



**CITY OF FORT LAUDERDALE
ENGINEERING DIVISION
APPLICATION TO INSTALL AT GRADE
COMMUNICATIONS SERVICE FACILITIES**

**PERMIT NO. CC13-07
District 3**

Rec'd
5/21/14
(5)

Applicant Name and Job Number Crown Castle NG East LLC SFL 62_1

Job Address and Location 891 NW 12th St.

Description of Work Installing cabinet and utility pole within right-of-way.

Anticipated start and end dates of work 6/2/14 - 45 days

- This permit application is for an exemption from the requirement to install communications service facilities below grade, in accordance with Section 25-100.1.B.3 of the City of Fort Lauderdale Code of Ordinances (Code). A letter by a qualified expert(s) is attached.
- Crown Castle is requesting the following waivers (check all applicable subsections and attach supporting documentation):

- C.1 (Size)
- C.2 (Height)
- C.3 (Front Yard)
- C.4 (Corner Yard)
- C.6 (Separation)
- C.7 (Exist. Facility)
- C.12 (Collector)

- With the exception of any waivers that may be checked above, the proposed at grade facilities conform to the requirements in Section 25-100.1 of the Code
- Notice of the pending application has been provided to all property owners abutting public rights-of-way within one hundred fifty (150) feet of the proposed site and to the relevant homeowner association, in accordance with Section 25-100.1.E.5 of the Code.
- The proposed site will be maintained by Crown Castle in accordance with the approved Graffiti Mitigation Plan dated 04/04/2013 which is on file with the City Engineer
- A landscaping maintenance commitment letter from the adjacent property owner and relevant home owner association is attached to this application.
- Crown Castle shall be responsible for maintaining landscaping
- The proposed at grade facilities depicted on the attached plans are completely located in the public rights-of-way.

As an authorized representative of Crown Castle, I certify under oath that the forgoing statements are true and correct.

Armando Hernandez
Printed Name of Authorized Crown Castle Agent

[Signature]
Signature of Authorized Crown Castle Agent

Sworn to and subscribed before me this 16TH day of May, 2008 2014
My Commission Expires 8-23-16

(Seal)
Notary Public,
State of Florida

(Do not write below this line)

Conceptual approval date _____ by _____, Subject to the following conditions:

- 1) A detailed visual mitigation plan is required

Final Permit approval date _____ by _____ Final Inspection date _____ by _____

**Notify Engineering Permits Division 24 hours prior to starting work at (954) 828-5649



CROWN CASTLE SFL62_1

CLIENT :

CLIENT SITE ID#:

ADDRESS:

891 NW 12TH STREET
FORT LAUDERDALE, FLORIDA 33311

SITE TYPE:

REPLACEMENT 40' FPL WOOD POLE

PROPERTY INFORMATION

SITE COORDINATES: 26.14018°
-80.15379°
JURISDICTION: CITY OF FORT LAUDERDALE

PROPERTY OWNER: CROWN CASTLE
ADDRESS: 8555 NW 64TH STREET
MIAMI, FL 33166

PROJECT TEAM

PROJECT MANAGEMENT FIRM: CROWN CASTLE
ADDRESS: 8555 NW 64TH STREET
MIAMI, FL 33166

ENGINEERING FIRM: AW SOLUTIONS, INC.
ADDRESS: 300 CROWN OAK CENTRE DR.
LONGWOOD, FL 32750
CONTACT: SHANE HAFNER
PHONE: 407.260.0231 EXT. 120
FLORIDA COA#: 26983

DESIGN CRITERIA:

- FLORIDA BUILDING CODE 2010 AND ASCE 7-10. WIND LOAD PER ASCE 7-10.
 - A. ULTIMATE WIND SPEED: 170 MPH.
 - B. BUILDING RISK CATEGORY: II.
 - C. WIND EXPOSURE: C.
- DEAD LOAD:
 - A. EQUIPMENT WEIGHT PER MANUFACTURER DATA.
- SEISMIC LOAD DOES NOT GOVERN THIS DESIGN.

DRAWING INDEX

SHEET	SHEET DESCRIPTION	REV
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C1	SITE PLAN	2
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C2	ELEVATION	2
C3	DETAILS	2
C4	DETAILS	2
SP1	SPECIFICATIONS	2
SP2	SPECIFICATIONS	2

APPROVALS

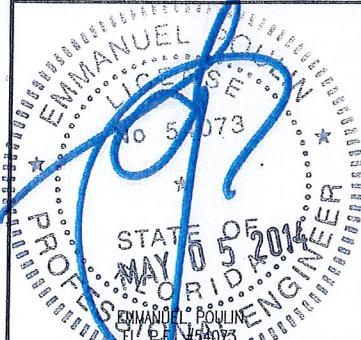
PROJECT MANAGER: _____ DATE: _____
CARRIER: _____
UTILITY: _____



300 CROWN OAK CENTRE DRIVE
LONGWOOD, FL 32750
TEL: 407.260.0231
FAX: 407.260.0749
FL COA#: 26983

DRAWN BY: CV CHECKED BY: JD

REV	DATE	DESCRIPTION
2	04/28/14	LOCATION & EQUIPMENT CHANGE
1	05/09/13	REVISED PER COMMENTS
0	10/30/12	ISSUED FOR PERMIT

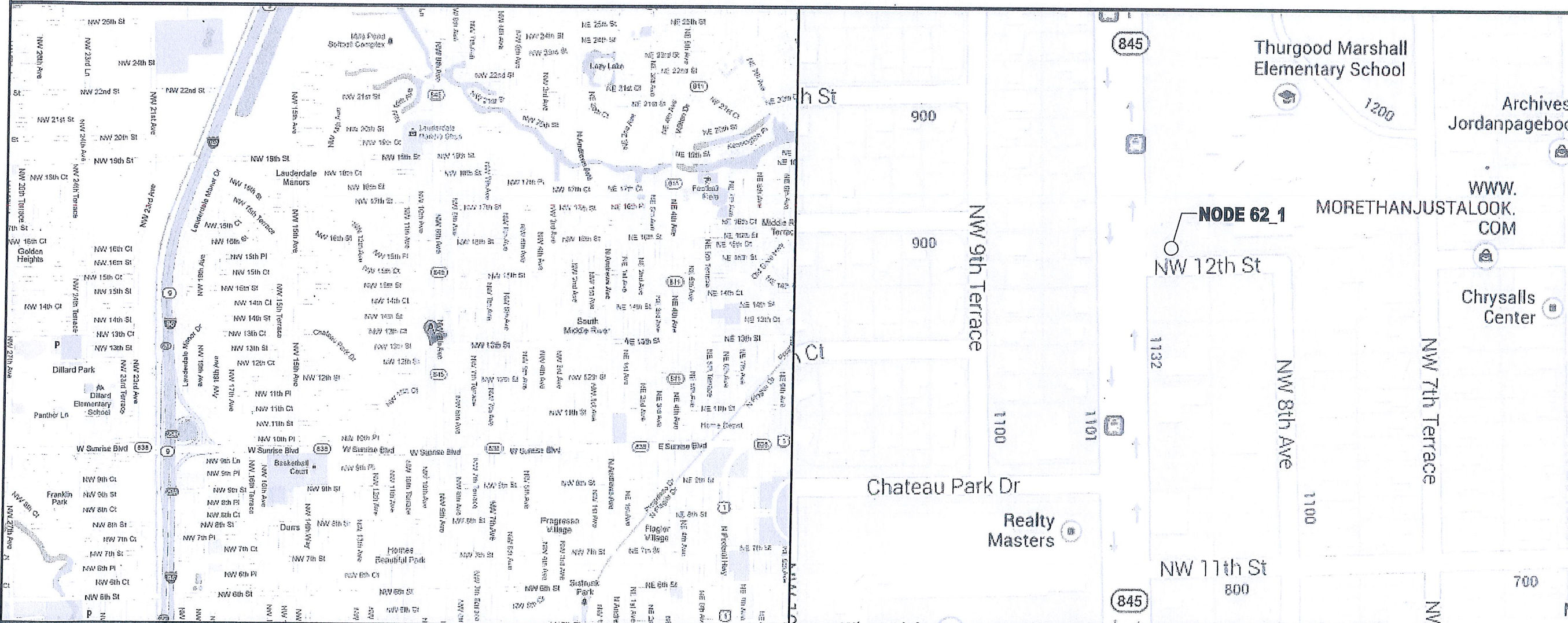


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SITE#: SFL62_1
ADDRESS: 891 NW 12TH STREET
FORT LAUDERDALE, FL 33311

SHEET TITLE:
TITLE SHEET

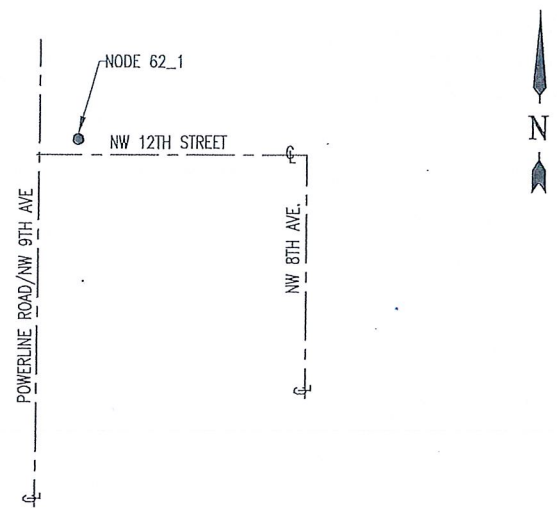
SHEET NUMBER:
T1



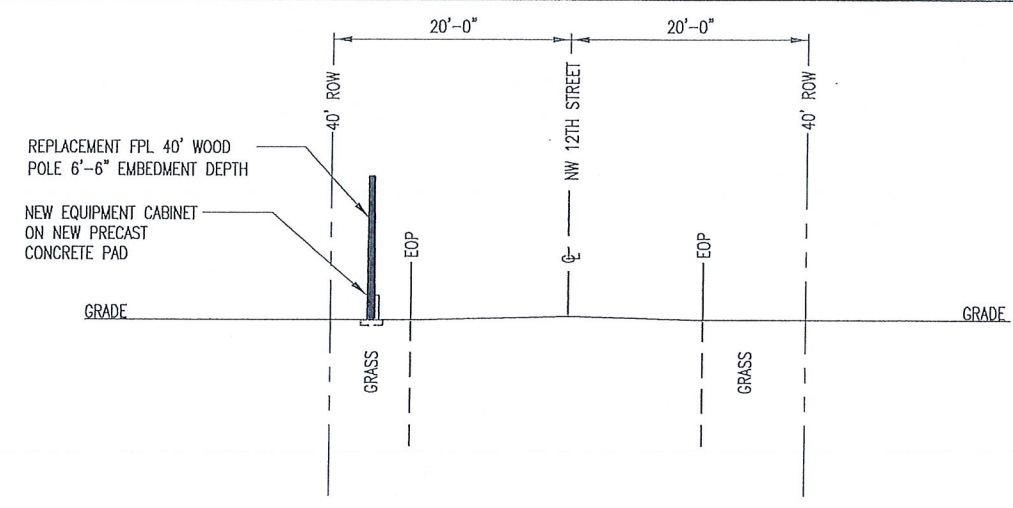
DRIVING DIRECTIONS

FROM THE CROWN CASTLE OFFICE IN MIAMI, HEAD WEST ON NW 64TH ST TOWARD NW 87TH AVENUE. TURN RIGHT ONTO NW 87TH AVENUE. TURN RIGHT ONTO NW 74TH STREET. TURN LEFT TO MERGE ONTO FL-826 N. TAKE THE EXIT TOWARD FL-826 E/BEACHES. MERGE ONTO FL-826 E/FL-91 S. TURN LEFT ONTO NW 2ND AVENUE. TAKE THE RAMP ON THE LEFT ONTO I-95 N. TAKE EXIT 29A TO MERGE ONTO FL-838 E/W SUNRISE BLVD. TURN LEFT ONTO POWERLINE ROAD. TURN RIGHT ONTO NW 12TH STREET. DESTINATION WILL BE ON THE LEFT.

UNDERGROUND SERVICE ALERT
CALL TOLL FREE
1-800-432-4770
48 HOURS BEFORE
YOU DIG



1 LOCATION SKETCH
SCALE: NTS

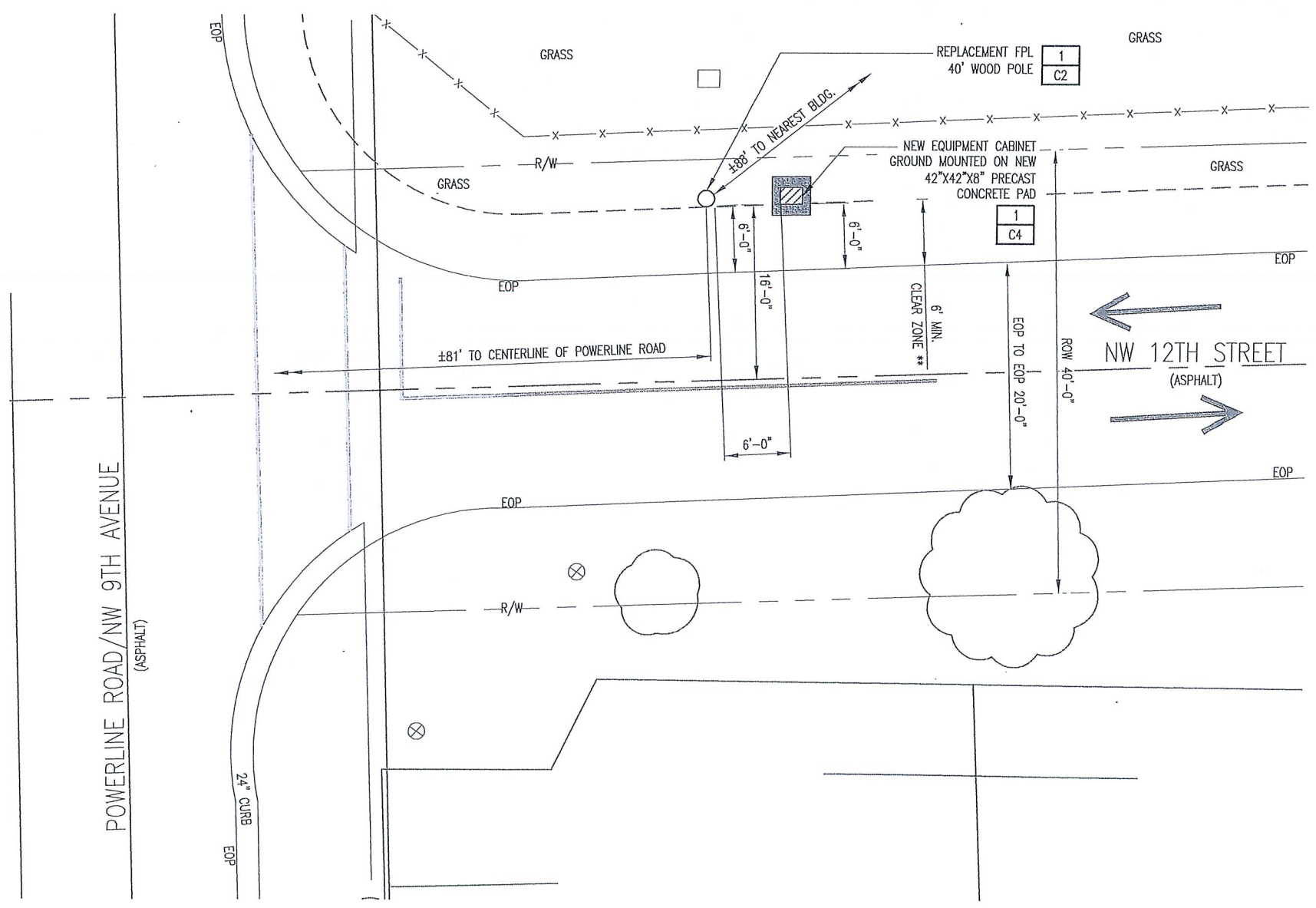


2 TYPICAL PROFILE VIEW
SCALE: NTS



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3 PLAN VIEW
SCALE: NTS

** MINIMUM CLEAR ZONES ILLUSTRATED USING DESIGN GUIDELINES FROM FDOT FLORIDA GREENBOOK, MAY 2007 EDITION

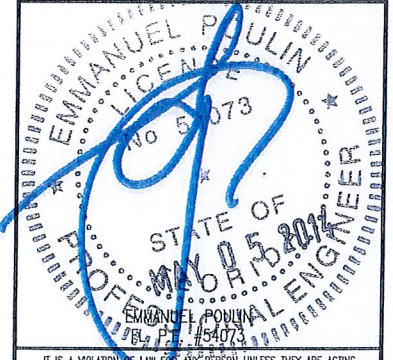
POSTED SPEED LIMIT:
25MPH



UNDERGROUND SERVICE ALERT
CALL TOLL FREE 1-800-432-4770
48 HOURS BEFORE YOU DIG

- NOTES:
- CONTRACTOR SHALL MAINTAIN UNINTERRUPTED ACCESS TO ALL DRIVEWAYS, SIDE STREETS AND WALKWAYS AT ALL TIMES UNLESS OTHERWISE PERMITTED.
 - CONTRACTOR SHALL PREPARE A MAINTENANCE OF TRAFFIC (M.O.T.) PLAN FOR PEDESTRIAN TRAFFIC AND WORK WITHIN THE RIGHT-OF-WAY, INCLUDING VEHICLE PARKING AND EQUIPMENT STAGING.
 - CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS TO ORIGINAL CONDITION OR BETTER.

SYMBOL LEGEND			
— E —	POWER CONDUIT	— SS —	NEW EQUIPMENT CABINET ON PRECAST PAD
— T —	TELCO CONDUIT	⊗	UTILITY POLE
— F —	PROPOSED FIBER CONDUIT	⊙	HYDRANT
— OHE —	OVERHEAD CONDUCTORS	⊕	MANHOLE
— G —	GROUNDING	— C —	CENTERLINE OF ROAD
— X —	FENCE	○	REPLACEMENT WOOD POLE
— W —	WATER	□	PROPOSED CONCRETE UTILITY POLE
— S —	SEWER		
— GAS —	GAS		
1	← REPRESENTS DETAIL #	NOTE 1	← REPRESENTS NOTE
C7	← REPRESENTS SHEET #	SHT E7	← REPRESENTS SHEET #



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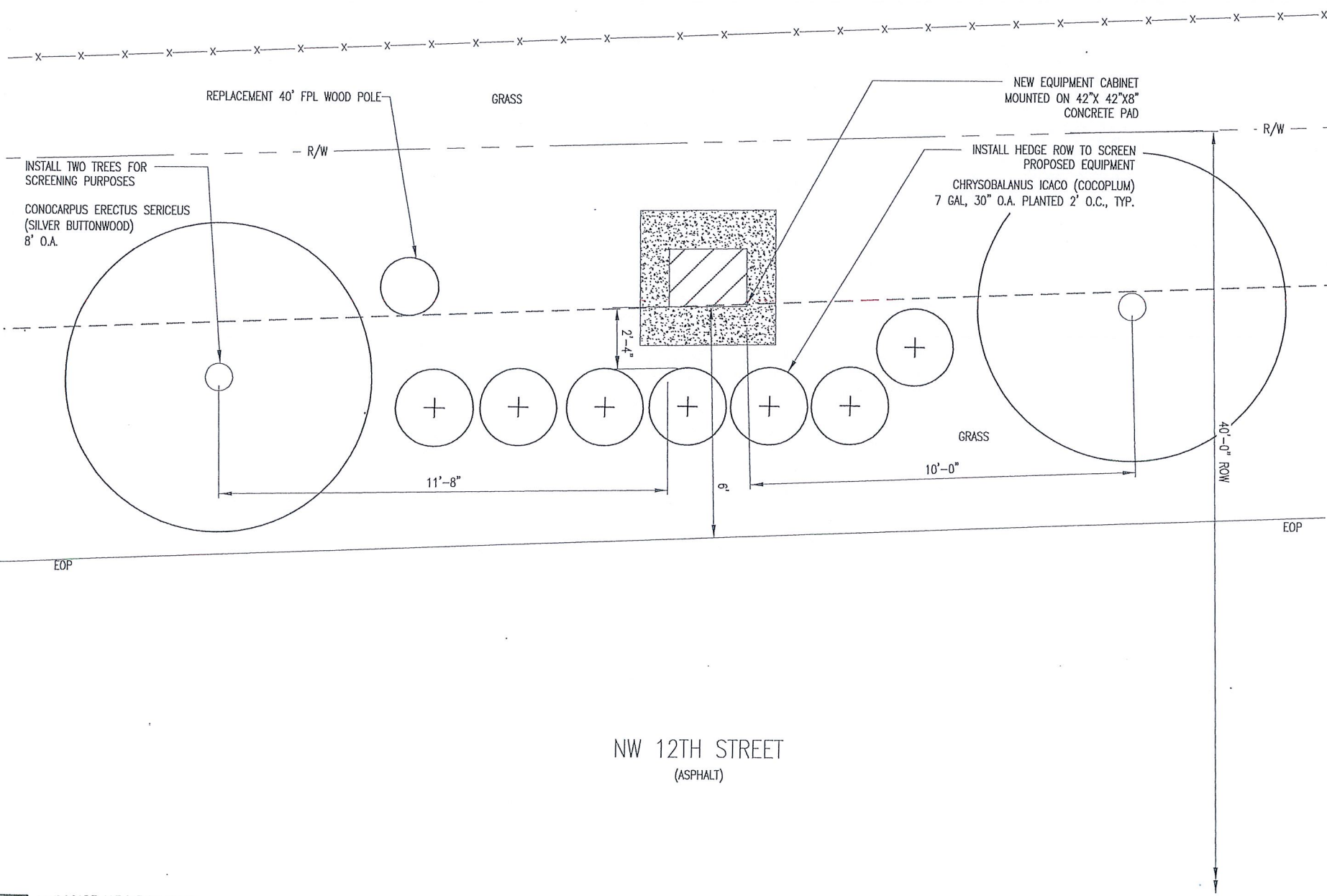
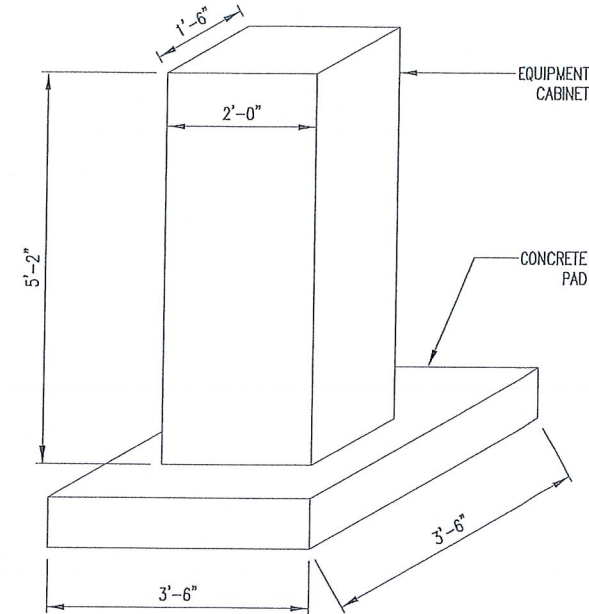
SITE#: SFL62_1
ADDRESS: 891 NW 12TH STREET
FORT LAUDERDALE, FL 33311

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C1

LANDSCAPE NOTES:

1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS FOR FLORIDA NO. 1 OR BETTER, AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS" PART I, 1963, AND PART 11, STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE, TALLAHASSEE, FLORIDA.
2. IT SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING WORK.
3. ALL PLANT BEDS TO RECEIVE 10" OF 50/50 MIX. 50% SAND, 50% MUCK.
4. IT SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO PROVIDE A SMOOTH UNIFORM GRADE PRIOR TO INSTALLING SOD.
5. ALL MULCH TO BE 'FLORAMULCH' MELALEUCA MULCH.
6. ALL TREES TO BE STAKED IN THE FIELD WITH APPROVED NURSERY STANDARD METHODS.
7. TREES/PALMS SHALL BE INSTALLED A MIN. OF 3' FROM UNDERGROUND UTILITIES.



UNDERGROUND SERVICE ALERT
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 48 HOURS BEFORE YOU DIG

- NOTES:**
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 2. CONTRACTOR SHALL PREPARE A MAINTENANCE OF TRAFFIC (M.O.T.) PLAN FOR PEDESTRIAN TRAFFIC AND WORK WITHIN THE RIGHT-OF-WAY, INCLUDING VEHICLE PARKING AND EQUIPMENT STAGING.
 3. CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS TO ORIGINAL CONDITION OR BETTER.

SYMBOL LEGEND	
—E— POWER CONDUIT	NEW EQUIPMENT CABINET ON PRECAST PAD
—T— TELCO CONDUIT	—SS— STORM
—F— PROPOSED FIBER CONDUIT	⊗ UTILITY POLE
—OHE— OVERHEAD CONDUCTORS	⊕ HYDRANT
—G— GROUNDING	⊙ MANHOLE
—X— FENCE	—CL— CENTERLINE OF ROAD
—W— WATER	○ REPLACEMENT WOOD POLE
—S— SEWER	□ PROPOSED CONCRETE UTILITY POLE
—GAS— GAS	

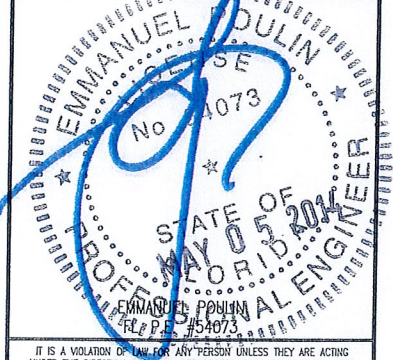
1 ← REPRESENTS DETAIL #
 C7 ← REPRESENTS SHEET #
 NOTE 1 ← REPRESENTS NOTE
 SHT E7 ← REPRESENTS SHEET #



AW Solutions
 incorporated
 300 CROWN OAK CENTRE DRIVE
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 FL COA# 26983

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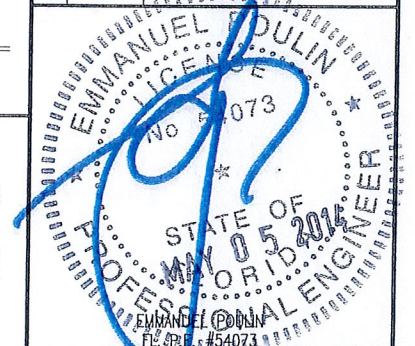
SITE#: SFL62_1
 ADDRESS: 891 NW 12TH STREET
 FORT LAUDERDALE, FL 33311

SHEET TITLE:
LANDSCAPE MITIGATION

SHEET NUMBER:
C1.1

1 LANDSCAPE MITIGATION PLAN
 SCALE: NTS

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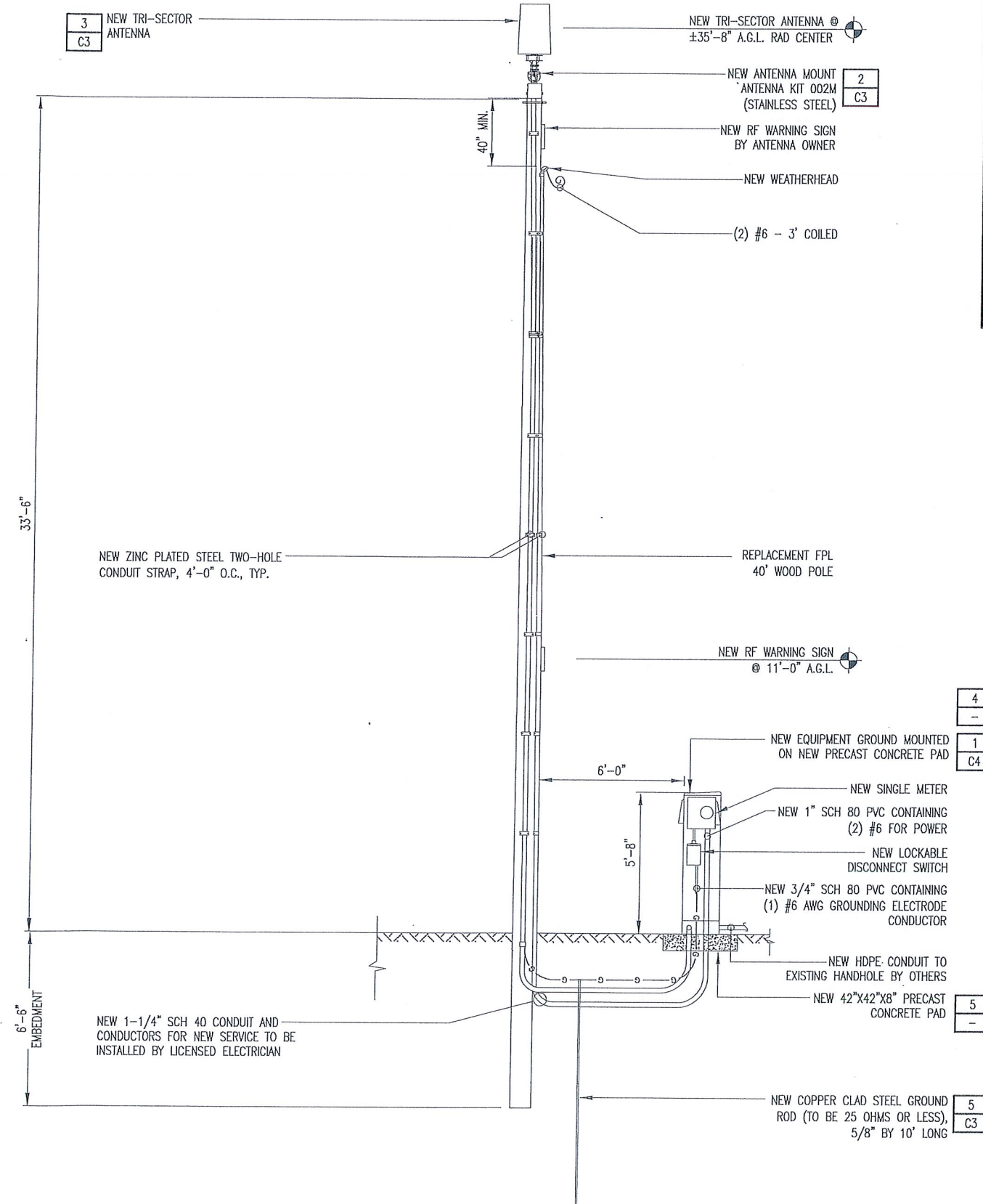
ADDRESS: 891 NW 12TH STREET
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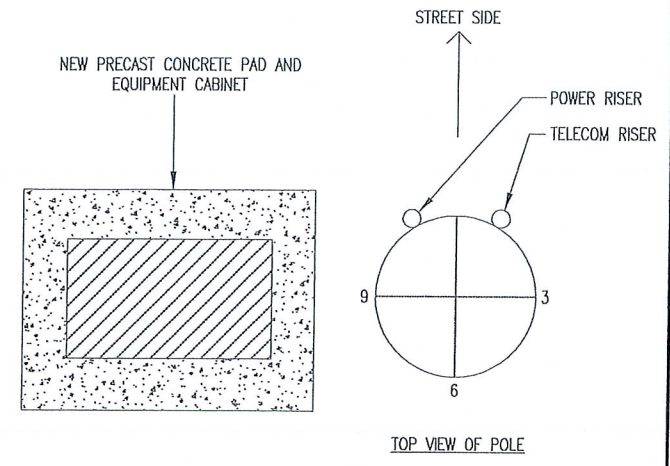
ELEVATION

SHEET NUMBER:

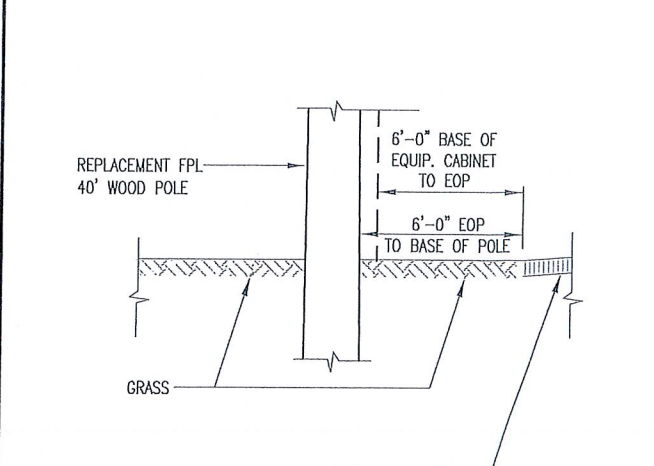
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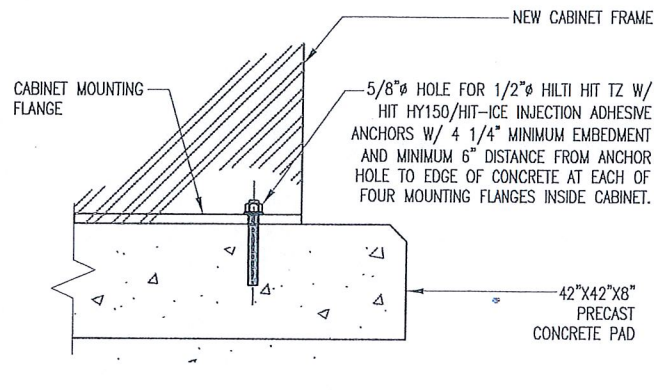
2 QUADRANT LOCATION OF PROPOSED EQUIPMENT
SCALE: NTS



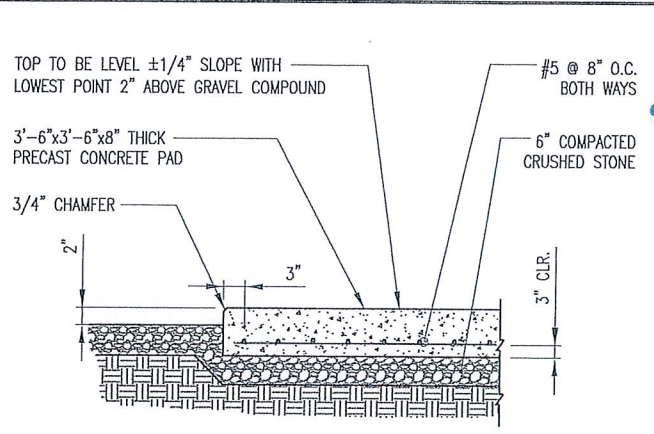
3 CURB ELEVATION
SCALE: NTS



4 EQUIPMENT CABINET ATTACHMENT DETAIL
SCALE: NTS



5 EQUIPMENT PAD DETAIL
SCALE: NTS



SYMBOL LEGEND

—E— POWER CONDUIT	—x— FENCE
—T— TELCO CONDUIT	—(s)— SILT FENCE
—OHE— OVERHEAD CONDUCTORS	
—G— GROUNDING	

1 ← REPRESENTS DETAIL #	NOTE 1 ← REPRESENTS NOTE
C7 ← REPRESENTS SHEET #	SHT E7 ← REPRESENTS SHEET #

1 ELEVATION
SCALE: NTS

3 NEW TRI-SECTOR ANTENNA
C3

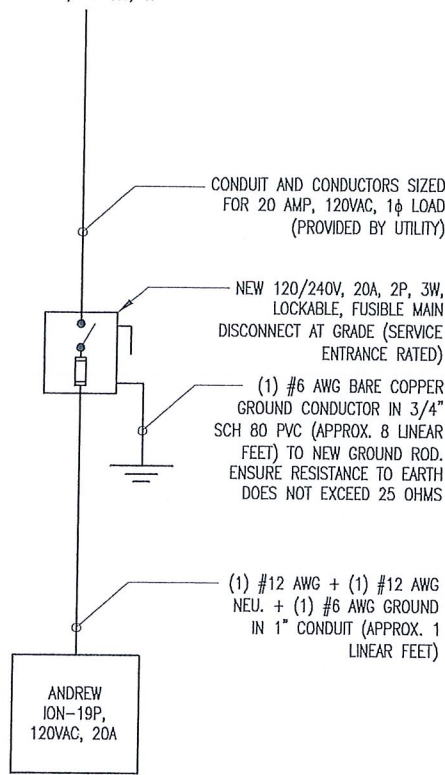
2 NEW ANTIENNA MOUNT ANTENNA KIT 002M (STAINLESS STEEL)
C3

4 NEW EQUIPMENT GROUND MOUNTED ON NEW PRECAST CONCRETE PAD
C4

5 NEW 42"x42"x8" PRECAST CONCRETE PAD
C4

5 NEW COPPER CLAD STEEL GROUND ROD (TO BE 25 OHMS OR LESS), 5/8" BY 10' LONG
C3

NEW ELECT. SERVICE,
20 AMP, 120VAC, 1Ø



1 RISER DIAGRAM
SCALE: NTS

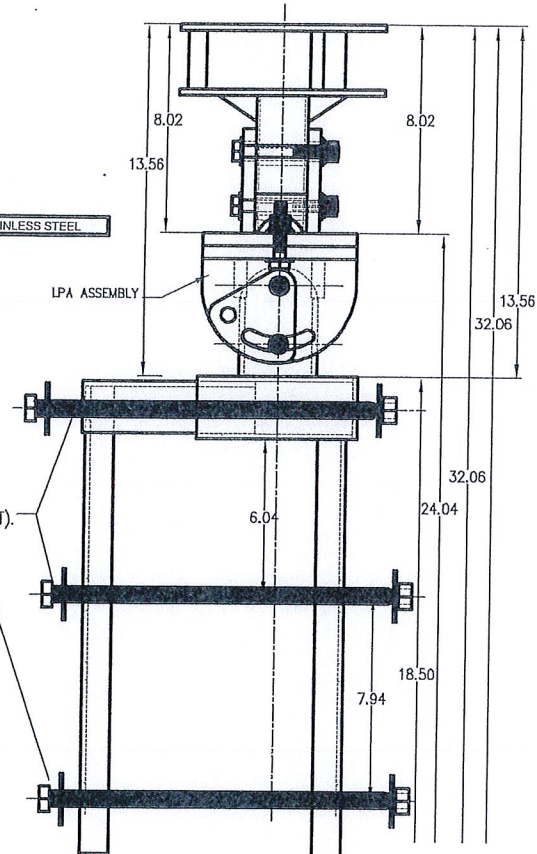
- SHORT CIRCUIT CURRENT RATING OF FUSIBLE MAIN DISCONNECT: 100kA.
- PER FLORIDA BUILDING CODE 2010: FEEDER CONDUCTORS ARE SIZED FOR A MAXIMUM VOLTAGE DROP OF 2% AT DESIGN LOAD OF 20A.
- PER FLORIDA BUILDING CODE 2010: BRANCH CIRCUIT CONDUCTORS ARE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3% AT DESIGN LOAD. HOWEVER, THIS DESIGN CONTAINS NO BRANCH CIRCUITS.
- ALL CONDUCTORS ARE TO BE COPPER WIRE WITH INSULATION TYPE XHHW.
- ALL ABOVE GRADE CONDUIT IS TO BE UV RESISTANT SCHEDULE 80 PVC. ALL BELOW GRADE CONDUIT IS TO BE SCHEDULE 40 PVC.

(3) 5/8" (TOP OF POLE DIAMETER) STAINLESS STEEL HARDWARE BOLT, SQUARE WASHER AND FASTENER (NUT). "NOT" SUPPLIED IN KIT.

2 ANTENNA MOUNTING KIT (002M)
SCALE: NTS

MATERIAL= 316 STAINLESS STEEL

LPA ASSEMBLY



KATHREIN
SCALA DIVISION

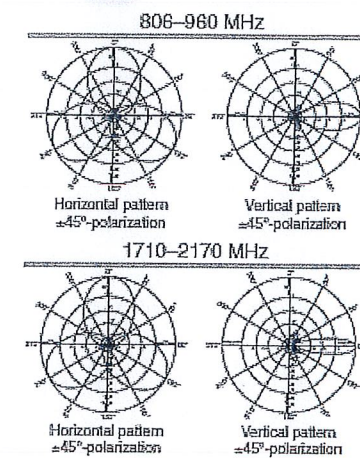
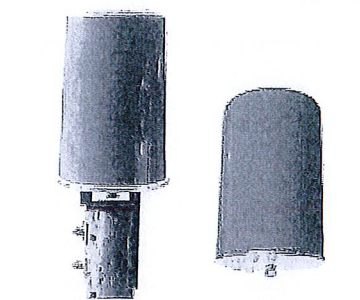
Kathrein's dual band antennas are ready for 3G applications, covering all existing wireless bands as well as all spectrum under consideration for future systems, AMPS, PCS and 3G/UMTS.

- Wide band operation.
- Exceptional intermodulation characteristics.
- High strength fiberglass radome.
- Internal duplexers allow the +45° polarization (upper and lower bands) to be combined on one connector and the -45° polarization (upper and lower bands) to be combined on a second connector for each antenna.

General specifications:

Frequency range	806-960 MHz 1710-2170 MHz
VSWR	<1.5:1
Impedance	50 ohms
Intermodulation (2x20w)	IM3: <-150 dBc
Polarization	+45° upper and lower band -45° upper and lower band
Connector	6 x 7-16 DIN female
Isolation	intra-system >30 dB inter-system >40 dB (806-960 // 1710-2170 MHz)
Radome color	Brown, gray or dark gray (custom colors available at additional cost)
Weight	50 lb (22.7 kg)
Height	24 inches (609 mm)
Radome diameter	16 inches (407 mm)
Equivalent flat plate area	1.6 ft² (0.148 m²)
Wind survival rating*	100 mph (160 kph)
Shipping dimensions	32 x 20 x 19 inches (813 x 508 x 483 mm)
Shipping weight	52 lb (23.6 kg)
Mounting	Designed to be mounted on top of a utility pole using a custom mounting bracket supplied by the customer.

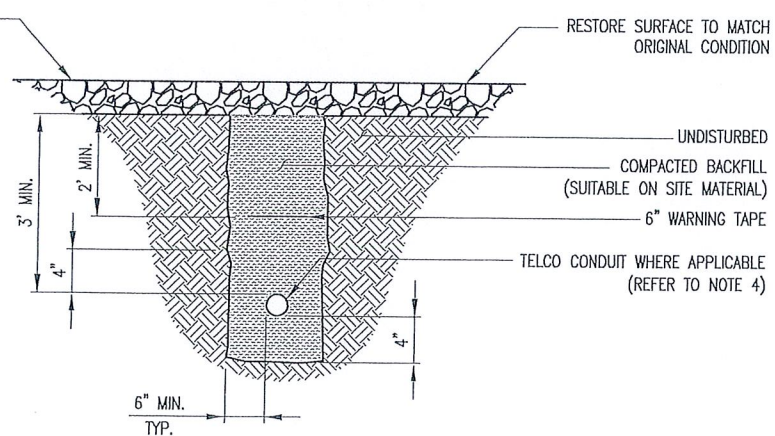
See reverse for order information.



Specifications:	806-866 MHz	824-894 MHz	880-960 MHz	1710-1880 MHz	1850-1990 MHz	1920-2170 MHz
Gain	11.1 dBi	11.4 dBi	11.8 dBi	12.5 dBi	13.3 dBi	13.6 dBi
Front-to-back ratio (180° ± 30°)	>23 dB (co-polar) >20 dB (total power)	>23 dB (co-polar) >20 dB (total power)	>25 dB (co-polar) >22 dB (total power)	>25 dB (co-polar) >22 dB (total power)	>25 dB (co-polar) >22 dB (total power)	>25 dB (co-polar) >22 dB (total power)
Maximum input power	250 watts (at 50°C)	250 watts (at 50°C)	250 watts (at 50°C)	200 watts (at 50°C)	200 watts (at 50°C)	200 watts (at 50°C)
+45° and -45° polarization horizontal beamwidth	67° (half-power)	66° (half-power)	64° (half-power)	66° (half-power)	60° (half-power)	60° (half-power)
+45° and -45° polarization vertical beamwidth	34° (half-power)	33° (half-power)	30° (half-power)	20° (half-power)	16° (half-power)	17.5° (half-power)
Cross polar ratio						
Main direction	0°	0°	0°	16 dB (typical)	10 dB (typical)	20 dB (typical)
Sector	>10 dB	>10 dB	>10 dB	>10 dB	>10 dB	>10 dB

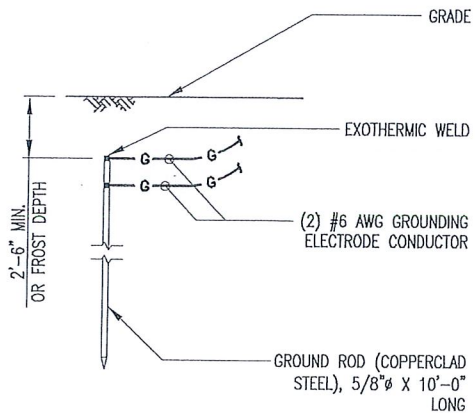
3 ANTENNA SPECIFICATIONS
SCALE: NTS

FINISHED GRADE, STONE, ASPHALT, CONCRETE PAVING OR SOD. MATCH SLOPE AND THICKNESS OF EXISTING SURFACE



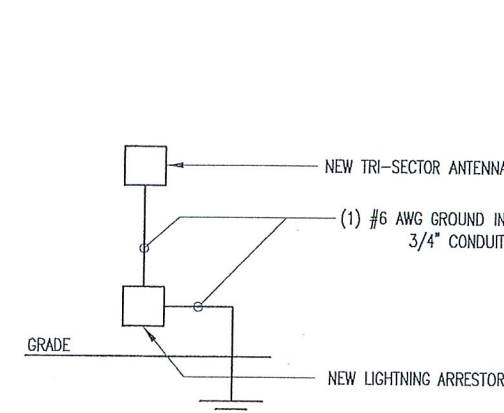
4 NEW UNDERGROUND CONDUIT(S) TRENCHING DETAIL (IF APPLICABLE, REFER TO SITE PLAN)
SCALE: NTS

- PROVIDE SCHEDULE 40 PVC CONDUIT BELOW GRADE EXCEPT AS NOTED BELOW.
- PROVIDE SCHEDULE 80 PVC CONDUIT AND ELBOWS AT STUB UP LOCATIONS (i.e. SERVICE POLE, BTS EQUIPMENT, ETC.).
- INSTALL UTILITY PULLBOXES PER NEC.
- SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY CO. REQUIREMENTS.
- CONDUIT/TUBING CONTAINING FIBER OPTIC CABLING TO BE FILLED WITH GEL TO PREVENT WATER PENETRATION, COMMONLY REFERRED TO AS "ICKY PICK."



5 GROUND ROD DETAIL
SCALE: NTS

- GROUND ROD TO BE DRIVEN 10' VERTICALLY.



6 ANTENNA GROUNDING SCHEMATIC
SCALE: NTS



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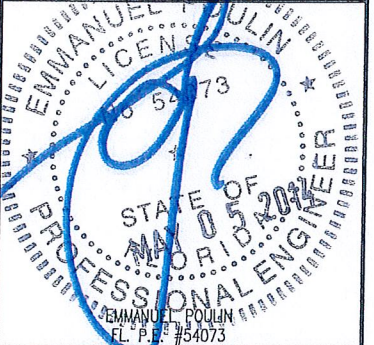
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SHEET TITLE:

DETAILS

SHEET NUMBER:

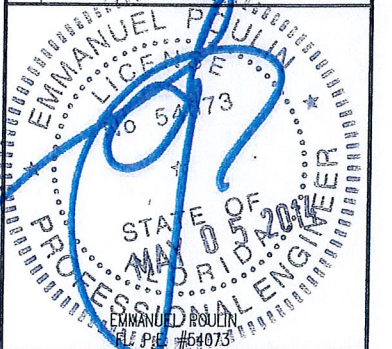
C3

Exhibit 6

14-1384

Page 6 of 7

REV	DATE	DESCRIPTION
2	04/28/14	LOCATION & EQUIPMENT CHANGE
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SHEET TITLE:

DETAILS

SHEET NUMBER:
C4

