAA/FCC APPROVED PAINT IS REQUIRED.

D. DO NOT PAINT OVER COLOR CODING OR ON EQUIPMENT MODEL NUMBERS.
66. ALL PROPOSED GROUND BAR DOWNLEADS ARE TO BE TERMINATED TO THE EXISTING ADJACENT GROUND BAR DOWNLEADS A MINIMUM DISTANCE OF 4'-0" BELOW GROUND BAR. TERMINATIONS MAY BE EXOTHERMIC OR COMPRESSION.
67. ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC. SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATION & RECOMMENDATIONS.

ROW CONSTRUCTION NOTES STANDALONE

68. NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2" [.038M].
69. 90 SHORT SWEEPS UNDER ANTENNA ARM. ALL CABLES MUST ONLY TRANSITION ON THE INSIDE OR BOTTOM OF ARMS (NO CABLE ON TOP OF ARMS).
70. USE 90 CONNECTOR AT CABLE CONNECTION TO ANTENNAS.
71. PLACE GPS ON ARM WITH SOUTHERN SKY EXPOSURE AT MINIMUM 6' [1.83] FROM TRANSMIT ANTENNA, WHICH IS 24" [.61M] AWAY FROM CENTER OF POLE.
72. USE 1/2" [.013M] CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
73. FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

* DISCONNECT, METER, AND ANTENNA BOXES MUST BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD 103-235, "SUPPLY AND COMMUNICATION EQUIPMENT"

* ANTENNAS SHALL BE INSTALLED ON TANGENT POLES ONLY. ANTENNAS SHALL NOT BE INSTALLED ON EQUIPMENT POLES. ALL POLES MUST BE BUCKET TRUCK ACCESSIBLE.

THE MINIMUM SIZE OF ALL ANTENNA POLE WILL BE ANSI CLASS 3.



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REVISIONS

BY	DESCRIPTION	DATE

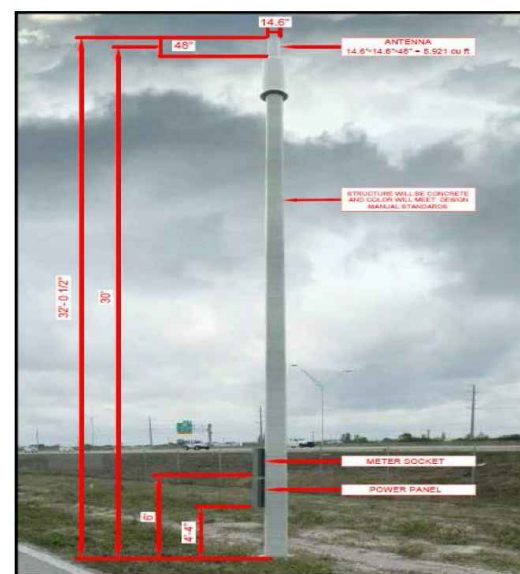
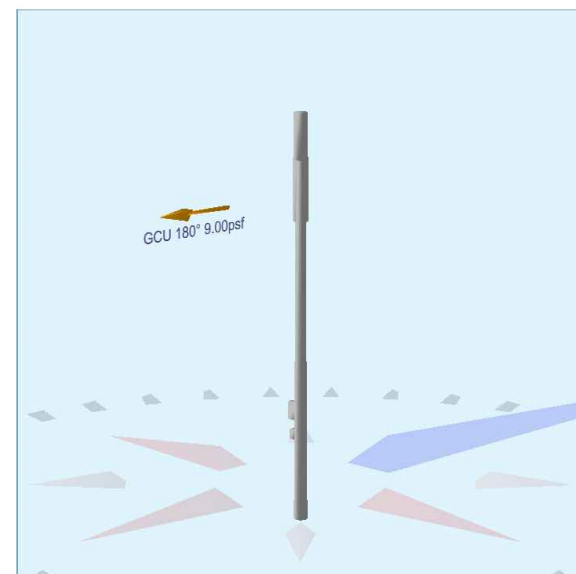


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PROJECT INFORMATION

DRAWING BY:	DRAFTPROS LLC	
CHECK BY:	DRAFTPROS LLC	
ORIGINAL SUBMITTAL:	FEB 20, 2019	
NODE NAME #:	CRAN_RTFL_PBC27_592	
TITLE:	ROW CONSTRUCTION NOTES	
SCALE:	NTS	PAGE: 25 OF: 25

Pole Num:	CRAN_RTFL_PBC27_592	Pole Length / Class:	35 / C	Code:	NESC	Structure Type:	Unguyed Tangent
Aux Data 1	BOCA RATON	Material:	Concrete	NESC Rule:	Rule 250B	Status	Unguyed
Aux Data 2	FL	Setting Depth (ft):	2.96	Construction Grade:	C	Pole Strength Factor:	1.00
Aux Data 3	3355 AIRPORT RD	G/L Circumference (in):	42.63	Loading District:	Light	Transverse Wind LF:	1.75
Aux Data 4	AT&T	--	--	Ice Thickness (in):	0.00	Wire Tension LF:	1.00
Aux Data 5	Unset	--	--	Wind Speed (mph):	59.29	Vertical LF:	1.90
Aux Data 6	Unset	--	--	Wind Pressure (psf):	9.00		
Latitude:	26.380212 Deg	Longitude:	-80.111086 Deg	Elevation:	9 Feet		



Pole Capacity Utilization (%)	Height (ft)	Wind Angle (deg)
Maximum	41.5	0.0
Groundline	41.5	0.0
Vertical	0.2	3.0

Pole Moments (ft-lb)	Load Angle (deg)	Wind Angle (deg)
Max Cap Util	13,282	180.0
Groundline	13,282	180.0
GL Allowable	32,906	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 180.0°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
GenericEquipments	245	34.0	5,519	41.6	16.8	273	154	1	274	17.0
ConcretePoles	475	66.0	7,763	58.5	23.6	384	2,571	18	402	25.0
Pole Load	719	100.0	13,282	100.0	40.4	657	2,725	19	676	42.0
Pole Reserve Capacity			19,624		59.6	952			934	58.0



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CHECK BY:	DRAFTPROS LLC
ORIGINAL SUBMITTAL:	FEB 20, 2019
NODE NAME #:	CRAN_RTFL_PBC27_592
TITLE:	STRUCTURAL ANALYSIS
SCALE:	NTS
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Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 180.0°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
AT&T	719	100.0	13,282	100.0	40.4	657	2,725	19	676	42.0
General Statement	0	0.0	0	0.0	0.0	0	0	0	0	0.0
Totals:	719	100.0	13,282	100.0	40.4	657	2,725	19	676	42.0

Detailed Load Components:

Generic Equipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Cylinder	ANTENNA	AT&T	30.04	0.06	0.0	0.0	36.20	48.00	--	14.60	--	0	2,303	2,303
Cylinder	SHROUD	AT&T	25.54	0.04	0.0	0.0	19.00	65.00	--	16.00	--	0	2,905	2,905
Box	Power Meter	AT&T	6.67	8.78	180.0	0.0	25.00	19.00	4.94	--	13.00	35	288	323
Box	MAIN DISCONNECT	AT&T	4.67	9.45	180.0	0.0	0.83	10.13	6.00	--	6.15	1	51	52
Totals:												36	5,547	5,583

Notes

Date	Author	Description
4/17/2015	General Statement	General Statement
General Statement: Non-AT&T facilities may not be accurately identified pending attachment information from attaching party.		



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