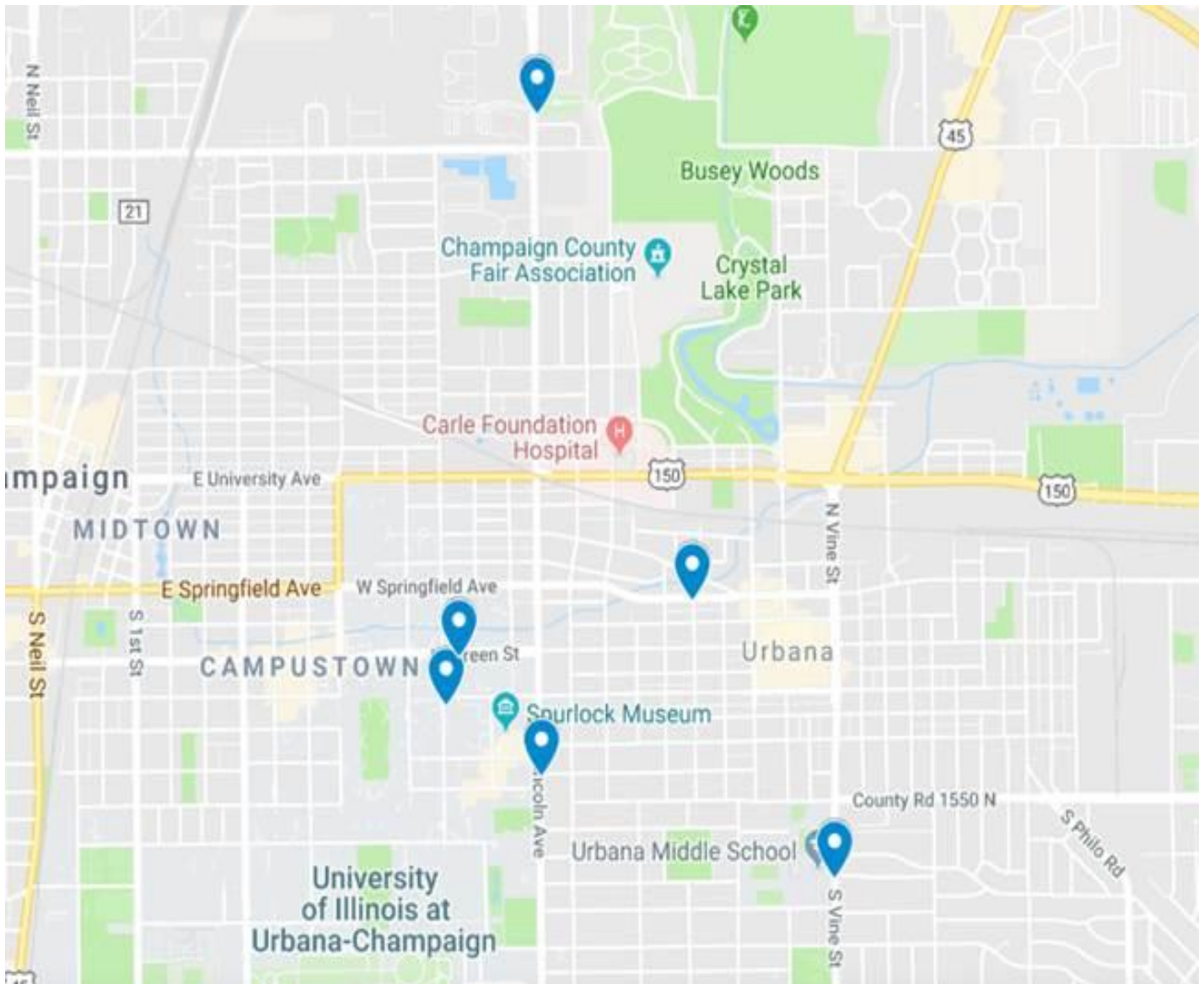


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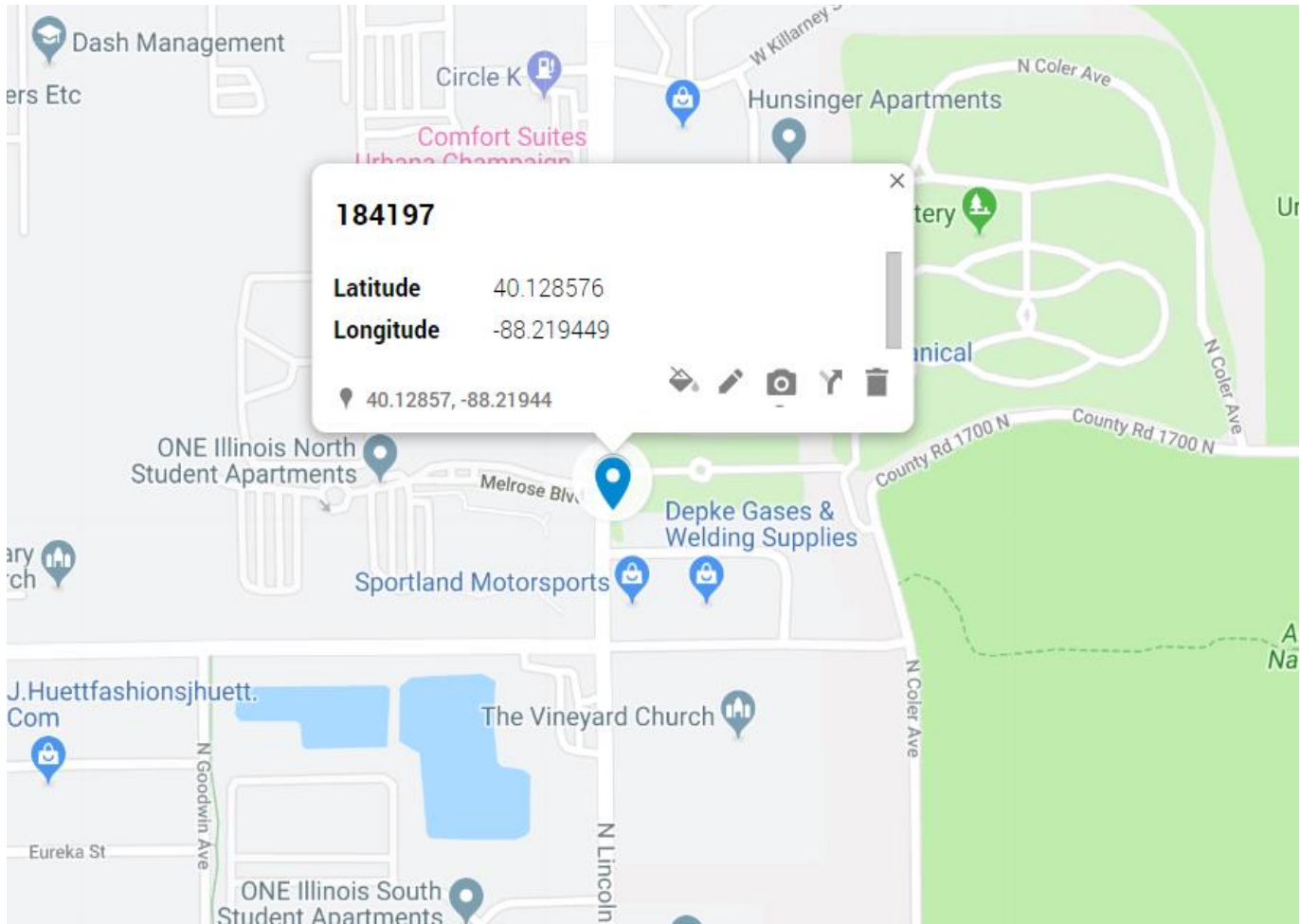
**Location Map and Permits, Plans & Specifications**

(see attached site maps and plans)

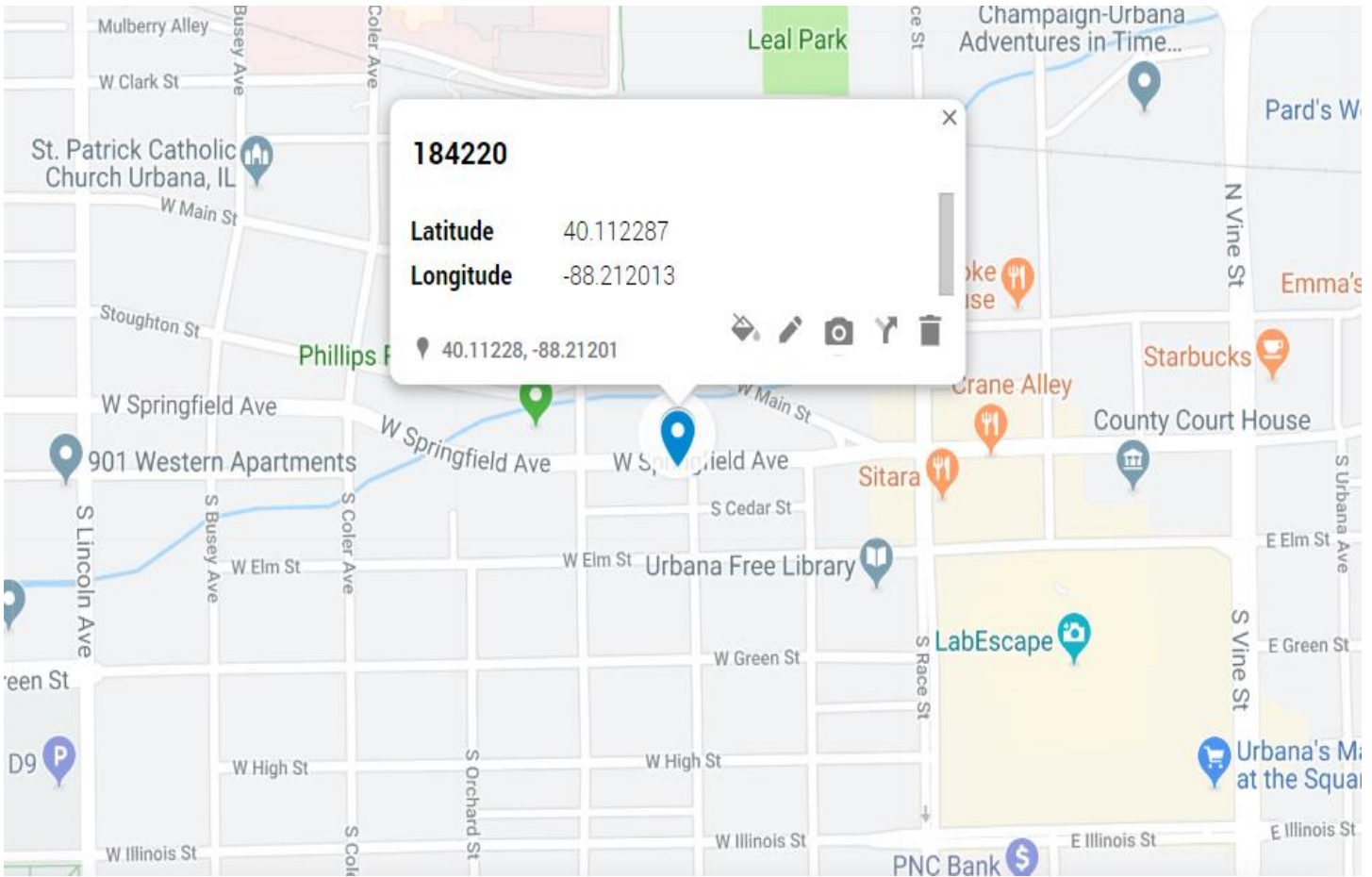
SITE MAP OVERVIEW:



PACE: MRCHI025397 / MRCHI025475  
SITE NAME: CRAN\_RCHI\_CHNOS\_004  
USID / NODE: 184197  
ADDRESS: 1614 N. LINCOLN AVENUE, URBANA, IL 61801  
COORDINATES: 40.128576, -88.219449

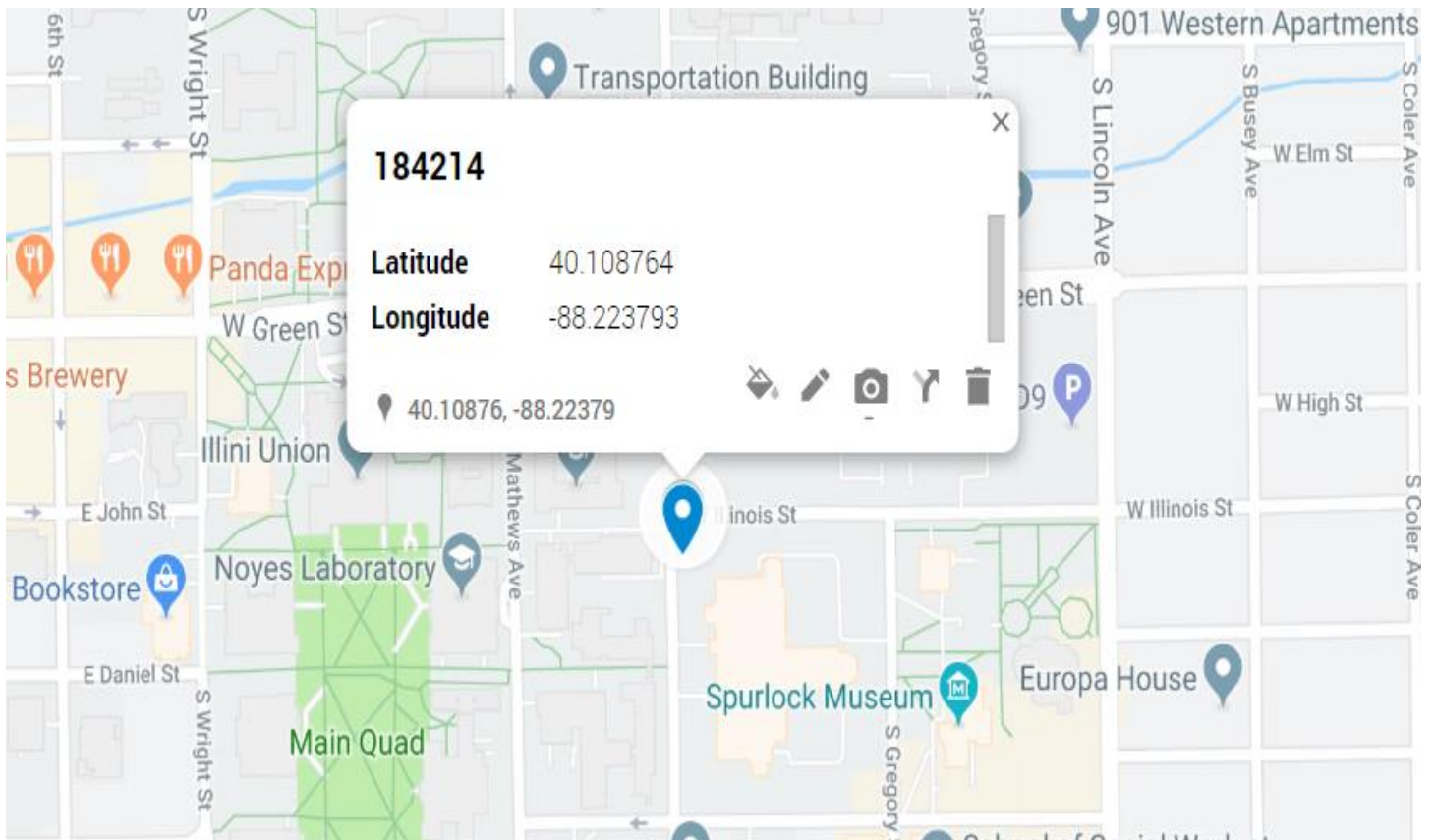


PACE: MRCHI025457 / MRCHI025418  
SITE NAME: CRAN\_RCHI\_CHUOI\_015  
USID / NODE: 184220  
ADDRESS: 402 W. SPRINGFIELD AVENUE, URBANA, IL 61801  
COORDINATES: 40.112287, -88.212013

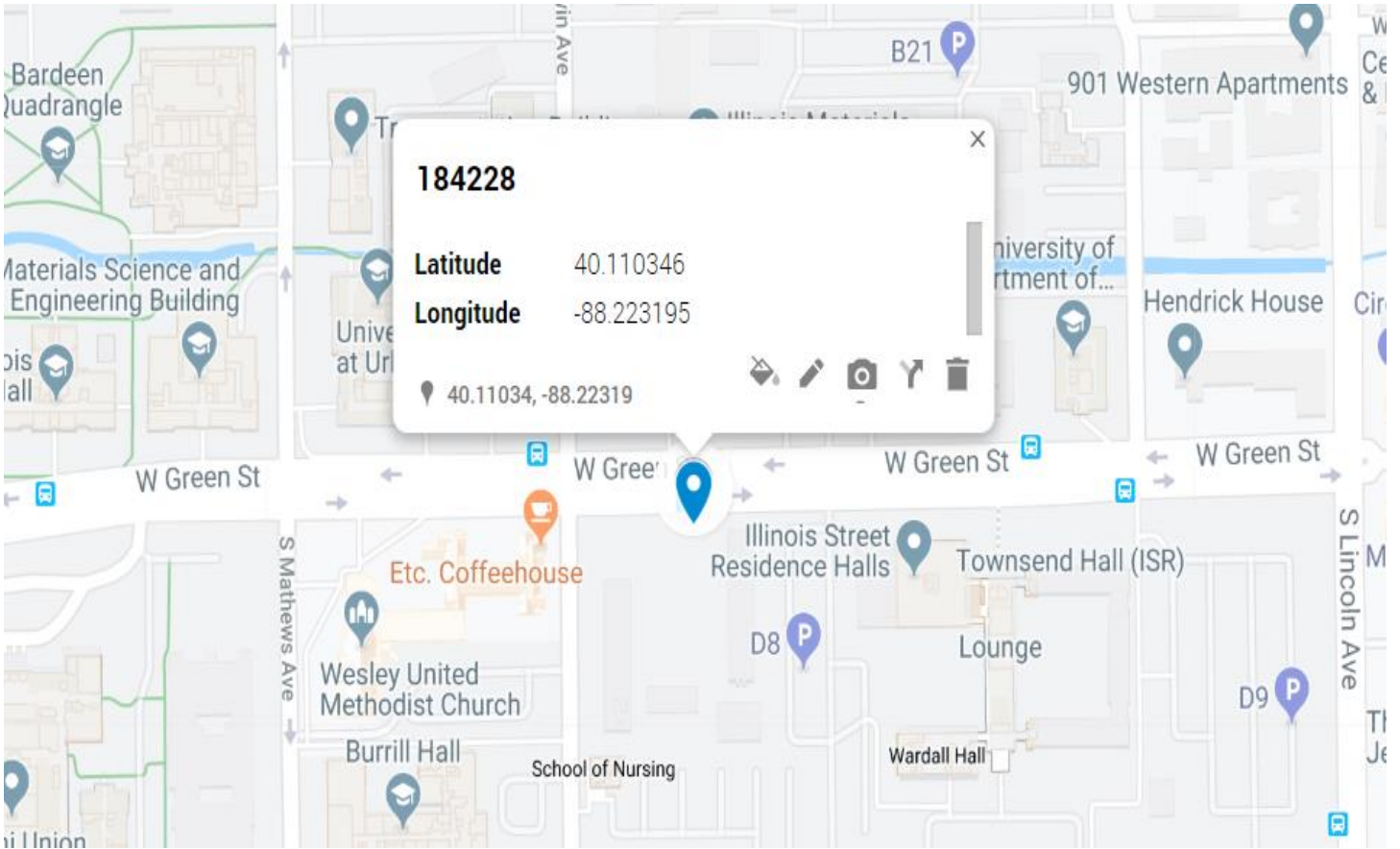




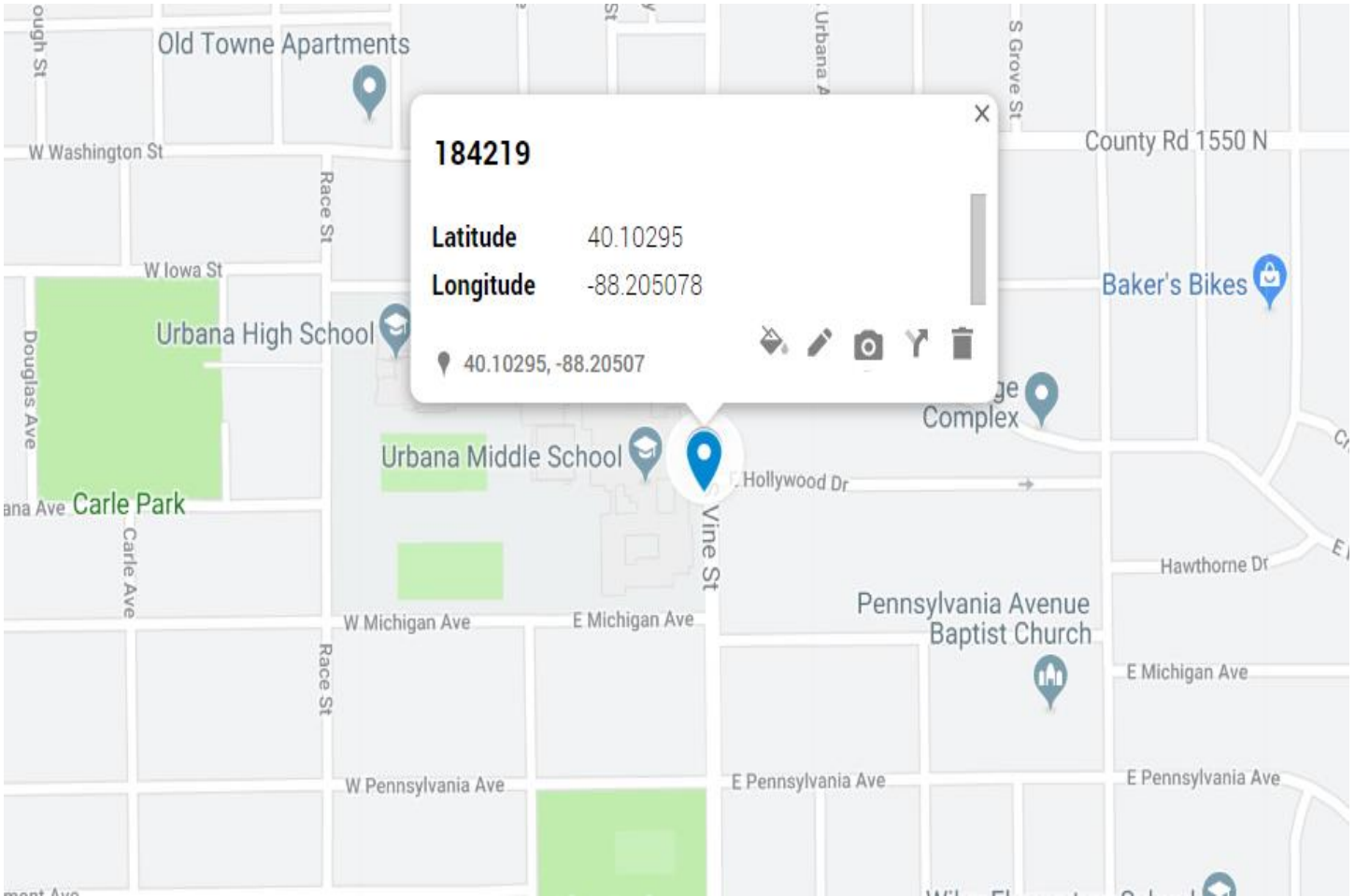
PACE: MRCHI025422 / MRCHI025403  
SITE NAME: CRAN\_RCHI\_CHUOI\_009  
USID / NODE: 184214  
ADDRESS: 544 S GOODWIN AVENUE, URBANA, IL 61801  
COORDINATES: 40.108764, -88.223793



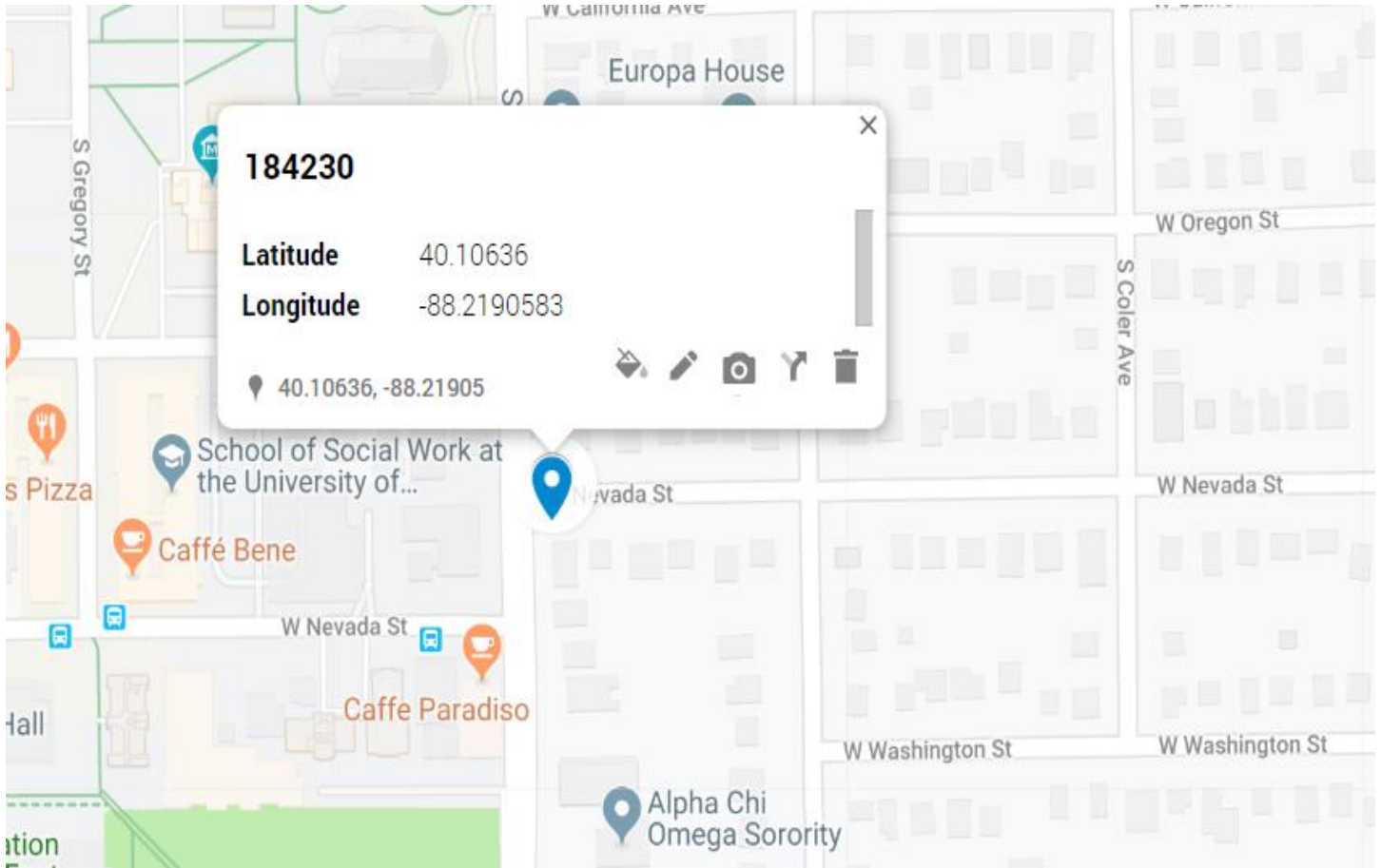
PACE: MRCHI025452 / MRCHI025399  
SITE NAME: CRAN\_RCHI\_CHUOI\_023  
USID / NODE: 184228  
ADDRESS: 1171 W GREEN STREET, URBANA, IL 61801  
COORDINATES: 40.110346, -88.223195



PACE: MRCHI025394 / MRCHI025420  
SITE NAME: CRAN\_RCHI\_CHUOI\_014  
USID / NODE: 184219  
ADDRESS: 1189 S VINE STREET, URBANA, IL 61801  
COORDINATES: 40.102950, -88.205078



PACE: MRCHI025454 / MRCHI025479  
SITE NAME: CRAN\_RCHI\_CHUOI\_026  
USID / NODE: 184230  
ADDRESS: 784 S LINCOLN AVENUE, URBANA, IL 61801  
COORDINATES: 40.106360, -88.2190583





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SITE PHOTO



# AT&T MOBILITY

**PROJECT :** LTE 1C&2C MICRO CELL BUILD  
**SITE # :** CRAN\_RCHI\_CHNOS\_004  
**USID / NODE:** 184197  
**FA # :** 14805856  
**PTN # :** 3304A0AAQK / 3304A0AARE  
**PACE # :** MRCHI025397 / MRCHI025475  
**ENODEB NAME :** ILL07001F\_R01  
**JURISDICTION :** CITY OF URBANA

**SITE NAME :** CRAN\_RCHI\_CHNOS\_004  
**ADDRESS :** 1614 N. LINCOLN AVENUE  
 URBANA, IL 61801

PROJECT INFORMATION

**SITE NAME:** CRAN\_RCHI\_CHNOS\_004  
**COUNTY:** CHAMPAIGN  
**ADDRESS:** 1614 N. LINCOLN AVENUE  
 URBANA, IL 61801  
**JURISDICTION:** CITY OF URBANA  
**USID:** 184197  
**FA NUMBER:** 14805856  
**PTN:** 3304A0AAQK / 3304A0AARE  
**PACE:** MRCHI025397 / MRCHI025475

**LATITUDE:** 40° 07' 42.37" (40.128576°)  
**LONGITUDE:** 88° 13' 09.88" (-88.219449°)  
**ELEVATION:** 742'

**LIGHT POLE/UTILITY POLE OWNER:** CITY OF URBANA

**APPLICANT:** AT&T MOBILITY  
 930 NATIONAL PARKWAY  
 SCHAUMBURG IL 60173

**AT&T PROJECT MANAGER/SITE ACQUISITION:** VANESSA ROSS  
 (217) 814-2314  
 VF2021@ATT.COM

**AT&T CONSTRUCTION MANAGER:** CHRISTIANA RACHAL  
 CR630A@ATT.COM

PROJECT CONSULTANTS

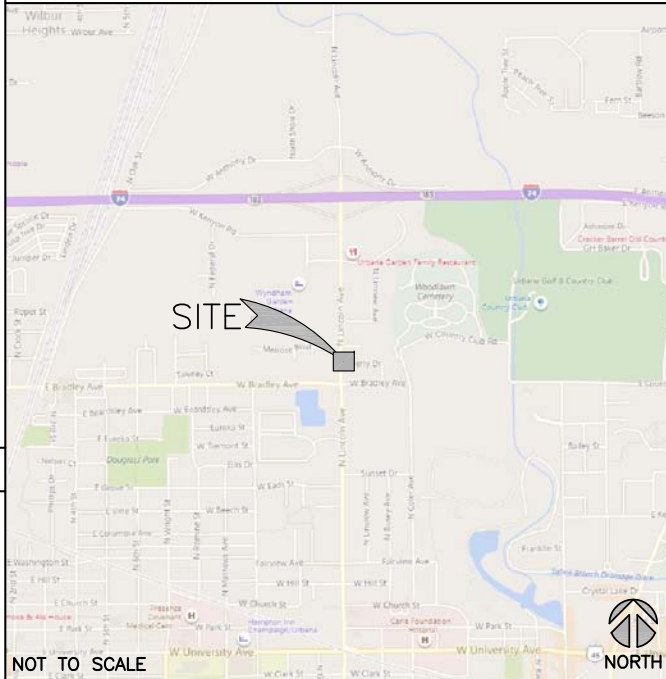
**PROJECT MANAGER:** SAC WIRELESS LLC  
 540 W. MADISON ST. (9TH FLOOR)  
 CHICAGO IL 60661  
**CONTACT:** PRITI MORE  
**PHONE:** (312) 789-4353  
**EMAIL:** PRITI.MORE@SACW.COM

**ARCHITECT:** GPD GROUP, INC. - 184-007100  
 520 S. MAIN ST., SUITE 2531  
 AKRON, OH 44311  
 317-295-3180

**SAC C.M.:** MARK KLEPACKI  
 EMAIL: MARK.KLEPACKI@SACW.COM

**SAC P.M.:** JAMES HOM  
 EMAIL: JAMES.HOM@SACW.COM

VICINITY MAP



LOCATION MAP



NOT TO SCALE

NOT TO SCALE



DRAWING INDEX

T1	TITLE SHEET
A1	FIBER DELIVERY PLANS (REFERENCE ONLY)
A2	OVERALL SITE PLAN
A3	ENLARGED PLAN
A4	EXISTING LIGHT POLE ELEVATION
A5	PROPOSED LIGHT POLE ELEVATIONS
A6	EQUIPMENT DETAILS (REFERENCE ONLY)
A7	MOUNTING DETAILS
S1	POLE FOUNDATION DETAILS
E1	ELECTRICAL ONE-LINE DIAGRAM
E2	PANEL SCHEDULE & ELECTRICAL DETAILS
E3	GROUNDING DETAILS
RF1	RF PLUMBING DIAGRAM (REFERENCE ONLY)
REF	POLE MANUFACTURER DESIGN (BY OTHERS)

SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

- REMOVE EXISTING LIGHT POLE AND REPLACE WITH NEW 40'-0" VALMONT ALUMINUM (MODEL# 400086106D4Z) LIGHT POLE (100 GRIT SATIN FINISH) PER PLAN
- INSTALL NEW ELECTRIC SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE. METER SUPPLIED & INSTALLED BY CONTRACTOR.
- INSTALL NEW FIBER SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE LOCATION AS SHOWN.
- INSTALL NEW POWER & FIBER EQUIPMENT PER PLAN
- INSTALL (1) NEW OMNI ANTENNA
- INSTALL (1) PCS RRUS-4415 & (1) 700 RRUS-11
- INSTALL CABLING AS REQUIRED
- GROUND AS REQUIRED
- LIGHT POLE LUMINARY TO BE SUPPLIED & INSTALLED BY CONTRACTOR. LUMINARY MUST BE APPROVED BY CITY OF URBANA PRIOR TO ORDER.
- STREET LIGHTING HANDHOLE (IF REQUIRED) SUPPLIED & INSTALLED BY CONTRACTOR
- POTHOLES SHALL BE REQUIRED FOR ANY PROPOSED UTILITY CROSSING
- HYDROVAC SHALL BE USED FOR ALL TRENCHING & POTHOLES ACTIVITIES
- CONTRACTOR SHALL MAINTAIN INTEGRITY OF EXISTING POLE DURING REMOVAL & COORDINATE RETURN OF REMOVED POLE TO THE CITY OF URBANA

UTILITY DELIVERY METHOD TO PROPOSED POLE

- FIBER - UNDERGROUND
- POWER - UNDERGROUND

CODE COMPLIANCE

- 2015 INTERNATIONAL BUILDING CODE W/CITY AMMENDMENTS
- 2014 NATIONAL ELECTRIC CODE W/CITY AMMENDMENTS

SPECIAL NOTES

- ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT AT&T CONSTRUCTION INSTALLATION GUIDE.
- EXISTING CONDITIONS WILL BE CHANGED & VERIFIED IN FIELD. IF SIGNIFICANT DEVIATIONS OR DETERIORATION ARE ENCOUNTERED AT THE TIME OF CONSTRUCTION, A REPAIR PERMIT WILL BE OBTAINED & CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- THESE DRAWINGS ARE FULL SIZE & SCALEABLE ON 11"x17" SHEET SIZE.
- STATEMENT THAT COMPLIANCE WITH THE ENERGY CODE IS NOT REQUIRED. -SCOPE OF WORK DOES NOT INVOLVE MODIFICATIONS TO EXTERIOR ENVELOPE OF BUILDING, HVAC SYSTEMS OR ELECTRICAL LIGHTING.

DO NOT SCALE DRAWINGS

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



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CIVIL SEAL

LTE 1C&2C MICRO CELL BUILD  
 14805856  
 CRAN\_RCHI\_CHNOS\_004  
 184197  
 1614 N. LINCOLN AVENUE  
 URBANA, IL 61801

SHEET TITLE  
 TITLE SHEET

SHEET NUMBER  
**T1**

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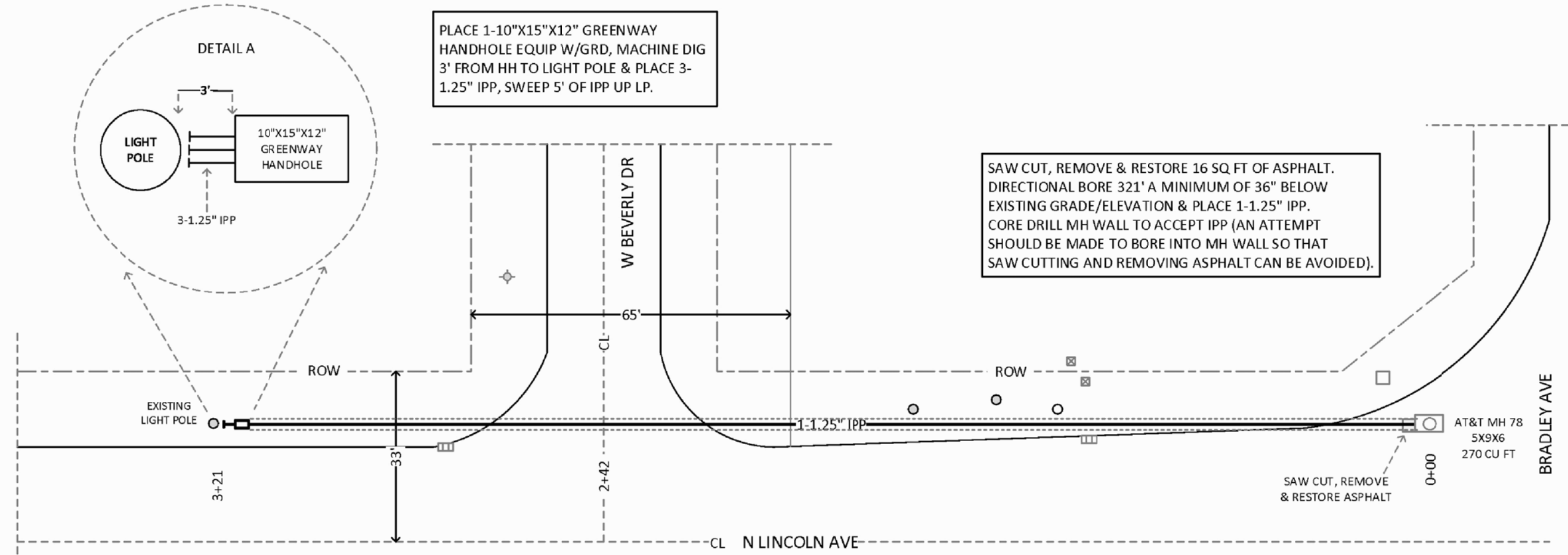
SHEET TITLE  
**FIBER DELIVERY PLANS**

SHEET NUMBER  
**A1**

PLACE 1-10"X15"X12" GREENWAY HANDHOLE EQUIP W/GRD, MACHINE DIG 3' FROM HH TO LIGHT POLE & PLACE 3-1.25" IPP, SWEEP 5' OF IPP UP LP.

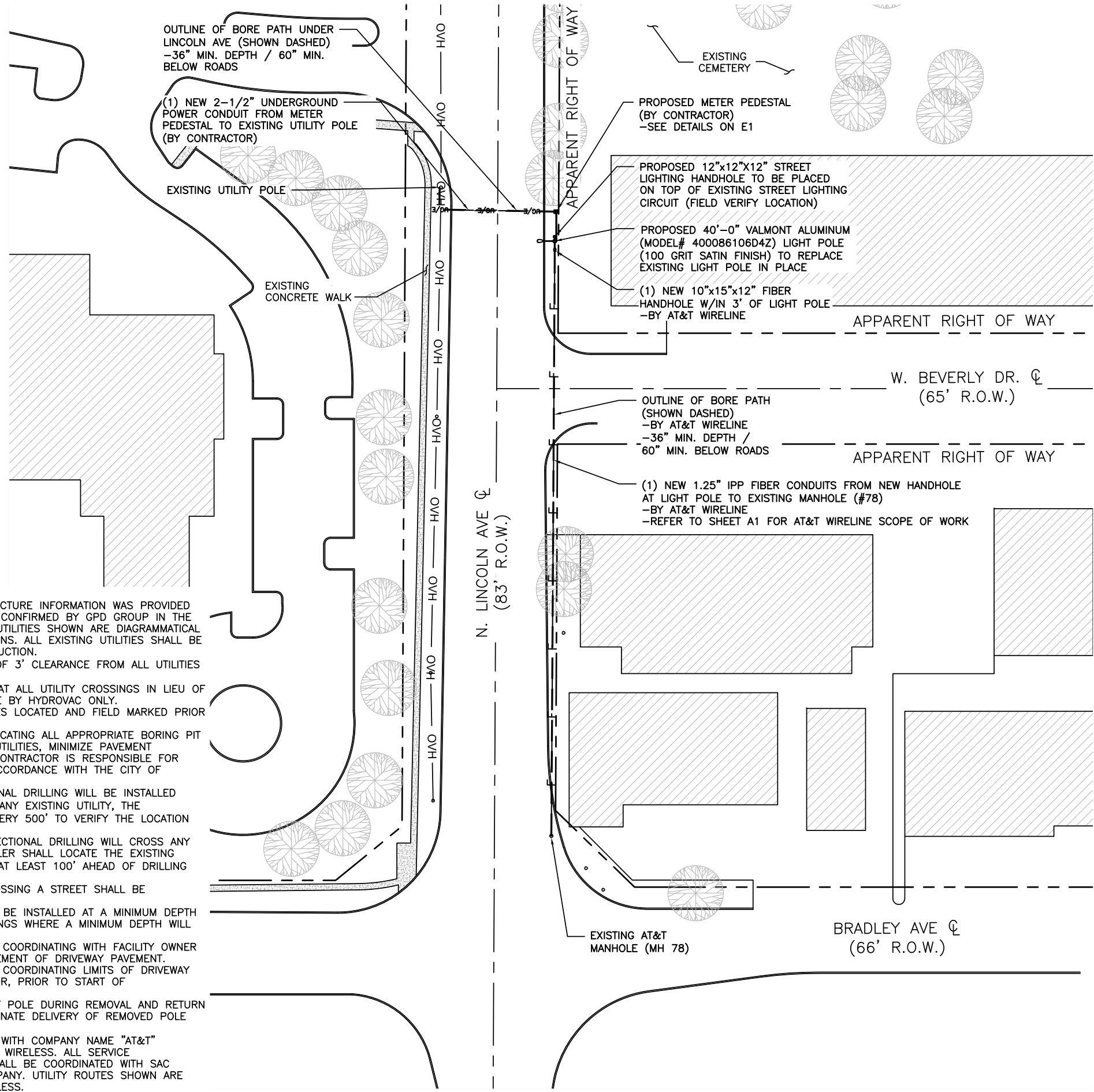
SAW CUT, REMOVE & RESTORE 16 SQ FT OF ASPHALT. DIRECTIONAL BORE 321' A MINIMUM OF 36" BELOW EXISTING GRADE/ELEVATION & PLACE 1-1.25" IPP. CORE DRILL MH WALL TO ACCEPT IPP (AN ATTEMPT SHOULD BE MADE TO BORE INTO MH WALL SO THAT SAW CUTTING AND REMOVING ASPHALT CAN BE AVOIDED).

**CITY OF URBANA**  
PERMIT SKETCH  
COUNTY: CHAMPAIGN  
TOWNSHIP: CUNNINGHAM  
SECTION: SW ¼ 5  
REF # A01BRSR  
SHEET 1 of 1





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**NOTES:**

1. EXISTING UNDERGROUND UTILITY INFRASTRUCTURE INFORMATION WAS PROVIDED BY SAC WIRELESS. INFORMATION WAS NOT CONFIRMED BY GPD GROUP IN THE FORM OF UTILITY LOCATES. THE EXISTING UTILITIES SHOWN ARE DIAGRAMMATICAL IN NATURE SHOWING APPROXIMATE LOCATIONS. ALL EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR DURING CONSTRUCTION.
2. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3' CLEARANCE FROM ALL UTILITIES & 5' CLEARANCE FROM ALL CONDUITS.
3. CONTRACTOR SHALL PERFORM POTHOLING AT ALL UTILITY CROSSINGS IN LIEU OF DIRECTIONAL BORING. POTHOLING SHALL BE BY HYDROVAC ONLY.
4. CONTRACTOR SHALL HAVE EXISTING UTILITIES LOCATED AND FIELD MARKED PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL TAKE CARE IN LOCATING ALL APPROPRIATE BORING PIT LOCATIONS IN ORDER TO AVOID EXISTING UTILITIES, MINIMIZE PAVEMENT RESTORATION AND TRAFFIC DISRUPTIONS. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DISTURBED PAVEMENT IN ACCORDANCE WITH THE CITY OF URBANA STANDARD SPECIFICATIONS.
6. AT LOCATIONS WHERE PROPOSED DIRECTIONAL DRILLING WILL BE INSTALLED WITHIN 5' LONGITUDINALLY (PARALLEL) TO ANY EXISTING UTILITY, THE DIRECTIONAL DRILLER SHALL "POTHOLE" EVERY 500' TO VERIFY THE LOCATION AND GRADE OF THE EXISTING UTILITY.
7. AT LOCATIONS WHERE THE PROPOSED DIRECTIONAL DRILLING WILL CROSS ANY EXISTING UNDERGROUND UTILITY, THE DRILLER SHALL LOCATE THE EXISTING UTILITY LINE AND GRADE BY "POTHOLING" AT LEAST 100' AHEAD OF DRILLING OPERATIONS.
8. ANY PROPOSED DIRECTIONAL DRILLING CROSSING A STREET SHALL BE PERPENDICULAR TO STREET DIRECTION.
9. ALL CONDUIT IN CITY RIGHT-OF-WAY WILL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES EXCEPT AT STREET CROSSINGS WHERE A MINIMUM DEPTH WILL BE 60 INCHES.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH FACILITY OWNER TO SCHEDULE ANY DEMOLITION & REPLACEMENT OF DRIVEWAY PAVEMENT.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LIMITS OF DRIVEWAY REPAIR WITH CITY RIGHT OF WAY INSPECTOR, PRIOR TO START OF CONSTRUCTION OR DEMOLITION.
12. CONTRACTOR SHALL MAINTAIN INTEGRITY OF POLE DURING REMOVAL AND RETURN POLE TO THE CITY OF CHAMPAIGN. COORDINATE DELIVERY OF REMOVED POLE WITH CITY RIGHT-OF-WAY INSPECTOR.
13. ALL AT&T HANDHOLES SHALL BE LABELED WITH COMPANY NAME "AT&T"
14. UTILITY COORDINATION PERFORMED BY SAC WIRELESS. ALL SERVICE COORDINATION WITH UTILITY COMPANIES SHALL BE COORDINATED WITH SAC WIRELESS AND VERIFIED WITH UTILITY COMPANY. UTILITY ROUTES SHOWN ARE BASED ON NOTES PROVIDED BY SAC WIRELESS.



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CIVIL SEAL

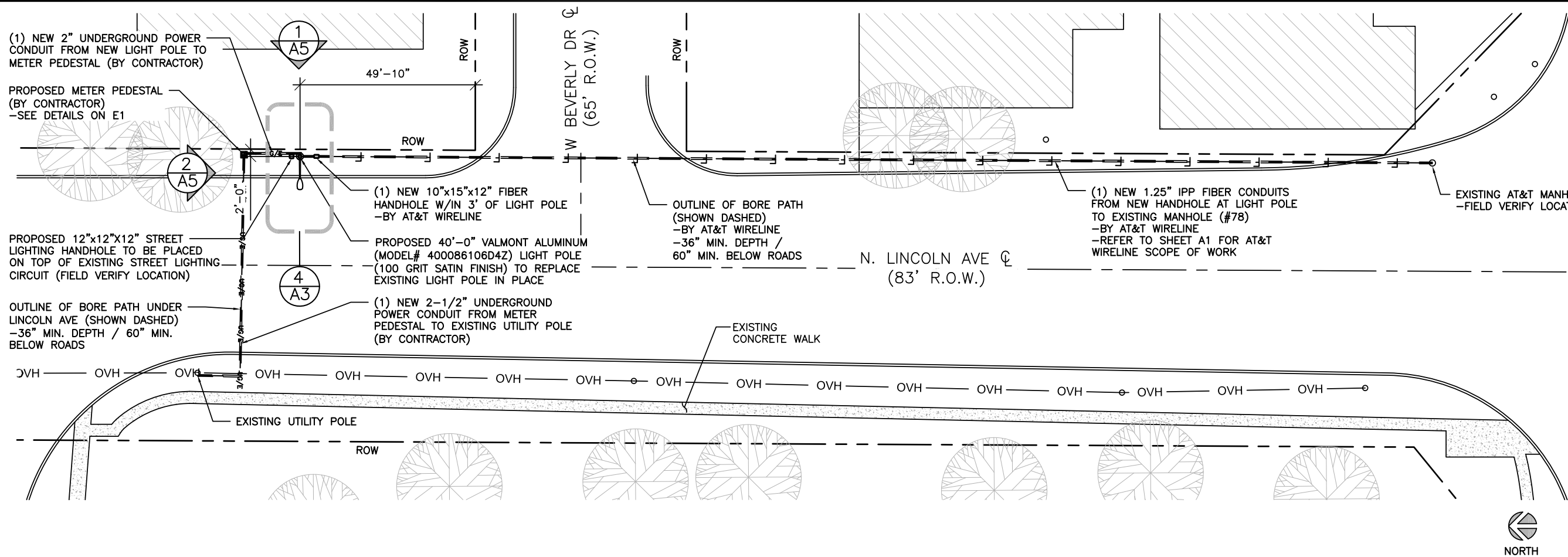
LTE 1C&2C MICRO CELL BUILD  
14805856  
CRAN\_RCHI\_CHNOS\_004  
184197  
1614 N. LINCOLN AVENUE  
URBANA, IL 61801

SHEET TITLE  
**OVERALL SITE PLAN**

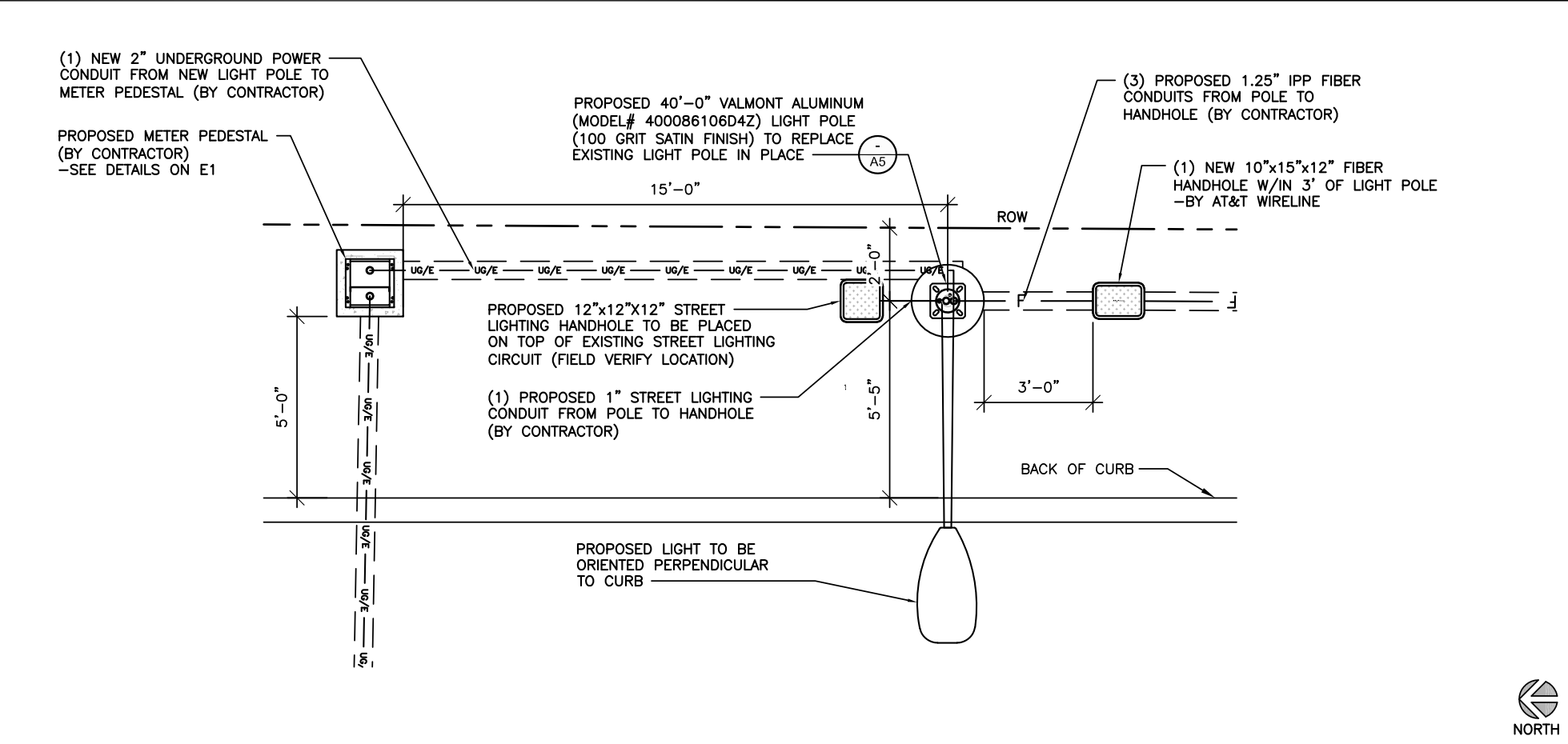
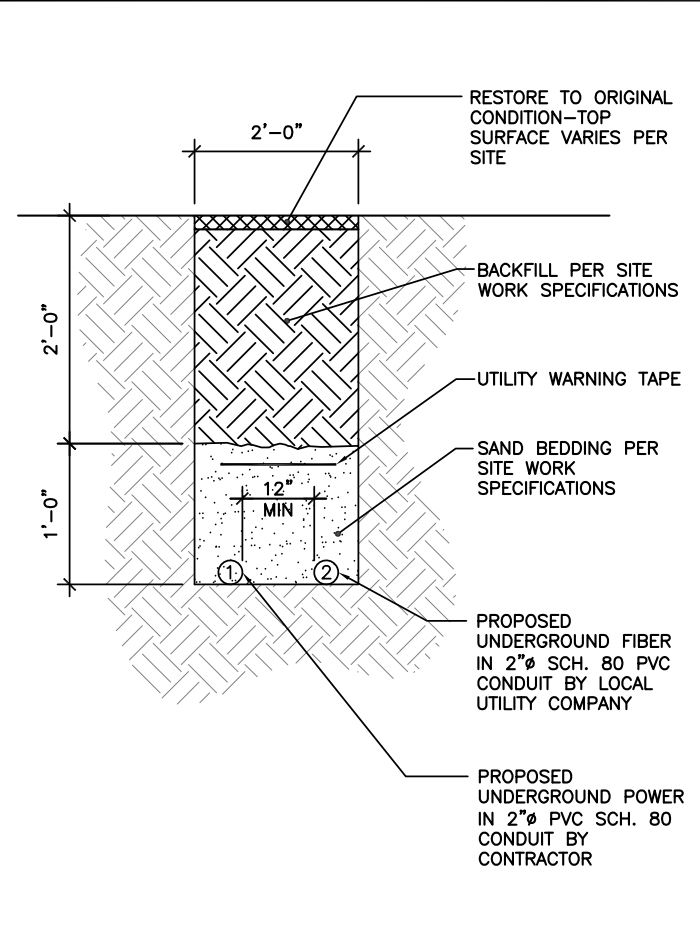
SHEET NUMBER  
**A2**



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ENLARGED SITE PLAN



LIGHT POLE PLAN



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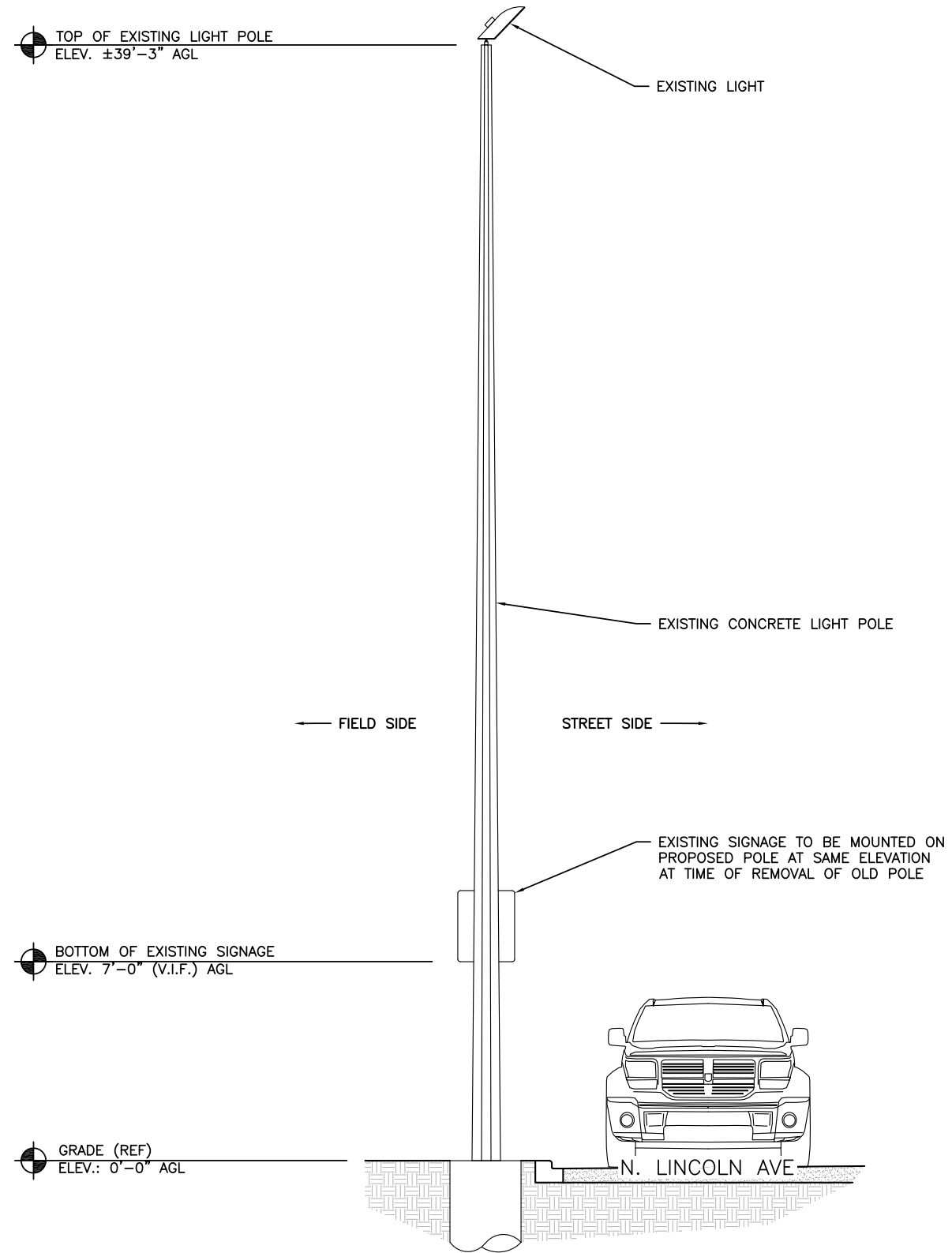
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SHEET TITLE  
**ENLARGED PLAN**

SHEET NUMBER  
**A3**

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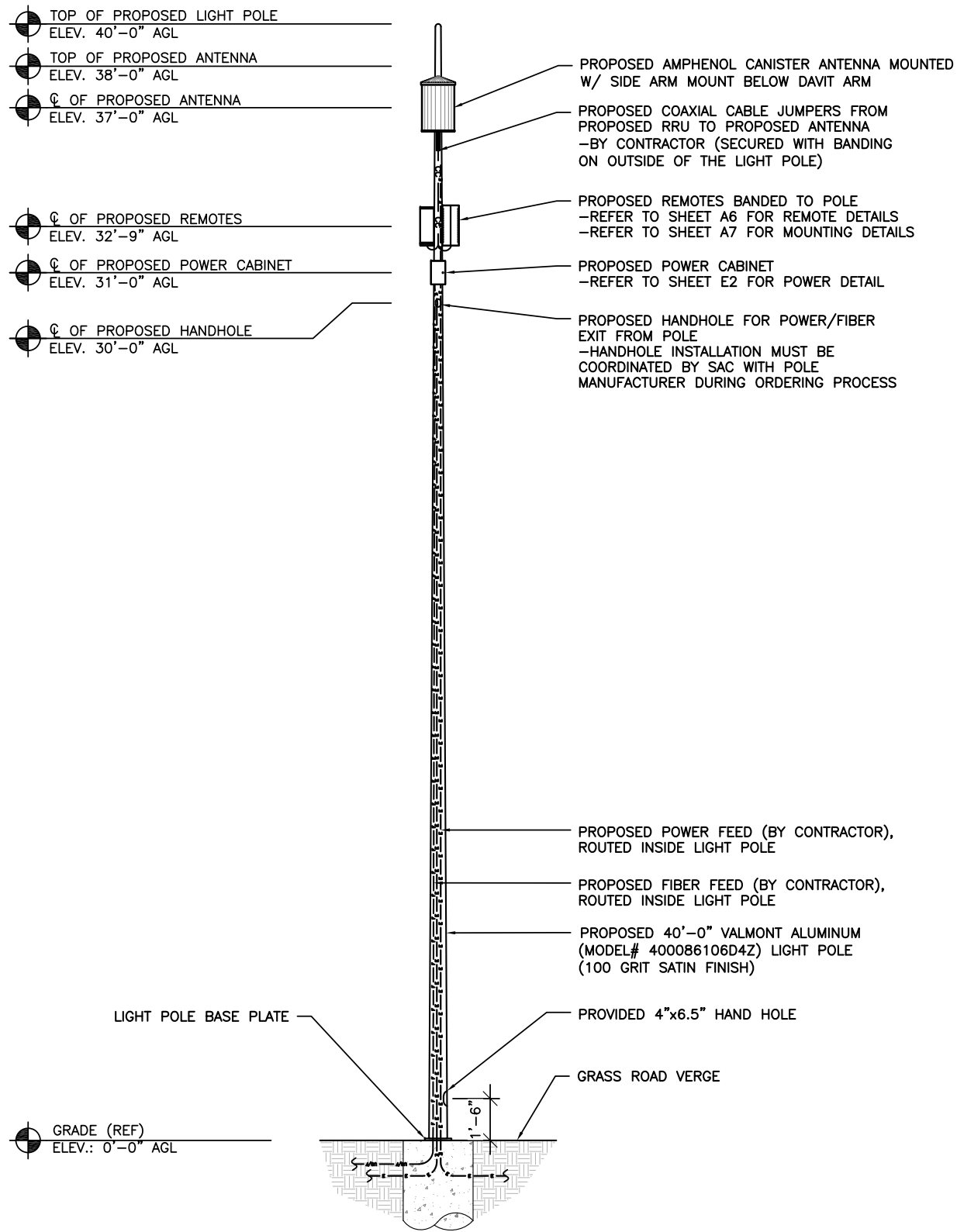
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SHEET TITLE  
**EXISTING LIGHT POLE ELEVATION**

SHEET NUMBER  
**A4**



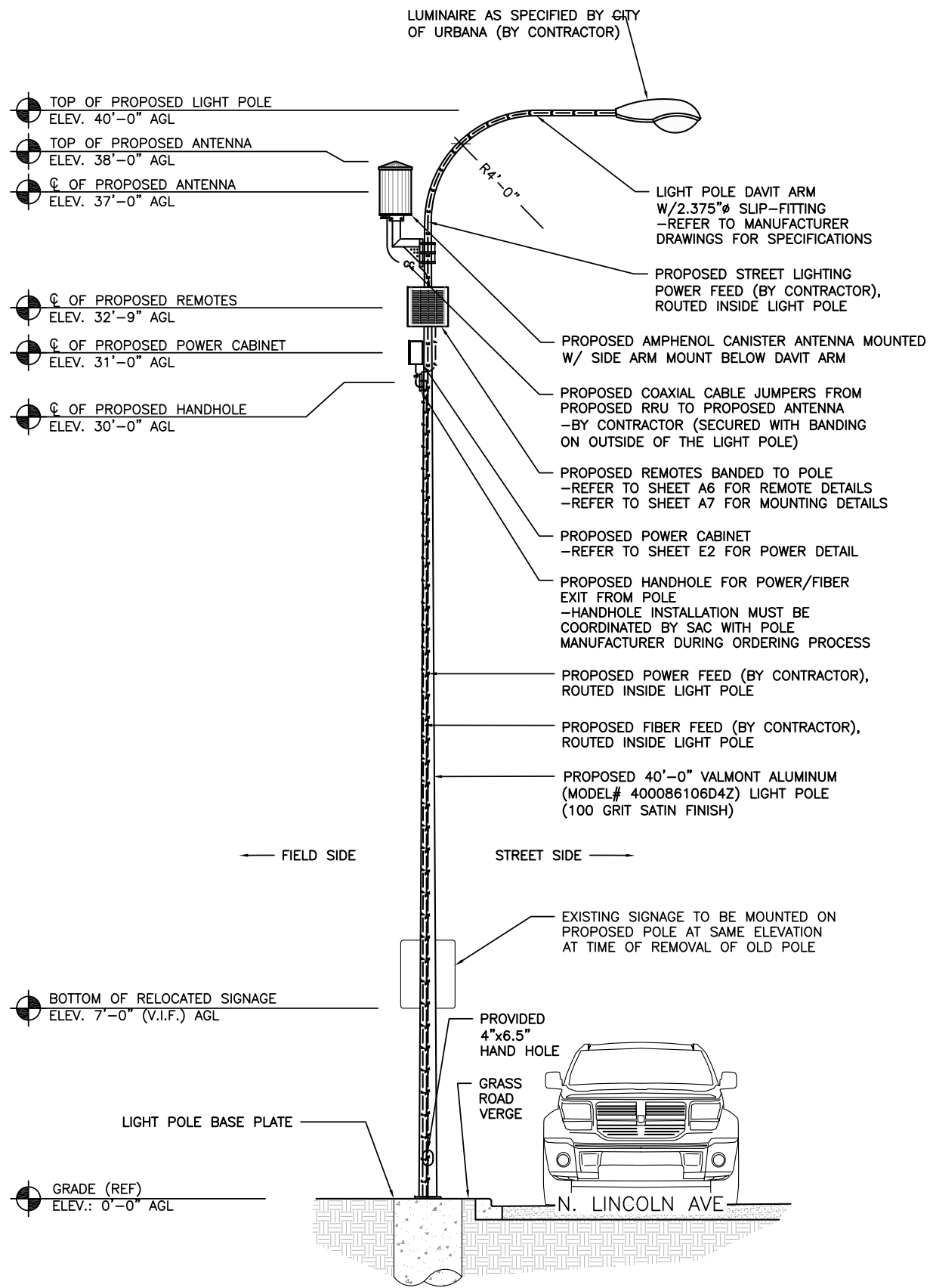
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PROPOSED LIGHT POLE FRONT ELEVATION (FIELD SIDE)

SCALE: 1/4" = 1'-0" (24x36)  
 (OR) 1/8" = 1'-0" (11x17)

1



PROPOSED LIGHT POLE SIDE ELEVATION

SCALE: 1/4" = 1'-0" (24x36)  
 (OR) 1/8" = 1'-0" (11x17)

2



REVISIONS			
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SHEET TITLE  
 PROPOSED LIGHT POLE ELEVATIONS

SHEET NUMBER  
**A5**

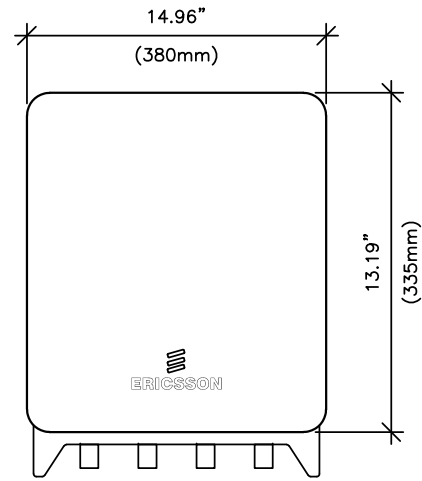
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MANUFACTURER: ERICSSON  
 MODEL: RRUS 4415 B25

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 14.96 IN (380mm)  
 WIDTH: 13.19 IN (335mm)  
 DEPTH: 5.39 IN (137mm)  
 WEIGHT: 46 LBS (21kg)

**INTERFACE SPECIFICATIONS:**  
 CPRI: 2x2.5/4.9/9.8/10.1 Gbps  
 (ONLY USE ERICSSON SUPPLIED AND APPROVED SFPs)

EXTERNAL ALARMS: 2



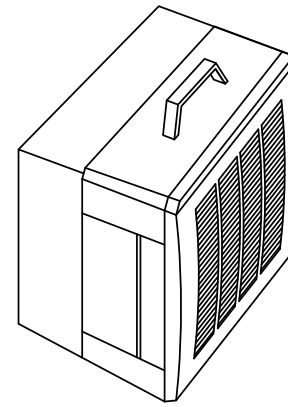
MANUFACTURER: ERICSSON  
 MODEL: RRUS-11

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 19.7 IN (500mm)  
 WIDTH: 17.0 IN (431mm)  
 DEPTH: 7.2 IN (182mm)  
 WEIGHT: 50.7 LBS (23kg)

**INTERFACE SPECIFICATIONS:**  
 ANTENNA PORTS: 2x7/16 IEC-169-4  
 OPTICAL INDICATORS: 6  
 EXTERNAL ALARMS: 1  
 FIELD GROUND: 1

**ELECTRICAL SPECIFICATIONS:**  
 POWER SUPPLY: -48 VDC OR 100-250 VAC

**ENVIRONMENTAL SPECIFICATIONS:**  
 NORMAL OPERATING TEMP.: -40°C TO +55°C  
 RELATIVE HUMIDITY: 5-100%



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RRUS 4415 B25 DETAILS

SCALE  
N.T.S. 1

RRUS-11 DETAILS

SCALE  
N.T.S. 2

DETAIL NOT USED

SCALE  
N.T.S. 3

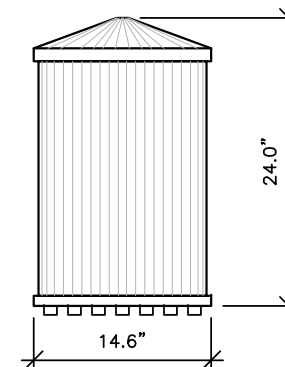
ANTENNA DETAIL

SCALE: NTS

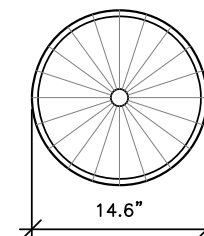
4



IMAGE



SIDE VIEW



TOP VIEW

AMPHENOL MULTI BAND CANISTER ANTENNA  
 MODEL: 2C2U3MT360X06Fxyso  
 COLOR: GREY

MECHANICAL CHARACTERISTICS

- ANTENNA DIMENSIONS (HEIGHT X DIAMETER) : 24.0"x14.6"
- WEIGHT W/OUT MOUNTING BRACKET KIT: TBD LBS
- SURVIVAL WIND SPEED: 150 MPH
- WIND AREA: 2.4 FT<sup>2</sup>
- WIND LOAD (100 MPH): 43 LBF

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 1614 N. LINCOLN AVENUE  
 URBANA, IL 61801

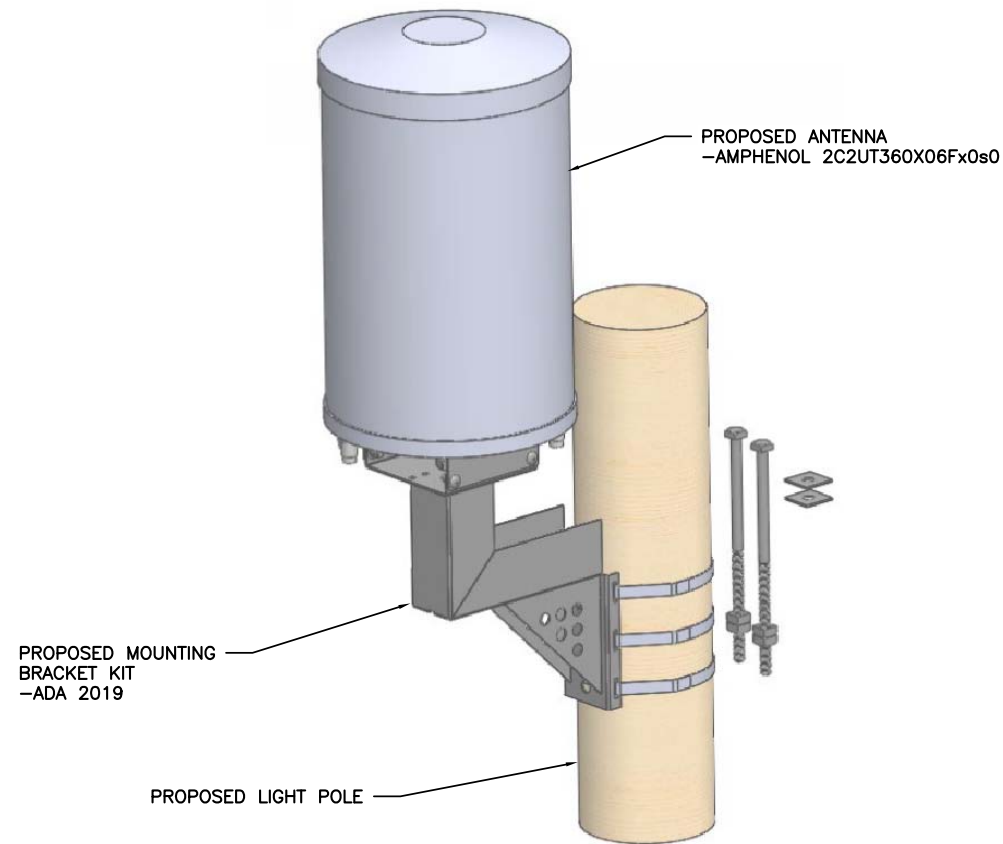
SHEET TITLE

EQUIPMENT  
 DETAILS

SHEET NUMBER

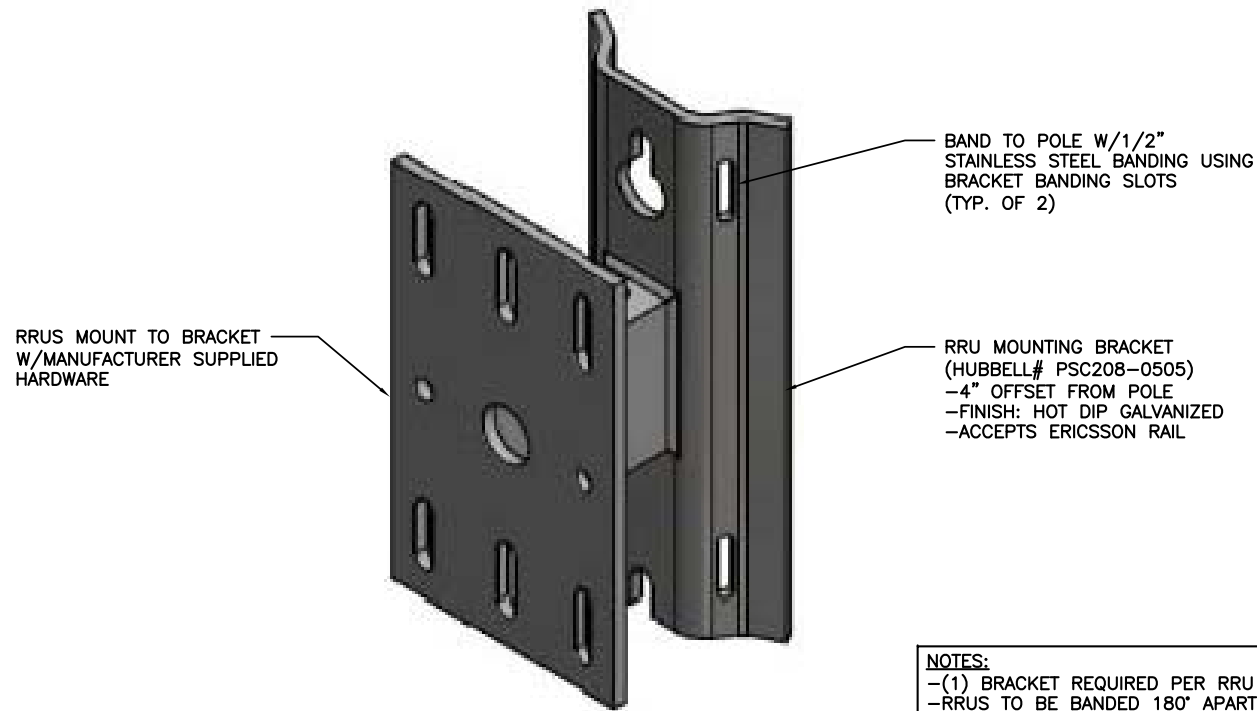
A6

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ANTENNA MOUNTING DETAIL

SCALE  
N.T.S. 1

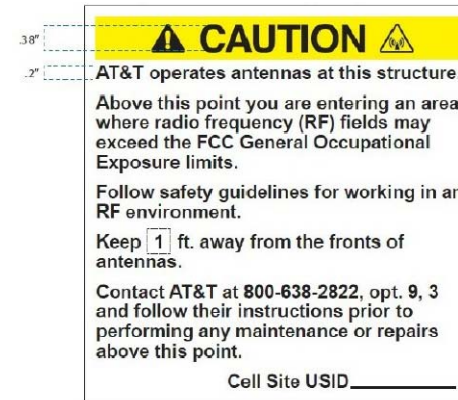


**NOTES:**  
-(1) BRACKET REQUIRED PER RRU  
-RRU TO BE BANDED 180° APART ON OPPOSITE SIDES OF POLE

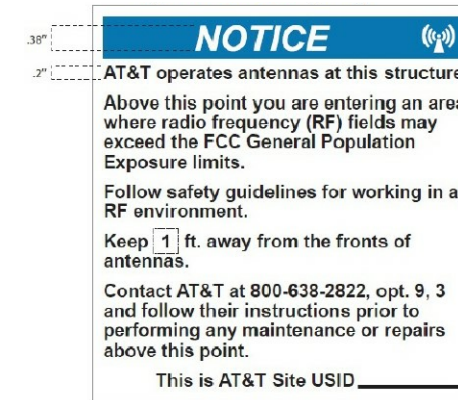
RRU MOUNTING DETAIL

SCALE  
N.T.S. 2

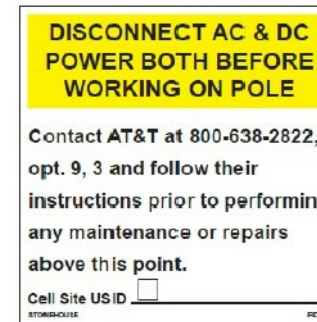
EXAMPLE CRAN RF CAUTION SIGN



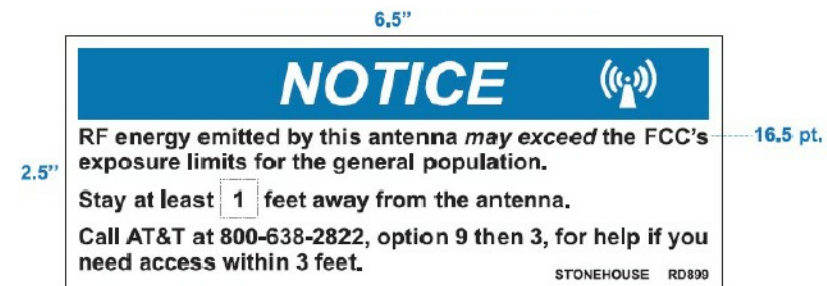
EXAMPLE CRAN RF NOTICE SIGN



EXAMPLE CRAN POLE POWER DISCONNECT SIGN



EXAMPLE STONEHOUSE RD899 RF NOTICE SIGN



CRAN Pole Power Disconnect, RF Notice, and Caution signs shall be ordered through Stonehouse Signs. Three versions are available for each of the signs shown in Figures 16, 17, and 18: .055 Polyethylene - Reflective, .025 Aluminum - Reflective, and Peel Back Label - Reflective. All versions are 6"x6" with font designed to be visible from 2-3 feet away when approached from below to provide warning about ascending into the high RF exposure areas. The RF Caution sign shown in Figure 19 is designed to be visible from 3 feet away and is available in the reflective peel back label version only. It is designed to fit on most of the CRAN/Small Cell antenna types currently deployed. It may also be placed on antenna shrouds as shown in Figures 11 and 12.

**SIGNAGE NOTE:**  
SIGNAGE SHALL BE INSTALLED PER AT&T DIRECTION

AT&T SIGNAGE DETAIL

SCALE: NTS

3



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	10/25/18	ISSUED FOR REVIEW	DTC
B	03/12/19	REVISED PER COMM.	MRL
C	05/02/19	ADDED FOUNDATION	MRL

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CIVIL SEAL

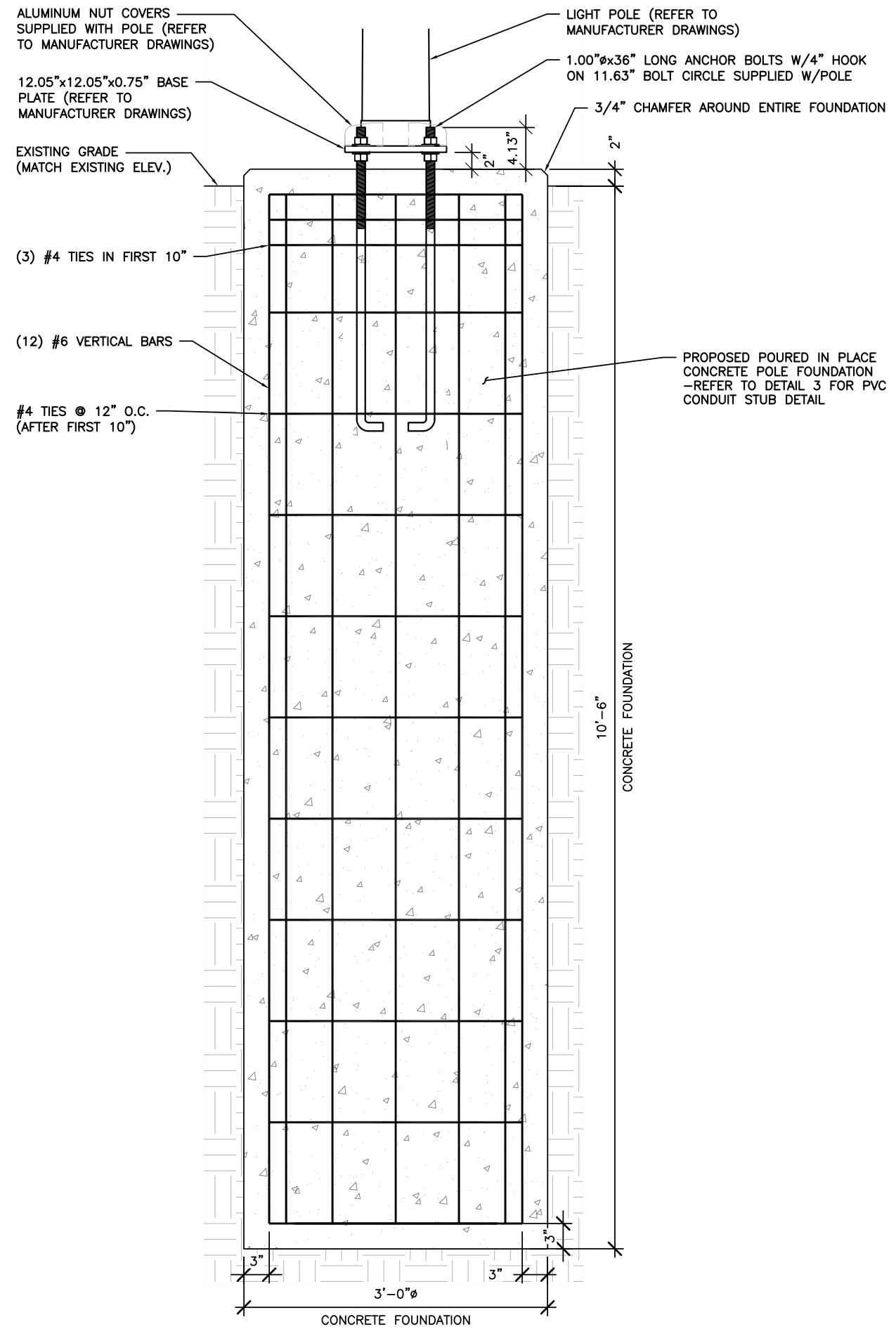
LTE 1C&2C MICRO CELL BUILD  
14805856  
CRAN\_RCHI\_CHNOS\_004  
184197  
1614 N. LINCOLN AVENUE  
URBANA, IL 61801

SHEET TITLE  
**MOUNTING  
DETAILS**

SHEET NUMBER  
**A7**



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**STRUCTURAL NOTES:**

1. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING SPECIFICATIONS:

- SLUMP 4" (±1")
- AIR ENTRAINMENT: 6% (±1%)
- MIN. COMPRESSIVE STRENGTH (F'c): 4,500 PSI @ 28 DAYS
- CONCRETE COVER: 3" ALL SIDES

CONCRETE SHALL BE TESTED BY A REPUTABLE INDEPENDENT THIRD PARTY TESTING AGENCY IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318. FIVE (5) CONCRETE CYLINDERS SHALL BE CAST IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318 AND BE LABORATORY CURED. THE AVERAGE OF THREE (3) CONCRETE CYLINDERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 4,500 PSI AT 28 DAYS. THE TESTING RESULTS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER AND AT&T REPRESENTATIVE.

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI\*96, "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" AND ACI 305, 306 AND 307 UNLESS NOTED OTHERWISE.

ALL DETAILING, FABRICATION AND PLACING OF CONCRETE SHALL CONFORM TO ACI 318-11.

2. STRUCTURAL STEEL SHALL MEET THE FOLLOWING SPECIFICATIONS:

- MATERIALS: REINFORCING ANCHOR BOLTS ASTM 615, GRADE 60  
ASTM F1554, GRADE 55
- REINFORCING COVER: TOP 2"  
BOTTOM 3"

3. DESIGN PARAMETERS:

STRUCTURAL ANALYSIS OF THE POLE AND FOUNDATION WAS COMPLETED BY OTHERS. COORDINATE WITH SAC WIRELESS FOR A COPY OF POLE STRUCTURAL ANALYSIS.

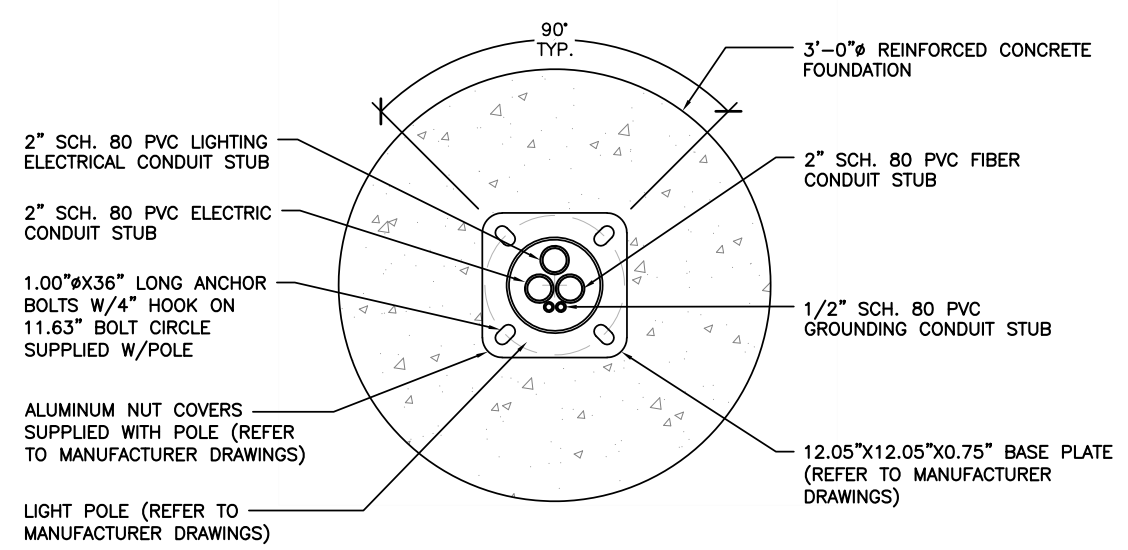
- DESIGN CODES: 2015 INTERNATIONAL BUILDING BUILDING CODE  
TIA-222-G  
ASCE 7-05  
CHAMPAIGN COUNTY, IL
- POLE LOCATION: CHAMPAIGN COUNTY, IL
- BASIC WIND SPEED: 130 MPH
- GUST FACTOR: 1.14
- STRUCTURE CLASS: CLASS II
- EXPOSURE CLASS: B
- TOPOGRAPHIC CATEGORY: 1

PRESUMPTIVE SOIL PARAMETERS: FOUNDATION IS BASED ON AN ALLOWABLE LATERAL BEARING PRESSURE OF AT LEAST 200 PSF/FT.

4. ALL CONTRACTORS SHALL EXERCISE GREAT CARE DURING EXCAVATION. CONTRACTOR SHALL PREDETERMINE UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY IF DEVIATION FROM PLANS EXIST. CONTRACTOR SHALL CONTACT 811 48 HR. PRIOR TO DIGGING, GRADING, OR DRILLING.

**FOUNDATION NOTES**

SCALE	2
N.T.S.	



FOUNDATION DETAIL

SCALE: NTS 1

FOUNDATION DETAIL

SCALE: NTS 3



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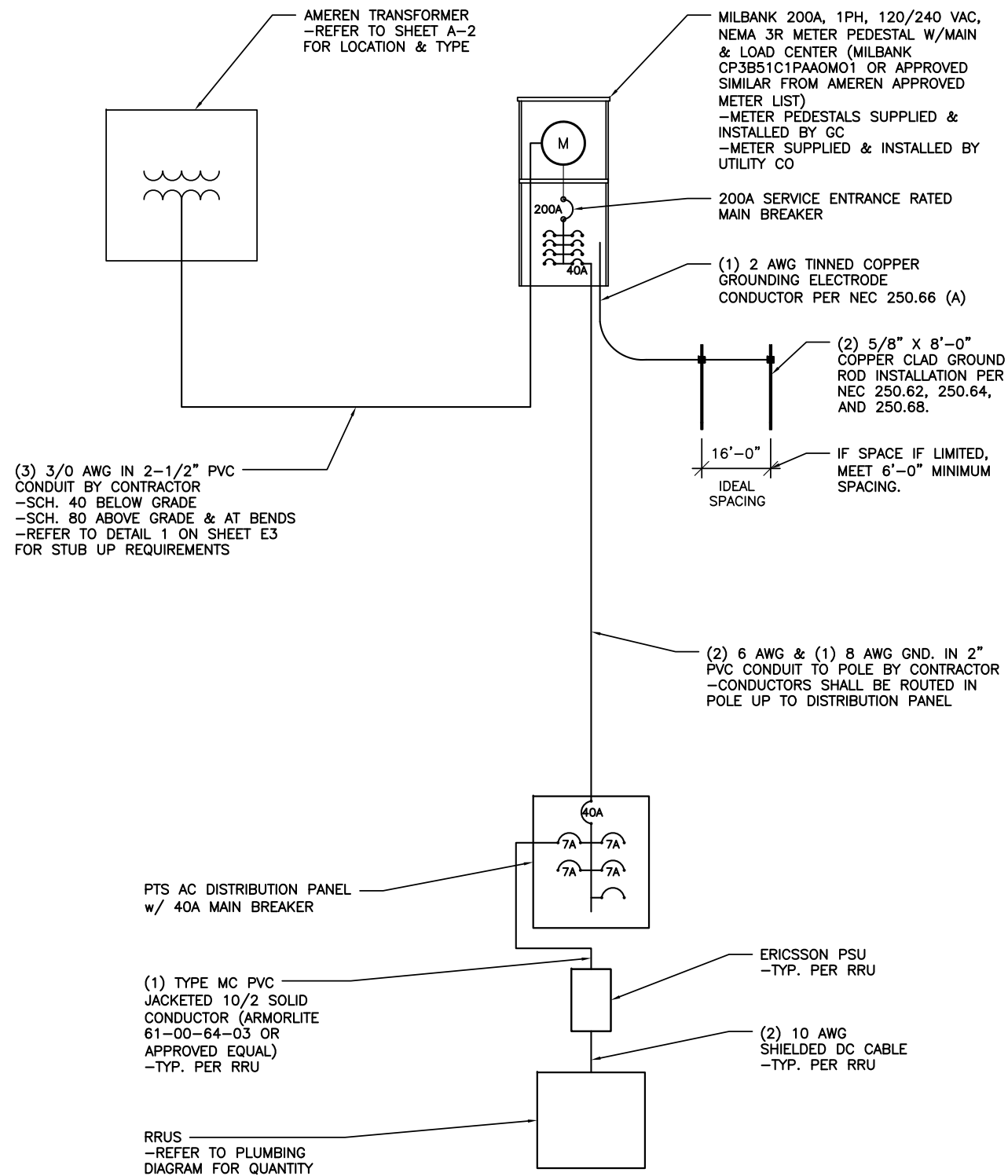
STRUCTURAL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805856  
CRAN\_RCHI\_CHNOS\_004  
184197  
1614 N. LINCOLN AVENUE  
URBANA, IL 61801

SHEET TITLE  
**POLE FOUNDATION DETAILS**

SHEET NUMBER  
**S1**

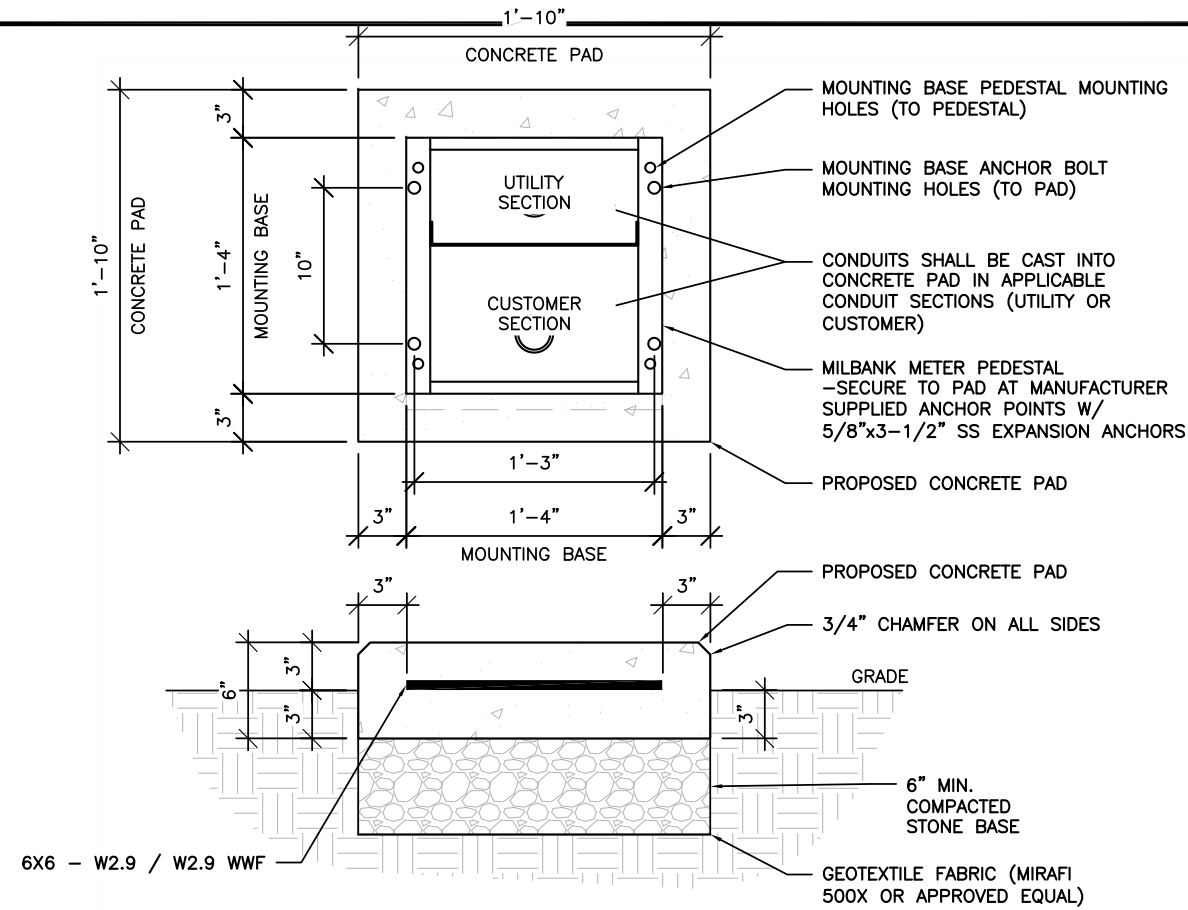
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ELECTRICAL ONE-LINE DIAGRAM

SCALE  
N.T.S.

1



METER PEDESTAL CONCRETE PAD FOUNDATION DETAIL

SCALE  
N.T.S.

2

**ELECTRICAL NOTES:**

- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SUCH THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING THE INSTALLATION OF GROUNDING AND UNDERGROUND CONDUIT AS TO PREVENT THE LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC (CADWELD) CONNECTIONS WHEN APPROVED BY CINCINNATI BELL CONSTRUCTION MANAGER.
- SERVICE TO METER PEDESTAL SHALL BE 120/240VAC, 200 AMP, SINGLE PHASE.
- ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).
- ALL GROUND CONNECTIONS ABOVE GRADE SHALL BE FORMED USING TWO (2) HIGH PRESS CRIMPS.
- ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP AND HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- ALL EXTERIOR GROUND CONNECTORS SHALL BE 2 AWG SOLID BARE, TINNED, COPPER UNLESS INDICATED OTHERWISE.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR FACILITY GROUNDING, USING FALL OF POTENTIAL METHOD.

**STANDARD CONDUIT NOTES:**

- UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ABOVE GROUND CONDUIT, ELBOWS, AND RISERS SHALL BE SCHEDULE 80 PVC.
- UNDERGROUND SERVICE CONDUIT SHALL MEET REQUIRED BURIAL DEPTH PER AMEREN ELECTRIC SERVICE MANUAL.
- G.C. TO STUB UP SERVICE CONDUIT AT UTILITY POLE WITH 90° SWEEPING ELBOW. GC. SHALL COIL SUFFICIENT CONDUCTOR TO REACH SERVICE CONNECTION ON POLE. G.C. SHALL SUPPLY ENOUGH CONDUIT AND RISER HARDWARE FOR AMEREN TO EXTEND SERVICE RISER UP POLE TO SERVICE CONNECTION POINT. REFER TO AMEREN ELECTRIC SERVICE MANUAL FOR REQUIREMENTS.
- ALL CONDUIT WILL BE EQUIPPED WITH 3/8" PULL ROPE AND HAVE A TRACER WIRE. TRACER WIRE NEEDS TO BE LAID ABOVE BURIED CONDUIT.

SCALE  
N.T.S.

3

ELECTRICAL NOTES



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ELECTRICAL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805856  
CRAN\_RCHI\_CHNOS\_004  
184197  
1614 N. LINCOLN AVENUE  
URBANA, IL 61801

SHEET TITLE  
**ELECTRICAL ONE-LINE DIAGRAM**

SHEET NUMBER  
**E1**

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AC POWER PANEL (MILBANK CP3B51C1PAAOM01)											
240 VOLTS, 1-PHASE, 3-WIRE, 200A											
MAIN RATING (A) :					200		SYSTEM VOLTAGE (V) :				240
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
DISTRIBUTION PANEL	1190	c	40	1	1190		2	--	c	0	
---	0	c	--	3		0	4	--	c	0	---
---	0	c	--	5	0		6	--	c	0	---
---	0	c	--	7		0	8	--	c	0	---
PHASE TOTALS (VA):					1190		0				
CURRENT PER PHASE (A):					12		0				Amperes/phase cannot exceed main breaker rating
PANEL TOTAL (VA):					1190		Legend: c = continuous, nc = non-continuous				
PANEL CAPACITY (kVA):					48.0		CONNECTED LOAD (kVA):				1.2
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					1.5						
PANEL LOADING (TOTAL) (kVA):					1.5						
SPARE CAPACITY (kVA):					46.5						

ELECTRICAL MAIN & LOAD CENTER PANEL SCHEDULE SCALE N.T.S. 1

AC POWER PANEL (RAYCAP RSCAC-6533-P-120-D)											
120 VOLTS, 1-PHASE, 2-WIRE, 40A											
MAIN RATING (A) :					40		SYSTEM VOLTAGE (V) :				120
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
RRUS-11	520	c	7	1	520		2	7	c	0	SPARE
RRUS-4415	670	c	7	3		670	4	7	c	0	SPARE
SPARE	0			5	0						
PHASE TOTALS (VA):					520		670				
CURRENT PER PHASE (A):					5		7				Amperes/phase cannot exceed main breaker rating
PANEL TOTAL (VA):					1190		Legend: c = continuous, nc = non-continuous				
PANEL CAPACITY (kVA):					4.8		CONNECTED LOAD (kVA):				1.2
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					1.5						
PANEL LOADING (TOTAL) (kVA):					1.5						
SPARE CAPACITY (kVA):					3.3						

ELECTRICAL PANEL SCHEDULE SCALE N.T.S. 3

MANUFACTURER: MILBANK  
 MODEL: CP3B51C1PAAOM01

MECHANICAL SPECIFICATIONS:  
 HEIGHT: 48 IN  
 WIDTH: 16 IN  
 DEPTH: 17 IN

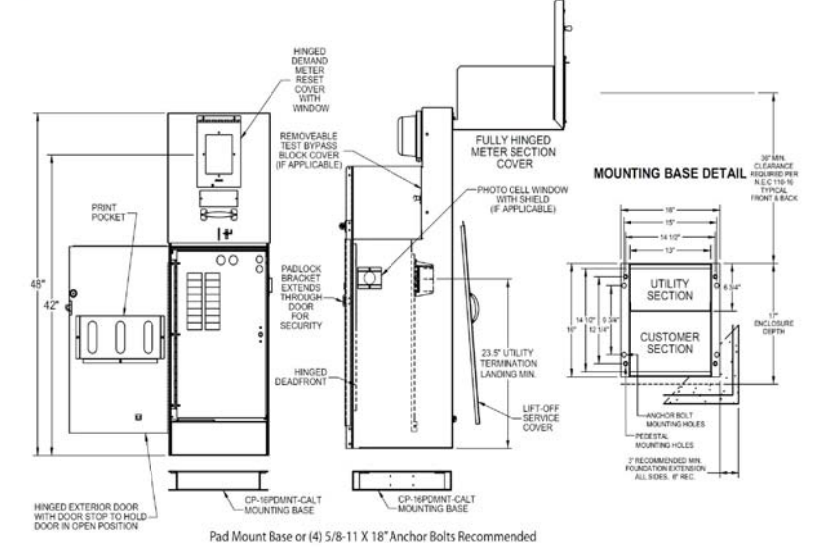
ELECTRICAL SPECIFICATIONS:  
 AMPERAGE RATING: 200 A  
 OPERATING VOLTAGE: 240 V  
 ELECTRICAL PHASE: 1 PH  
 MAIN BREAKER SIZE: 200 A  
 QTY OF BRANCH CIRCUITS: 20  
 LINE SIDE WIRE RANGE: 6 AWG - 350 kcmil

ENVIRONMENT SPECIFICATIONS:  
 UL LISTED: YES  
 NEMA RATING: 3R

ADDITIONAL SPECIFICATIONS:  
 ON AMEREN ENERGY APPROVED LIST (SECTION 1100 OF ELECTRIC SERVICE MANUAL, DATED JANUARY 18, 2018)



"A" Style 16" Metered Commercial Pedestal



SPECIAL NOTE:  
 METER PEDESTAL SHALL BE PAINTED TO MATCH AT&T EQUIPMENT IN RIGHT OF WAY. CONTRACTOR SHALL COORDINATE W/AT&T FOR COLOR AND PROVIDE DOCUMENTATION OF SUCH TO CITY OF URBANA FOR APPROVAL PRIOR TO CONSTRUCTION.

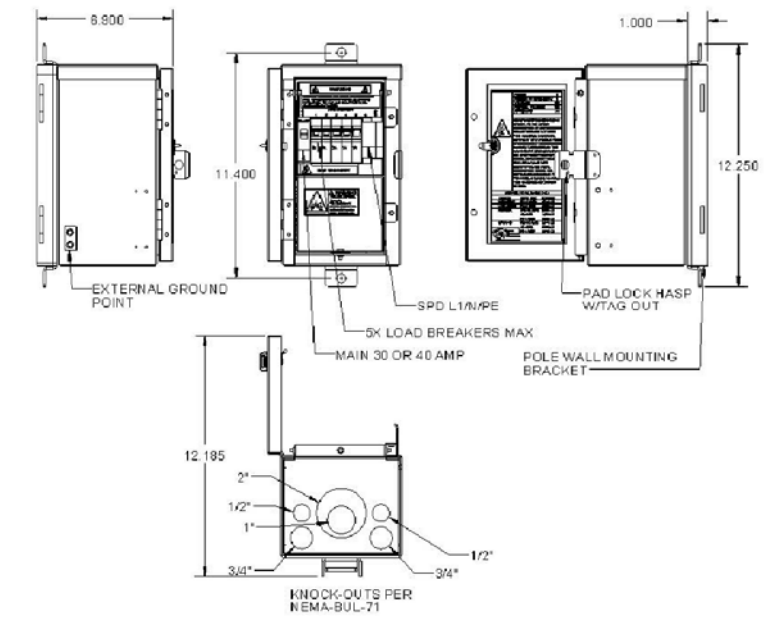
AC METER SOCKET W/MAIN & LOAD CENTER DETAIL SCALE N.T.S. 2

MANUFACTURER: PTS  
 MODEL: PTS90120

MECHANICAL SPECIFICATIONS:  
 HEIGHT: 10.13 IN  
 WIDTH: 06.15 IN  
 DEPTH: 06.00 IN  
 WEIGHT: 10 LBS  
 MOUNTING: BANDED TO POLE W/1/2" STAINLESS STEEL BANDING THROUGH MANUFACTURER SUPPLIED POLE MOUNTING BRACKET

ELECTRICAL SPECIFICATIONS:  
 AMPERAGE: 40A  
 OPERATING VOLTAGE: 120V  
 QTY OF PROTECTED CIRCUITS: 5

ENVIRONMENT SPECIFICATIONS:  
 NORMAL OPERATING TEMP.: -40°C TO +60°C



AC DISTRIBUTION PANEL DETAIL SCALE N.T.S. 4



REVISIONS			
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ELECTRICAL SEAL

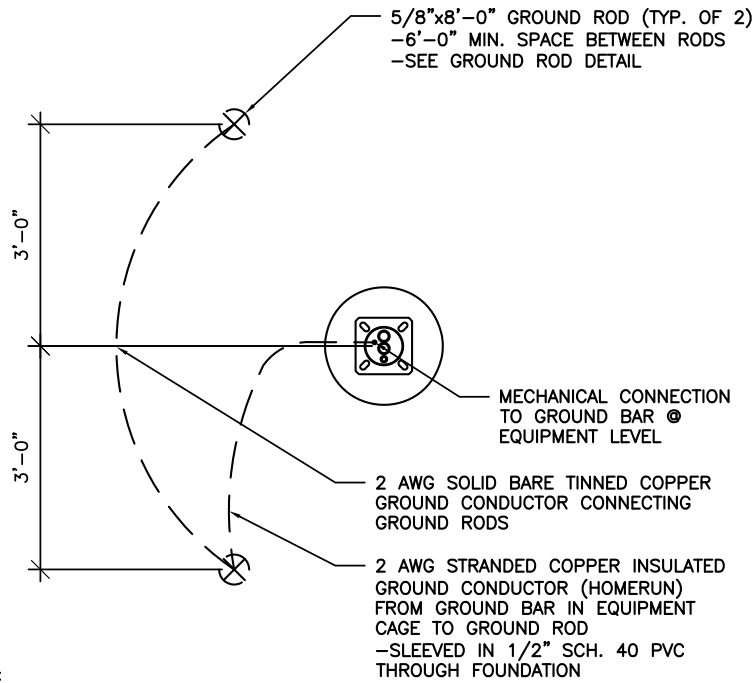
LTE 1C&2C MICRO CELL BUILD  
 14805856  
 CRAN\_RCH1\_CHNOS\_004  
 184197  
 1614 N. LINCOLN AVENUE  
 URBANA, IL 61801

SHEET TITLE  
 PANEL SCHEDULE & ELECTRICAL DETAILS

SHEET NUMBER  
**E2**



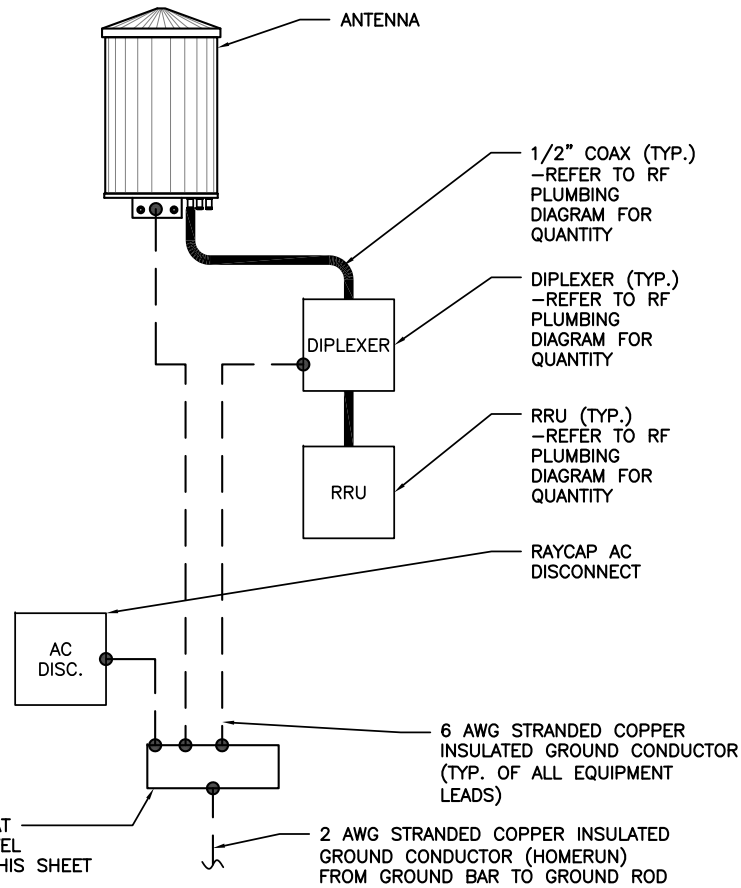
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NOTE:  
GROUND ROD LOCATIONS ARE  
DIAGRAMMATICAL ONLY. CONTRACTOR  
SHALL PLACE GROUND RODS IN  
FIELD TO BE LEAST OBSTRUCTIVE  
TO EXISTING FIELD CONDITIONS.

POLE GROUNDING PLAN DETAIL

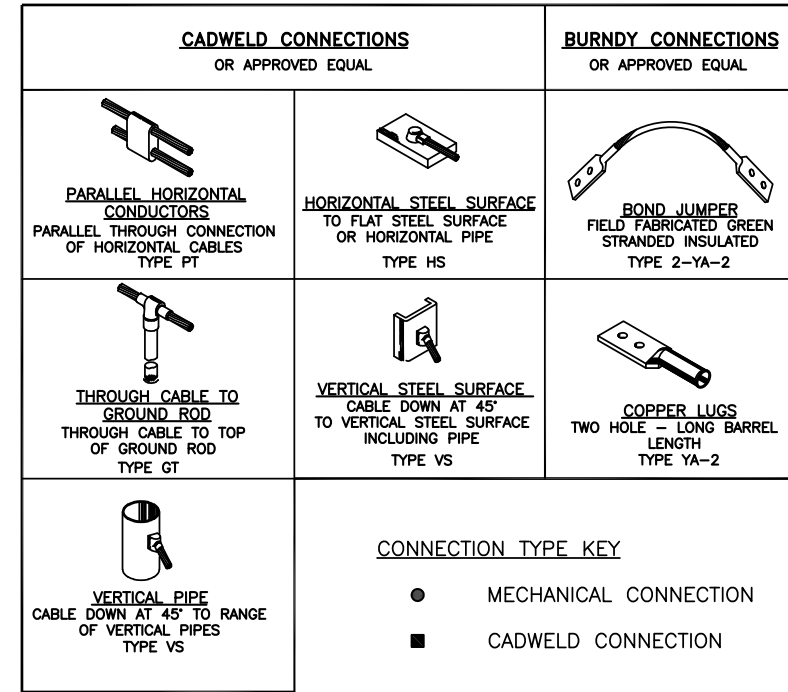
SCALE  
N.T.S. 1



GROUND BAR AT  
EQUIPMENT LEVEL  
-SEE DETAIL THIS SHEET

EQUIPMENT GROUNDING RISER DETAIL

SCALE  
N.T.S. 2

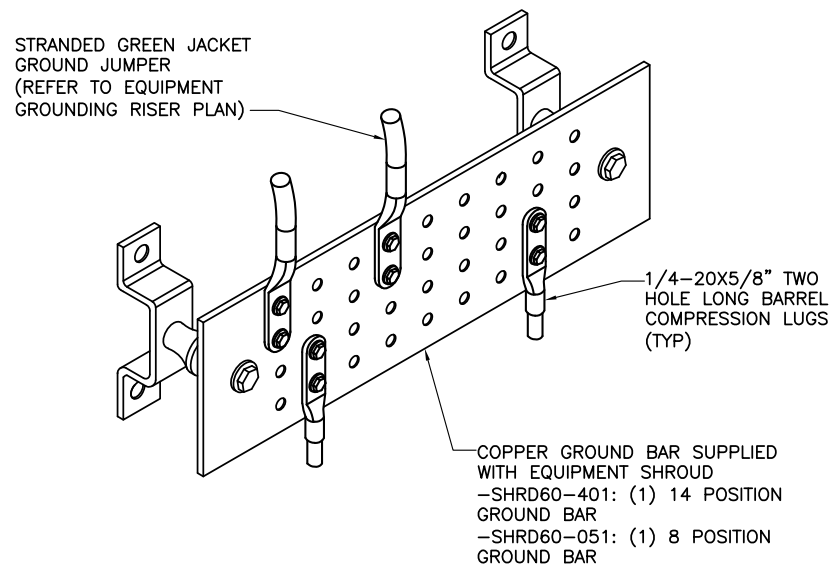


CONNECTION TYPE KEY

- MECHANICAL CONNECTION
- CADWELD CONNECTION

GROUNDING CONNECTIONS DETAIL

SCALE  
N.T.S. 3



- NOTES:
- CONTRACTOR SHALL UTILIZE LUGGED HOLES PROVIDED. NO DRILLING OF THE BAR WILL BE PERMITTED.
  - ALL HARDWARE SHALL BE 1/4-20 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
  - FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

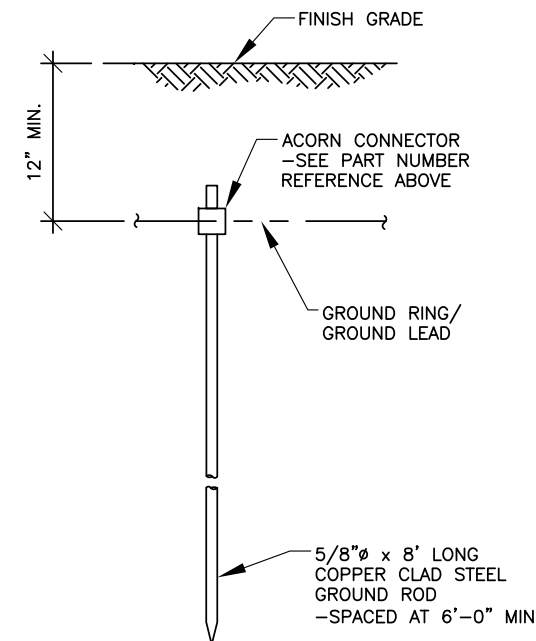
GROUND BAR DETAIL

SCALE  
N.T.S. 4

DETAIL NOT USED

SCALE  
N.T.S. 5

ACORN CONNECTOR		
ELEC. MOTION CO. PART #	GROUND CONDUCTOR SIZE	GROUND ROD SIZE
EM2DB	#12-1/0 AWG	5/8"Ø



GROUND ROD DETAIL

SCALE  
N.T.S. 6



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ELECTRICAL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805856  
CRAN\_RCHI\_CHNOS\_004  
184197  
1614 N. LINCOLN AVENUE  
URBANA, IL 61801

SHEET TITLE

GROUNDING  
DETAILS

SHEET NUMBER

E3

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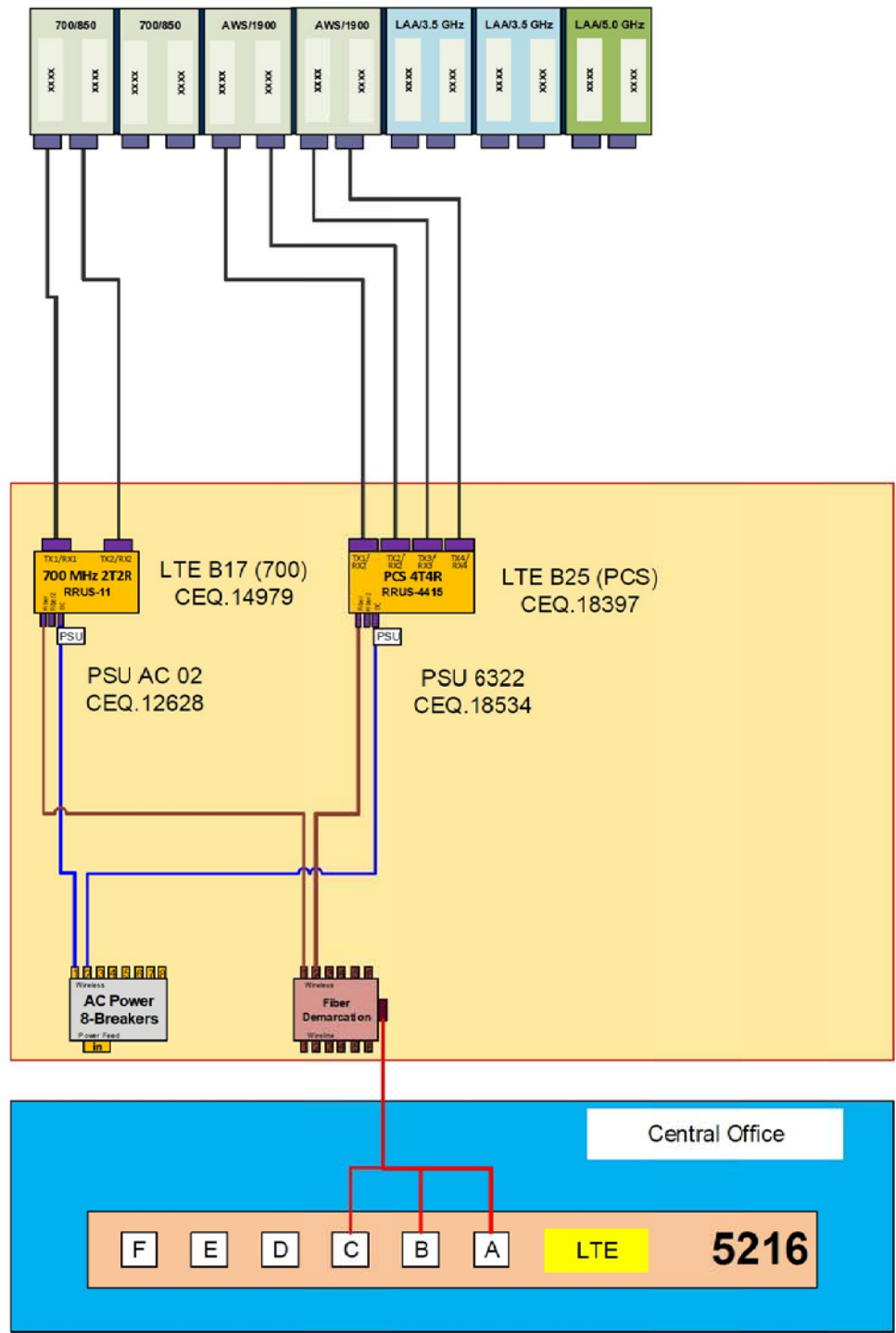
Diagram - 2	Diagram File Name - Micro 17.vsd												
Atoll Site Name -	Champaign CRAN HUB-University	Location Name -	CRAN_CHAMPAIGN_UNIVERSITY_0001 BUILD	Market -	CENTRAL ILLINOIS	Market Cluster -	ILLINOIS/WISCONSIN						
Comments:													

Configuration Name	700 MHz 2T2R LTE	700 MHz 4T4R LTE	850 MHz 2T2R LTE	850 MHz 4T4R LTE	1900 MHz 2T2R LTE	1900 MHz 4T4R LTE	2100 MHz 2T2R LTE	2100 MHz 4T4R LTE	5GHz LAA LTE	3.5 GHz LAA LTE	Sector Count	Carrier Count	Antenna LAA location
Micro #17	X	NA	NA	NA	NA	X	NA	NA	NA	NA	1	2	14 Ports Antenna

Amphenol Pseudo-Omni – 14 ports  
Antenna  
2C2U3MT360X06FxyS0



**Important Note:**  
For detailed radio to antenna wiring refer to the latest 4T4R Antenna/Radio Port Connection Field Notice (RF-HW-2016-234) and the 4T Wiring Playbook



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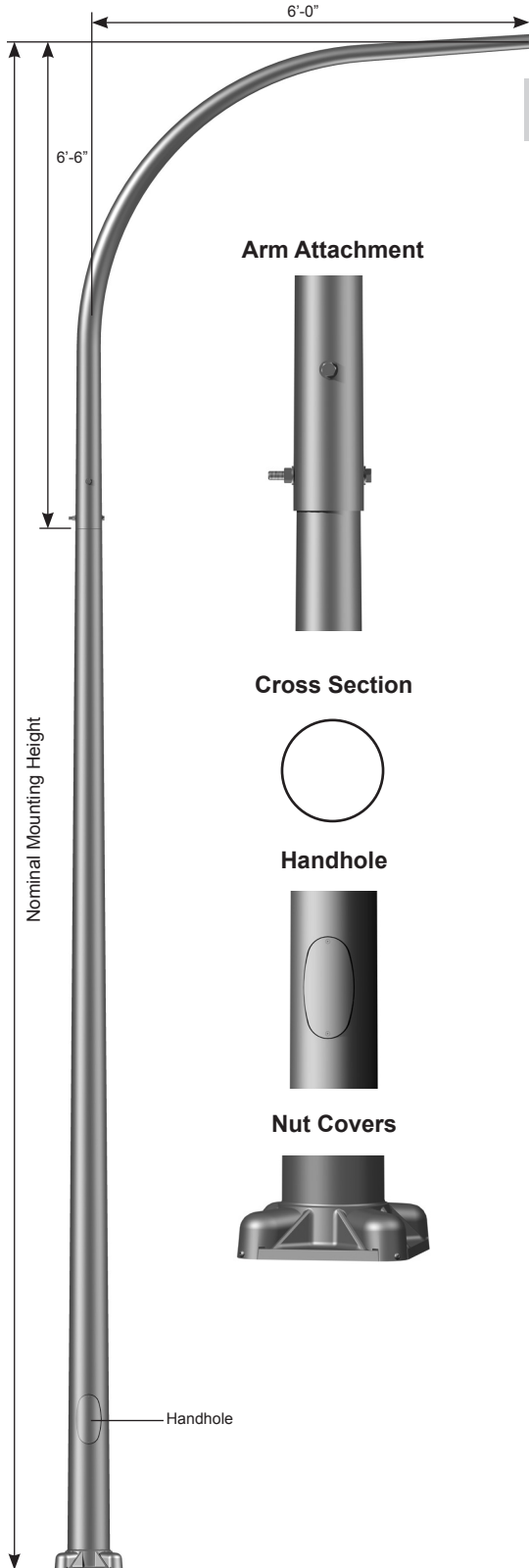
REFERENCE ONLY

LTE 1C&2C MICRO CELL BUILD  
14805856  
CRAN\_RCHI\_CHNOS\_004  
184197  
1614 N. LINCOLN AVENUE  
URBANA, IL 61801

SHEET TITLE  
RF  
PLUMBING  
DIAGRAM

SHEET NUMBER  
**RF1**

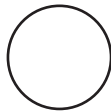
Job Name: _____	Client Name: _____
Job Location - City: _____ State: _____	Created By: _____ Date: _____
Product: _____ Quote: _____	Customer Approval: _____ Date: _____



**Arm Attachment**



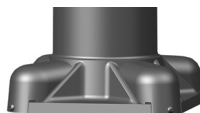
**Cross Section**



**Handhole**



**Nut Covers**



## SPECIFICATIONS

**Pole** - The pole shaft is extruded from seamless alloy aluminum.

**Davit Arm** - Davit arms are conically tapered from seamless alloy aluminum to 2.38" OD at the luminaire end. Davit arm members have a 4' bend radius and a 6'-6" rise.

**Davit Arm Attachment** - Connection allows arm to be erected and held in place by gravity and secured by two stainless steel through bolts.

**Handhole** - A covered handhole with hardware and grounding provision are provided.

**Base Cover** - Optional decorative base covers available as special order.

**Anchor Base** - The anchor base is cast from 356 alloy aluminum. The completed assembly is heat-treated to a T6 temper. Aluminum nut covers are included with anchor base unless otherwise specified.

**Anchor Bolts** - Anchor bolts conform to ASTM F1554 Grade 55 and are provided with two hex nuts and two flat washers. Bolts have an "L" bend on one end and are galvanized a minimum of 12" on the threaded end.

**Hardware** - All structural and non-structural fasteners are stainless steel.

**Finish** - The standard finish for the pole assembly and components is satin brushed, natural anodize, duranodic or polyester powder applied coating in accordance with Valmont's Specifications. Additional finish options available upon request.

**Design Criteria** - Please reference Design Criteria Specification for appropriate design conditions.



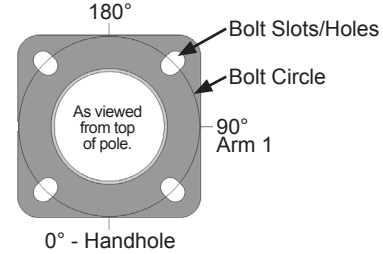
# ROUND TAPERED ALUMINUM Davit Arm 6' Single

Job Name: _____	Client Name: _____
Job Location - City: _____ State: _____	Created By: _____ Date: _____
Product: _____ Quote: _____	Customer Approval: _____ Date: _____

## ANCHORAGE DATA

POLE		BASE PLATE			ANCHOR BOLTS			
BASE OD (IN)	WALL THK (IN)	BOLT CIRCLE		SQUARE (IN)	THK (IN)	DIA x LENGTH x HOOK (IN)	PROJECTION (IN)	± (IN)
		DIA (IN)	± (IN)					
6.00	0.156	9.50	0.75	10.32	0.630	0.75 x 17.00 x 3.00	3.50	N/A
7.00	0.156	10.56	0.43	11.26	0.750	1.00 x 36.00 x 4.00	4.13	N/A
8.00	0.156	11.63	0.37	12.05	0.750	1.00 x 36.00 x 4.00	4.13	N/A
8.00	0.188	11.63	0.37	12.05	0.750	1.00 x 36.00 x 4.00	4.13	N/A
8.00	0.250	11.63	0.37	12.05	0.750	1.00 x 36.00 x 4.00	4.13	N/A
9.00	0.156	13.25	0.75	12.48	1.250	1.00 x 36.00 x 4.00	4.13	N/A
9.00	0.188	13.25	0.75	12.48	1.250	1.00 x 36.00 x 4.00	4.13	N/A

Anchor Base Detail



## LOAD AND DIMENSIONAL DATA

NOMINAL MOUNTING HEIGHT	QUANTITY OF ARMS	MAX WEIGHT <sup>1</sup> (LBS)	DESIGN INFORMATION					POLE DIMENSIONS					STRUCTURE WEIGHT <sup>2</sup> (LBS)	MODEL NUMBER
			70 MPH w/1.3 GUST	80 MPH w/1.3 GUST	90 MPH w/1.3 GUST	100 MPH w/1.3 GUST	110 MPH w/1.3 GUST	POLE HEIGHT	BASE OD (IN)	TOP OD (IN)	WALL THK (IN)			
20'-0"	Single	75	6.0	6.0	6.0	4.7	3.4	13'-6"	6.00	4.00	0.156	69	200065106D4Z	
		75	6.0	5.2	3.3	2.0	1.1	18'-6"	6.00	4.00	0.156	83	250065106D4Z	
25'-0"	Single	75	6.0	6.0	6.0	4.5	3.2	18'-6"	7.00	4.00	0.156	91	250075106D4Z	
		75	4.5	2.3	0.8	N/A	N/A	23'-6"	6.00	4.00	0.156	98	300065106D4Z	
30'-0"	Single	75	6.0	5.4	3.4	2.0	1.0	23'-6"	7.00	4.00	0.156	109	300075106D4Z	
		75	6.0	6.0	6.0	4.4	2.9	23'-6"	8.00	4.50	0.156	122	300085106D4Z	
35'-0"	Single	75	5.0	2.5	1.0	N/A	N/A	28'-6"	7.00	4.00	0.156	124	350075106D4Z	
		75	6.0	5.5	3.4	2.0	0.9	28'-6"	8.00	4.50	0.156	139	350085106D4Z	
		75	6.0	6.0	5.3	3.5	2.2	28'-6"	8.00	4.50	0.188	160	350086106D4Z	
		75	6.0	6.0	6.0	4.2	2.7	28'-6"	9.00	4.50	0.156	153	350095106D4Z	
		75	6.0	6.0	6.0	6.0	4.3	28'-6"	9.00	4.50	0.188	176	350096106D4Z	
		75	6.0	6.0	6.0	6.0	4.6	28'-6"	8.00	4.50	0.250	200	350088106D4Z	
40'-0"	Single	75	5.2	2.6	1.1	N/A	N/A	33'-6"	8.00	4.50	0.156	159	400085106D4Z	
		75	6.0	4.6	2.7	1.3	N/A	33'-6"	8.00	4.50	0.188	183	400086106D4Z	
		75	6.0	5.6	3.5	1.9	0.8	33'-6"	9.00	4.50	0.156	175	400095106D4Z	
		75	6.0	6.0	5.5	3.6	2.1	33'-6"	9.00	4.50	0.188	202	400096106D4Z	
		75	6.0	6.0	5.7	3.8	2.3	33'-6"	8.00	4.50	0.250	231	400088106D4Z	

- EPA represents the Effective Projected Area of each luminaire. Designs are limited to one luminaire per arm. Variations from sizes above are available upon inquiry at the factory. Satisfactory performance of poles is dependent upon the pole being properly attached to a supporting foundation of adequate design.
- Structure weight is a nominal value which includes the pole shaft, base plate and luminaire arm(s).

## PRODUCT ORDERING CODES

CROSS SECTION	MODEL NUMBER	COLOR		OPTIONS
R				
R = Round	200065106D4Z 250065106D4Z 250075106D4Z 300065106D4Z 300075106D4Z 300085106D4Z 350075106D4Z 350085106D4Z 350086106D4Z 350095106D4Z 350096106D4Z 350088106D4Z 400085106D4Z 400086106D4Z 400095106D4Z 400096106D4Z 400088106D4Z	<b>Polyester Powder</b> DWH = White DSS = Sandstone BR = Burgundy HG = Hunter Green DNA = Natural Aluminum DCG = Charcoal Gray DMB = Medium Bronze SBN = Sanded Brown DNB = New Dark Bronze DDB = Dark Bronze SBK = Sanded Black DBL = Black DSB = Steel Blue DTG = Dark Green DBR = Red SC = Special Color (Contact Factory)	<b>Anodized</b> 204 = Clear Natural 311 = Light Bronze* 312 = Medium Bronze* 313 = Dark Bronze* 335 = Black* *Duranodize Anodize  <b>Brushed</b> SBF = Satin Brushed	See Accessories at valmontstructures.com (Please Specify with Code)

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**PROJECT INFORMATION**

**SITE NAME:** CRAN\_RCHI\_CHUOI\_015  
**COUNTY:** CHAMPAIGN  
**ADDRESS:** 402 W. SPRINGFIELD AVENUE  
 URBANA, IL 61801  
**JURISDICTION:** CITY OF URBANA  
**USID:** 184220  
**FA NUMBER:** 14805800  
**PTN:** 3304A0AAPA / 3304A0AARW  
**PACE:** MRCHI025457 / MRCHI025418

**LATITUDE:** 40° 06' 44.23" (40.112286°)  
**LONGITUDE:** 88° 12' 43.13" (-88.211981°)  
**ELEVATION:** 713'

**LIGHT POLE/UTILITY POLE OWNER:** CITY OF URBANA

**APPLICANT:** AT&T MOBILITY  
 930 NATIONAL PARKWAY  
 SCHAUMBURG IL 60173

**AT&T PROJECT MANAGER/SITE ACQUISITION:** VANESSA ROSS  
 (217) 814-2314  
 VF2021@ATT.COM

**AT&T CONSTRUCTION MANAGER:** CHRISTIANA RACHAL  
 CR630A@ATT.COM

**PROJECT CONSULTANTS**

**PROJECT MANAGER:** SAC WIRELESS LLC  
 540 W. MADISON ST. (9TH FLOOR)  
 CHICAGO IL 60661  
 CONTACT: PRITI MORE  
 PHONE: (312) 789-4353  
 EMAIL: PRITI.MORE@SACW.COM

**ARCHITECT:** GPD GROUP, INC. - 184-007100  
 520 S. MAIN ST., SUITE 2531  
 AKRON, OH 44311  
 317-295-3180

**SAC C.M.:** MARK KLEPACKI  
 EMAIL: MARK.KLEPACKI@SACW.COM

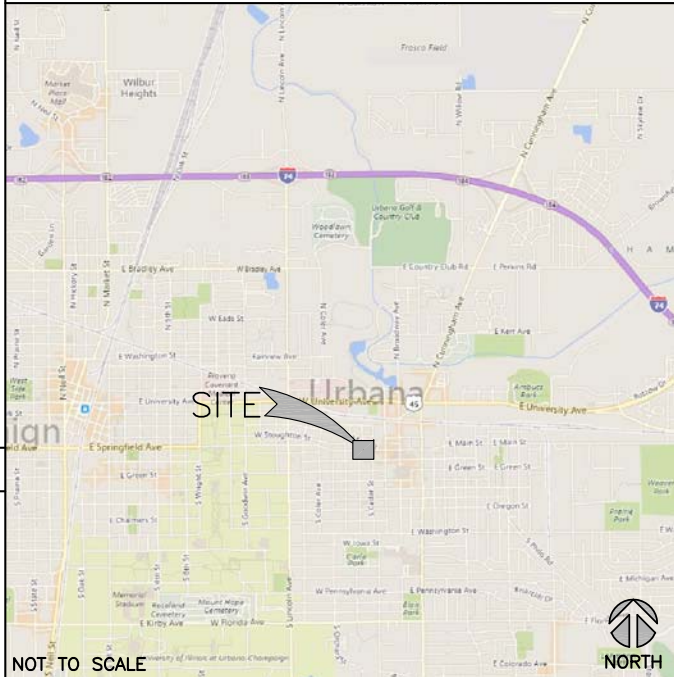
**SAC P.M.:** JAMES HOM  
 EMAIL: JAMES.HOM@SACW.COM

# AT&T MOBILITY

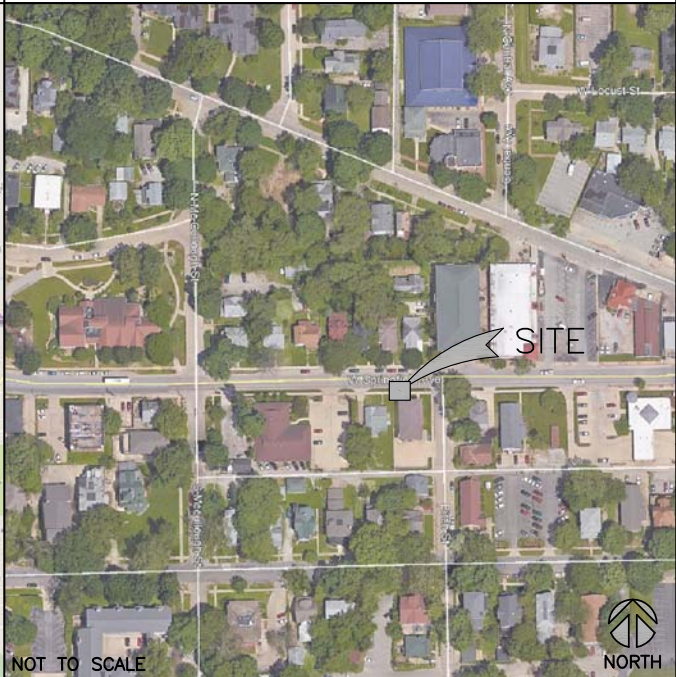
**PROJECT :** LTE 1C&2C MICRO CELL BUILD  
**SITE # :** CRAN\_RCHI\_CHUOI\_015  
**USID / NODE:** 184220  
**FA # :** 14805800  
**PTN # :** 3304A0AAPA / 3304A0AARW  
**PACE # :** MRCHI025457 / MRCHI025418  
**ENODEB NAME :** ILL07045F\_R02  
**JURISDICTION :** CITY OF URBANA

**SITE NAME :** CRAN\_RCHI\_CHUOI\_015  
**ADDRESS :** 402 W. SPRINGFIELD AVENUE  
 URBANA, IL 61801

**VICINITY MAP**



**LOCATION MAP**



NOT TO SCALE

NOT TO SCALE

**DRAWING INDEX**

T1	TITLE SHEET
A1	FIBER DELIVERY PLANS (REFERENCE ONLY)
A2	OVERALL SITE PLAN
A3	ENLARGED PLAN
A4	EXISTING LIGHT POLE ELEVATION
A5	PROPOSED LIGHT POLE ELEVATIONS
A6	EQUIPMENT DETAILS (REFERENCE ONLY)
A7	MOUNTING DETAILS
S1	POLE FOUNDATION DETAILS
E1	ELECTRICAL ONE-LINE DIAGRAM
E2	PANEL SCHEDULE & ELECTRICAL DETAILS
E3	GROUNDING DETAILS
RF1	RF PLUMBING DIAGRAM (REFERENCE ONLY)
REF	POLE MANUFACTURER DESIGN (BY OTHERS)

**SCOPE OF WORK**

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

- REMOVE EXISTING LIGHT POLE AND REPLACE WITH NEW 40'-0" HAPCO ALUMINUM RTA DAVIT ARM LIGHT POLE (BLACK POWDER COAT - 5 YR)
- INSTALL NEW ELECTRIC SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE. METER SUPPLIED & INSTALLED BY CONTRACTOR.
- INSTALL NEW FIBER SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE LOCATION AS SHOWN.
- INSTALL NEW POWER & FIBER EQUIPMENT PER PLAN
- INSTALL (1) NEW OMNI ANTENNA
- INSTALL (1) PCS RRUS-4415 & (1) 700 RRUS-11
- INSTALL CABLING AS REQUIRED
- GROUND AS REQUIRED
- LIGHT POLE LUMINARY TO BE SUPPLIED & INSTALLED BY CONTRACTOR. LUMINARY MUST BE APPROVED BY CITY OF URBANA PRIOR TO ORDER.
- STREET LIGHTING HANDHOLE (IF REQUIRED) SUPPLIED & INSTALLED BY CONTRACTOR
- POTHOLES SHALL BE REQUIRED FOR ANY PROPOSED UTILITY CROSSING
- HYDROVAC SHALL BE USED FOR ALL TRENCHING & POTHOLES ACTIVITIES
- CONTRACTOR SHALL MAINTAIN INTEGRITY OF EXISTING POLE DURING REMOVAL & COORDINATE RETURN OF REMOVED POLE TO THE CITY OF URBANA

**UTILITY DELIVERY METHOD TO PROPOSED POLE**

- FIBER - UNDERGROUND
- POWER - UNDERGROUND

**CODE COMPLIANCE**

- 2015 INTERNATIONAL BUILDING CODE W/CITY AMMENDMENTS
- 2014 NATIONAL ELECTRIC CODE W/CITY AMMENDMENTS

**SPECIAL NOTES**

- ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT AT&T CONSTRUCTION INSTALLATION GUIDE.
- EXISTING CONDITIONS WILL BE CHANGED & VERIFIED IN FIELD. IF SIGNIFICANT DEVIATIONS OR DETERIORATION ARE ENCOUNTERED AT THE TIME OF CONSTRUCTION, A REPAIR PERMIT WILL BE OBTAINED & CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- THESE DRAWINGS ARE FULL SIZE & SCALEABLE ON 11"x17" SHEET SIZE.
- STATEMENT THAT COMPLIANCE WITH THE ENERGY CODE IS NOT REQUIRED. -SCOPE OF WORK DOES NOT INVOLVE MODIFICATIONS TO EXTERIOR ENVELOPE OF BUILDING, HVAC SYSTEMS OR ELECTRICAL LIGHTING.

**DO NOT SCALE DRAWINGS**

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



**REVISIONS**

REV.	DATE	DESCRIPTION	INITIALS
A	10/30/18	ISSUED FOR REVIEW	DTC
B	03/12/19	REVISED PER COMM	MRL
C	05/02/19	ADDED FOUNDATION	MRL

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF ILLINOIS.

CIVIL SEAL

LTE 1C&2C MICRO CELL BUILD  
 14805800  
 CRAN\_RCHI\_CHUOI\_015  
 184220  
 402 W. SPRINGFIELD AVENUE  
 URBANA, IL 61801

SHEET TITLE

TITLE SHEET

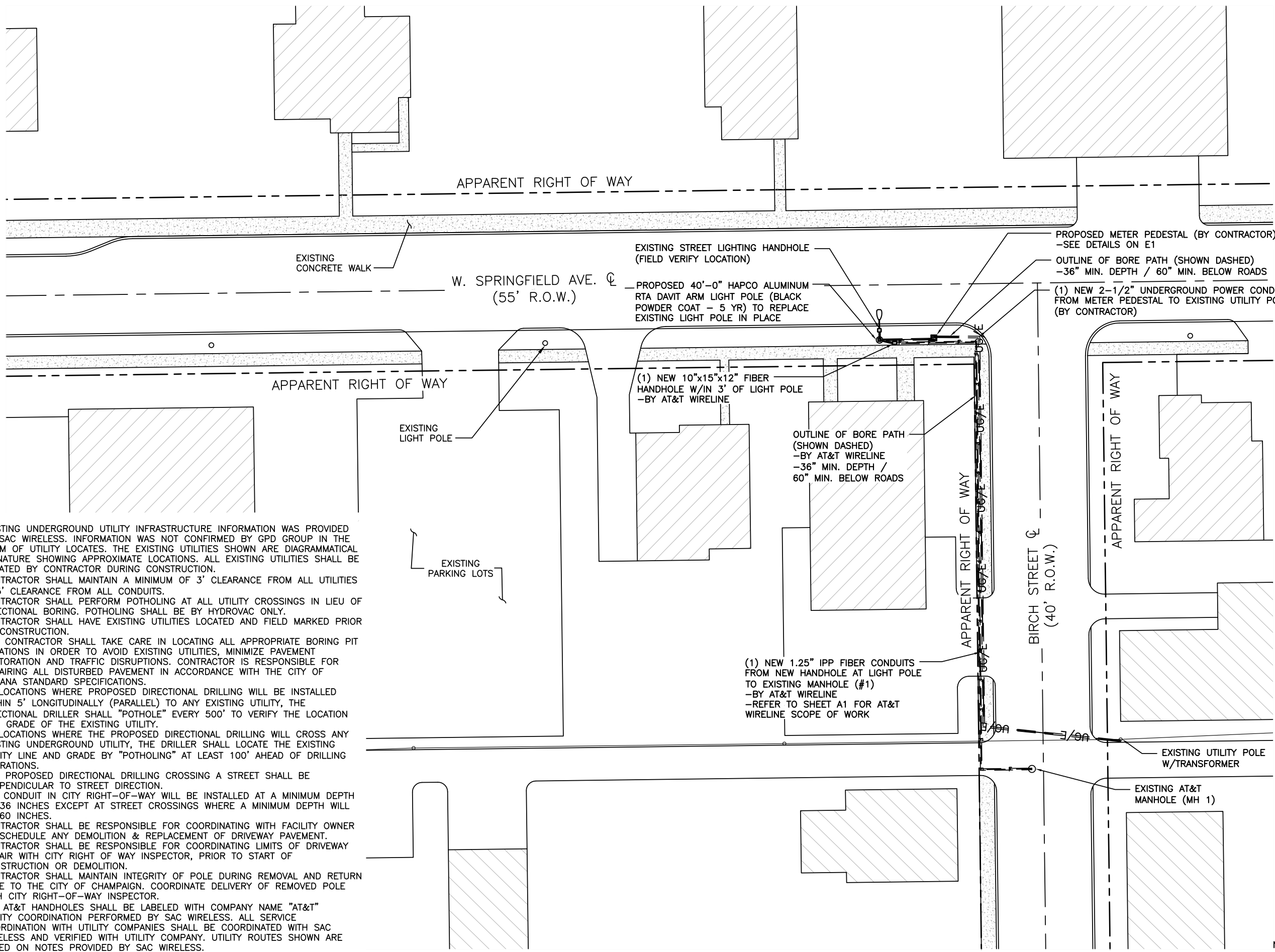
SHEET NUMBER

T1





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**NOTES:**

1. EXISTING UNDERGROUND UTILITY INFRASTRUCTURE INFORMATION WAS PROVIDED BY SAC WIRELESS. INFORMATION WAS NOT CONFIRMED BY GPD GROUP IN THE FORM OF UTILITY LOCATES. THE EXISTING UTILITIES SHOWN ARE DIAGRAMMATICAL IN NATURE SHOWING APPROXIMATE LOCATIONS. ALL EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR DURING CONSTRUCTION.
2. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3' CLEARANCE FROM ALL UTILITIES & 5' CLEARANCE FROM ALL CONDUITS.
3. CONTRACTOR SHALL PERFORM POTHOLING AT ALL UTILITY CROSSINGS IN LIEU OF DIRECTIONAL BORING. POTHOLING SHALL BE BY HYDROVAC ONLY.
4. CONTRACTOR SHALL HAVE EXISTING UTILITIES LOCATED AND FIELD MARKED PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL TAKE CARE IN LOCATING ALL APPROPRIATE BORING PIT LOCATIONS IN ORDER TO AVOID EXISTING UTILITIES, MINIMIZE PAVEMENT RESTORATION AND TRAFFIC DISRUPTIONS. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DISTURBED PAVEMENT IN ACCORDANCE WITH THE CITY OF URBANA STANDARD SPECIFICATIONS.
6. AT LOCATIONS WHERE PROPOSED DIRECTIONAL DRILLING WILL BE INSTALLED WITHIN 5' LONGITUDINALLY (PARALLEL) TO ANY EXISTING UTILITY, THE DIRECTIONAL DRILLER SHALL "POTHOLE" EVERY 500' TO VERIFY THE LOCATION AND GRADE OF THE EXISTING UTILITY.
7. AT LOCATIONS WHERE THE PROPOSED DIRECTIONAL DRILLING WILL CROSS ANY EXISTING UNDERGROUND UTILITY, THE DRILLER SHALL LOCATE THE EXISTING UTILITY LINE AND GRADE BY "POTHOLING" AT LEAST 100' AHEAD OF DRILLING OPERATIONS.
8. ANY PROPOSED DIRECTIONAL DRILLING CROSSING A STREET SHALL BE PERPENDICULAR TO STREET DIRECTION.
9. ALL CONDUIT IN CITY RIGHT-OF-WAY WILL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES EXCEPT AT STREET CROSSINGS WHERE A MINIMUM DEPTH WILL BE 60 INCHES.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH FACILITY OWNER TO SCHEDULE ANY DEMOLITION & REPLACEMENT OF DRIVEWAY PAVEMENT.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LIMITS OF DRIVEWAY REPAIR WITH CITY RIGHT OF WAY INSPECTOR, PRIOR TO START OF CONSTRUCTION OR DEMOLITION.
12. CONTRACTOR SHALL MAINTAIN INTEGRITY OF POLE DURING REMOVAL AND RETURN POLE TO THE CITY OF CHAMPAIGN. COORDINATE DELIVERY OF REMOVED POLE WITH CITY RIGHT-OF-WAY INSPECTOR.
13. ALL AT&T HANDHOLES SHALL BE LABELED WITH COMPANY NAME "AT&T"
14. UTILITY COORDINATION PERFORMED BY SAC WIRELESS. ALL SERVICE COORDINATION WITH UTILITY COMPANIES SHALL BE COORDINATED WITH SAC WIRELESS AND VERIFIED WITH UTILITY COMPANY. UTILITY ROUTES SHOWN ARE BASED ON NOTES PROVIDED BY SAC WIRELESS.



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CIVIL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805800  
CRAN\_RCHI\_CHU01\_015  
184220  
402 W. SPRINGFIELD AVENUE  
URBANA, IL 61801

SHEET TITLE  
**OVERALL SITE PLAN**

SHEET NUMBER  
**A2**

OVERALL SITE PLAN

30' 0 15' 30' SCALE: 1" = 30'-0" (24x36)  
(OR) 1/2" = 30'-0" (11x17)



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CIVIL SEAL

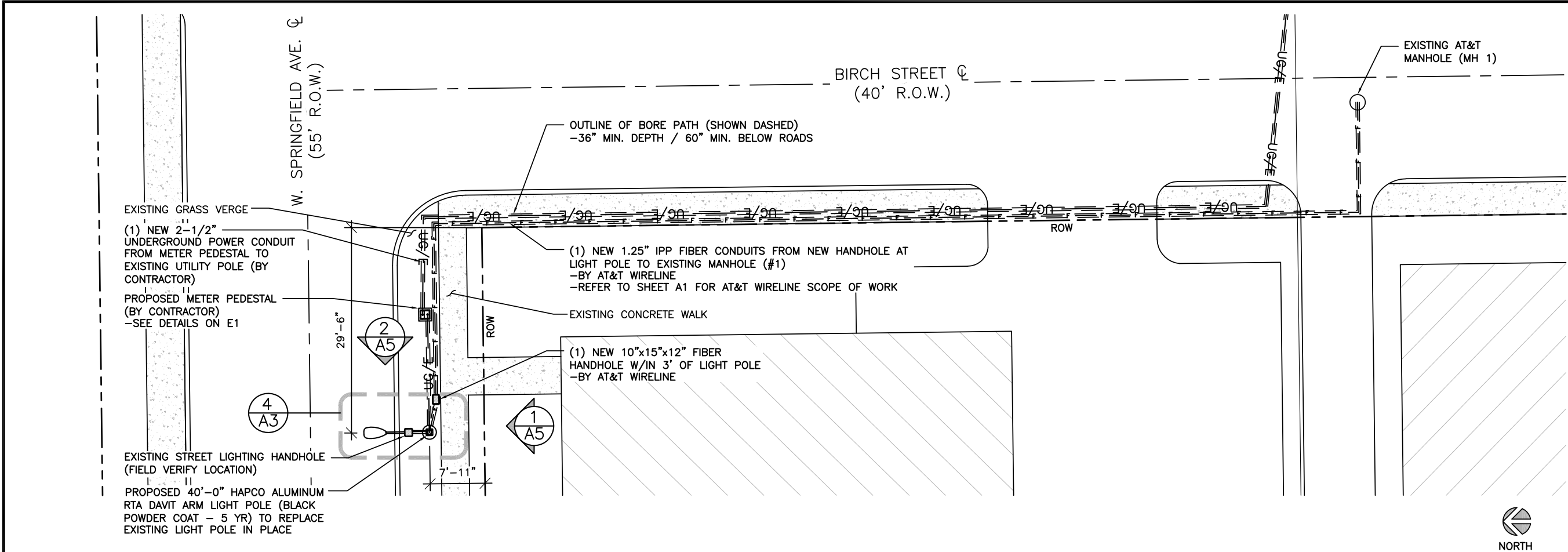
LTE 1C&2C MICRO CELL BUILD  
14805800  
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184220  
402 W. SPRINGFIELD AVENUE  
URBANA, IL 61801

SHEET TITLE

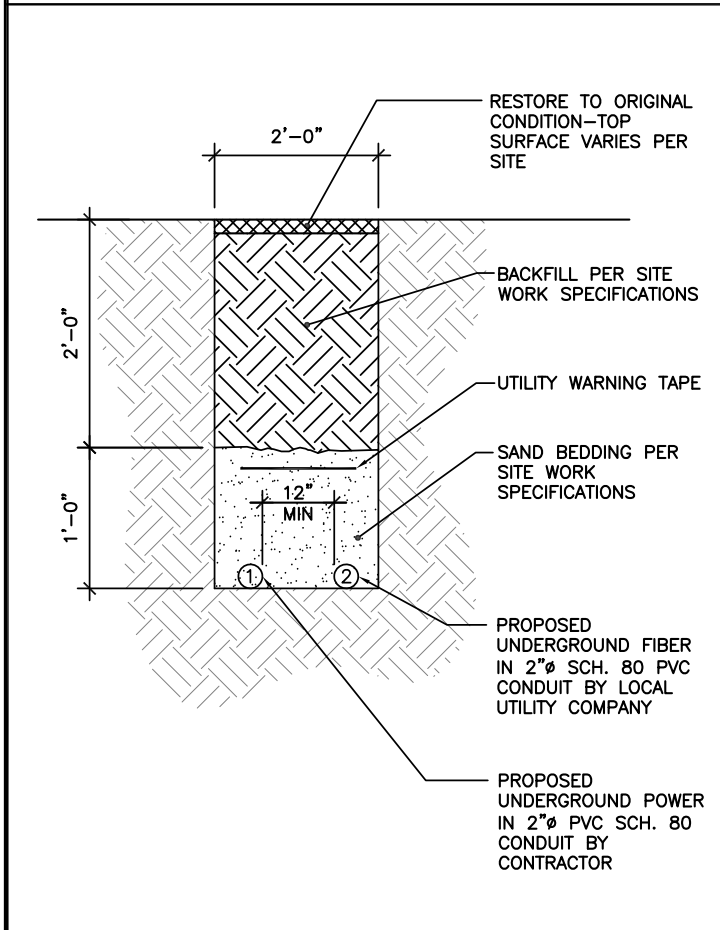
ENLARGED  
PLAN

SHEET NUMBER

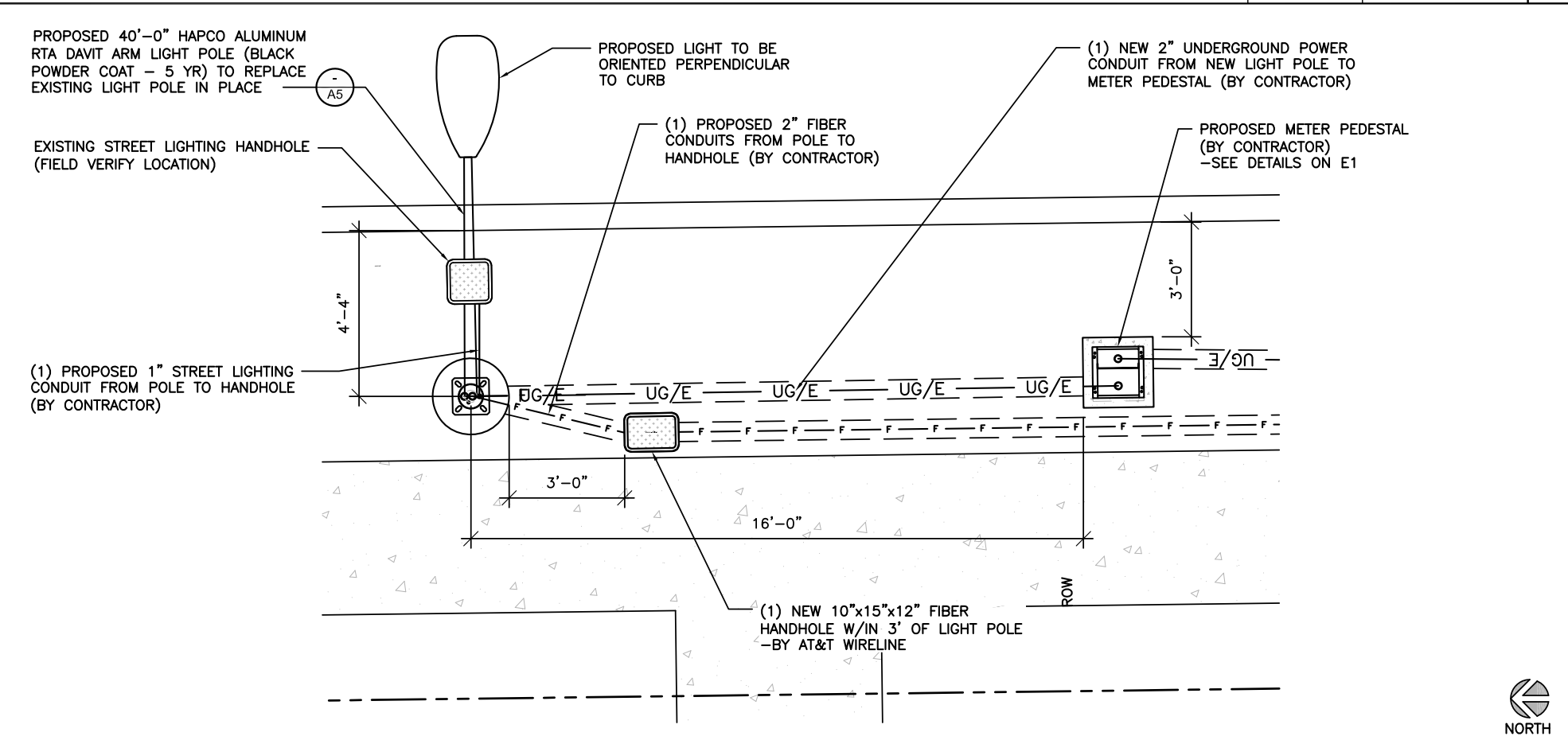
**A3**



ENLARGED SITE PLAN

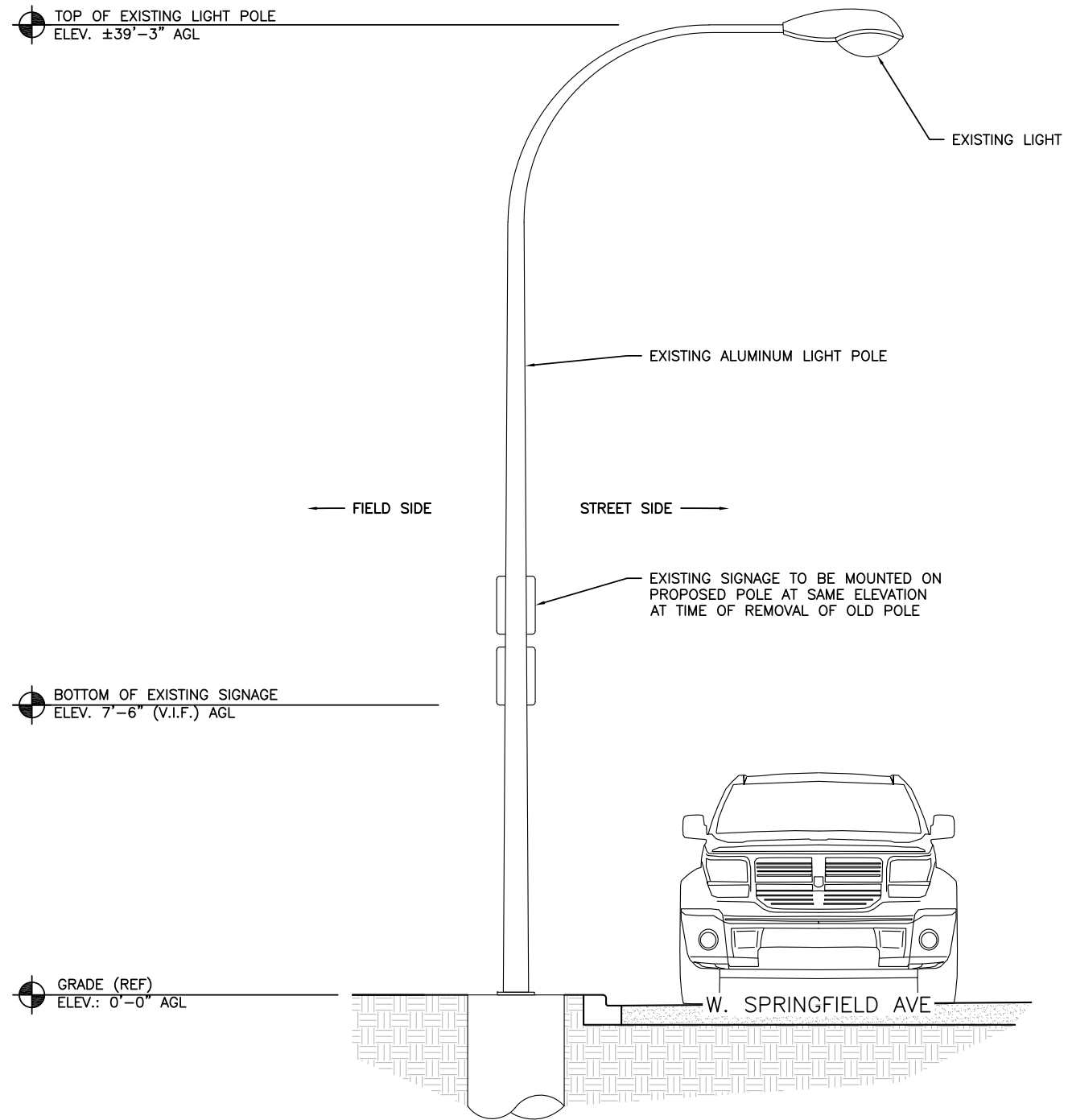


TYPICAL TRENCH DETAIL

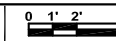


LIGHT POLE PLAN

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EXISTING LIGHT POLE ELEVATION



SCALE: 1/4" = 1'-0" (24x36)  
(OR) 1/8" = 1'-0" (11x17)

1



**SOC**  
WIRELESS  
1501 E. WOODFIELD RD.  
SUITE #300E  
SCHAUMBURG, IL 60173  
www.socw.com  
847.944.1600

A&E  
**GPD GROUP, INC.**  
Lic. # - 184-007100  
520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

REVISIONS			
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CIVIL SEAL

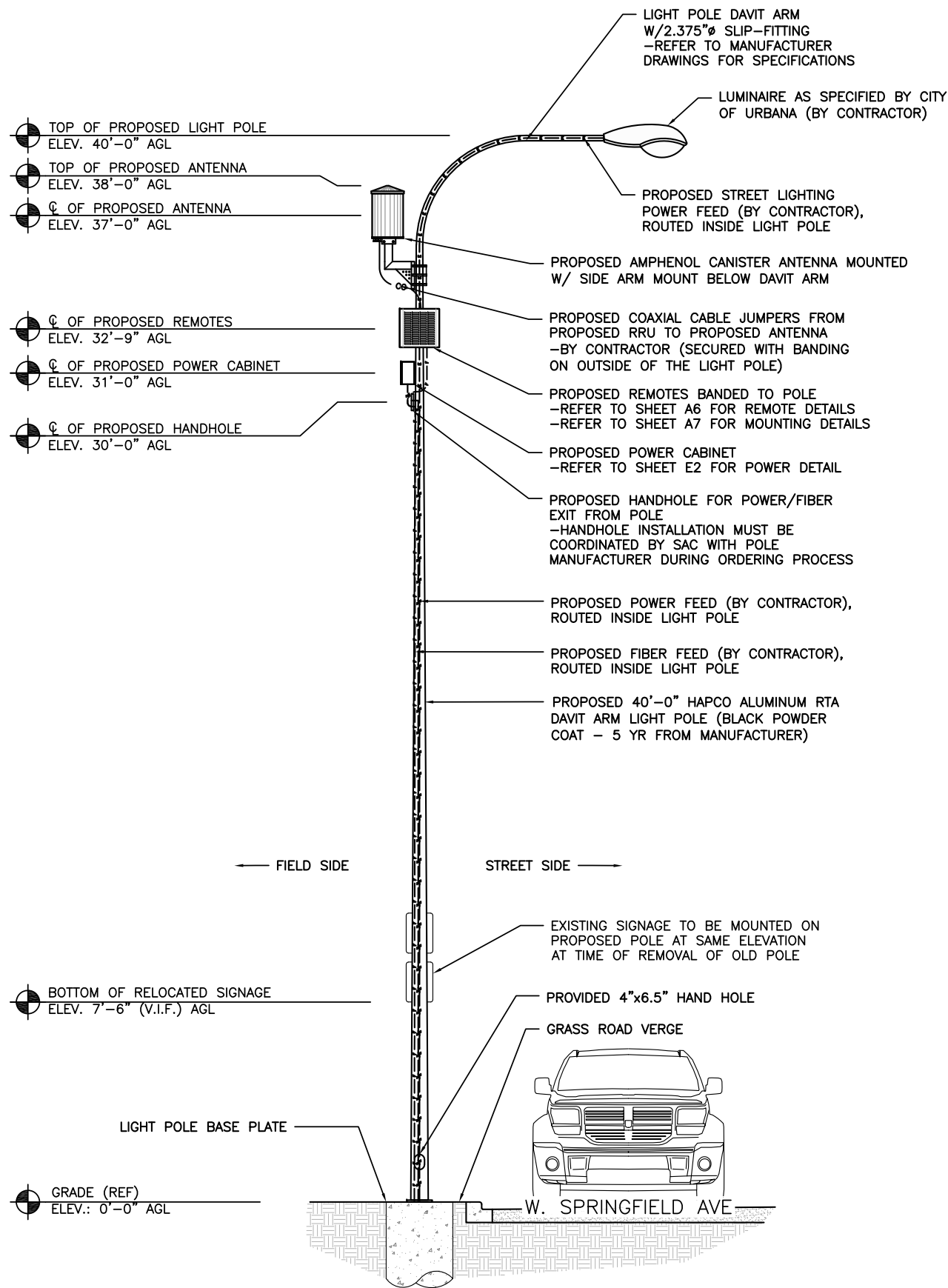
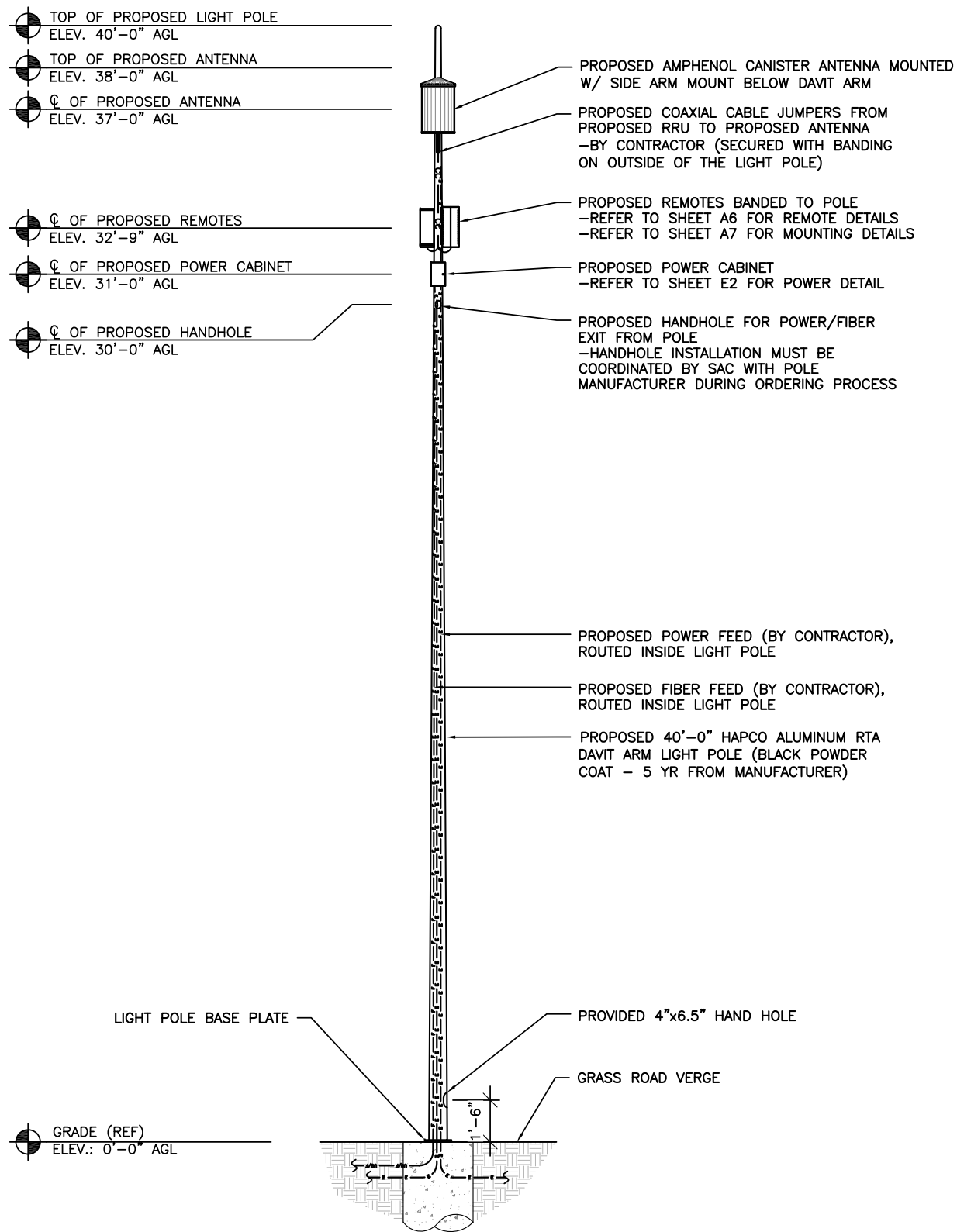
LTE 1C&2C MICRO CELL BUILD  
14805800  
CRAN\_RCHI\_CHU01\_015  
184220  
402 W. SPRINGFIELD AVENUE  
URBANA, IL 61801

SHEET TITLE  
**EXISTING  
LIGHT POLE  
ELEVATION**

SHEET NUMBER  
**A4**



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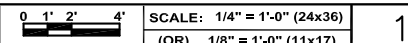
CIVIL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805800  
CRAN\_RCHI\_CHU01\_015  
184220  
402 W. SPRINGFIELD AVENUE  
URBANA, IL 61801

SHEET TITLE  
**PROPOSED LIGHT POLE ELEVATIONS**

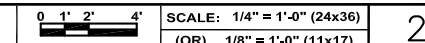
SHEET NUMBER  
**A5**

PROPOSED LIGHT POLE FRONT ELEVATION (FIELD SIDE)



1

PROPOSED LIGHT POLE SIDE ELEVATION



2

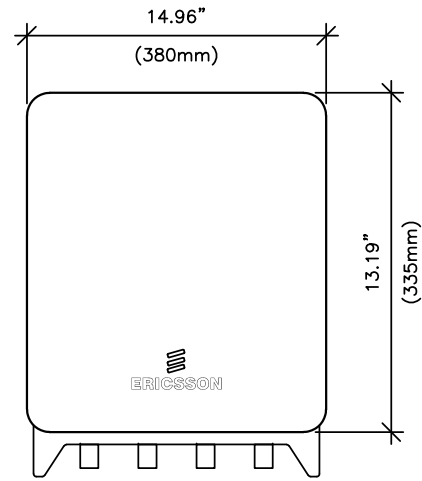
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MANUFACTURER: ERICSSON  
 MODEL: RRUS 4415 B25

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 14.96 IN (380mm)  
 WIDTH: 13.19 IN (335mm)  
 DEPTH: 5.39 IN (137mm)  
 WEIGHT: 46 LBS (21kg)

**INTERFACE SPECIFICATIONS:**  
 CPRI: 2x2.5/4.9/9.8/10.1 Gbps  
 (ONLY USE ERICSSON SUPPLIED AND APPROVED SFPs)

EXTERNAL ALARMS: 2



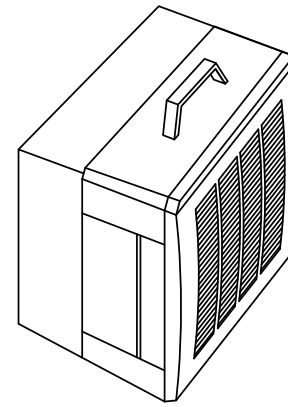
MANUFACTURER: ERICSSON  
 MODEL: RRUS-11

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 19.7 IN (500mm)  
 WIDTH: 17.0 IN (431mm)  
 DEPTH: 7.2 IN (182mm)  
 WEIGHT: 50.7 LBS (23kg)

**INTERFACE SPECIFICATIONS:**  
 ANTENNA PORTS: 2x7/16 IEC-169-4  
 OPTICAL INDICATORS: 6  
 EXTERNAL ALARMS: 1  
 FIELD GROUND: 1

**ELECTRICAL SPECIFICATIONS:**  
 POWER SUPPLY: -48 VDC OR 100-250 VAC

**ENVIRONMENTAL SPECIFICATIONS:**  
 NORMAL OPERATING TEMP.: -40°C TO +55°C  
 RELATIVE HUMIDITY: 5-100%



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	10/30/18	ISSUED FOR REVIEW	DTC
B	03/12/19	REVISED PER COMM	MRL
C	05/02/19	ADDED FOUNDATION	MRL

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

RRUS 4415 B25 DETAILS

SCALE  
N.T.S. 1

RRUS-11 DETAILS

SCALE  
N.T.S. 2

DETAIL NOT USED

SCALE  
N.T.S. 3

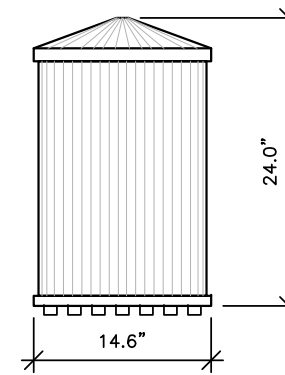
ANTENNA DETAIL

SCALE: NTS

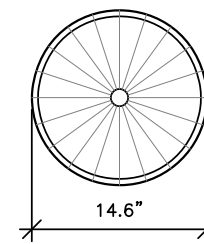
4



IMAGE



SIDE VIEW



TOP VIEW

AMPHENOL MULTI BAND CANISTER ANTENNA  
 MODEL: 2C2U3MT360X06Fxyso  
 COLOR: GREY

MECHANICAL CHARACTERISTICS

- ANTENNA DIMENSIONS (HEIGHT X DIAMETER) : 24.0"x14.6"
- WEIGHT W/OUT MOUNTING BRACKET KIT: TBD LBS
- SURVIVAL WIND SPEED: 150 MPH
- WIND AREA: 2.4 FT<sup>2</sup>
- WIND LOAD (100 MPH): 43 LBF

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF ILLINOIS.

REFERENCE ONLY

LTE 1C&2C MICRO CELL BUILD  
 14805800  
 CRAN\_RCHI\_CHU01\_015  
 184220  
 402 W. SPRINGFIELD AVENUE  
 URBANA, IL 61801

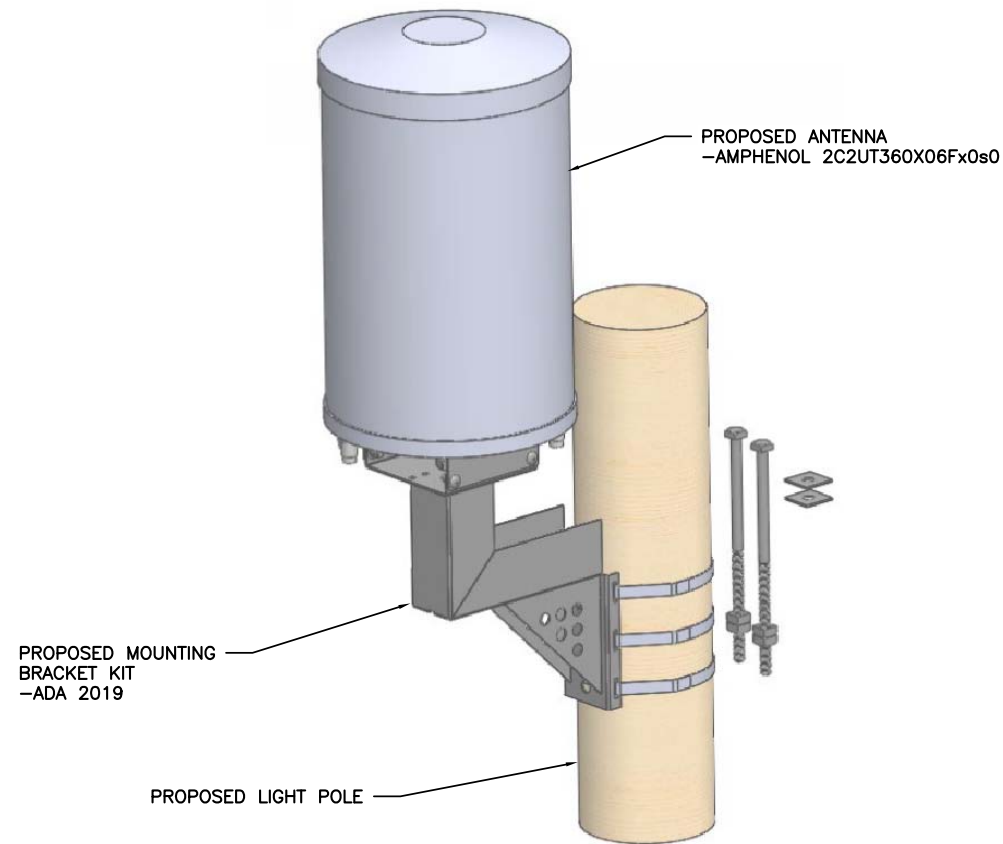
SHEET TITLE

EQUIPMENT  
 DETAILS

SHEET NUMBER

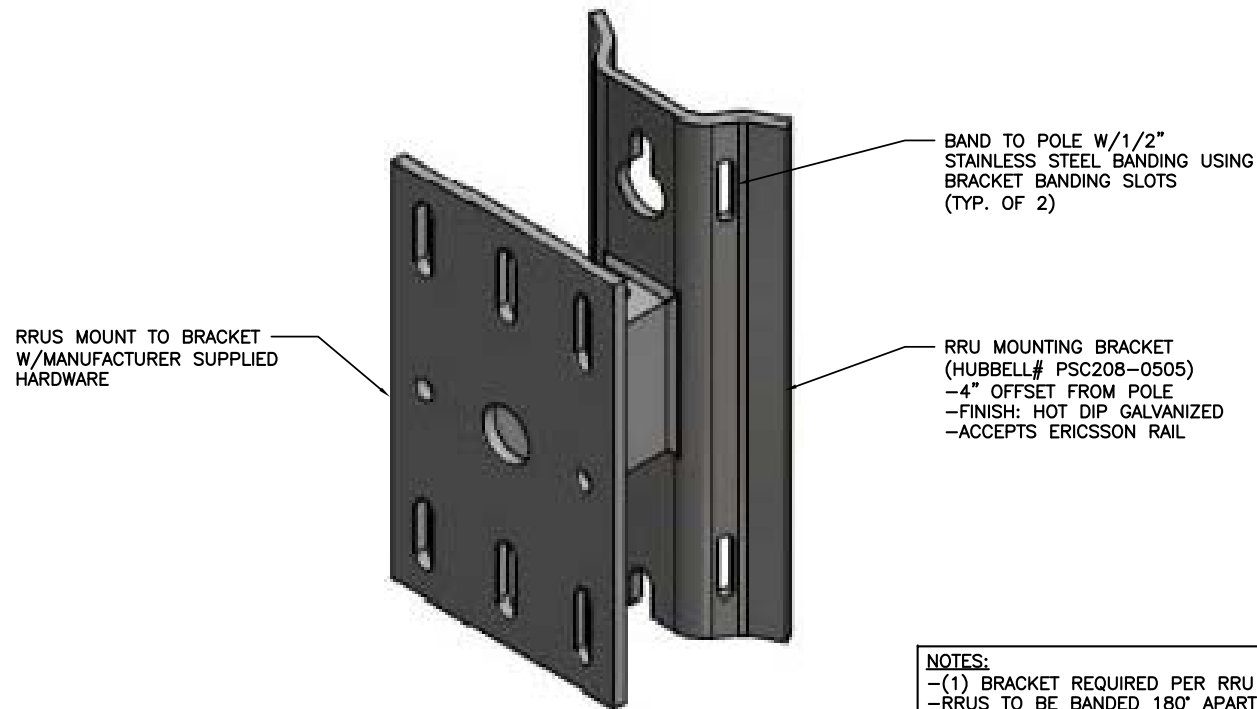
A6

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ANTENNA MOUNTING DETAIL

SCALE	1
N.T.S.	

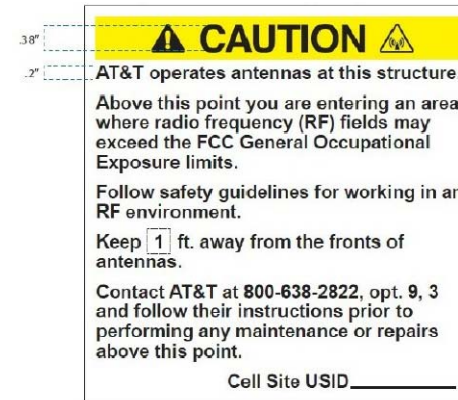


**NOTES:**  
-(1) BRACKET REQUIRED PER RRU  
-RRUS TO BE BANDED 180° APART ON OPPOSITE SIDES OF POLE

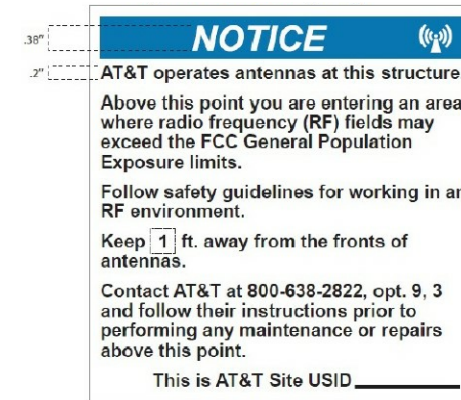
RRU MOUNTING DETAIL

SCALE	2
N.T.S.	

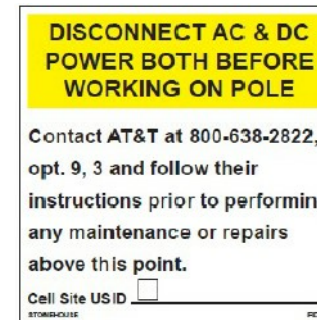
EXAMPLE CRAN RF CAUTION SIGN



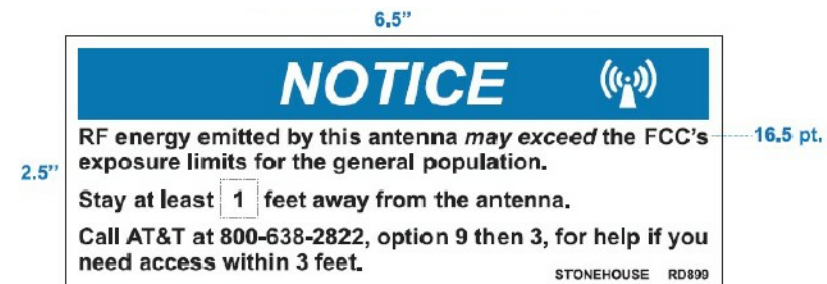
EXAMPLE CRAN RF NOTICE SIGN



EXAMPLE CRAN POLE POWER DISCONNECT SIGN



EXAMPLE STONEHOUSE RD899 RF NOTICE SIGN



CRAN Pole Power Disconnect, RF Notice, and Caution signs shall be ordered through Stonehouse Signs. Three versions are available for each of the signs shown in Figures 16, 17, and 18: .055 Polyethylene - Reflective, .025 Aluminum - Reflective, and Peel Back Label - Reflective. All versions are 6"x6" with font designed to be visible from 2-3 feet away when approached from below to provide warning about ascending into the high RF exposure areas. The RF Caution sign shown in Figure 19 is designed to be visible from 3 feet away and is available in the reflective peel back label version only. It is designed to fit on most of the CRAN/Small Cell antenna types currently deployed. It may also be placed on antenna shrouds as shown in Figures 11 and 12.

**SIGNAGE NOTE:**  
SIGNAGE SHALL BE INSTALLED PER AT&T DIRECTION

AT&T SIGNAGE DETAIL

SCALE: NTS

3



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	10/30/18	ISSUED FOR REVIEW	DTC
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C	05/02/19	ADDED FOUNDATION	MRL

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CIVIL SEAL

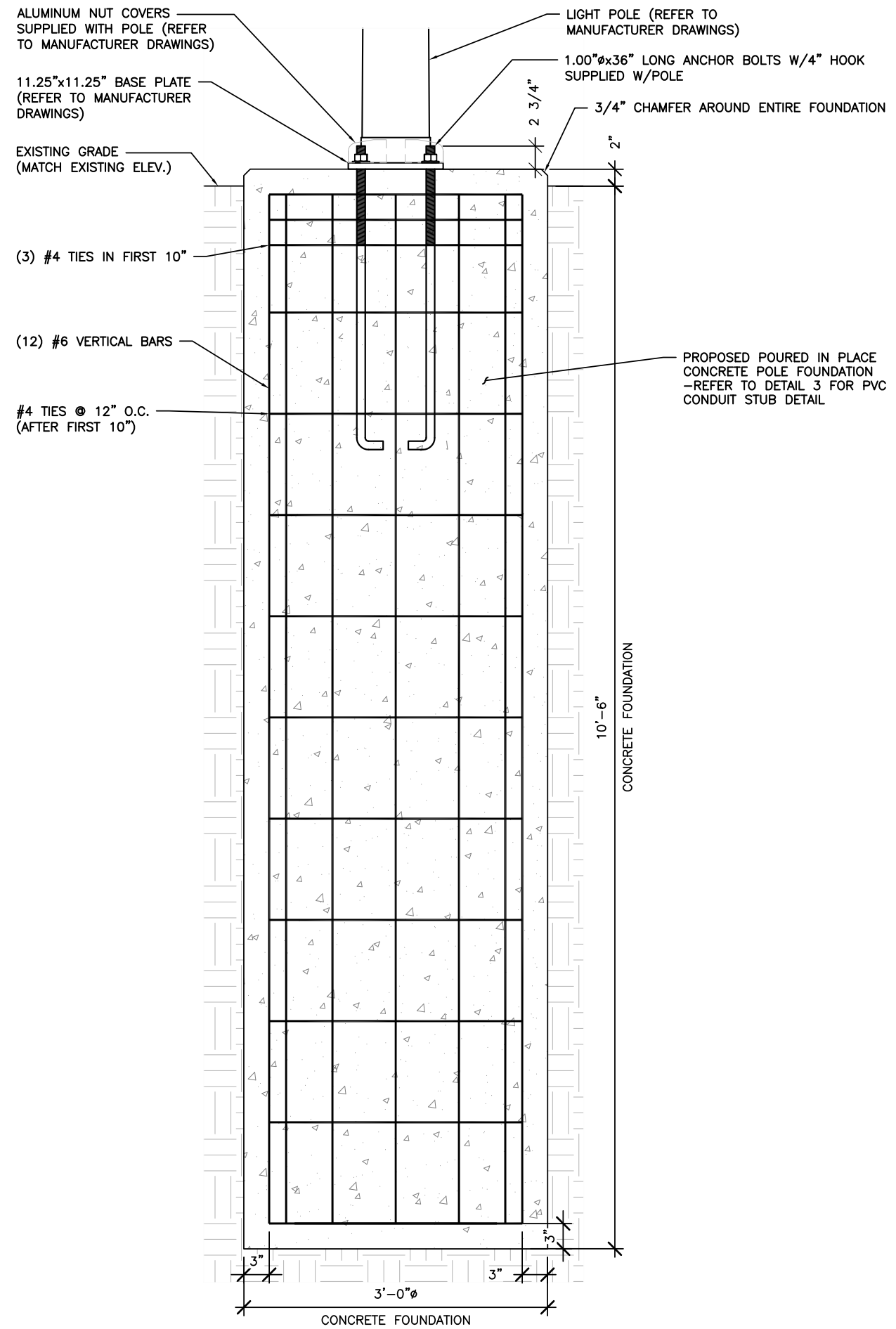
LTE 1C&2C MICRO CELL BUILD  
14805800  
CRAN\_RCHI\_CHU01\_015  
184220  
402 W. SPRINGFIELD AVENUE  
URBANA, IL 61801

SHEET TITLE  
**MOUNTING  
DETAILS**

SHEET NUMBER  
**A7**



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**STRUCTURAL NOTES:**

1. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING SPECIFICATIONS:

SLUMP	4" (±1")
AIR ENTRAINMENT:	6% (±1%)
MIN. COMPRESSIVE STRENGTH (F'c):	4,500 PSI @ 28 DAYS
CONCRETE COVER:	3" ALL SIDES

CONCRETE SHALL BE TESTED BY A REPUTABLE INDEPENDENT THIRD PARTY TESTING AGENCY IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318. FIVE (5) CONCRETE CYLINDERS SHALL BE CAST IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318 AND BE LABORATORY CURED. THE AVERAGE OF THREE (3) CONCRETE CYLINDERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 4,500 PSI AT 28 DAYS. THE TESTING RESULTS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER AND AT&T REPRESENTATIVE.

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI\*96, "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" AND ACI 305, 306 AND 307 UNLESS NOTED OTHERWISE.

ALL DETAILING, FABRICATION AND PLACING OF CONCRETE SHALL CONFORM TO ACI 318-11.

2. STRUCTURAL STEEL SHALL MEET THE FOLLOWING SPECIFICATIONS:

MATERIALS:	REINFORCING ANCHOR BOLTS	ASTM 615, GRADE 60 ASTM F1554, GRADE 55
REINFORCING COVER:	TOP	2"
	BOTTOM	3"

3. DESIGN PARAMETERS:

STRUCTURAL ANALYSIS OF THE POLE AND FOUNDATION WAS COMPLETED BY OTHERS. COORDINATE WITH SAC WIRELESS FOR A COPY OF POLE STRUCTURAL ANALYSIS.

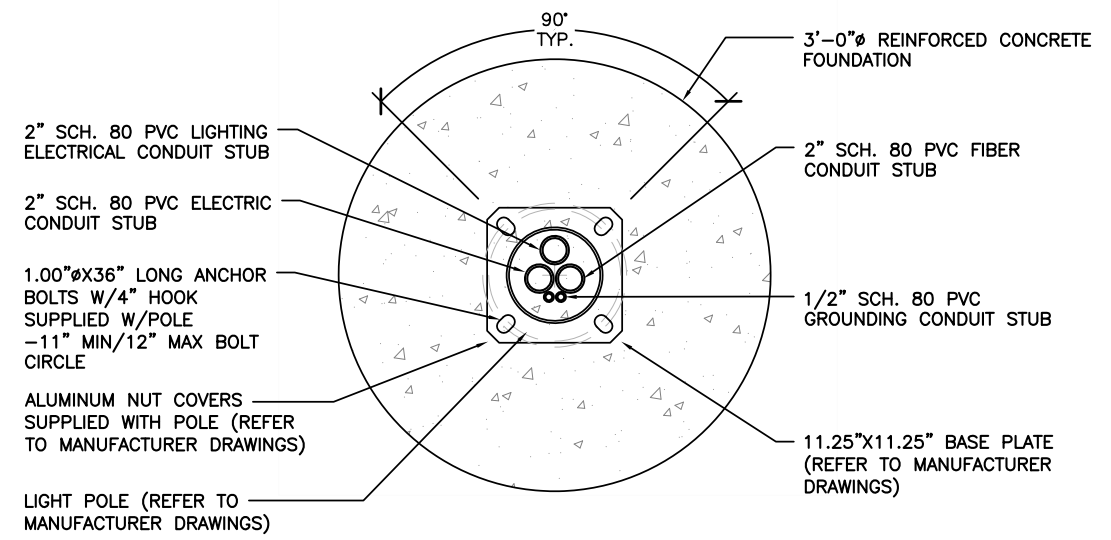
DESIGN CODES:	2015 INTERNATIONAL BUILDING BUILDING CODE TIA-222-G ASCE 7-05 CHAMPAIGN COUNTY, IL
POLE LOCATION:	
BASIC WIND SPEED:	130 MPH
GUST FACTOR:	1.14
STRUCTURE CLASS:	CLASS II
EXPOSURE CLASS:	B
TOPOGRAPHIC CATEGORY:	1

PRESUMPTIVE SOIL PARAMETERS: FOUNDATION IS BASED ON AN ALLOWABLE LATERAL BEARING PRESSURE OF AT LEAST 200 PSF/FT.

4. ALL CONTRACTORS SHALL EXERCISE GREAT CARE DURING EXCAVATION. CONTRACTOR SHALL PREDETERMINE UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY IF DEVIATION FROM PLANS EXIST. CONTRACTOR SHALL CONTACT 811 48 HR. PRIOR TO DIGGING, GRADING, OR DRILLING.

**FOUNDATION NOTES**

SCALE	2
N.T.S.	



FOUNDATION DETAIL

SCALE: NTS 1

FOUNDATION DETAIL

SCALE: NTS 3



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STRUCTURAL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805800  
CRAN\_RCHI\_CHU01\_015  
184220  
402 W. SPRINGFIELD AVENUE  
URBANA, IL 61801

SHEET TITLE  
**POLE FOUNDATION DETAILS**

SHEET NUMBER  
**S1**





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AC POWER PANEL (MILBANK CP3B51C1PAAOM01)											
240 VOLTS, 1-PHASE, 3-WIRE, 200A											
MAIN RATING (A) :					SYSTEM VOLTAGE (V) :						
200					240						
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
DISTRIBUTION PANEL	1190	c	40	1	1190		2	--	c	0	
	0	c	--	3		0	4	--	c	0	
	0	c	--	5	0		6	--	c	0	
	0	c	--	7		0	8	--	c	0	
PHASE TOTALS (VA):					1190	0					
CURRENT PER PHASE (A):					12	0	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					1190	Legend: c = continuous, nc = non-continuous					
PANEL CAPACITY (kVA):					48.0	CONNECTED LOAD (kVA): 1.2					
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					1.5						
PANEL LOADING (TOTAL) (kVA):					1.5						
SPARE CAPACITY (kVA):					46.5						

ELECTRICAL MAIN & LOAD CENTER PANEL SCHEDULE SCALE N.T.S. 1

AC POWER PANEL (RAYCAP RSCAC-6533-P-120-D)											
120 VOLTS, 1-PHASE, 2-WIRE, 40A											
MAIN RATING (A) :					SYSTEM VOLTAGE (V) :						
40					120						
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
AWS RRUS-32 B66	704	c	7	1	704		2	7	c	0	SPARE
PCS RRUS-32 B2	704	c	7	3		704	4	7	c	0	SPARE
SPARE	0		7	5	0						
PHASE TOTALS (VA):					704	704					
CURRENT PER PHASE (A):					7	7	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					1408	Legend: c = continuous, nc = non-continuous					
PANEL CAPACITY (kVA):					4.8	CONNECTED LOAD (kVA): 1.4					
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					1.8						
PANEL LOADING (TOTAL) (kVA):					1.8						
SPARE CAPACITY (kVA):					3.0						

ELECTRICAL PANEL SCHEDULE SCALE N.T.S. 3

MANUFACTURER: MILBANK  
 MODEL: CP3B51C1PAAOM01

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 48 IN  
 WIDTH: 16 IN  
 DEPTH: 17 IN

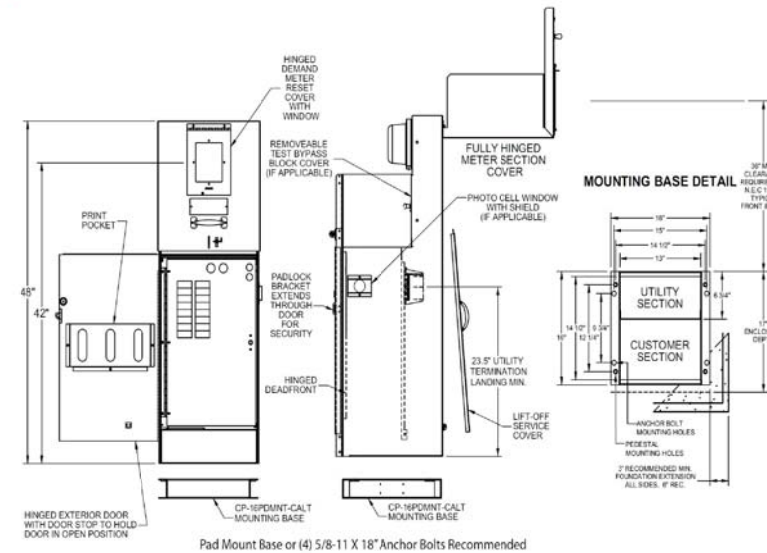
**ELECTRICAL SPECIFICATIONS:**  
 AMPERAGE RATING: 200 A  
 OPERATING VOLTAGE: 240 V  
 ELECTRICAL PHASE: 1 PH  
 MAIN BREAKER SIZE: 200 A  
 QTY OF BRANCH CIRCUITS: 20  
 LINE SIDE WIRE RANGE: 6 AWG - 350 kcmil

**ENVIRONMENT SPECIFICATIONS:**  
 UL LISTED: YES  
 NEMA RATING: 3R

**ADDITIONAL SPECIFICATIONS:**  
 ON AMEREN ENERGY APPROVED LIST (SECTION 1100 OF ELECTRIC SERVICE MANUAL, DATED JANUARY 18, 2018)



"A" Style 16" Metered Commercial Pedestal



**SPECIAL NOTE:**  
 METER PEDESTAL SHALL BE PAINTED TO MATCH AT&T EQUIPMENT IN RIGHT OF WAY. CONTRACTOR SHALL COORDINATE W/AT&T FOR COLOR AND PROVIDE DOCUMENTATION OF SUCH TO CITY OF URBANA FOR APPROVAL PRIOR TO CONSTRUCTION.

AC METER SOCKET W/MAIN & LOAD CENTER DETAIL SCALE N.T.S. 2

MANUFACTURER: PTS  
 MODEL: PTS90120

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 10.13 IN  
 WIDTH: 06.15 IN  
 DEPTH: 06.00 IN  
 WEIGHT: 10 LBS

**ELECTRICAL SPECIFICATIONS:**  
 AMPERAGE: 40A  
 OPERATING VOLTAGE: 120V  
 QTY OF PROTECTED CIRCUITS: 5

**ENVIRONMENT SPECIFICATIONS:**  
 NORMAL OPERATING TEMP.: -40°C TO +60°C



AC DISTRIBUTION PANEL DETAIL SCALE N.T.S. 4



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
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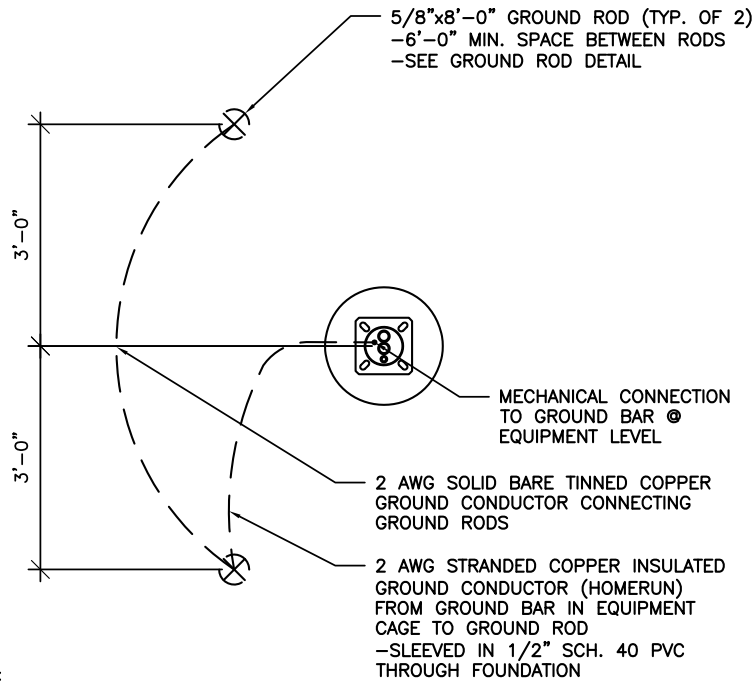
ELECTRICAL SEAL

LTE 1C&2C MICRO CELL BUILD  
 14805800  
 CRAN\_RCHI\_CHU01\_015  
 184220  
 402 W. SPRINGFIELD AVENUE  
 URBANA, IL 61801

SHEET TITLE  
**PANEL SCHEDULE & ELECTRICAL DETAILS**

SHEET NUMBER  
**E2**

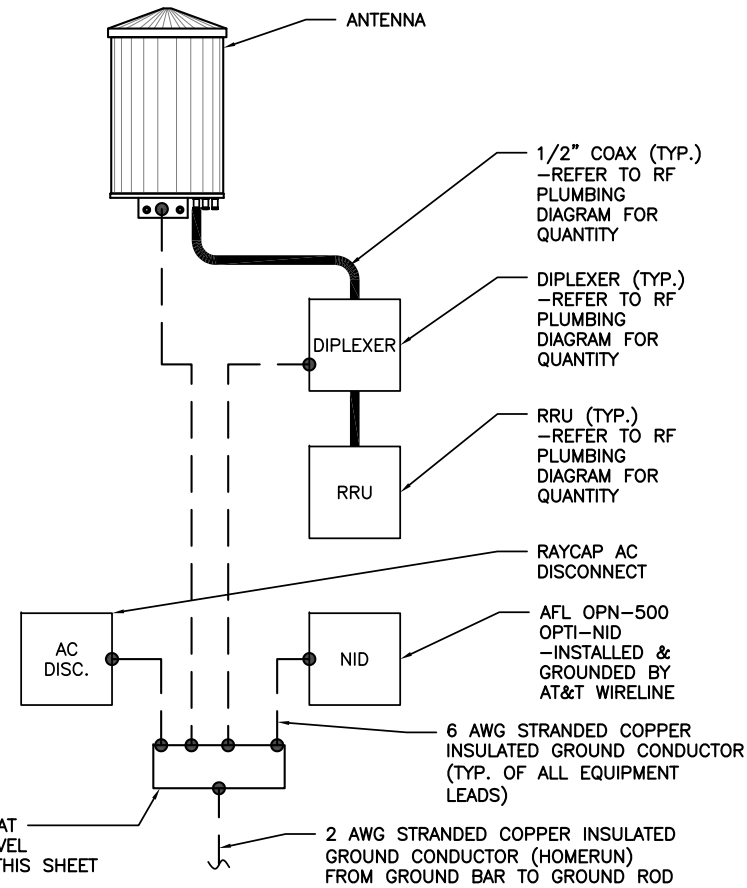
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NOTE:  
GROUND ROD LOCATIONS ARE  
DIAGRAMMATICAL ONLY. CONTRACTOR  
SHALL PLACE GROUND RODS IN  
FIELD TO BE LEAST OBSTRUCTIVE  
TO EXISTING FIELD CONDITIONS.

POLE GROUNDING PLAN DETAIL

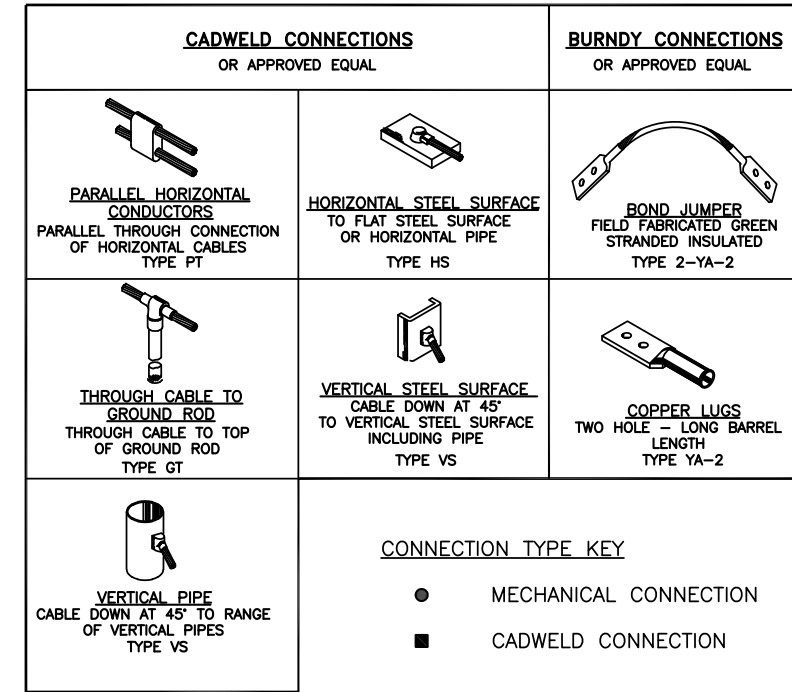
SCALE  
N.T.S. 1



GROUND BAR AT  
EQUIPMENT LEVEL  
-SEE DETAIL THIS SHEET

EQUIPMENT GROUNDING RISER DETAIL

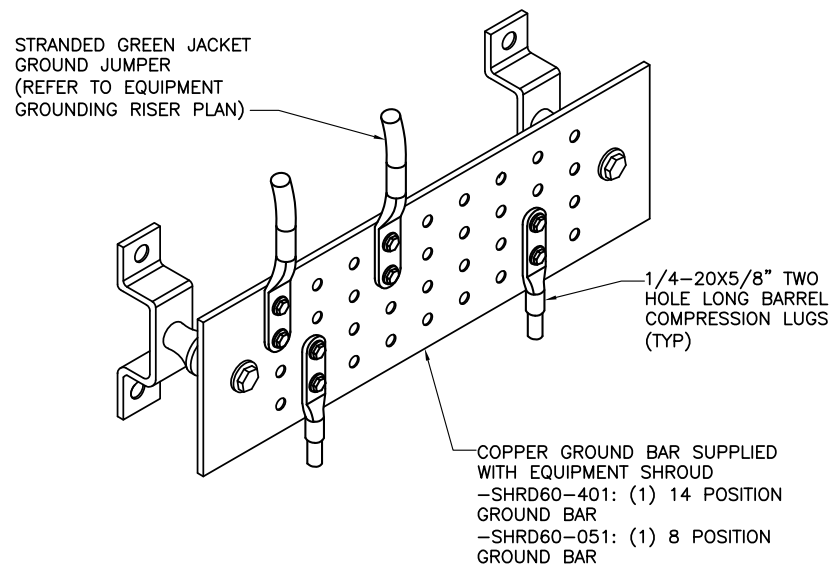
SCALE  
N.T.S. 2



CONNECTION TYPE KEY  
● MECHANICAL CONNECTION  
■ CADWELD CONNECTION

GROUNDING CONNECTIONS DETAIL

SCALE  
N.T.S. 3



NOTES:  
1. CONTRACTOR SHALL UTILIZE LUGGED HOLES PROVIDED. NO DRILLING OF THE BAR WILL BE PERMITTED.  
2. ALL HARDWARE SHALL BE 1/4-20 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.  
3. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

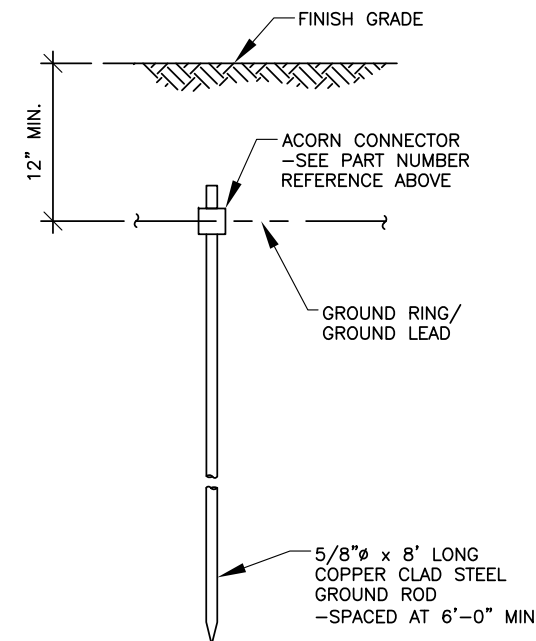
GROUND BAR DETAIL

SCALE  
N.T.S. 4

DETAIL NOT USED

SCALE  
N.T.S. 5

ACORN CONNECTOR		
ELEC. MOTION CO. PART #	GROUND CONDUCTOR SIZE	GROUND ROD SIZE
EM2DB	#12-1/0 AWG	5/8"Ø



GROUND ROD DETAIL

SCALE  
N.T.S. 6



REVISIONS			
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ELECTRICAL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805800  
CRAN\_RCHI\_CHU01\_015  
184220  
402 W. SPRINGFIELD AVENUE  
URBANA, IL 61801

SHEET TITLE

GROUNDING  
DETAILS

SHEET NUMBER

E3



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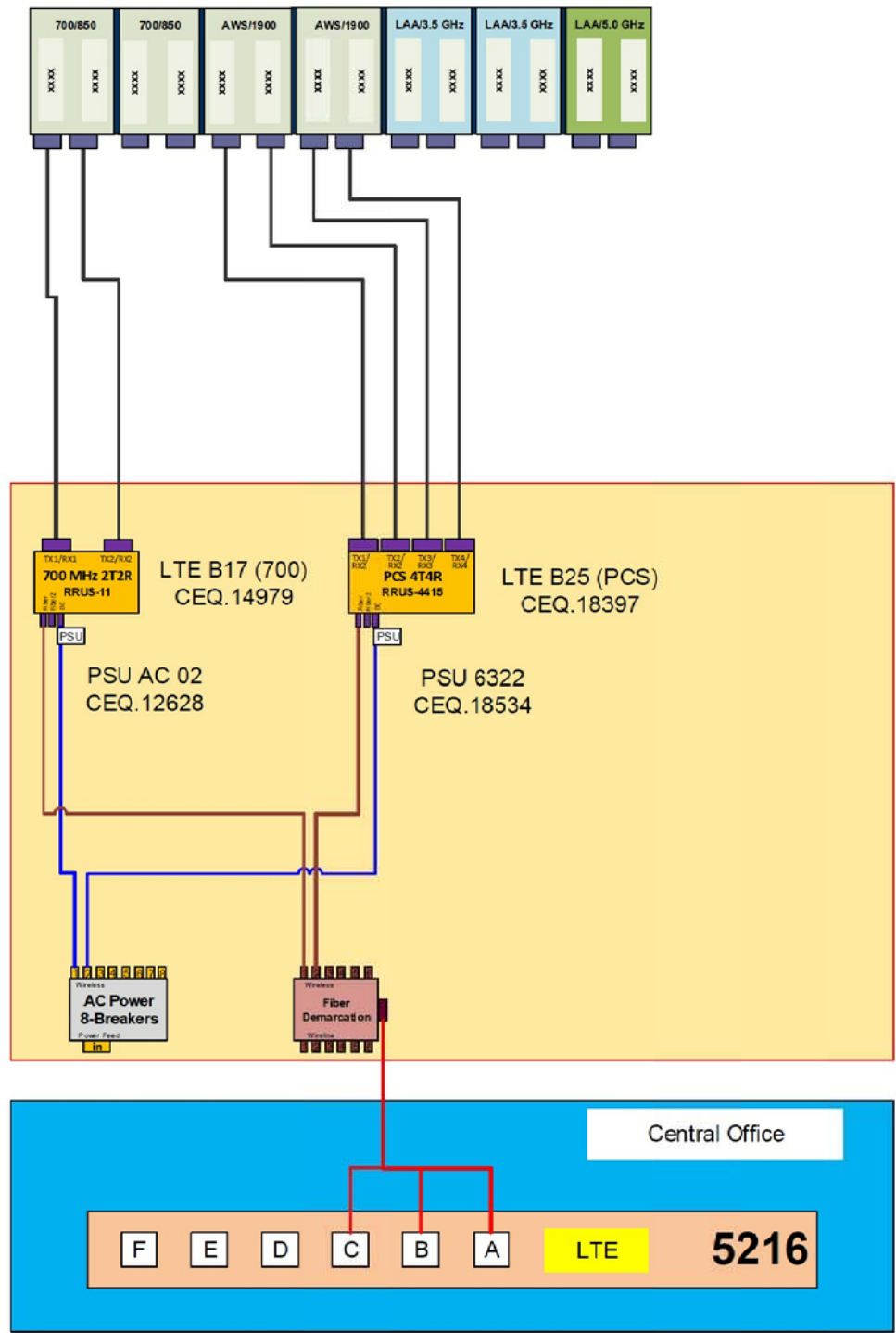
Diagram - 2	Diagram File Name - Micro 17.vsd												
Atoll Site Name -	Champaign CRAN HUB-University	Location Name -	CRAN_CHAMPAIGN_UNIVERSITY_0001 BUILD	Market -	CENTRAL ILLINOIS	Market Cluster -	ILLINOIS/WISCONSIN						
Comments:													

Configuration Name	700 MHz 2T2R LTE	700 MHz 4T4R LTE	850 MHz 2T2R LTE	850 MHz 4T4R LTE	1900 MHz 2T2R LTE	1900 MHz 4T4R LTE	2100 MHz 2T2R LTE	2100 MHz 4T4R LTE	5GHz LAA LTE	3.5 GHz LAA LTE	Sector Count	Carrier Count	Antenna LAA location
Micro #17	X	NA	NA	NA	NA	X	NA	NA	NA	NA	1	2	14 Ports Antenna

Amphenol Pseudo-Omni – 14 ports Antenna  
2C2U3MT360X06FxyS0



**Important Note:**  
For detailed radio to antenna wiring refer to the latest 4T4R Antenna/Radio Port Connection Field Notice (RF-HW-2016-234) and the 4T Wiring Playbook



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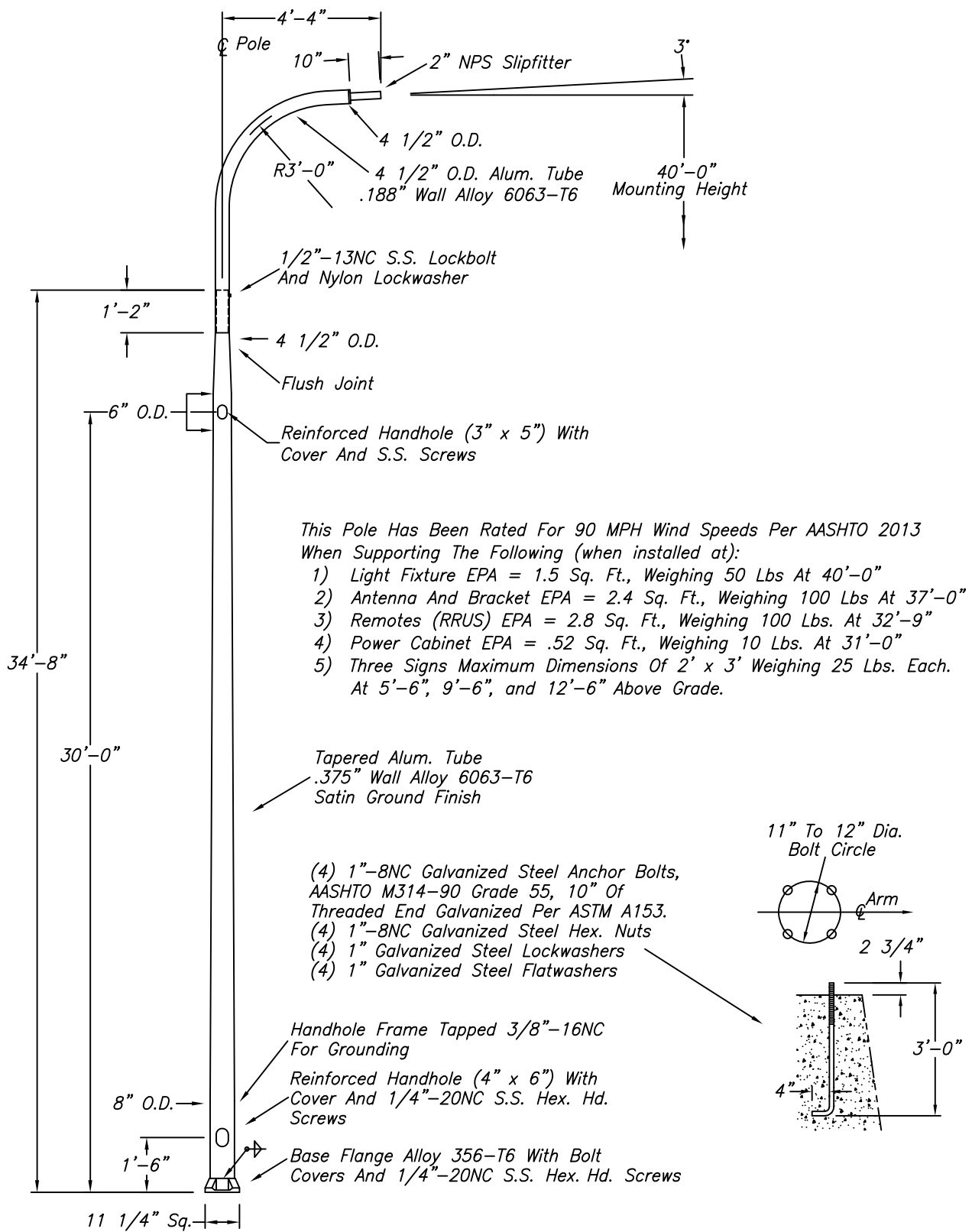
REFERENCE ONLY

LTE 1C&2C MICRO CELL BUILD 14805800  
CRAN\_RCHI\_CHU01\_015 184220  
402 W. SPRINGFIELD AVENUE URBANA, IL 61801

SHEET TITLE  
RF PLUMBING DIAGRAM

SHEET NUMBER  
**RF1**





This Pole Has Been Rated For 90 MPH Wind Speeds Per AASHTO 2013  
When Supporting The Following (when installed at):

- 1) Light Fixture EPA = 1.5 Sq. Ft., Weighing 50 Lbs At 40'-0"
- 2) Antenna And Bracket EPA = 2.4 Sq. Ft., Weighing 100 Lbs At 37'-0"
- 3) Remotes (RRUS) EPA = 2.8 Sq. Ft., Weighing 100 Lbs. At 32'-9"
- 4) Power Cabinet EPA = .52 Sq. Ft., Weighing 10 Lbs. At 31'-0"
- 5) Three Signs Maximum Dimensions Of 2' x 3' Weighing 25 Lbs. Each.  
At 5'-6", 9'-6", and 12'-6" Above Grade.

SKDGO32619B

WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES

NO.	REVISIONS	DATE

**hapco**  
Abingdon, Va.

TITLE 40' DAVIT/ANTENNA POLE

CUSTOMER

SCALE NTS DATE 3.26.19

BY RDG DWG. NO. Page 30 of 30

CHK'D SKDGO32619B

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SITE PHOTO



# AT&T MOBILITY

**PROJECT :** LTE 1C&2C PICO CELL BUILD  
**SITE # :** CRAN\_RCHI\_CHUOI\_009  
**USID / NODE:** 184214  
**FA # :** 14805794  
**PTN # :** 3304A0AAPG / 3304A0AAPW  
**PACE # :** MRCHI025422 / MRCH025403  
**ENODE B:** ILL07042F\_R2  
**JURISDICTION :** CITY OF URBANA

**SITE NAME :** CRAN\_RCHI\_CHUOI\_009  
**ADDRESS :** 544 S GOODWIN AVE  
 URBANA, IL 61801

PROJECT INFORMATION

**SITE NAME:** CRAN\_RCHI\_CHUOI\_009  
**COUNTY:** CHAMPAIGN  
**ADDRESS:** 544 S GOODWIN AVE  
 URBANA, IL 61801  
**JURISDICTION:** CITY OF URBANA  
**USID:** 184214  
**FA NUMBER:** 14805794  
**PTN:** 3304A0AAPG / 3304A0AAPW  
**PACE:** MRCHI025422 / MRCH025403

**LATITUDE:** 40° 06' 31.67" (40.108764°)  
**LONGITUDE:** 88° 13' 26.65" (-88.223793°)  
**ELEVATION:** 721'

**LIGHT POLE/UTILITY POLE OWNER:** CITY OF URBANA

**APPLICANT:** AT&T MOBILITY  
 930 NATIONAL PARKWAY  
 SCHAUMBURG IL 60173

**AT&T PROJECT MANAGER/SITE ACQUISITION:** VANESSA ROSS  
 (217) 814-2314  
 VF2021@ATT.COM

**AT&T CONSTRUCTION MANAGER:** CHRISTIANA RACHAL  
 CR630A@ATT.COM

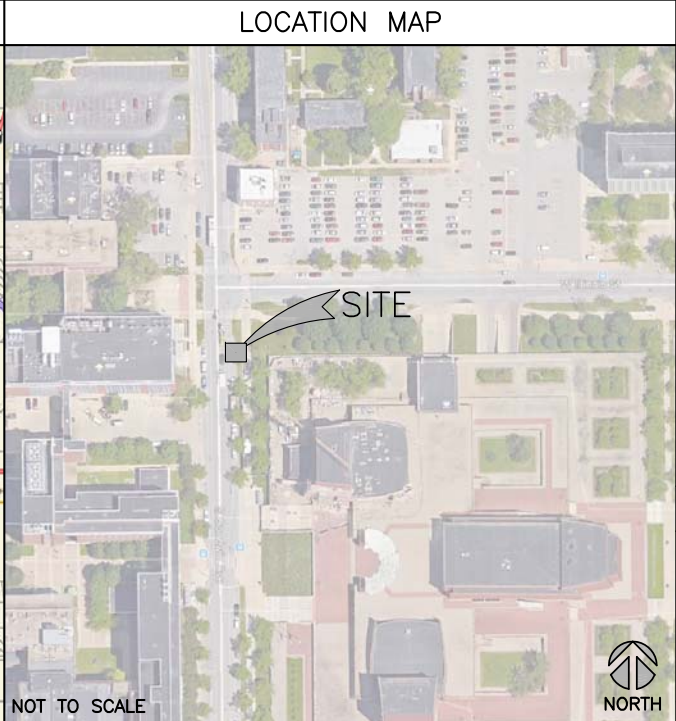
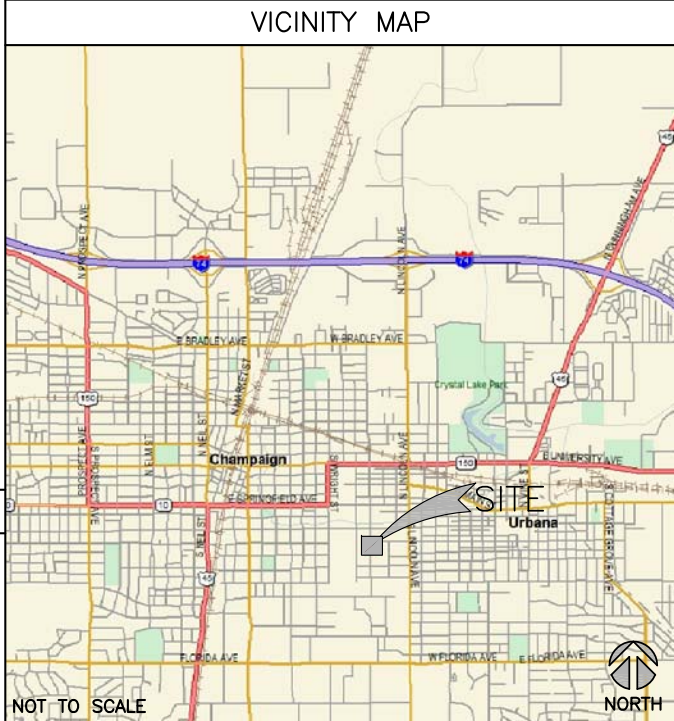
PROJECT CONSULTANTS

**PROJECT MANAGER:** SAC WIRELESS LLC  
 540 W. MADISON ST. (9TH FLOOR)  
 CHICAGO IL 60661  
 CONTACT: PRITI MORE  
 PHONE: (312) 789-4353  
 EMAIL: PRITI.MORE@SACW.COM

**ARCHITECT:** GPD GROUP, INC. - 184-007100  
 520 S. MAIN ST., SUITE 2531  
 AKRON, OH 44311  
 317-295-3180

**SAC C.M.:** MARK KLEPACKI  
 EMAIL: MARK.KLEPACKI@SACW.COM

**SAC P.M.:** JAMES HOM  
 EMAIL: JAMES.HOM@SACW.COM



DRAWING INDEX

T1	TITLE SHEET
A1	FIBER DELIVERY PLANS (REFERENCE ONLY)
A2	OVERALL SITE PLAN
A3	ENLARGED PLAN
A4	EXISTING LIGHT POLE ELEVATION
A5	PROPOSED LIGHT POLE ELEVATIONS
A6	EQUIPMENT SHROUD DETAILS (REFERENCE ONLY)
A7	EQUIPMENT DETAILS (REFERENCE ONLY)
A8	MOUNTING DETAILS
S1	POLE FOUNDATION DETAILS
E1	ELECTRICAL ONE-LINE DIAGRAM
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E3	GROUNDING DETAILS
RF1	RF PLUMBING DIAGRAM (REFERENCE ONLY)
REF	POLE MANUFACTURER DESIGN (BY OTHERS)

SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

- REMOVE EXISTING LIGHT POLE AND REPLACE WITH NEW 30' HAPCO DAVIT ARM (RTA30D8B4D1A) LIGHT POLE (BLACK POWDER COAT 5 YR)
- INSTALL NEW ELECTRIC SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE. METER SUPPLIED & INSTALLED BY CONTRACTOR.
- INSTALL NEW FIBER SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE LOCATION AS SHOWN.
- INSTALL NEW POWER & FIBER EQUIPMENT PER PLAN
- INSTALL (1) NEW OMNI ANTENNA
- INSTALL (2) PCS 2203 RRUS & (1) LAA 2205 RRU IN CHARLES DENSIFICATION SHROUD
- INSTALL CABLING AS REQUIRED
- GROUND AS REQUIRED
- LIGHT POLE LUMINARY TO BE SUPPLIED & INSTALLED BY CONTRACTOR. LUMINARY MUST BE APPROVED BY CITY OF URBANA PRIOR TO ORDER.
- STREET LIGHTING HANDHOLE (IF REQUIRED) SUPPLIED & INSTALLED BY CONTRACTOR
- POTHOLES SHALL BE REQUIRED FOR ANY PROPOSED UTILITY CROSSING
- HYDROVAC SHALL BE USED FOR ALL TRENCHING & POTHOLES ACTIVITIES
- CONTRACTOR SHALL MAINTAIN INTEGRITY OF EXISTING POLE DURING REMOVAL & COORDINATE RETURN OF REMOVED POLE TO THE CITY OF URBANA

UTILITY DELIVERY METHOD TO PROPOSED POLE

- FIBER - UNDERGROUND
- POWER - UNDERGROUND

CODE COMPLIANCE

- 2015 INTERNATIONAL BUILDING CODE W/CITY AMMENDMENTS
- 2014 NATIONAL ELECTRIC CODE W/CITY AMMENDMENTS

SPECIAL NOTES

- ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT AT&T CONSTRUCTION INSTALLATION GUIDE.
- EXISTING CONDITIONS WILL BE CHANGED & VERIFIED IN FIELD. IF SIGNIFICANT DEVIATIONS OR DETERIORATION ARE ENCOUNTERED AT THE TIME OF CONSTRUCTION, A REPAIR PERMIT WILL BE OBTAINED & CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- THESE DRAWINGS ARE FULL SIZE & SCALEABLE ON 11"x17" SHEET SIZE.
- STATEMENT THAT COMPLIANCE WITH THE ENERGY CODE IS NOT REQUIRED. -SCOPE OF WORK DOES NOT INVOLVE MODIFICATIONS TO EXTERIOR ENVELOPE OF BUILDING, HVAC SYSTEMS OR ELECTRICAL LIGHTING.

DO NOT SCALE DRAWINGS

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



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CIVIL SEAL

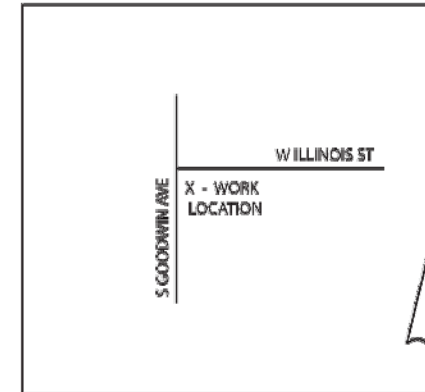
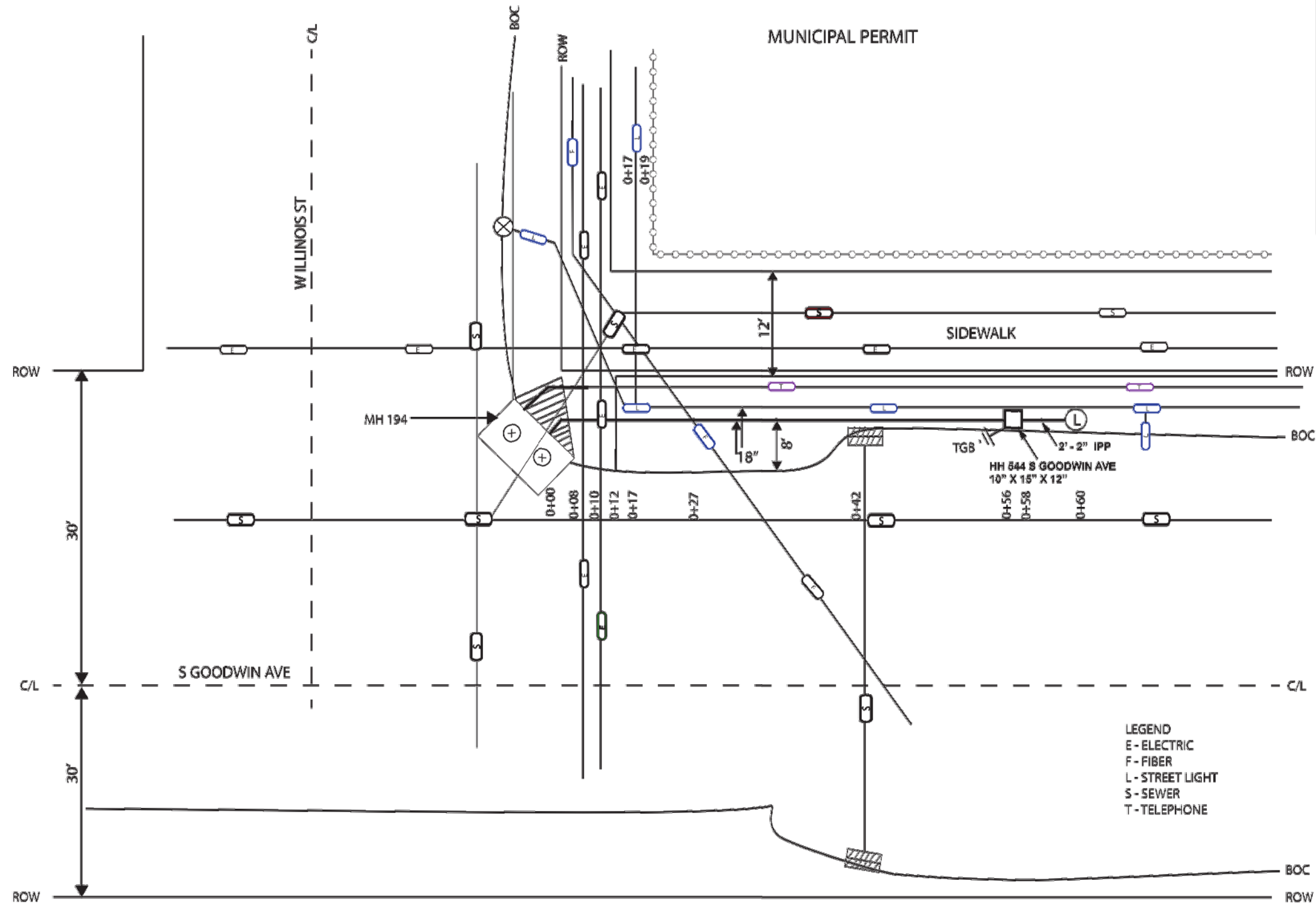
LTE 1C&2C PICO CELL BUILD  
 14805794  
 CRAN\_RCHI\_CHUOI\_009  
 184214  
 544 S GOODWIN AVE  
 URBANA, IL 61801

SHEET TITLE  
 TITLE SHEET

SHEET NUMBER  
**T1**



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Know what's below.  
 Call before you dig.

201 S NEIL St, FLR 1  
 Champaign, IL 61820

Job# A01BZJ2  
 Engineer: Michael Murphy  
 Tel No: 217-398-7979  
 Quarter: 18 NE  
 Municipality: Urbana  
 Township: Cunningham  
 County: Champaign  
 Wire Center: Cunningham  
 Sheet 1 of 1



SOC WIRELESS  
 1501 E. WOODFIELD RD.  
 SUITE #300E  
 SCHAUMBURG, IL 60173  
 www.socw.com  
 847.944.1600

GPD GROUP, INC.  
 LIC. # - 184-007100  
 520 South Main Street, Suite 2531  
 Akron, OH 44311  
 330.572.2100 Fax: 330.572.2102

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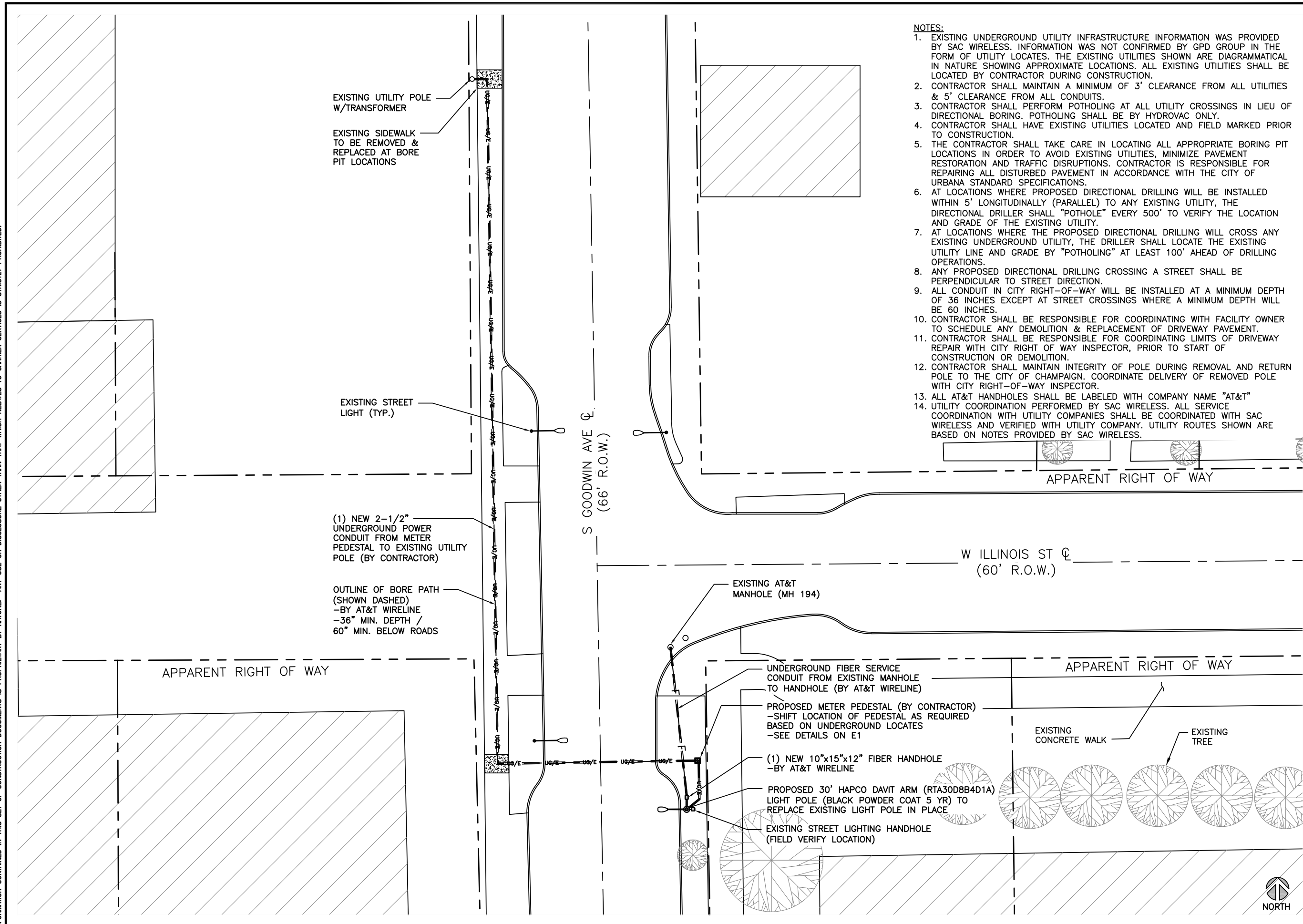
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SHEET TITLE  
 FIBER DELIVERY PLANS

SHEET NUMBER  
**A1**



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- NOTES:**
- EXISTING UNDERGROUND UTILITY INFRASTRUCTURE INFORMATION WAS PROVIDED BY SAC WIRELESS. INFORMATION WAS NOT CONFIRMED BY GPD GROUP IN THE FORM OF UTILITY LOCATES. THE EXISTING UTILITIES SHOWN ARE DIAGRAMMATICAL IN NATURE SHOWING APPROXIMATE LOCATIONS. ALL EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR DURING CONSTRUCTION.
  - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3' CLEARANCE FROM ALL UTILITIES & 5' CLEARANCE FROM ALL CONDUITS.
  - CONTRACTOR SHALL PERFORM POTHOLING AT ALL UTILITY CROSSINGS IN LIEU OF DIRECTIONAL BORING. POTHOLING SHALL BE BY HYDROVAC ONLY.
  - CONTRACTOR SHALL HAVE EXISTING UTILITIES LOCATED AND FIELD MARKED PRIOR TO CONSTRUCTION.
  - THE CONTRACTOR SHALL TAKE CARE IN LOCATING ALL APPROPRIATE BORING PIT LOCATIONS IN ORDER TO AVOID EXISTING UTILITIES, MINIMIZE PAVEMENT RESTORATION AND TRAFFIC DISRUPTIONS. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DISTURBED PAVEMENT IN ACCORDANCE WITH THE CITY OF URBANA STANDARD SPECIFICATIONS.
  - AT LOCATIONS WHERE PROPOSED DIRECTIONAL DRILLING WILL BE INSTALLED WITHIN 5' LONGITUDINALLY (PARALLEL) TO ANY EXISTING UTILITY, THE DIRECTIONAL DRILLER SHALL "POTHOLE" EVERY 500' TO VERIFY THE LOCATION AND GRADE OF THE EXISTING UTILITY.
  - AT LOCATIONS WHERE THE PROPOSED DIRECTIONAL DRILLING WILL CROSS ANY EXISTING UNDERGROUND UTILITY, THE DRILLER SHALL LOCATE THE EXISTING UTILITY LINE AND GRADE BY "POTHOLING" AT LEAST 100' AHEAD OF DRILLING OPERATIONS.
  - ANY PROPOSED DIRECTIONAL DRILLING CROSSING A STREET SHALL BE PERPENDICULAR TO STREET DIRECTION.
  - ALL CONDUIT IN CITY RIGHT-OF-WAY WILL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES EXCEPT AT STREET CROSSINGS WHERE A MINIMUM DEPTH WILL BE 60 INCHES.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH FACILITY OWNER TO SCHEDULE ANY DEMOLITION & REPLACEMENT OF DRIVEWAY PAVEMENT.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LIMITS OF DRIVEWAY REPAIR WITH CITY RIGHT OF WAY INSPECTOR, PRIOR TO START OF CONSTRUCTION OR DEMOLITION.
  - CONTRACTOR SHALL MAINTAIN INTEGRITY OF POLE DURING REMOVAL AND RETURN POLE TO THE CITY OF CHAMPAIGN. COORDINATE DELIVERY OF REMOVED POLE WITH CITY RIGHT-OF-WAY INSPECTOR.
  - ALL AT&T HANDHOLES SHALL BE LABELED WITH COMPANY NAME "AT&T"
  - UTILITY COORDINATION PERFORMED BY SAC WIRELESS. ALL SERVICE COORDINATION WITH UTILITY COMPANIES SHALL BE COORDINATED WITH SAC WIRELESS AND VERIFIED WITH UTILITY COMPANY. UTILITY ROUTES SHOWN ARE BASED ON NOTES PROVIDED BY SAC WIRELESS.



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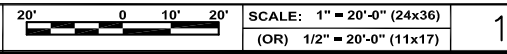
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SHEET TITLE  
**OVERALL SITE PLAN**

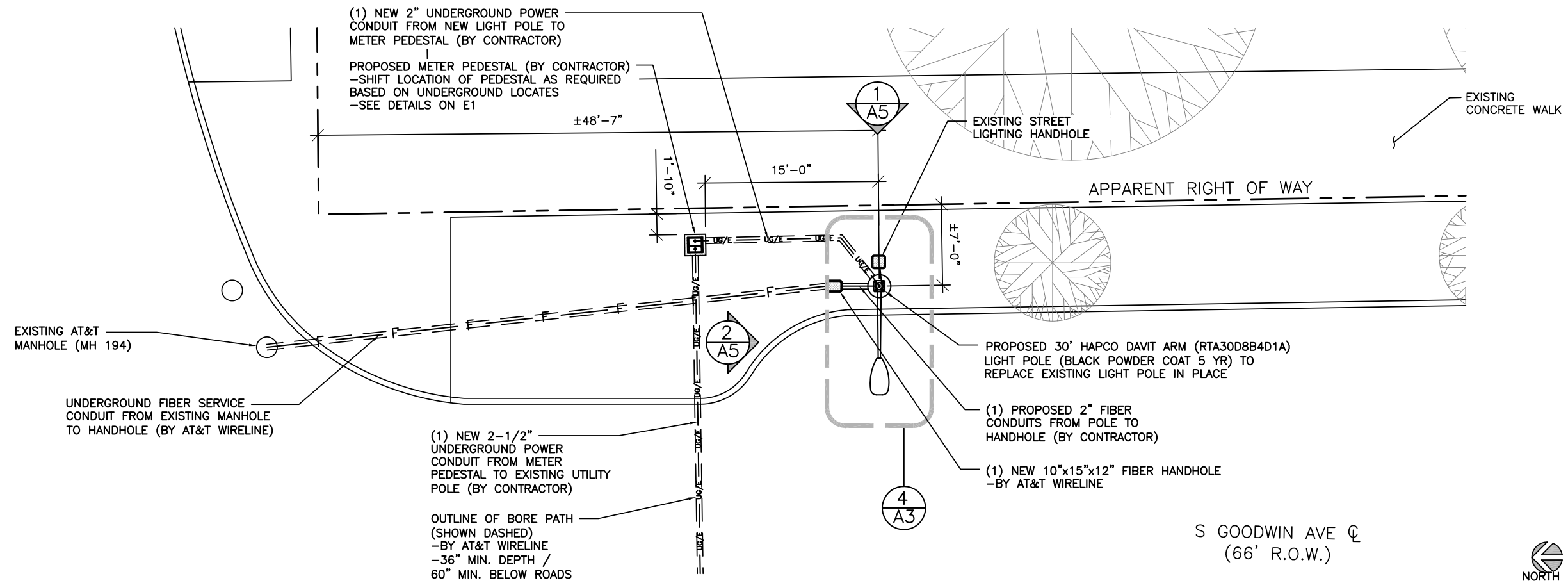
SHEET NUMBER  
**A2**

OVERALL SITE PLAN





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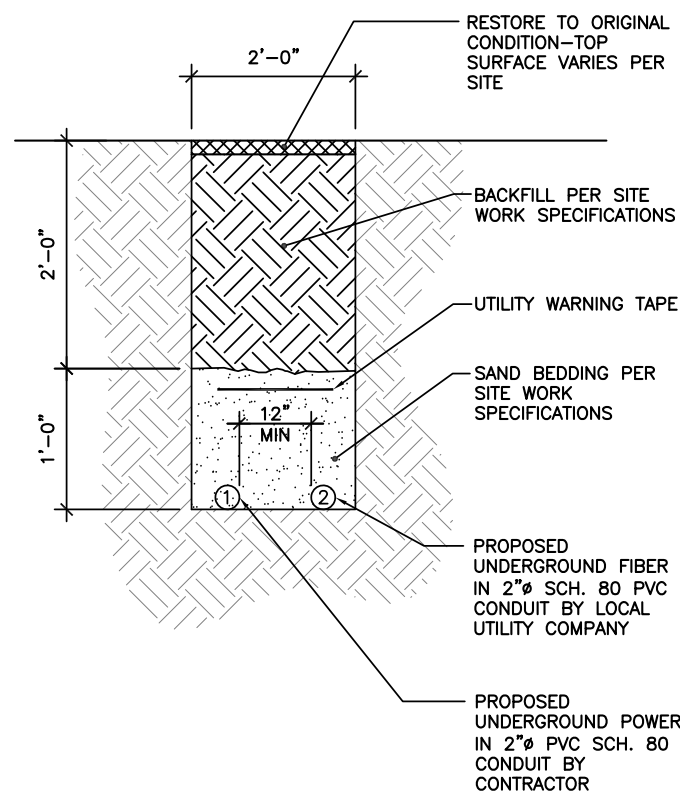
ENLARGED SITE PLAN

SCALE: 3/32" = 1'-0" (24x36)  
(OR) 3/64" = 1'-0" (11x17)



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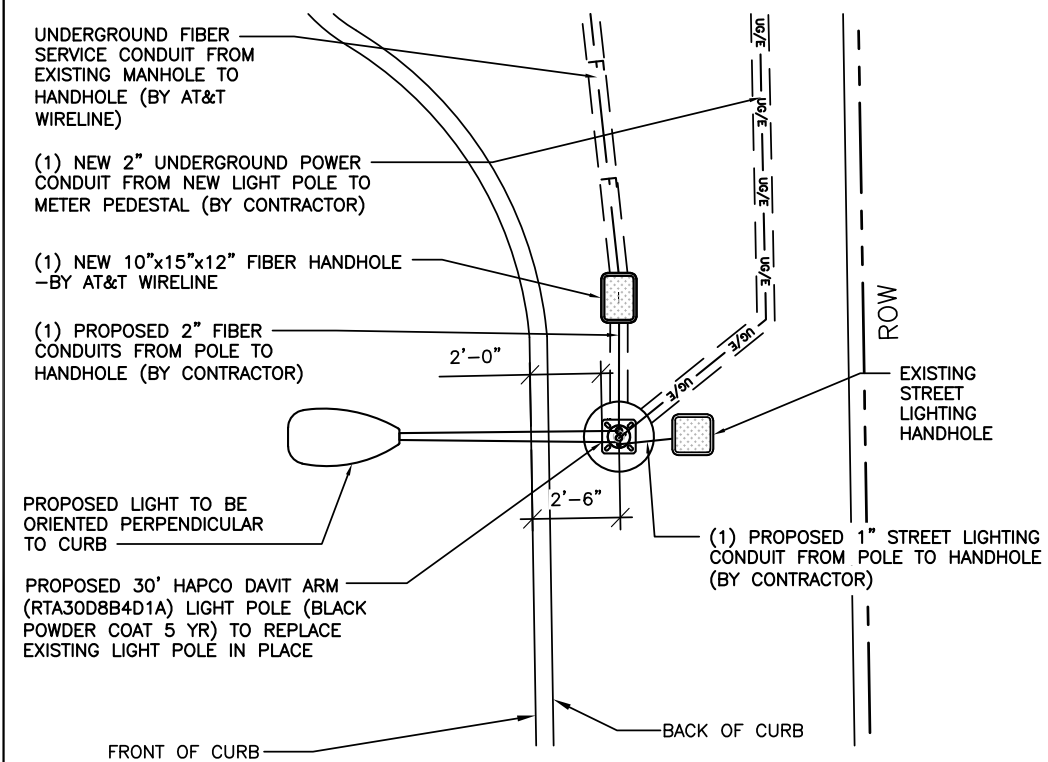
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TYPICAL TRENCH DETAIL

SCALE: N.T.S. 2

DETAIL NOT USED



LIGHT POLE PLAN

SCALE: N.T.S. 4



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SHEET TITLE

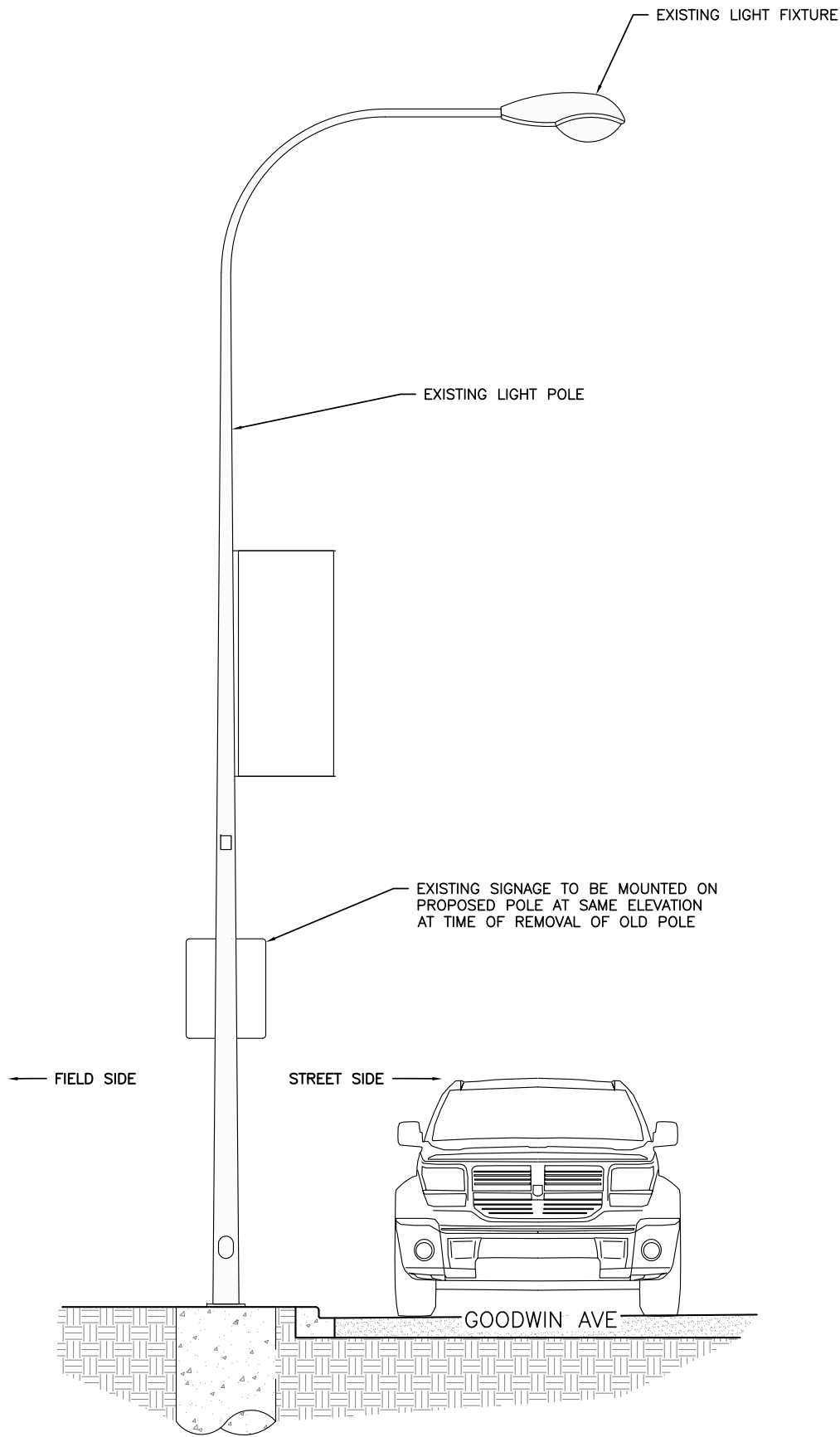
ENLARGED PLAN

SHEET NUMBER

A3

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- 
 CL LIGHTING FIXTURE MOUNT  
 ELEV. ±30'-0" AGL
  
- 
 TOP OF BANNER MOUNT  
 ELEV. ±19'-0" AGL
  
- 
 BOTTOM OF BANNER MOUNT  
 ELEV. ±13'-4" AGL
  
- 
 CL POWER OUTLET  
 ELEV. ±11'-8" AGL
  
- 
 BOTTOM OF STREET SIGN  
 ELEV. ±6'-9" AGL
  
- 
 GRADE (REF)  
 ELEV.: 0'-0" AGL



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SHEET TITLE  
 EXISTING  
 LIGHT POLE  
 ELEVATION

SHEET NUMBER  
**A4**

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TOP OF PROPOSED LIGHT POLE  
ELEV. 30'-0" AGL

TOP OF PROPOSED ANTENNA  
ELEV. 28'-1" AGL

☉ OF PROPOSED ANTENNA  
ELEV. 27'-0" AGL

TOP OF EQUIPMENT SHROUD  
ELEV. 22'-5" AGL

☉ OF PROPOSED HANDHOLE  
ELEV. 20'-0" AGL

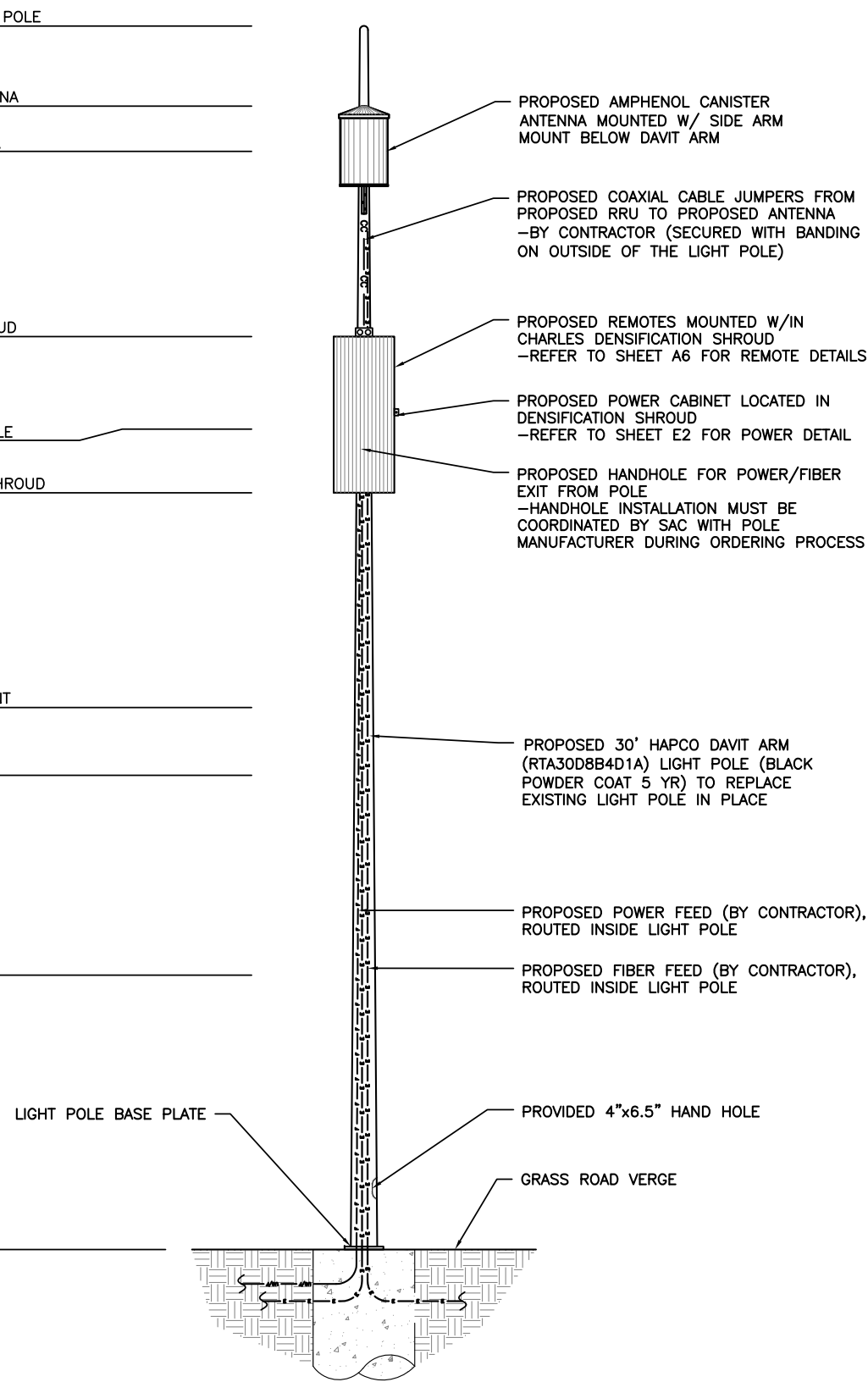
BOTTOM OF EQUIPMENT SHROUD  
ELEV. 18'-7" AGL

BOTTOM OF BANNER MOUNT  
ELEV. ±13'-4" AGL

☉ POWER OUTLET  
ELEV. ±11'-8" AGL

BOTTOM OF STREET SIGN  
ELEV. ±6'-9" AGL

GRADE (REF)  
ELEV.: 0'-0" AGL



0 1' 2' 4' SCALE: 1/4" = 1'-0" (24x36)  
(OR) 1/8" = 1'-0" (11x17)

1

TOP OF PROPOSED LIGHT POLE  
ELEV. 30'-0" AGL

TOP OF PROPOSED ANTENNA  
ELEV. 28'-1" AGL

☉ OF PROPOSED ANTENNA  
ELEV. 27'-0" AGL

TOP OF EQUIPMENT SHROUD  
ELEV. 22'-5" AGL

☉ OF PROPOSED HANDHOLE  
ELEV. 20'-0" AGL

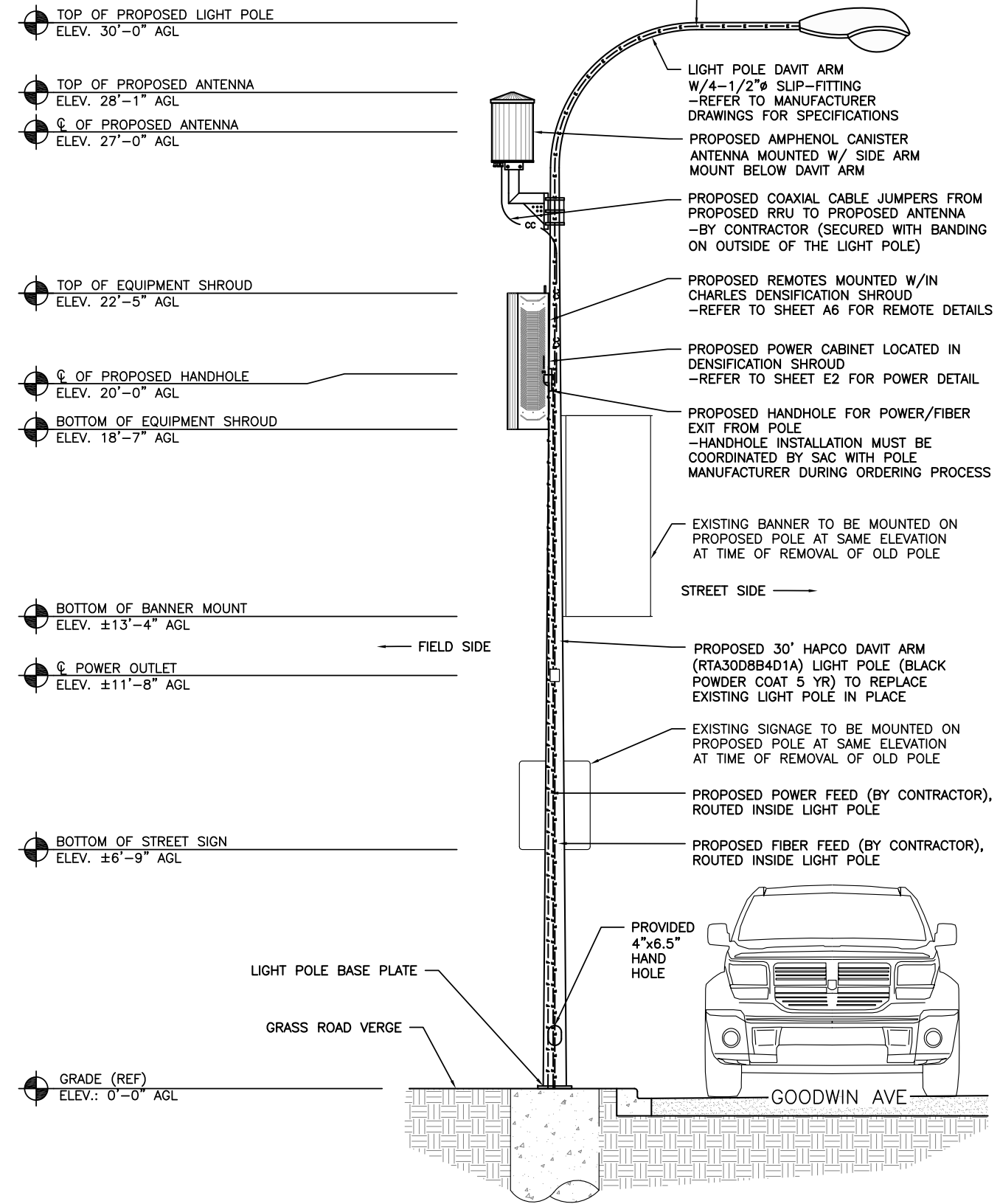
BOTTOM OF EQUIPMENT SHROUD  
ELEV. 18'-7" AGL

BOTTOM OF BANNER MOUNT  
ELEV. ±13'-4" AGL

☉ POWER OUTLET  
ELEV. ±11'-8" AGL

BOTTOM OF STREET SIGN  
ELEV. ±6'-9" AGL

GRADE (REF)  
ELEV.: 0'-0" AGL



0 1.5' 3' 5' SCALE: 3/16" = 1'-0" (24x36)  
(OR) 3/32" = 1'-0" (11x17)

2



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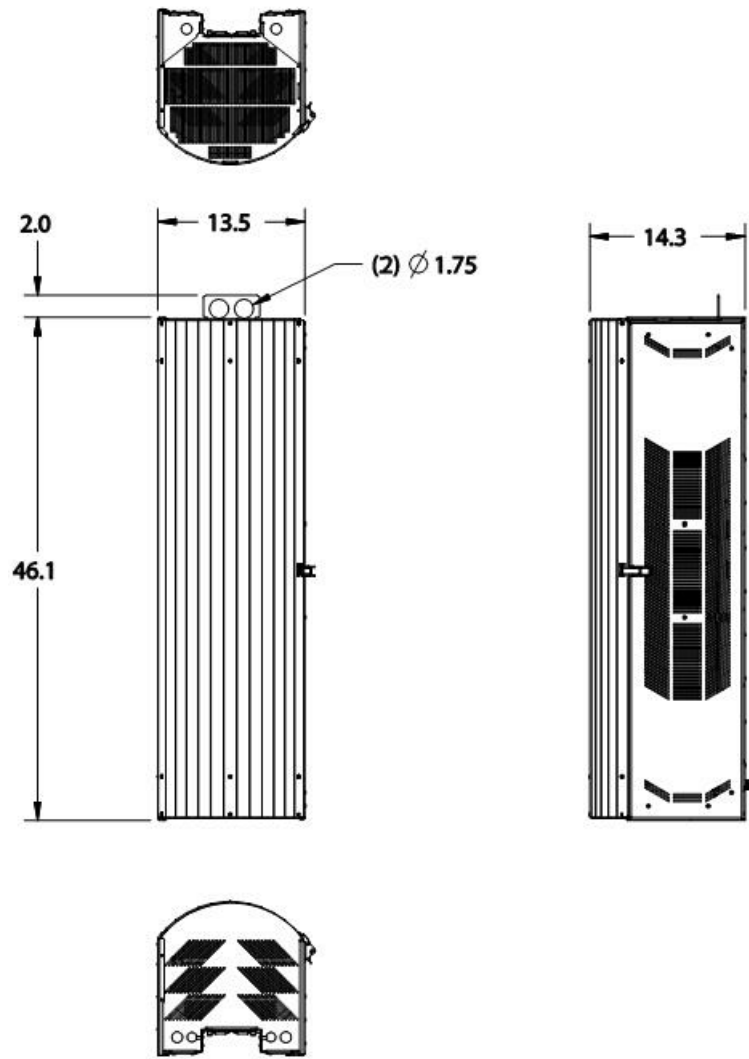
SHEET TITLE  
**PROPOSED LIGHT POLE ELEVATIONS**

SHEET NUMBER  
**A5**

PROPOSED LIGHT POLE FRONT ELEVATION (FIELD SIDE)

PROPOSED LIGHT POLE SIDE ELEVATION

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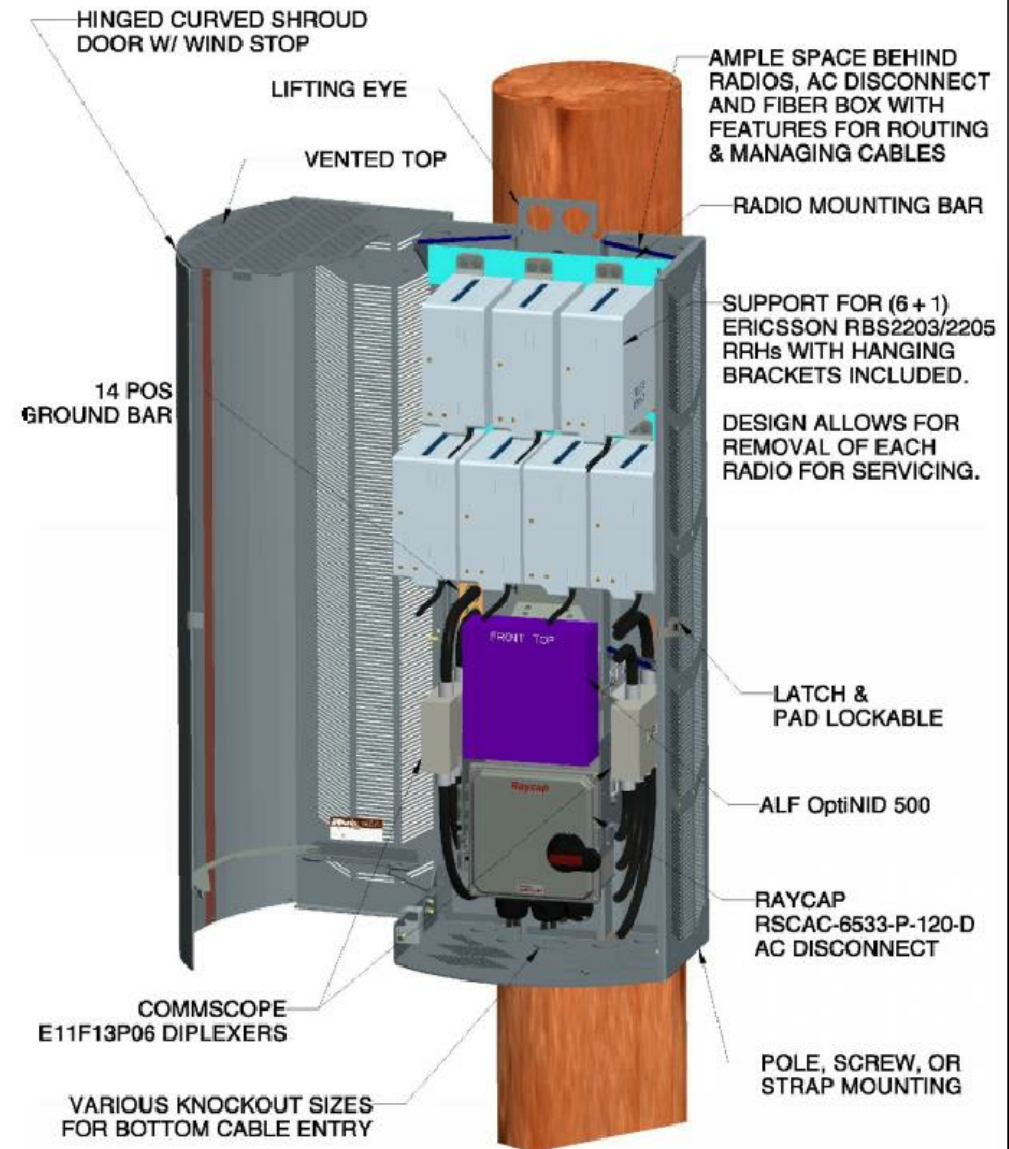
46.1" TALL EQUIPMENT SHROUD DETAIL

1

DETAIL NOT USED

2

EQUIPMENT SHROUD LAYOUT



AMPLE SPACE BEHIND RADIOS, AC DISCONNECT AND FIBER BOX WITH FEATURES FOR ROUTING & MANAGING CABLES

RADIO MOUNTING BAR

SUPPORT FOR (6 + 1) ERICSSON RBS2203/2205 RRHs WITH HANGING BRACKETS INCLUDED.

DESIGN ALLOWS FOR REMOVAL OF EACH RADIO FOR SERVICING.

14 POS GROUND BAR

VENTED TOP

LIFTING EYE

HINGED CURVED SHROUD DOOR W/ WIND STOP

ALF OptiNID 500

RAYCAP RSCAC-6533-P-120-D AC DISCONNECT

POLE, SCREW, OR STRAP MOUNTING

VARIOUS KNOCKOUT SIZES FOR BOTTOM CABLE ENTRY

COMMSCOPE E11F13P06 DIPLEXERS

LATCH & PAD LOCKABLE

LATCH & PAD LOCKABLE

ALF OptiNID 500

RAYCAP RSCAC-6533-P-120-D AC DISCONNECT

POLE, SCREW, OR STRAP MOUNTING

SCALE: NTS

3



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SHEET TITLE  
**EQUIPMENT SHROUD DETAILS**

SHEET NUMBER  
**A6**



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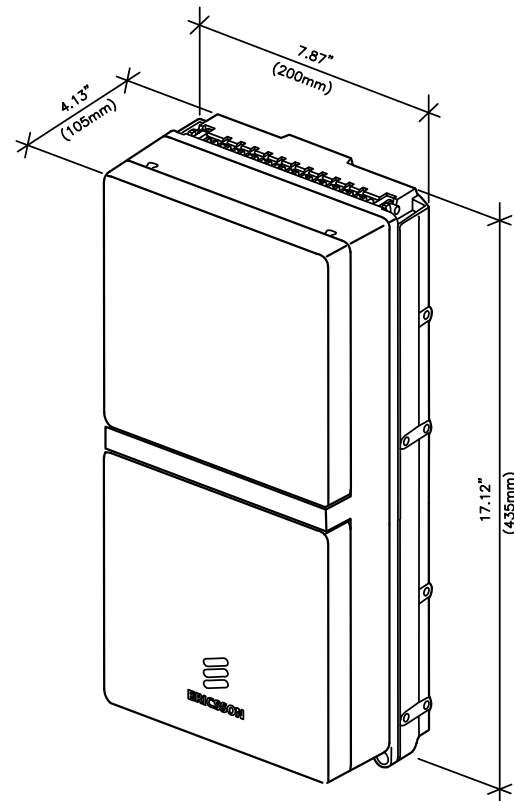
MANUFACTURER: ERICSSON  
MODEL: RADIO 2205

**MECHANICAL SPECIFICATIONS:**  
HEIGHT: 17.12 IN (435mm)  
WIDTH: 7.87 IN (200mm)  
DEPTH: 4.13 IN (105mm)  
WEIGHT: 21 LBS (9.5kg)

**INTERFACE SPECIFICATIONS:**  
ANTENNA PORTS: TBD  
CPRI: TBD  
OPTICAL INDICATORS: TBD  
EXTERNAL ALARMS: TBD  
FIELD GROUND: TBD

**ELECTRICAL SPECIFICATIONS:**  
POWER SUPPLY: TBD

**ENVIRONMENT SPECIFICATIONS:**  
NORMAL OPERATING TEMP.: TBD  
RELATIVE HUMIDITY: TBD  
ENVIRONMENT: TBD



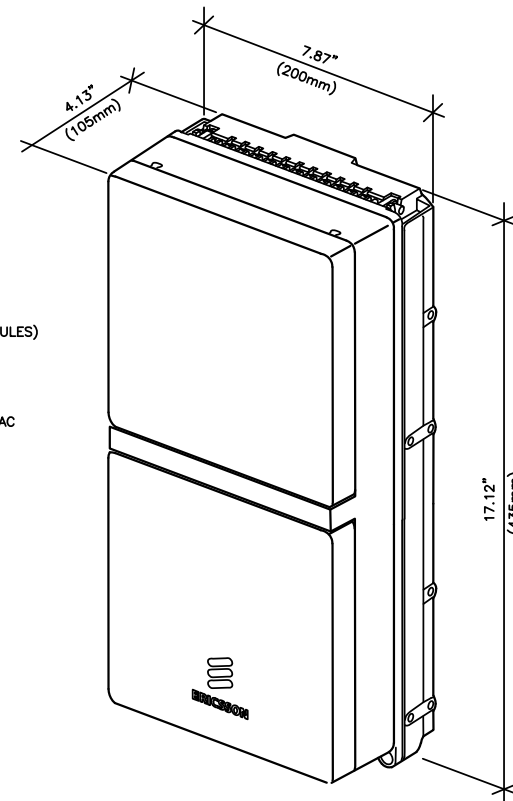
MANUFACTURER: ERICSSON  
MODEL: RADIO 2203

**MECHANICAL SPECIFICATIONS:**  
HEIGHT: 17.12 IN (435mm)  
WIDTH: 7.87 IN (200mm)  
DEPTH: 4.13 IN (105mm)  
WEIGHT: 21 LBS (9.5kg)

**INTERFACE SPECIFICATIONS:**  
ANTENNA PORTS: 2x4.3-10 (f)  
CPRI: 2x2.5/5/10 Gbps (EXCHANGEABLE SFP MODULES)  
OPTICAL INDICATORS: 6  
EXTERNAL ALARMS: 2  
FIELD GROUND: 1

**ELECTRICAL SPECIFICATIONS:**  
POWER SUPPLY: -48 VDC OR 100-250 VAC

**ENVIRONMENT SPECIFICATIONS:**  
NORMAL OPERATING TEMP.: -40°C TO +55°C (COLD START AT -40°C)  
RELATIVE HUMIDITY: 5-100%  
ENVIRONMENT: OUTDOOR CLASS W/IP65



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RRU 2205 DETAIL

SCALE  
N.T.S. 1

RRU 2203 DETAIL

SCALE  
N.T.S. 2

DETAIL NOT USED

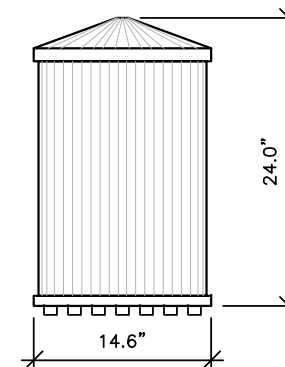
SCALE  
N.T.S. 3

ANTENNA DETAIL

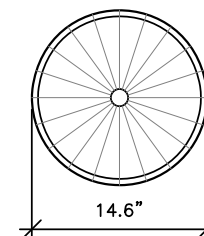
SCALE: NTS 4



IMAGE



SIDE VIEW



TOP VIEW

AMPENOL MULTI BAND CANISTER ANTENNA  
MODEL: 2C2U3MT360X06Fxyso  
COLOR: GREY

**MECHANICAL CHARACTERISTICS**

- ANTENNA DIMENSIONS (HEIGHT X DIAMETER) : 24.0"x14.6"
- WEIGHT W/OUT MOUNTING BRACKET KIT: TBD LBS
- SURVIVAL WIND SPEED: 150 MPH
- WIND AREA: 2.4 FT<sup>2</sup>
- WIND LOAD (100 MPH): 43 LBF

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REFERENCE ONLY

LTE 1C&2C PICO CELL BUILD  
14805794  
CRAN\_RCHI\_CHUOI\_009  
184214  
544 S GOODWIN AVE  
URBANA, IL 61801

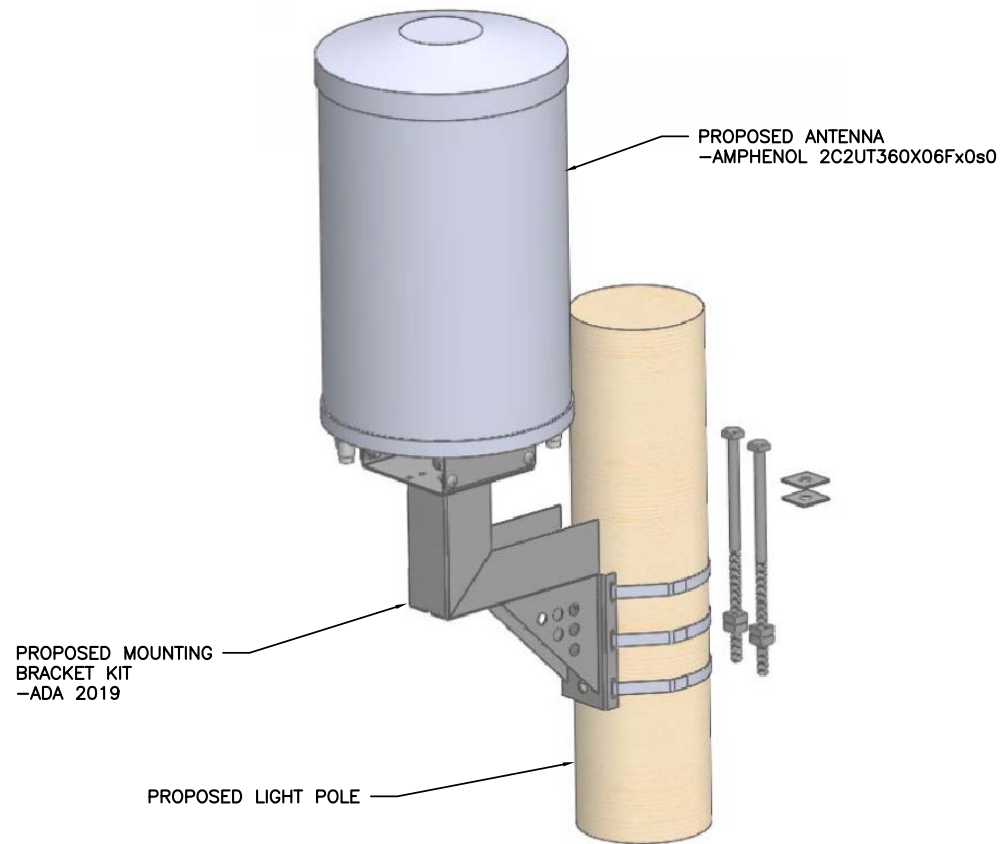
**SHEET TITLE**

EQUIPMENT  
DETAILS

**SHEET NUMBER**

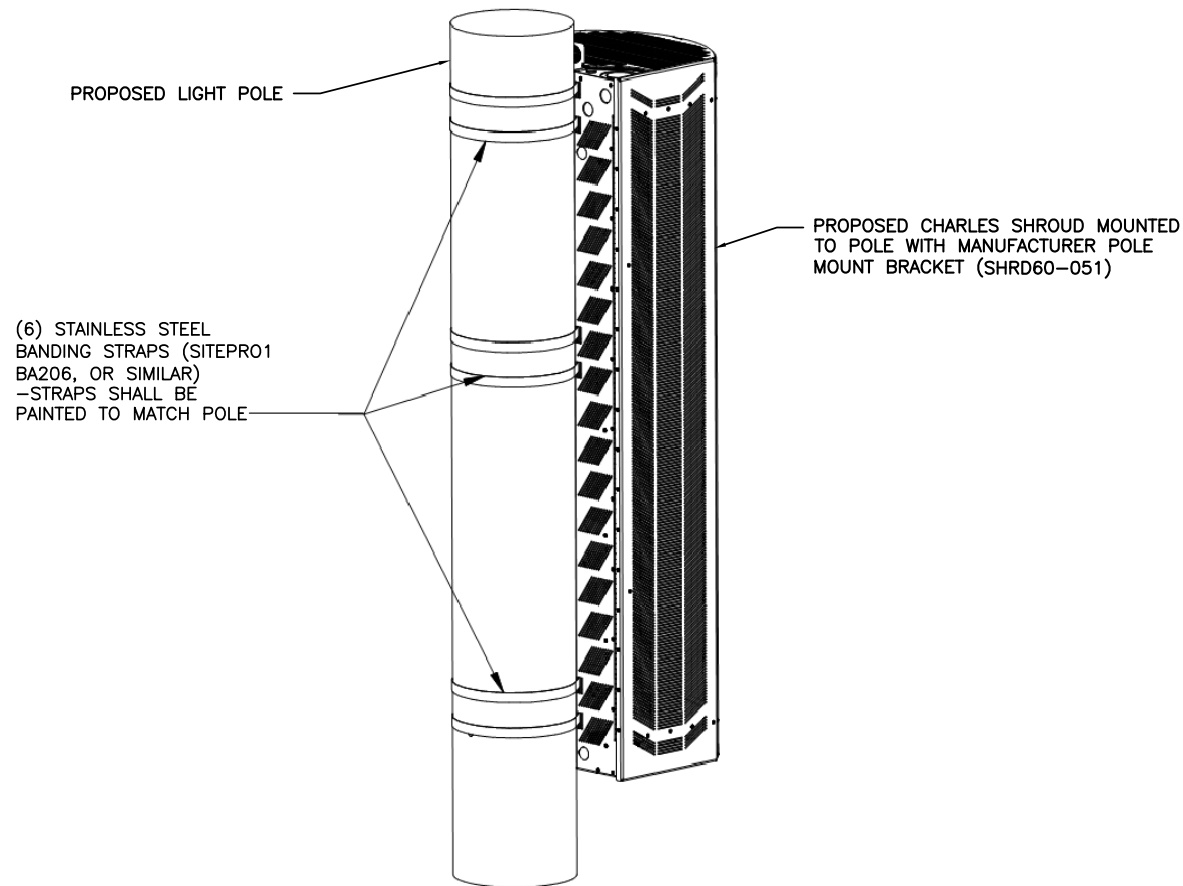
**A7**

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ANTENNA MOUNTING DETAIL

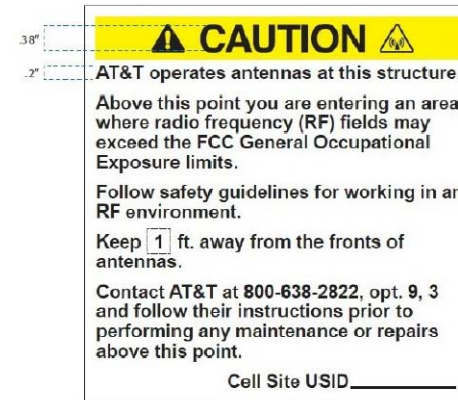
SCALE  
N.T.S. 1



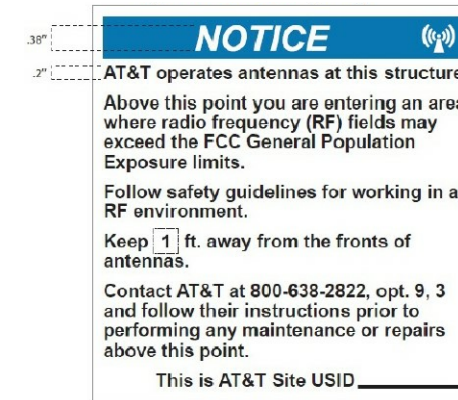
SHROUD MOUNTING DETAIL

SCALE  
N.T.S. 2

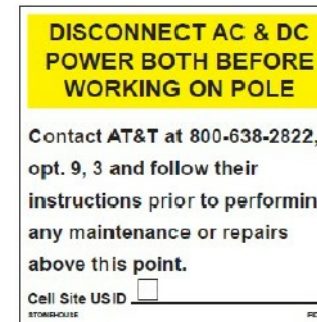
EXAMPLE CRAN RF CAUTION SIGN



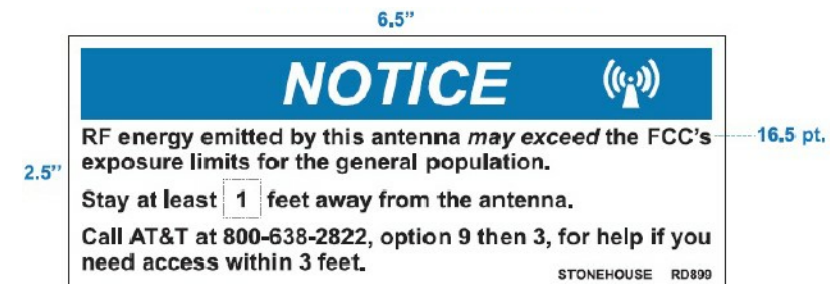
EXAMPLE CRAN RF NOTICE SIGN



EXAMPLE CRAN POLE POWER DISCONNECT SIGN



EXAMPLE STONEHOUSE RD899 RF NOTICE SIGN



CRAN Pole Power Disconnect, RF Notice, and Caution signs shall be ordered through Stonehouse Signs. Three versions are available for each of the signs shown in Figures 16, 17, and 18: .055 Polyethylene - Reflective, .025 Aluminum - Reflective, and Peel Back Label - Reflective. All versions are 6"x6" with font designed to be visible from 2-3 feet away when approached from below to provide warning about ascending into the high RF exposure areas. The RF Caution sign shown in Figure 19 is designed to be visible from 3 feet away and is available in the reflective peel back label version only. It is designed to fit on most of the CRAN/Small Cell antenna types currently deployed. It may also be placed on antenna shrouds as shown in Figures 11 and 12.

SIGNAGE NOTE:  
SIGNAGE SHALL BE INSTALLED PER AT&T DIRECTION

AT&T SIGNAGE DETAIL

SCALE: NTS

3



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	10/26/18	ISSUED FOR REVIEW	SEK
B	03/12/19	REVISED PER COMM.	MRL
C	05/02/19	ADDED FOUNDATION	MRL

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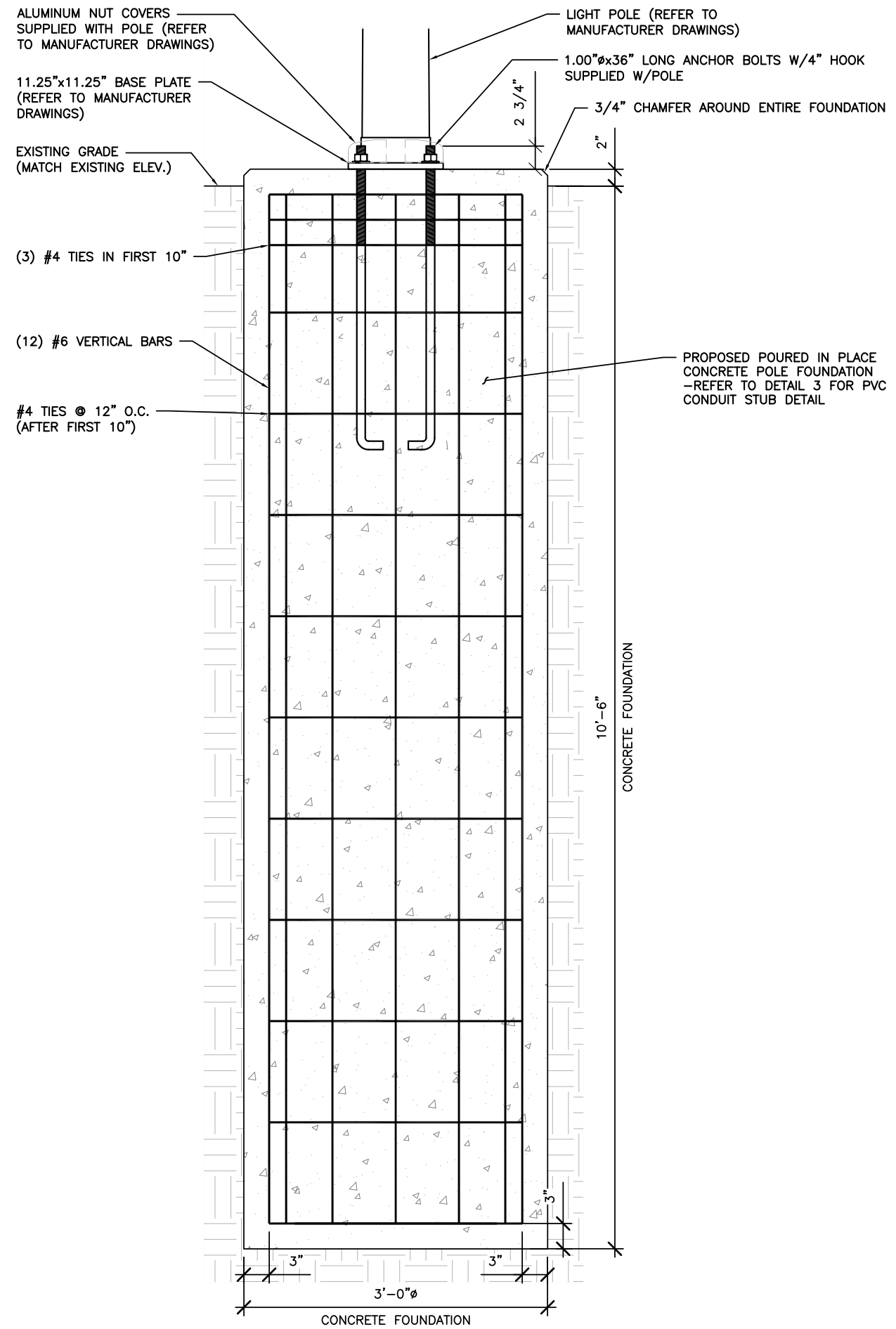
REFERENCE ONLY

LTE 1C&2C PICO CELL BUILD  
14805794  
CRAN\_RCHI\_CHUOI\_009  
184214  
544 S GOODWIN AVE  
URBANA, IL 61801

SHEET TITLE  
MOUNTING DETAILS

SHEET NUMBER  
**A8**

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PROPOSED POURED IN PLACE CONCRETE POLE FOUNDATION -REFER TO DETAIL 3 FOR PVC CONDUIT STUB DETAIL

**STRUCTURAL NOTES:**

1. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING SPECIFICATIONS:

SLUMP 4" (±1")  
 AIR ENTRAINMENT: 6% (±1%)  
 MIN. COMPRESSIVE STRENGTH (F'c): 4,500 PSI @ 28 DAYS  
 CONCRETE COVER: 3" ALL SIDES

CONCRETE SHALL BE TESTED BY A REPUTABLE INDEPENDENT THIRD PARTY TESTING AGENCY IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318. FIVE (5) CONCRETE CYLINDERS SHALL BE CAST IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318 AND BE LABORATORY CURED. THE AVERAGE OF THREE (3) CONCRETE CYLINDERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 4,500 PSI AT 28 DAYS. THE TESTING RESULTS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER AND AT&T REPRESENTATIVE.

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI\*96, "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" AND ACI 305, 306 AND 307 UNLESS NOTED OTHERWISE.

ALL DETAILING, FABRICATION AND PLACING OF CONCRETE SHALL CONFORM TO ACI 318-11.

2. STRUCTURAL STEEL SHALL MEET THE FOLLOWING SPECIFICATIONS:

MATERIALS: REINFORCING ASTM 615, GRADE 60  
 ANCHOR BOLTS ASTM F1554, GRADE 55

REINFORCING COVER: TOP 2"  
 BOTTOM 3"

3. DESIGN PARAMETERS:

STRUCTURAL ANALYSIS OF THE POLE AND FOUNDATION WAS COMPLETED BY OTHERS. COORDINATE WITH SAC WIRELESS FOR A COPY OF POLE STRUCTURAL ANALYSIS.

DESIGN CODES: 2015 INTERNATIONAL BUILDING BUILDING CODE  
 TIA-222-G  
 ASCE 7-05  
 CHAMPAIGN COUNTY, IL

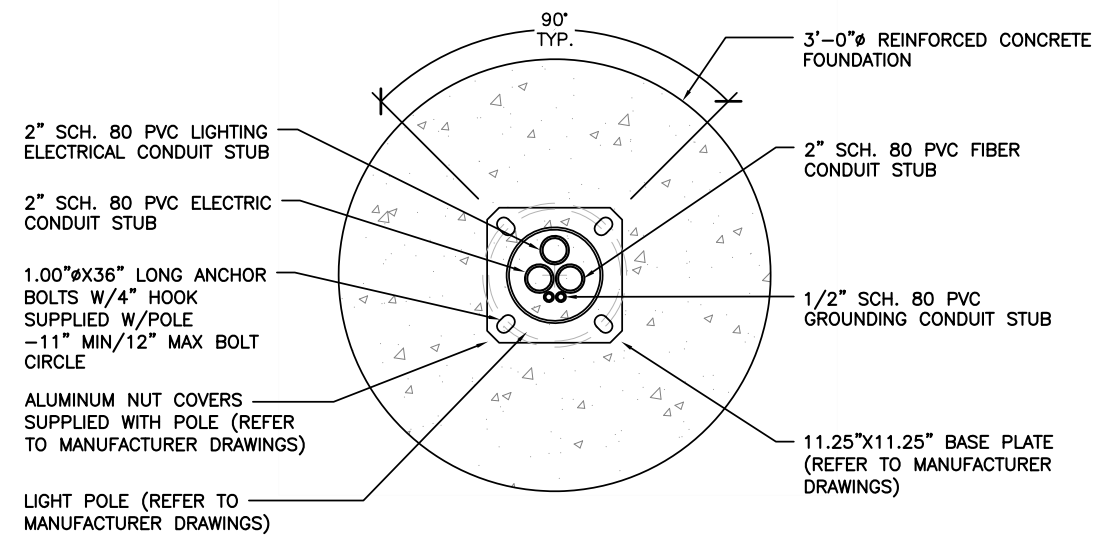
POLE LOCATION:  
 BASIC WIND SPEED: 130 MPH  
 GUST FACTOR: 1.14  
 STRUCTURE CLASS: CLASS II  
 EXPOSURE CLASS: B  
 TOPOGRAPHIC CATEGORY: 1

PRESUMPTIVE SOIL PARAMETERS: FOUNDATION IS BASED ON AN ALLOWABLE LATERAL BEARING PRESSURE OF AT LEAST 200 PSF/FT.

4. ALL CONTRACTORS SHALL EXERCISE GREAT CARE DURING EXCAVATION. CONTRACTOR SHALL PREDETERMINE UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY IF DEVIATION FROM PLANS EXIST. CONTRACTOR SHALL CONTACT 811 48 HR. PRIOR TO DIGGING, GRADING, OR DRILLING.

**FOUNDATION NOTES**

SCALE	2
N.T.S.	



FOUNDATION DETAIL

SCALE: NTS 1

FOUNDATION DETAIL

SCALE: NTS 3



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STRUCTURAL SEAL

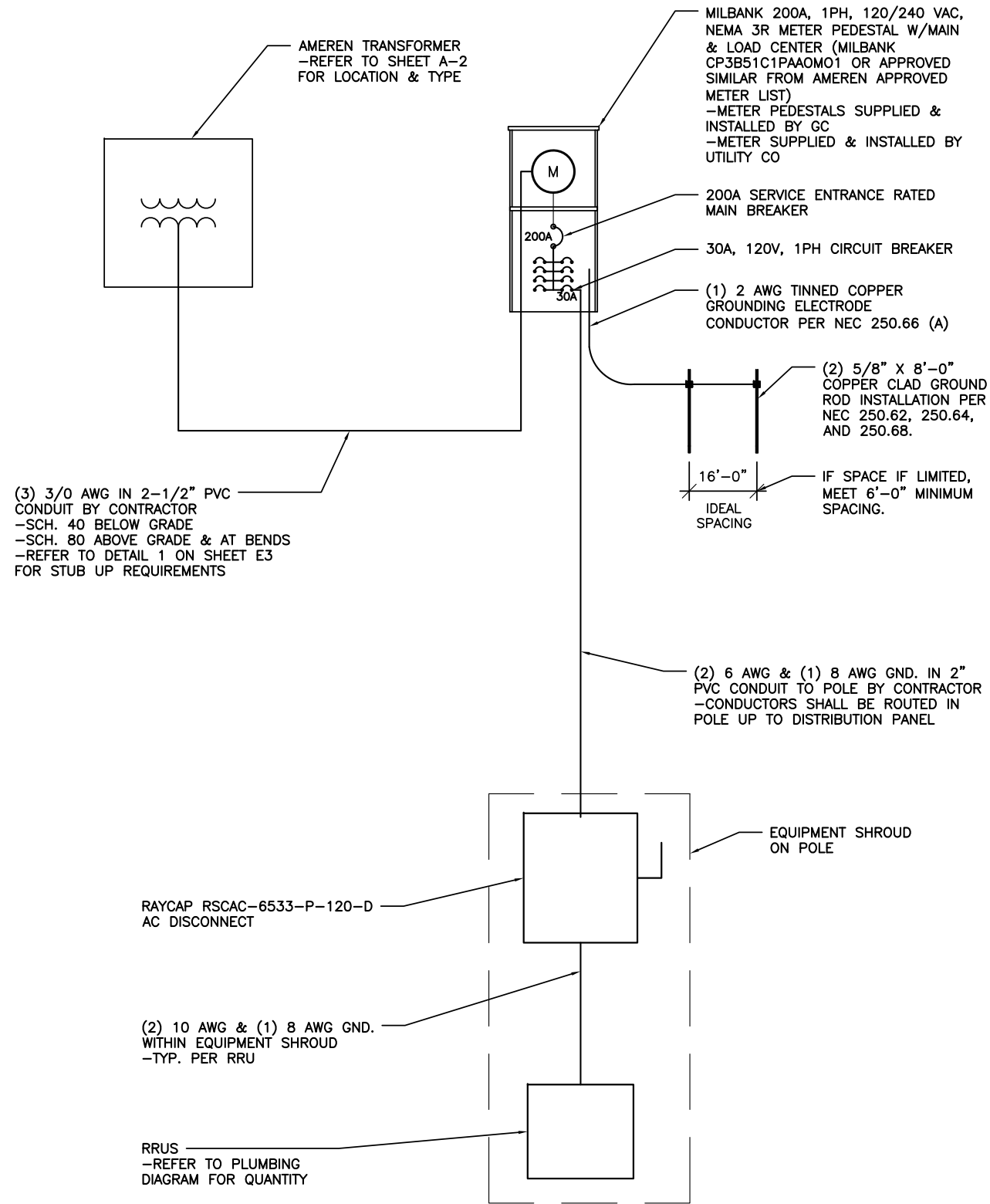
LTE 1C&2C PICO CELL BUILD  
 14805794  
 CRAN\_RCHI\_CHUOI\_009  
 184214  
 544 S GOODWIN AVE  
 URBANA, IL 61801

SHEET TITLE  
**POLE FOUNDATION DETAILS**

SHEET NUMBER  
**S1**



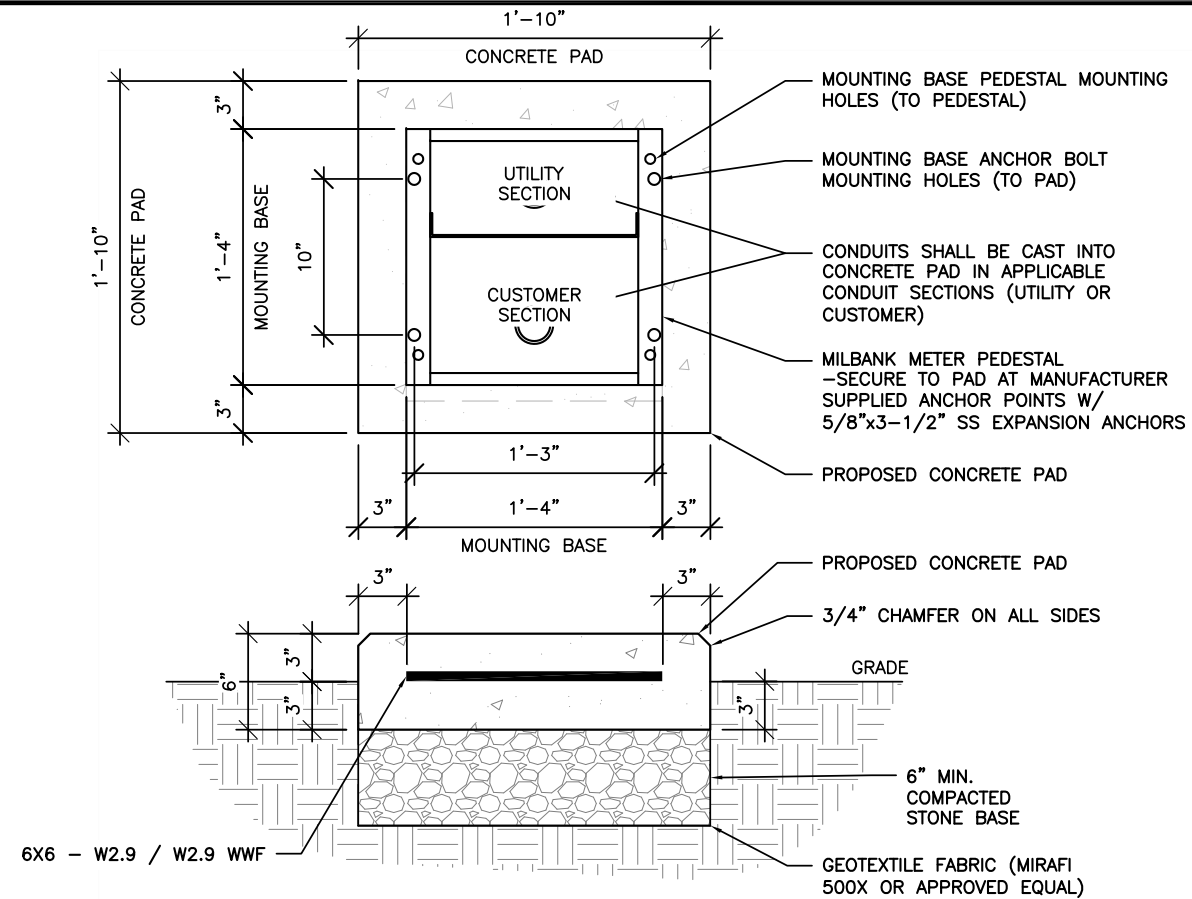
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ELECTRICAL ONE-LINE DIAGRAM

SCALE  
N.T.S.

1



METER PEDESTAL CONCRETE PAD FOUNDATION DETAIL

SCALE  
N.T.S.

2

ELECTRICAL NOTES:

- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE CODES.
- CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SUCH THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- SUBCONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING THE INSTALLATION OF GROUNDING AND UNDERGROUND CONDUIT AS TO PREVENT THE LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC (CADWELD) CONNECTIONS WHEN APPROVED BY CINCINNATI BELL CONSTRUCTION MANAGER.
- SERVICE TO METER PEDESTAL SHALL BE 120/240VAC, 200 AMP, SINGLE PHASE.
- ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).
- ALL GROUND CONNECTIONS ABOVE GRADE SHALL BE FORMED USING TWO (2) HIGH PRESS CRIMPS.
- ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP AND HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- ALL EXTERIOR GROUND CONNECTORS SHALL BE 2 AWG SOLID BARE, TINNED, COPPER UNLESS INDICATED OTHERWISE.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR FACILITY GROUNDING, USING FALL OF POTENTIAL METHOD.

STANDARD CONDUIT NOTES:

- UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ABOVE GROUND CONDUIT, ELBOWS, AND RISERS SHALL BE SCHEDULE 80 PVC.
- UNDERGROUND SERVICE CONDUIT SHALL MEET REQUIRED BURIAL DEPTH PER AMEREN ELECTRIC SERVICE MANUAL.
- G.C. TO STUB UP SERVICE CONDUIT AT UTILITY POLE WITH 90° SWEEPING ELBOW. G.C. SHALL SUPPLY ENOUGH CONDUIT AND RISER HARDWARE FOR AMEREN TO EXTEND SERVICE RISER UP POLE TO SERVICE CONNECTION POINT. REFER TO AMEREN ELECTRIC SERVICE MANUAL FOR REQUIREMENTS.
- ALL CONDUIT WILL BE EQUIPPED WITH 3/8" PULL ROPE AND HAVE A TRACER WIRE. TRACER WIRE NEEDS TO BE LAID ABOVE BURIED CONDUIT.

SCALE  
N.T.S.

3

ELECTRICAL NOTES



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ELECTRICAL SEAL

LTE 1C&2C PICO CELL BUILD  
14805794  
CRAN\_RCHI\_CHUOI\_009  
184214  
544 S GOODWIN AVE  
URBANA, IL 61801

SHEET TITLE

ELECTRICAL  
ONE-LINE  
DIAGRAM

SHEET NUMBER

E1

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AC POWER PANEL (MILBANK CF3B51C1PAACMO1)											
240 VOLTS, 1-PHASE, 3-WIRE, 200A											
MAIN RATING (A) :					200		SYSTEM VOLTAGE (V) :				
					240						
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
DISTRIBUTION PANEL	2112	c	30	1	2112		2	--	c	0	---
	0	c	--	3		0	4	--	c	0	---
	0	c	--	5	0		6	--	c	0	---
	0	c	--	7		0	8	--	c	0	---
PHASE TOTALS (VA):					2112		0				
CURRENT PER PHASE (A):					22		0 Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					2112		Legend: c = continuous, nc = non-continuous				
PANEL CAPACITY (kVA):					48.0		CONNECTED LOAD (kVA): 2.1				
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					2.6						
PANEL LOADING (TOTAL) (kVA):					2.6						
SPARE CAPACITY (kVA):					45.4						

ELECTRICAL MAIN & LOAD CENTER PANEL SCHEDULE

SCALE  
N.T.S.

1

AC METER SOCKET W/MAIN & LOAD CENTER DETAIL

SCALE  
N.T.S.

2

AC POWER PANEL (RAYCAP RSCAC-6533-P-120-D)											
120 VOLTS, 1-PHASE, 2-WIRE, 30A											
MAIN RATING (A) :					30		SYSTEM VOLTAGE (V) :				
					120						
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
RRUS-2203	704	c	7	1	1408		2	7	c	704	RRUS-2205
RRUS-2203	704	c	7	3		704	4	7	c	0	---
PHASE TOTALS (VA):					1408		704				
CURRENT PER PHASE (A):					15		7 Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					2112		Legend: c = continuous, nc = non-continuous				
PANEL CAPACITY (kVA):					3.6		CONNECTED LOAD (kVA): 2.1				
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					2.6						
PANEL LOADING (TOTAL) (kVA):					2.6						
SPARE CAPACITY (kVA):					1.0						

ELECTRICAL PANEL SCHEDULE

SCALE  
N.T.S.

3

AC DISTRIBUTION PANEL DETAIL

SCALE  
N.T.S.

4

MANUFACTURER: MILBANK  
MODEL: CP3B51C1PAAOM01

MECHANICAL SPECIFICATIONS:  
HEIGHT: 48 IN  
WIDTH: 16 IN  
DEPTH: 17 IN

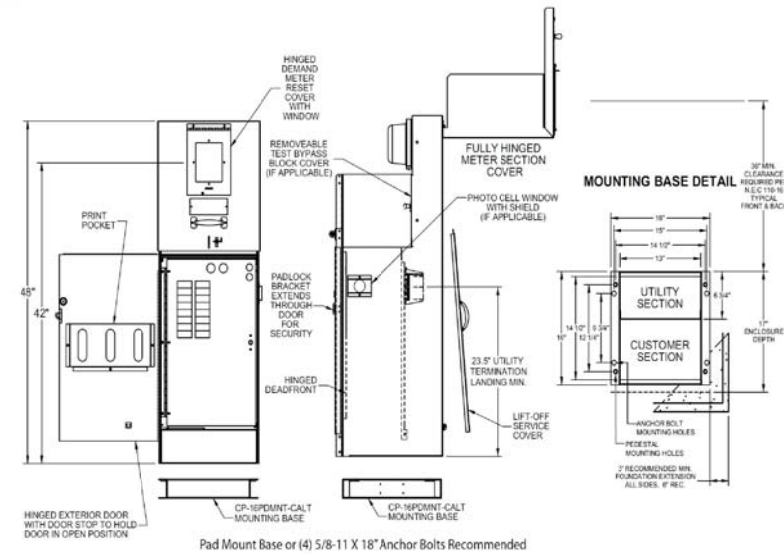
ELECTRICAL SPECIFICATIONS:  
AMPERAGE RATING: 200 A  
OPERATING VOLTAGE: 240 V  
ELECTRICAL PHASE: 1 PH  
MAIN BREAKER SIZE: 200 A  
QTY OF BRANCH CIRCUITS: 20  
LINE SIDE WIRE RANGE: 6 AWG - 350 kcmil

ENVIRONMENT SPECIFICATIONS:  
UL LISTED: YES  
NEMA RATING: 3R

ADDITIONAL SPECIFICATIONS:  
ON AMEREN ENERGY APPROVED LIST (SECTION 1100 OF ELECTRIC SERVICE MANUAL, DATED JANUARY 18, 2018)



"A" Style 16" Metered Commercial Pedestal



SPECIAL NOTE:  
METER PEDESTAL SHALL BE PAINTED TO MATCH AT&T EQUIPMENT IN RIGHT OF WAY. CONTRACTOR SHALL COORDINATE W/AT&T FOR COLOR AND PROVIDE DOCUMENTATION OF SUCH TO CITY OF URBANA FOR APPROVAL PRIOR TO CONSTRUCTION.

MANUFACTURER: RAYCAP  
MODEL: RSCAC-6533-P-120-D

MECHANICAL SPECIFICATIONS:  
HEIGHT: 10.45 IN (265.43 mm)  
WIDTH: 10.28 IN (261.11 mm)  
DEPTH: 7.46 IN (189.48 mm)  
WEIGHT: 1.25 LBS (1.02 kg)

ELECTRICAL SPECIFICATIONS:  
AMPERAGE: 30A  
OPERATING VOLTAGE: 120V  
QTY OF PROTECTED CIRCUITS: 4  
CONNECTION TERMINALS: COMPRESSION LUGS (6 AWG-14 AWG)  
TERMINAL BLOCK (10 AWG-26 AWG)

ENVIRONMENT SPECIFICATIONS:  
NORMAL OPERATING TEMP.: -40°C TO +80°C  
ENVIRONMENT: OUTDOOR CLASS NEMA 4X  
POLYCARBONATE UL 94V-0 RATED



AC DISTRIBUTION PANEL DETAIL



REVISIONS			
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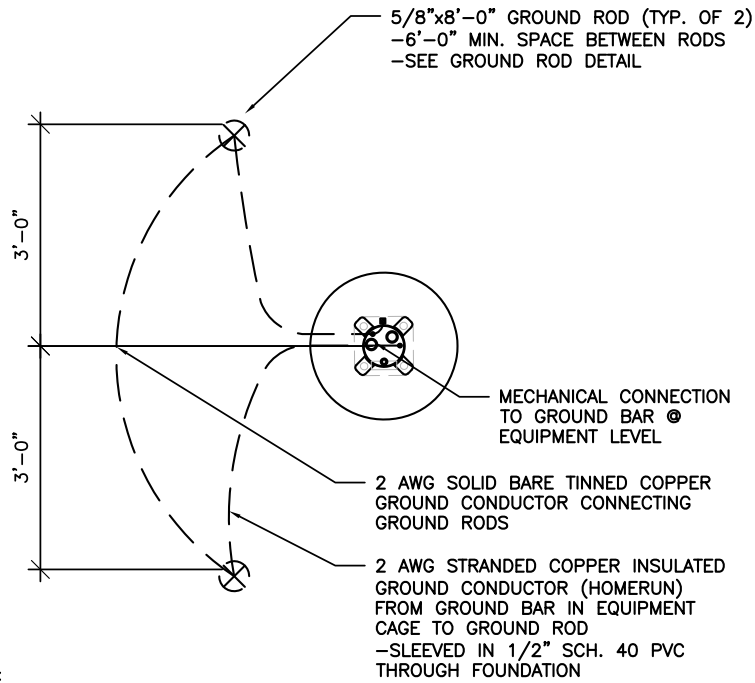
ELECTRICAL SEAL

LTE 1C&2C PICO CELL BUILD  
14805794  
CRAN\_RCHI\_CHU01\_009  
184214  
544 S GOODWIN AVE  
URBANA, IL 61801

SHEET TITLE  
PANEL SCHEDULE  
& ELECTRICAL  
DETAILS

SHEET NUMBER  
**E2**

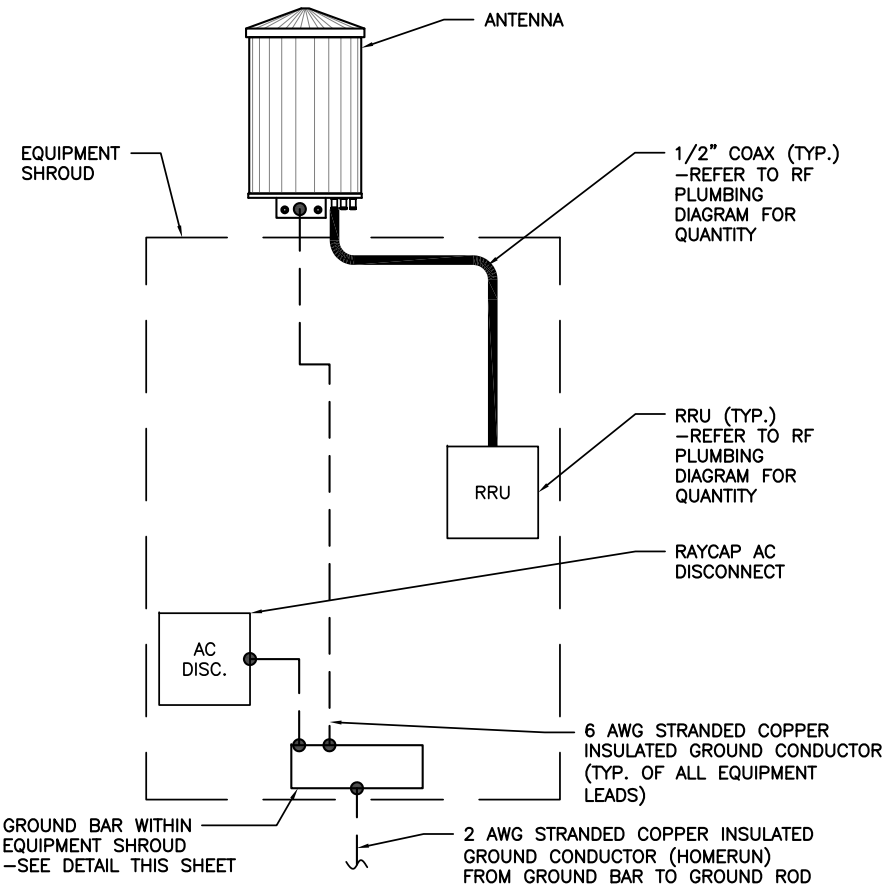
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NOTE:  
GROUND ROD LOCATIONS ARE  
DIAGRAMMATICAL ONLY. CONTRACTOR  
SHALL PLACE GROUND RODS IN  
FIELD TO BE LEAST OBSTRUCTIVE  
TO EXISTING FIELD CONDITIONS.

POLE GROUNDING PLAN DETAIL

SCALE  
N.T.S. 1



EQUIPMENT GROUNDING RISER DETAIL

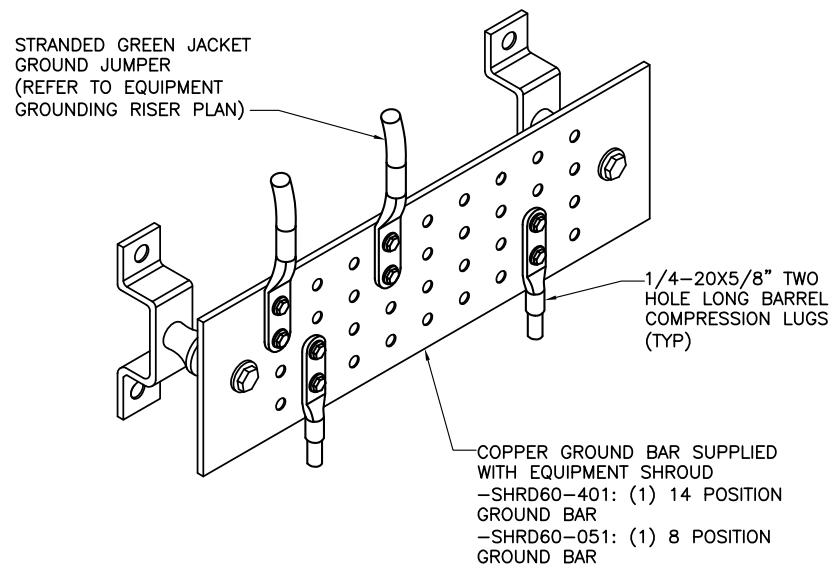
SCALE  
N.T.S. 2

CADWELD CONNECTIONS OR APPROVED EQUAL		BURNDY CONNECTIONS OR APPROVED EQUAL	
	PARALLEL HORIZONTAL CONDUCTORS PARALLEL THROUGH CONNECTION OF HORIZONTAL CABLES TYPE PT		HORIZONTAL STEEL SURFACE TO FLAT STEEL SURFACE OR HORIZONTAL PIPE TYPE HS
	THROUGH CABLE TO GROUND ROD THROUGH CABLE TO TOP OF GROUND ROD TYPE GT		VERTICAL STEEL SURFACE CABLE DOWN AT 45° TO VERTICAL STEEL SURFACE INCLUDING PIPE TYPE VS
	VERTICAL PIPE CABLE DOWN AT 45° TO RANGE OF VERTICAL PIPES TYPE VS		BOND JUMPER FIELD FABRICATED GREEN STRANDED INSULATED TYPE 2-YA-2
			COPPER LUGS TWO HOLE - LONG BARREL LENGTH TYPE YA-2

CONNECTION TYPE KEY  
● MECHANICAL CONNECTION  
■ CADWELD CONNECTION

GROUNDING CONNECTIONS DETAIL

SCALE  
N.T.S. 3



NOTES:  
1. CONTRACTOR SHALL UTILIZE LUGGED HOLES PROVIDED. NO DRILLING OF THE BAR WILL BE PERMITTED.  
2. ALL HARDWARE SHALL BE 1/4-20 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.  
3. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

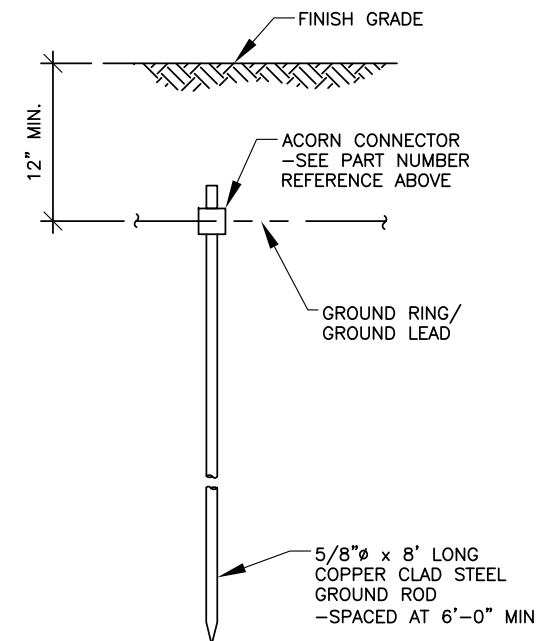
GROUND BAR DETAIL

SCALE  
N.T.S. 4

DETAIL NOT USED

SCALE  
N.T.S. 5

ACORN CONNECTOR		
ELEC. MOTION CO. PART #	GROUND CONDUCTOR SIZE	GROUND ROD SIZE
EM2DB	#12-1/0 AWG	5/8"Ø



GROUND ROD DETAIL

SCALE  
N.T.S. 6



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URBANA, IL 61801

SHEET TITLE

GROUNDING  
DETAILS

SHEET NUMBER

E3



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Diagram - 1 Diagram File Name - Pico 02.vsd  
 Atoll Site Name - Champaign CRAN HUB- University Location Name - CRAN\_CHAMPAIGN\_U NIVERSITY\_0001 Market - CENTRAL ILLINOIS Market Cluster - ILLINOIS/WISCONSIN  
 Comments:

Configuration Name	700 MHz 2T2R LTE	700 MHz 4T4R LTE	850 MHz 2T2R LTE	850 MHz 4T4R LTE	1900 MHz 2T2R LTE	1900 MHz 4T4R LTE	2100 MHz 2T2R LTE	2100 MHz 4T4R LTE	5GHz LAA LTE	3.5 GHz LAA LTE	Sector Count	Carrier Count	Antenna LAA location
Pico #02	NA	NA	NA	NA	NA	X	NA	NA	X	NA	1	2	14 Ports Antenna

Amphenol Pseudo-Omni – 14 ports Antenna  
 2C2U3MT360X06Fxs0

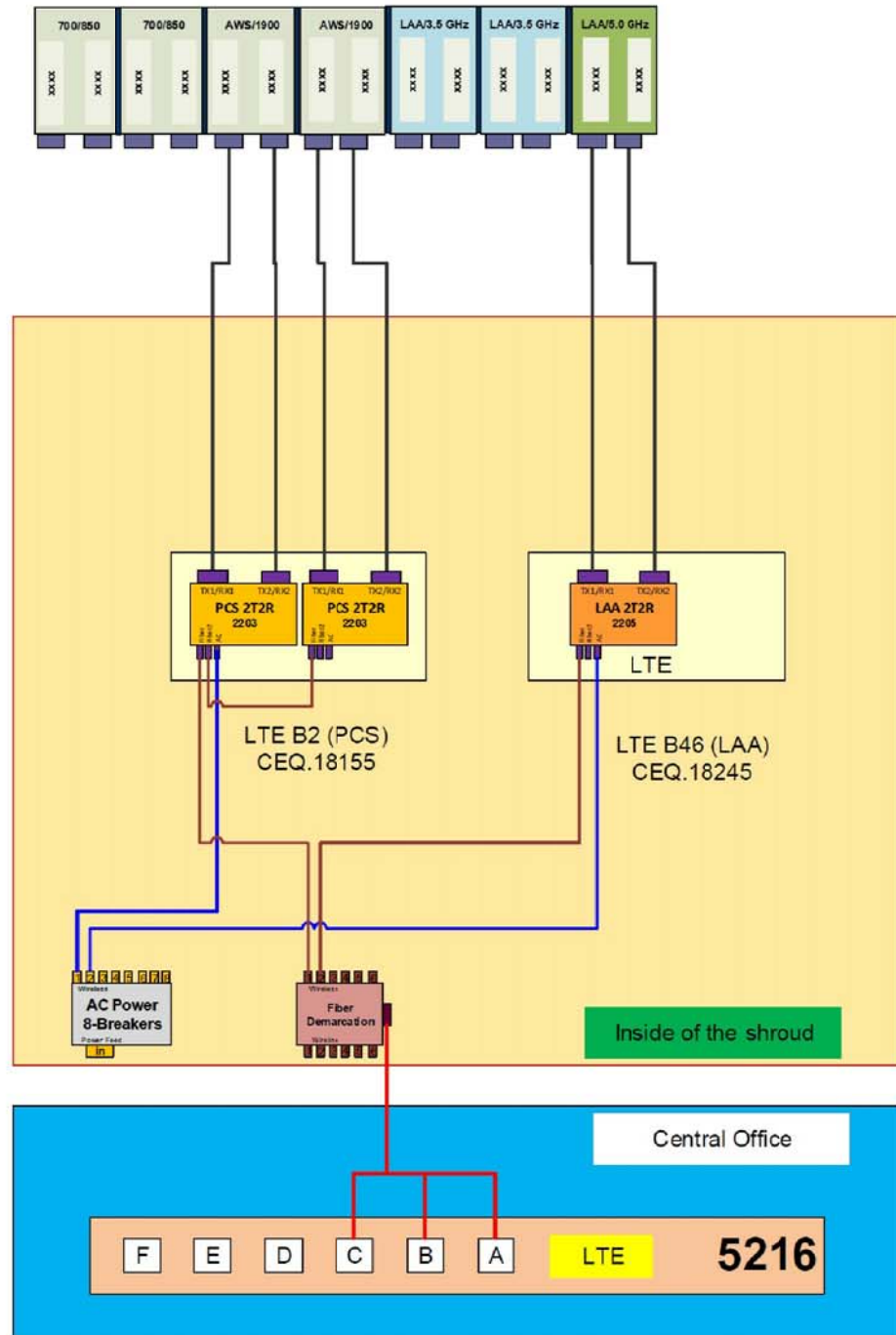


**Important Note:**  
 For detailed radio to antenna wiring refer to the latest 4T4R Antenna/Radio Port Connection Field Notice (RF-HW-2016-234) and the 4T Wiring Playbook

- Two Radios**
- B2 (PCS) – CEQ.18155
  - B66A (AWS) – CEQ.18167
- One Radio/One Dummy Radio**
- B46 (LAA) – CEQ.18245



- HXWXD – 17.12" X 7.87" X 4.13"
- WEIGHT – 21 LBS.
- POWER CONSUMPTION – WATTS MAX
- MINIMUM AC FUSE RATING – 8 AMP
- MAX HEAT DISSIPATION – 20 WATTS



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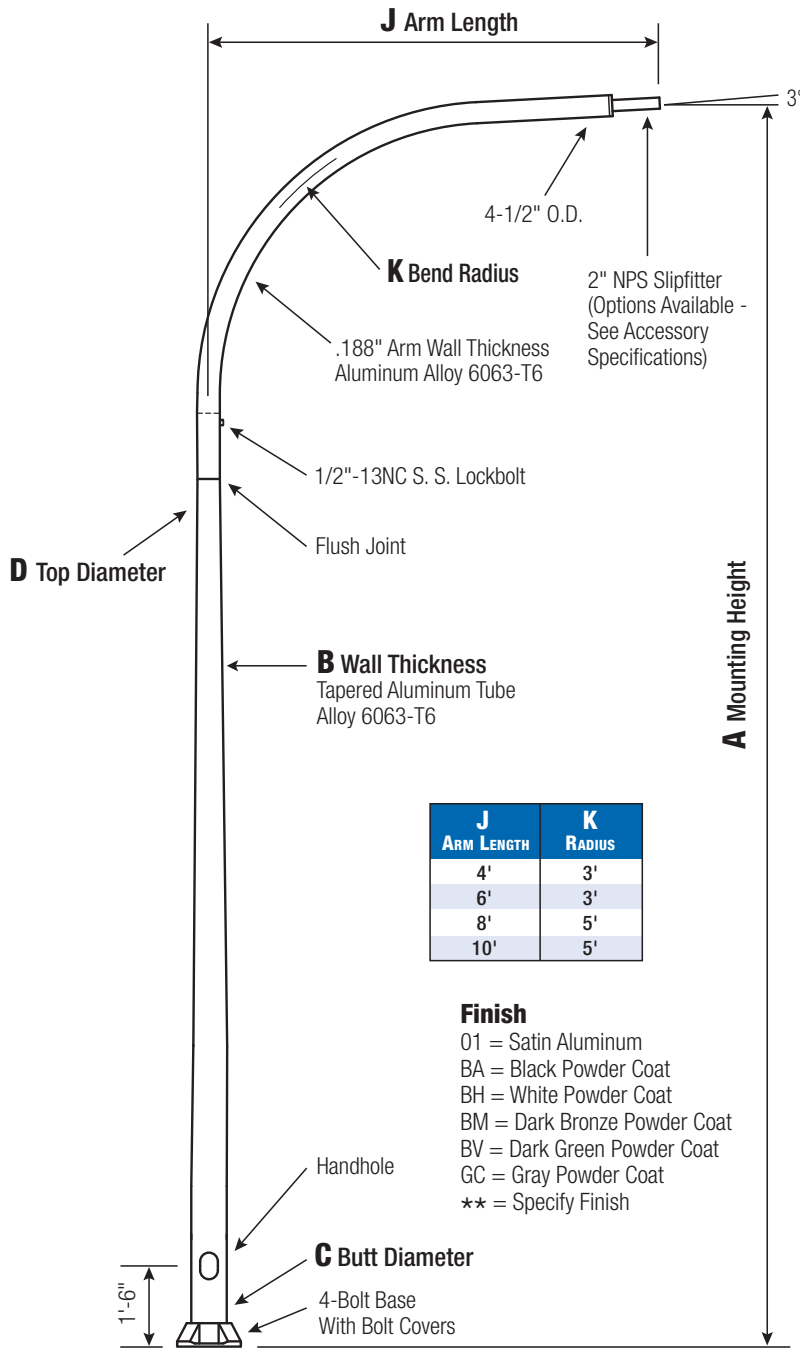
LTE 1C&2C PICO CELL BUILD 14805794  
 CRAN\_RCHI\_CHU01\_009 184214  
 544 S GOODWIN AVE URBANA, IL 61801

SHEET TITLE  
 RF PLUMBING DIAGRAM

SHEET NUMBER  
**RF1**

# RTA

## Round Tapered Aluminum Pole with Arms Single Davit — 4-Bolt Base



J ARM LENGTH	K RADIUS
4'	3'
6'	3'
8'	5'
10'	5'

### Finish

- O1 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- \*\* = Specify Finish

# RTA30D8B4D1A -

CATALOG NUMBER

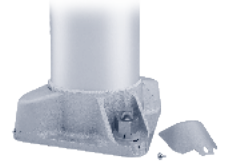
FINISH

### Pole

Shaft and arm will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

### Base Style

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.

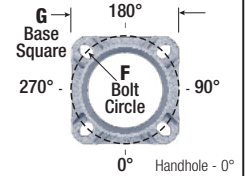


### Handhole

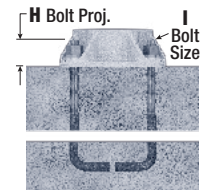
Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.

### Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.



Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.



### Vibration Damper

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.



**WARNING:**  
Do not install light pole without luminaire.

Satin Aluminum or Powder Coated  
Finish per Customer Specification.

A Mtg. Hgt.	B WALL THICKNESS	C BUTT DIAMETER	J ARM LENGTH	LUM. WEIGHT	MAXIMUM EPA					OLD CAT. NUMBER	CATALOG NUMBER
					90	100	110	120	130		
30	0.188"	8	10'	35	9.0	6.5	5.7	3.9	2.7	41-160	RTA30D8B4D1A-**

C BUTT DIA.	D TOP DIA.	F BOLT CIR. DIA.	G BASE SQ.	H BOLT PROJ.	I BOLT SIZE
8	4.5	11 - 12	11.25	2.75	1 x 36 x 4

Dimensions in Inches

<b>CUSTOMER NAME:</b>	
<b>PROJECT:</b>	<b>LOCATION:</b>
<b>NOTES:</b>	<b>QUANTITY:</b>



26252 Hillman Highway  
Abingdon, VA 24210  
800.368.7171  
www.hapco.com

**EPA Notes:** Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.



SITE PHOTO



PROJECT INFORMATION

SITE NAME: CRAN\_RCHI\_CHNOS\_004  
 COUNTY: CHAMPAIGN  
 ADDRESS: 1171 W GREEN ST  
 URBANA, IL 61801  
 JURISDICTION: CITY OF URBANA  
 USID: 184228  
 FA NUMBER: 14805850  
 PTN: 3304A0AAQR / 3304A0AARM  
 PACE: MRCHI025452 / MRCHI025399

LATITUDE: 40° 06' 37.3782" (40.110383°)  
 LONGITUDE: 88° 13' 23.6742" (-88.223243°)  
 ELEVATION: 720'

LIGHT POLE/UTILITY  
 POLE OWNER: CITY OF URBANA

APPLICANT: AT&T MOBILITY  
 930 NATIONAL PARKWAY  
 SCHAUMBURG IL 60173

AT&T PROJECT  
 MANAGER/SITE  
 ACQUISITION: VANESSA ROSS  
 (217) 814-2314  
 VF2021@ATT.COM

AT&T CONSTRUCTION  
 MANAGER: CHRISTIANA RACHAL  
 CR630A@ATT.COM

PROJECT CONSULTANTS

PROJECT MANAGER: SAC WIRELESS LLC  
 540 W. MADISON ST. (9TH FLOOR)  
 CHICAGO IL 60661  
 CONTACT: PRITI MORE  
 PHONE: (312) 789-4353  
 EMAIL: PRITI.MORE@SACW.COM

ARCHITECT: GPD GROUP, INC. - 184-007100  
 520 S. MAIN ST., SUITE 2531  
 AKRON, OH 44311  
 317-295-3180

SAC C.M. MARK KLEPACKI  
 EMAIL: MARK.KLEPACKI@SACW.COM

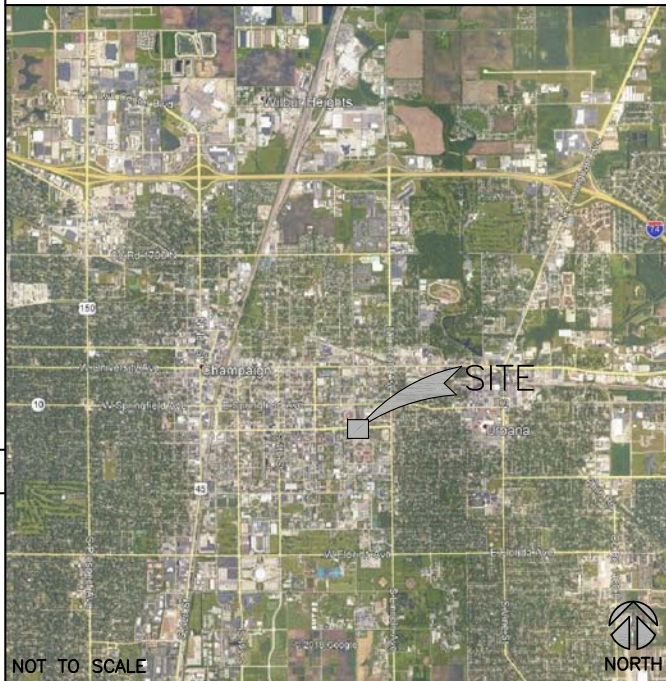
SAC P.M. JAMES HOM  
 EMAIL: JAMES.HOM@SACW.COM

# AT&T MOBILITY

**PROJECT :** LTE 1C&2C MICRO CELL BUILD  
**SITE # :** CRAN\_RCHI\_CHUOI\_023  
**USID / NODE:** 184228  
**FA # :** 14805850  
**PTN # :** 3304A0AAQR / 3304A0AARM  
**PACE # :** MRCHI025452 / MRCHI025399  
**ENODEB NAME :** ILL07049F\_R01  
**JURISDICTION :** CITY OF URBANA

**SITE NAME :** CRAN\_RCHI\_CHNOS\_004  
**ADDRESS :** 1171 W GREEN ST  
 URBANA, IL 61801

VICINITY MAP



NOT TO SCALE



LOCATION MAP



NOT TO SCALE

DRAWING INDEX

T1	TITLE SHEET
A1	FIBER DELIVERY PLANS (REFERENCE ONLY)
A2	OVERALL SITE PLAN
A3	ENLARGED PLAN
A4	EXISTING LIGHT POLE ELEVATION
A5	PROPOSED LIGHT POLE ELEVATIONS
A6	EQUIPMENT DETAILS (REFERENCE ONLY)
A7	MOUNTING DETAILS
S1	POLE FOUNDATION DETAILS
E1	ELECTRICAL ONE-LINE DIAGRAM
E2	PANEL SCHEDULE & ELECTRICAL DETAILS
E3	GROUNDING DETAILS
RF1	RF PLUMBING DIAGRAM (REFERENCE ONLY)
REF	POLE MANUFACTURER DESIGN (BY OTHERS)

SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

- REMOVE EXISTING LIGHT POLE AND REPLACE WITH NEW 40'-0" HAPCO ALUMINUM DAVIT ARM (DWG# SKDG032619B) LIGHT POLE (BLACK POWDER COAT 5 YR) PER PLAN
- INSTALL NEW ELECTRIC SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE. METER SUPPLIED & INSTALLED BY CONTRACTOR.
- INSTALL NEW FIBER SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE LOCATION AS SHOWN.
- INSTALL NEW POWER & FIBER EQUIPMENT PER PLAN
- INSTALL (1) NEW OMNI ANTENNA
- INSTALL (1) PCS RRUS-4415 & (1) 700 RRUS-11
- INSTALL CABLING AS REQUIRED
- GROUND AS REQUIRED
- LIGHT POLE LUMINARY TO BE SUPPLIED & INSTALLED BY CONTRACTOR. LUMINARY MUST BE APPROVED BY CITY OF URBANA PRIOR TO ORDER.
- STREET LIGHTING HANDHOLE (IF REQUIRED) SUPPLIED & INSTALLED BY CONTRACTOR
- POTHOLES SHALL BE REQUIRED FOR ANY PROPOSED UTILITY CROSSING
- HYDROVAC SHALL BE USED FOR ALL TRENCHING & POTHOLES ACTIVITIES
- CONTRACTOR SHALL MAINTAIN INTEGRITY OF EXISTING POLE DURING REMOVAL & COORDINATE RETURN OF REMOVED POLE TO THE CITY OF URBANA

UTILITY DELIVERY METHOD TO PROPOSED POLE

- FIBER - UNDERGROUND
- POWER - UNDERGROUND

CODE COMPLIANCE

- 2015 INTERNATIONAL BUILDING CODE W/CITY AMMENDMENTS
- 2014 NATIONAL ELECTRIC CODE W/CITY AMMENDMENTS

SPECIAL NOTES

- ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT AT&T CONSTRUCTION INSTALLATION GUIDE.
- EXISTING CONDITIONS WILL BE CHANGED & VERIFIED IN FIELD. IF SIGNIFICANT DEVIATIONS OR DETERIORATION ARE ENCOUNTERED AT THE TIME OF CONSTRUCTION, A REPAIR PERMIT WILL BE OBTAINED & CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- THESE DRAWINGS ARE FULL SIZE & SCALEABLE ON 11"x17" SHEET SIZE.
- STATEMENT THAT COMPLIANCE WITH THE ENERGY CODE IS NOT REQUIRED. -SCOPE OF WORK DOES NOT INVOLVE MODIFICATIONS TO EXTERIOR ENVELOPE OF BUILDING, HVAC SYSTEMS OR ELECTRICAL LIGHTING.

DO NOT SCALE DRAWINGS

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



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	03/27/19	ISSUED FOR REVIEW	MW
B	05/02/19	ADDED FOUNDATION	MRL

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF ILLINOIS.

CIVIL SEAL

LTE 1C&2C MICRO CELL BUILD  
 14805850  
 CRAN\_RCHI\_CHNOS\_004  
 184228  
 1171 W GREEN ST  
 URBANA, IL 61801

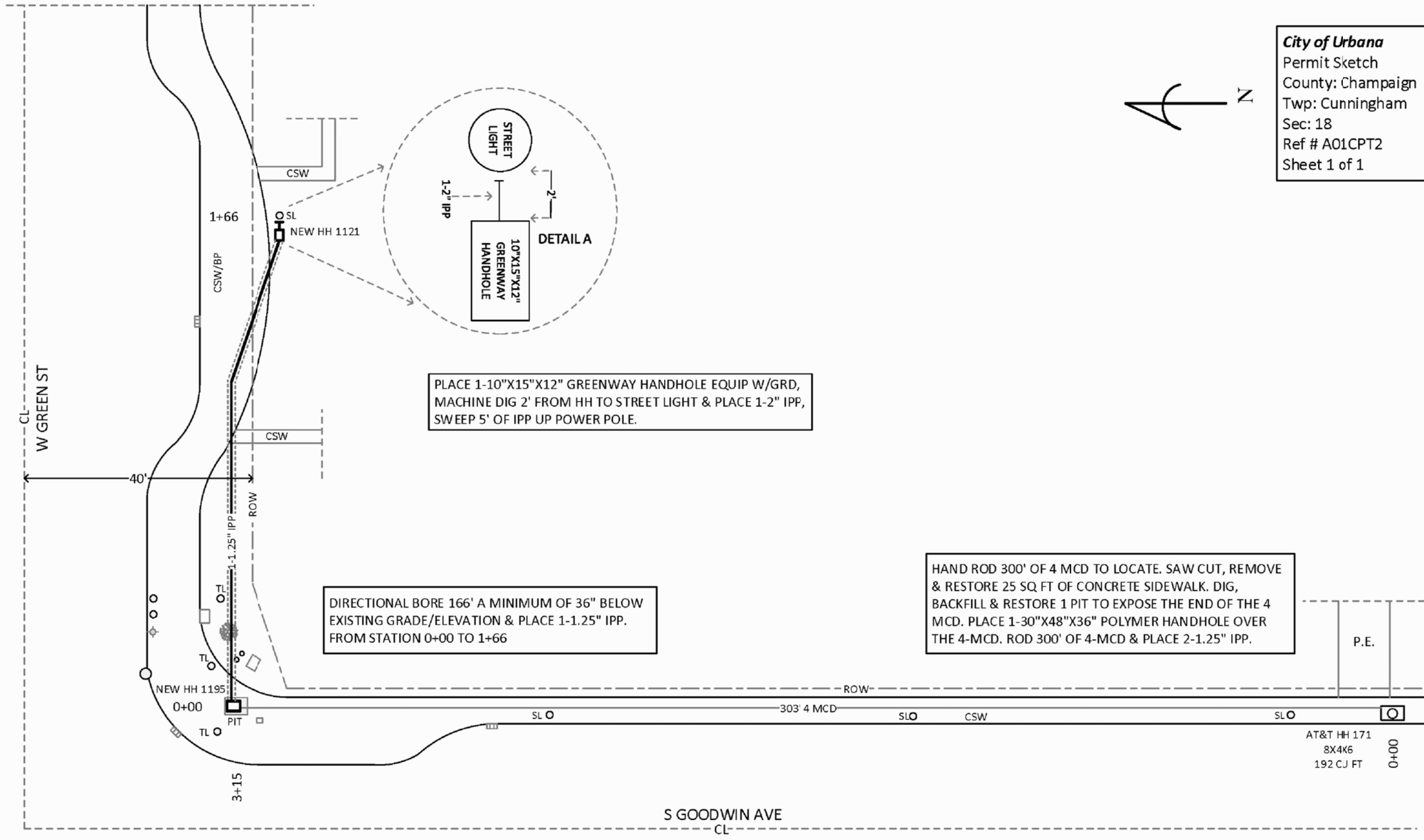
SHEET TITLE  
 TITLE SHEET

SHEET NUMBER  
**T1**

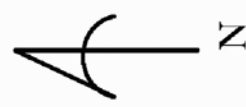
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**City of Urbana**  
 Permit Sketch  
 County: Champaign  
 Twp: Cunningham  
 Sec: 18  
 Ref # A01CPT2  
 Sheet 1 of 1



PLACE 1-10"X15"X12" GREENWAY HANDHOLE EQUIP W/GRD, MACHINE DIG 2' FROM HH TO STREET LIGHT & PLACE 1-2" IPP, SWEEP 5' OF IPP UP POWER POLE.

DIRECTIONAL BORE 166' A MINIMUM OF 36" BELOW EXISTING GRADE/ELEVATION & PLACE 1-1.25" IPP. FROM STATION 0+00 TO 1+66

HAND ROD 300' OF 4 MCD TO LOCATE. SAW CUT, REMOVE & RESTORE 25 SQ FT OF CONCRETE SIDEWALK. DIG, BACKFILL & RESTORE 1 PIT TO EXPOSE THE END OF THE 4 MCD. PLACE 1-30"X48"X36" POLYMER HANDHOLE OVER THE 4-MCD. ROD 300' OF 4-MCD & PLACE 2-1.25" IPP.



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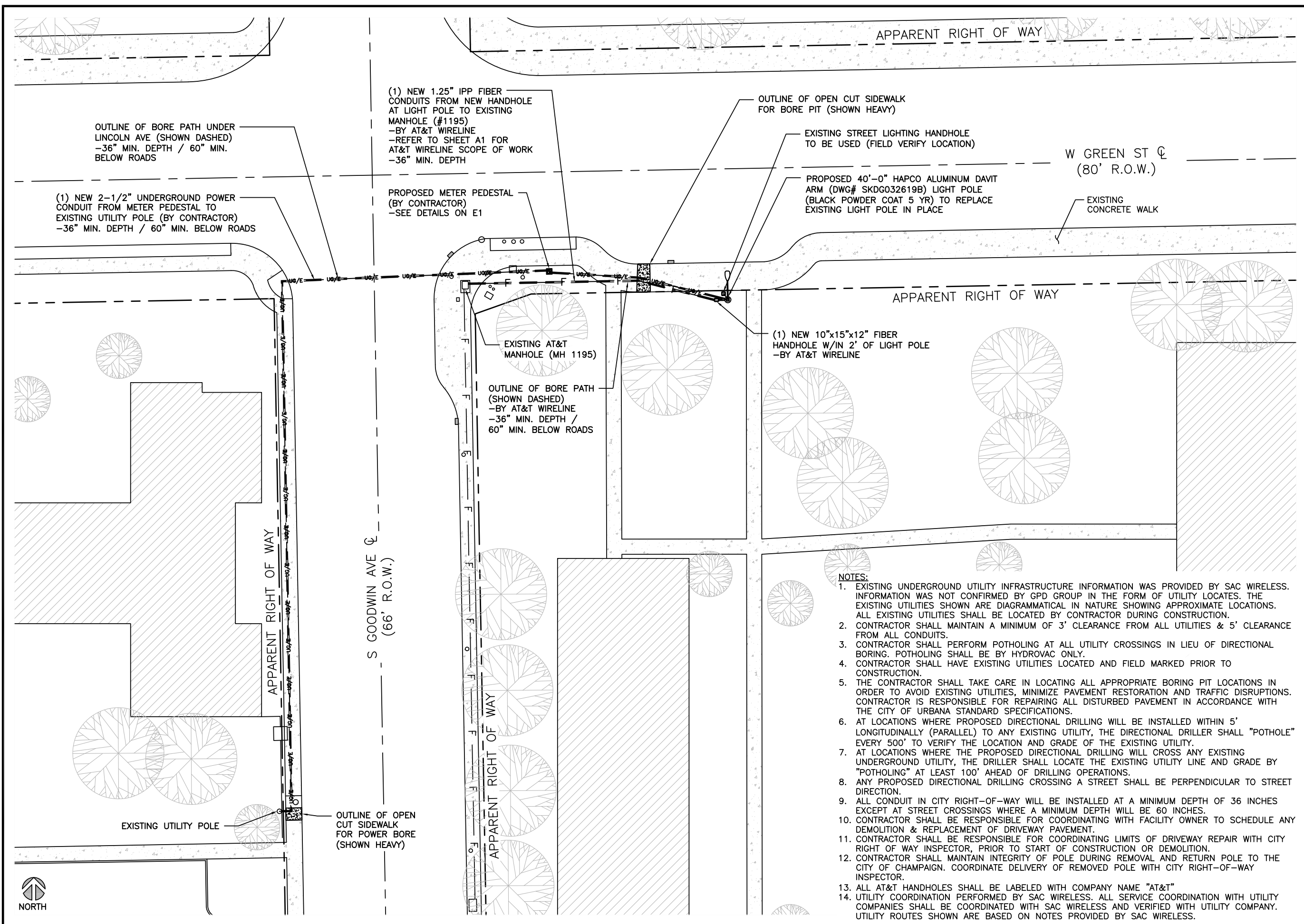
REFERENCE ONLY

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SHEET TITLE  
**FIBER DELIVERY PLANS**

SHEET NUMBER  
**A1**

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- NOTES:**
- EXISTING UNDERGROUND UTILITY INFRASTRUCTURE INFORMATION WAS PROVIDED BY SAC WIRELESS. INFORMATION WAS NOT CONFIRMED BY GPD GROUP IN THE FORM OF UTILITY LOCATES. THE EXISTING UTILITIES SHOWN ARE DIAGRAMMATICAL IN NATURE SHOWING APPROXIMATE LOCATIONS. ALL EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR DURING CONSTRUCTION.
  - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3' CLEARANCE FROM ALL UTILITIES & 5' CLEARANCE FROM ALL CONDUITS.
  - CONTRACTOR SHALL PERFORM POTHOLING AT ALL UTILITY CROSSINGS IN LIEU OF DIRECTIONAL BORING. POTHOLING SHALL BE BY HYDROVAC ONLY.
  - CONTRACTOR SHALL HAVE EXISTING UTILITIES LOCATED AND FIELD MARKED PRIOR TO CONSTRUCTION.
  - THE CONTRACTOR SHALL TAKE CARE IN LOCATING ALL APPROPRIATE BORING PIT LOCATIONS IN ORDER TO AVOID EXISTING UTILITIES, MINIMIZE PAVEMENT RESTORATION AND TRAFFIC DISRUPTIONS. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DISTURBED PAVEMENT IN ACCORDANCE WITH THE CITY OF URBANA STANDARD SPECIFICATIONS.
  - AT LOCATIONS WHERE PROPOSED DIRECTIONAL DRILLING WILL BE INSTALLED WITHIN 5' LONGITUDINALLY (PARALLEL) TO ANY EXISTING UTILITY, THE DIRECTIONAL DRILLER SHALL "POTHOLE" EVERY 500' TO VERIFY THE LOCATION AND GRADE OF THE EXISTING UTILITY.
  - AT LOCATIONS WHERE THE PROPOSED DIRECTIONAL DRILLING WILL CROSS ANY EXISTING UNDERGROUND UTILITY, THE DRILLER SHALL LOCATE THE EXISTING UTILITY LINE AND GRADE BY "POTHOLING" AT LEAST 100' AHEAD OF DRILLING OPERATIONS.
  - ANY PROPOSED DIRECTIONAL DRILLING CROSSING A STREET SHALL BE PERPENDICULAR TO STREET DIRECTION.
  - ALL CONDUIT IN CITY RIGHT-OF-WAY WILL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES EXCEPT AT STREET CROSSINGS WHERE A MINIMUM DEPTH WILL BE 60 INCHES.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH FACILITY OWNER TO SCHEDULE ANY DEMOLITION & REPLACEMENT OF DRIVEWAY PAVEMENT.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LIMITS OF DRIVEWAY REPAIR WITH CITY RIGHT OF WAY INSPECTOR, PRIOR TO START OF CONSTRUCTION OR DEMOLITION.
  - CONTRACTOR SHALL MAINTAIN INTEGRITY OF POLE DURING REMOVAL AND RETURN POLE TO THE CITY OF CHAMPAIGN. COORDINATE DELIVERY OF REMOVED POLE WITH CITY RIGHT-OF-WAY INSPECTOR.
  - ALL AT&T HANDHOLES SHALL BE LABELED WITH COMPANY NAME "AT&T"
  - UTILITY COORDINATION PERFORMED BY SAC WIRELESS. ALL SERVICE COORDINATION WITH UTILITY COMPANIES SHALL BE COORDINATED WITH SAC WIRELESS AND VERIFIED WITH UTILITY COMPANY. UTILITY ROUTES SHOWN ARE BASED ON NOTES PROVIDED BY SAC WIRELESS.



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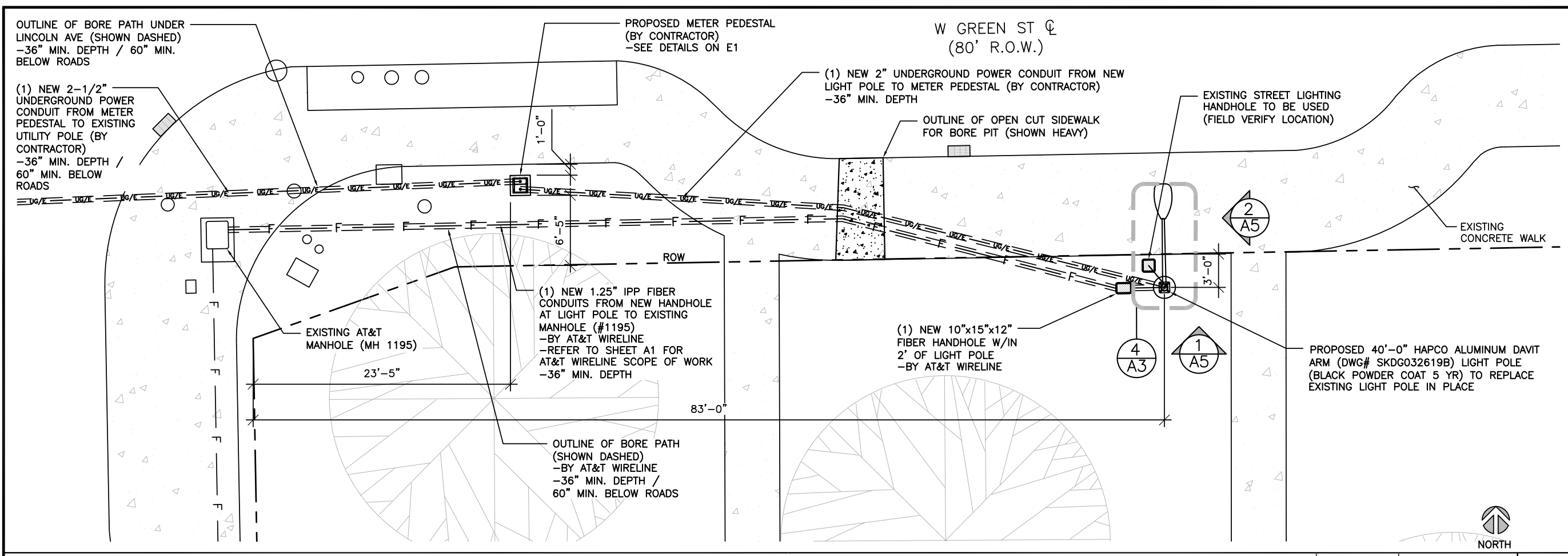
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SHEET TITLE  
**OVERALL SITE PLAN**

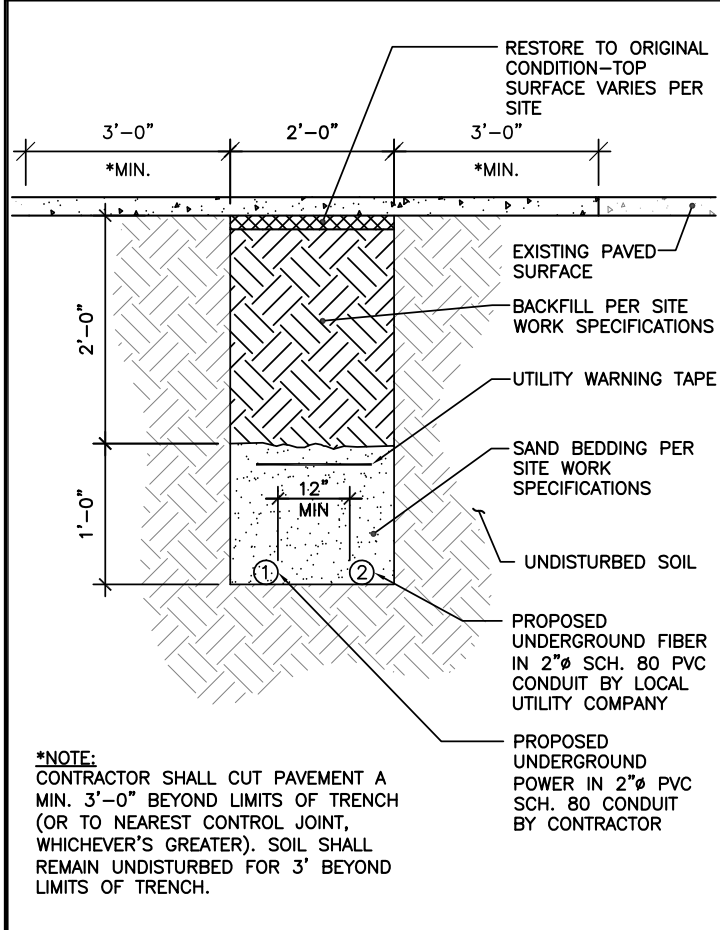
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**A2**

OVERALL SITE PLAN

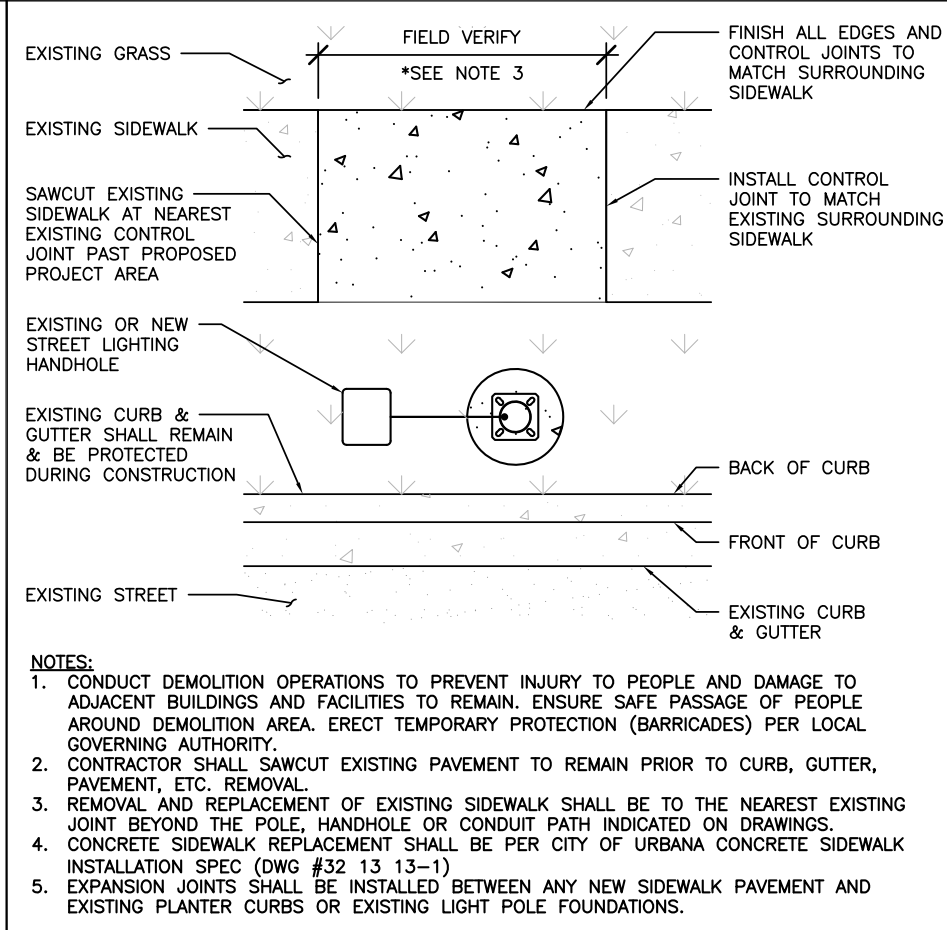
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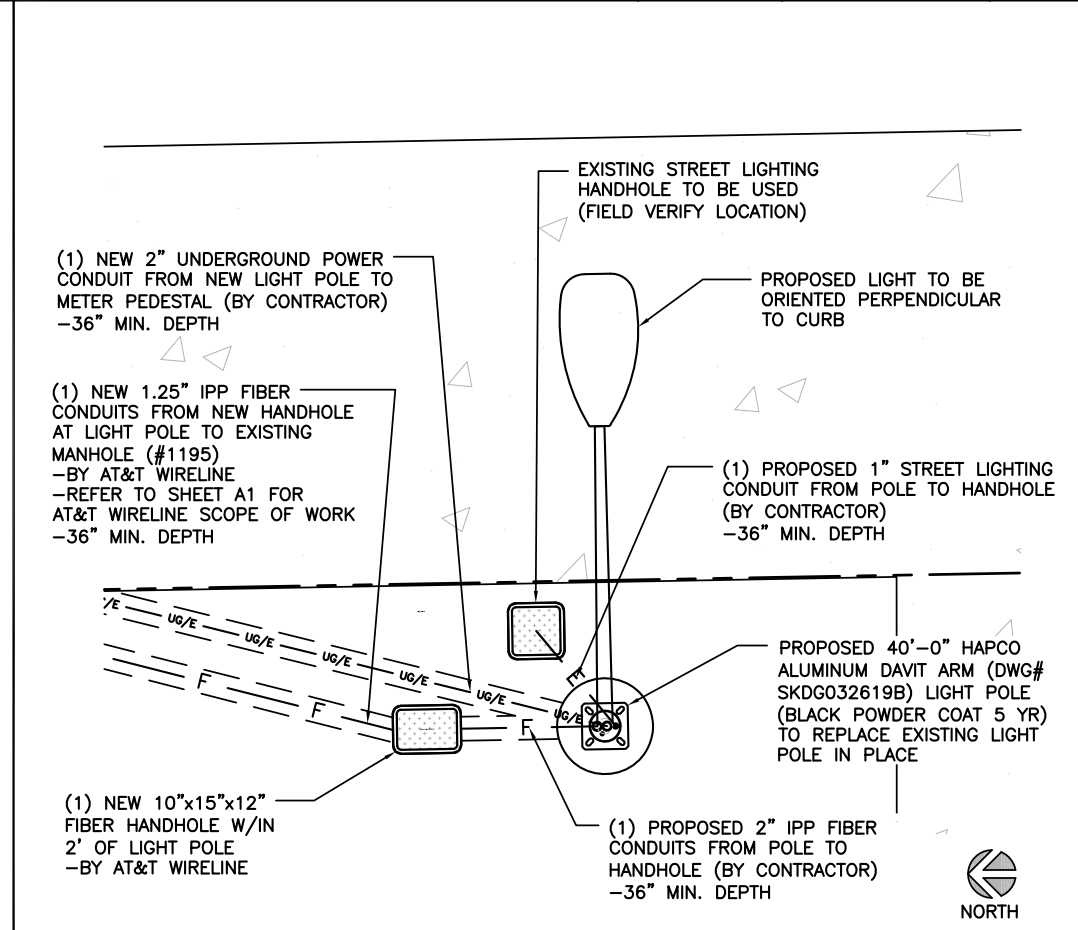
ENLARGED SITE PLAN



TYPICAL TRENCH DETAIL



OPEN CUT SIDEWALK DETAIL



LIGHT POLE PLAN



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SHEET TITLE  
**ENLARGED PLAN**

SHEET NUMBER  
**A3**



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EXISTING POLE NOT IN PLACE AT  
TIME OF ORIGINAL SITE WALK



REVISIONS			
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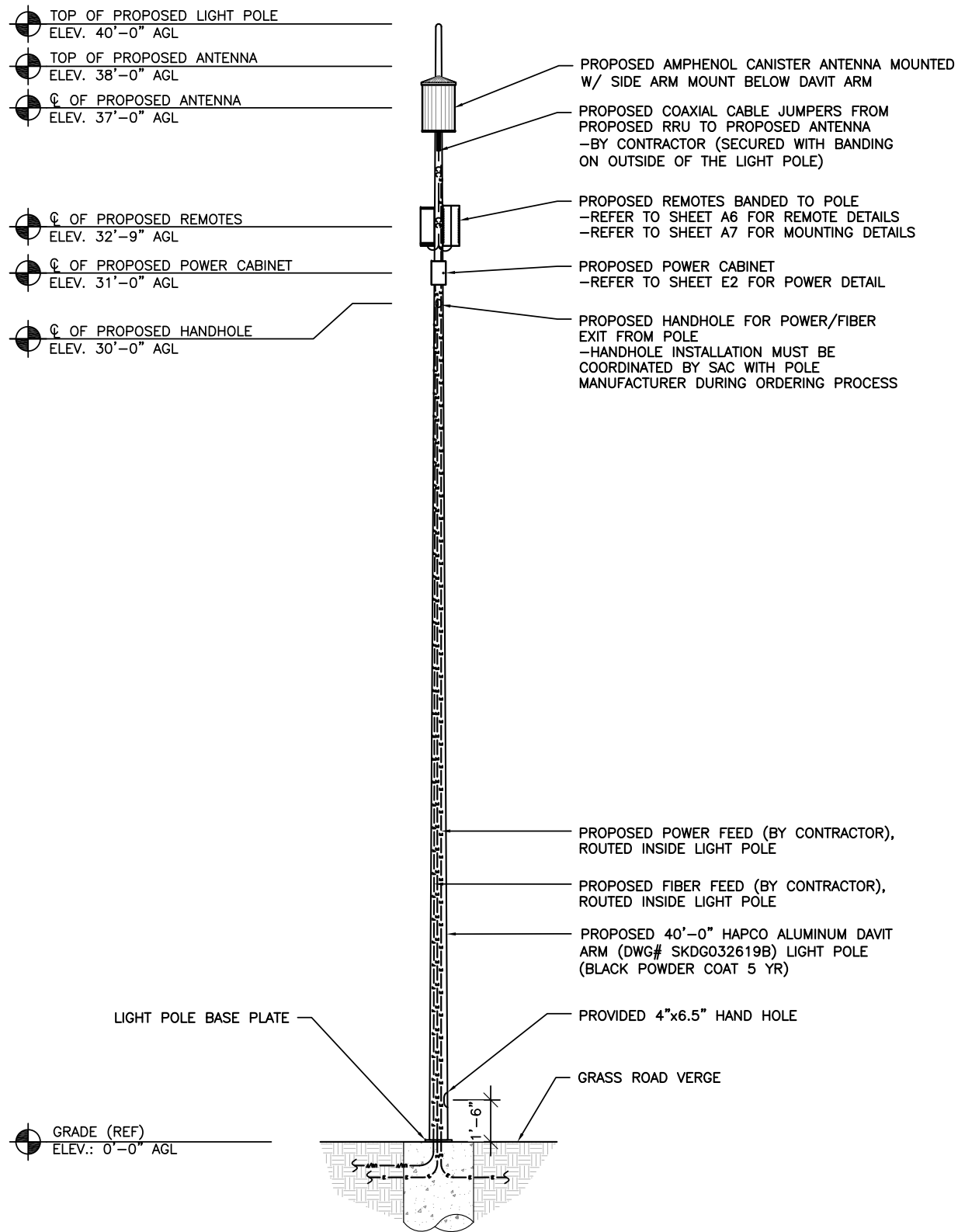
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SHEET TITLE  
EXISTING  
LIGHT POLE  
ELEVATION

SHEET NUMBER  
**A4**

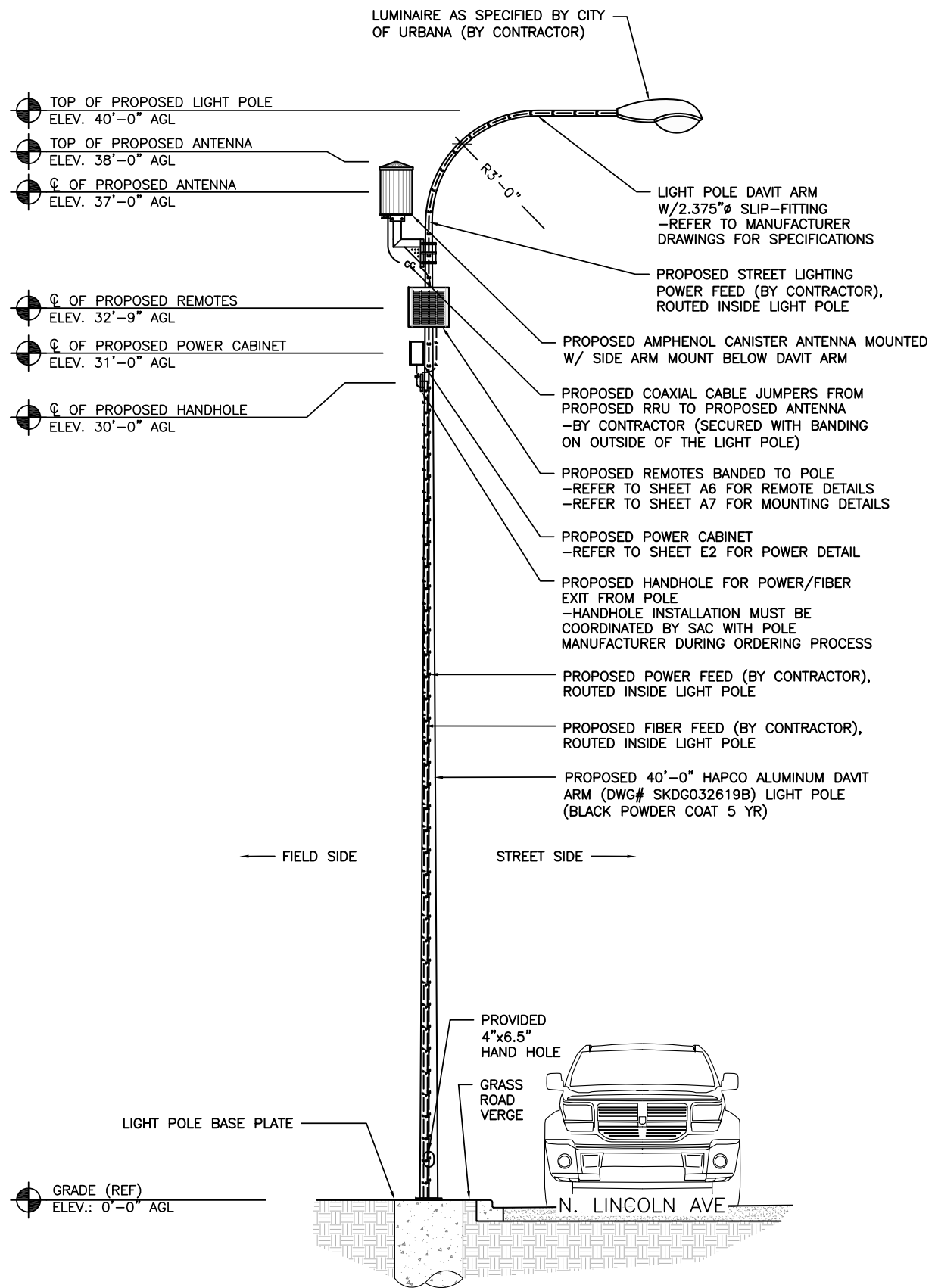
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PROPOSED LIGHT POLE FRONT ELEVATION (FIELD SIDE)

SCALE: 1/4" = 1'-0" (24x36)  
 (OR) 1/8" = 1'-0" (11x17)

1



PROPOSED LIGHT POLE SIDE ELEVATION

SCALE: 1/4" = 1'-0" (24x36)  
 (OR) 1/8" = 1'-0" (11x17)

2



REVISIONS			
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SHEET TITLE  
 PROPOSED LIGHT POLE ELEVATIONS

SHEET NUMBER  
**A5**

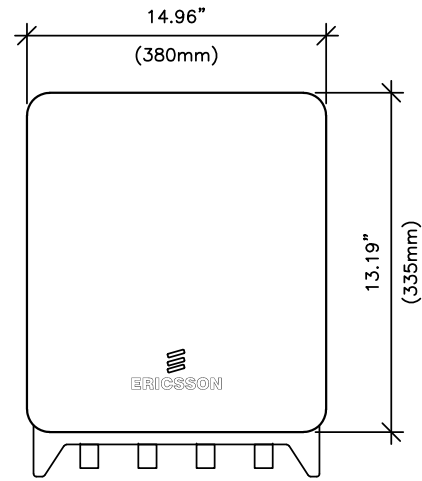
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MANUFACTURER: ERICSSON  
 MODEL: RRUS 4415 B25

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 14.96 IN (380mm)  
 WIDTH: 13.19 IN (335mm)  
 DEPTH: 5.39 IN (137mm)  
 WEIGHT: 46 LBS (21kg)

**INTERFACE SPECIFICATIONS:**  
 CPRI: 2x2.5/4.9/9.8/10.1 Gbps  
 (ONLY USE ERICSSON SUPPLIED AND APPROVED SFPs)

EXTERNAL ALARMS: 2



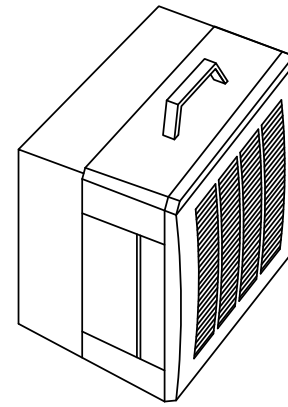
MANUFACTURER: ERICSSON  
 MODEL: RRUS-11

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 19.7 IN (500mm)  
 WIDTH: 17.0 IN (431mm)  
 DEPTH: 7.2 IN (182mm)  
 WEIGHT: 50.7 LBS (23kg)

**INTERFACE SPECIFICATIONS:**  
 ANTENNA PORTS: 2x7/16 IEC-169-4  
 OPTICAL INDICATORS: 6  
 EXTERNAL ALARMS: 1  
 FIELD GROUND: 1

**ELECTRICAL SPECIFICATIONS:**  
 POWER SUPPLY: -48 VDC OR 100-250 VAC

**ENVIRONMENTAL SPECIFICATIONS:**  
 NORMAL OPERATING TEMP.: -40°C TO +55°C  
 RELATIVE HUMIDITY: 5-100%



REVISIONS			
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RRUS 4415 B25 DETAILS

SCALE  
N.T.S. 1

RRUS-11 DETAILS

SCALE  
N.T.S. 2

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REFERENCE ONLY

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SHEET TITLE

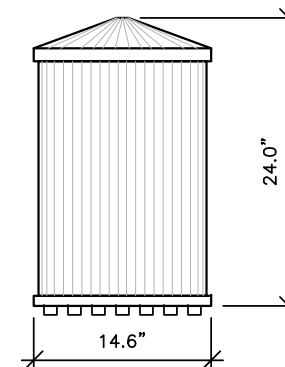
EQUIPMENT DETAILS

SHEET NUMBER

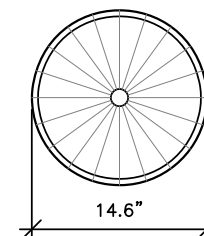
A6



IMAGE



SIDE VIEW



TOP VIEW

AMPENOL MULTI BAND CANISTER ANTENNA  
 MODEL: 2C2U3MT360X06Fxyso0

COLOR NOTE:  
 CONTRACTOR SHALL PAINT ALL EQUIPMENT ATTACHED TO STREETLIGHT POLE TO MATCH POLE

MECHANICAL CHARACTERISTICS

- ANTENNA DIMENSIONS (HEIGHT X DIAMETER) : 24.0"x14.6"
- WEIGHT W/OUT MOUNTING BRACKET KIT: TBD LBS
- SURVIVAL WIND SPEED: 150 MPH
- WIND AREA: 2.4 FT<sup>2</sup>
- WIND LOAD (100 MPH): 43 LBF

DETAIL NOT USED

SCALE  
N.T.S. 3

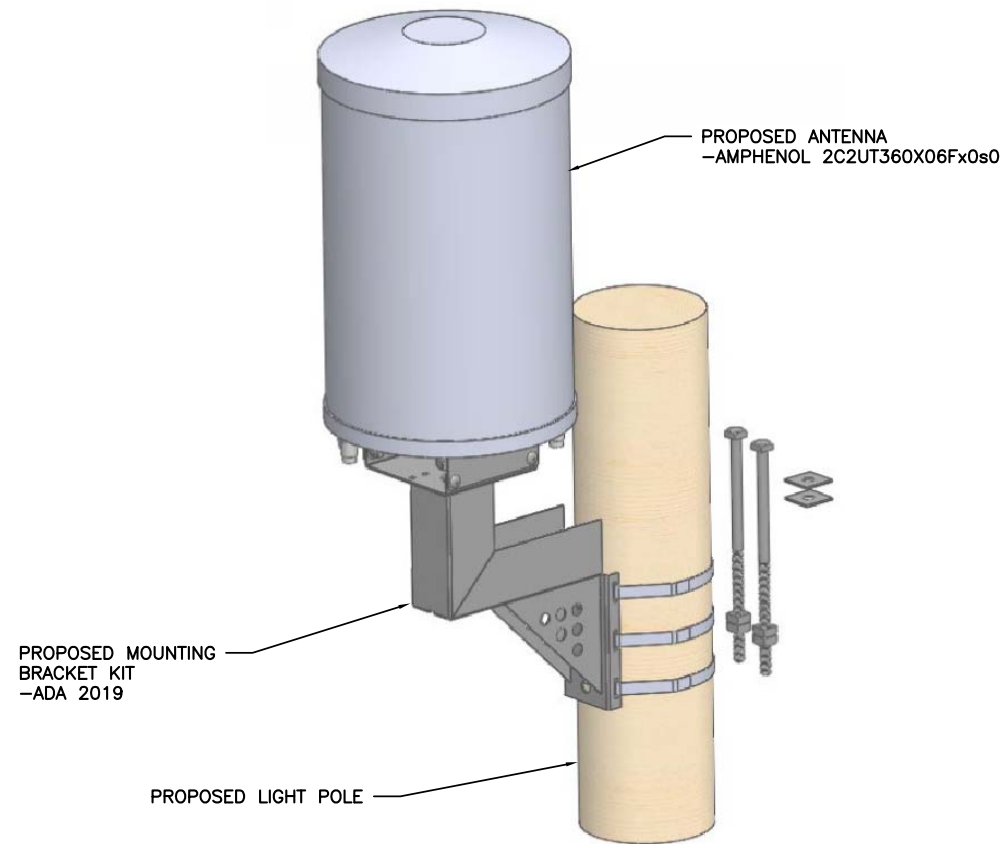
ANTENNA DETAIL

SCALE: NTS

4

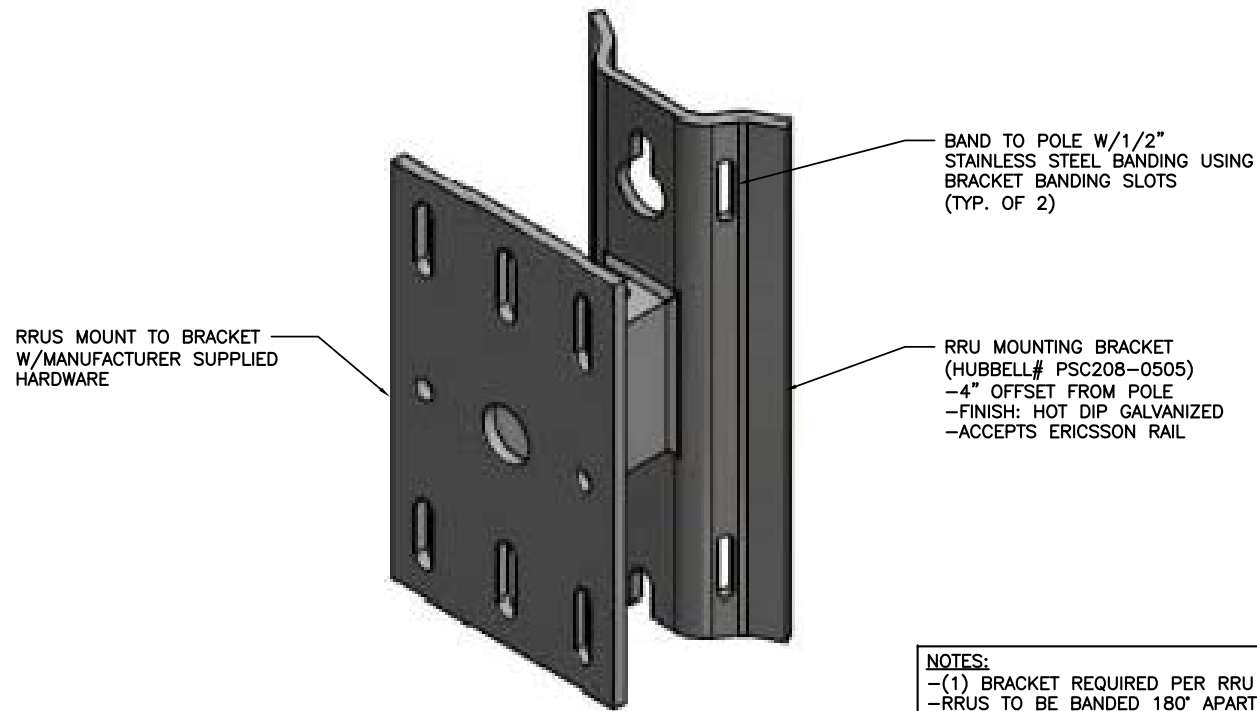


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ANTENNA MOUNTING DETAIL

SCALE  
N.T.S. 1

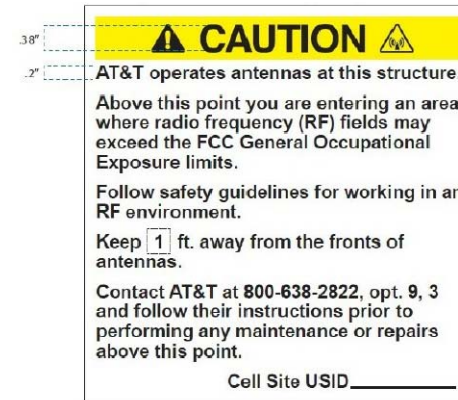


**NOTES:**  
-(1) BRACKET REQUIRED PER RRU  
-RRU TO BE BANDED 180° APART ON OPPOSITE SIDES OF POLE

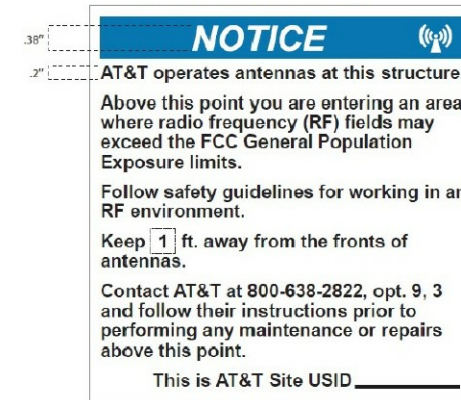
RRU MOUNTING DETAIL

SCALE  
N.T.S. 2

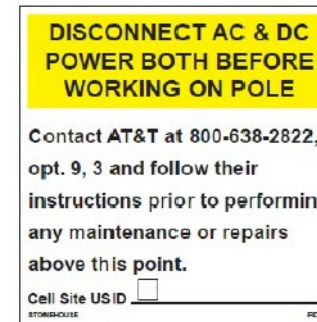
EXAMPLE CRAN RF CAUTION SIGN



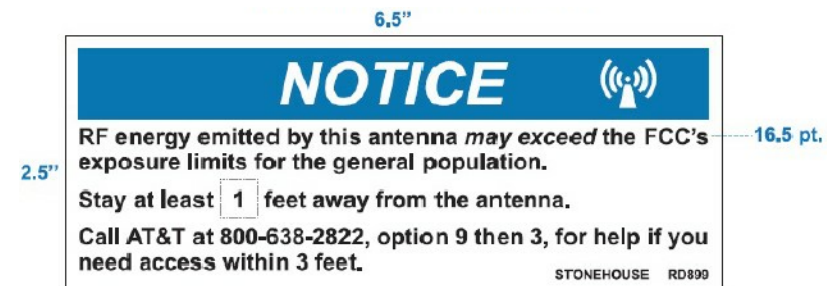
EXAMPLE CRAN RF NOTICE SIGN



EXAMPLE CRAN POLE POWER DISCONNECT SIGN



EXAMPLE STONEHOUSE RD899 RF NOTICE SIGN



CRAN Pole Power Disconnect, RF Notice, and Caution signs shall be ordered through Stonehouse Signs. Three versions are available for each of the signs shown in Figures 16, 17, and 18: .055 Polyethylene - Reflective, .025 Aluminum - Reflective, and Peel Back Label - Reflective. All versions are 6"x6" with font designed to be visible from 2-3 feet away when approached from below to provide warning about ascending into the high RF exposure areas. The RF Caution sign shown in Figure 19 is designed to be visible from 3 feet away and is available in the reflective peel back label version only. It is designed to fit on most of the CRAN/Small Cell antenna types currently deployed. It may also be placed on antenna shrouds as shown in Figures 11 and 12.

**SIGNAGE NOTE:**  
SIGNAGE SHALL BE INSTALLED PER AT&T DIRECTION

AT&T SIGNAGE DETAIL

SCALE: NTS

3



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	03/27/19	ISSUED FOR REVIEW	MW
B	05/02/19	ADDED FOUNDATION	MRL

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF ILLINOIS.

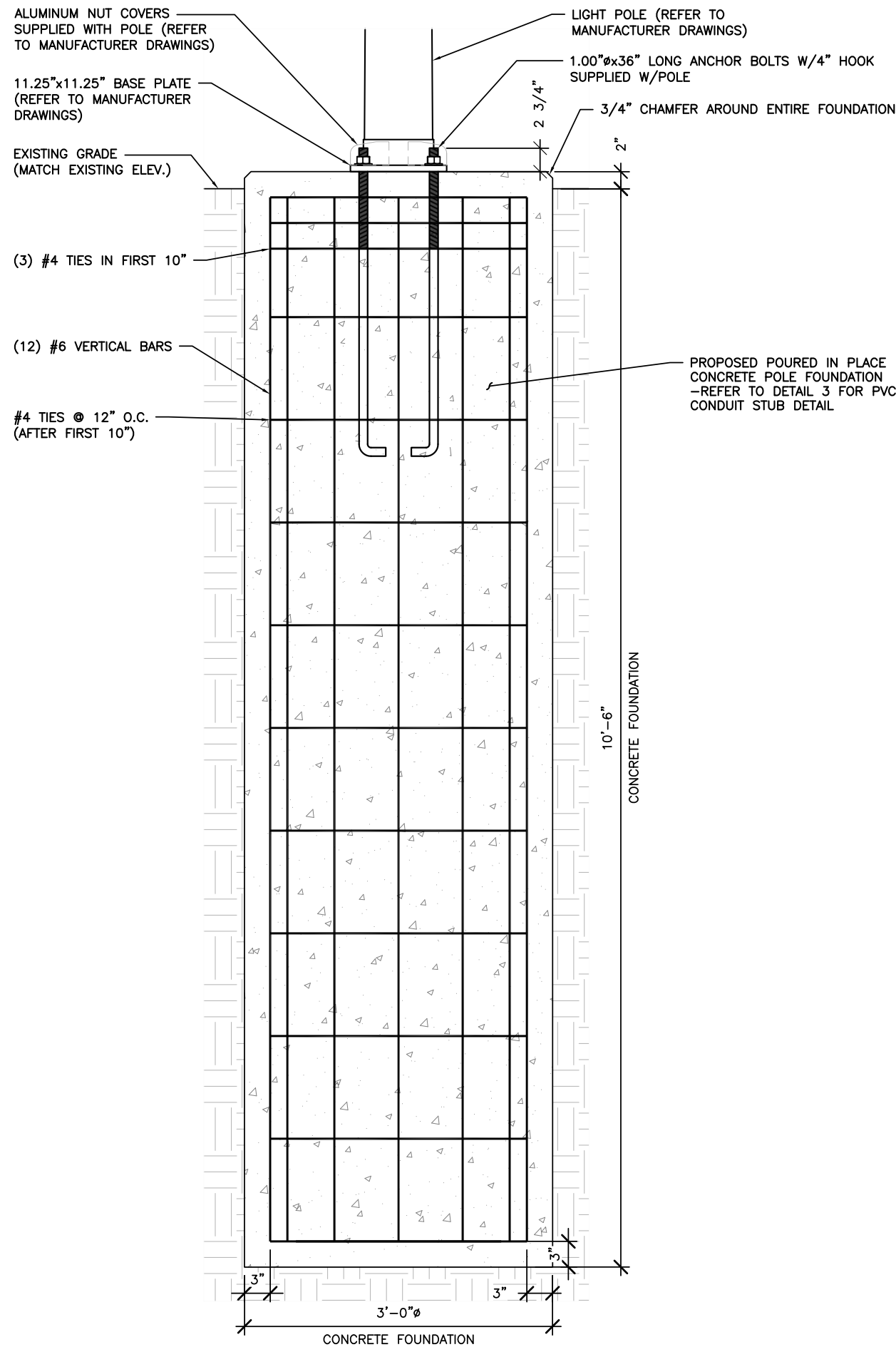
CIVIL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805850  
CRAN\_RCHI\_CHNOS\_004  
184228  
1171 W GREEN ST  
URBANA, IL 61801

SHEET TITLE  
**MOUNTING DETAILS**

SHEET NUMBER  
**A7**

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**STRUCTURAL NOTES:**

1. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING SPECIFICATIONS:

SLUMP 4" (±1")  
 AIR ENTRAINMENT: 6% (±1%)  
 MIN. COMPRESSIVE STRENGTH (F'c): 4,500 PSI @ 28 DAYS  
 CONCRETE COVER: 3" ALL SIDES

CONCRETE SHALL BE TESTED BY A REPUTABLE INDEPENDENT THIRD PARTY TESTING AGENCY IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318. FIVE (5) CONCRETE CYLINDERS SHALL BE CAST IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318 AND BE LABORATORY CURED. THE AVERAGE OF THREE (3) CONCRETE CYLINDERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 4,500 PSI AT 28 DAYS. THE TESTING RESULTS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER AND AT&T REPRESENTATIVE.

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI\*96, "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" AND ACI 305, 306 AND 307 UNLESS NOTED OTHERWISE.

ALL DETAILING, FABRICATION AND PLACING OF CONCRETE SHALL CONFORM TO ACI 318-11.

2. STRUCTURAL STEEL SHALL MEET THE FOLLOWING SPECIFICATIONS:

MATERIALS: REINFORCING ANCHOR BOLTS ASTM 615, GRADE 60  
 ASTM F1554, GRADE 55  
 REINFORCING COVER: TOP 2"  
 BOTTOM 3"

3. DESIGN PARAMETERS:

STRUCTURAL ANALYSIS OF THE POLE AND FOUNDATION WAS COMPLETED BY OTHERS. COORDINATE WITH SAC WIRELESS FOR A COPY OF POLE STRUCTURAL ANALYSIS.

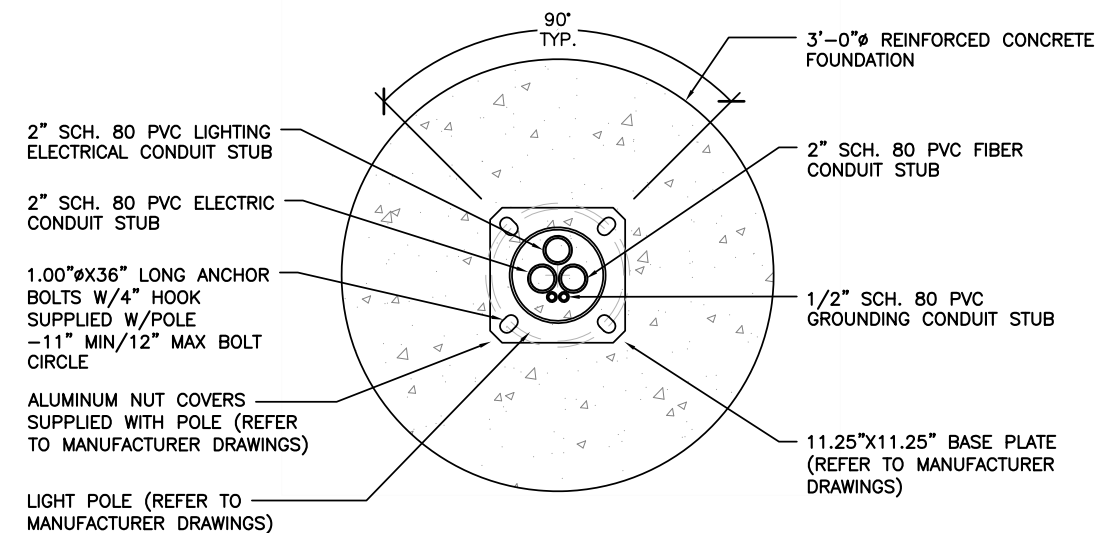
DESIGN CODES: 2015 INTERNATIONAL BUILDING BUILDING CODE  
 TIA-222-G  
 ASCE 7-05  
 CHAMPAIGN COUNTY, IL  
 POLE LOCATION:  
 BASIC WIND SPEED: 130 MPH  
 GUST FACTOR: 1.14  
 STRUCTURE CLASS: CLASS II  
 EXPOSURE CLASS: B  
 TOPOGRAPHIC CATEGORY: 1

PRESUMPTIVE SOIL PARAMETERS: FOUNDATION IS BASED ON AN ALLOWABLE LATERAL BEARING PRESSURE OF AT LEAST 200 PSF/FT.

4. ALL CONTRACTORS SHALL EXERCISE GREAT CARE DURING EXCAVATION. CONTRACTOR SHALL PREDETERMINE UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY IF DEVIATION FROM PLANS EXIST. CONTRACTOR SHALL CONTACT 811 48 HR. PRIOR TO DIGGING, GRADING, OR DRILLING.

**FOUNDATION NOTES**

SCALE	2
N.T.S.	



FOUNDATION DETAIL

SCALE: NTS

1

FOUNDATION DETAIL

SCALE: NTS

3



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
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STRUCTURAL SEAL

LTE 1C&2C MICRO CELL BUILD  
 14805850  
 CRAN\_RCHI\_CHNOS\_004  
 184228  
 1171 W GREEN ST  
 URBANA, IL 61801

SHEET TITLE  
**POLE FOUNDATION DETAILS**

SHEET NUMBER  
**S1**





THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

AC POWER PANEL (MILBANK CP3B51C1PAAOM01)											
240 VOLTS, 1-PHASE, 3-WIRE, 200A											
MAIN RATING (A) :					SYSTEM VOLTAGE (V) :						
200					240						
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
DISTRIBUTION PANEL	1190	c	40	1	1190		2	--	c	0	
---	0	c	--	3		0	4	--	c	0	---
---	0	c	--	5	0		6	--	c	0	---
---	0	c	--	7		0	8	--	c	0	---
PHASE TOTALS (VA):					1190	0					
CURRENT PER PHASE (A):					12	0	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					1190	Legend: c = continuous, nc = non-continuous					
PANEL CAPACITY (kVA):					48.0	CONNECTED LOAD (kVA): 1.2					
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					1.5						
PANEL LOADING (TOTAL) (kVA):					1.5						
SPARE CAPACITY (kVA):					46.5						

ELECTRICAL MAIN & LOAD CENTER PANEL SCHEDULE SCALE N.T.S. 1

AC POWER PANEL (RAYCAP RSCAC-6533-P-120-D)											
120 VOLTS, 1-PHASE, 2-WIRE, 40A											
MAIN RATING (A) :					SYSTEM VOLTAGE (V) :						
40					120						
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
RRUS-11	520	c	7	1	520		2	7	c	0	SPARE
RRUS-4415	670	c	7	3		670	4	7	c	0	SPARE
SPARE	0			5	0						
PHASE TOTALS (VA):					520	670					
CURRENT PER PHASE (A):					5	7	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					1190	Legend: c = continuous, nc = non-continuous					
PANEL CAPACITY (kVA):					4.8	CONNECTED LOAD (kVA): 1.2					
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					1.5						
PANEL LOADING (TOTAL) (kVA):					1.5						
SPARE CAPACITY (kVA):					3.3						

ELECTRICAL PANEL SCHEDULE SCALE N.T.S. 3

MANUFACTURER: MILBANK  
 MODEL: CP3B51C1PAAOM01

MECHANICAL SPECIFICATIONS:  
 HEIGHT: 48 IN  
 WIDTH: 16 IN  
 DEPTH: 17 IN

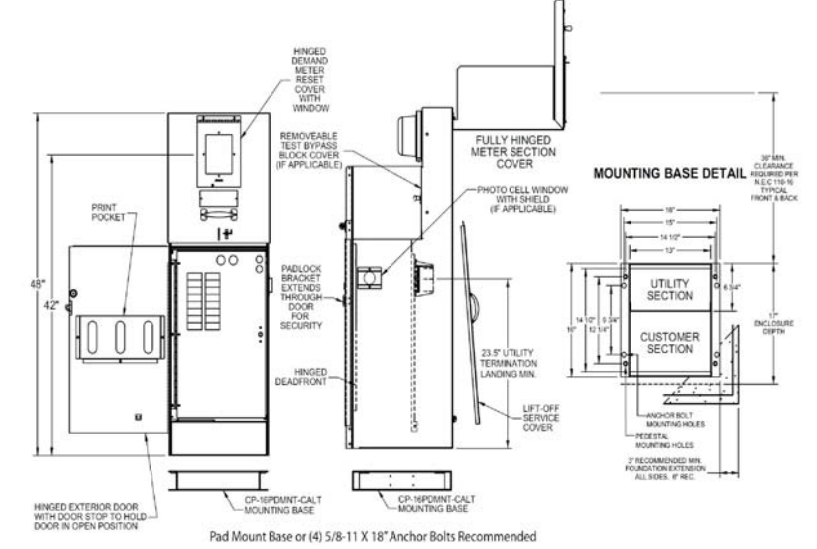
ELECTRICAL SPECIFICATIONS:  
 AMPERAGE RATING: 200 A  
 OPERATING VOLTAGE: 240 V  
 ELECTRICAL PHASE: 1 PH  
 MAIN BREAKER SIZE: 200 A  
 QTY OF BRANCH CIRCUITS: 20  
 LINE SIDE WIRE RANGE: 6 AWG - 350 kcmil

ENVIRONMENT SPECIFICATIONS:  
 UL LISTED: YES  
 NEMA RATING: 3R

ADDITIONAL SPECIFICATIONS:  
 ON AMEREN ENERGY APPROVED LIST (SECTION 1100 OF ELECTRIC SERVICE MANUAL, DATED JANUARY 18, 2018)



"A" Style 16" Metered Commercial Pedestal



SPECIAL NOTE:  
 METER PEDESTAL SHALL BE PAINTED TO MATCH AT&T EQUIPMENT IN RIGHT OF WAY. CONTRACTOR SHALL COORDINATE W/AT&T FOR COLOR AND PROVIDE DOCUMENTATION OF SUCH TO CITY OF URBANA FOR APPROVAL PRIOR TO CONSTRUCTION.

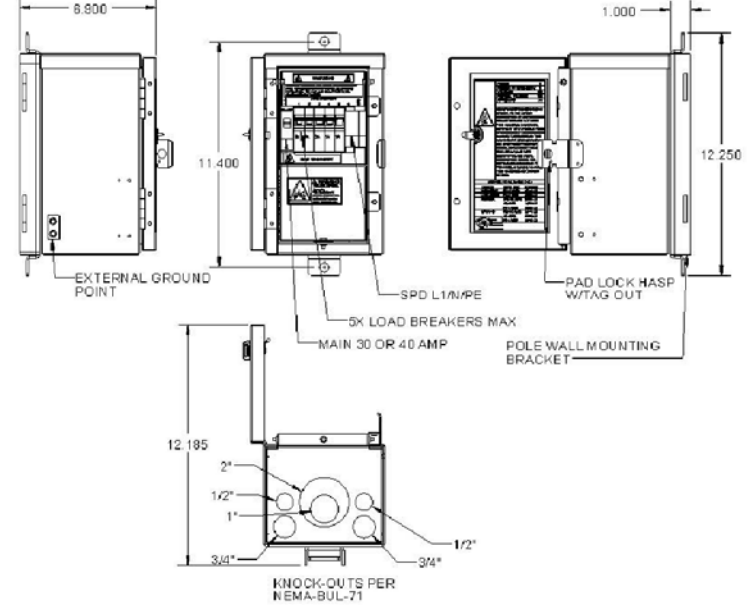
AC METER SOCKET W/MAIN & LOAD CENTER DETAIL SCALE N.T.S. 2

MANUFACTURER: PTS  
 MODEL: PTS90120

MECHANICAL SPECIFICATIONS:  
 HEIGHT: 10.13 IN  
 WIDTH: 06.15 IN  
 DEPTH: 06.00 IN  
 WEIGHT: 10 LBS  
 MOUNTING: BANDED TO POLE W/1/2" STAINLESS STEEL BANDING THROUGH MANUFACTURER SUPPLIED POLE MOUNTING BRACKET

ELECTRICAL SPECIFICATIONS:  
 AMPERAGE: 40A  
 OPERATING VOLTAGE: 120V  
 QTY OF PROTECTED CIRCUITS: 5

ENVIRONMENT SPECIFICATIONS:  
 NORMAL OPERATING TEMP.: -40°C TO +60°C



AC DISTRIBUTION PANEL DETAIL SCALE N.T.S. 4



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
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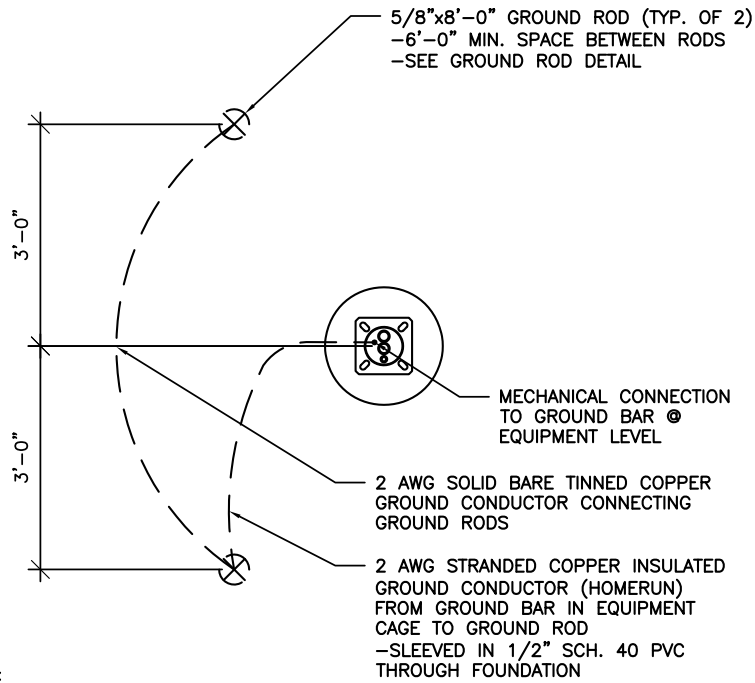
ELECTRICAL SEAL

LTE 1C&2C MICRO CELL BUILD  
 14805850  
 CRAN\_RCH1\_CHNOS\_004  
 184228  
 1171 W GREEN ST  
 URBANA, IL 61801

SHEET TITLE  
 PANEL SCHEDULE & ELECTRICAL DETAILS

SHEET NUMBER  
**E2**

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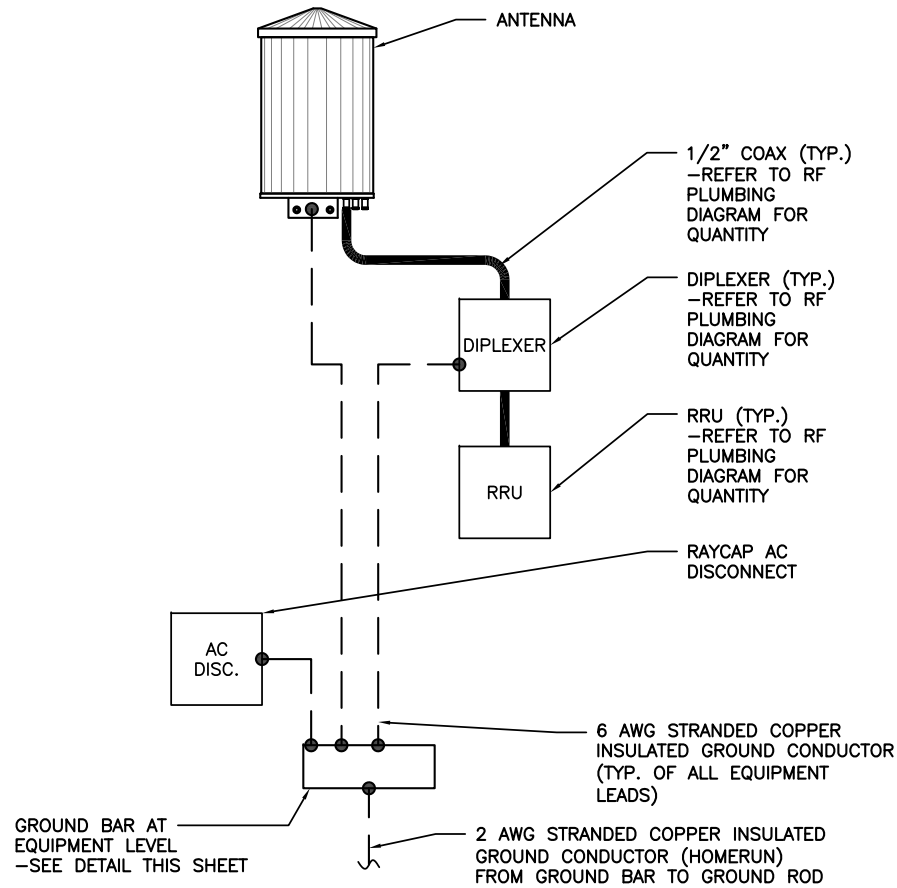
NOTE:  
GROUND ROD LOCATIONS ARE DIAGRAMMATICAL ONLY. CONTRACTOR SHALL PLACE GROUND RODS IN FIELD TO BE LEAST OBSTRUCTIVE TO EXISTING FIELD CONDITIONS.

POLE GROUNDING PLAN DETAIL

SCALE  
N.T.S.

1

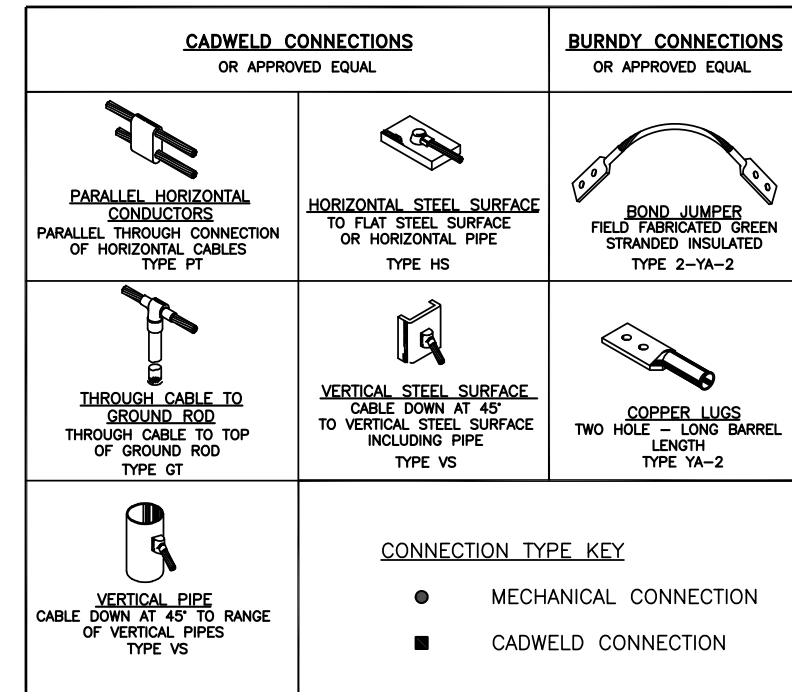
EQUIPMENT GROUNDING RISER DETAIL



SCALE  
N.T.S.

2

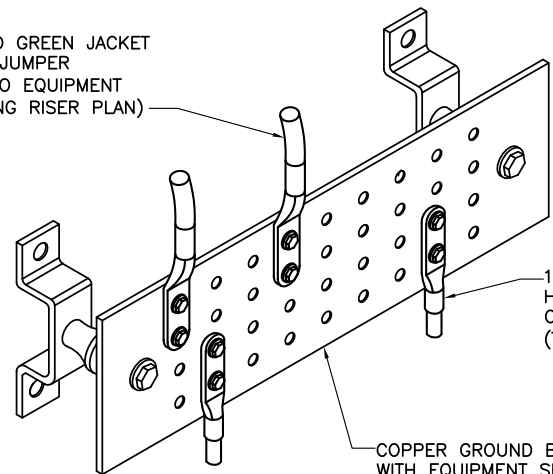
GROUNDING CONNECTIONS DETAIL



SCALE  
N.T.S.

3

STRANDED GREEN JACKET GROUND JUMPER (REFER TO EQUIPMENT GROUNDING RISER PLAN)



NOTES:  
1. CONTRACTOR SHALL UTILIZE LUGGED HOLES PROVIDED. NO DRILLING OF THE BAR WILL BE PERMITTED.  
2. ALL HARDWARE SHALL BE 1/4-20 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.  
3. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

GROUND BAR DETAIL

SCALE  
N.T.S.

4

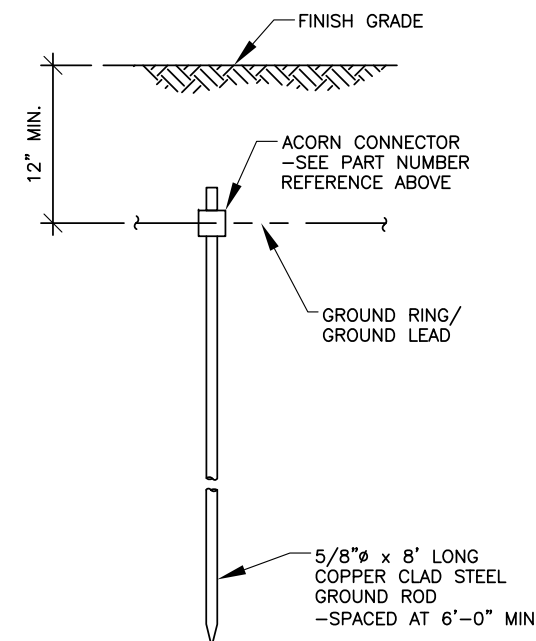
DETAIL NOT USED

SCALE  
N.T.S.

5

GROUND ROD DETAIL

ACORN CONNECTOR		
ELEC. MOTION CO. PART #	GROUND CONDUCTOR SIZE	GROUND ROD SIZE
EM2DB	#12-1/0 AWG	5/8"Ø



SCALE  
N.T.S.

6



REVISIONS			
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ELECTRICAL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805850  
CRAN\_RCHI\_CHNOS\_004  
184228  
1171 W GREEN ST  
URBANA, IL 61801

SHEET TITLE

**GROUNDING  
DETAILS**

SHEET NUMBER

**E3**

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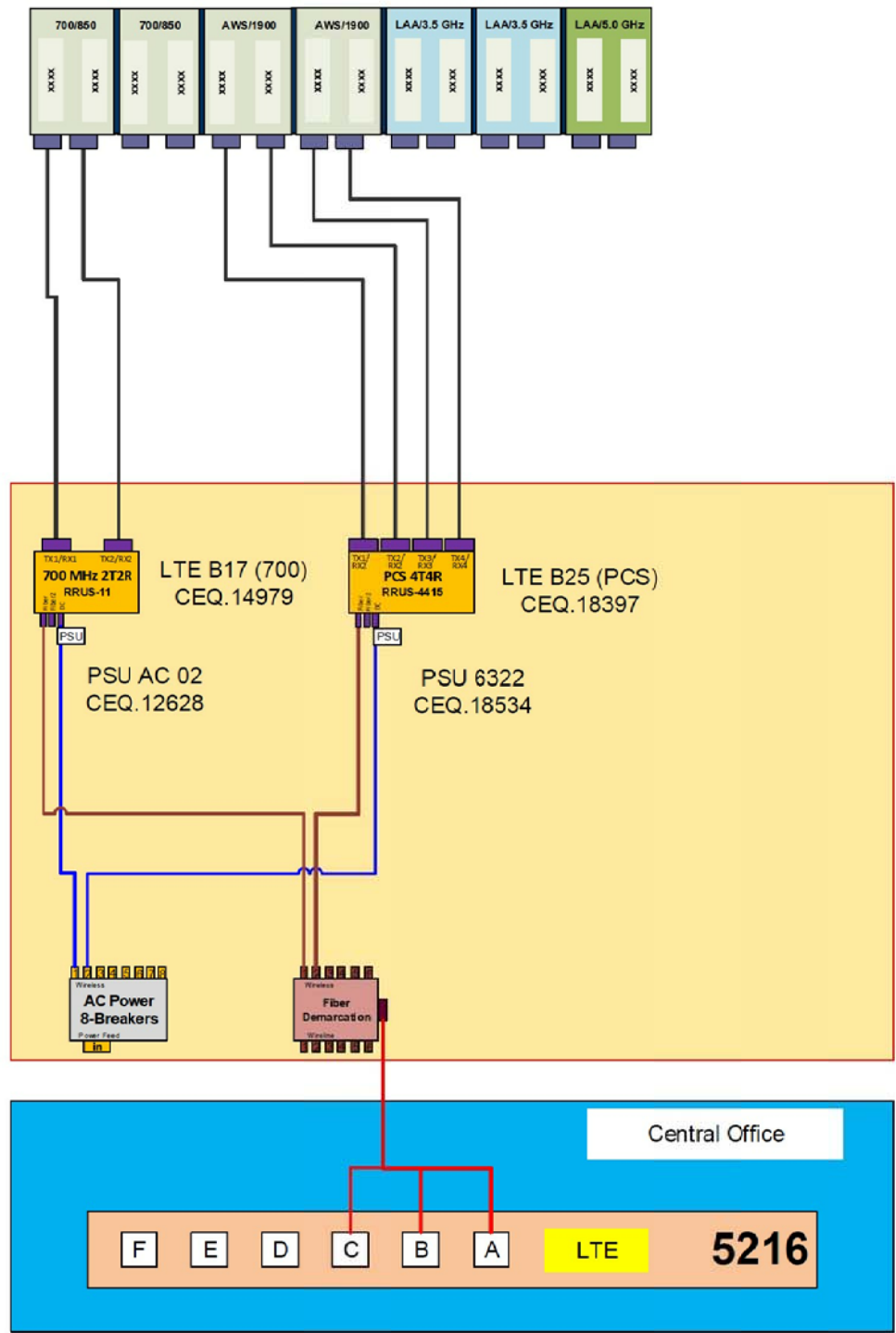
Diagram - 2	Diagram File Name - Micro 17.vsd												
Atoll Site Name -	Champaign CRAN HUB-University	Location Name -	CRAN_CHAMPAIGN_UNIVERSITY_0001 BUILD	Market -	CENTRAL ILLINOIS	Market Cluster -	ILLINOIS/WISCONSIN						
Comments:													

Configuration Name	700 MHz 2T2R LTE	700 MHz 4T4R LTE	850 MHz 2T2R LTE	850 MHz 4T4R LTE	1900 MHz 2T2R LTE	1900 MHz 4T4R LTE	2100 MHz 2T2R LTE	2100 MHz 4T4R LTE	5GHz LAA LTE	3.5 GHz LAA LTE	Sector Count	Carrier Count	Antenna LAA location
Micro #17	X	NA	NA	NA	NA	X	NA	NA	NA	NA	1	2	14 Ports Antenna

Amphenol Pseudo-Omni – 14 ports Antenna  
2C2U3MT360X06FxyS0



**Important Note:**  
For detailed radio to antenna wiring refer to the latest 4T4R Antenna/Radio Port Connection Field Notice (RF-HW-2016-234) and the 4T Wiring Playbook



REVISIONS			
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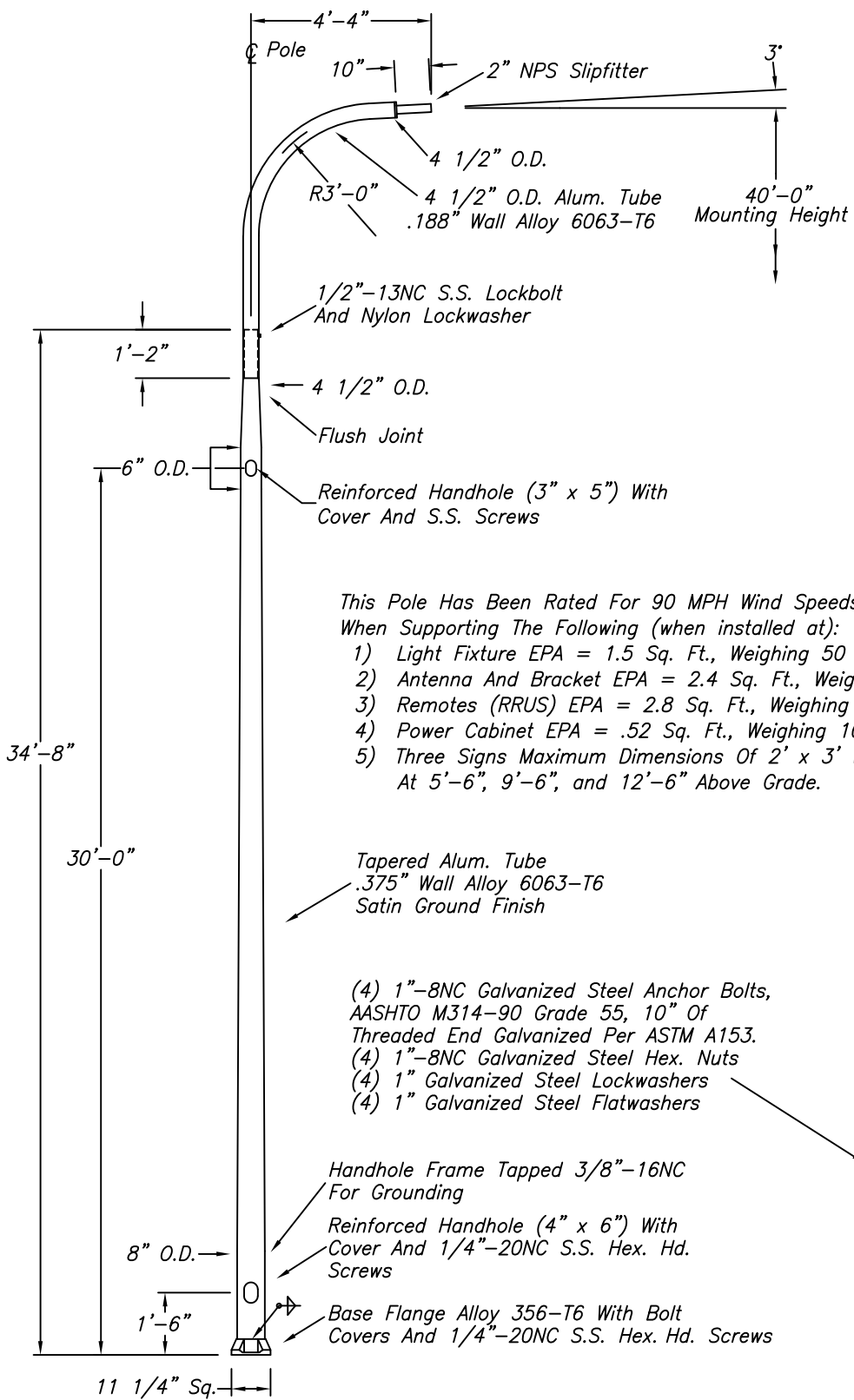
REFERENCE ONLY

LTE 1C&2C MICRO CELL BUILD  
14805850  
CRAN\_RCHI\_CHNOS\_004  
184228  
1171 W GREEN ST  
URBANA, IL 61801

SHEET TITLE  
RF PLUMBING DIAGRAM

SHEET NUMBER  
**RF1**

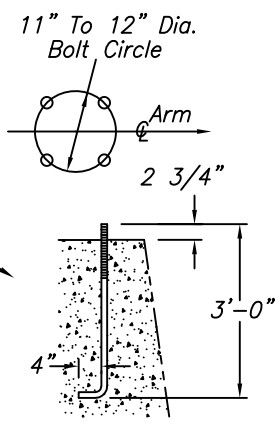




This Pole Has Been Rated For 90 MPH Wind Speeds Per AASHTO 2013 When Supporting The Following (when installed at):

- 1) Light Fixture EPA = 1.5 Sq. Ft., Weighing 50 Lbs At 40'-0"
- 2) Antenna And Bracket EPA = 2.4 Sq. Ft., Weighing 100 Lbs At 37'-0"
- 3) Remotes (RRUS) EPA = 2.8 Sq. Ft., Weighing 100 Lbs. At 32'-9"
- 4) Power Cabinet EPA = .52 Sq. Ft., Weighing 10 Lbs. At 31'-0"
- 5) Three Signs Maximum Dimensions Of 2' x 3' Weighing 25 Lbs. Each. At 5'-6", 9'-6", and 12'-6" Above Grade.

- Tapered Alum. Tube  
.375" Wall Alloy 6063-T6  
Satin Ground Finish
- (4) 1"-8NC Galvanized Steel Anchor Bolts,  
AASHTO M314-90 Grade 55, 10" Of  
Threaded End Galvanized Per ASTM A153.
- (4) 1"-8NC Galvanized Steel Hex. Nuts
- (4) 1" Galvanized Steel Lockwashers
- (4) 1" Galvanized Steel Flatwashers



SKDGO32619B

**WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES**

NO.	REVISIONS	DATE

**hapco**  
Abingdon, Va.

TITLE 40' DAVIT/ANTENNA POLE	
CUSTOMER	
SCALE NTS	DATE 3.26.19
BY RDG	DWG. NO. Page 30 of 30
CHK'D	SKDGO32619B

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# AT&T MOBILITY

**PROJECT :** LTE 1C&2C MICRO CELL BUILD  
**SITE # :** CRAN\_RCHI\_CHUOI\_014  
**USID / NODE:** 184219  
**FA # :** 14805799  
**PTN # :** 3304A0AAPB / 3304A0AARX  
**PACE # :** MRCHI025394 / MRCHI025420  
**ENODEB NAME :** ILL07045F\_R01  
**JURISDICTION :** CITY OF URBANA

**SITE NAME :** CRAN\_RCHI\_CHUOI\_014  
**ADDRESS :** 1189 S VINE ST  
 URBANA, IL 61801

**PROJECT INFORMATION**

**SITE NAME:** CRAN\_RCHI\_CHUOI\_014  
**COUNTY:** CHAMPAIGN  
**ADDRESS:** 1189 S VINE ST  
 URBANA, IL 61801  
**JURISDICTION:** CITY OF URBANA  
**USID:** 184219  
**FA NUMBER:** 14805799  
**PTN:** 3304A0AAPB / 3304A0AARX  
**PACE:** MRCHI025394 / MRCHI025420

**LATITUDE:** 40° 06' 10.62" (40.10295°)  
**LONGITUDE:** 88° 12' 18.28" (-88.205078°)  
**ELEVATION:** 731'

**LIGHT POLE/UTILITY POLE OWNER:** CITY OF URBANA

**APPLICANT:** AT&T MOBILITY  
 930 NATIONAL PARKWAY  
 SCHAUMBURG IL 60173

**AT&T PROJECT MANAGER/SITE ACQUISITION:** CONSTANCE LAMBERES  
 (847) 330-3427  
 CL644H@ATT.COM

**AT&T CONSTRUCTION MANAGER:** CHRISTIANA RACHAL  
 CR630A@ATT.COM

**PROJECT CONSULTANTS**

**PROJECT MANAGER:** SAC WIRELESS LLC  
 540 W. MADISON ST. (9TH FLOOR)  
 CHICAGO IL 60661  
 CONTACT: PRITI MORE  
 PHONE: (312) 789-4353  
 EMAIL: PRITI.MORE@SACW.COM

**ARCHITECT:** GPD GROUP, INC. - 184-007100  
 520 S. MAIN ST., SUITE 2531  
 AKRON, OH 44311  
 317-295-3180

**SAC C.M.:** MARK KLEPACKI  
 EMAIL: MARK.KLEPACKI@SACW.COM

**SAC P.M.:** JAMES HOM  
 EMAIL: JAMES.HOM@SACW.COM



NOT TO SCALE

NOT TO SCALE

DRAWING INDEX	
T1	TITLE SHEET
A1	FIBER DELIVERY PLANS (REFERENCE ONLY)
A2	OVERALL SITE PLAN
A3	ENLARGED PLAN
A4	EXISTING LIGHT POLE ELEVATION
A5	PROPOSED LIGHT POLE ELEVATIONS
A6	EQUIPMENT DETAILS (REFERENCE ONLY)
A7	MOUNTING DETAILS
S1	POLE FOUNDATION DETAILS
E1	ELECTRICAL ONE-LINE DIAGRAM
E2	PANEL SCHEDULE & ELECTRICAL DETAILS
E3	GROUNDING DETAILS
RF1	RF PLUMBING DIAGRAM (REFERENCE ONLY)
REF	POLE MANUFACTURER DESIGN (BY OTHERS)

**SCOPE OF WORK**

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

- REMOVE EXISTING LIGHT POLE AND REPLACE WITH NEW 40'-0" HAPCO RTA DAVIT ARM LIGHT POLE (100 GRIT SATIN FINISH) PER PLAN
- INSTALL NEW FIBER SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE LOCATION (TO BE COORDINATED W/AT&T)
- INSTALL NEW POWER & FIBER EQUIPMENT PER PLAN
- INSTALL (1) NEW OMNI ANTENNA
- INSTALL (1) PCS RRUS-4415 & (1) 700 RRUS-11
- INSTALL CABLING AS REQUIRED
- GROUND AS REQUIRED
- LIGHT POLE LUMINARY TO BE SUPPLIED & INSTALLED BY CONTRACTOR. LUMINARY MUST BE APPROVED BY CITY OF URBANA PRIOR TO ORDER.
- STREET LIGHTING HANDHOLE (IF REQUIRED) SUPPLIED & INSTALLED BY CONTRACTOR
- POTHOLING SHALL BE REQUIRED FOR ANY PROPOSED UTILITY CROSSING
- HYDROVAC SHALL BE USED FOR ALL TRENCHING & POTHOLING ACTIVITIES
- CONTRACTOR SHALL MAINTAIN INTEGRITY OF EXISTING POLE DURING REMOVAL & COORDINATE RETURN OF REMOVED POLE TO THE CITY OF URBANA

**UTILITY DELIVERY METHOD TO PROPOSED POLE**  
 - FIBER - UNDERGROUND  
 - POWER - UNDERGROUND

**CODE COMPLIANCE**

- 2015 INTERNATIONAL BUILDING CODE W/CITY AMMENDMENTS
- 2014 NATIONAL ELECTRIC CODE W/CITY AMMENDMENTS

**SPECIAL NOTES**

- ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT AT&T CONSTRUCTION INSTALLATION GUIDE.
- EXISTING CONDITIONS WILL BE CHANGED & VERIFIED IN FIELD. IF SIGNIFICANT DEVIATIONS OR DETERIORATION ARE ENCOUNTERED AT THE TIME OF CONSTRUCTION, A REPAIR PERMIT WILL BE OBTAINED & CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- THESE DRAWINGS ARE FULL SIZE & SCALEABLE ON 11"x17" SHEET SIZE.
- STATEMENT THAT COMPLIANCE WITH THE ENERGY CODE IS NOT REQUIRED. -SCOPE OF WORK DOES NOT INVOLVE MODIFICATIONS TO EXTERIOR ENVELOPE OF BUILDING, HVAC SYSTEMS OR ELECTRICAL LIGHTING.

**DO NOT SCALE DRAWINGS**

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



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 184219  
 1189 S VINE ST  
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SHEET TITLE  
**TITLE SHEET**

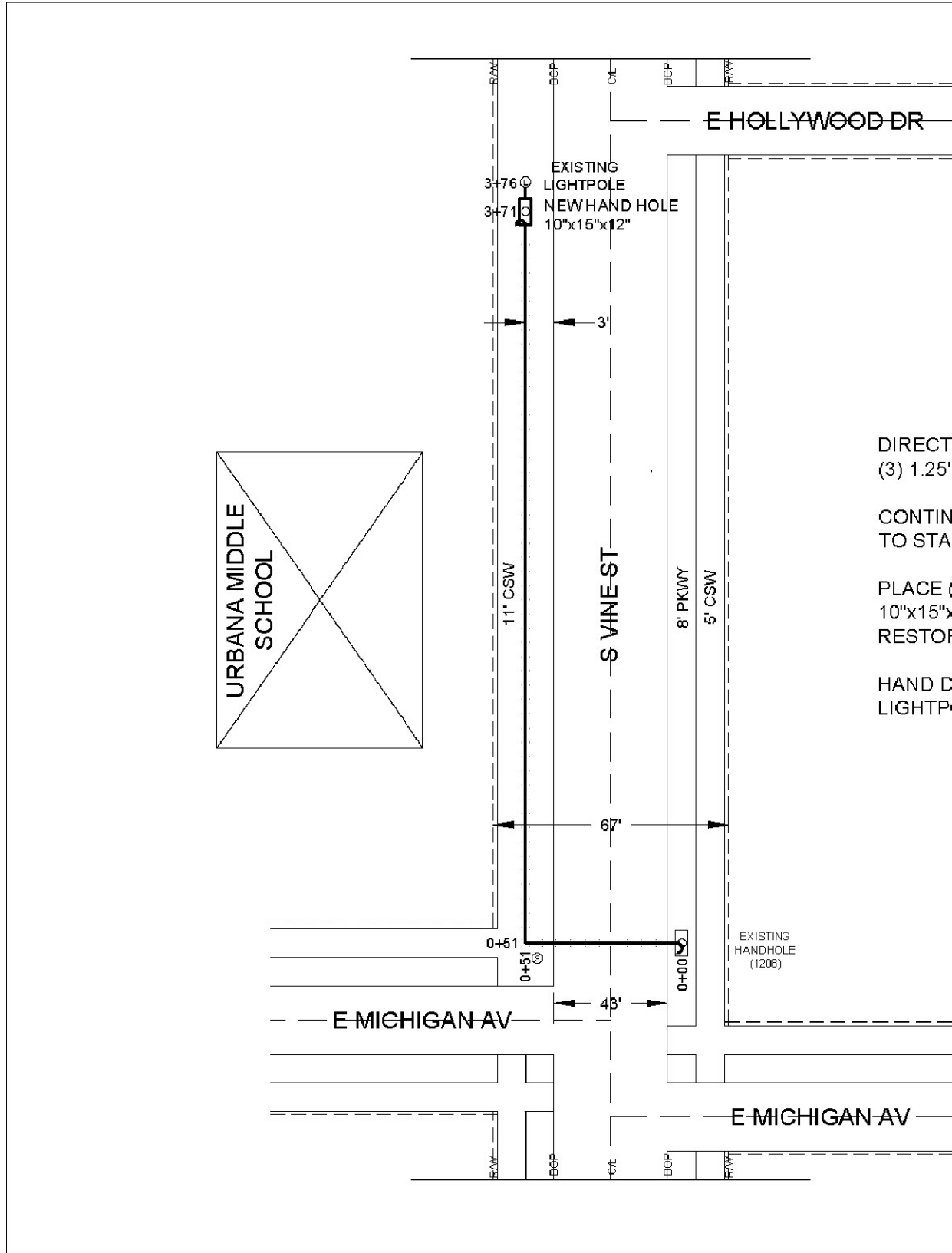
SHEET NUMBER  
**T1**

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN ILLINOIS, CALL ILLINOIS ONE CALL  
 TOLL FREE: 1-800-892-0123 OR  
 www.illinois1call.com

ILLINOIS STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

Know what's below.  
 Call before you dig.

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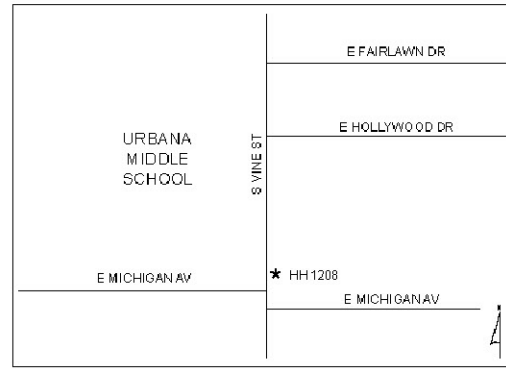
DIRECTIONAL BORE 51ft WEST PLACING  
(3) 1.25" IPP HH 1208 TO STA MARKER 0+51.

CONTINUE DIRECTIONAL BORE NORTH 320ft  
TO STA MARKER 3+71.

PLACE (1) HANDHOLE HDPE BODY/LID  
10"x15"x12" (PID: 1000006143)  
RESTORE CONCRETE SIDEWALK

HAND DIG & PLACE (3) 1.25" IPP 5ft TO EXISTING  
LIGHTPOLE

**LOCATION MAP**



- CONSTRUCTION NOTES:**
- 1) LOCATE ALL UTILITIES AND ALL UNDERGROUND OBSTRUCTIONS PRIOR TO DIGGING
  - 2) WORK AREA PROTECTION REQUIRED
  - 3) PLACE AT&T ID DECALS AT REQUIRED LOCATIONS
  - 4) RESTORE ALL DISTURBED GROUNDS TO ORIGINAL OR BETTER CONDITION
  - 5) AT&T REQUIRES A MINIMUM DEPTH OF 24"
  - 6) AT&T CONTRACTORS TO PROVIDE ALL BARRICADES AND WORK AREA PROTECTIONS
  - 7) AT&T CONTRACTOR TO REMOVE ALL DEBRIS
  - 8) ALL PROPOSED WORK IS IN EXISTING PUBLIC RIGHT OF WAY AND/OR UTILITY EASEMENT

**MUNICIPAL PERMIT**  
**1189 S VINE ST**  
**URBANA, IL**



AT&T PROJECT: A01BR58  
JAMES DARR  
1640 E HAZEL DELL RD FLR. 1  
SPRINGFIELD, IL 62703  
(W) 217-789-8771  
(C) 217-320-8146

PRINT 1 of 1



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URBANA, IL 61801

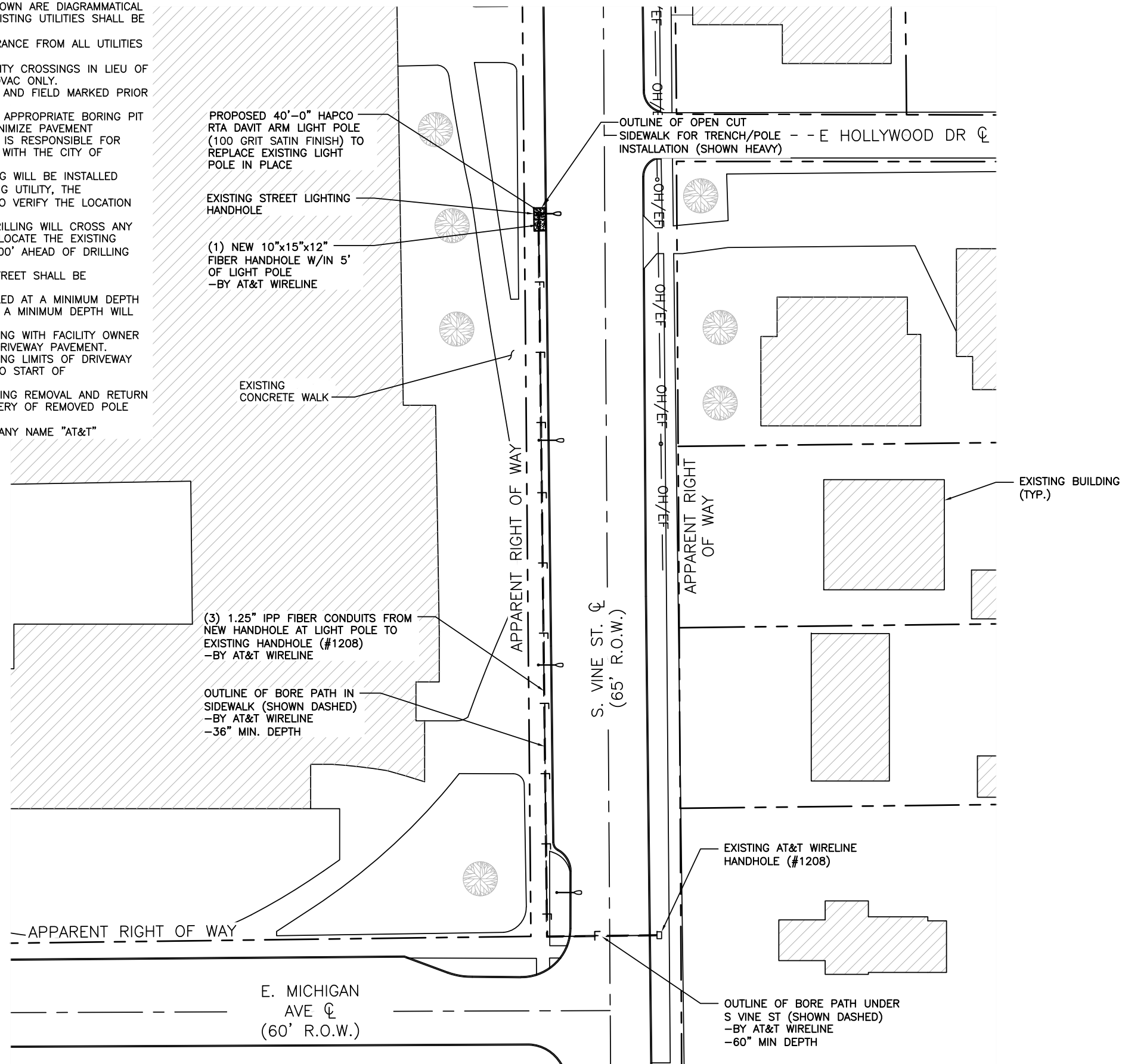
SHEET TITLE  
**FIBER DELIVERY PLANS**

SHEET NUMBER  
**A1**



**NOTES:**

- EXISTING UNDERGROUND UTILITY INFRASTRUCTURE INFORMATION WAS PROVIDED BY SAC WIRELESS. INFORMATION WAS NOT CONFIRMED BY GPD GROUP IN THE FORM OF UTILITY LOCATES. THE EXISTING UTILITIES SHOWN ARE DIAGRAMMATICAL IN NATURE SHOWING APPROXIMATE LOCATIONS. ALL EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR DURING CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3' CLEARANCE FROM ALL UTILITIES & 5' CLEARANCE FROM ALL CONDUITS.
- CONTRACTOR SHALL PERFORM POTHOLING AT ALL UTILITY CROSSINGS IN LIEU OF DIRECTIONAL BORING. POTHOLING SHALL BE BY HYDROVAC ONLY.
- CONTRACTOR SHALL HAVE EXISTING UTILITIES LOCATED AND FIELD MARKED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE CARE IN LOCATING ALL APPROPRIATE BORING PIT LOCATIONS IN ORDER TO AVOID EXISTING UTILITIES, MINIMIZE PAVEMENT RESTORATION AND TRAFFIC DISRUPTIONS. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DISTURBED PAVEMENT IN ACCORDANCE WITH THE CITY OF URBANA STANDARD SPECIFICATIONS.
- AT LOCATIONS WHERE PROPOSED DIRECTIONAL DRILLING WILL BE INSTALLED WITHIN 5' LONGITUDINALLY (PARALLEL) TO ANY EXISTING UTILITY, THE DIRECTIONAL DRILLER SHALL "POTHOLE" EVERY 500' TO VERIFY THE LOCATION AND GRADE OF THE EXISTING UTILITY.
- AT LOCATIONS WHERE THE PROPOSED DIRECTIONAL DRILLING WILL CROSS ANY EXISTING UNDERGROUND UTILITY, THE DRILLER SHALL LOCATE THE EXISTING UTILITY LINE AND GRADE BY "POTHOLING" AT LEAST 100' AHEAD OF DRILLING OPERATIONS.
- ANY PROPOSED DIRECTIONAL DRILLING CROSSING A STREET SHALL BE PERPENDICULAR TO STREET DIRECTION.
- ALL CONDUIT IN CITY RIGHT-OF-WAY WILL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES EXCEPT AT STREET CROSSINGS WHERE A MINIMUM DEPTH WILL BE 60 INCHES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH FACILITY OWNER TO SCHEDULE ANY DEMOLITION & REPLACEMENT OF DRIVEWAY PAVEMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LIMITS OF DRIVEWAY REPAIR WITH CITY RIGHT OF WAY INSPECTOR, PRIOR TO START OF CONSTRUCTION OR DEMOLITION.
- CONTRACTOR SHALL MAINTAIN INTEGRITY OF POLE DURING REMOVAL AND RETURN POLE TO THE CITY OF CHAMPAIGN. COORDINATE DELIVERY OF REMOVED POLE WITH CITY RIGHT-OF-WAY INSPECTOR.
- ALL AT&T HANDHOLES SHALL BE LABELED WITH COMPANY NAME "AT&T"



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SHEET TITLE  
**OVERALL SITE PLAN**

SHEET NUMBER  
**A2**

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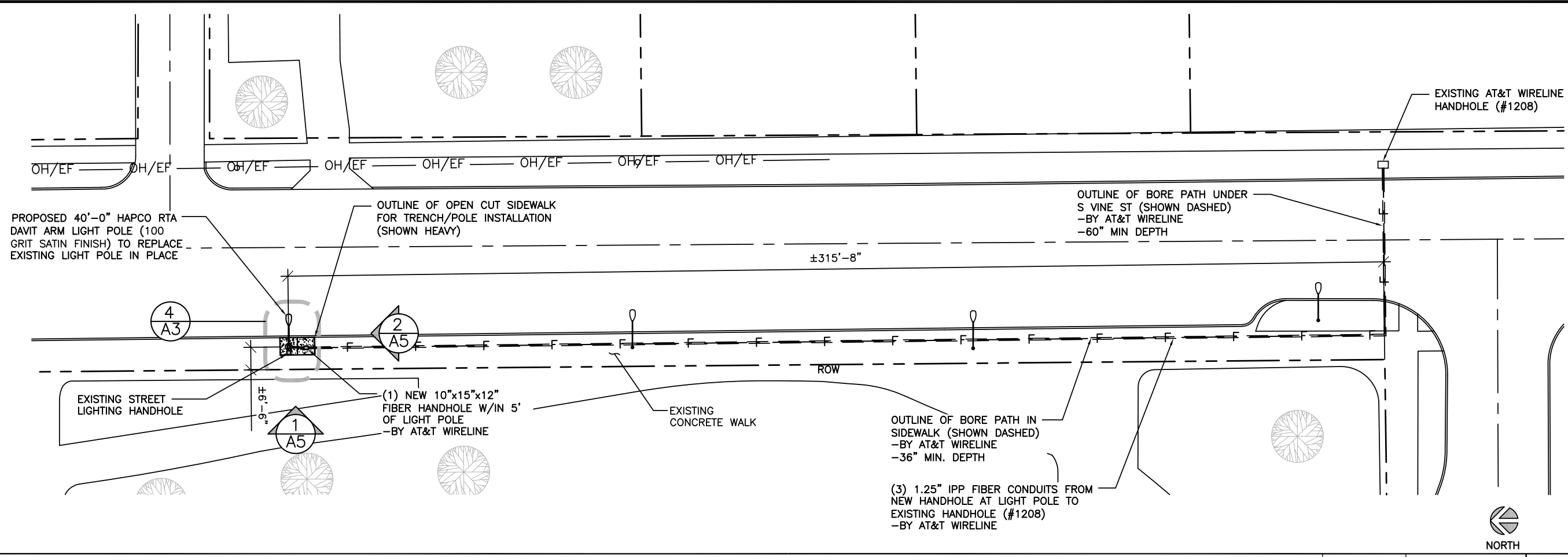


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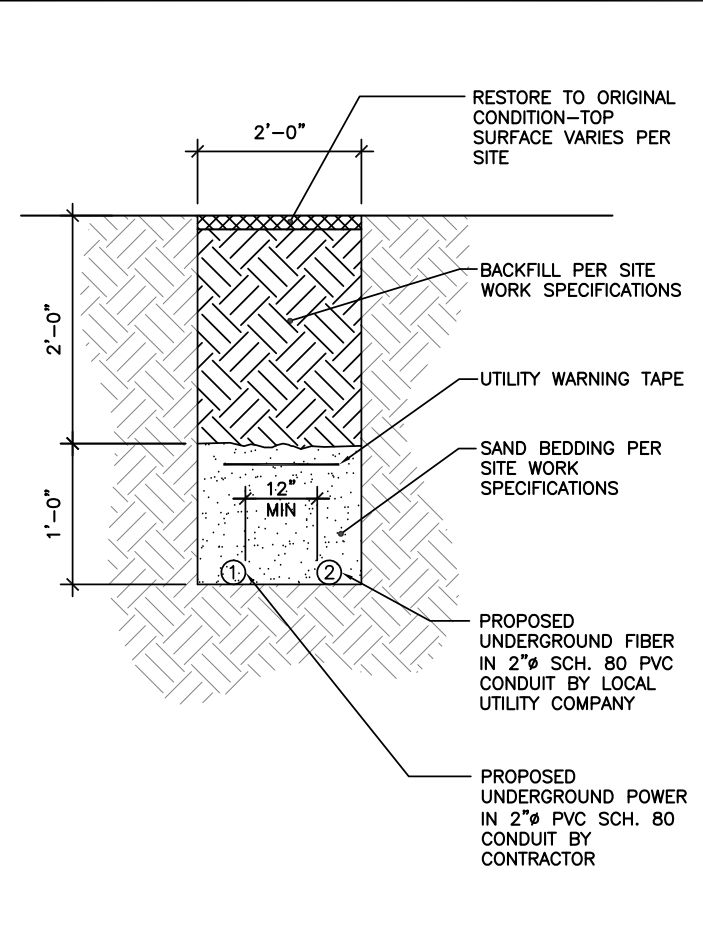
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ENLARGED SITE PLAN

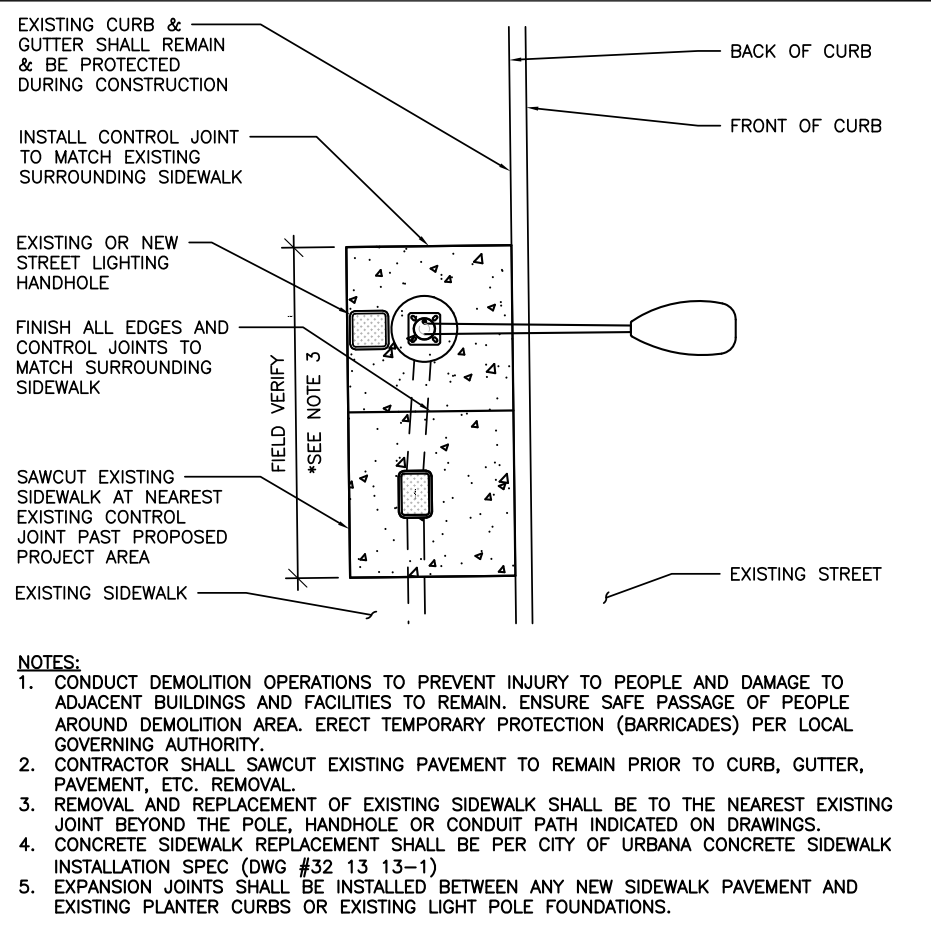
0 3' 6" 12" SCALE: 3/32" = 1'-0" (24x36)  
(OR) 3/64" = 1'-0" (11x17)

1



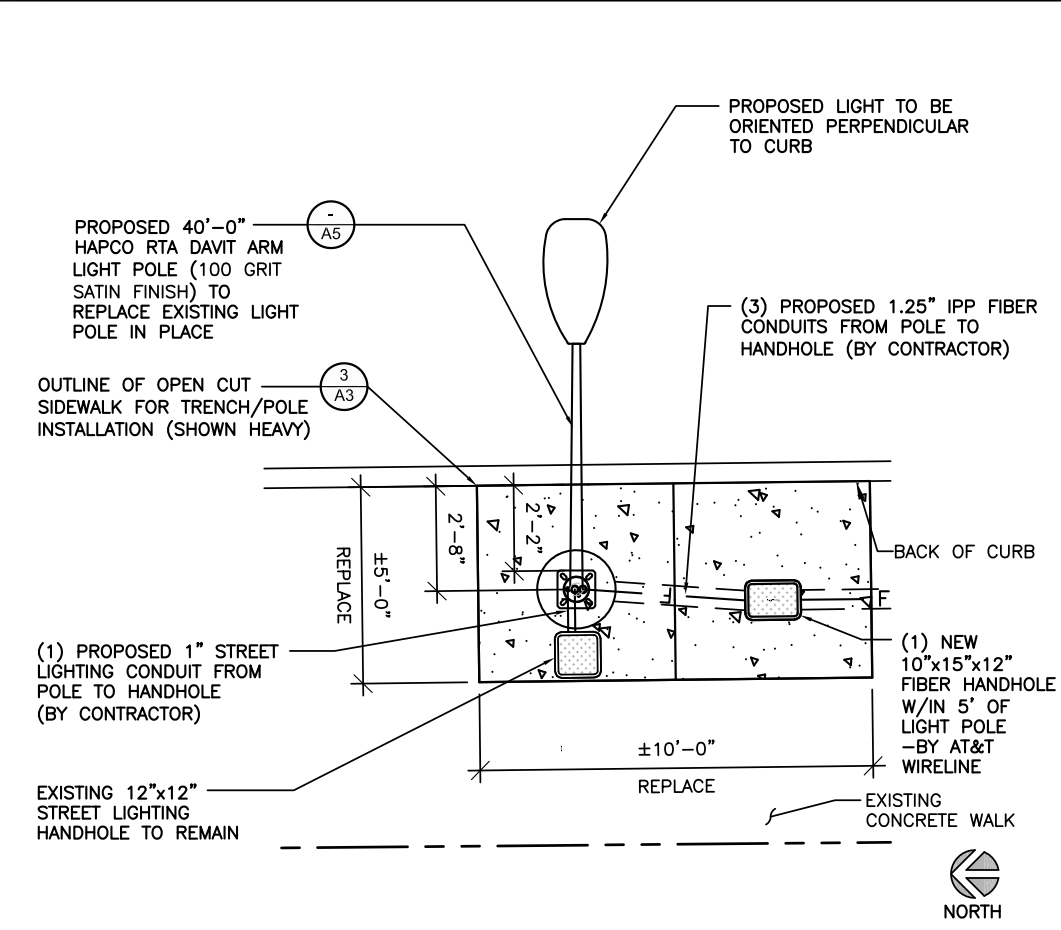
TYPICAL TRENCH DETAIL

SCALE N.T.S. 2



TYPICAL OPEN CUT DETAIL AT PROPOSED POLE

SCALE N.T.S. 3



LIGHT POLE PLAN

SCALE N.T.S. 4

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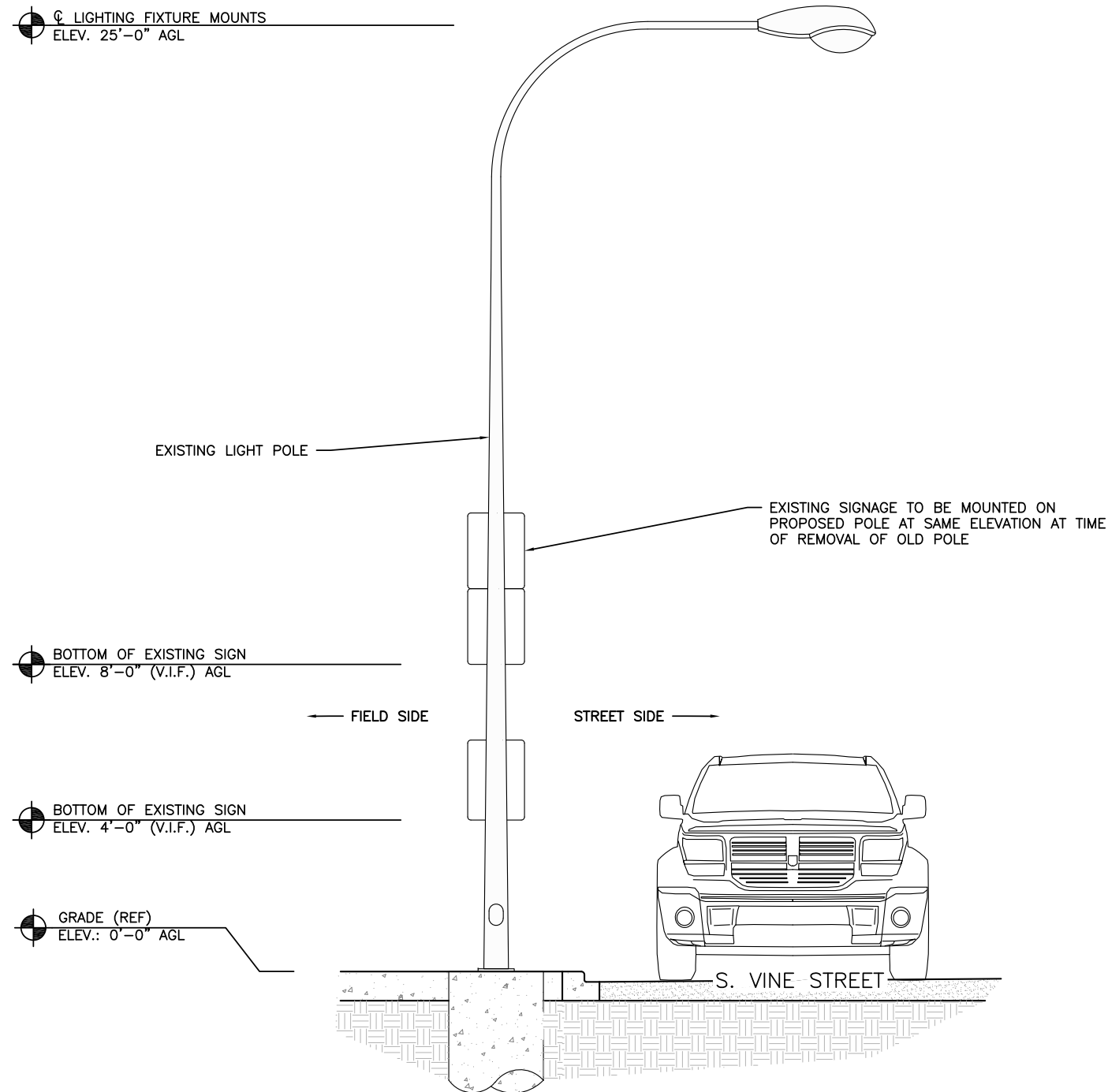
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SHEET TITLE  
ENLARGED PLAN

SHEET NUMBER  
A3

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1501 E. WOODFIELD RD.  
SUITE #300E  
SCHAUMBURG, IL 60173  
www.socw.com  
847.944.1600



520 South Main Street, Suite 2531  
Akron, OH 44311  
330.572.2100 Fax: 330.572.2102

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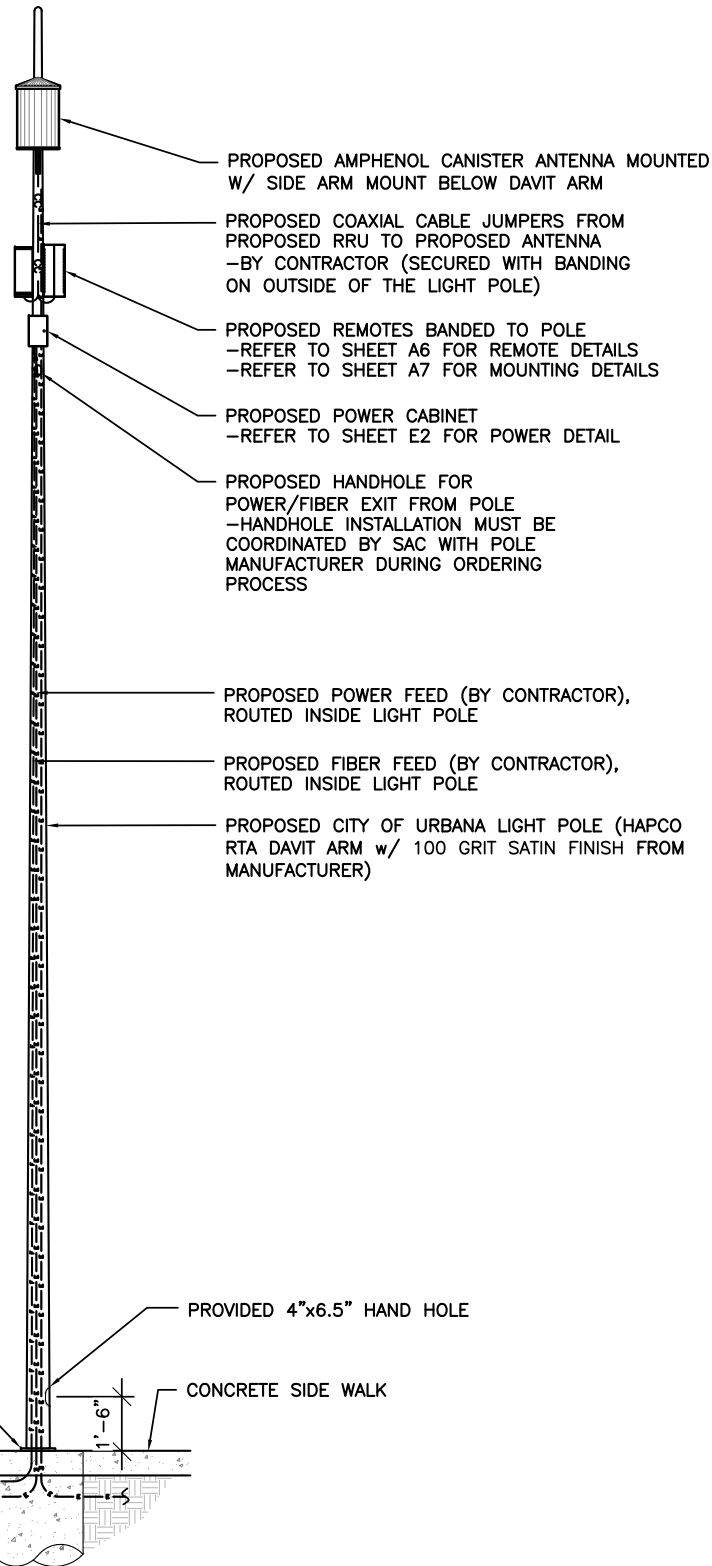
SHEET TITLE  
**EXISTING  
LIGHT POLE  
ELEVATION**

SHEET NUMBER  
**A4**



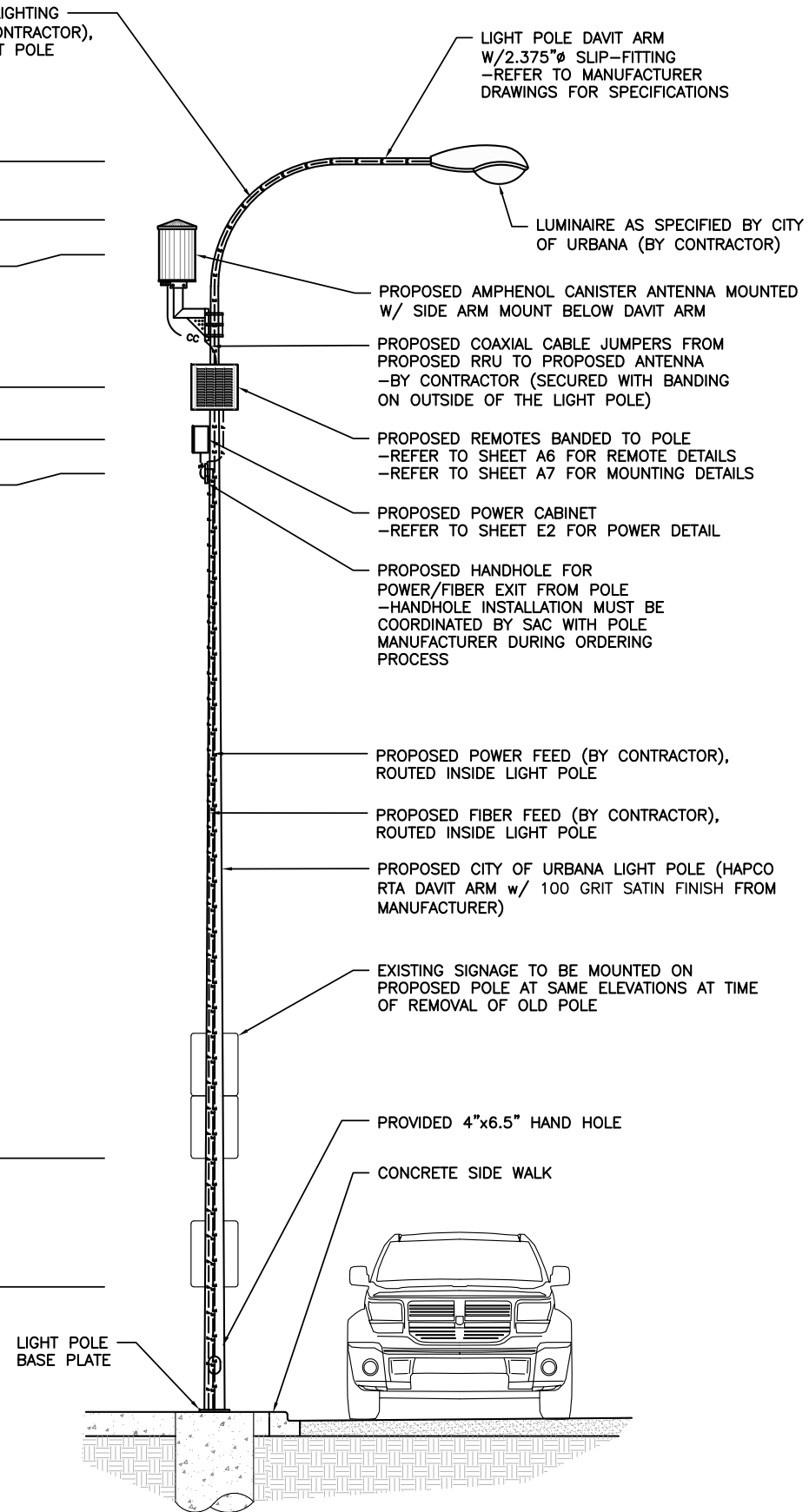
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- TOP OF PROPOSED LIGHT POLE  
ELEV. 40'-0" AGL
- TOP OF PROPOSED ANTENNA  
ELEV. 38'-0" AGL
- $\phi$  OF PROPOSED ANTENNA  
ELEV. 37'-0" AGL
- $\phi$  OF PROPOSED REMOTES  
ELEV. 32'-9" AGL
- $\phi$  OF PROPOSED POWER CABINET  
ELEV. 31'-0" AGL
- $\phi$  OF PROPOSED HANDHOLE  
ELEV. 30'-0" AGL



- TOP OF PROPOSED LIGHT POLE  
ELEV. 40'-0" AGL
- TOP OF PROPOSED ANTENNA  
ELEV. 38'-0" AGL
- $\phi$  OF PROPOSED ANTENNA  
ELEV. 37'-0" AGL
- $\phi$  OF PROPOSED REMOTES  
ELEV. 32'-9" AGL
- $\phi$  OF PROPOSED POWER CABINET  
ELEV. 31'-0" AGL
- $\phi$  OF PROPOSED HANDHOLE  
ELEV. 30'-0" AGL

- BOTTOM OF EXISTING SIGN  
ELEV. 8'-0" (V.I.F.) AGL
- BOTTOM OF EXISTING SIGN  
ELEV. 4'-0" (V.I.F.) AGL
- GRADE (REF)  
ELEV.: 0'-0" AGL



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SHEET TITLE  
**PROPOSED LIGHT POLE ELEVATIONS**

SHEET NUMBER  
**A5**

PROPOSED LIGHT POLE FRONT ELEVATION (FIELD SIDE)

0 1.5' 3' 5' SCALE: 3/16" = 1'-0" (24x36)  
(OR) 3/32" = 1'-0" (11x17)

1

PROPOSED LIGHT POLE SIDE ELEVATION

0 1.5' 3' 5' SCALE: 3/16" = 1'-0" (24x36)  
(OR) 3/32" = 1'-0" (11x17)

2

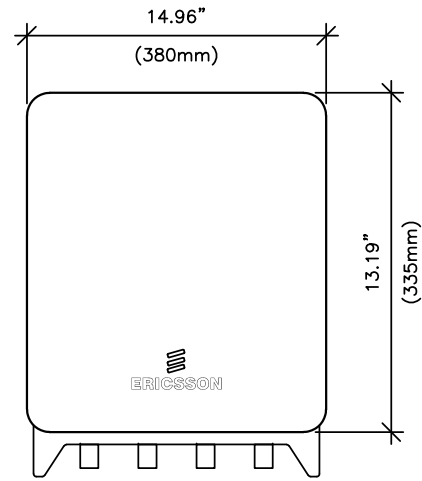
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MANUFACTURER: ERICSSON  
 MODEL: RRUS 4415 B25

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 14.96 IN (380mm)  
 WIDTH: 13.19 IN (335mm)  
 DEPTH: 5.39 IN (137mm)  
 WEIGHT: 46 LBS (21kg)

**INTERFACE SPECIFICATIONS:**  
 CPRI: 2x2.5/4.9/9.8/10.1 Gbps  
 (ONLY USE ERICSSON SUPPLIED AND APPROVED SFPs)

EXTERNAL ALARMS: 2



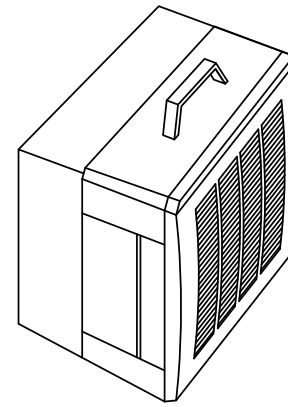
MANUFACTURER: ERICSSON  
 MODEL: RRUS-11

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 19.7 IN (500mm)  
 WIDTH: 17.0 IN (431mm)  
 DEPTH: 7.2 IN (182mm)  
 WEIGHT: 50.7 LBS (23kg)

**INTERFACE SPECIFICATIONS:**  
 ANTENNA PORTS: 2x7/16 IEC-169-4  
 OPTICAL INDICATORS: 6  
 EXTERNAL ALARMS: 1  
 FIELD GROUND: 1

**ELECTRICAL SPECIFICATIONS:**  
 POWER SUPPLY: -48 VDC OR 100-250 VAC

**ENVIRONMENTAL SPECIFICATIONS:**  
 NORMAL OPERATING TEMP.: -40°C TO +55°C  
 RELATIVE HUMIDITY: 5-100%



RRUS 4415 B25 DETAILS

SCALE  
N.T.S. 1

RRUS-11 DETAILS

SCALE  
N.T.S. 2



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SHEET TITLE

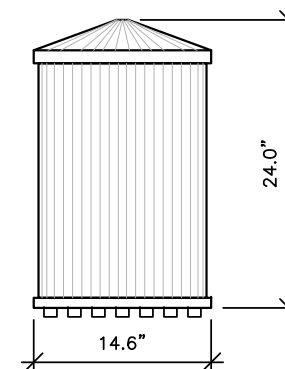
EQUIPMENT DETAILS

SHEET NUMBER

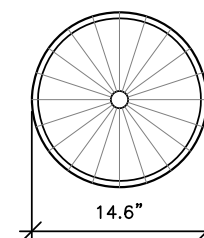
A6



IMAGE



SIDE VIEW



TOP VIEW

AMPHENOL MULTI BAND CANISTER ANTENNA  
 MODEL: 2C2U3MT360X06Fxyso  
 COLOR: GREY

MECHANICAL CHARACTERISTICS

- ANTENNA DIMENSIONS (HEIGHT X DIAMETER) : 24.0"x14.6"
- WEIGHT W/OUT MOUNTING BRACKET KIT: TBD LBS
- SURVIVAL WIND SPEED: 150 MPH
- WIND AREA: 2.4 FT<sup>2</sup>
- WIND LOAD (100 MPH): 43 LBF

DETAIL NOT USED

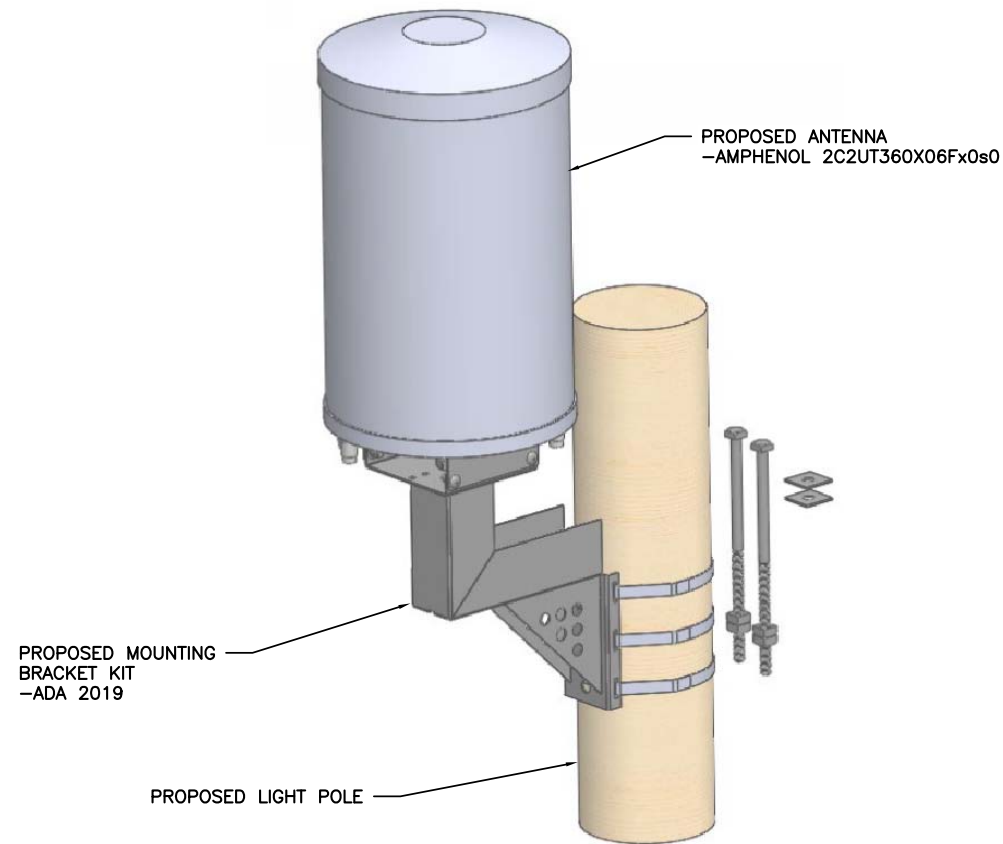
SCALE  
N.T.S. 3

ANTENNA DETAIL

SCALE: NTS

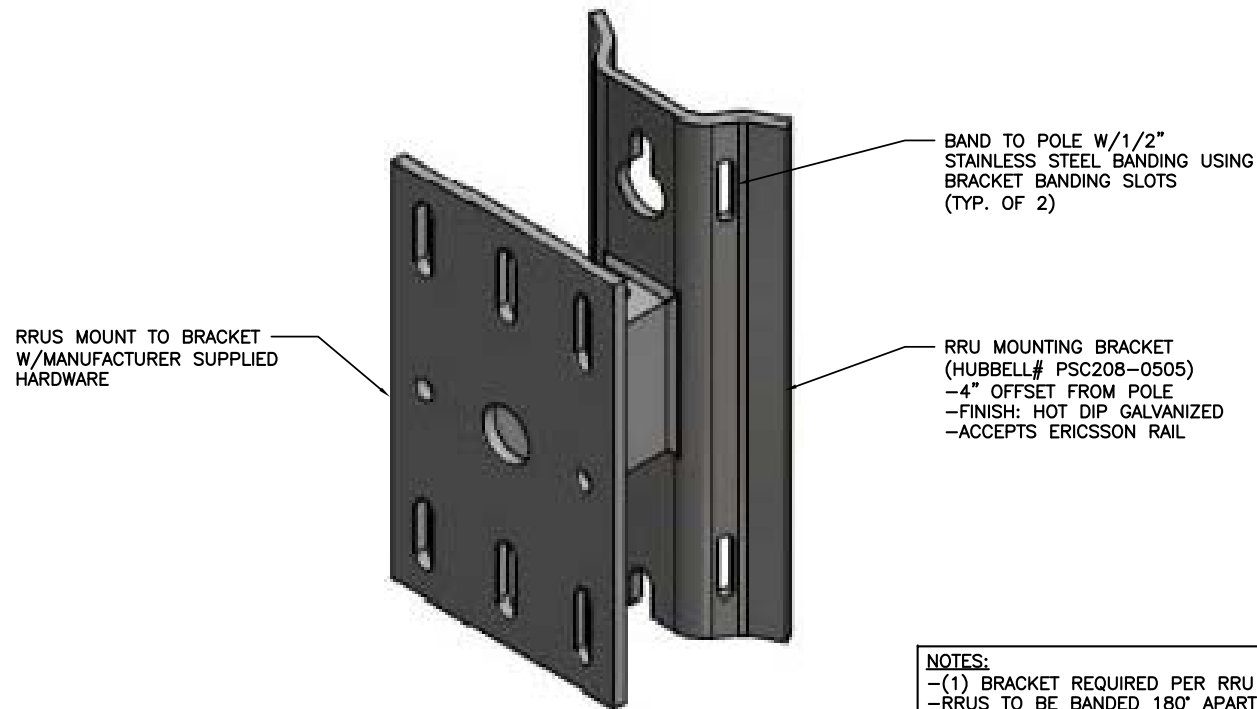
4

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ANTENNA MOUNTING DETAIL

SCALE  
N.T.S. 1

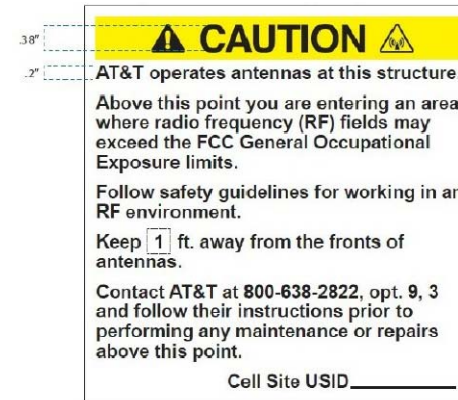


**NOTES:**  
-(1) BRACKET REQUIRED PER RRU  
-RRU TO BE BANDED 180° APART ON OPPOSITE SIDES OF POLE

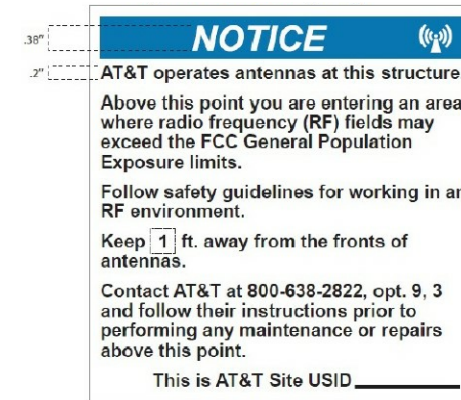
RRU MOUNTING DETAIL

SCALE  
N.T.S. 2

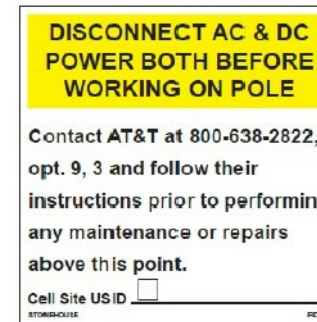
EXAMPLE CRAN RF CAUTION SIGN



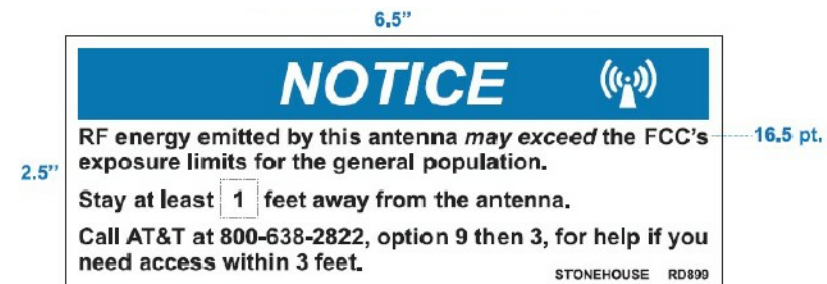
EXAMPLE CRAN RF NOTICE SIGN



EXAMPLE CRAN POLE POWER DISCONNECT SIGN



EXAMPLE STONEHOUSE RD899 RF NOTICE SIGN



CRAN Pole Power Disconnect, RF Notice, and Caution signs shall be ordered through Stonehouse Signs. Three versions are available for each of the signs shown in Figures 16, 17, and 18: .055 Polyethylene - Reflective, .025 Aluminum - Reflective, and Peel Back Label - Reflective. All versions are 6"x6" with font designed to be visible from 2-3 feet away when approached from below to provide warning about ascending into the high RF exposure areas. The RF Caution sign shown in Figure 19 is designed to be visible from 3 feet away and is available in the reflective peel back label version only. It is designed to fit on most of the CRAN/Small Cell antenna types currently deployed. It may also be placed on antenna shrouds as shown in Figures 11 and 12.

**SIGNAGE NOTE:**  
SIGNAGE SHALL BE INSTALLED PER AT&T DIRECTION

AT&T SIGNAGE DETAIL

SCALE: NTS

3



REVISIONS			
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CIVIL SEAL

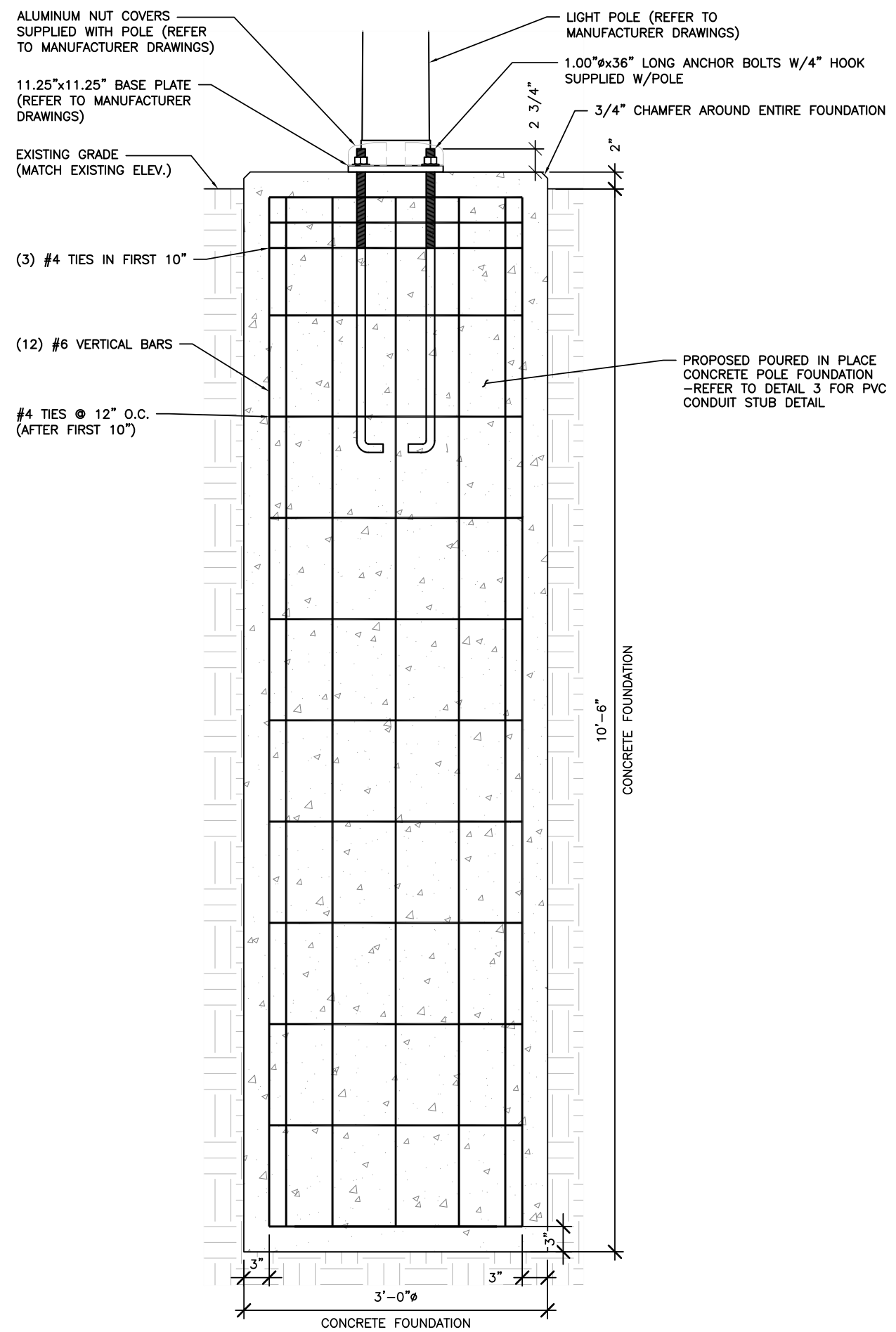
LTE 1C&2C MICRO CELL BUILD  
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CRAN\_RCHI\_CHU01\_014  
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SHEET TITLE  
**MOUNTING DETAILS**

SHEET NUMBER  
**A7**



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**STRUCTURAL NOTES:**

1. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING SPECIFICATIONS:

SLUMP 4" (±1")  
 AIR ENTRAINMENT: 6% (±1%)  
 MIN. COMPRESSIVE STRENGTH (F'c): 4,500 PSI @ 28 DAYS  
 CONCRETE COVER: 3" ALL SIDES

CONCRETE SHALL BE TESTED BY A REPUTABLE INDEPENDENT THIRD PARTY TESTING AGENCY IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318. FIVE (5) CONCRETE CYLINDERS SHALL BE CAST IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318 AND BE LABORATORY CURED. THE AVERAGE OF THREE (3) CONCRETE CYLINDERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 4,500 PSI AT 28 DAYS. THE TESTING RESULTS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER AND AT&T REPRESENTATIVE.

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI\*96, "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" AND ACI 305, 306 AND 307 UNLESS NOTED OTHERWISE.

ALL DETAILING, FABRICATION AND PLACING OF CONCRETE SHALL CONFORM TO ACI 318-11.

2. STRUCTURAL STEEL SHALL MEET THE FOLLOWING SPECIFICATIONS:

MATERIALS: REINFORCING ASTM 615, GRADE 60  
 ANCHOR BOLTS ASTM F1554, GRADE 55

REINFORCING COVER: TOP 2"  
 BOTTOM 3"

3. DESIGN PARAMETERS:

STRUCTURAL ANALYSIS OF THE POLE AND FOUNDATION WAS COMPLETED BY OTHERS. COORDINATE WITH SAC WIRELESS FOR A COPY OF POLE STRUCTURAL ANALYSIS.

DESIGN CODES: 2015 INTERNATIONAL BUILDING BUILDING CODE  
 TIA-222-G  
 ASCE 7-05  
 CHAMPAIGN COUNTY, IL

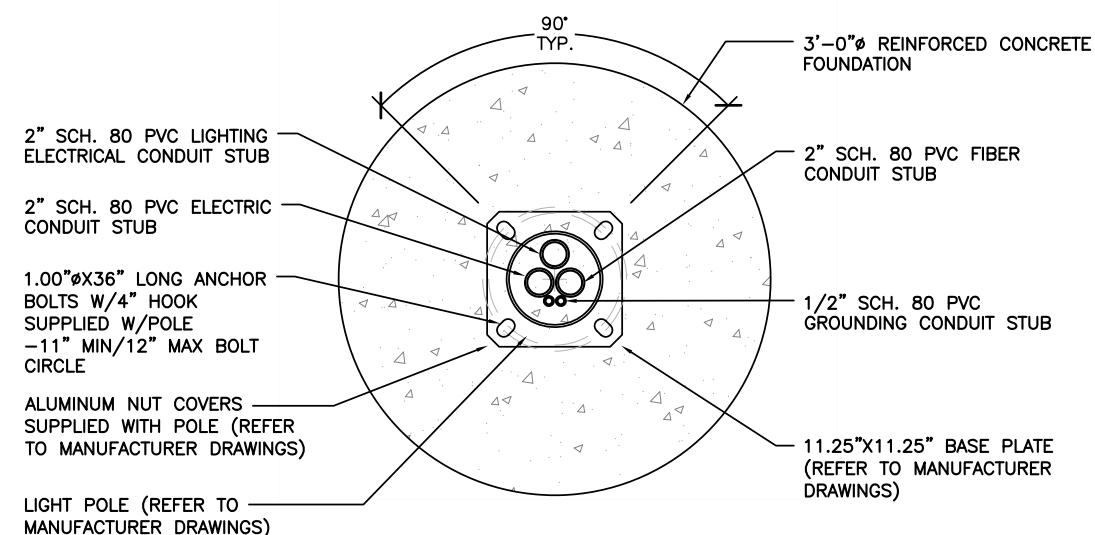
POLE LOCATION:  
 BASIC WIND SPEED: 130 MPH  
 GUST FACTOR: 1.14  
 STRUCTURE CLASS: CLASS II  
 EXPOSURE CLASS: B  
 TOPOGRAPHIC CATEGORY: 1

PRESUMPTIVE SOIL PARAMETERS: FOUNDATION IS BASED ON AN ALLOWABLE LATERAL BEARING PRESSURE OF AT LEAST 200 PSF/FT.

4. ALL CONTRACTORS SHALL EXERCISE GREAT CARE DURING EXCAVATION. CONTRACTOR SHALL PREDETERMINE UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY IF DEVIATION FROM PLANS EXIST. CONTRACTOR SHALL CONTACT 811 48 HR. PRIOR TO DIGGING, GRADING, OR DRILLING.

**FOUNDATION NOTES**

SCALE	2
N.T.S.	



FOUNDATION DETAIL

SCALE: NTS

1

FOUNDATION DETAIL

SCALE: NTS

3



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	10/29/18	ISSUED FOR REVIEW	SEK
B	03/12/19	REVISED PER COMM.	MRL
C	05/02/19	ADDED FOUNDATION	MRL

NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET

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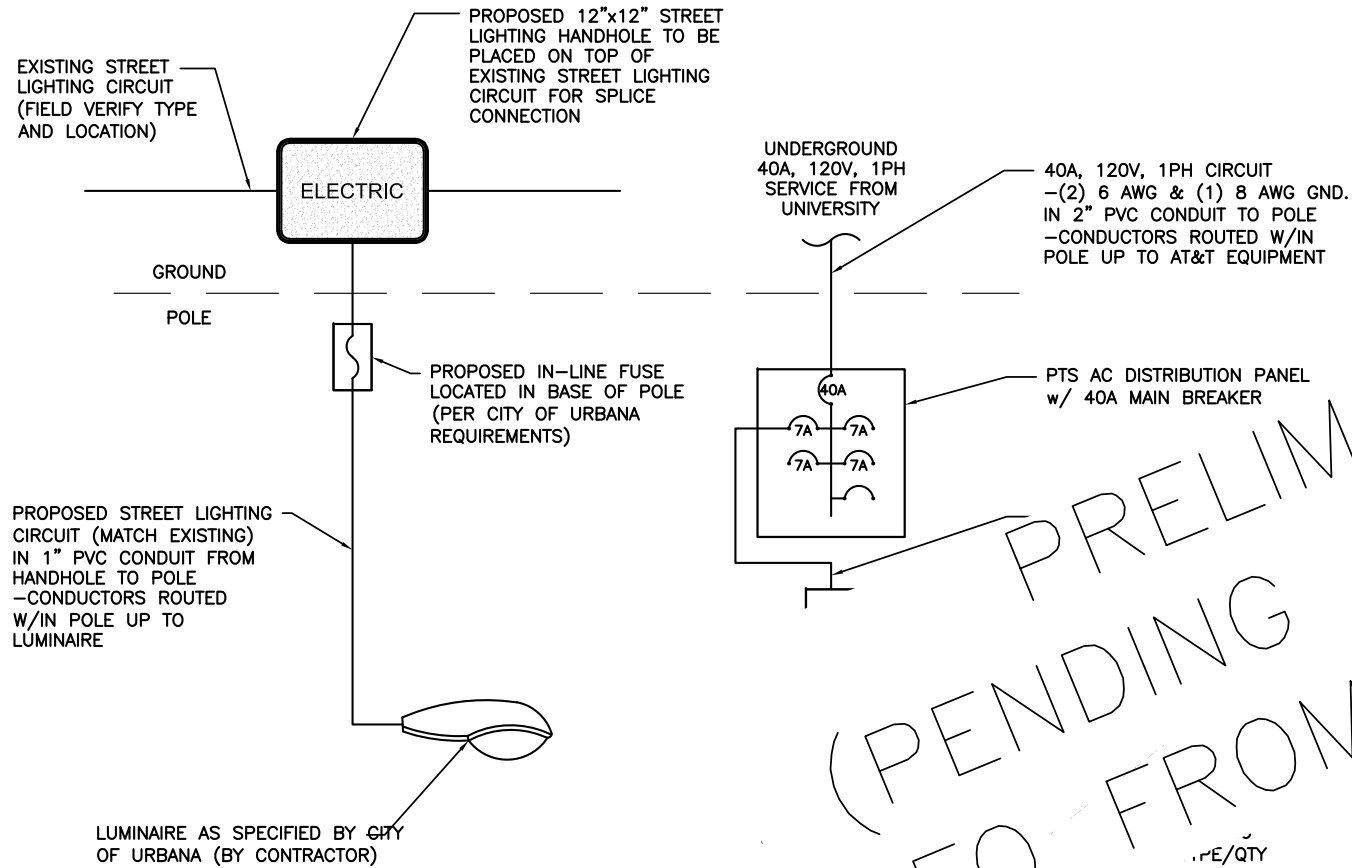
STRUCTURAL SEAL

LTE 1C&2C MICRO CELL BUILD  
 14805799  
 CRAN\_RCHI\_CHU01\_014  
 184219  
 1189 S VINE ST  
 URBANA, IL 61801

SHEET TITLE  
**POLE FOUNDATION DETAILS**

SHEET NUMBER  
**S1**

**NOTE:**  
THIS ONE-LINE DIAGRAM IS PRELIMINARY AND SHALL BE USED TO SHOW THE INTENT OF THE ELECTRICAL CONNECTIONS AT THE POLE. SERVICE DELIVERY & METERING FROM UNIVERSITY TO BE COORDINATED PRIOR TO CONSTRUCTION.



**LUMINAIRE NOTE:**  
LUMINAIRE SHALL BE BLACK POWDER-COAT FULL CUTOFF LED COBRA HEAD, GE EVOLVE LED SCALABLE ERS3, BLACK, 4000K, OR CITY OF URBANA APPROVED EQUAL.

PRELIMINARY  
(PENDING ELECTRICAL  
INFO FROM UNIVERSITY)

SCALE	2
N.T.S.	

- ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND ALL APPLICABLE CODES.
- ...MATIC. SUBCONTRACTOR SHALL INSTALL CONDUITS SUCH THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
- ...RESPONSIBLE FOR PROPERLY SEQUENCING THE INSTALLATION OF GROUNDING AND UNDERGROUND CONDUIT AS TO LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT.
- ...PRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC (CADWELD) CONNECTIONS WHEN APPROVED BY CINCINNATI BELL CONSTRUCTION MANAGER.
- SERVICE TO POLE SHALL BE 120VAC, 40 AMP, SINGLE PHASE.
  - ALL GROUND CONNECTIONS BELOW GRADE SHALL BE EXOTHERMIC (CADWELD).
  - ALL GROUND CONNECTIONS ABOVE GRADE SHALL BE FORMED USING TWO (2) HIGH PRESS CRIMPS.
  - ALL EXOTHERMIC CONNECTIONS TO THE GROUND RODS SHALL START AT THE TOP AND HAVE A VERTICAL SEPARATION OF 6" FOR EVERY ADDITIONAL CONNECTION.
  - ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
  - ALL EXTERIOR GROUND CONNECTORS SHALL BE 2 AWG SOLID BARE, TINNED, COPPER UNLESS INDICATED OTHERWISE.
  - CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED. BACK TO BACK CONNECTIONS ON OPPOSITE SIDES OF THE GROUND BUS ARE PERMITTED.
  - USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
  - MAXIMUM RESISTANCE OF THE COMPLETED GROUND SYSTEM SHALL NOT EXCEED 5 OHMS. TESTING SHALL BE PERFORMED IN ACCORDANCE WITH PROJECT SPECIFICATIONS FOR FACILITY GROUNDING, USING FALL OF POTENTIAL METHOD.

**STANDARD CONDUIT NOTES:**

- UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC. ABOVE GROUND CONDUIT, ELBOWS, AND RISERS SHALL BE SCHEDULE 80 PVC.
- G.C. TO STUB SERVICE CONDUIT UNDERGROUND WITH 90° SWEEPING ELBOW AND PULL STRING AND CAP CONDUIT. MARKER SHALL BE LEFT INDICATING WHERE STUBBED CONDUIT ENDS FOR UTILITY COMPANY REFERENCE.
- SPARE CONDUITS FROM FUTURE METERS SHALL TERMINATE IN HAND HOLE WITH PULL STRING. CONDUITS AND METERS SHALL BE LABELED CORRESPONDINGLY.
- ALL CONDUIT WILL BE EQUIPPED WITH 3/8" PULL ROPE AND HAVE A TRACER WIRE. TRACER WIRE NEEDS TO BE LAID ABOVE BURIED CONDUIT.

ELECTRICAL ONE-LINE DIAGRAM

SCALE	1
N.T.S.	

ELECTRICAL NOTES

SCALE	3
N.T.S.	



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ELECTRICAL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805799  
CRAN\_RCHI\_CHU01\_014  
184219  
1189 S VINE ST  
URBANA, IL 61801

SHEET TITLE  
**ELECTRICAL ONE-LINE DIAGRAM**

SHEET NUMBER  
**E1**

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AC POWER PANEL (RAYCAP RSCAC-6533-P-120-D)											
120 VOLTS, 1-PHASE, 2-WIRE, 40A											
MAIN RATING (A) :				40		SYSTEM VOLTAGE (V) :				120	
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
RRUS-11	520	c	7	1	520		2	7	c	0	SPARE
RRUS-4415	670	c	7	3		670	4	7	c	0	SPARE
SPARE	0		7	5	0						
PHASE TOTALS (VA):					520	670					
CURRENT PER PHASE (A):					5	7	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					1190		Legend: c = continuous, nc = non-continuous				
PANEL CAPACITY (kVA):					4.8		CONNECTED LOAD (kVA): 1.2				
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					1.5						
PANEL LOADING (TOTAL) (kVA):					1.5						
SPARE CAPACITY (kVA):					3.3						

MANUFACTURER: PTS  
MODEL: PTS90120

MECHANICAL SPECIFICATIONS:  
HEIGHT: 10.13 IN  
WIDTH: 06.15 IN  
DEPTH: 06.00 IN  
WEIGHT: 10 LBS

ELECTRICAL SPECIFICATIONS:  
AMPERAGE: 40A  
OPERATING VOLTAGE: 120V  
QTY OF PROTECTED CIRCUITS: 5

ENVIRONMENT SPECIFICATIONS:  
NORMAL OPERATING TEMP.: -40°C TO +60°C



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ELECTRICAL SEAL

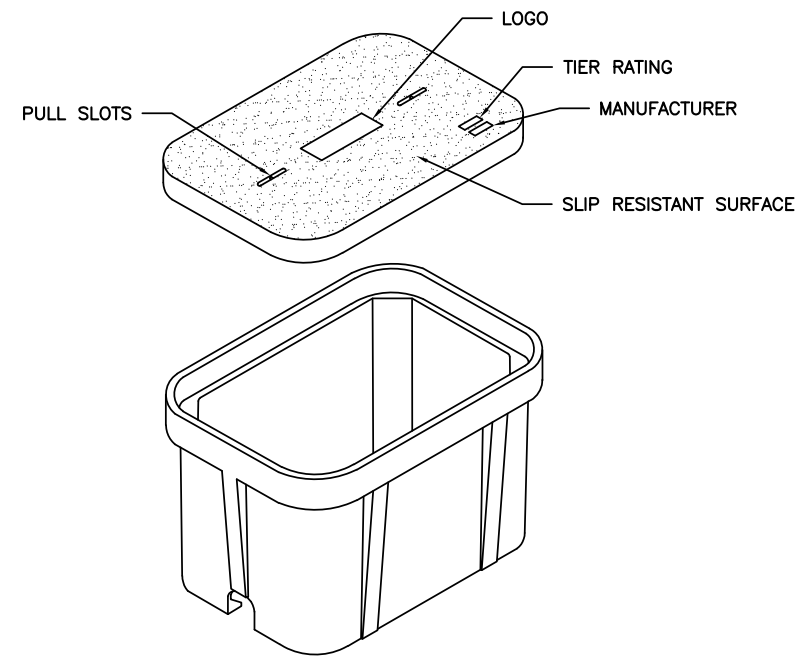
LTE 1C&2C MICRO CELL BUILD  
14805799  
CRAN\_RCHI\_CHU01\_014  
184219  
1189 S VINE ST  
URBANA, IL 61801

SHEET TITLE  
PANEL SCHEDULE  
& ELECTRICAL  
DETAILS

SHEET NUMBER  
**E2**

ELECTRICAL PANEL SCHEDULE SCALE N.T.S. 1

RAYCAP AC DISCONNECT DETAIL SCALE N.T.S. 2



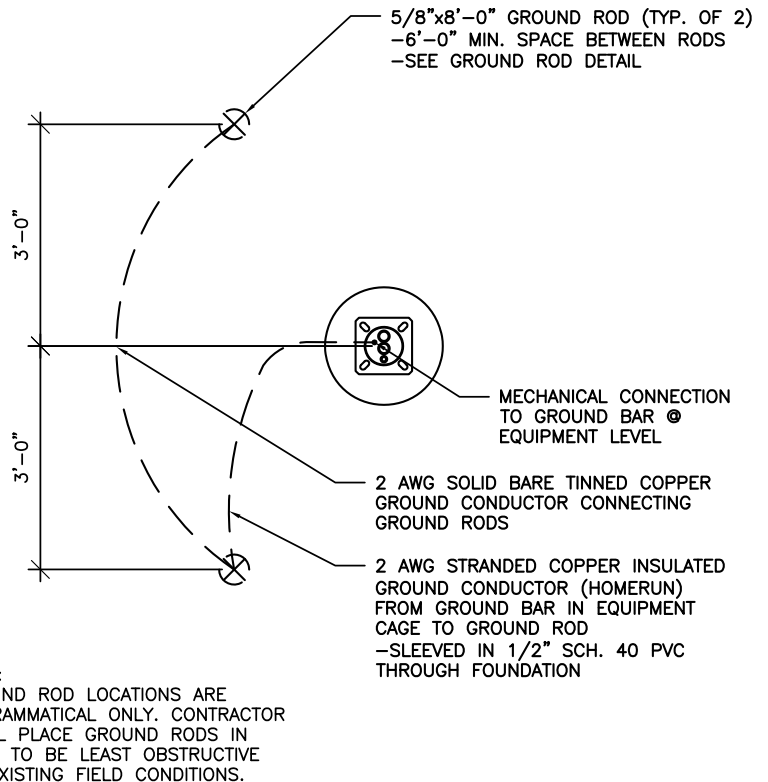
- NOTES:
- CONTRACTOR SHALL SUPPLY & INSTALL UL LISTED, TIER 22 RATED, 24"x36"x36" PG STYLE GASKETED POLYMER CONCRETE HANDHOLE (QUAZITE PG2436BA36 OR APPROVED EQUAL) W/UL LISTED, TIER 22 24"x36" PG STYLE POLYMER CONCRETE COVER (QUAZITE PG2436HH21 OR APPROVED EQUAL). COVER SHALL BEAR THE LOGO "FIBER OPTICS" AND TIER RATING.
  - HANDHOLE SHALL BEAR ON A MIN. 6" COMPACTED CLEAN GRAVEL BASE.
  - CONDUITS STUBBED UP INSIDE BOTTOM OF HANDHOLE SHALL EXTEND A MINIMUM OF 4" ABOVE GRAVEL BASE.

FIBER HAND HOLE DETAIL SCALE N.T.S. 3

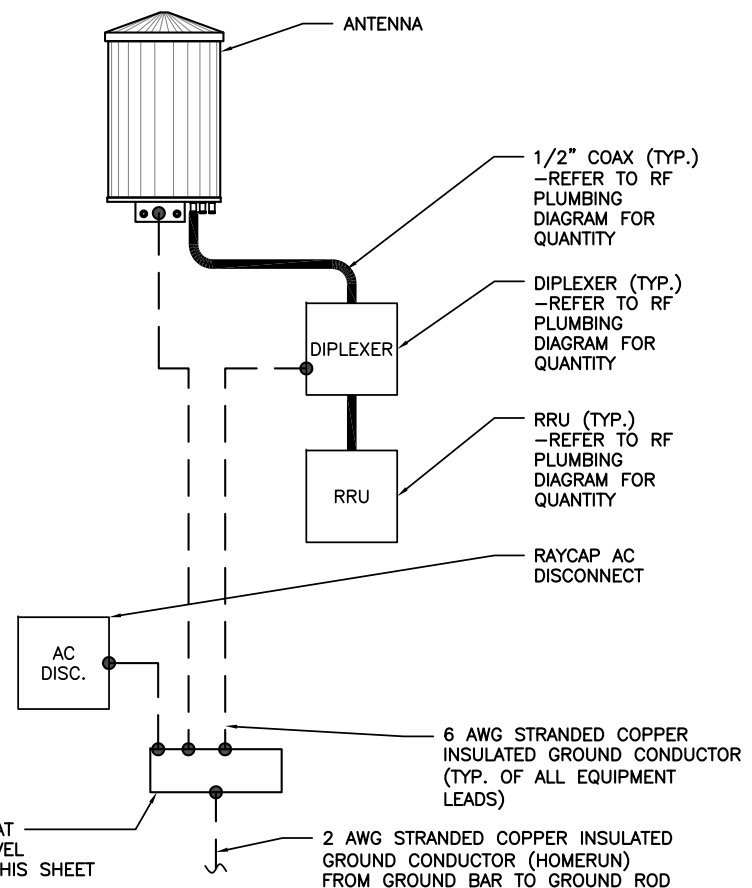
DETAIL NOT USED SCALE N.T.S. 4



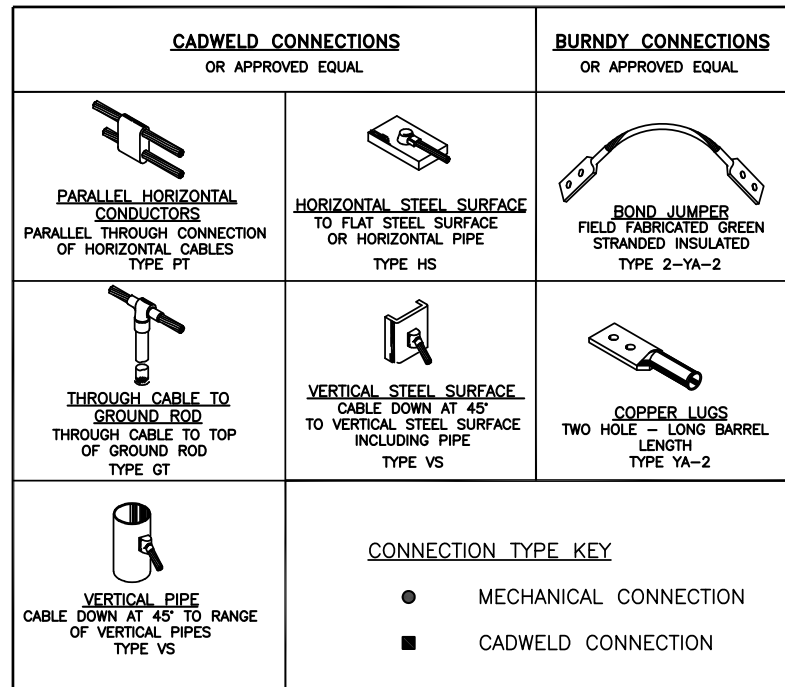
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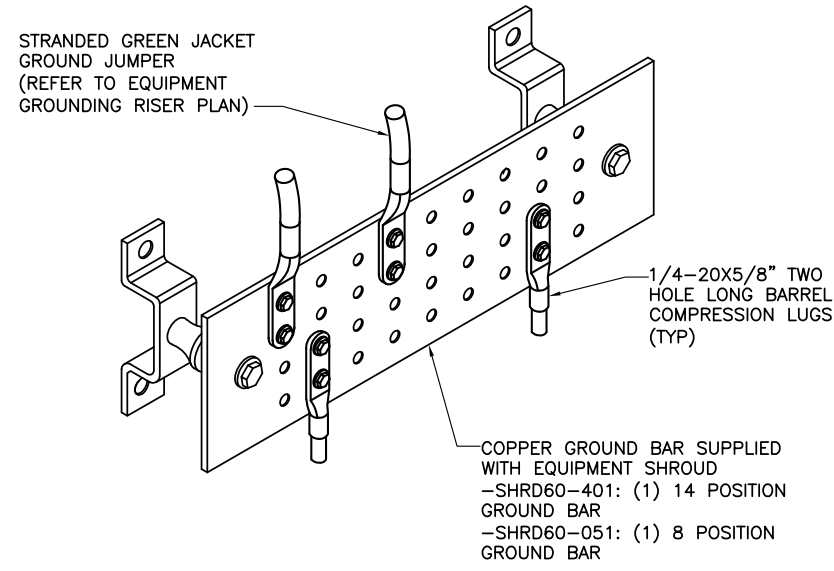
POLE GROUNDING PLAN DETAIL SCALE N.T.S. 1



EQUIPMENT GROUNDING RISER DETAIL SCALE N.T.S. 2



GROUNDING CONNECTIONS DETAIL SCALE N.T.S. 3

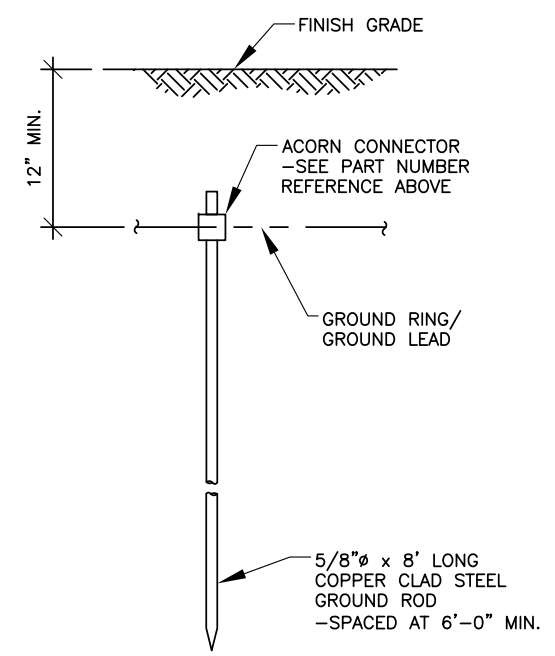


- NOTES:**
- CONTRACTOR SHALL UTILIZE LUGGED HOLES PROVIDED. NO DRILLING OF THE BAR WILL BE PERMITTED.
  - ALL HARDWARE SHALL BE 1/4-20 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
  - FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

GROUND BAR DETAIL SCALE N.T.S. 4

DETAIL NOT USED SCALE N.T.S. 5

ACORN CONNECTOR		
ELEC. MOTION CO. PART #	GROUND CONDUCTOR SIZE	GROUND ROD SIZE
EM2DB	#12-1/0 AWG	5/8"Ø



GROUND ROD DETAIL SCALE N.T.S. 6



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ELECTRICAL SEAL

LTE 1C&2C MICRO CELL BUILD  
14805799  
CRAN\_RCHI\_CHU01\_014  
184219  
1189 S VINE ST  
URBANA, IL 61801

SHEET TITLE  
**GROUNDING  
DETAILS**

SHEET NUMBER  
**E3**

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Diagram - 2 Diagram File Name - Micro 17.vsd

Atoll Site Name - Champaign CRAN HUB-University Location Name - CRAN\_CHAMPAIGN\_UNIVERSITY\_0001 BUILD BBU Market - CENTRAL ILLINOIS Market Cluster - ILLINOIS/WISCONSIN

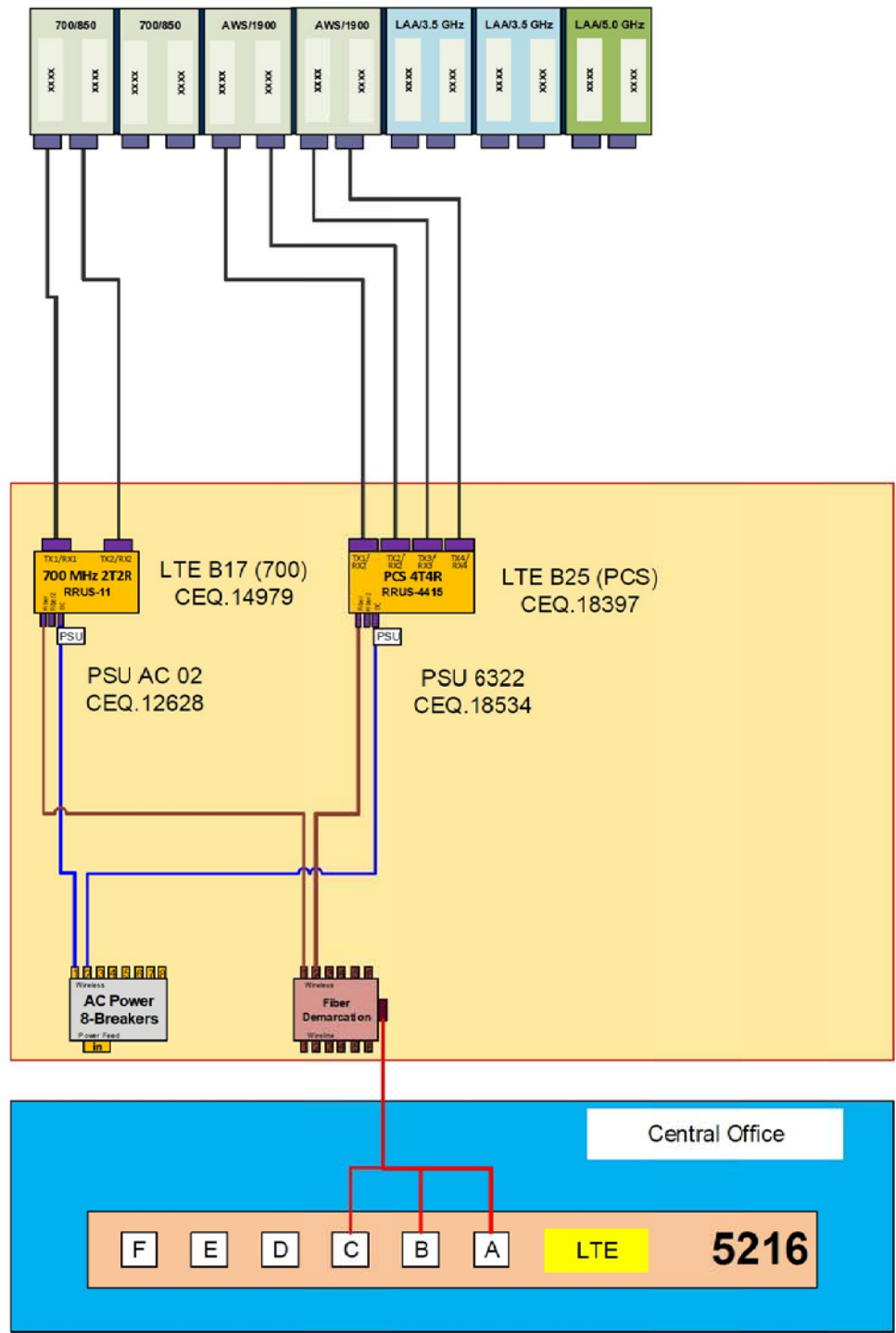
Comments:

Configuration Name	700 MHz 2T2R LTE	700 MHz 4T4R LTE	850 MHz 2T2R LTE	850 MHz 4T4R LTE	1900 MHz 2T2R LTE	1900 MHz 4T4R LTE	2100 MHz 2T2R LTE	2100 MHz 4T4R LTE	5GHz LAA LTE	3.5 GHz LAA LTE	Sector Count	Carrier Count	Antenna LAA location
Micro #17	X	NA	NA	NA	NA	X	NA	NA	NA	NA	1	2	14 Ports Antenna

Amphenol Pseudo-Omni – 14 ports Antenna  
2C2U3MT360X06FxyS0



**Important Note:**  
For detailed radio to antenna wiring refer to the latest 4T4R Antenna/Radio Port Connection Field Notice (RF-HW-2016-234) and the 4T Wiring Playbook



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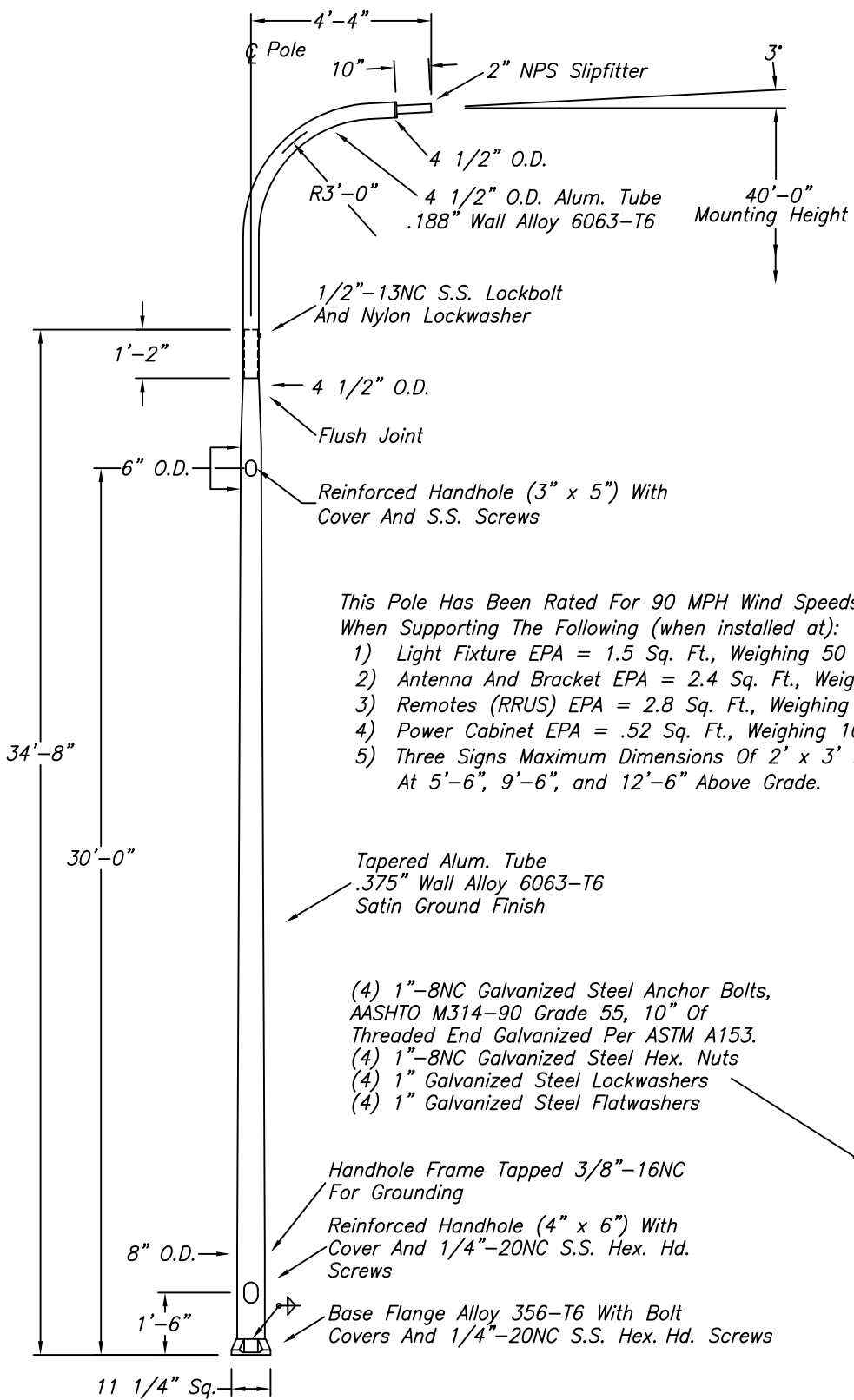
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REFERENCE ONLY

LTE 1C&2C MICRO CELL BUILD 14805799  
CRAN\_RCHI\_CHU01\_014 184219  
1189 S VINE ST URBANA, IL 61801

SHEET TITLE  
RF PLUMBING DIAGRAM

SHEET NUMBER  
**RF1**

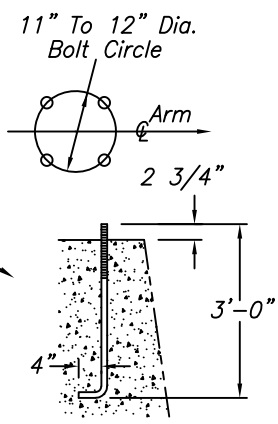


This Pole Has Been Rated For 90 MPH Wind Speeds Per AASHTO 2013 When Supporting The Following (when installed at):

- 1) Light Fixture EPA = 1.5 Sq. Ft., Weighing 50 Lbs At 40'-0"
- 2) Antenna And Bracket EPA = 2.4 Sq. Ft., Weighing 100 Lbs At 37'-0"
- 3) Remotes (RRUS) EPA = 2.8 Sq. Ft., Weighing 100 Lbs. At 32'-9"
- 4) Power Cabinet EPA = .52 Sq. Ft., Weighing 10 Lbs. At 31'-0"
- 5) Three Signs Maximum Dimensions Of 2' x 3' Weighing 25 Lbs. Each. At 5'-6", 9'-6", and 12'-6" Above Grade.

Tapered Alum. Tube  
.375" Wall Alloy 6063-T6  
Satin Ground Finish

- (4) 1"-8NC Galvanized Steel Anchor Bolts, AASHTO M314-90 Grade 55, 10" Of Threaded End Galvanized Per ASTM A153.
- (4) 1"-8NC Galvanized Steel Hex. Nuts
- (4) 1" Galvanized Steel Lockwashers
- (4) 1" Galvanized Steel Flatwashers



- Handhole Frame Tapped 3/8"-16NC For Grounding
- Reinforced Handhole (4" x 6") With Cover And 1/4"-20NC S.S. Hex. Hd. Screws
- Base Flange Alloy 356-T6 With Bolt Covers And 1/4"-20NC S.S. Hex. Hd. Screws

SKDGO32619B

WARNING: DO NOT INSTALL LIGHTING POLES WITHOUT LUMINAIRES

NO.	REVISIONS	DATE

**hapco**  
Abingdon, Va.

TITLE 40' DAVIT/ANTENNA POLE	
CUSTOMER	
SCALE NTS	DATE 3.26.19
BY RDG	DWG. NO. Page 30 of 30
CHK'D	SKDGO32619B



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**PROJECT INFORMATION**

**SITE NAME:** CRAN\_RCHI\_CHUOI\_026  
**COUNTY:** CHAMPAIGN  
**ADDRESS:** 784 S LINCOLN AVE  
 CHAMPAIGN, IL 61801  
**JURISDICTION:** CITY OF URBANA  
**USID:** 184230  
**FA NUMBER:** 14805853  
**PTN:** 3304A0AAQN / 3304A0AARJ  
**PACE:** MRCHI025454 / MRCHI025479

**LATITUDE:** 40° 06' 22.82" (40.106339°)  
**LONGITUDE:** 88° 13' 09.21" (-88.219225°)  
**ELEVATION:** 732'

**LIGHT POLE/UTILITY POLE OWNER:** CITY OF URBANA

**APPLICANT:** AT&T MOBILITY  
 930 NATIONAL PARKWAY  
 SCHAUMBURG IL 60173

**AT&T PROJECT MANAGER/SITE ACQUISITION:** VANESSA ROSS  
 (217) 814-2314  
 VF2021@ATT.COM

**AT&T CONSTRUCTION MANAGER:** CHRISTIANA RACHAL  
 CR630A@ATT.COM

**PROJECT CONSULTANTS**

**PROJECT MANAGER:** SAC WIRELESS LLC  
 540 W. MADISON ST. (9TH FLOOR)  
 CHICAGO IL 60661  
 CONTACT: PRITI MORE  
 PHONE: (312) 789-4353  
 EMAIL: PRITI.MORE@SACW.COM

**ARCHITECT:** GPD GROUP, INC. - 184-007100  
 520 S. MAIN ST., SUITE 2531  
 AKRON, OH 44311  
 317-295-3180

**SAC C.M.:** MARK KLEPACKI  
 EMAIL: MARK.KLEPACKI@SACW.COM

**SAC P.M.:** JAMES HOM  
 EMAIL: JAMES.HOM@SACW.COM

# AT&T MOBILITY

**PROJECT :** LTE 1C&2C PICO CELL BUILD  
**SITE # :** CRAN\_RCHI\_CHUOI\_026  
**USID / NODE:** 184230  
**FA # :** 14805853  
**PTN # :** 3304A0AAQN / 3304A0AARJ  
**PACE # :** MRCHI025454 / MRCHI025479  
**ENODEB NAME :** ILL07050F\_R02  
**JURISDICTION :** CITY OF URBANA

**SITE NAME :** CRAN\_RCHI\_CHUOI\_026  
**ADDRESS :** 784 S LINCOLN AVE  
 CHAMPAIGN, IL 61801



DRAWING INDEX	
T1	TITLE SHEET
A1	FIBER DELIVERY PLANS (REFERENCE ONLY)
A2	OVERALL SITE PLAN
A3	ENLARGED PLAN
A4	EXISTING LIGHT POLE ELEVATION
A5	PROPOSED LIGHT POLE ELEVATIONS
A6	EQUIPMENT SHROUD DETAILS (REFERENCE ONLY)
A7	EQUIPMENT DETAILS (REFERENCE ONLY)
A8	MOUNTING DETAILS
S1	POLE FOUNDATION DETAILS
E1	ELECTRICAL ONE-LINE DIAGRAM
E2	PANEL SCHEDULE & ELECTRICAL DETAILS
E3	GROUNDING DETAILS
RF1	RF PLUMBING DIAGRAM (REFERENCE ONLY)
REF	POLE MANUFACTURER DESIGN (BY OTHERS)

**SCOPE OF WORK**

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

- REMOVE EXISTING LIGHT POLE AND REPLACE WITH NEW 30' HAPCO DOUBLE DAVIT ARM (RTA30E8C4D2601) LIGHT POLE (100 GRIT SATIN FINISH)
- INSTALL NEW ELECTRIC SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE. METER SUPPLIED & INSTALLED BY CONTRACTOR.
- INSTALL NEW FIBER SERVICE RUN FROM EXISTING SOURCE TO NEW LIGHT POLE LOCATION AS SHOWN.
- INSTALL NEW POWER & FIBER EQUIPMENT PER PLAN
- INSTALL (1) NEW OMNI ANTENNA
- INSTALL (2) PCS 2203 RRUS & (1) LAA 2205 RRU IN CHARLES DENSIFICATION SHROUD
- INSTALL CABLING AS REQUIRED
- GROUND AS REQUIRED
- LIGHT POLE LUMINARY TO BE SUPPLIED & INSTALLED BY CONTRACTOR. LUMINARY MUST BE APPROVED BY CITY OF URBANA PRIOR TO ORDER.
- STREET LIGHTING HANDHOLE (IF REQUIRED) SUPPLIED & INSTALLED BY CONTRACTOR
- POTHOLES SHALL BE REQUIRED FOR ANY PROPOSED UTILITY CROSSING
- HYDROVAC SHALL BE USED FOR ALL TRENCHING & POTHOLES ACTIVITIES
- CONTRACTOR SHALL MAINTAIN INTEGRITY OF EXISTING POLE DURING REMOVAL & COORDINATE RETURN OF REMOVED POLE TO THE CITY OF URBANA

**UTILITY DELIVERY METHOD TO PROPOSED POLE**

- FIBER - UNDERGROUND
- POWER - UNDERGROUND

**CODE COMPLIANCE**

- 2015 INTERNATIONAL BUILDING CODE W/CITY AMMENDMENTS
- 2014 NATIONAL ELECTRIC CODE W/CITY AMMENDMENTS

**SPECIAL NOTES**

- ALL WORK SHALL BE INSTALLED IN CONFORMANCE WITH CURRENT AT&T CONSTRUCTION INSTALLATION GUIDE.
- EXISTING CONDITIONS WILL BE CHANGED & VERIFIED IN FIELD. IF SIGNIFICANT DEVIATIONS OR DETERIORATION ARE ENCOUNTERED AT THE TIME OF CONSTRUCTION, A REPAIR PERMIT WILL BE OBTAINED & CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY.
- THESE DRAWINGS ARE FULL SIZE & SCALEABLE ON 11"x17" SHEET SIZE.
- STATEMENT THAT COMPLIANCE WITH THE ENERGY CODE IS NOT REQUIRED. -SCOPE OF WORK DOES NOT INVOLVE MODIFICATIONS TO EXTERIOR ENVELOPE OF BUILDING, HVAC SYSTEMS OR ELECTRICAL LIGHTING.

**DO NOT SCALE DRAWINGS**

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



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CIVIL SEAL

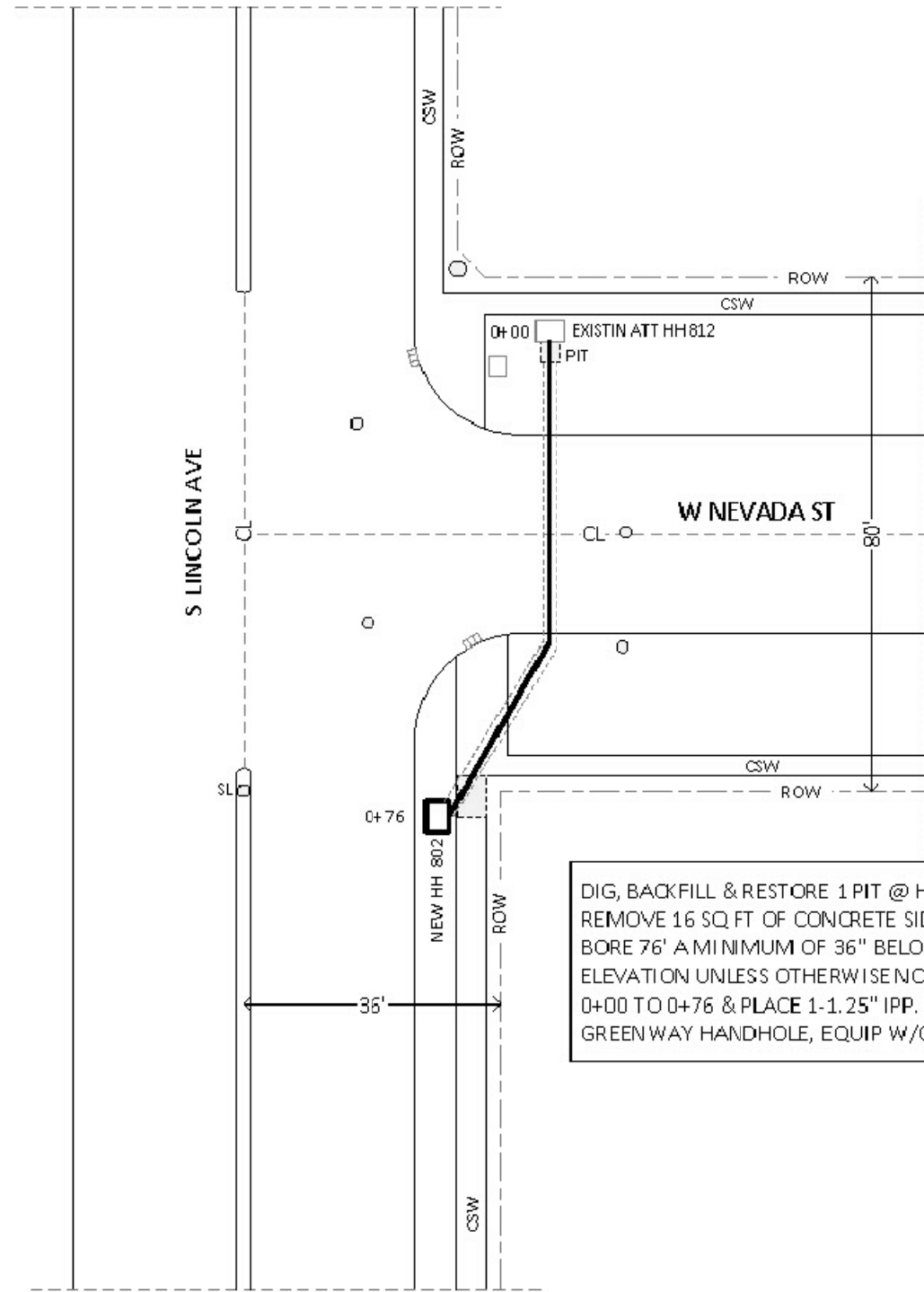
LTE 1C&2C PICO CELL BUILD  
 14805853  
 CRAN\_RCHI\_CHUOI\_026  
 184230  
 784 S LINCOLN AVE  
 CHAMPAIGN, IL 61801

SHEET TITLE  
**TITLE SHEET**

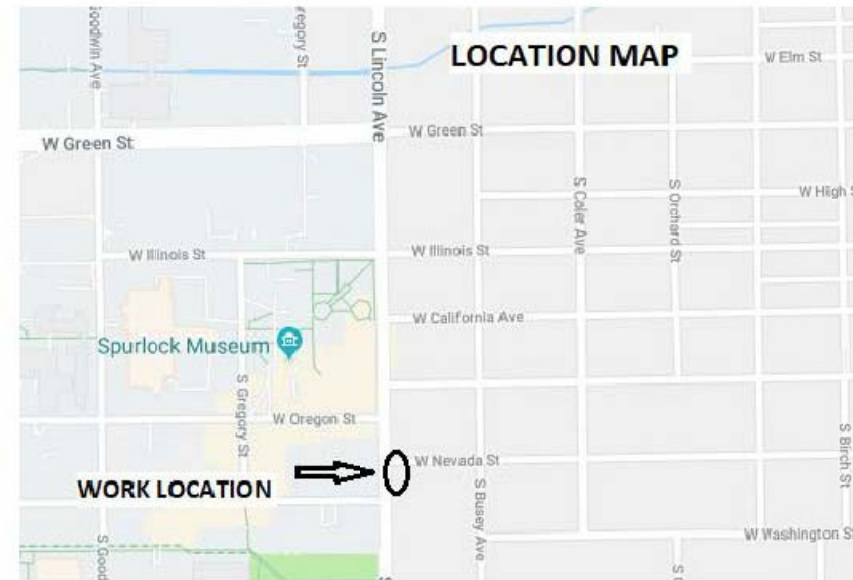
SHEET NUMBER  
**T1**

Know what's below.  
 Call before you dig.

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DIG, BACKFILL & RESTORE 1 PIT @ HH 812 TO PLACE IPP, REMOVE 16 SQ FT OF CONCRETE SIDEWALK, DIRECTIONAL BORE 76' A MINIMUM OF 36" BELOW EXISTING GRADE/ELEVATION UNLESS OTHERWISE NOTED, FROM STATION 0+00 TO 0+76 & PLACE 1-1.25" IPP. PLACE 1-10"X15"X:2" GREENWAY HANDHOLE, EQUIP W/GRD.



City of Urbana  
 Permit Sketch  
 County: Champaign  
 Twp: Cunningham  
 Qtr Sec: 17  
 Ref # A01CQ2N  
 Sheet 1 of 1



**SOC**  
 WIRELESS  
 1501 E. WOODFIELD RD.  
 SUITE #300E  
 SCHAUMBURG, IL 60173  
 www.socw.com  
 847.944.1600

**GPD GROUP, INC.**  
 Lic. # - 184-007100  
 520 South Main Street, Suite 2531  
 Akron, OH 44311  
 330.572.2100 Fax: 330.572.2102

REVISIONS			
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B	03/12/19	REVISED PER COMM.	MRL

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SHEET TITLE  
**FIBER DELIVERY PLANS**

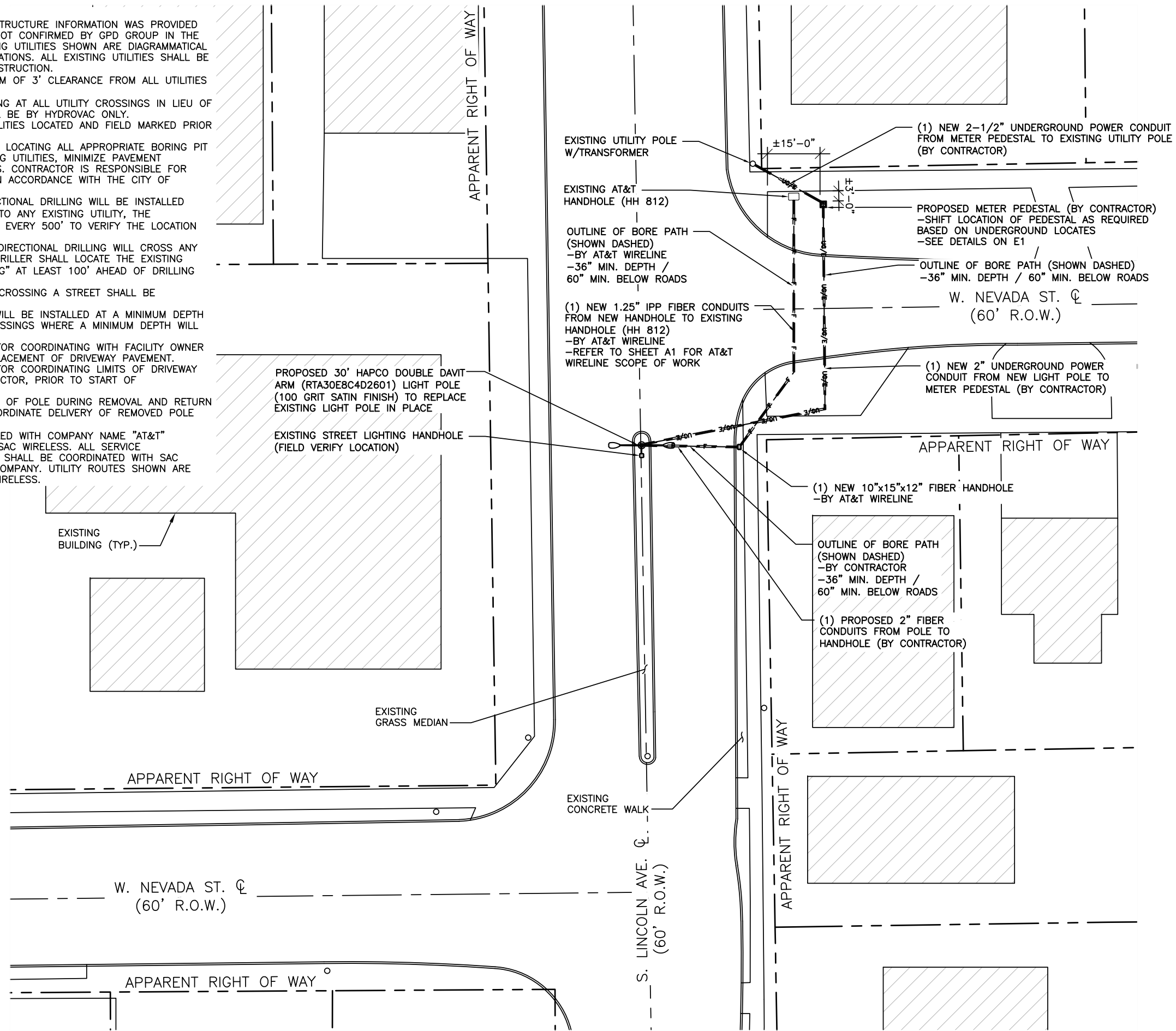
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**A1**



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**NOTES:**

1. EXISTING UNDERGROUND UTILITY INFRASTRUCTURE INFORMATION WAS PROVIDED BY SAC WIRELESS. INFORMATION WAS NOT CONFIRMED BY GPD GROUP IN THE FORM OF UTILITY LOCATES. THE EXISTING UTILITIES SHOWN ARE DIAGRAMMATICAL IN NATURE SHOWING APPROXIMATE LOCATIONS. ALL EXISTING UTILITIES SHALL BE LOCATED BY CONTRACTOR DURING CONSTRUCTION.
2. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3' CLEARANCE FROM ALL UTILITIES & 5' CLEARANCE FROM ALL CONDUITS.
3. CONTRACTOR SHALL PERFORM POTHOLING AT ALL UTILITY CROSSINGS IN LIEU OF DIRECTIONAL BORING. POTHOLING SHALL BE BY HYDROVAC ONLY.
4. CONTRACTOR SHALL HAVE EXISTING UTILITIES LOCATED AND FIELD MARKED PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL TAKE CARE IN LOCATING ALL APPROPRIATE BORING PIT LOCATIONS IN ORDER TO AVOID EXISTING UTILITIES, MINIMIZE PAVEMENT RESTORATION AND TRAFFIC DISRUPTIONS. CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DISTURBED PAVEMENT IN ACCORDANCE WITH THE CITY OF URBANA STANDARD SPECIFICATIONS.
6. AT LOCATIONS WHERE PROPOSED DIRECTIONAL DRILLING WILL BE INSTALLED WITHIN 5' LONGITUDINALLY (PARALLEL) TO ANY EXISTING UTILITY, THE DIRECTIONAL DRILLER SHALL "POTHOLE" EVERY 500' TO VERIFY THE LOCATION AND GRADE OF THE EXISTING UTILITY.
7. AT LOCATIONS WHERE THE PROPOSED DIRECTIONAL DRILLING WILL CROSS ANY EXISTING UNDERGROUND UTILITY, THE DRILLER SHALL LOCATE THE EXISTING UTILITY LINE AND GRADE BY "POTHOLING" AT LEAST 100' AHEAD OF DRILLING OPERATIONS.
8. ANY PROPOSED DIRECTIONAL DRILLING CROSSING A STREET SHALL BE PERPENDICULAR TO STREET DIRECTION.
9. ALL CONDUIT IN CITY RIGHT-OF-WAY WILL BE INSTALLED AT A MINIMUM DEPTH OF 36 INCHES EXCEPT AT STREET CROSSINGS WHERE A MINIMUM DEPTH WILL BE 60 INCHES.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH FACILITY OWNER TO SCHEDULE ANY DEMOLITION & REPLACEMENT OF DRIVEWAY PAVEMENT.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING LIMITS OF DRIVEWAY REPAIR WITH CITY RIGHT OF WAY INSPECTOR, PRIOR TO START OF CONSTRUCTION OR DEMOLITION.
12. CONTRACTOR SHALL MAINTAIN INTEGRITY OF POLE DURING REMOVAL AND RETURN POLE TO THE CITY OF CHAMPAIGN. COORDINATE DELIVERY OF REMOVED POLE WITH CITY RIGHT-OF-WAY INSPECTOR.
13. ALL AT&T HANDHOLES SHALL BE LABELED WITH COMPANY NAME "AT&T"
14. UTILITY COORDINATION PERFORMED BY SAC WIRELESS. ALL SERVICE COORDINATION WITH UTILITY COMPANIES SHALL BE COORDINATED WITH SAC WIRELESS AND VERIFIED WITH UTILITY COMPANY. UTILITY ROUTES SHOWN ARE BASED ON NOTES PROVIDED BY SAC WIRELESS.



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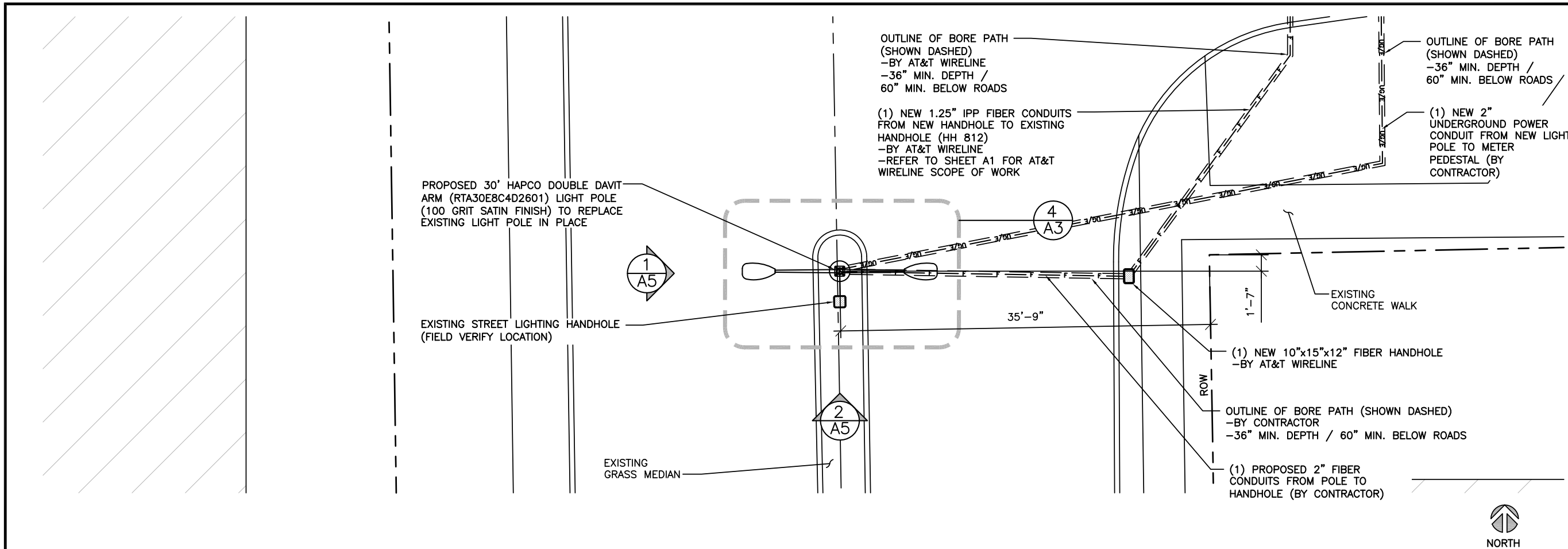
SHEET TITLE  
**OVERALL  
SITE PLAN**

SHEET NUMBER  
**A2**





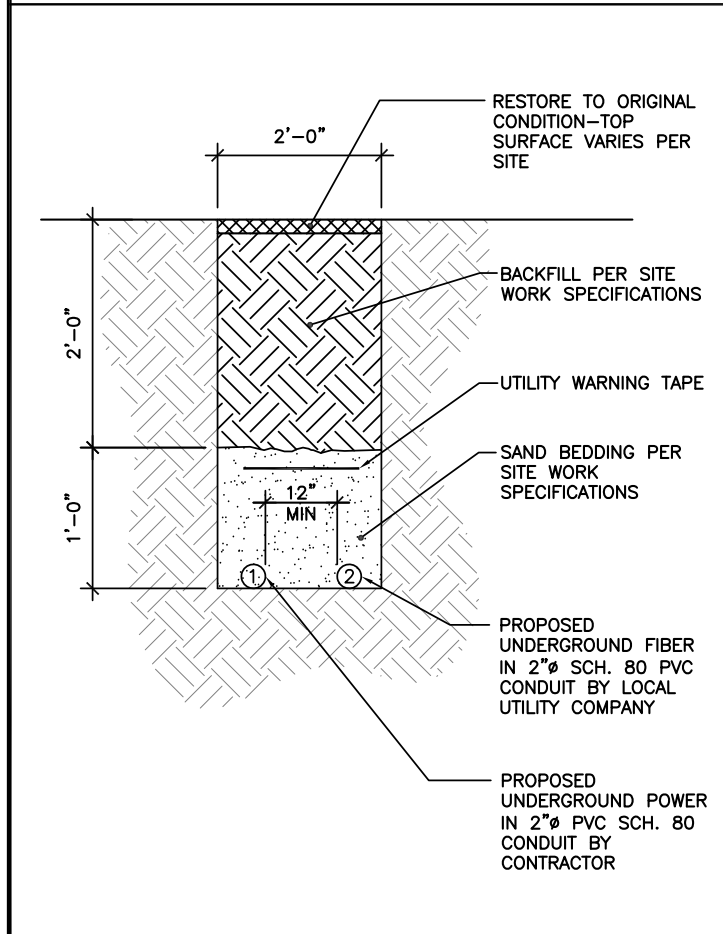
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ENLARGED SITE PLAN

0 3' 6" 12" SCALE: 3/32" = 1'-0" (24x36)  
 (OR) 3/64" = 1'-0" (11x17)

1

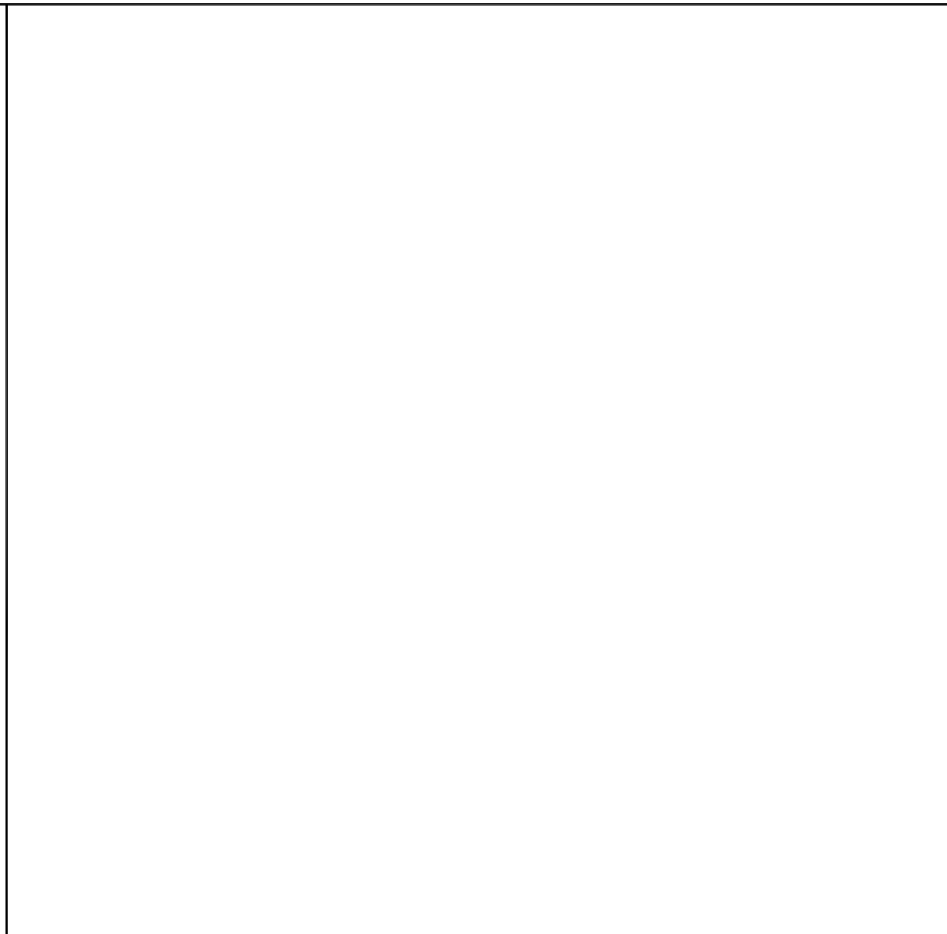


TYPICAL TRENCH DETAIL

SCALE N.T.S.

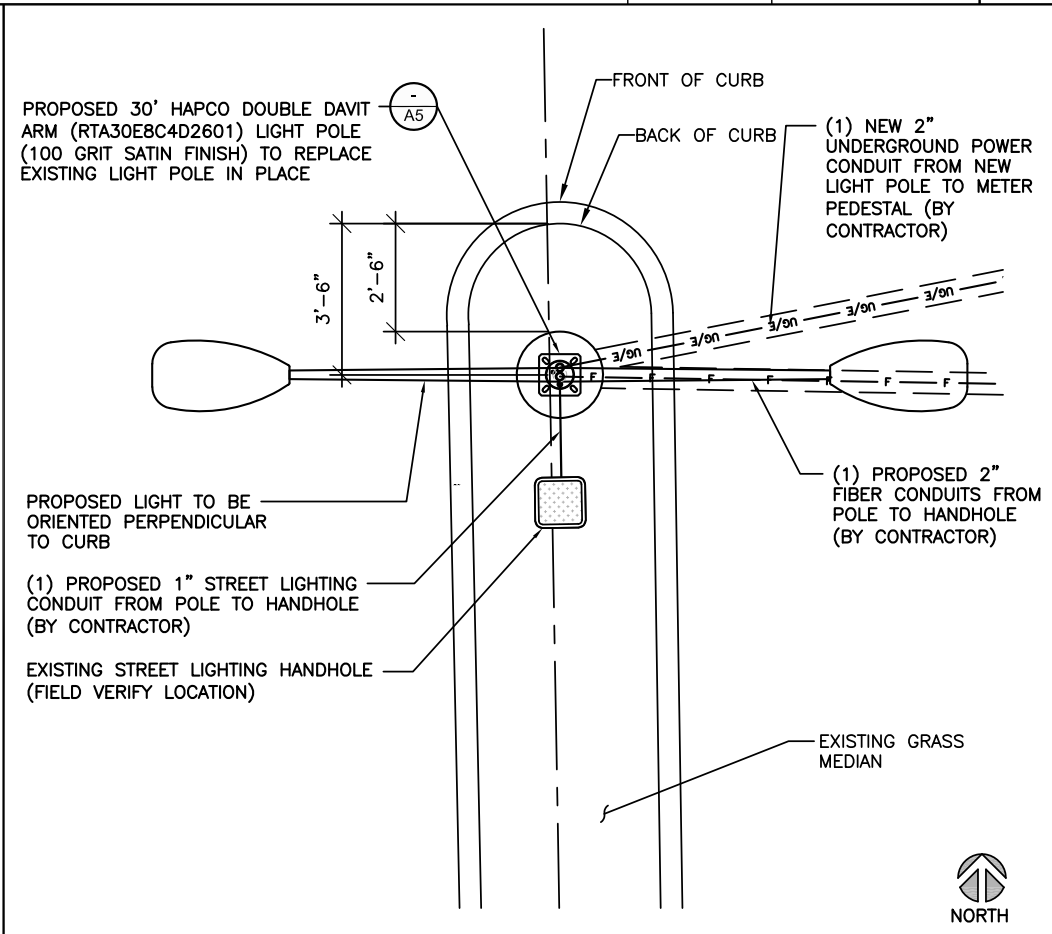
2

DETAIL NOT USED



SCALE N.T.S.

3



LIGHT POLE PLAN

SCALE N.T.S.

4



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 184230  
 784 S LINCOLN AVE  
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SHEET TITLE

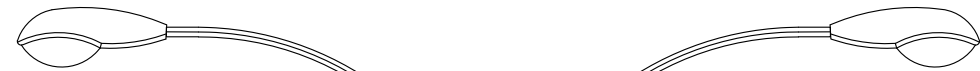
ENLARGED PLAN

SHEET NUMBER

A3

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TOP OF EXISTING LIGHT POLE  
ELEV. ±30'-0" AGL



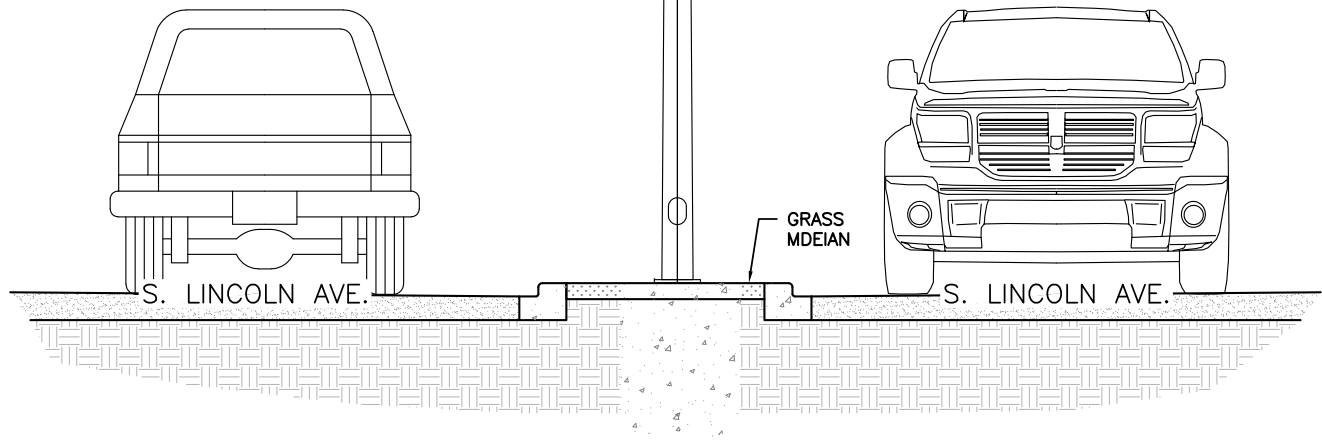
EXISTING LIGHT ARM (TYP.)

EXISTING LIGHT POLE

← STREET SIDE

STREET SIDE →

GRADE (REF)  
ELEV.: 0'-0" AGL



S. LINCOLN AVE.

S. LINCOLN AVE.

GRASS  
MDEIAN



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CIVIL SEAL

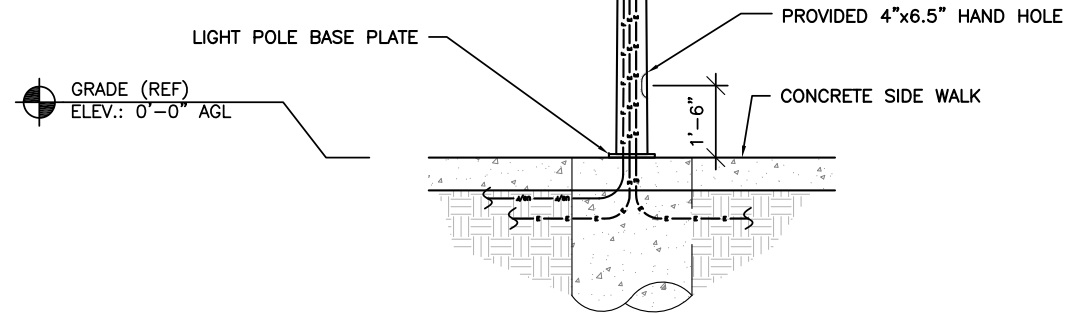
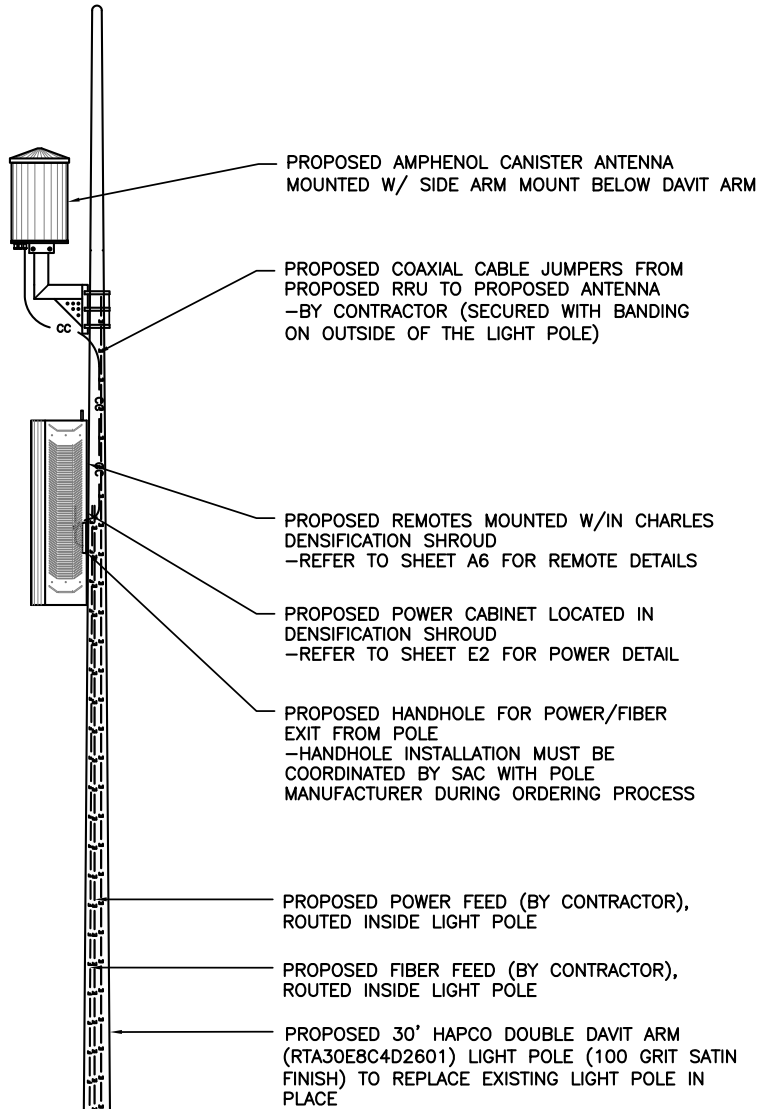
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SHEET TITLE  
**EXISTING  
LIGHT POLE  
ELEVATION**

SHEET NUMBER  
**A4**

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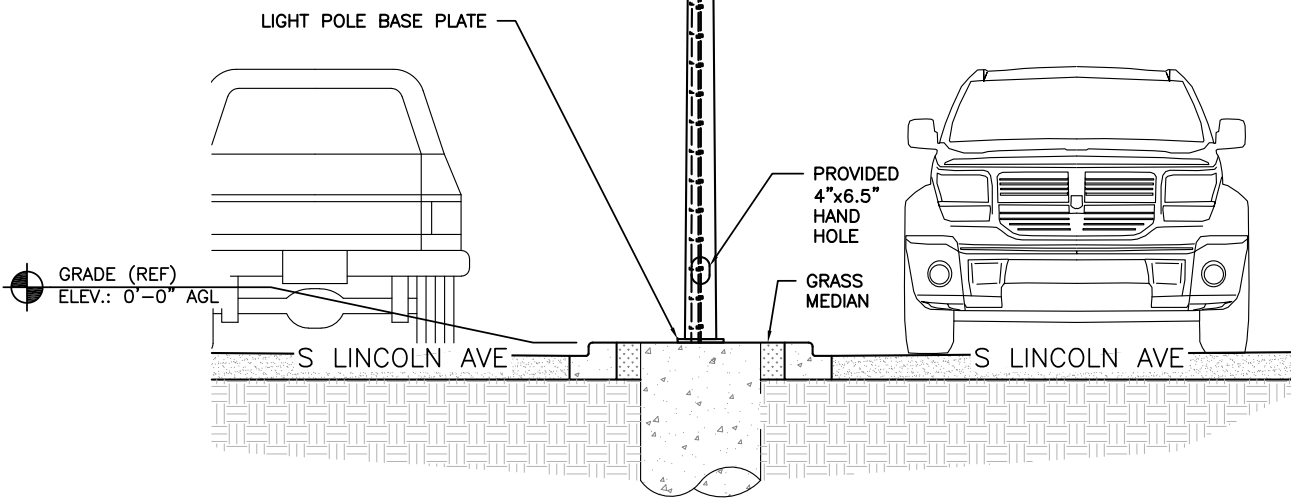
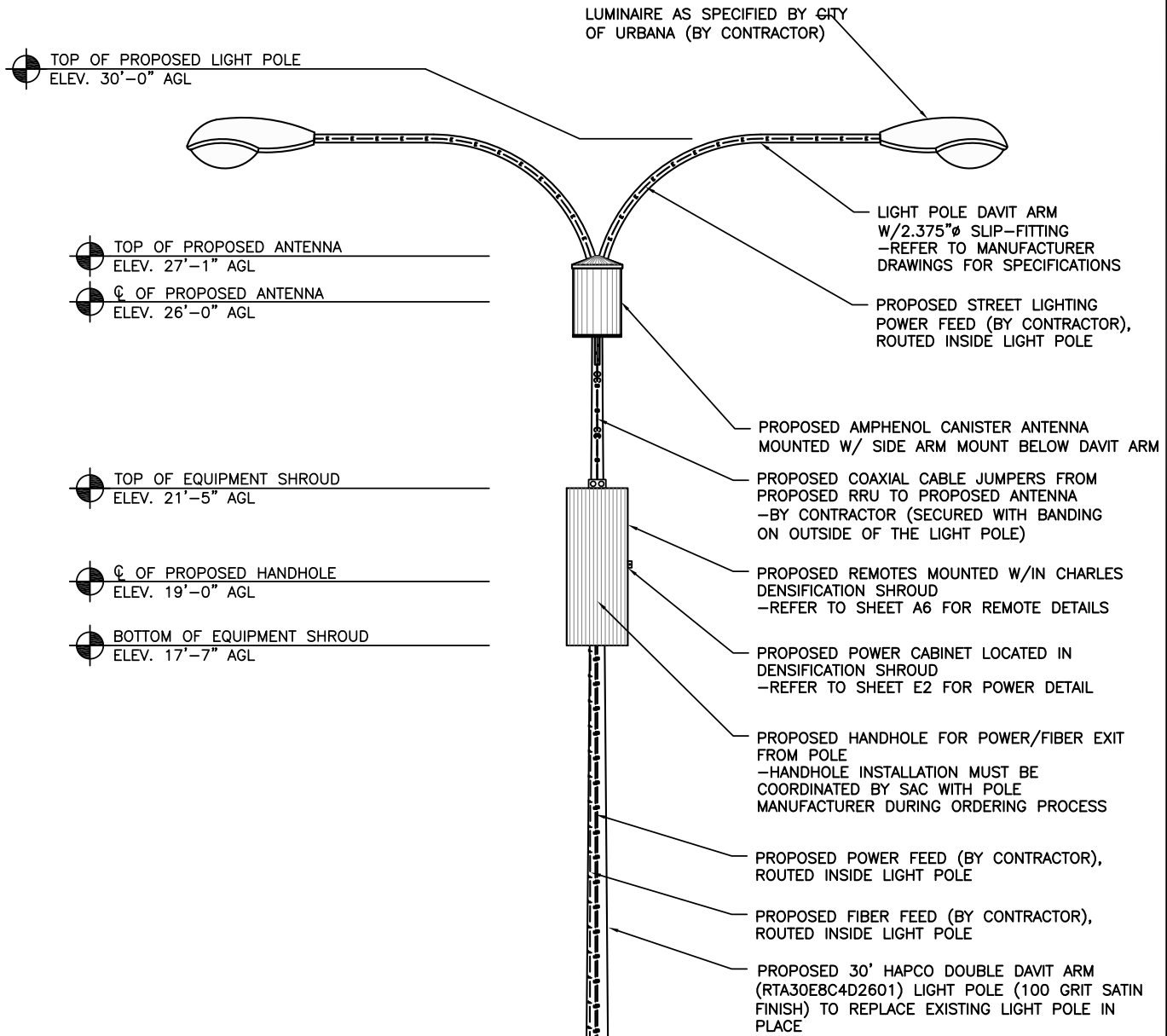
- TOP OF PROPOSED LIGHT POLE  
ELEV. 30'-0" AGL
- TOP OF PROPOSED ANTENNA  
ELEV. 27'-1" AGL
- CL OF PROPOSED ANTENNA  
ELEV. 26'-0" AGL
- TOP OF EQUIPMENT SHROUD  
ELEV. 21'-5" AGL
- CL OF PROPOSED HANDHOLE  
ELEV. 19'-0" AGL
- BOTTOM OF EQUIPMENT SHROUD  
ELEV. 17'-7" AGL



PROPOSED LIGHT POLE FRONT ELEVATION

SCALE: 1/4" = 1'-0" (24x36)  
 (OR) 1/8" = 1'-0" (11x17)

1



PROPOSED LIGHT POLE SIDE ELEVATION

SCALE: 1/4" = 1'-0" (24x36)  
 (OR) 1/8" = 1'-0" (11x17)

2



REVISIONS			
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CIVIL SEAL

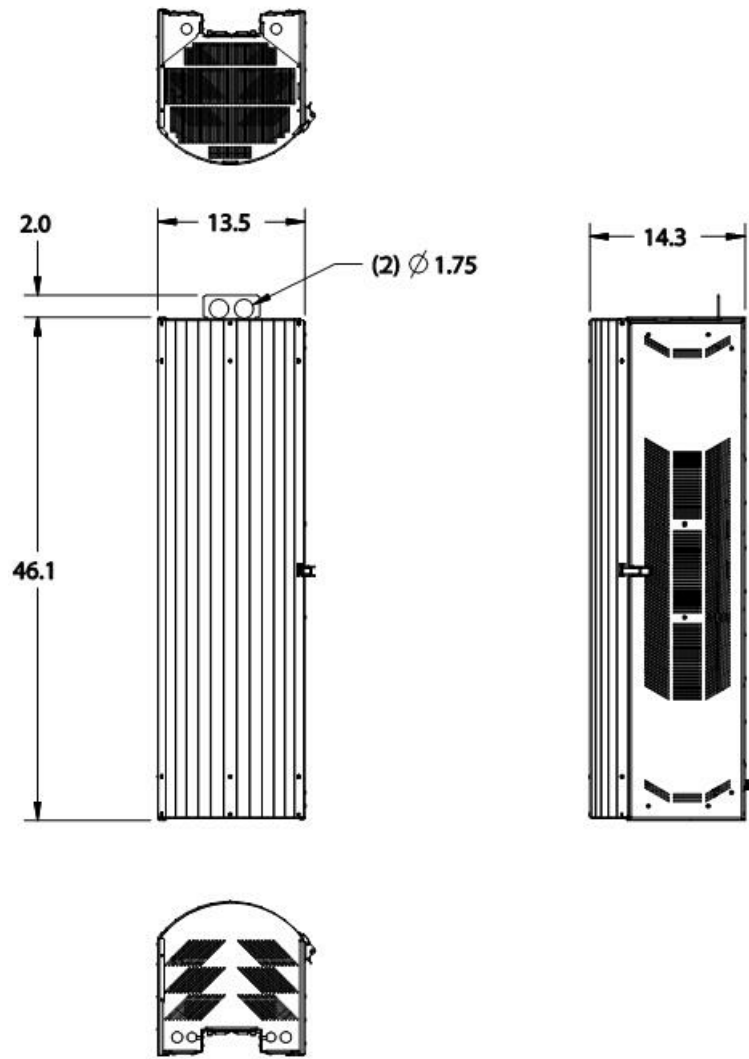
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SHEET TITLE  
**PROPOSED LIGHT POLE ELEVATIONS**

SHEET NUMBER  
**A5**



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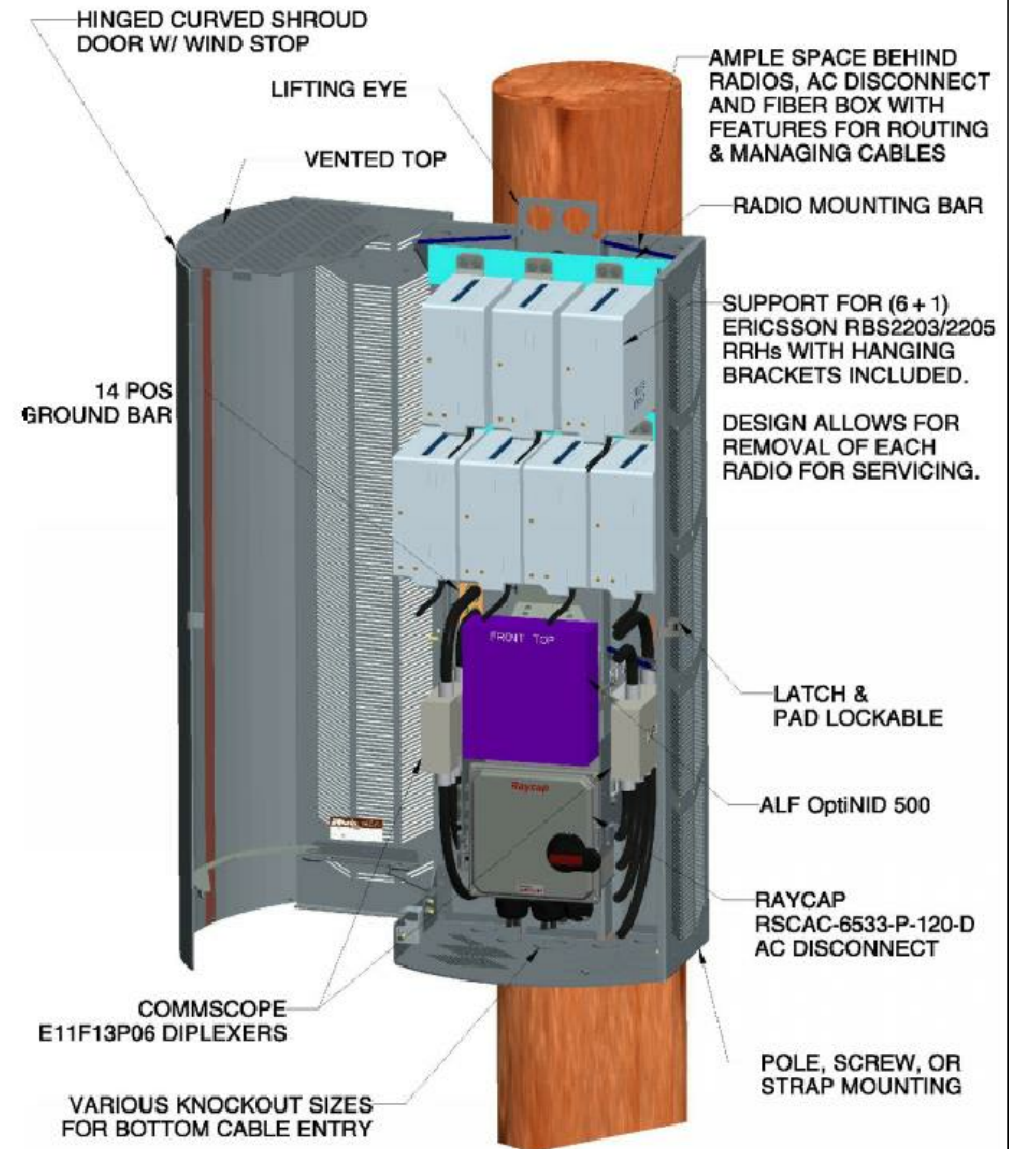
46.1" TALL EQUIPMENT SHROUD DETAIL

1

DETAIL NOT USED

2

EQUIPMENT SHROUD LAYOUT



SCALE: NTS

3



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SHEET TITLE  
**EQUIPMENT SHROUD DETAILS**

SHEET NUMBER  
**A6**

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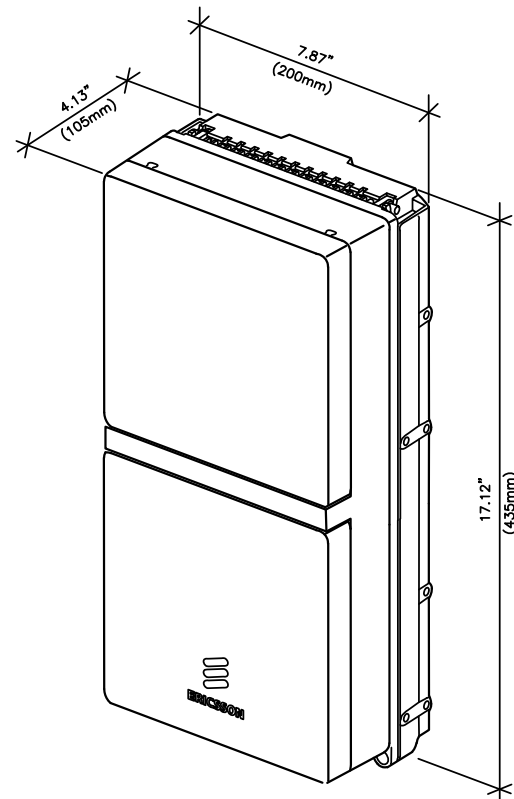
MANUFACTURER: ERICSSON  
 MODEL: RADIO 2205

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 17.12 IN (435mm)  
 WIDTH: 7.87 IN (200mm)  
 DEPTH: 4.13 IN (105mm)  
 WEIGHT: 21 LBS (9.5kg)

**INTERFACE SPECIFICATIONS:**  
 ANTENNA PORTS: TBD  
 CPRI: TBD  
 OPTICAL INDICATORS: TBD  
 EXTERNAL ALARMS: TBD  
 FIELD GROUND: TBD

**ELECTRICAL SPECIFICATIONS:**  
 POWER SUPPLY: TBD

**ENVIRONMENT SPECIFICATIONS:**  
 NORMAL OPERATING TEMP.: TBD  
 RELATIVE HUMIDITY: TBD  
 ENVIRONMENT: TBD



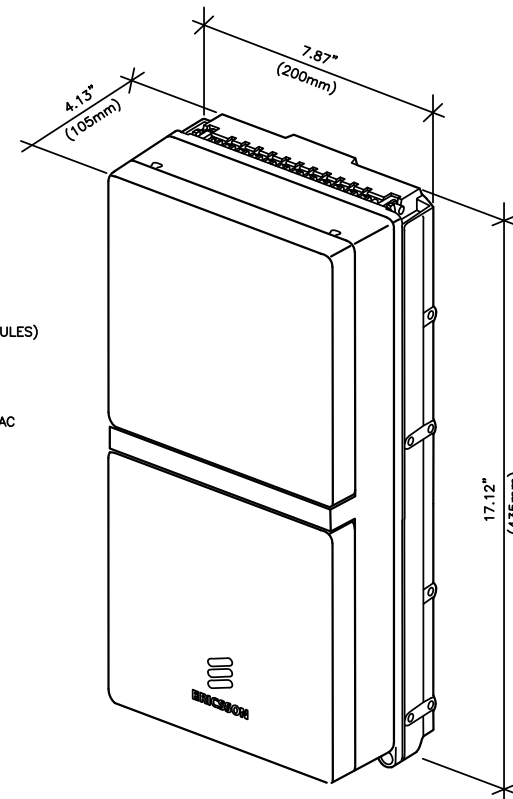
MANUFACTURER: ERICSSON  
 MODEL: RADIO 2203

**MECHANICAL SPECIFICATIONS:**  
 HEIGHT: 17.12 IN (435mm)  
 WIDTH: 7.87 IN (200mm)  
 DEPTH: 4.13 IN (105mm)  
 WEIGHT: 21 LBS (9.5kg)

**INTERFACE SPECIFICATIONS:**  
 ANTENNA PORTS: 2x4.3-10 (f)  
 CPRI: 2x2.5/5/10 Gbps (EXCHANGEABLE SFP MODULES)  
 OPTICAL INDICATORS: 6  
 EXTERNAL ALARMS: 2  
 FIELD GROUND: 1

**ELECTRICAL SPECIFICATIONS:**  
 POWER SUPPLY: -48 VDC OR 100-250 VAC

**ENVIRONMENT SPECIFICATIONS:**  
 NORMAL OPERATING TEMP.: -40°C TO +55°C (COLD START AT -40°C)  
 RELATIVE HUMIDITY: 5-100%  
 ENVIRONMENT: OUTDOOR CLASS W/IP65



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RRU 2205 DETAIL

SCALE  
N.T.S. 1

RRU 2203 DETAIL

SCALE  
N.T.S. 2

DETAIL NOT USED

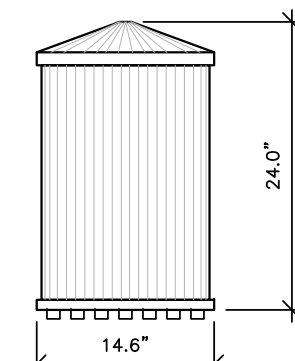
SCALE  
N.T.S. 3

ANTENNA DETAIL

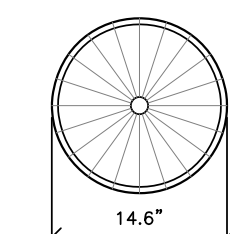
SCALE: NTS 4



IMAGE



SIDE VIEW



TOP VIEW

AMPHENOL MULTI BAND CANISTER ANTENNA  
 MODEL: 2C2U3MT360X06Fxyso  
 COLOR: GREY

MECHANICAL CHARACTERISTICS	
- ANTENNA DIMENSIONS (HEIGHT X DIAMETER) :	24.0"x14.6"
- WEIGHT W/OUT MOUNTING BRACKET KIT:	TBD LBS
- SURVIVAL WIND SPEED:	150 MPH
- WIND AREA:	2.4 FT <sup>2</sup>
- WIND LOAD (100 MPH):	43 LBF

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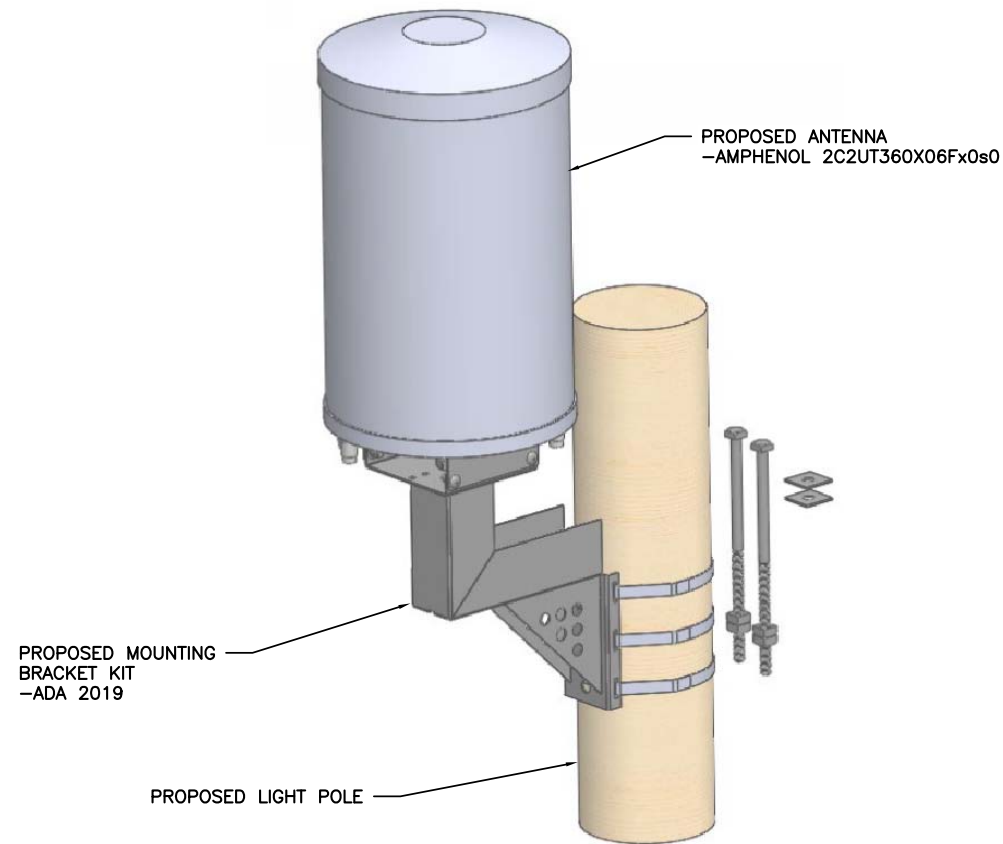
REFERENCE ONLY

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 184230  
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 CHAMPAIGN, IL 61801

SHEET TITLE  
**EQUIPMENT  
 DETAILS**

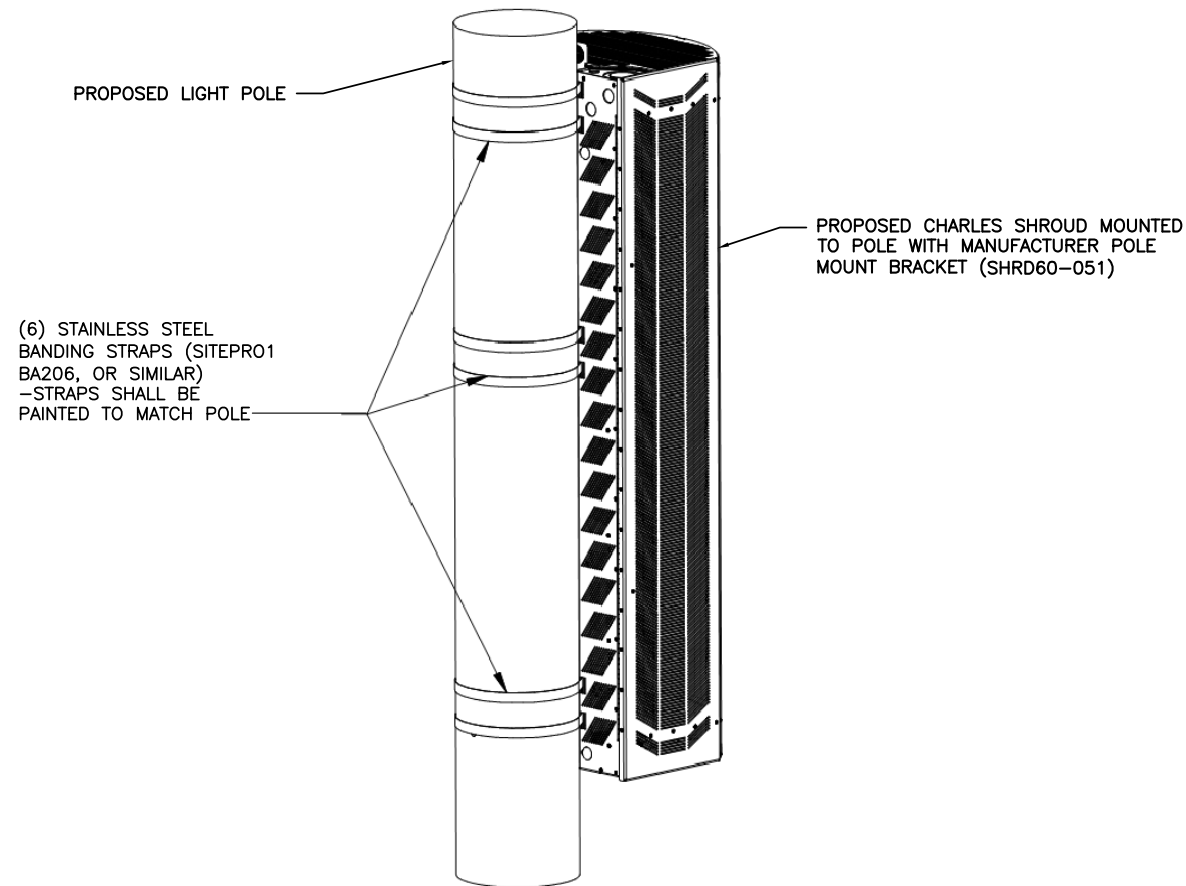
SHEET NUMBER  
**A7**

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ANTENNA MOUNTING DETAIL

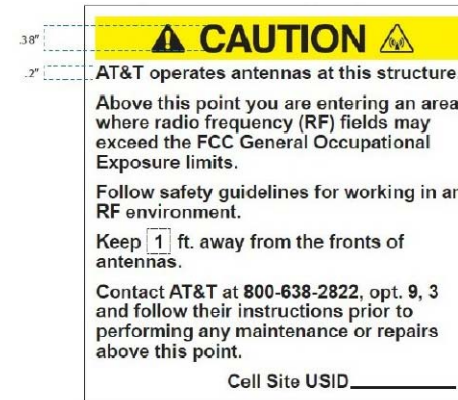
SCALE  
N.T.S. 1



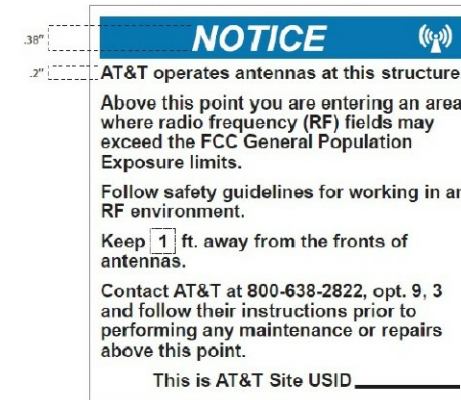
SHROUD MOUNTING DETAIL

SCALE  
N.T.S. 2

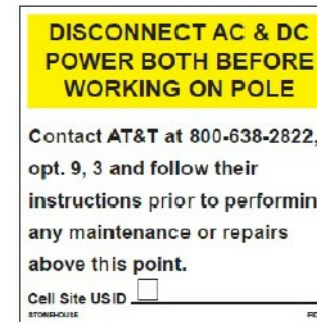
EXAMPLE CRAN RF CAUTION SIGN



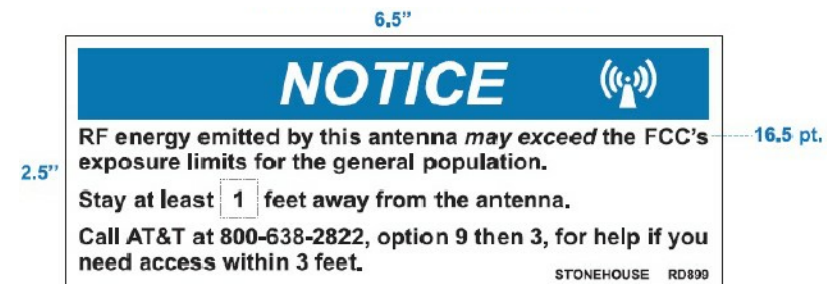
EXAMPLE CRAN RF NOTICE SIGN



EXAMPLE CRAN POLE POWER DISCONNECT SIGN



EXAMPLE STONEHOUSE RD899 RF NOTICE SIGN



CRAN Pole Power Disconnect, RF Notice, and Caution signs shall be ordered through Stonehouse Signs. Three versions are available for each of the signs shown in Figures 16, 17, and 18: .055 Polyethylene - Reflective, .025 Aluminum - Reflective, and Peel Back Label - Reflective. All versions are 6"x6" with font designed to be visible from 2-3 feet away when approached from below to provide warning about ascending into the high RF exposure areas. The RF Caution sign shown in Figure 19 is designed to be visible from 3 feet away and is available in the reflective peel back label version only. It is designed to fit on most of the CRAN/Small Cell antenna types currently deployed. It may also be placed on antenna shrouds as shown in Figures 11 and 12.

SIGNAGE NOTE:  
SIGNAGE SHALL BE INSTALLED PER AT&T DIRECTION

AT&T SIGNAGE DETAIL

SCALE: NTS

3



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CIVIL SEAL

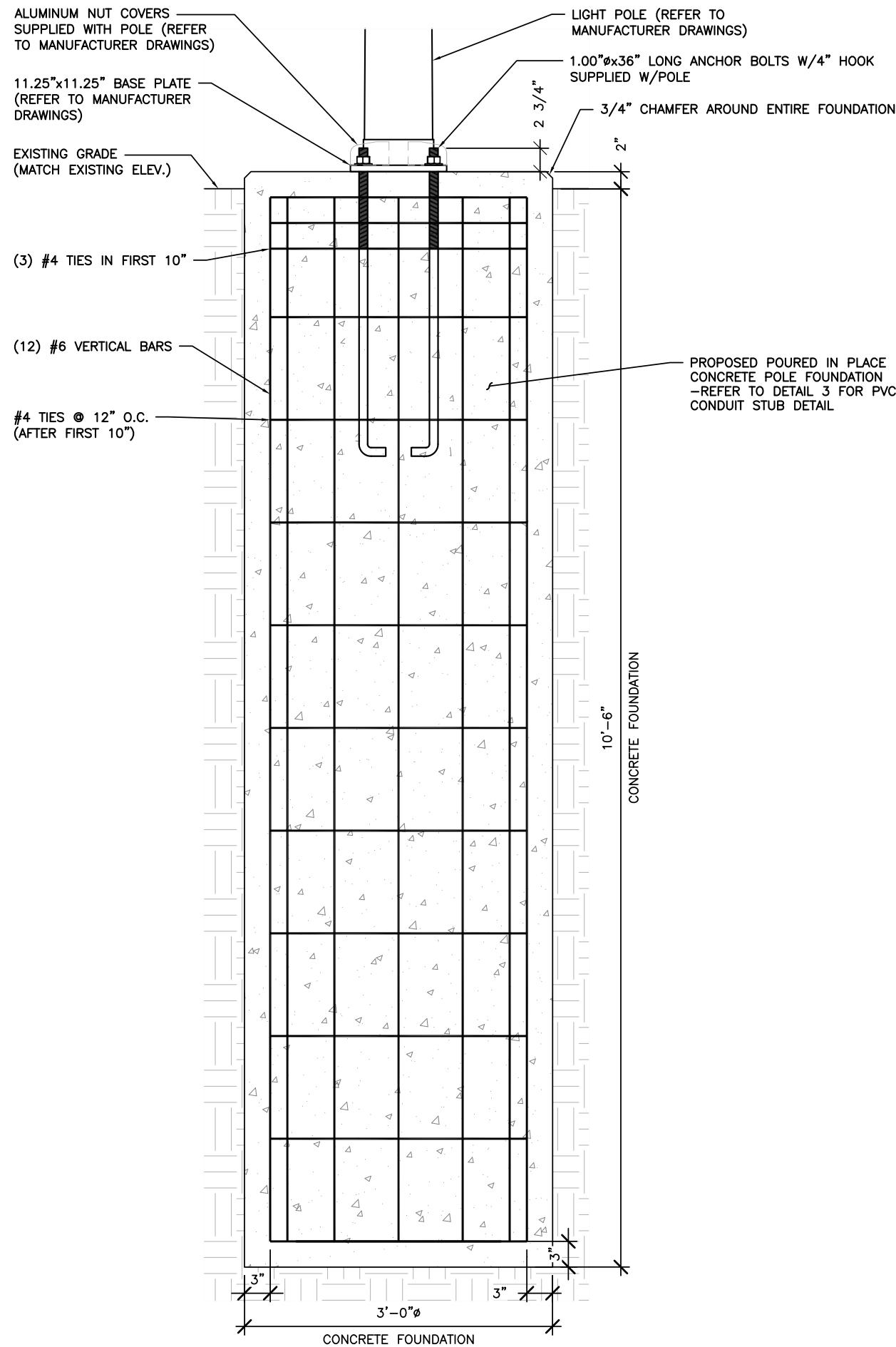
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SHEET TITLE  
**MOUNTING DETAILS**

SHEET NUMBER  
**A8**



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**STRUCTURAL NOTES:**

1. STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING SPECIFICATIONS:

SLUMP 4" (±1")  
 AIR ENTRAINMENT: 6% (±1%)  
 MIN. COMPRESSIVE STRENGTH (F'c): 4,500 PSI @ 28 DAYS  
 CONCRETE COVER: 3" ALL SIDES

CONCRETE SHALL BE TESTED BY A REPUTABLE INDEPENDENT THIRD PARTY TESTING AGENCY IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318. FIVE (5) CONCRETE CYLINDERS SHALL BE CAST IN ACCORDANCE WITH LATEST WISCONSIN ACCEPTED EDITION OF ACI-318 AND BE LABORATORY CURED. THE AVERAGE OF THREE (3) CONCRETE CYLINDERS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'c) OF 4,500 PSI AT 28 DAYS. THE TESTING RESULTS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER AND AT&T REPRESENTATIVE.

ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI\*96, "STANDARD SPECIFICATION FOR STRUCTURAL CONCRETE" AND ACI 305, 306 AND 307 UNLESS NOTED OTHERWISE.

ALL DETAILING, FABRICATION AND PLACING OF CONCRETE SHALL CONFORM TO ACI 318-11.

2. STRUCTURAL STEEL SHALL MEET THE FOLLOWING SPECIFICATIONS:

MATERIALS: REINFORCING ANCHOR BOLTS ASTM 615, GRADE 60  
 ASTM F1554, GRADE 55

REINFORCING COVER: TOP 2"  
 BOTTOM 3"

3. DESIGN PARAMETERS:

STRUCTURAL ANALYSIS OF THE POLE AND FOUNDATION WAS COMPLETED BY OTHERS. COORDINATE WITH SAC WIRELESS FOR A COPY OF POLE STRUCTURAL ANALYSIS.

DESIGN CODES: 2015 INTERNATIONAL BUILDING BUILDING CODE  
 TIA-222-G  
 ASCE 7-05  
 CHAMPAIGN COUNTY, IL

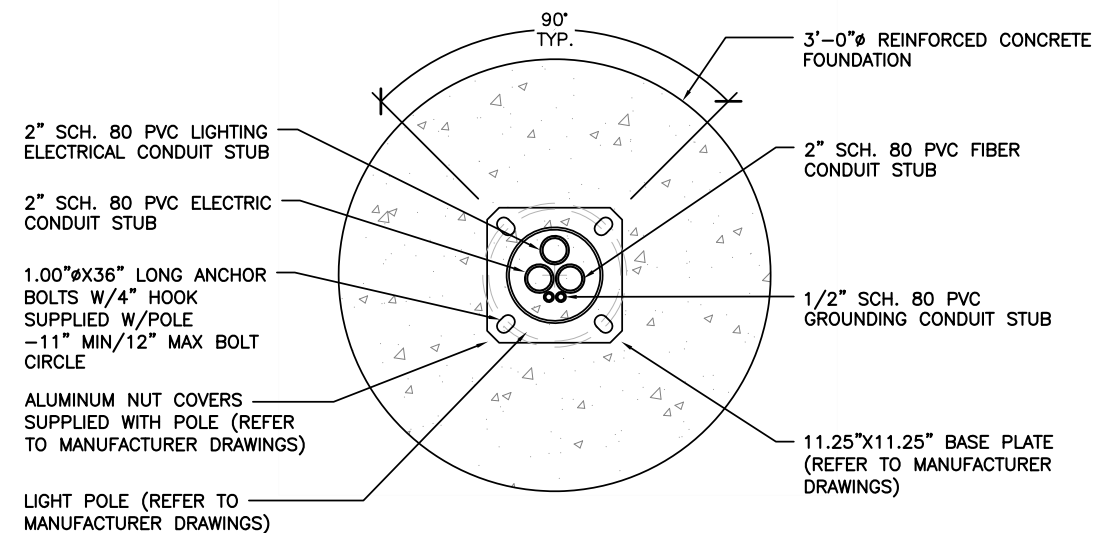
POLE LOCATION:  
 BASIC WIND SPEED: 130 MPH  
 GUST FACTOR: 1.14  
 STRUCTURE CLASS: CLASS II  
 EXPOSURE CLASS: B  
 TOPOGRAPHIC CATEGORY: 1

PRESUMPTIVE SOIL PARAMETERS: FOUNDATION IS BASED ON AN ALLOWABLE LATERAL BEARING PRESSURE OF AT LEAST 200 PSF/FT.

4. ALL CONTRACTORS SHALL EXERCISE GREAT CARE DURING EXCAVATION. CONTRACTOR SHALL PREDETERMINE UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY IF DEVIATION FROM PLANS EXIST. CONTRACTOR SHALL CONTACT 811 48 HR. PRIOR TO DIGGING, GRADING, OR DRILLING.

**FOUNDATION NOTES**

SCALE	2
N.T.S.	



FOUNDATION DETAIL

SCALE: NTS

1

FOUNDATION DETAIL

SCALE: NTS

3



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
A	10/31/18	ISSUED FOR REVIEW	SEK
B	03/12/19	REVISED PER COMM.	MRL

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STRUCTURAL SEAL

LTE 1C&2C PICO CELL BUILD  
 14805853  
 CRAN\_RCHI\_CHU01\_026  
 184230  
 784 S LINCOLN AVE  
 CHAMPAIGN, IL 61801

SHEET TITLE  
**POLE FOUNDATION DETAILS**

SHEET NUMBER  
**S1**



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AC POWER PANEL (MILBANK U5871-XL-100-5T9-AMS)											
240 VOLTS, 1-PHASE, 3-WIRE, 100A											
MAIN RATING (A) :					100		SYSTEM VOLTAGE (V) :				
					240						
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
DISTRIBUTION PANEL	2112	c	30	1	2112		2	--	c	0	---
	0	c	--	3		0	4	--	c	0	---
	0	c	--	5	0		6	--	c	0	---
	0	c	--	7		0	8	--	c	0	---
PHASE TOTALS (VA):					2112		0				
CURRENT PER PHASE (A):					22		0 Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					2112		Legend: c = continuous, nc = non-continuous				
PANEL CAPACITY (kVA):					24.0		CONNECTED LOAD (kVA): 2.1				
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					2.6						
PANEL LOADING (TOTAL) (kVA):					2.6						
SPARE CAPACITY (kVA):					21.4						

ELECTRICAL MAIN & LOAD CENTER PANEL SCHEDULE

SCALE  
N.T.S.

1

AC METER SOCKET W/MAIN & LOAD CENTER DETAIL

SCALE  
N.T.S.

2

AC POWER PANEL (RAYCAP RSCAC-6533-P-120-D)											
120 VOLTS, 1-PHASE, 2-WIRE, 30A											
MAIN RATING (A) :					30		SYSTEM VOLTAGE (V) :				
					120						
DESCRIPTION	VA	c/nc	BKR	POSN	L1	L2	POSN	BKR	c/nc	VA	DESCRIPTION
RRUS-2203	704	c	7	1	1408		2	7	c	704	RRUS-2205
RRUS-2203	704	c	7	3		704	4	7	c	0	---
PHASE TOTALS (VA):					1408		704				
CURRENT PER PHASE (A):					15		7 Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					2112		Legend: c = continuous, nc = non-continuous				
PANEL CAPACITY (kVA):					3.6		CONNECTED LOAD (kVA): 2.1				
PANEL LOADING (100% non-cont. load) (kVA):					0.0						
PANEL LOADING (125% continuous load) (kVA):					2.6						
PANEL LOADING (TOTAL) (kVA):					2.6						
SPARE CAPACITY (kVA):					1.0						

ELECTRICAL PANEL SCHEDULE

SCALE  
N.T.S.

3

AC DISTRIBUTION PANEL DETAIL

SCALE  
N.T.S.

4

MANUFACTURER: MILBANK  
MODEL: CP3B51C1PAAOM01

MECHANICAL SPECIFICATIONS:  
HEIGHT: 48 IN  
WIDTH: 16 IN  
DEPTH: 17 IN

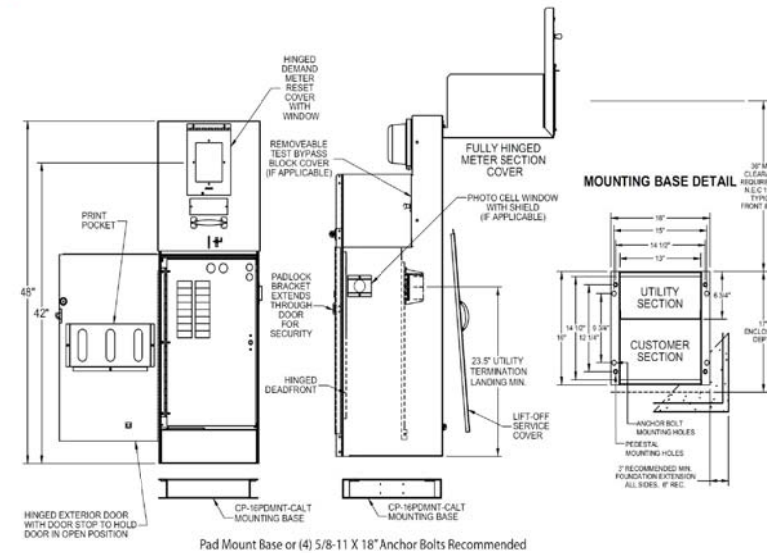
ELECTRICAL SPECIFICATIONS:  
AMPERAGE RATING: 200 A  
OPERATING VOLTAGE: 240 V  
ELECTRICAL PHASE: 1 PH  
MAIN BREAKER SIZE: 200 A  
QTY OF BRANCH CIRCUITS: 20  
LINE SIDE WIRE RANGE: 6 AWG - 350 kcmil

ENVIRONMENT SPECIFICATIONS:  
UL LISTED: YES  
NEMA RATING: 3R

ADDITIONAL SPECIFICATIONS:  
ON AMEREN ENERGY APPROVED LIST (SECTION 1100 OF ELECTRIC SERVICE MANUAL, DATED JANUARY 18, 2018)



"A" Style 16" Metered Commercial Pedestal



SPECIAL NOTE:  
METER PEDESTAL SHALL BE PAINTED TO MATCH AT&T EQUIPMENT IN RIGHT OF WAY. CONTRACTOR SHALL COORDINATE W/AT&T FOR COLOR AND PROVIDE DOCUMENTATION OF SUCH TO CITY OF URBANA FOR APPROVAL PRIOR TO CONSTRUCTION.

MANUFACTURER: RAYCAP  
MODEL: RSCAC-6533-P-120-D

MECHANICAL SPECIFICATIONS:  
HEIGHT: 10.45 IN (265.43 mm)  
WIDTH: 10.28 IN (261.11 mm)  
DEPTH: 7.46 IN (189.48 mm)  
WEIGHT: 1.25 LBS (1.02 kg)

ELECTRICAL SPECIFICATIONS:  
AMPERAGE: 30A  
OPERATING VOLTAGE: 120V  
QTY OF PROTECTED CIRCUITS: 4  
CONNECTION TERMINALS: COMPRESSION LUGS (6 AWG-14 AWG)  
TERMINAL BLOCK (10 AWG-26 AWG)

ENVIRONMENT SPECIFICATIONS:  
NORMAL OPERATING TEMP.: -40°C TO +80°C  
ENVIRONMENT: OUTDOOR CLASS NEMA 4X  
POLYCARBONATE UL 94V-0 RATED



AC DISTRIBUTION PANEL DETAIL



REVISIONS			
REV.	DATE	DESCRIPTION	INITIALS
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ELECTRICAL SEAL

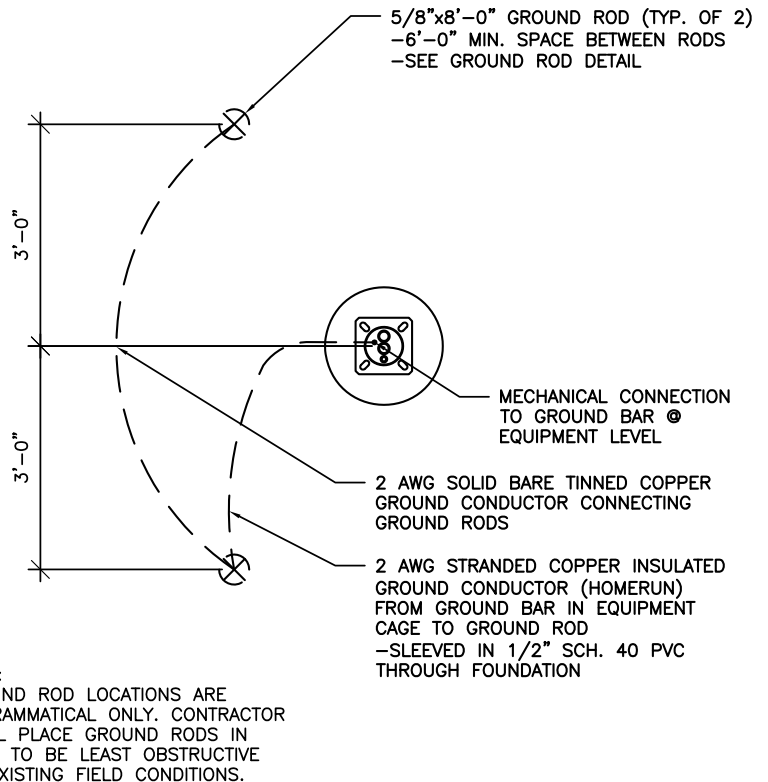
LTE 1C&2C PICO CELL BUILD  
14805853  
CRAN\_RCHI\_CHU01\_026  
184230  
784 S LINCOLN AVE  
CHAMPAIGN, IL 61801

SHEET TITLE  
PANEL SCHEDULE & ELECTRICAL DETAILS

SHEET NUMBER  
**E2**

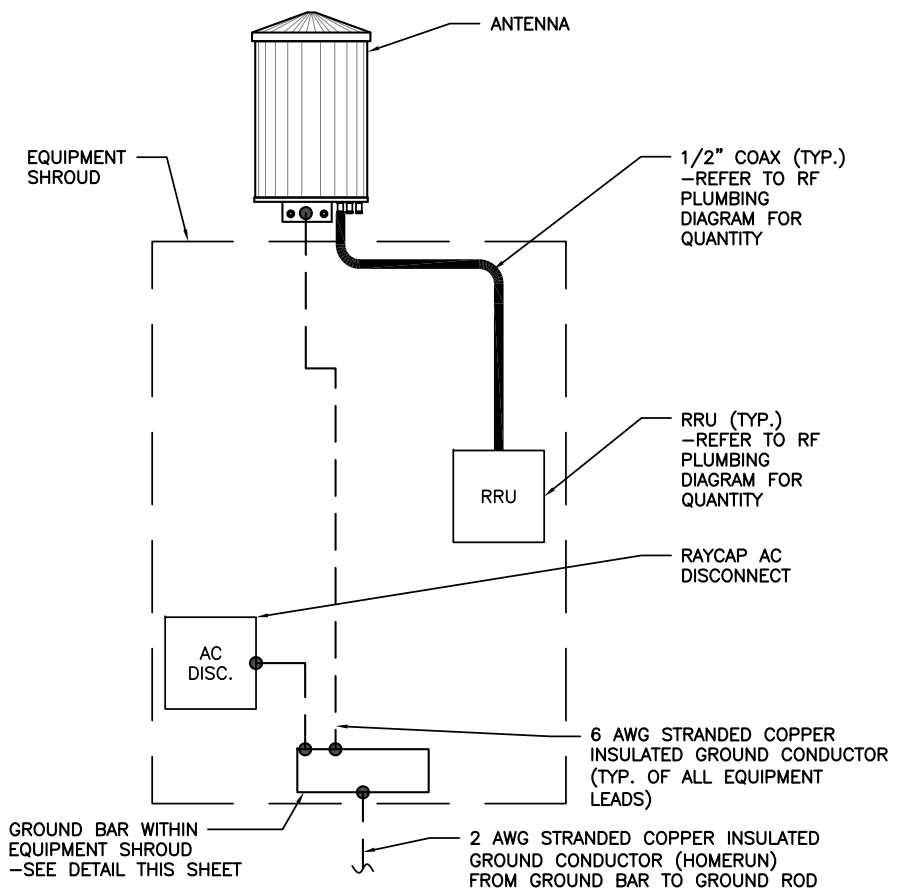


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NOTE:  
GROUND ROD LOCATIONS ARE  
DIAGRAMMATICAL ONLY. CONTRACTOR  
SHALL PLACE GROUND RODS IN  
FIELD TO BE LEAST OBSTRUCTIVE  
TO EXISTING FIELD CONDITIONS.

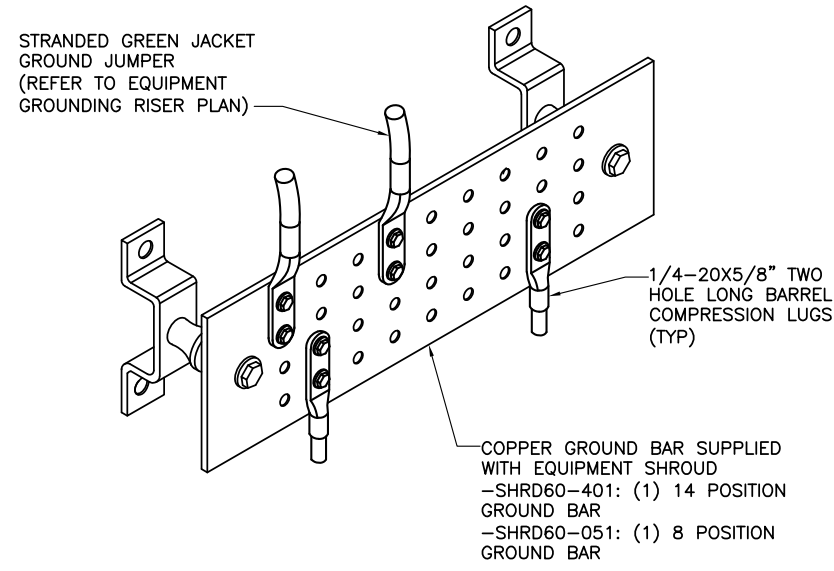
POLE GROUNDING PLAN DETAIL SCALE N.T.S. 1



EQUIPMENT GROUNDING RISER DETAIL SCALE N.T.S. 2

CADWELD CONNECTIONS OR APPROVED EQUAL		BURNDY CONNECTIONS OR APPROVED EQUAL
PARALLEL HORIZONTAL CONDUCTORS PARALLEL THROUGH CONNECTION OF HORIZONTAL CABLES TYPE PT	HORIZONTAL STEEL SURFACE TO FLAT STEEL SURFACE OR HORIZONTAL PIPE TYPE HS	BOND JUMPER FIELD FABRICATED GREEN STRANDED INSULATED TYPE 2-YA-2
THROUGH CABLE TO GROUND ROD THROUGH CABLE TO TOP OF GROUND ROD TYPE GT	VERTICAL STEEL SURFACE CABLE DOWN AT 45° TO VERTICAL STEEL SURFACE INCLUDING PIPE TYPE VS	COPPER LUGS TWO HOLE - LONG BARREL LENGTH TYPE YA-2
VERTICAL PIPE CABLE DOWN AT 45° TO RANGE OF VERTICAL PIPES TYPE VS	<b>CONNECTION TYPE KEY</b> MECHANICAL CONNECTION CADWELD CONNECTION	

GROUNDING CONNECTIONS DETAIL SCALE N.T.S. 3

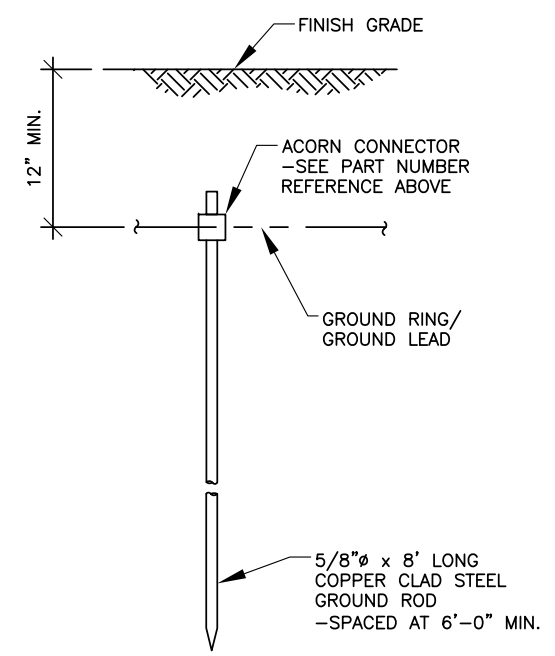


NOTES:  
1. CONTRACTOR SHALL UTILIZE LUGGED HOLES PROVIDED. NO DRILLING OF THE BAR WILL BE PERMITTED.  
2. ALL HARDWARE SHALL BE 1/4-20 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.  
3. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

GROUND BAR DETAIL SCALE N.T.S. 4

DETAIL NOT USED SCALE N.T.S. 5

ACORN CONNECTOR		
ELEC. MOTION CO. PART #	GROUND CONDUCTOR SIZE	GROUND ROD SIZE
EM2DB	#12-1/0 AWG	5/8"Ø



GROUND ROD DETAIL SCALE N.T.S. 6



REVISIONS			
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ELECTRICAL SEAL

LTE 1C&2C PICO CELL BUILD  
14805853  
CRAN\_RCHI\_CHU01\_026  
184230  
784 S LINCOLN AVE  
CHAMPAIGN, IL 61801

SHEET TITLE  
**GROUNDING  
DETAILS**

SHEET NUMBER  
**E3**

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Diagram - 1 Diagram File Name - Pico 02.vsd  
 Atoll Site Name - Champaign CRAN HUB- University Location Name - CRAN\_CHAMPAIGN\_U NIVERSITY\_0001 Market - CENTRAL ILLINOIS Market Cluster - ILLINOIS/WISCONSIN  
 Comments:

Configuration Name	700 MHz 2T2R LTE	700 MHz 4T4R LTE	850 MHz 2T2R LTE	850 MHz 4T4R LTE	1900 MHz 2T2R LTE	1900 MHz 4T4R LTE	2100 MHz 2T2R LTE	2100 MHz 4T4R LTE	5GHz LAA LTE	3.5 GHz LAA LTE	Sector Count	Carrier Count	Antenna LAA location
Pico #02	NA	NA	NA	NA	NA	X	NA	NA	X	NA	1	2	14 Ports Antenna

Amphenol Pseudo-Omni – 14 ports Antenna  
 2C2U3MT360X06Fxs0

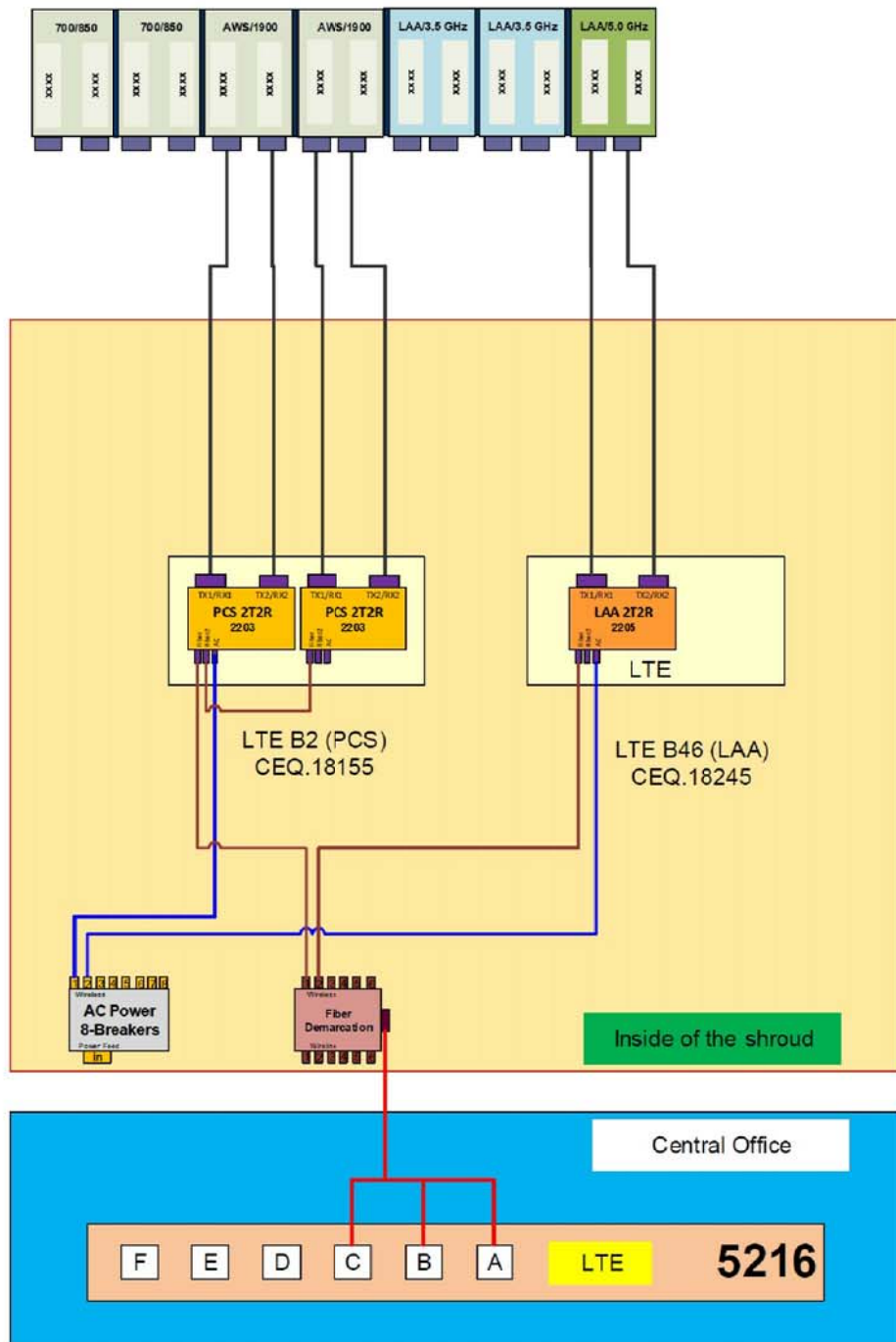


**Important Note:**  
 For detailed radio to antenna wiring refer to the latest 4T4R Antenna/Radio Port Connection Field Notice (RF-HW-2016-234) and the 4T Wiring Playbook

- Two Radios**
- B2 (PCS) – CEQ.18155
  - B66A (AWS) – CEQ.18167
- One Radio/One Dummy Radio**
- B46 (LAA) – CEQ.18245



- HXWXD – 17.12" X 7.87" X 4.13"
- WEIGHT – 21 LBS.
- POWER CONSUMPTION – WATTS MAX
- MINIMUM AC FUSE RATING – 8 AMP
- MAX HEAT DISSIPATION – 20 WATTS



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REFERENCE ONLY

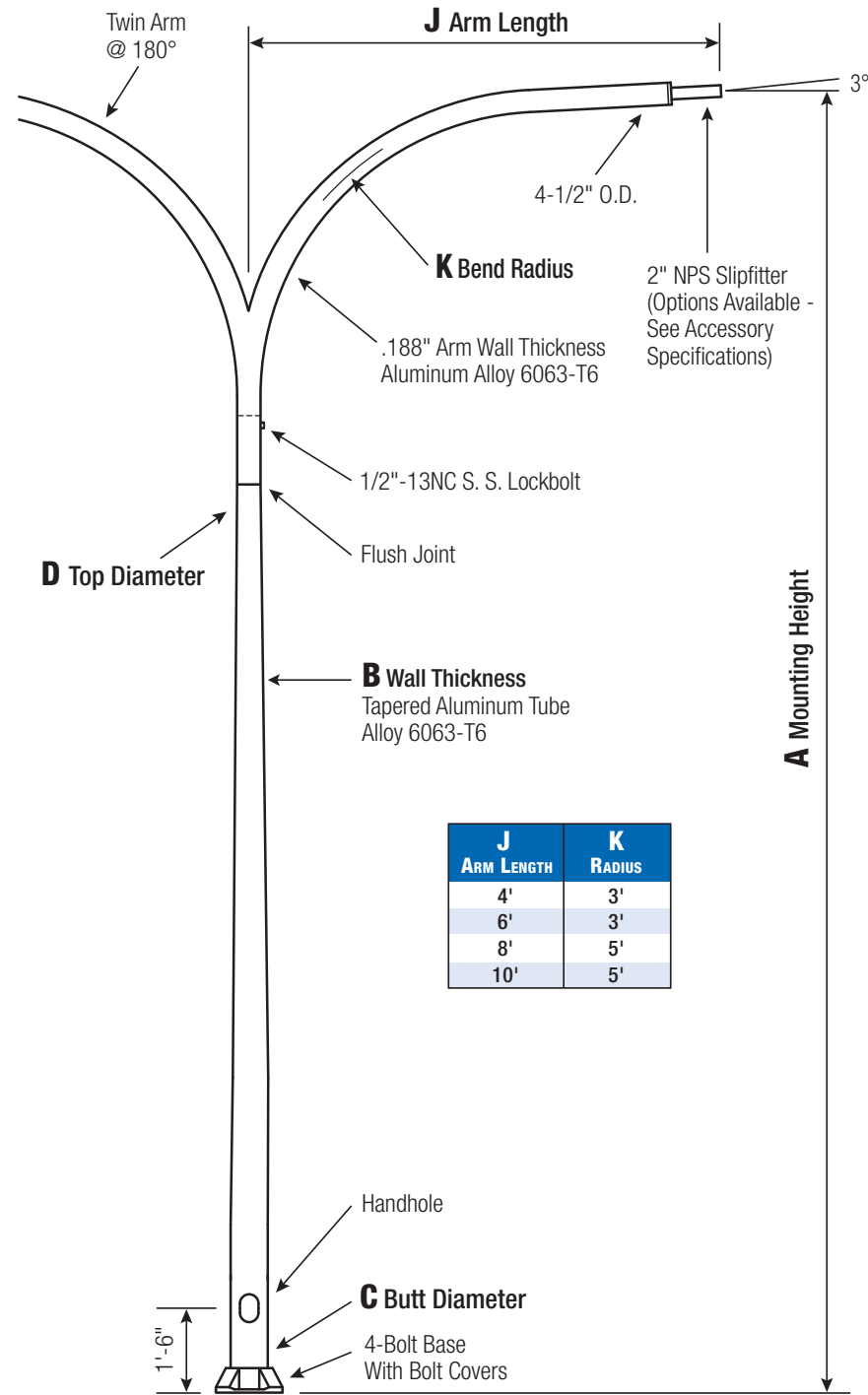
LTE 1C&2C PICO CELL BUILD 14805853  
 CRAN\_RCHI\_CHU01\_026 184230  
 784 S LINCOLN AVE CHAMPAIGN, IL 61801

SHEET TITLE  
 RF PLUMBING DIAGRAM

SHEET NUMBER  
**RF1**

# RTA

## Round Tapered Aluminum Pole with Arms Double Davit — 4-Bolt Base



J ARM LENGTH	K RADIUS
4'	3'
6'	3'
8'	5'
10'	5'

Satin Aluminum or Powder Coated Finish per Customer Specification.

C BUTT DIA.	D TOP DIA.	F BOLT CIR. DIA.	G BASE SQ.	H BOLT PROJ.	I BOLT SIZE
6	4.5	9 - 10	9.75	2.75	1 x 36 x 4
7	4.5	10 - 11	10.5	2.75	1 x 36 x 4
8	4.5	11 - 12	11.25	2.75	1 x 36 x 4
10	6	14 - 15	14	3.25	1 x 48 x 4

Dimensions in Inches

### Pole

Shaft and arms will be constructed of seamless extruded tube of 6063 Aluminum Alloy per the requirements of ASTM B221. The shaft assembly shall be full-length heat treated after base weld to produce a T6 temper.

### Base Style

4-Bolt Cast Aluminum Base Flange of Alloy 356-T6 with Aluminum Bolt Covers (Alloy 356-F) and Stainless Steel Hex Head Attaching Screws.



### Handhole

**6" Butt Diameter** - Reinforced, 3" x 5" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. A Grounding Provision incorporating a 3/8" diameter hole is provided opposite the Handhole.

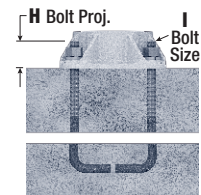
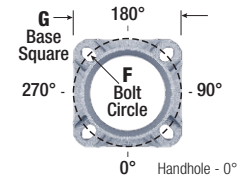
**7"+ Butt Diameters** - Reinforced, 4" x 6" curved Cast Aluminum Frame (Alloy 356-T6) with Aluminum Door and two (2) SS Hex Head Screws. Reinforced Frame will contain a tapped 3/8"-16NC Grounding Provision.



### Anchorage

Anchorage Kit will include four (4) L-shaped Steel Anchor Bolts conforming to AASHTO M314-90 Grade 55. Ten inches (10") of threaded end will be galvanized per ASTM A153.

Kits will contain four (4) Hex Nuts, four (4) Lock Washers, and four (4) Flat Washers (all components Galvanized Steel). A bolt circle template will be provided.



### Vibration Damper

When determined necessary by Hapco, a Vibration Damper will be factory-installed inside the pole shaft. Customer specification of the damper is available.



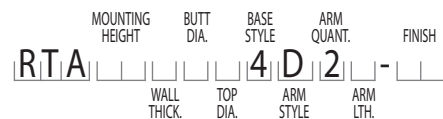
**WARNING:** Do not install light pole without luminaire.



A Mtg. Hgt.	B WALL THICKNESS	C BUTT DIAMETER	J ARM LENGTH	LUM. WEIGHT	MAXIMUM EPA PER ARM					OLD CAT. NUMBER	CATALOG NUMBER
					90	100	110	120	130		
20	0.156"	6	4'	35	5.8	4.2	3.7	2.7	2.0	42-031	RTA20C6B4D24-**-
20	0.156"	6	6'	35	5.4	3.7	3.2	2.2	1.5	42-032	RTA20C6B4D26-**-
20	0.156"	6	8'	35	4.7	3.1	2.6	1.6	0.9	42-033	RTA20C6B4D28-**-
20	0.188"	6	4'	35	7.5	5.6	5.0	3.8	2.9	42-001	RTA20D6B4D24-**-
20	0.188"	6	6'	35	7.0	5.0	4.5	3.3	2.4	42-002	RTA20D6B4D26-**-
20	0.188"	6	8'	35	6.4	4.4	3.9	2.7	1.8	42-003	RTA20D6B4D28-**-
20	0.156"	7	4'	35	9.2	7.0	6.3	4.9	3.8	42-025	RTA20C7B4D24-**-
20	0.156"	7	6'	35	8.8	6.4	5.8	4.4	3.3	42-026	RTA20C7B4D26-**-
20	0.156"	7	8'	35	8.2	5.8	5.2	3.8	2.7	42-027	RTA20C7B4D28-**-
20	0.188"	7	4'	35	11.6	8.8	8.1	6.4	5.1	42-007	RTA20D7B4D24-**-
20	0.188"	7	6'	35	11.2	8.4	7.6	5.9	4.6	42-008	RTA20D7B4D26-**-
20	0.188"	7	8'	35	10.4	7.8	7.0	5.3	4.0	42-009	RTA20D7B4D28-**-
25	0.156"	6	4'	35	3.1	1.8	1.5	0.8	-	-	RTA25C6B4D24-**-
25	0.156"	6	6'	35	2.5	1.3	1.0	-	-	-	RTA25C6B4D26-**-
25	0.188"	6	4'	35	4.4	2.9	2.5	1.7	1.0	42-073	RTA25D6B4D24-**-
25	0.188"	6	6'	35	3.8	2.4	2.0	1.1	0.5	42-074	RTA25D6B4D26-**-
25	0.188"	6	8'	35	3.2	1.7	1.3	0.5	-	42-075	RTA25D6B4D28-**-
25	0.188"	6	10'	35	2.6	1.1	0.7	-	-	42-076	RTA25D6B4D2A-**-
25	0.156"	7	4'	35	5.6	4.0	3.5	2.5	1.7	42-103	RTA25C7B4D24-**-
25	0.156"	7	6'	35	5.2	3.4	3.0	2.0	1.2	42-104	RTA25C7B4D26-**-
25	0.156"	7	8'	35	4.5	2.8	2.3	1.3	0.6	42-105	RTA25C7B4D28-**-
25	0.156"	7	10'	35	3.9	2.2	1.7	0.7	-	42-106	RTA25C7B4D2A-**-
25	0.188"	7	4'	35	7.4	5.4	4.8	3.6	2.7	42-079	RTA25D7B4D24-**-
25	0.188"	7	6'	35	7.0	4.9	4.4	3.1	2.2	42-080	RTA25D7B4D26-**-
25	0.188"	7	8'	35	6.3	4.2	3.7	2.5	1.5	42-081	RTA25D7B4D28-**-
25	0.156"	8	6'	35	7.1	5.1	4.7	3.5	2.5	-	RTA25C8B4D26-**-
25	0.156"	8	8'	35	6.5	4.5	4.1	2.9	1.9	-	RTA25C8B4D28-**-
25	0.156"	8	10'	35	5.9	3.9	3.5	2.3	1.5	-	RTA25C8B4D2A-**-
25	0.188"	8	4'	35	11.0	8.4	7.6	6.0	4.7	42-085	RTA25D8B4D24-**-
25	0.188"	8	6'	35	10.6	7.9	7.1	5.5	4.2	42-086	RTA25D8B4D26-**-
25	0.188"	8	8'	35	9.8	7.2	6.5	4.8	3.5	42-087	RTA25D8B4D28-**-
25	0.188"	8	10'	35	9.4	6.6	5.9	4.2	2.9	42-088	RTA25D8B4D2A-**-
30	0.188"	6	4'	35	2.1	1.0	0.7	-	-	-	RTA30D6B4D24-**-
30	0.156"	7	4'	35	3.2	1.9	1.5	0.8	-	42-145	RTA30C7B4D24-**-
30	0.156"	7	6'	35	2.6	1.3	1.0	-	-	42-146	RTA30C7B4D26-**-
30	0.156"	7	8'	35	2.0	0.7	-	-	-	42-147	RTA30C7B4D28-**-
30	0.156"	8	4'	35	5.3	3.7	3.3	2.3	1.5	42-175	RTA30C8B4D24-**-
30	0.156"	8	6'	35	4.9	3.1	2.7	1.7	1.0	42-176	RTA30C8B4D26-**-
30	0.156"	8	8'	35	4.1	2.5	2.1	1.1	-	42-177	RTA30C8B4D28-**-
30	0.156"	8	10'	35	3.5	1.9	1.5	0.5	-	42-178	RTA30C8B4D2A-**-
30	0.188"	8	4'	35	7.5	5.4	4.8	3.6	2.6	42-157	RTA30D8B4D24-**-
30	0.188"	8	6'	35	7.0	4.8	4.3	3.0	2.1	42-158	RTA30D8B4D26-**-
30	0.188"	8	8'	35	6.2	4.2	3.6	2.4	1.4	42-159	RTA30D8B4D28-**-
30	0.188"	8	10'	35	5.6	3.6	3.0	1.7	0.8	42-160	RTA30D8B4D2A-**-
30	0.219"	8	4'	35	9.2	6.8	6.2	4.7	3.6	42-163	RTA30E8B4D24-**-
30	0.219"	8	6'	35	8.8	6.3	5.6	4.2	3.0	42-164	RTA30E8B4D26-**-
30	0.219"	8	8'	35	8.0	5.6	5.0	3.5	2.4	42-165	RTA30E8B4D28-**-
30	0.219"	8	10'	35	7.4	5.0	4.4	2.8	1.8	42-166	RTA30E8B4D2A-**-
30	0.250"	8	4'	35	11.0	8.2	7.5	5.8	4.6	42-169	RTA30F8B4D24-**-
30	0.250"	8	6'	35	10.6	7.8	7.0	5.3	4.0	42-170	RTA30F8B4D26-**-
30	0.250"	8	8'	35	9.8	7.0	6.3	4.6	3.4	42-171	RTA30F8B4D28-**-
30	0.250"	8	10'	35	9.2	6.4	5.6	4.0	2.7	42-172	RTA30F8B4D2A-**-
35	0.156"	8	4'	35	3.3	1.9	1.5	0.7	-	42-223	RTA35C8B4D24-**-
35	0.156"	8	6'	35	2.7	1.3	1.0	-	-	42-224	RTA35C8B4D26-**-
35	0.156"	8	8'	35	2.0	0.6	-	-	-	42-225	RTA35C8B4D28-**-
35	0.188"	8	4'	35	4.8	3.2	2.7	1.8	1.1	42-229	RTA35D8B4D24-**-
35	0.188"	8	6'	35	4.3	2.6	2.2	1.2	0.5	42-230	RTA35D8B4D26-**-
35	0.188"	8	8'	35	3.6	1.9	1.5	0.5	-	42-231	RTA35D8B4D28-**-
35	0.188"	8	10'	35	3.0	1.3	0.8	-	-	42-232	RTA35D8B4D2A-**-
35	0.219"	8	4'	35	6.4	4.4	3.8	2.7	1.9	42-235	RTA35E8B4D24-**-
35	0.219"	8	6'	35	5.8	3.8	3.3	2.2	1.3	42-236	RTA35E8B4D26-**-
35	0.250"	8	4'	35	7.8	5.6	5.0	3.6	2.6	42-241	RTA35F8B4D24-**-
35	0.250"	8	6'	35	7.2	5.0	4.4	3.1	2.1	42-242	RTA35F8B4D26-**-
35	0.250"	8	8'	35	6.6	4.3	3.7	2.4	1.4	42-243	RTA35F8B4D28-**-
35	0.250"	8	10'	35	5.8	3.6	3.0	1.8	0.8	42-244	RTA35F8B4D2A-**-
35	0.188"	10	8'	35	9.4	6.8	6.0	4.4	3.1	42-249	RTA35D1C4D28-**-
35	0.188"	10	10'	35	8.8	6.2	5.4	3.8	2.4	42-250	RTA35D1C4D2A-**-
40	0.188"	8	4'	35	2.8	1.4	1.1	-	-	42-325	RTA40D8B4D24-**-
40	0.188"	8	6'	35	2.2	0.8	0.5	-	-	42-326	RTA40D8B4D26-**-
40	0.188"	8	8'	35	1.5	-	-	-	-	42-327	RTA40D8B4D28-**-
40	0.250"	8	4'	35	5.2	3.4	3.0	1.9	1.1	42-337	RTA40F8B4D24-**-
40	0.250"	8	6'	35	4.7	2.8	2.4	1.3	0.6	42-338	RTA40F8B4D26-**-
40	0.250"	8	8'	35	4.0	2.2	1.7	0.6	-	42-339	RTA40F8B4D28-**-
40	0.250"	8	10'	35	3.3	1.5	1.0	-	-	42-340	RTA40F8B4D2A-**-
40	0.188"	10	6'	35	7.0	5.0	4.4	3.0	2.0	42-375	RTA40D1C4D26-**-
40	0.188"	10	8'	35	6.4	4.3	3.8	2.4	1.3	42-363	RTA40D1C4D28-**-
40	0.188"	10	10'	35	5.8	3.6	3.1	1.8	0.7	42-364	RTA40D1C4D2A-**-
40	0.250"	10	10'	35	9.8	7.0	6.2	4.4	2.9	42-376	RTA40F1C4D2A-**-

**Catalog Number System**

The catalog number for Hapco poles utilizes the following identification system.



**Catalog Number Example -**

**RTA 30 D 8 B 4 D 2 6 - 01**

Round Tapered Aluminum, 30' Mounting Height, .188" Wall Thickness, 8" Butt Diameter, 4.5" Top Diameter, 4-Bolt Base, Davit Arm, Double, 6' Arm Length, Satin Aluminum Finish.

**Wall Thickness**

- C = .156"
- D = .188"
- E = .219"
- F = .250"

**Butt Diameter**

- 6 = 6"
- 7 = 7"
- 8 = 8"
- 1 = 10"

**Top Diameter**

- B = 4.5"
- C = 6"

**Base Style**

- 4 = 4-Bolt Base

**Arm Style**

- D = Davit

**Arm Quantity**

- 2 = Double

**Arm Length**

- 4 = 4'
- 6 = 6'
- 8 = 8'
- A = 10'

**Finish**

- O1 = Satin Aluminum
- BA = Black Powder Coat
- BH = White Powder Coat
- BM = Dark Bronze Powder Coat
- BV = Dark Green Powder Coat
- GC = Gray Powder Coat
- \*\* = Specify Finish

**EPA Notes:**

Effective Projected Area (EPA) in square feet. EPA's calculated using wind velocity (mph) indicated in accordance with 2009 AASHTO LTS-5 using a 25 year design life. Maximum EPA is based on the luminaire weight shown. Increased luminaire weight may reduce the maximum EPA. If weight is exceeded, or if other design life or code is required, please consult the factory.