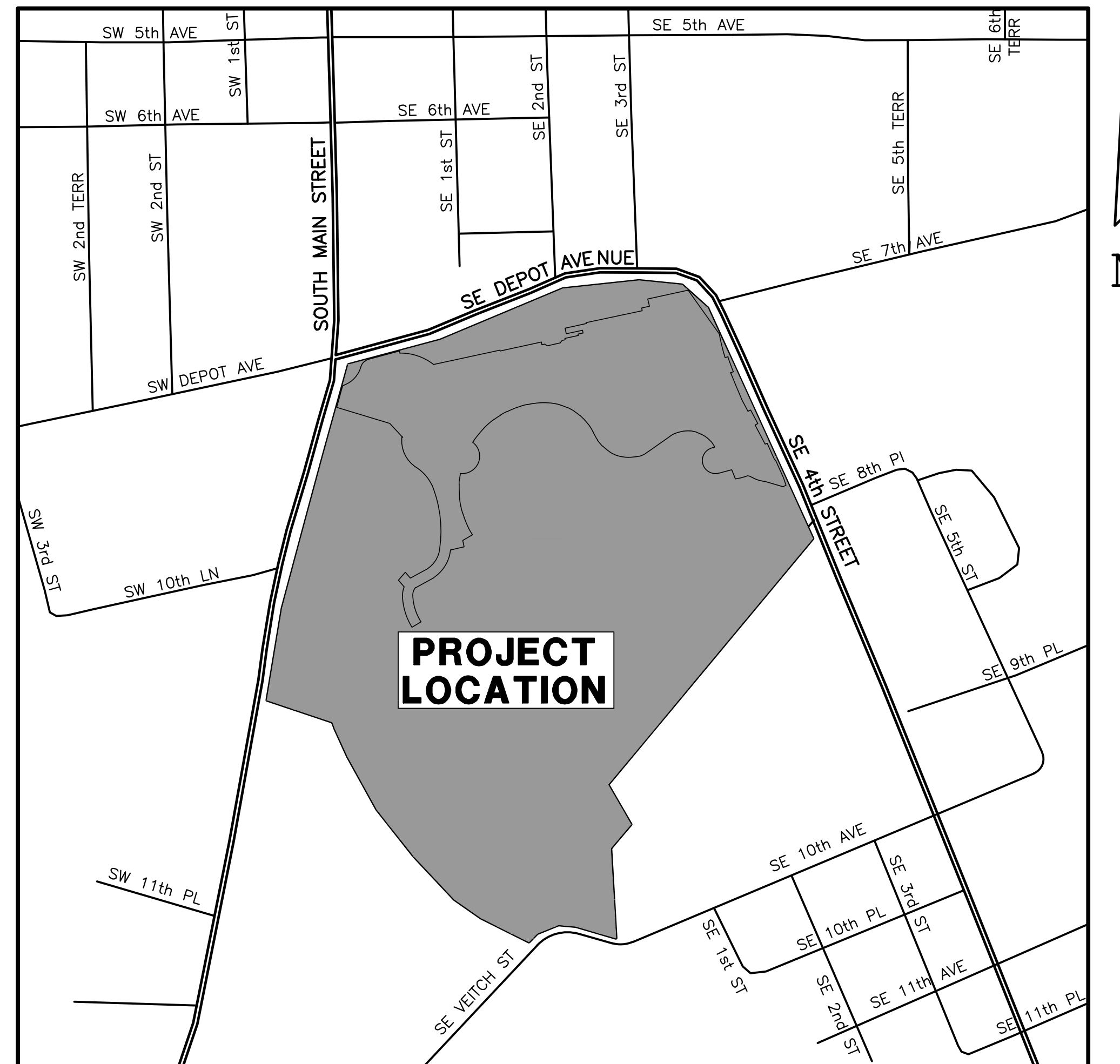
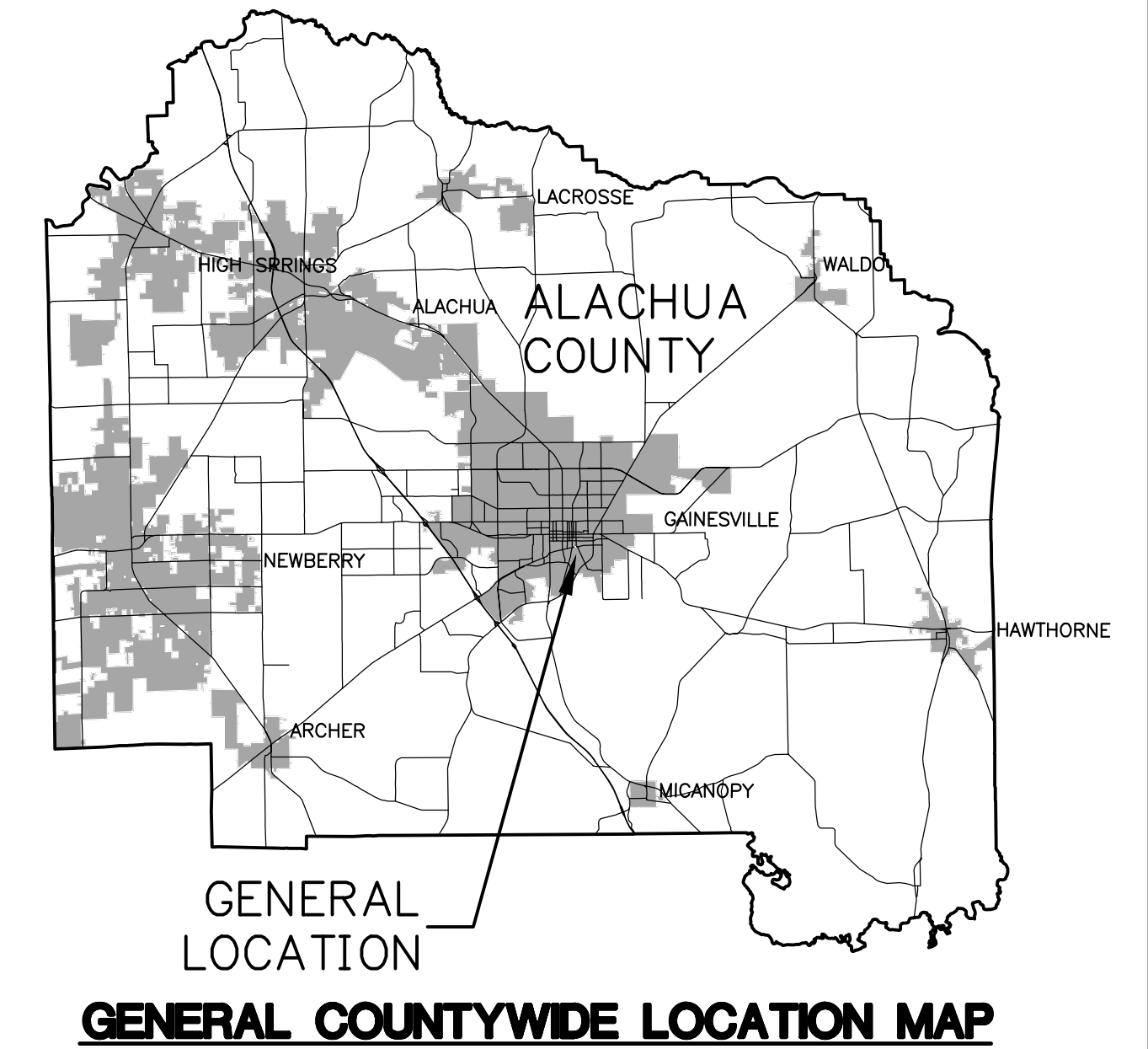


FINAL CONSTRUCTION DRAWINGS OF DEPOT PARK ELECTRICAL IMPROVEMENTS FOR CITY OF GAINESVILLE



LOCATION MAP
NTS

DEPOT PARK ELECTRICAL IMPROVEMENTS	
SHEET INDEX	
SHEET NO.	TITLE
CO.0	COVER SHEET
EO.1	ELECTRICAL LEGEND, DETAILS & SCHEDULES
E1.0	OVERALL ELECTRICAL KEY PLAN
E1.1	ELECTRICAL ENLARGED SITE PLAN - SOUTHWEST
E1.2	ELECTRICAL ENLARGED SITE PLAN - NORTHWEST
E1.3	ELECTRICAL ENLARGED SITE PLAN - NORTHEAST
E1.4	ELECTRICAL ENLARGED SITE PLAN - SOUTHEAST
E2.0	ELECTRICAL SCHEDULES
E2.1	ELECTRICAL SCHEDULES
E3.0	ELECTRICAL SPECIFICATIONS
E3.1	ELECTRICAL SPECIFICATIONS
P-1	PHOTOMETRIC CALCULATIONS
P-2	PHOTOMETRIC PLANS

SUBMITTAL SCHEDULE	
MILESTONE	DATE
1. 50% CONSTRUCTION DOCUMENTS	JULY 8, 2019
2. 100% CONSTRUCTION DOCUMENTS	AUGUST 6, 2019
3. FINAL CONSTRUCTION DOCUMENTS	AUGUST 26, 2019

REVISIONS				
NO.	DATE	DESCRIPTION	DRWN	APPR

ENGINEER OF RECORD: SEE ELECTRICAL DRAWINGS	
--	--

JBrown
Professional Group Inc

CIVIL ENGINEERING • LAND SURVEYING • PLANNING
Fla. Board of Professional Engineers CA No. 30495

3530 NW 43rd Street • Gainesville, Florida 32606
PHONE: (352) 375-8999 • FAX: (352) 375-0833
E-MAIL: contact@jbprogroup.com

SHEET TITLE: COVER SHEET	DATE: AUGUST 2019 PROJECT NO: 057-19-03 SHEET NO: C0.0
CLIENT: DEPOT PARK GAINESVILLE, FL	PROJECT: ELECTRICAL IMPROVEMENTS

Aug 26, 2019 - 14:22:17 - Tim - \\V057-19-34 - Depot Park - Lighting & Electrical Improvements\Production\Sheets\ - CO.0_COVER.dwg

SOIL CONTAMINANTS:

DO NOT PERFORM ANY WORK WITHOUT COORDINATING WITH OWNER AND CONSTRUCTION MANAGER. UNDERGROUND WORK WILL REQUIRE TESTING FOR ENVIRONMENTAL CONTAMINANTS, AND MAY REQUIRE REMEDIATION.

FOR THE PURPOSES OF BIDDING, ASSUME ANY SOIL 24 INCHES OR MORE BELOW GRADE IS SUBJECT TO TESTING IF DISTURBED. ANY REMEDIATION SCOPE WILL BE NEGOTIATED WITH OWNER SUBSEQUENT TO POSITIVE TEST RESULTS.

COORDINATE WITH FDEP AND OWNER TO ESTABLISH PPE, TESTING, AND REMEDIATION PLAN PRIOR TO PROCEEDING WITH THE WORK.

GENERAL NOTES:

- ROUTE CONDUITS ALONG CONTOURS OF EXISTING WALKWAYS. UNDERMINE SIDEWALKS AS NEEDED FOR CROSSINGS. DO NOT CUT EXISTING HARDSCAPE WITHOUT PRIOR PERMISSION.
- MINIMIZE DAMAGE TO PLANTS, ROOTS, AND SOFTSCAPE. COORDINATE ALL DIGGING UNDER TREE CANOPIES WITH OWNER PRIOR TO PROCEEDING.
- THERE IS EXTENSIVE EXISTING ELECTRICAL, STORMWATER, AND OTHER UTILITIES THROUGHOUT THE SITE. COORDINATE LINE LOCATES PRIOR TO ALL DIGGING. HAND DIG ALL LOCATIONS WHERE AT RISK OF DAMAGING EXISTING SYSTEMS.
- CAREFULLY COORDINATE ALL ENVIRONMENTAL REQUIREMENTS FOR ALL DIGGING WITH FDEP. SEE SOIL CONTAMINANTS NOTE ON SHEET E0.1.
- CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED LANDSCAPING AND TURF REPAIR/REPLACEMENT.

SHARED CONDUITS:

MULTIPLE CIRCUITS MAY SHARE CONDUITS WHERE CODE COMPLIANT. NO CONDUIT SHALL CONTAIN MORE THAN 12 CURRENT CARRYING CONDUCTORS. SEE TABLE BELOW FOR MAXIMUM NUMBER OF CURRENT CARRYING CONDUCTORS PER CONDUIT, PER 2014 NEC 310.15(B)(3)(a). THESE NUMBERS INCLUDE NEUTRALS, BUT NOT EGCs. SIZE ALL CONDUITS PER NEC ANNEX C.

120V 20A CIRCUITS:	
WIRE SIZE	MAX HOTS-NEUTRALS PER CONDUIT
#12	6
#10	9
#8	12
#6	12
#4	12

120V 30A CIRCUITS (NEMA TT-30R):	
WIRE SIZE	MAX HOTS-NEUTRALS PER CONDUIT
#10	3
#8	9
#6	12
#4	12
#3	12
#2	12

208V 50A CIRCUITS:	
WIRE SIZE	MAX HOTS-NEUTRALS PER CONDUIT
#8	3
#6	9
#4	9
#3	12
#2	12

MAXIMUM WIRE LENGTHS:

PLAN ALL ROUTES AND VERIFY ALL RECEPTACLE CIRCUIT LENGTHS PRIOR TO PROCEEDING. FINAL ROUTING MAY DIFFER FROM THE ASSUMPTIONS MADE IN THIS DESIGN. ADJUST WIRE SIZES PER FINAL ROUTE AND THE FOLLOWING MAXIMUM LENGTHS FOR VARIOUS WIRE GAUGES. (ALL LENGTHS ARE COPPER CONDUCTOR LENGTH, SINGLE PHASE CIRCUITS, FROM PANEL TO LOAD. SIZES ARE BASED ON 5% BRANCH CIRCUIT VOLTAGE DROP AT 100% LOAD, PER ANSI C84.1, RANGE A, FOR NON-LIGHTING LOADS. DO NOT USE THIS TABLE FOR WIRING WITHIN BUILDINGS.)

120V 20A CIRCUITS:	
WIRE SIZE	MAXIMUM LENGTH
#12	75'
#10	125'
#8	190'
#6	300'
#4	475'

120V 30A CIRCUITS (NEMA TT-30R):	
WIRE SIZE	MAXIMUM LENGTH
#10	80'
#8	125'
#6	190'
#4	300'
#3	400'
#2	525'

208V 50A CIRCUITS:	
WIRE SIZE	MAXIMUM LENGTH
#8	130'
#6	210'
#4	325'
#3	415'
#2	540'

LEGEND

- RECEPTACLE:**
- Ⓢ DUPLEX RECEPTACLE. 18" AFF UNO. ALL EXTERIOR RECEPTACLES SHALL BE GFCI WR TYPE IN WEATHERPROOF BOX WITH IN-USE COVER UNLESS OTHERWISE NOTED. WHERE INSTALLED ON POLE, PROVIDE CURVED BOX BACKING MATCHING POLE DIAMETER.
 - Ⓢ SPECIAL RECEPTACLE. SEE SUBSCRIPT FOR ADDITIONAL INFORMATION.
- RECEPTACLE SUBSCRIPTS:**
- G GFCI-TYPE RECEPTACLE.
 - GCB GFCI-TYPE POWER FROM BRANCH CIRCUIT BREAKER.
 - WP WEATHER RESISTANT WIRING DEVICE. WP RECEPTACLES SHALL BE GFCI TYPE WITH IN-USE COVERS.
 - 30A NEMA TT-30R RECEPTACLE. PROVIDE SINGLE-GANG DEVICE IN DEEP WEATHERPROOF BOX & WEATHERPROOF COVER. COORDINATE BOX SIZE WITH WIRE BEND RADIUS. PROVIDE CURVED BOX BACKING MATCHING POLE DIAMETER.
 - 50A NEMA 14-50R RECEPTACLE. PROVIDE SINGLE-GANG DEVICE IN DEEP WEATHERPROOF BOX & WEATHERPROOF COVER. COORDINATE BOX SIZE WITH WIRE BEND RADIUS. PROVIDE CURVED BOX BACKING MATCHING POLE DIAMETER.
- POWER EQUIPMENT AND CONNECTIONS:**
- PANELBOARD.
 - Ⓢ ELECTRICAL CONNECTION TO EQUIPMENT. SEE ELECTRICAL EQUIPMENT SCHEDULE.
 - Ⓢ JUNCTION BOX.
 - Ⓢ SAFETY SWITCH. MOUNT AS INDICATED. 60" TO TOP UNO.
 - Ⓢ FUSED SAFETY SWITCH. MOUNT AS INDICATED. 80" TO TOP UNO.
- LIGHT FIXTURES:**
- Ⓢ LIGHT FIXTURES SHALL BE AS INDICATED IN LIGHT FIXTURE SCHEDULE. SEE LIGHT FIXTURE SCHEDULE.
- LIGHT FIXTURES SUBSCRIPTS:**
- a,b LOWERCASE LETTERS INDICATE SWITCHING/DIMMING ZONES.
 - 24/7 LIGHT NOT SWITCHED BY OCCUPANCY SENSORS OR SWITCHES.
 - EM PARTIAL SHADING OR 'EM' SUBSCRIPT INDICATES EMERGENCY FIXTURE. SEE LIGHT FIXTURE SCHEDULE.
- LIGHTING CONTROLS:**
- Ⓢ 120/277V 20A PHOTOCELL.
 - Ⓢ 120/277V LIGHTING CONTACTOR. BOD: ENCLOSED SQUARE D CLASS 8903 WITH HOA SWITCH.
 - Ⓢ 120/277V ASTRONOMICAL TIME CLOCK. BOD: PARAGON SUNTRACKER II.
- ANNOTATIONS:**
- Ⓢ DEMOLITION SHEET NOTE.
 - Ⓢ ELECTRICAL SHEET NOTE.
- GENERAL SUBSCRIPTS (APPLY TO ALL CATEGORIES):**
- 2P1A ELECTRICAL EQUIPMENT TAG.
 - GCB FED FROM GFCI TYPE CIRCUIT BREAKER.
 - 72" INDICATES HEIGHT OF FIXTURE, RECEPTACLE, BOX, CABINET, ETC. HEIGHT IS TO CENTERLINE UNLESS OTHERWISE INDICATED.
 - EX EXISTING TO REMAIN
 - WP WEATHERPROOF INSTALLATION, WITH APPROPRIATELY LISTED OR INDICATED PRODUCTS.
 - A-1 ELECTRICAL HOME RUN TO PANELBOARD. UNDERLINED LABEL INDICATES PANELBOARD NAME AND CIRCUIT NUMBER.

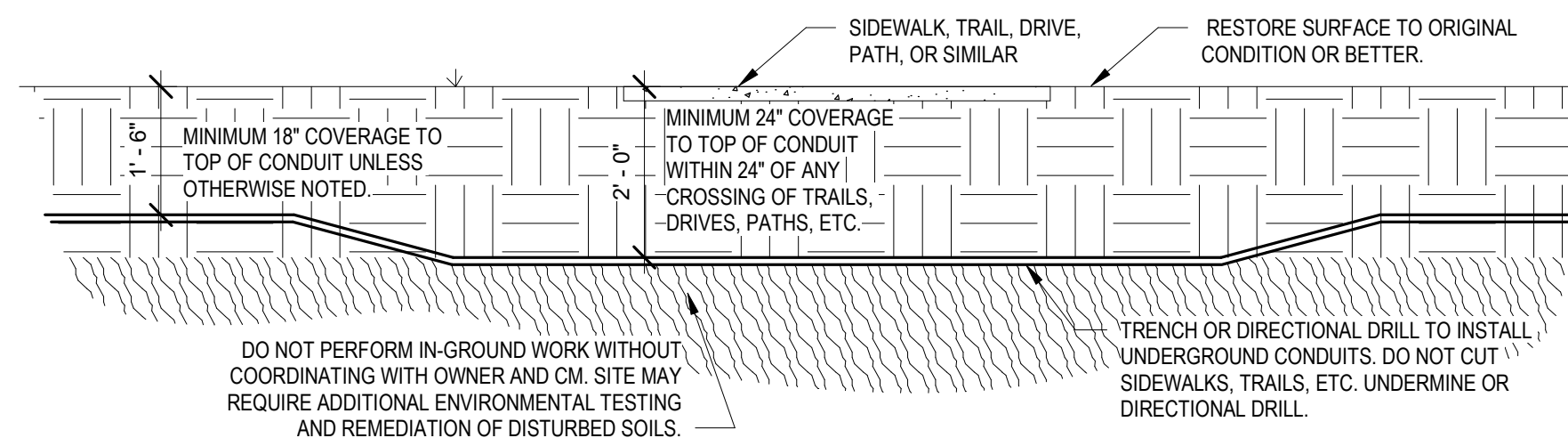
ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
BOD	BASIS OF DESIGN
C	CONDUIT
CB	CIRCUIT BREAKER
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED
CKT	CIRCUIT
DNV	DIVISION
DP	DISTRIBUTION PANEL
ECB	ENCLOSED CIRCUIT BREAKER
EOR	ENGINEER OF RECORD
EX	EXISTING TO REMAIN
FSS	FUSED SAFETY SWITCH
G	GROUND, GROUND FAULT CIRCUIT INTERRUPTER
GCB	GFCI CIRCUIT BREAKER
GRU	GAINESVILLE REGIONAL UTILITIES
HH	HAND HOLE
LP	LIGHTING PANEL
LTG	LIGHTING
LTS	LIGHTS
MCC	MOTOR CONTROL CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
PBD	PANELBOARD
PQM	POWER QUALITY METER
PP	POND PUMP
RCPT	RECEPTACLE
SPD	SURGE PROTECTION DEVICE
SLC	SIGNALING LINE CIRCUIT
SP	SPLASH PAD
SS	SAFETY SWITCH
SWBD	SWITCHBOARD
TBD	TO BE DETERMINED
TCR	TELECOMMUNICATIONS ROOM
TO	TELECOMMUNICATIONS OUTLET
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
WP	WEATHER PROOF / WEATHER RESISTANT
WR	WEATHER PROOF / WEATHER RESISTANT WITH RESPECT TO
WRT	WITH RESPECT TO

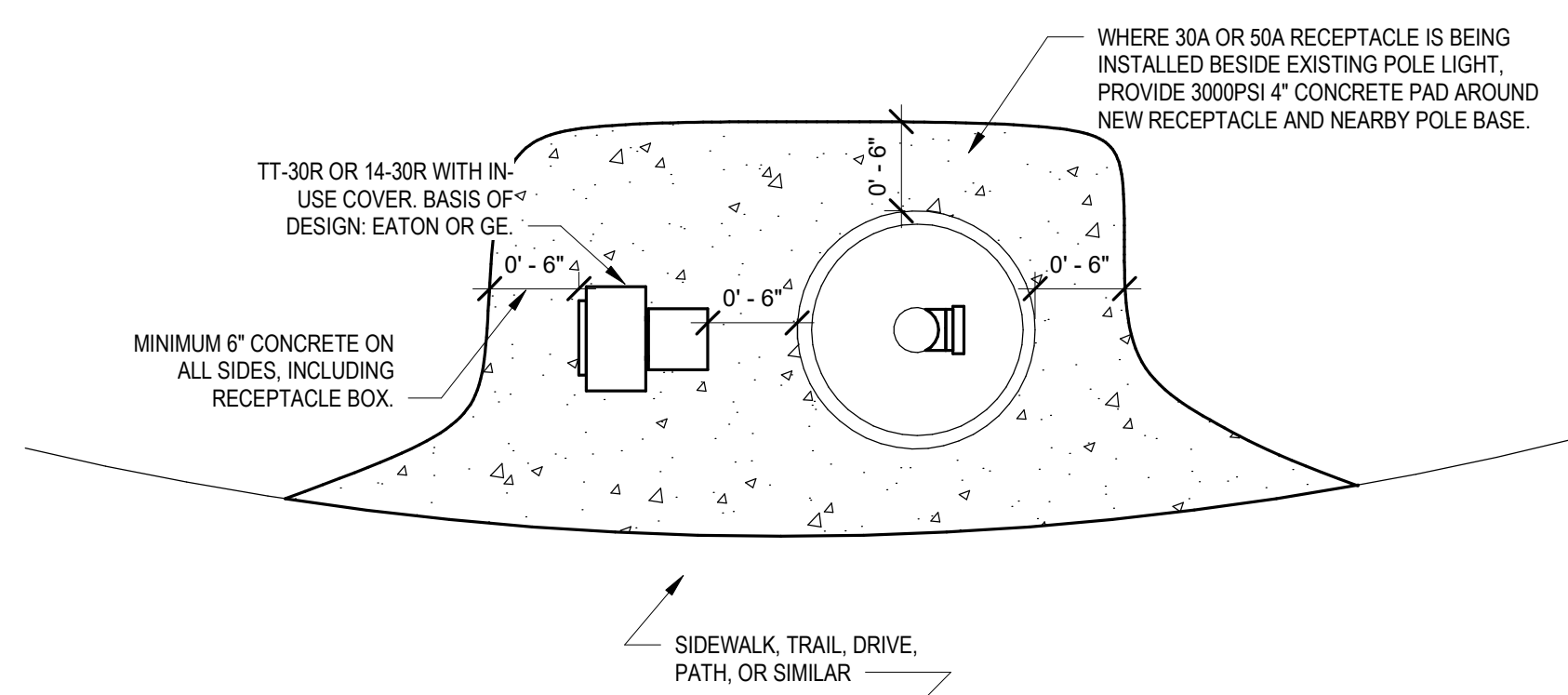
CODES AND STANDARDS

ALL PROJECT WORK SHALL BE GOVERNED BY AND ADHERE TO THE FOLLOWING CODES AND STANDARDS.

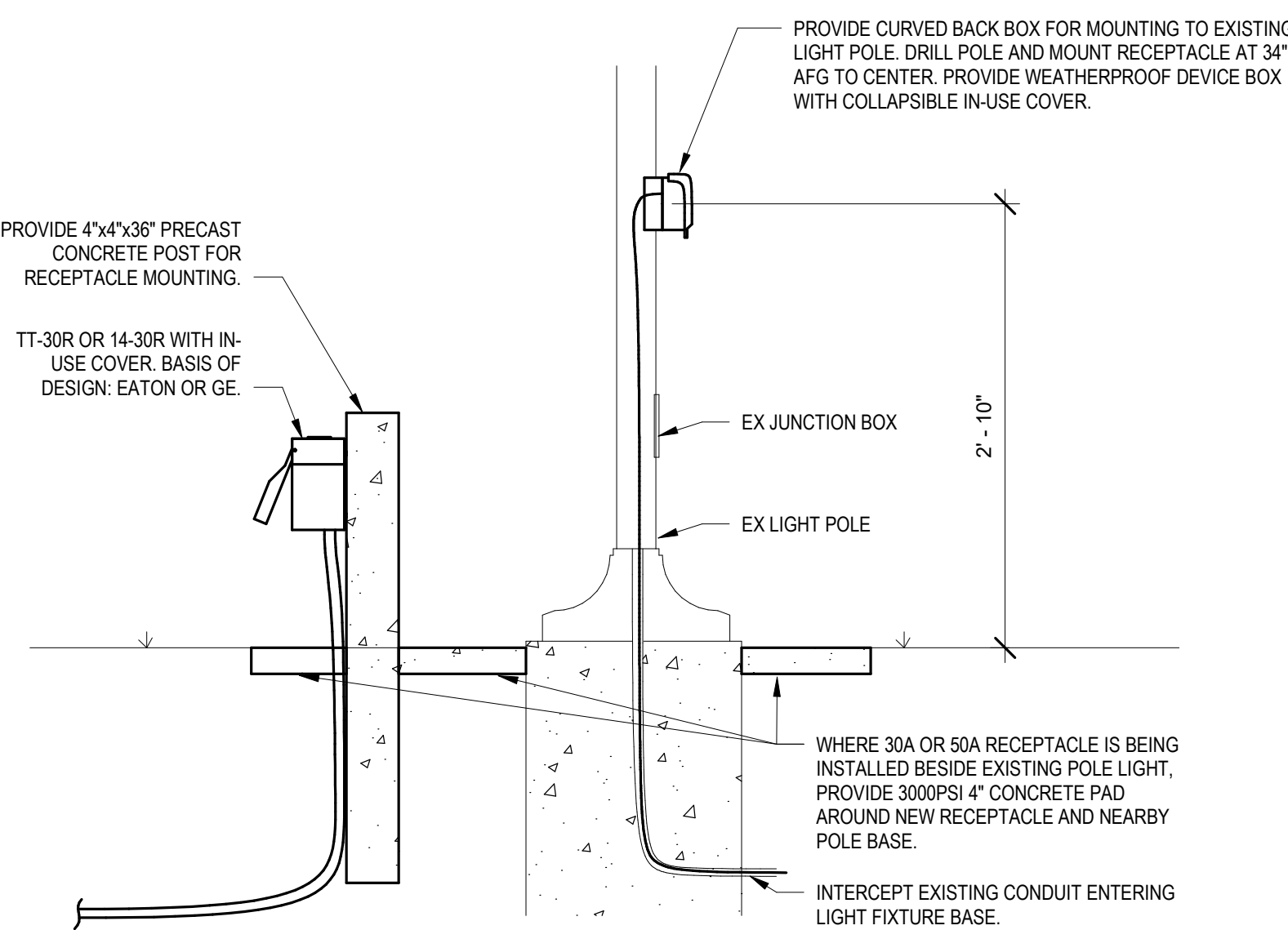
- FLORIDA BUILDING CODE - SIXTH EDITION (2017)
- FLORIDA BUILDING CODE - SIXTH EDITION (2017) - ENERGY CONSERVATION
- FLORIDA FIRE PREVENTION CODE - SIXTH EDITION (2017)
 - FIRE CODE (NFPA 1 - 2015 FLORIDA EDITION)
 - LIFE SAFETY CODE (NFPA 101 - 2015 FLORIDA EDITION)
- NATIONAL ELECTRIC CODE (2014 NFPA 70).
- UNDERWRITERS' LABORATORIES (UL)
- AMERICAN NATIONAL STANDARDS INSTITUTION (ANSI)
- AMERICAN SOCIETY OF TESTING MATERIALS (ASTM)
- NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
- INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
- NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION (NECA)
- ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA)
- ELECTRONICS INDUSTRY ALLIANCE (EIA)



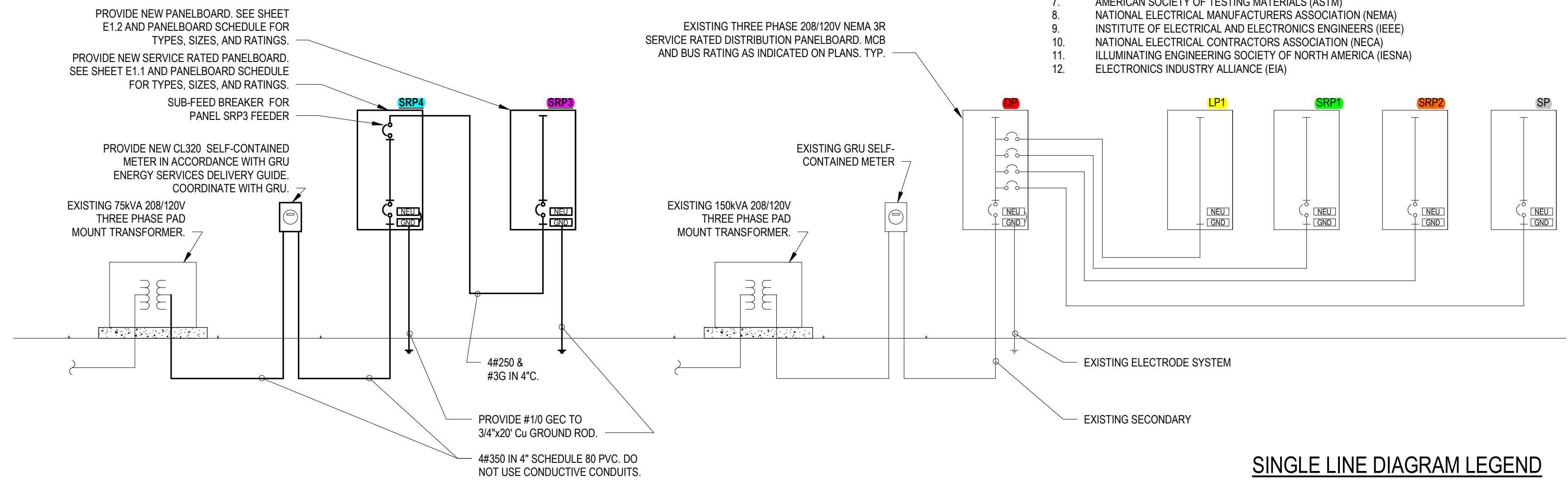
2 UNDERGROUND RACEWAYS DETAIL
NOT TO SCALE



3 RECEPTACLE INSTALLATION DETAILS
NOT TO SCALE

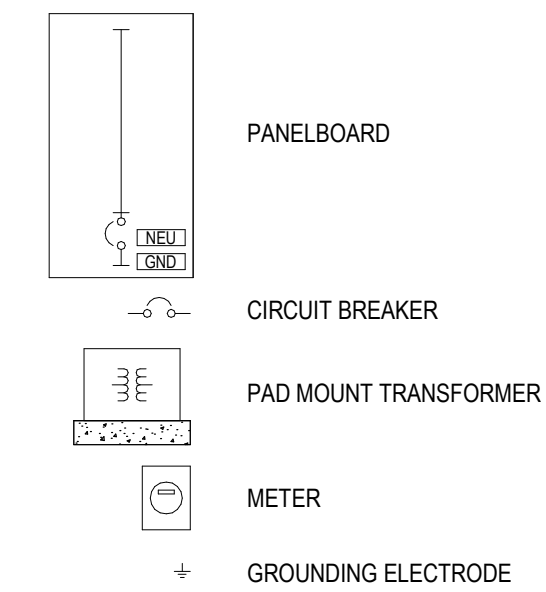


4 FREESTANDING 20A RECEPTACLE INSTALLATION DETAIL
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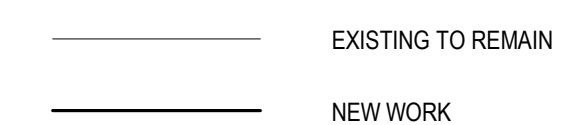


1 ELECTRICAL SINGLE LINE DIAGRAM
NOT TO SCALE

SINGLE LINE DIAGRAM LEGEND



SINGLE LINE DIAGRAM LINETYPES



MG
mitchell gullegge
engineering

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www.mitchellgullegge.com

Andrew P. McCaddin
PE - 83318

PROJECT NAME:
**CITY OF GAINESVILLE
DEPOT PARK ELECTRICAL**

OWNER:
CITY OF GAINESVILLE

874 SE 4TH STREET
GAINESVILLE, FL 32601

Gainesville.
Citizen centered
People empowered

OWNER'S PROJECT NUMBER:

MG PROJECT NUMBER: 19050
REVISIONS:
REV DESC DATE

ISSUE:
FINAL CONSTRUCTION DOCUMENTS

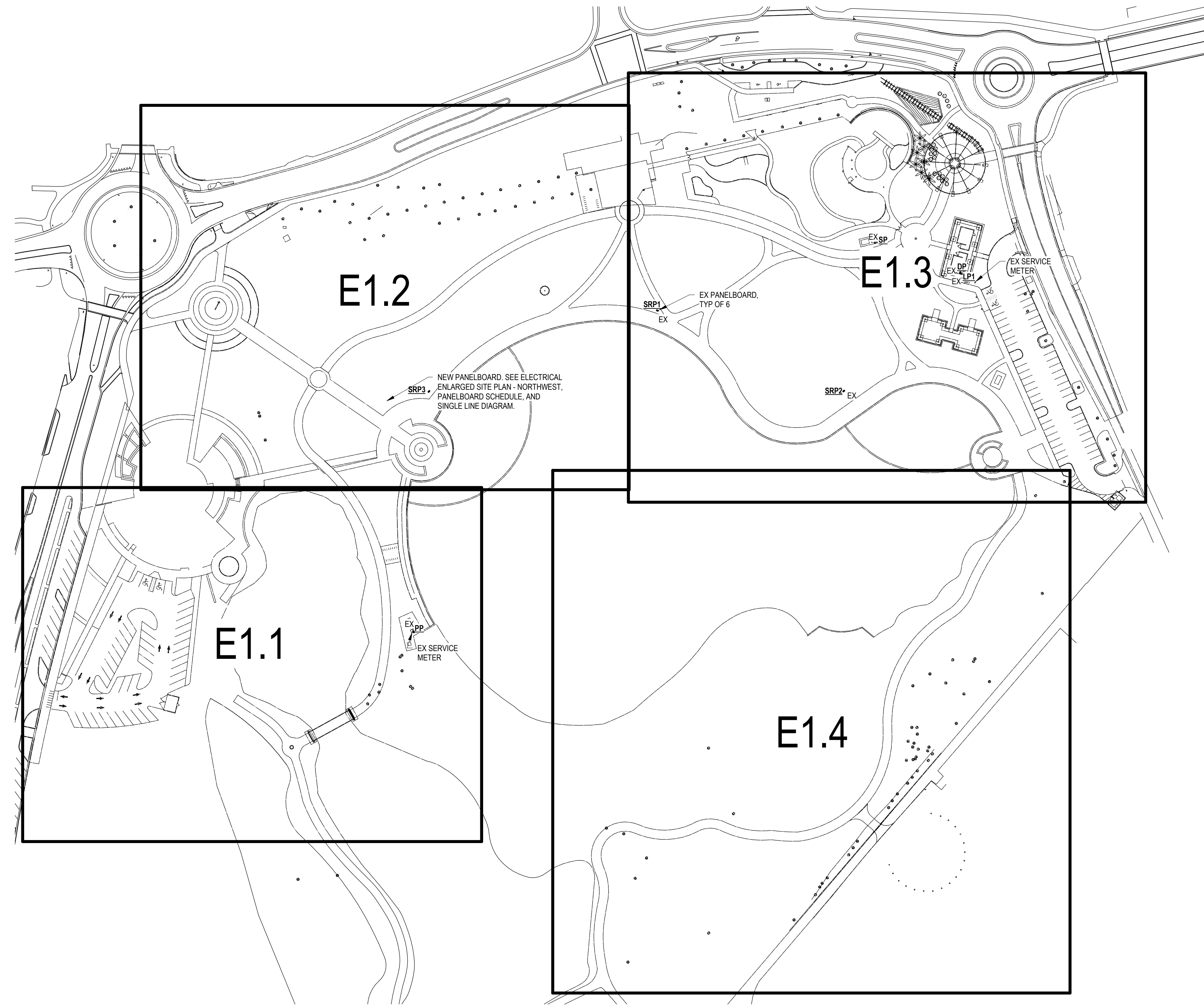
ISSUE DATE:
08/26/2019

CHECKED BY:
APM

SHEET TITLE:
ELECTRICAL
LEGEND, DETAILS &
SCHEDULES

SHEET NUMBER:

E0.1



OVERALL ELECTRICAL KEY PLAN
1" = 80'-0"



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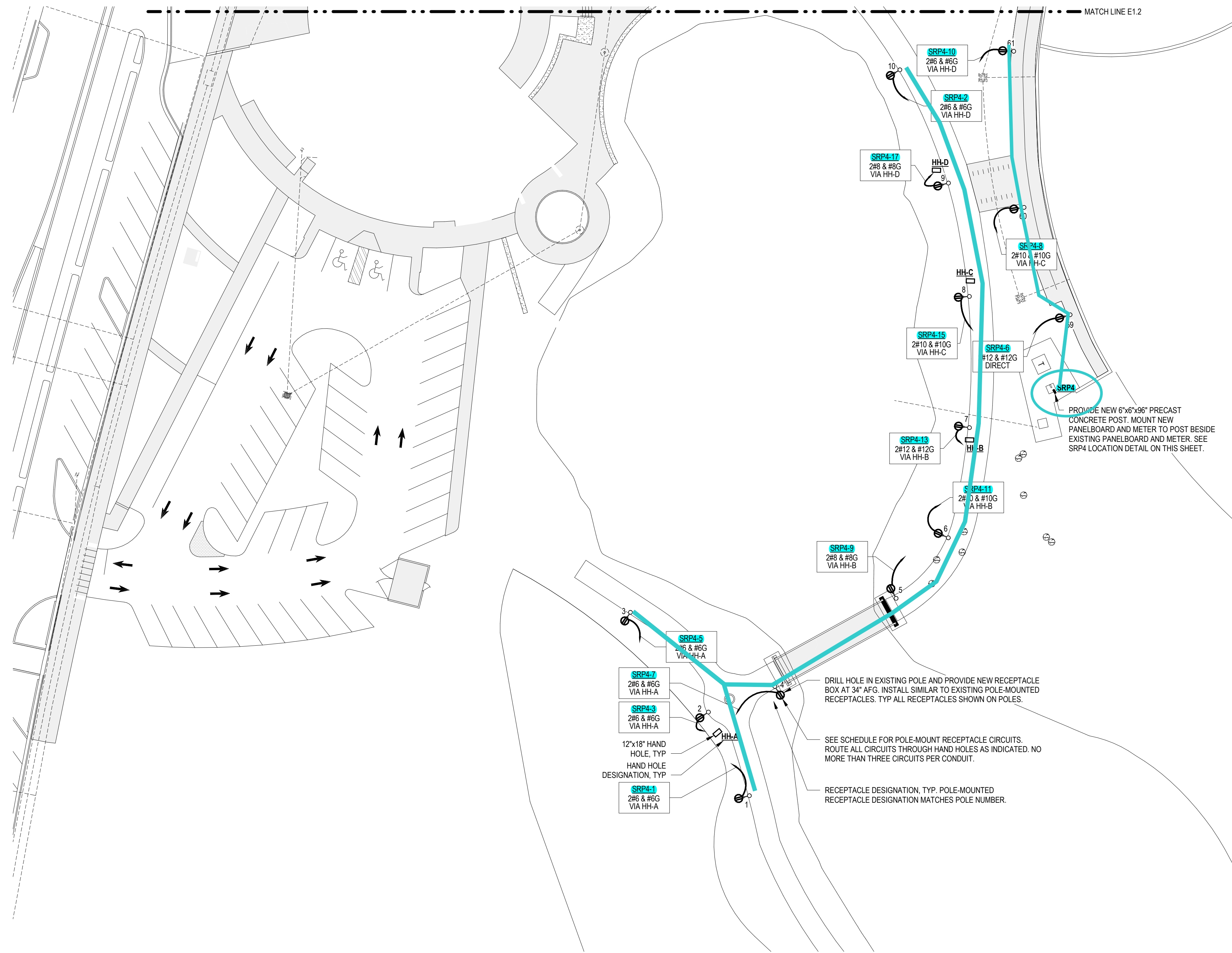
ISSUE DATE:
08/26/2019

CHECKED BY:
APM

SHEET TITLE:
**OVERALL
ELECTRICAL KEY
PLAN**

SHEET NUMBER:

E1.0



ELECTRICAL ENLARGED SITE PLAN - SOUTHWEST
1" = 30'-0"



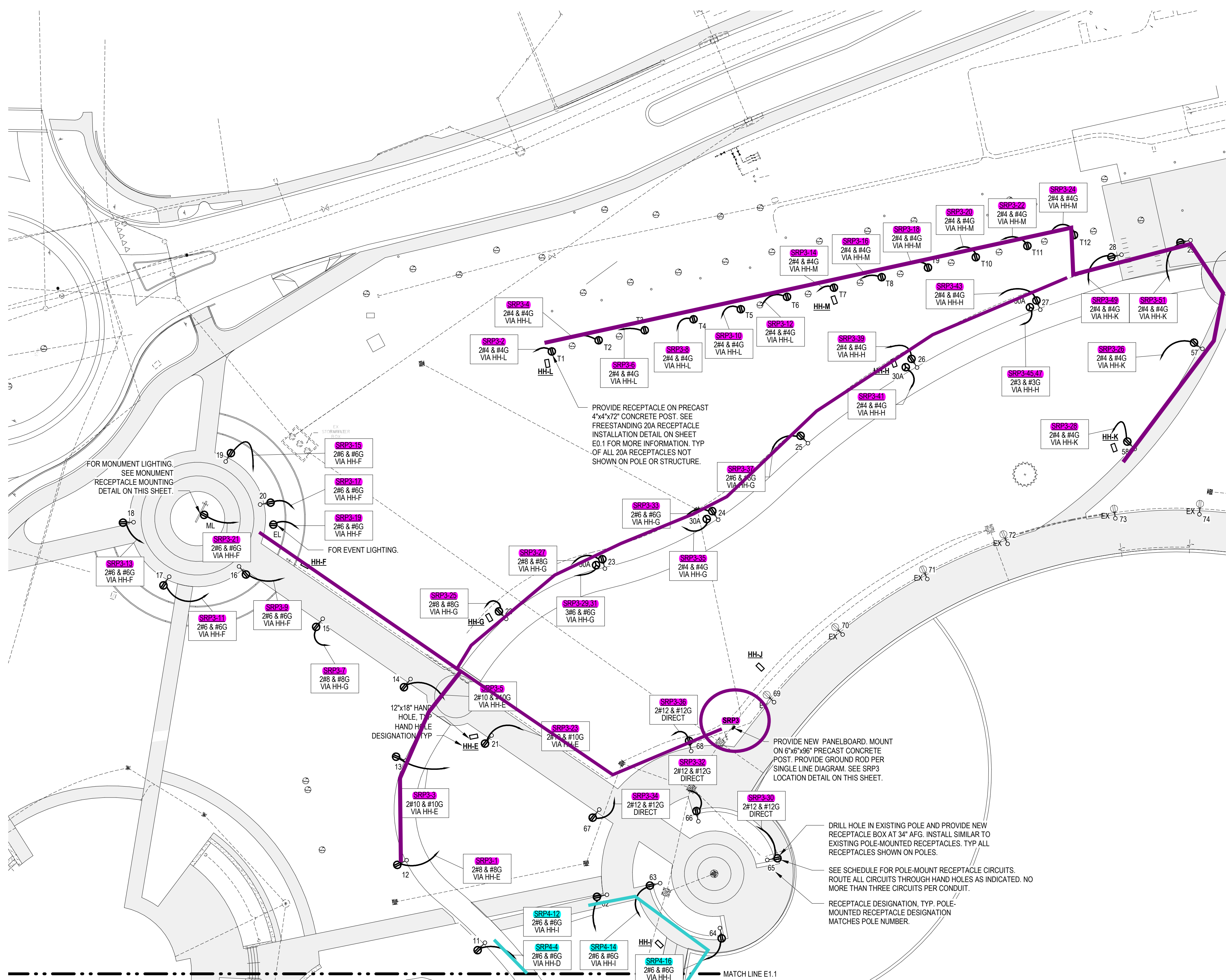
KEY PLAN SOUTHWEST
1" = 300'-0"



SRP4 LOCATION DETAIL
1 NOT TO SCALE

GENERAL NOTES

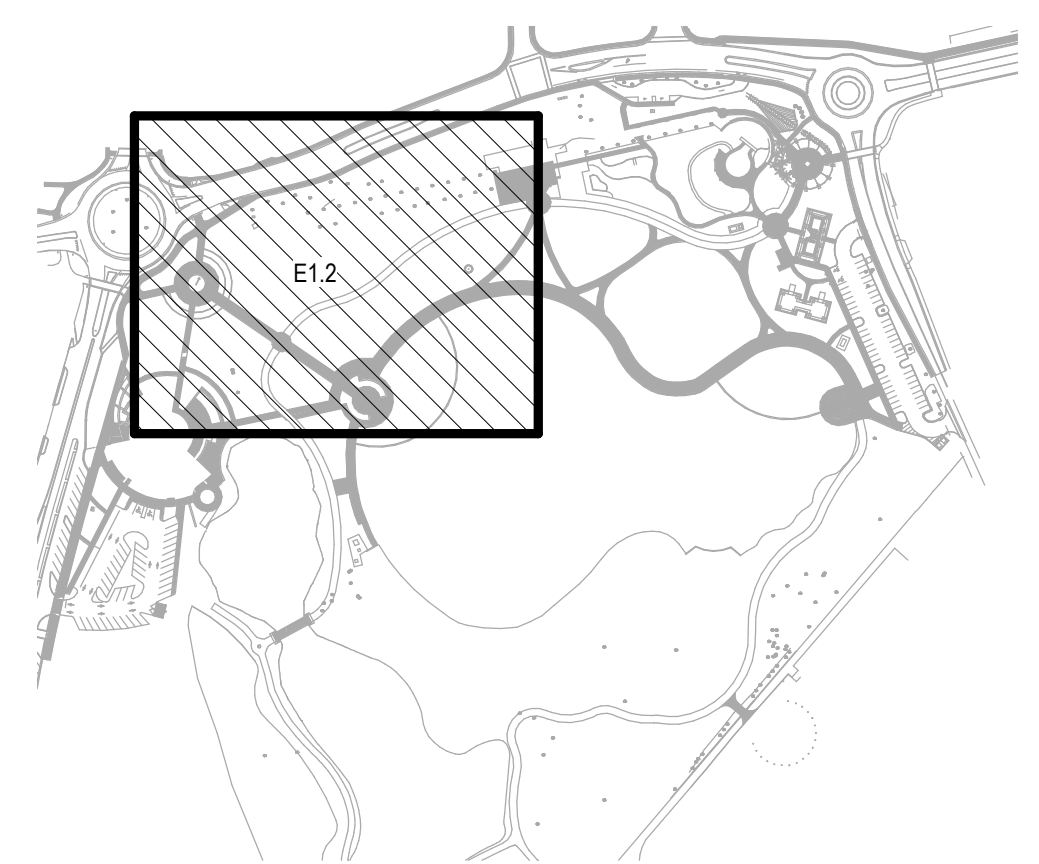
1. ROUTE CONDUITS ALONG CONTOURS OF EXISTING WALKWAYS. UNDERMINE SIDEWALKS AS NEEDED FOR CROSSINGS. DO NOT CUT EXISTING HARDSCAPE WITHOUT PRIOR PERMISSION.
2. MINIMIZE DAMAGE TO PLANTS, ROOTS, AND SOFTSCAPE. COORDINATE ALL DIGGING UNDER TREE CANOPIES WITH OWNER PRIOR TO PROCEEDING.
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4. CAREFULLY COORDINATE ALL ENVIRONMENTAL REQUIREMENTS FOR ALL DIGGING WITH FDEP. SEE SOIL CONTAMINANTS NOTE ON SHEET ED.1.
5. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED LANDSCAPING AND TURF REPAIR/REPLACEMENT.



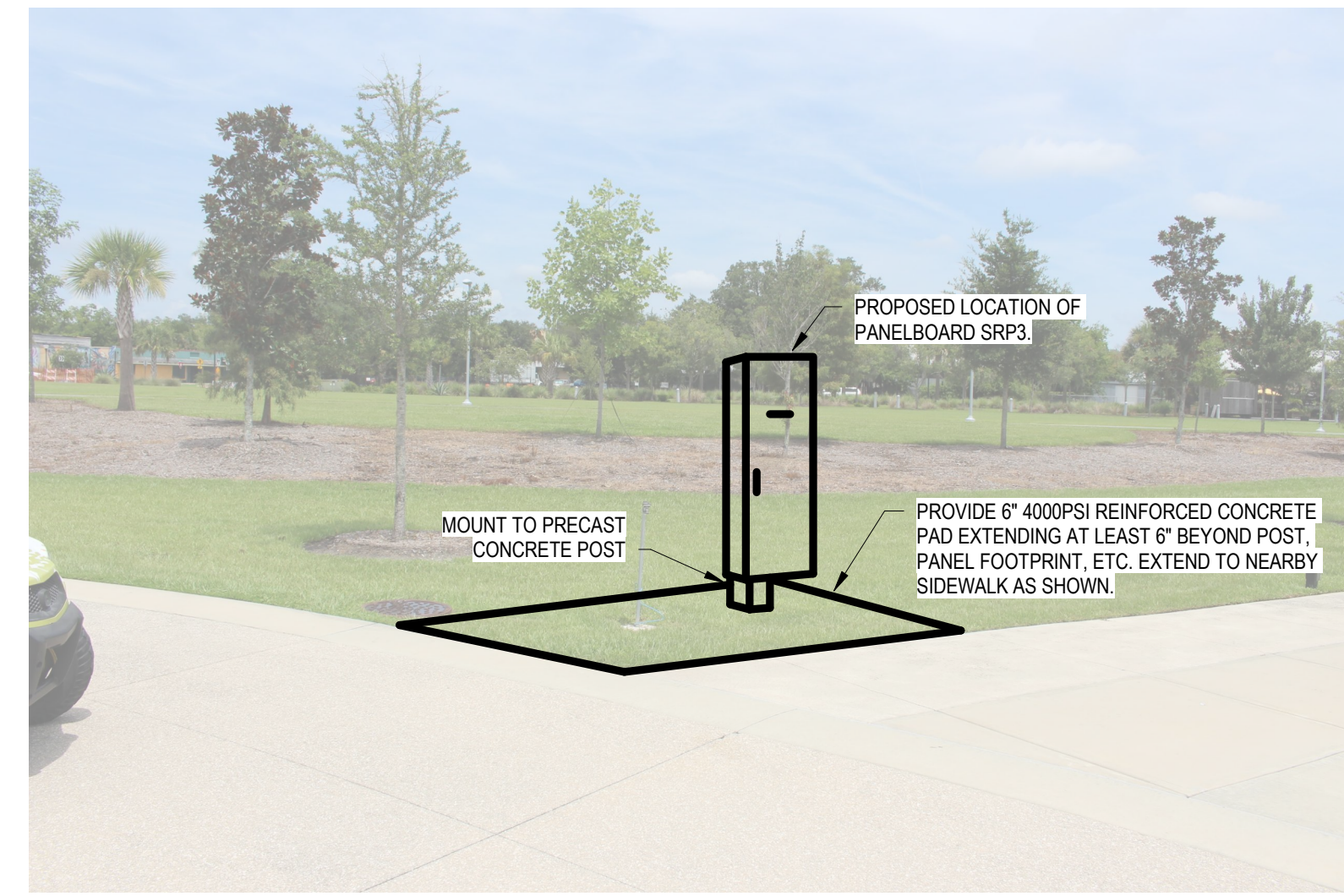
ELECTRICAL ENLARGED SITE PLAN - NORTHWEST
1" = 30'-0"

GENERAL NOTES

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1 MONUMENT RECEPTACLE MOUNTING DETAIL
NOT TO SCALE



2 SRP3 LOCATION DETAIL
NOT TO SCALE



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OWNER'S PROJECT NUMBER:

REV	DESC	DATE

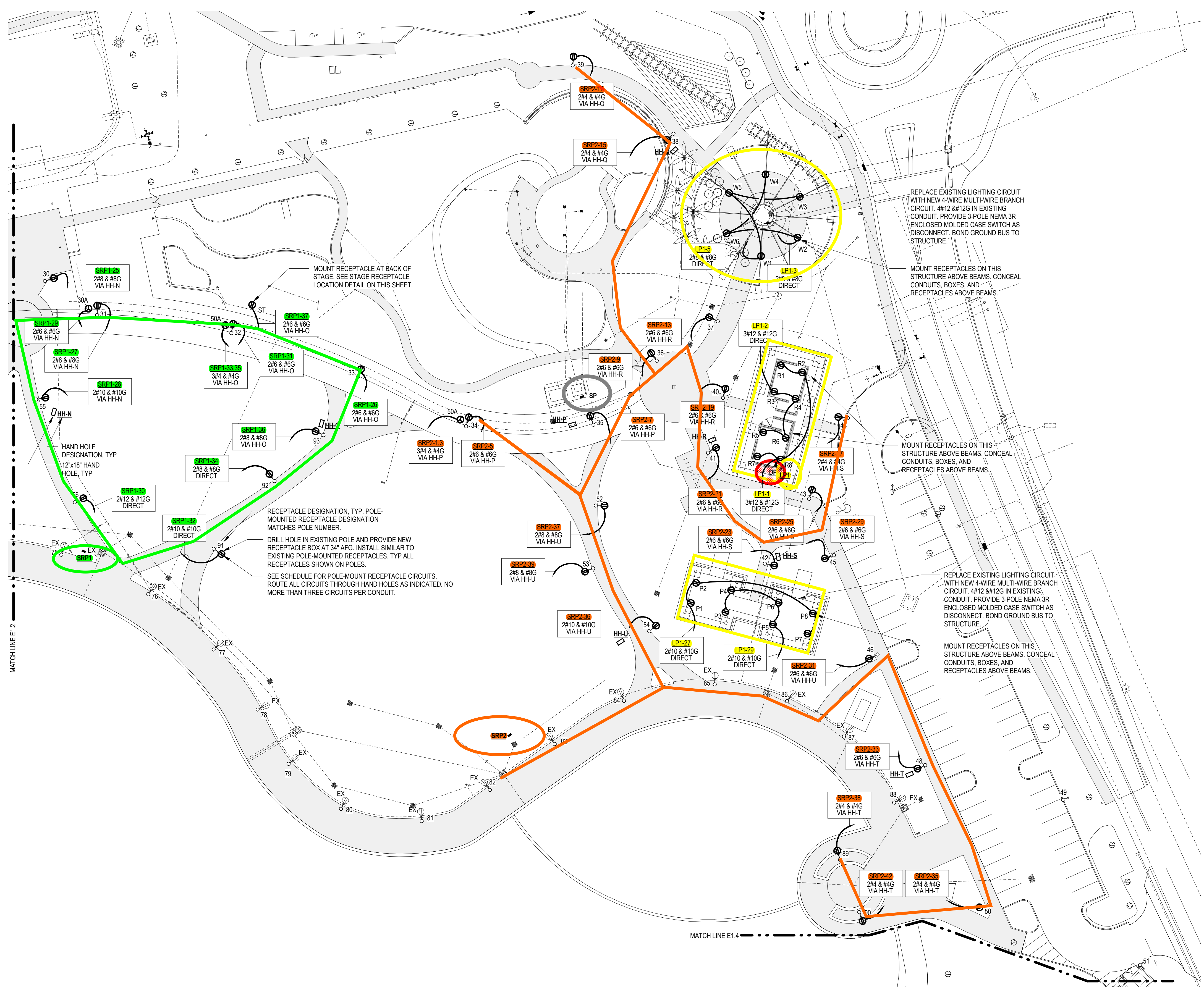
ISSUE:
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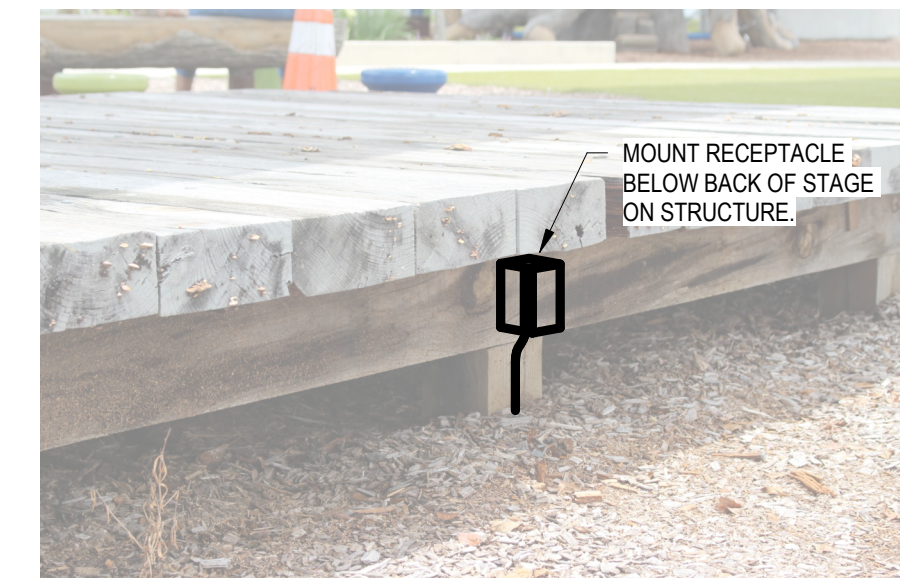
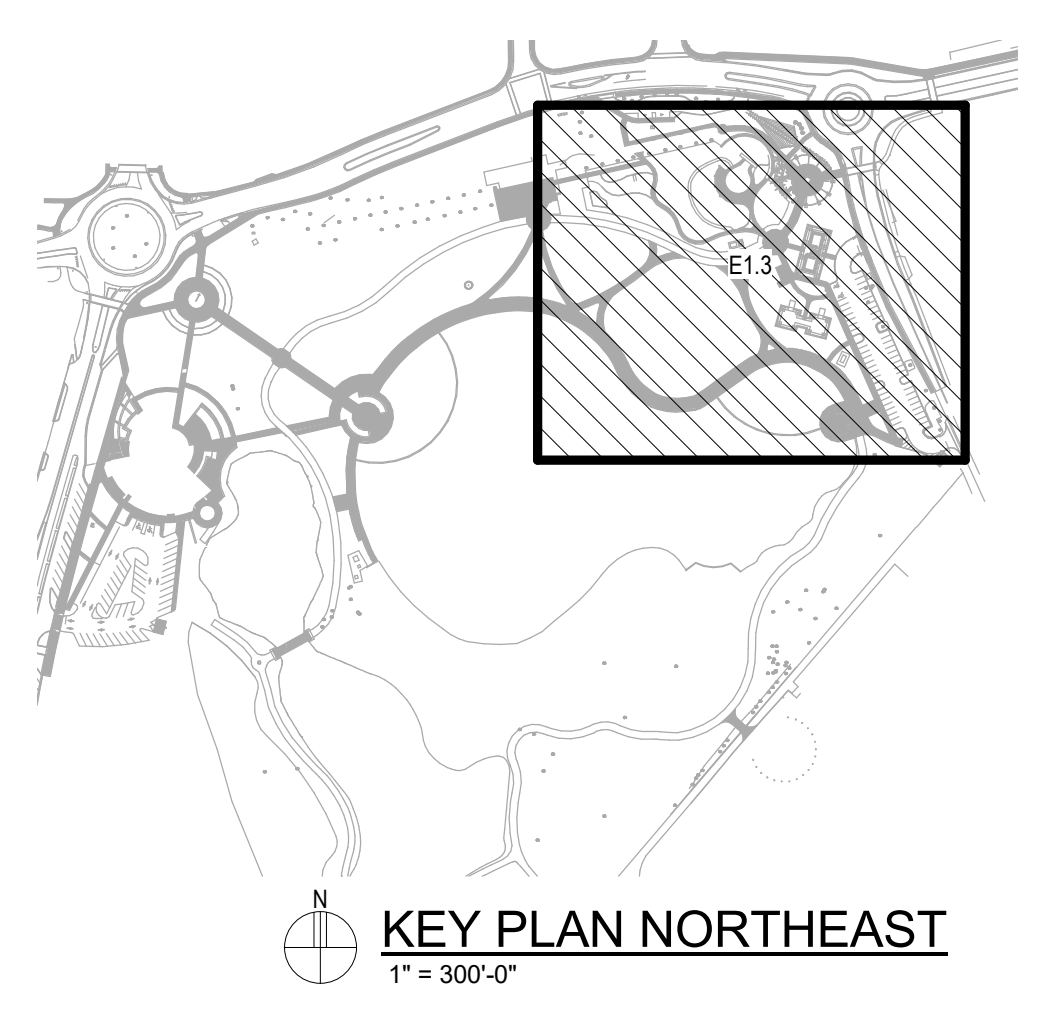
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APM

SHEET TITLE:
**ELECTRICAL
ENLARGED SITE
PLAN - NORTHWEST**
SHEET NUMBER:

E1.2



ELECTRICAL ENLARGED SITE PLAN - NORTHEAST
1" = 30'-0"



STAGE RECEPTACLE LOCATION DETAIL
1" = 1'-0"

GENERAL NOTES

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MG PROJECT NUMBER: 19050
REV DESC DATE

ISSUE:
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ISSUE DATE:
08/26/2019

CHECKED BY:
APM

SHEET TITLE:
**ELECTRICAL
ENLARGED SITE
PLAN - NORTHEAST**
SHEET NUMBER:

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	BASIS OF DESIGN	LIGHT SOURCE	INITIAL LUMENS	COLOR TEMPERATURE	WATTAGE	VOLTAGE	MOUNTING	NOTES
PBL	LED BOLLARD	SIGNIFY GARDCO PBL-14L-200-NW-G2-3-UNV	LED	965 lm	4000 K	11 VA	UNV	CONCRETE BASE	SEE PHOTOMETRIC PLANS BY VENDOR

- NOTES:
- SUBMIT ALTERNATES TO A/E FOR CONSIDERATION A MINIMUM OF 10 BUSINESS DAYS PRIOR TO BID. SUBMIT FIXTURE "CUT SHEET", INDICATING ALL INTENDED RATINGS AND OPTIONS.
 - A/E WILL REVIEW ALTERNATES TO DETERMINE IF THEY ARE FUNCTIONALLY, AESTHETICALLY, AND STRUCTURALLY EQUAL. A/E RESERVE THE RIGHT TO REJECT ANY FIXTURES WHICH ARE NOT DEEMED EQUAL TO THE BASIS OF DESIGN.
 - ALTERNATES REJECTED BY A/E SHALL NOT RESULT IN ADDITIONAL CHARGES TO THE OWNER. MINUTES.

MATCH LINE E1.3

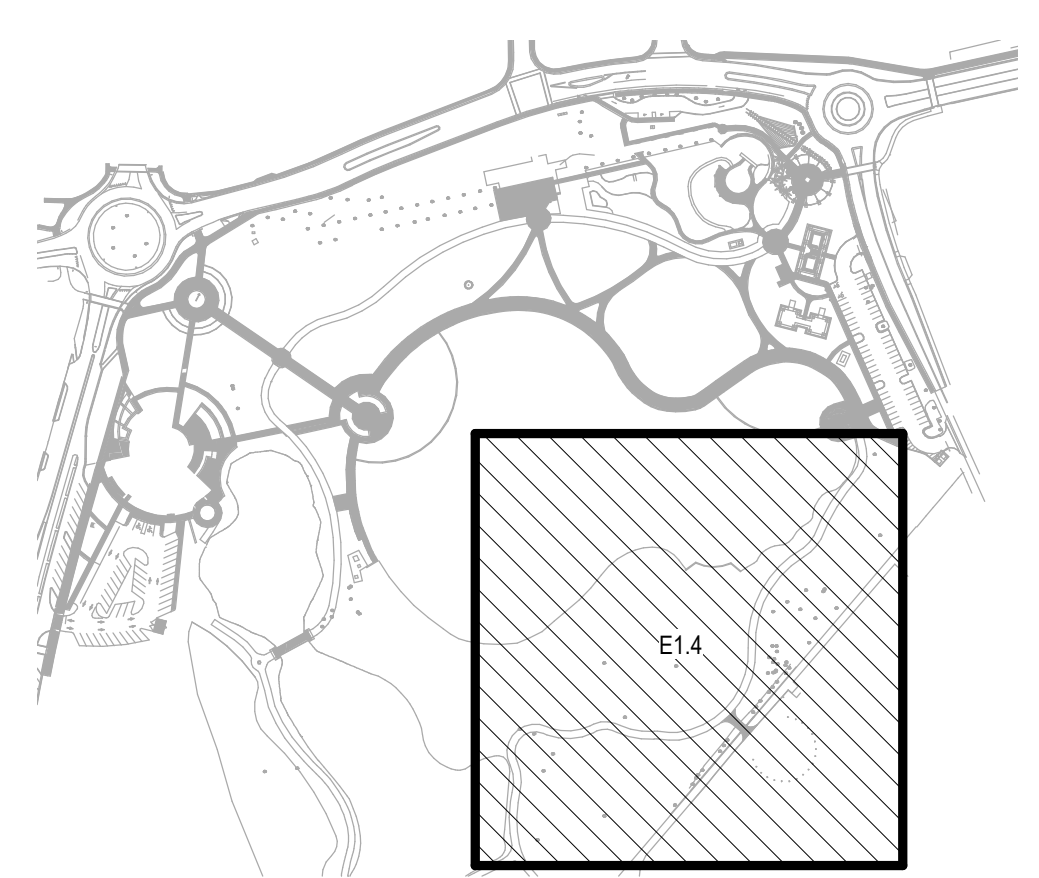
LP119.21
2#10 & #10G
VIA TC & PC

BOLLARD LIGHT, TYP OF 21.
INSTALL 3' FROM PATH. SEE DETAIL.

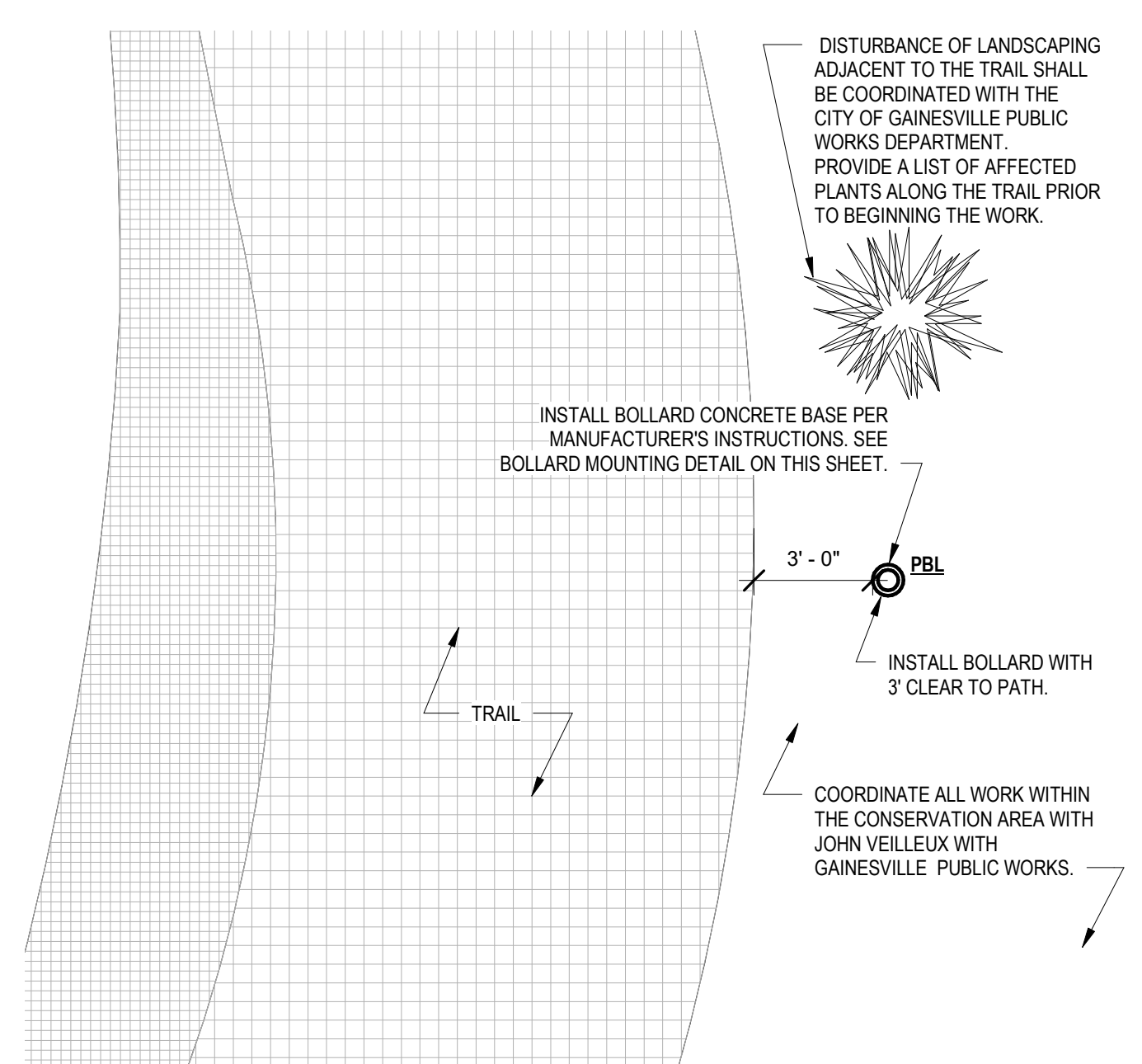
COORDINATE ALL WORK WITHIN THE
CONSERVATION AREA WITH JOHN VELLEUX
WITH GAINESVILLE PUBLIC WORKS.

PROVIDE SPARE 1" FROM PANEL
LP1 TO THIS LOCATION FOR
FUTURE LIGHTING. CAP AND MARK
EXACT LOCATION IN RECORD SET.

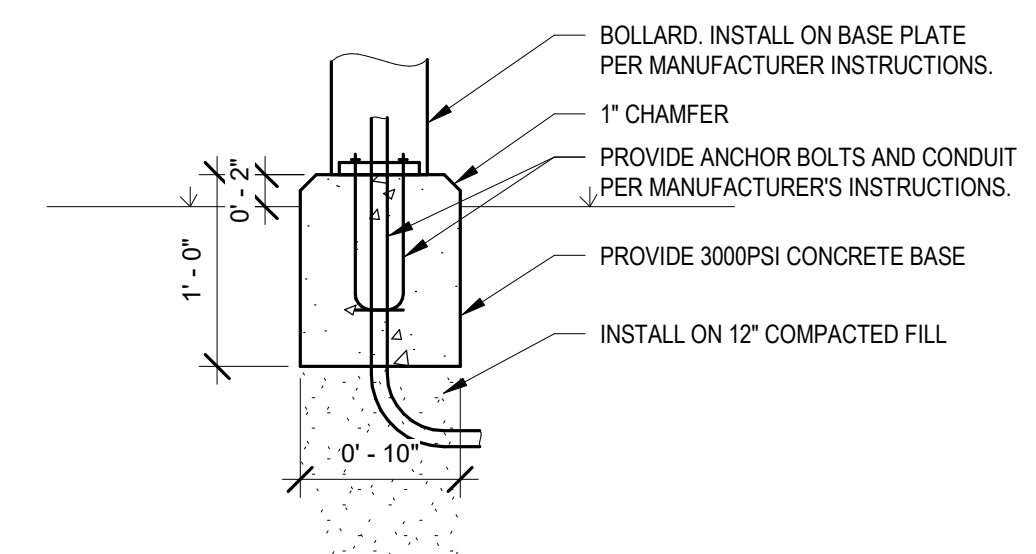
FUTURE BOLLARD, TYP OF 23



KEY PLAN SOUTHEAST
1" = 300'-0"



1 BOLLARD INSTALLATION DETAIL
NOT TO SCALE



2 BOLLARD MOUNTING DETAIL
NOT TO SCALE

GENERAL NOTES

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ELECTRICAL ENLARGED SITE PLAN - SOUTHEAST
1" = 30'-0"



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DEPOT PARK ELECTRICAL**

OWNER:
CITY OF GAINESVILLE

874 SE 4TH STREET
GAINESVILLE, FL 32601
Gainesville.
Citizen centered
People empowered

OWNER'S PROJECT NUMBER:

REV	DESC	DATE

ISSUE:
FINAL CONSTRUCTION DOCUMENTS

ISSUE DATE:
08/26/2019

CHECKED BY:
APM

SHEET TITLE:
**ELECTRICAL
ENLARGED SITE
PLAN - SOUTHEAST**
SHEET NUMBER:

E1.4

Ex Branch Panel: DP

Location: Supply From: DP
Mounting: SURFACE
Enclosure: NEMA 1
Basis of Design: NQ
Service Rated: YES

Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 42,000
SPD: YES
PQM: NO

Phase Bus Rating: 400 A
MCB Rating: 400 A
Neutral Rating: 100%
Feeder Ampacity: 400 A
Feeder Phase Conductor: 3#600
Feeder Neutral Conductor: N/A
Feeder Ground Conductor: N/A
Feeder Conduit: 4"
Number of Parallel Runs: 1

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT		
1	SPACE ONLY	--	--	0 VA			1861 VA						2		
3	UNKNOWN - COORDINATE WITH OWNER TO DETERMIN LOAD.	40 A	3	0 VA				1260 VA			3	100 A	LP1	4	
5					0 VA			1260 VA						6	
7					0 VA			16940...						8	
9					0 VA				16607...				3	200 A	SRP1
11	SP	100 A	3	0 VA			0 VA						12		
13					0 VA			0 VA						14	
15	SRP2	300 A	3	21599...			0 VA				3	60 A	SPD	16	
17					20351...			0 VA						18	
19					19436...			0 VA				--	--	SPD	20
21	N/A	--	--	0 VA			0 VA			--	--	SPD	22		
23	MAIN	400 A	3	0 VA			0 VA				--	--	SPD	24	
25					0 VA			0 VA				--	--	SPD	26
27					0 VA			0 VA				--	--	SPD	28
29				N/A	--	--	0 VA			0 VA			--	--	SPD
Total Load:				38227 VA			39466 VA			38842 VA					
Total Amps:				319 A			330 A			324 A					

Ex Branch Panel: SRP1

Location: Supply From: DP
Mounting: CONCRETE POST & STRUT
Enclosure: N4X SS
Basis of Design: NQ
Service Rated: NO

Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 10,000
SPD: YES
PQM: NO

Phase Bus Rating: 200 A
MCB Rating: 200 A
Neutral Rating: 100%
Feeder Ampacity: 200 A
Feeder Phase Conductor: 3#3/0
Feeder Neutral Conductor: 3#3/0
Feeder Ground Conductor: #6
Feeder Conduit: 2"
Number of Parallel Runs: 1

Notes:
DEMOLISH EXISTING SPD. PROVIDE NEW 100KA EXTERNAL NEMA 4X SPD WITH 50KA MOVs. BOD: ASCO 430. CONNECT VIA 5#6.
EXISTING LOADS ARE INCLUDED AS A LUMP SUM, BASED ON 125% OF PEAK 12 MONTH DEMAND PER 2014 NEC 220.87.
FOOD TRUCKS LOAD IS CALCULATED AT 80% OF NOMINAL BREAKER RATING, WITH 65% FACTOR APPLIED FOR THERMOSTATICALLY CONTROLLED KITCHEN EQUIPMENT (2014 NEC TABLE 220.56).
NEW WORK IS INDICATED IN BOLD. PROVIDE NEW CIRCUIT BREAKERS WHERE BOLD.
VERIFY ALL EXISTING LOADS AND UPDATE PANEL DIRECTORY ACCORDINGLY.

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT			
1	UNKNOW (SEE NOTES)	20 A	3	0 VA			10700...				1	30 A	30A RCPT #1	2		
3					0 VA			10700...				1	30 A	30A RCPT #2	4	
5					0 VA		0 VA		10700...				2	50 A	30A RCPT #3	6
7					0 VA		0 VA		0 VA				2	50 A	30A RCPT #4	8
9	RCPT @ POLES 71,72,73	20 A	3		0 VA		0 VA		0 VA		2	50 A	30A RCPT #4	10		
11					0 VA		0 VA		0 VA				12			
13	RCPT @ POLES 74,75,76	20 A	3	0 VA			0 VA				1	20 A	UNKNOW (SEE NOTES)	14		
15					0 VA			0 VA				1	20 A	UNKNOW (SEE NOTES)	16	
17					0 VA			0 VA		0 VA			1	20 A	UNKNOW (SEE NOTES)	18
19	RCPT @ POLES 77,78,79	20 A	3	0 VA			0 VA				3	30 A	RCPT @ POLES 68,69,70	20		
21					0 VA			0 VA						22		
23					0 VA			0 VA		0 VA				24		
25					1248 VA			1248 VA		1248 VA			1	20 A	RCPT @ POLE 33	26
27	RCPT @ POLE 31	20 A	1		1248 VA		1248 VA				1	20 A	RCPT @ POLE 55	28		
29	30A RCPT @ POLE 31	30 A	1			1872 VA		1248 VA			1	20 A	RCPT @ POLE 56	30		
31	RCPT @ POLE 32	20 A	1	1248 VA			1248 VA				1	20 A	RCPT @ POLE 91	32		
33	50A RCPT @ POLE 32	50 A	2		2163 VA		1248 VA				1	20 A	RCPT @ POLE 92	34		
35						2163 VA		1248 VA		1248 VA		1	20 A	RCPT @ POLE 93	36	
37	RCPT @ POLE PLAY STAGE	20 A	1	1248 VA			0 VA						38			
39	SPARE	20 A	1		0 VA		0 VA			3	60 A	SPD	40			
41	SPARE	20 A	1		0 VA		0 VA						42			
Total Load:				16940 VA			16607 VA			17231 VA						
Total Amps:				142 A			138 A			144 A						

Ex Branch Panel: LP1

Location: Supply From: DP
Mounting: SURFACE
Enclosure: NEMA 1
Basis of Design: NQ
Service Rated: YES

Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 65,000
SPD: NO
PQM: NO

Phase Bus Rating: 150 A
MCB Rating: 150 A
Neutral Rating: 100%
Feeder Ampacity: 150 A
Feeder Phase Conductor: 3#1/0
Feeder Neutral Conductor: #1/0
Feeder Ground Conductor: #6
Feeder Conduit: 2"
Number of Parallel Runs: 1

Notes:
FOOD TRUCKS LOAD IS CALCULATED AT 80% OF NOMINAL BREAKER RATING, WITH 65% FACTOR APPLIED FOR THERMOSTATICALLY CONTROLLED KITCHEN EQUIPMENT (2014 NEC TABLE 220.56).
NEW WORK IS INDICATED IN BOLD. PROVIDE NEW CIRCUIT BREAKERS WHERE BOLD.
VERIFY ALL EXISTING LOADS AND UPDATE PANEL DIRECTORY ACCORDINGLY.
PLACE EX MENS ROOM AND WOMENS ROOM RECEPTACLES ON SINGLE BREAKER #22.
PLACE ALL EX WAGON WHEEL LIGHTS ON SINGLE BREAKER #17.

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT		
1	RCPT - ABOVE RESTROOM	20 A	1	720 VA			720 VA			1	20 A	RCPT - ABOVE RESTROOM	2		
3	RCPT - WAGON WHEEL	20 A	1		540 VA			0 VA			2	20 A	UNKNOW (SEE NOTES)	4	
5	RCPT - WAGON WHEEL	20 A	1			540 VA		0 VA			2	20 A	UNKNOW (SEE NOTES)	6	
7	POLE LIGHTS	30 A	2	0 VA			0 VA				2	20 A	POLE LIGHTS	8	
9					0 VA			0 VA		0 VA			2	20 A	POLE LIGHTS
11	POLE LIGHTS	20 A	2	0 VA			0 VA				2	100 A	WATER HEATER	12	
13					0 VA			0 VA		0 VA			1	20 A	RCPT - ELECTRICAL ROOM
15	PAVILION LIGHTS	20 A	1	0 VA			0 VA				1	20 A	RCPT - ELECTRICAL ROOM	16	
17	WAGON WHEEN LIGHTS *** (ABSORB...	20 A	1			0 VA		0 VA			1	20 A	LTS - ELECTRICAL ROOM	18	
19	SOUTHEAST TRAIL LIGHTS	20 A	2	456 VA			0 VA				1	20 A	RCPT - RESTROOMS	20	
21					0 VA			0 VA				1	20 A	MENS ROOM LIGHTS	22
23					0 VA			0 VA		0 VA			1	20 A	RCPT - MOP ROOM
25	DRINKING FOUNTAIN	20 A	1	0 VA			0 VA			--	--	SPACE ONLY	26		
27	RCPT - PAVILION	20 A	1		720 VA			0 VA		--	--	SPACE ONLY	28		
29	RCPT - PAVILION	20 A	1			720 VA			0 VA	--	--	SPACE ONLY	30		
Total Load:				1861 VA			1260 VA			1260 VA					
Total Amps:				16 A			11 A			11 A					

Ex Branch Panel: SRP2

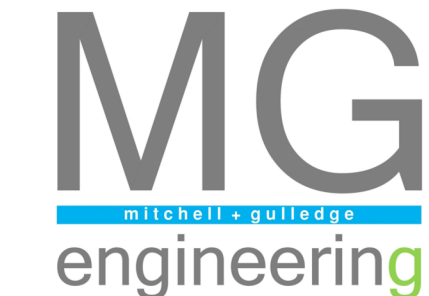
Location: Supply From: DP
Mounting: CONCRETE POST & STRUT
Enclosure: N4X SS
Basis of Design: NQ
Service Rated: NO

Volts: 120/208 Wye
Phases: 3
Wires: 4
A.I.C. Rating: 10,000
SPD: YES
PQM: NO

Phase Bus Rating: 300 A
MCB Rating: 300 A
Neutral Rating: 100%
Feeder Ampacity: 300 A
Feeder Phase Conductor: 3#350
Feeder Neutral Conductor: #350
Feeder Ground Conductor: #4
Feeder Conduit: 3"
Number of Parallel Runs: 1

Notes:
EXISTING LOADS ARE INCLUDED AS A LUMP SUM, BASED ON 125% OF PEAK 12 MONTH DEMAND PER 2014 NEC 220.87.
FOOD TRUCKS LOAD IS CALCULATED AT 80% OF NOMINAL BREAKER RATING, WITH 65% FACTOR APPLIED FOR THERMOSTATICALLY CONTROLLED KITCHEN EQUIPMENT (2014 NEC TABLE 220.56).
NEW WORK IS INDICATED IN BOLD. PROVIDE NEW CIRCUIT BREAKERS WHERE BOLD.
VERIFY ALL EXISTING LOADS AND UPDATE PANEL DIRECTORY ACCORDINGLY.

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT		
1	50A RCPT @ POLE 34	50 A	2	2163 VA			10700...				3	20 A	RCPT - POLES (UNKNOW #, SEE NOTES)	2	
3					2163 VA		1248 VA		10700...						4
5				RCPT @ POLE 34	20 A	1		1248 VA		0 VA		10700...			6
7				RCPT @ POLE 35	20 A	1	1248 VA			0 VA		0 VA			8
9	RCPT @ POLE 36	20 A	1	1248 VA			0 VA		0 VA		2	50 A	UNKNOW (SEE NOTES)	10	
11	RCPT - POLES (UNKNOW #, SEE...	20 A	1			0 VA			0 VA		2	50 A	UNKNOW (SEE NOTES)	12	
13	RCPT @ POLE 37	20 A	1	1248 VA			0 VA		0 VA		2	50 A	UNKNOW (SEE NOTES)	14	
15	RCPT @ POLE 38	20 A	1	1248 VA			0 VA		0 VA		2	50 A	UNKNOW (SEE NOTES)	16	
17	RCPT @ POLE 39	20 A	1	1248 VA		1248 VA		0 VA	0 VA		2	50 A	UNKNOW (SEE NOTES)	18	
19	RCPT @ POLE 40	20 A	1	1248 VA			0 VA		0 VA		2	50 A	STAGE HYDRAULICS	20	
21	RCPT @ POLE 41	20 A	1	1248 VA			0 VA		0 VA		2	50 A	STAGE HYDRAULICS	22	
23	RCPT @ POLE 42	20 A	1	1248 VA		1248 VA		0 VA	0 VA		1	20 A	RCPT - POLES (UNKNOW #, SEE...	24	
25	RCPT @ POLE 43	20 A	1	1248 VA			0 VA		0 VA		1	20 A	RCPT - POLES (UNKNOW #, SEE...	26	
27	RCPT @ POLE 44	20 A	1	1248 VA			0 VA		0 VA		2	50 A	STAGE HYDRAULICS	28	
29	RCPT @ POLE 45	20 A	1	1248 VA		1248 VA		0 VA	0 VA		2	50 A	STAGE HYDRAULICS	30	
31	RCPT @ POLE 46	20 A	1	1248 VA			0 VA		0 VA		1	20 A	RCPT - POLES (UNKNOW #, SEE...	32	
33	RCPT @ POLE 48	20 A	1	1248 VA			0 VA		0 VA		1	20 A	RCPT - POLES (UNKNOW #, SEE...	34	
35	RCPT @ POLE 50	20 A	1	1248 VA		1248 VA		1248 VA			1	20 A	RCPT @ POLE 54	36	
37	RCPT @ POLE 52	20 A	1	1248 VA			1248 VA		1248 VA		1	20 A	RCPT @ POLE 89	38	
39	RCPT @ POLE 53	20 A	1	1248 VA			0 VA		0 VA		1	20 A	RCPT - POLES (UNKNOW #, SEE...	40	
41	SPARE	20 A	1			0 VA		1248 VA		1	20 A	RCPT @ POLE 90	42		
43	SPD	--	--	0 VA			0 VA		0 VA	--	--	SPD	44		
45	SPD	--	--		0 VA		0 VA		0 VA	--	--	SPD	46		
47	SPD	--	--			0 VA		0 VA		0 VA	--	SPD	48		
49	SPD	--	--	0 VA			0 VA		0 VA	--	--	SPD	50		
51	SPD	--	--		0 VA		0 VA		0 VA	--	--	SPD	52		
53	SPD	--	--			0 VA			0 VA	--	--	SPD	54		
Total Load:				21599 VA			20351 VA			19436 VA					
Total Amps:				181 A			171 A			162 A					



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PROJECT NAME:
CITY OF GAINESVILLE
DEPOT PARK ELECTRICAL

OWNER:
CITY OF GAINESVILLE

874 SE 4TH STREET
GAINESVILLE, FL 32601

Gainesville.
Citizen centered
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CHECKED BY:
APM

SHEET TITLE:
ELECTRICAL SCHEDULES

SHEET NUMBER:

E2.0

New Branch Panel: SRP3

Location:	Volts: 120/208 Wye	Phase Bus Rating: 225 A
Supply From: SRP4	Phases: 3	MCB Rating: 225 A
Mounting: CONCRETE POST & STRUT	Wires: 4	Neutral Rating: 100%
Enclosure: N4X SS	A.I.C. Rating: 10,000	Feeder Ampacity: 225 A
Basis of Design: NQ	SPD: YES	Feeder Phase Conductor: 3#250
Service Rated: YES	PQM: NO	Feeder Neutral Conductor: 1#250
		Feeder Ground Conductor: #3
		Feeder Conduit: 4"
		Number of Parallel Runs: 1

Notes:
 PROVIDE 100kA EXTERNAL NEMA 4X SPD WITH 50kA MOVs. BOD: ASCO 430. CONNECT VIA 5#6.
 FOOD TRUCKS LOAD IS CALCULATED AT 80% OF NOMINAL BREAKER RATING, WITH 65% FACTOR APPLIED FOR THERMOSTATICALLY CONTROLLED KITCHEN EQUIPMENT (2014 NEC TABLE 220.56).

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	RCPT @ POLE 12	20 A	1	1248 VA			1248 VA			1	20 A	RCPT @ FOOT PATH T1	2
3	RCPT @ POLE 13	20 A	1		1248 VA			1248 VA		1	20 A	RCPT @ FOOT PATH T2	4
5	RCPT @ POLE 14	20 A	1			1248 VA			1248 VA	1	20 A	RCPT @ FOOT PATH T3	6
7	RCPT @ POLE 15	20 A	1	1248 VA			1248 VA			1	20 A	RCPT @ FOOT PATH T4	8
9	RCPT @ POLE 16	20 A	1		1248 VA			1248 VA		1	20 A	RCPT @ FOOT PATH T5	10
11	RCPT @ POLE 17	20 A	1			1248 VA			1248 VA	1	20 A	RCPT @ FOOT PATH T6	12
13	RCPT @ POLE 18	20 A	1	1248 VA			1248 VA			1	20 A	RCPT @ FOOT PATH T7	14
15	RCPT @ POLE 19	20 A	1		1248 VA			1248 VA		1	20 A	RCPT @ FOOT PATH T8	16
17	RCPT @ POLE 20	20 A	1			1248 VA			1248 VA	1	20 A	RCPT @ FOOT PATH T9	18
19	RCPT @ EVENT LIGHTING	20 A	1	1248 VA			1248 VA			1	20 A	RCPT @ FOOT PATH T10	20
21	RCPT @ MONUMENT	20 A	1		1248 VA			1248 VA		1	20 A	RCPT @ FOOT PATH T11	22
23	RCPT @ POLE 21	20 A	1			1248 VA			1248 VA	1	20 A	RCPT @ FOOT PATH T12	24
25	RCPT @ POLE 22	20 A	1	1248 VA			1248 VA			1	20 A	RCPT @ POLE 57	26
27	RCPT @ POLE 23	20 A	1		1248 VA			1248 VA		1	20 A	RCPT @ POLE 58	28
29						2163 VA			1248 VA	1	20 A	RCPT @ POLE 65	30
31	50A RCPT @ POLE 23	50 A	2	2163 VA			1248 VA			1	20 A	RCPT @ POLE 66	32
33	RCPT @ POLE 24	20 A	1		1248 VA			1248 VA		1	20 A	RCPT @ POLE 67	34
35	30A RCPT @ POLE 24	30 A	1			1872 VA			1248 VA	1	20 A	RCPT @ POLE 68	36
37	RCPT @ POLE 25	20 A	1	1248 VA			0 VA			1	20 A	SPARE	38
39	RCPT @ POLE 26	20 A	1		1248 VA			0 VA		1	20 A	SPARE	40
41	30A RCPT @ POLE 26	30 A	1			1872 VA			0 VA	1	20 A	SPARE	42
43	RCPT @ POLE 27	20 A	1	1248 VA			0 VA			1	20 A	SPARE	44
45					2163 VA			0 VA		1	20 A	SPARE	46
47	50A RCPT @ POLE 27	50 A	2			2163 VA			0 VA	1	20 A	SPARE	48
49	RCPT @ POLE 28	20 A	1	1248 VA			0 VA						50
51	RCPT @ POLE 29	20 A	1		1248 VA			0 VA		3	60 A	SPD	52
53	SPARE	20 A	1			0 VA			0 VA				54
Total Load:				19635 VA		19635 VA		20550 VA					
Total Amps:				164 A		164 A		171 A					

New Branch Panel: SRP4

Location:	Volts: 120/208 Wye	Phase Bus Rating: 300 A
Supply From:	Phases: 3	MCB Rating: 300 A
Mounting: CONCRETE POST & STRUT	Wires: 4	Neutral Rating: 100%
Enclosure: N4X SS	A.I.C. Rating: 22,000	Feeder Ampacity: 300 A
Basis of Design: NQ	SPD: YES	Feeder Phase Conductor: 3#350
Service Rated: YES	PQM: NO	Feeder Neutral Conductor: 1#350
		Feeder Ground Conductor: N/A
		Feeder Conduit: 4"
		Number of Parallel Runs: 1

Notes:
 PROVIDE 100kA EXTERNAL NEMA 4X SPD WITH 50kA MOVs. BOD: ASCO 430. CONNECT VIA 5#6.
 FOOD TRUCKS LOAD IS CALCULATED AT 80% OF NOMINAL BREAKER RATING, WITH 65% FACTOR APPLIED FOR THERMOSTATICALLY CONTROLLED KITCHEN EQUIPMENT (2014 NEC TABLE 220.56).
 REMOVE EXISTING POLE LIGHTS FROM PANEL PP AND CONNECT TO NEW CIRCUIT BREAKER IN THIS PANEL. RE-WORK RACEWAY AND WIRING S NEEDED. DO NOT ROUTE CIRCUIT VIA PANEL PP.

CKT	Circuit Description	Trip	Poles	A	B	C	A	B	C	Poles	Trip	Circuit Description	CKT
1	RCPT @ POLE 1	20 A	1	1248 VA			1248 VA			1	20 A	RCPT @ POLE 10	2
3	RCPT @ POLE 2	20 A	1		1248 VA			1248 VA		1	20 A	RCPT @ POLE 11	4
5	RCPT @ POLE 3	20 A	1			1248 VA			1248 VA	1	20 A	RCPT @ POLE 59	6
7	RCPT @ POLE 4	20 A	1	1248 VA			1248 VA			1	20 A	RCPT @ POLE 60	8
9	RCPT @ POLE 5	20 A	1		1248 VA			1248 VA		1	20 A	RCPT @ POLE 61	10
11	RCPT @ POLE 6	20 A	1			1248 VA			1248 VA	1	20 A	RCPT @ POLE 62	12
13	RCPT @ POLE 7	20 A	1	1248 VA			1248 VA			1	20 A	RCPT @ POLE 63	14
15	RCPT @ POLE 8	20 A	1		1248 VA			1248 VA		1	20 A	RCPT @ POLE 64	16
17	RCPT @ POLE 9	20 A	1			1248 VA			0 VA	--	--	SPACE ONLY	18
19	SPARE	20 A	1	0 VA			0 VA			--	--	SPACE ONLY	20
21	SPARE	20 A	1		0 VA			0 VA		--	--	SPACE ONLY	22
23	SPARE	20 A	1			0 VA			0 VA	--	--	SPACE ONLY	24
25	SPARE	20 A	1	0 VA			0 VA			--	--	SPACE ONLY	26
27	SPARE	20 A	1		0 VA			0 VA		--	--	SPACE ONLY	28
29	SPARE	20 A	1			0 VA			0 VA	--	--	SPACE ONLY	30
31	SPARE	20 A	1	0 VA			0 VA			--	--	SPACE ONLY	32
33	SPARE	20 A	1		0 VA			0 VA		--	--	SPACE ONLY	34
35	SPARE	20 A	1			0 VA			0 VA	--	--	SPACE ONLY	36
37				0 VA			0 VA						38
39	POLE LIGHTS	30 A	3		0 VA			0 VA		3	60 A	SPD	40
41						0 VA			0 VA				42
43				19635...			0 VA			--	--	NOT A SPACE	44
45	SRP3 (SUB-FEED)	300 A	3		19635...			0 VA		--	--	NOT A SPACE	46
47						20550...			0 VA	--	--	NOT A SPACE	48
Total Load:				27123 VA		27123 VA		26790 VA					
Total Amps:				226 A		226 A		223 A					



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PROJECT NAME:
**CITY OF GAINESVILLE
 DEPOT PARK ELECTRICAL**

OWNER:
 CITY OF GAINESVILLE
 874 SE 4TH STREET
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OWNER'S PROJECT NUMBER:

MC PROJECT NUMBER: 19050
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 APM

SHEET TITLE:
**ELECTRICAL
 SCHEDULES**

SHEET NUMBER:

E2.1

ELECTRICAL SPECIFICATIONS (CONTINUED)

PART 9 - PANELBOARDS
9.1 MANUFACTURERS
A. APPROVED MANUFACTURERS: ALL PANELBOARD PRODUCTS SHALL BE THE PRODUCE OF ONE OF THE FOLLOWING:
1. SQUARE D (SCHNEIDER ELECTRIC)
2. GENERAL ELECTRIC
3. CUTLER HAMMER (EATON)
4. SIEMENS
B. BASIS OF DESIGN:
1. ITEMS SPECIFIED ARE TO ESTABLISH A STANDARD OF QUALITY FOR DESIGN, FUNCTION, MATERIALS, AND APPEARANCE.
2. EQUIVALENT PRODUCTS BY OTHER MANUFACTURERS ARE ACCEPTABLE.
3. THE DESIGN PROFESSIONAL WILL BE THE SOLE JUDGE OF WHAT IS EQUIVALENT.
4. ANY ADJUSTMENTS REQUIRED TO MEET EQUIVALENCY REQUIREMENTS SHALL BE AT CONTRACTOR'S EXPENSE.
5. SEE DRAWINGS FOR SCHEDULES INDICATING ADDITIONAL BASIS OF DESIGN INFORMATION.
9.2 MATERIALS AND COMPONENTS
A. GENERAL:
1. ALL RATINGS SHALL MEET OR EXCEED THE VALUES INDICATED ON THE DRAWINGS.
2. PANELBOARDS SHALL BE SUITABLE FOR USE AS SERVICE EQUIPMENT WHEN APPLICATION REQUIREMENTS COMPLY WITH UL 67 AND NEC ARTICLE 230.
B. FEEDER CONNECTION(S):
1. INTERIORS SHALL BE FIELD CONVERTIBLE FOR TOP OR BOTTOM INCOMING FEED.
2. MAIN CIRCUIT BREAKERS SHALL BE VERTICALLY MOUNTED.
3. SUB-FEED CIRCUIT BREAKERS SHALL BE VERTICALLY MOUNTED.
4. MAIN LUG INTERIORS UP TO 400 AMPERES SHALL BE FIELD CONVERTIBLE TO MAIN CIRCUIT BREAKER.
C. BUSES:
1. PROVIDE ONE CONTINUOUS BUS BAR PER PHASE.
2. EACH BUS BAR SHALL HAVE SEQUENTIALLY PHASED BRANCH CIRCUIT CONNECTORS SUITABLE FOR PLUG-ON OR BOLT-ON BRANCH CIRCUIT BREAKERS.
3. THE BUSING SHALL BE FULLY RATED.
4. BUSING SHALL BE PLATED COPPER.
5. BUS BAR PLATING SHALL RUN THE ENTIRE LENGTH OF THE BUS BAR.
6. SOLID NEUTRAL(S) SHALL BE PLATED AND LOCATED IN THE MAINS COMPARTMENT UP TO 225 AMPERES SO INCOMING NEUTRAL CABLE MAY BE OF THE SAME LENGTH.
7. INTERIOR PHASE BUS SHALL BE PRE-DRILLED TO ACCOMMODATE FIELD INSTALLABLE OPTIONS (I.E., SUB-FEED LUGS, SUB-FEED CIRCUIT BREAKERS, THRU-FEED LUGS, ETC.).
D. CIRCUIT BREAKERS:
1. CIRCUIT BREAKERS SHALL BE UL-LISTED WITH AMPERAGE RATINGS, INTERRUPTING RATINGS, AND NUMBER OF POLES AS INDICATED AND SCHEDULED ON THE DRAWINGS.
2. TWO-POLE AND THREE-POLE CIRCUIT BREAKERS SHALL HAVE COMMON TRIPPING OF ALL POLES. CIRCUIT BREAKER FRAME SIZES ABOVE 100 AMPERES SHALL HAVE A SINGLE MAGNETIC TRIP ADJUSTMENT LOCATED ON THE FRONT OF THE CIRCUIT BREAKER THAT SHALL ALLOW THE USER TO SIMULTANEOUSLY SELECT THE DESIRED TRIP LEVEL OF ALL POLES. CIRCUIT BREAKERS SHALL HAVE A PUSH-TO-TRIP BUTTON FOR MAINTENANCE AND TESTING PURPOSES.
3. CIRCUIT BREAKERS SHALL HAVE AN OVERCENTER, TRIP-FREE, TOGGLE MECHANISM WHICH SHALL PROVIDE QUICK-MAKE, QUICK-BREAK CONTACT ACTION.
4. CIRCUIT BREAKERS SHALL HAVE A PERMANENT TRIP UNIT WITH THERMAL AND MAGNETIC TRIP ELEMENTS IN EACH POLE.
5. MAIN CIRCUIT BREAKER THERMAL ELEMENTS SHALL BE TRUE RMS SENSING AND SHALL BE FACTORY CALIBRATED TO OPERATE IN A 40 DEGREE C AMBIENT ENVIRONMENT.
6. CIRCUIT BREAKER HANDLE AND FACEPLATE SHALL INDICATE RATED AMPACITY.
7. STANDARD CONSTRUCTION CIRCUIT BREAKERS SHALL BE CSA AND UL-LISTED FOR REVERSE CONNECTION WITHOUT RESTRICTIVE LINE OR LOAD MARKINGS.
8. CIRCUIT BREAKER ESCUTCHEON SHALL HAVE INTERNATIONAL IO MARKINGS, IN ADDITION TO STANDARD ON/OFF MARKINGS.
9. CIRCUIT BREAKER HANDLE ACCESSORIES SHALL PROVIDE PROVISIONS FOR LOCKING HANDLE IN THE ON OR OFF POSITION.
10. CIRCUIT BREAKERS SHALL BE UL-LISTED FOR USE WITH THE FOLLOWING ACCESSORIES, AND SHALL BE PROVIDED SUCH ACCESSORIES AS INDICATED AND SCHEDULED ON THE DRAWINGS:
a. SHUNT TRIP
b. UNDER VOLTAGE TRIP
c. GROUND FAULT SHUNT TRIP
d. AUXILIARY SWITCH
e. ALARM SWITCH
f. COMPRESSION LUG KITS
11. THE EXPOSED FACEPLATES OF BRANCH CIRCUIT BREAKERS SHALL BE FLUSH WITH ONE ANOTHER.
12. MOLDED CASE BRANCH CIRCUIT BREAKERS SHALL HAVE BOLT-ON TYPE BUS CONNECTORS.
13. BREAKER SHALL BE UL LISTED WITH THE FOLLOWING RATINGS: (15-125A) HEATING, AIR CONDITIONING, AND REFRIGERATION (HACR), (15-30A) HIGH INTENSITY DISCHARGE (HID), (15-20A) SWITCH DUTY (SWD), (15-50A) EQUIPMENT PROTECTION DEVICE (EPD) (480V/277VAC MAXIMUM).
ENCLOSURES:
E. TYPE 1 BOXES:
1. TYPE 1 BOXES:
a. BOXES SHALL BE HOT-DIP ZINC GALVANIZED STEEL CONSTRUCTED IN ACCORDANCE WITH UL 50 REQUIREMENTS. UNPAINTED GALVANNEALED STEEL IS NOT ACCEPTABLE.
b. BOXES SHALL HAVE REMOVABLE ENDWALLS WITH KNOCKOUTS LOCATED ON ONE END. BOXES SHALL HAVE WELDED INTERIOR MOUNTING STUDS. INTERIOR MOUNTING BRACKETS ARE NOT REQUIRED.
c. BOXES IN FIRE AND/OR TEMPERATURE RATED WALLS SHALL BE PROVIDED WITH A LISTED MAT OR WRAP INSTALLED PER AN APPLICABLE UL DETAIL. 3M INTERAM ENDOTHERMIC MAT OR EQUAL.
2. TYPE 1 FRONTS:
a. FRONT SHALL MEET STRENGTH AND RIGIDITY REQUIREMENTS PER UL 50 STANDARDS.
b. FRONT SHALL HAVE GREY ENAMEL ELECTRODEPOSITED OVER CLEANED PHOSPHATIZED STEEL.
c. FRONTS SHALL BE HINGED ONE-PIECE WITH DOOR, OR DOOR-IN-DOOR.
d. MOUNTING SHALL BE FLUSH OR SURFACE AS INDICATED AND SCHEDULED ON THE DRAWINGS.
e. PANELBOARDS SHALL HAVE MONO-FLAT FRONTS WITH CONCEALED DOOR HINGES AND MOUNTED WITH TRIM SCREWS.
f. FRONT SHALL NOT BE REMOVABLE WITH THE DOOR LOCKED.
g. DOORS ON FRONT SHALL HAVE ROUNDED CORNERS AND EDGES SHALL BE FREE OF BURRS.
h. FRONT SHALL HAVE CYLINDRICAL TUMBLER TYPE LOCK WITH CATCH AND SPRING-LOADED STAINLESS STEEL DOOR PULL.
i. LOCK ASSEMBLIES SHALL BE KEVED ALIKE.
j. ONE KEY SHALL BE PROVIDED WITH EACH LOCK.
k. A CLEAR PLASTIC DIRECTORY CARDHOLDER SHALL BE MOUNTED ON THE INSIDE OF DOOR.
F. GROUNDING:
1. A SOLIDLY BONDED COPPER EQUIPMENT GROUND BAR SHALL BE PROVIDED.
G. IDENTIFICATION:
1. NAMEPLATES SHALL CONTAIN SYSTEM INFORMATION AND CATALOG NUMBER OR FACTORY ORDER NUMBER, INTERIOR WIRING DIAGRAM, NEUTRAL WIRING DIAGRAM, UL-LISTED LABEL, AND SHORT CIRCUIT CURRENT RATING SHALL BE DISPLAYED ON THE INTERIOR OR IN A BOOKLET FORMAT.
H. SAFETY:
1. CURRENT CARRYING PARTS SHALL BE INSULATED FROM GROUND AND PHASE-TO-PHASE BY HIGH DIELECTRIC STRENGTH THERMOPLASTIC.
2. INTERIOR TRIM SHALL BE OF DEADFRONT CONSTRUCTION TO SHIELD USER FROM ENERGIZED PARTS. DEADFRONT TRIM SHALL HAVE FILLER PLATES COVERING UNUSED MOUNTING SPACES.
I. MISCELLANEOUS:
1. INTERIOR LEVELING PROVISIONS SHALL BE PROVIDED FOR FLUSH MOUNTED APPLICATIONS.
2. THE ENTIRE PANELBOARD SHALL BE LISTED AS A SYSTEM, INCLUDING ALL BREAKERS, BUSES, ENCLOSURE, COVER, ETC.
3. LUGS SHALL BE UL-LISTED TO ACCEPT SOLID OR STRANDED COPPER CONDUCTORS.
4. LUGS SHALL BE SUITABLE FOR 90 DEGREE C RATED WIRE, SIZED ACCORDING TO THE 75 DEGREE C TEMPERATURE RATING PER NEC TABLE 310-15(B)(16). BRANCH CIRCUIT BREAKERS RATED 30 AMPERES AND BELOW MAY BE UL-LISTED TO ACCEPT 60 DEGREE C RATED WIRE.
5. LUG BODY SHALL BE BOLTED IN PLACE. SNAP-IN DESIGNS ARE NOT ACCEPTABLE.
9.3 INSTALLATION
A. GENERAL: INSTALL PANELBOARDS AND ACCESSORIES IN ACCORDANCE WITH REVIEWED PRODUCT DATA, FINAL SHOP DRAWINGS, MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS, AND AS INDICATED ON THE DRAWINGS.
1. INSTALL PANELBOARDS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, NEMA PB 1.1, AND NEC STANDARDS.
9.4 FIELD QUALITY CONTROL
A. INSPECT COMPLETE INSTALLATION FOR PHYSICAL DAMAGE, PROPER ALIGNMENT, ANCHORAGE, AND GROUNDING.
B. MEASURE STEADY STATE LOAD CURRENTS AT EACH PANELBOARD FEEDER, REARRANGE CIRCUITS IN THE PANELBOARD TO BALANCE THE PHASE LOADS WITHIN 20 PERCENT OF EACH OTHER. MAINTAIN PROPER PHASING FOR MULTI-WIRE BRANCH CIRCUITS.
C. CHECK TIGHTNESS OF BOLTED CONNECTIONS AND CIRCUIT BREAKER CONNECTIONS USING CALIBRATED TORQUE WRENCH OR TORQUE SCREWDRIVER PER MANUFACTURER'S WRITTEN SPECIFICATIONS.
9.5 PROTECTION
A. PROVIDE FINAL PROTECTION AND MAINTAIN CONDITIONS IN A MANNER ACCEPTABLE TO THE INSTALLER, THAT SHALL ENSURE THAT THE PANELBOARDS SHALL BE WITHOUT DAMAGE AT TIME OF SUBSTANTIAL COMPLETION.

PART 10 - WIRING DEVICES
10.1 TYPES OF ELECTRICAL WIRING DEVICES IN THIS SECTION INCLUDE THE FOLLOWING:
A. RECEPTACLES
B. GROUND FAULT CIRCUIT INTERRUPTERS
C. SWITCHES
D. WALL PLATES
10.2 ACCEPTABLE MANUFACTURERS
A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, MANUFACTURERS PROVIDING WIRING DEVICES WHICH MAY BE INCORPORATED IN THE WORK INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING (FOR EACH TYPE AND RATING OF WIRING DEVICE):
1. HUBBELL, INC.
2. LEVITON MANUFACTURING CO., INC.
3. PASS AND SEYMOUR, INC.
4. EATON, INC.
10.3 FABRICATED WIRING DEVICES
A. GENERAL: PROVIDE FACTORY FABRICATED WIRING DEVICES, IN TYPES, COLORS, AND ELECTRICAL RATINGS FOR APPLICATIONS INDICATED AND WHICH COMPLY WITH NEMA STDS. PUBNO. WD
1. NORMAL POWER: PROVIDE WHITE COLOR DEVICES EXCEPT AS OTHERWISE INDICATED.
2. RECEPTACLES:
a. RECEPTACLES SHALL BE SPECIFICATION GRADE, WITH BACK-FED WIRING CONNECTIONS AND CLAMPING MECHANISMS ON ALL TERMINALS.
b. ALL RECEPTACLES SHALL BE DUPLEX NEMA 5-20R UNLESS INDICATED OTHERWISE.
c. BASE RECEPTACLE SHALL BE NEMA 5-20R SHALL BE HUBBELL 5362 OR LEVITON 5362. LEVITON 'S' SERIES (E.G. 5362-SW) IS NOT ACCEPTABLE. PROVIDE ADDITIONAL FEATURES AS DESCRIBED BELOW.
d. WEATHERPROOF: ALL RECEPTACLES MARKED 'WP' ON PLANS SHALL BE WEATHERPROOF-TYPE, AND SHALL BE MARKED 'WP'. SUCH RECEPTACLES SHALL ALSO BE GFCI TYPE UNLESS OTHERWISE INDICATED.
e. GFCI: ALL RECEPTACLES MARKED 'G' OR 'WP' ON PLANS SHALL BE GFCI TYPE, SELF TESTING, CONFORMING TO CURRENT UL REQUIREMENTS. "LATE MODEL" GFCIs NOT SATISFYING CURRENT UL REQUIREMENTS ARE FORBIDDEN. "SLIM" MODELS ARE FORBIDDEN.
B. SWITCHES:
1. SNAP: PROVIDE TOGGLE SWITCHES, RATED 20 AMPS AT 120/277 VOLTS, QUIET TYPE, UL L WITHOUT DERATING FOR TUNGSTEN LAMP LOADS OR INDUCTIVE LOADS. "SLIM" SERIES (E.G. 1221S) ARE FORBIDDEN. THE FOLLOWING CATALOG NUMBERS ARE BASIS OF DESIGN LEVITON/HUBBELL.
a. SINGLE POLE: 1221
b. TWO POLE: 1222
10.4 WIRING DEVICE ACCESSORIES
A. WALL PLATES:
1. UNLESS OTHERWISE INDICATED, WALL PLATE MATERIAL SHALL BE AS FOLLOWS:
a. INTERIOR FINISHED SPACES: NYLON, EXCEPT WHERE INDICATED AS 'WP'.
b. INTERIOR UNFINISHED SPACES: GALVANIZED, EXCEPT WHERE INDICATED AS 'WP'.
c. EXTERIOR OR 'WP' COVER AS PART OF WEATHERPROOF ASSEMBLY.
2. PROVIDE COMMERCIAL SPECIFICATION GRADE WALL PLATES FOR SINGLE AND COMBINATION WIRING DEVICES, OF TYPES, SIZES, AND WITH GANGING AND CUTOUTS AS INDICATED. SELECT PLATES WHICH MATE AND MATCH WIRING DEVICES, CONSTRUCT WITH METAL SCREWS FOR SECURING PLATES TO DEVICES. SCREW HEADS TO MATCH FINISH OF PLATES.
10.5 INSTALLATION OF WIRING DEVICES
A. INSTALL WIRING DEVICES AS INDICATED, IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, APPLICABLE REQUIREMENTS OF NEC AND NECAS "STANDARD OF INSTALLATION", AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO FULFILL PROJECT REQUIREMENTS.
B. INSTALL WIRING DEVICES ONLY IN ELECTRICAL BOXES WHICH ARE CLEAN, FREE FROM EXCESS BUILDING MATERIALS, DIRT, AND DEBRIS.
C. REAR WIRE ALL WIRING DEVICE CONNECTIONS. SIDE TERMINATIONS ARE FORBIDDEN.
**D. TIGHTEN CONNECTORS AND TERMINALS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR WIRING DEVICES. WHERE MANUFACTURER'S TORQUE REQUIREMENTS ARE NOT INDICATED, TIGHTEN CONNECTORS AND TERMINALS TO COMPLY WITH TIGHTENING TORQUES SPECIFIED IN UL STDS 488A AND B. USE PROPERLY SCALED TORQUE INDICATING HAND TOOL. ORIENT ALL RECEPTACLES WITH THE GROUND PIN UP, EXCEPT:
1. WHERE RECEPTACLE SERVES EQUIPMENT WHICH MAY HAVE A 90° PLUG, ORIENT RECEPTACLE GROUND PIN DOWN.
2. ORIENT HORIZONTALLY INSTALLED RECEPTACLES (E.G. RECEPTACLES IN SURFACE RACEWAY) WITH THE NEUTRAL PIN UP.**
10.6 GROUNDING
A. PROVIDE EQUIPMENT GROUNDING CONNECTIONS FOR ALL WIRING DEVICES, UNLESS OTHERWISE INDICATED. TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUES SPECIFIED IN UL STD 488A TO ASSURE PERMANENT AND EFFECTIVE GROUNDS. GROUNDING CONDUCTOR SHALL BE BONDED TO ALL BOXES WITH A SEPARATE SCREW. SCREWS USED TO SUPPORT BOXES ARE NOT TO BE USED FOR GROUNDING. BONDING SCREWS SHALL BE INSTALLED IN BOX DURING ROUGH-IN INSTALLATION. BONDING SCREWS SHALL BE GREEN HEXAGONAL TYPE.

PART 11 - SAFETY SWITCHES
11.1 MANUFACTURERS
A. APPROVED MANUFACTURERS: ALL SAFETY SWITCH PRODUCTS SHALL BE THE PRODUCE OF ONE OF THE FOLLOWING:
1. SQUARE D (SCHNEIDER ELECTRIC)
2. BUSSMANN (EATON)
3. GENERAL ELECTRIC
4. SIEMENS
11.2 MATERIALS AND COMPONENTS
A. GENERAL:
1. MINIMUM RATINGS SHALL BE AS INDICATED ON THE DRAWINGS.
B. SWITCH INTERIOR:
1. ALL SWITCHES SHALL HAVE SWITCH BLADES WHICH ARE VISIBLE WHEN THE SWITCH IS OFF AND THE COVER IS OPEN.
2. LUGS SHALL BE FRONT REMOVABLE AND UL LISTED FOR 75°C CONDUCTORS.
3. ALL CURRENT CARRYING PARTS SHALL BE PLATED TO RESIST CORROSION.
4. SWITCHES SHALL HAVE REMOVABLE ARC SUPPRESSORS TO FACILITATE EASY ACCESS TO LINE SIDE LUGS.
5. SWITCHES SHALL HAVE PROVISIONS FOR A FIELD INSTALLABLE ELECTRICAL INTERLOCK.
C. GROUNDING:
1. A SOLIDLY BONDED COPPER EQUIPMENT GROUND BAR SHALL BE PROVIDED.
D. IDENTIFICATION:
1. NAMEPLATES SHALL CONTAIN PRODUCT INFORMATION AND CATALOG NUMBER OR FACTORY ORDER NUMBER, CSA AND UL-LISTED LABEL, AND SHORT CIRCUIT CURRENT RATING SHALL BE DISPLAYED ON THE INTERIOR.
E. SWITCH MECHANISM:
1. SWITCH OPERATING MECHANISM SHALL BE QUICK-MAKE, QUICK-BREAK SUCH THAT, DURING NORMAL OPERATION OF THE SWITCH, THE OPERATION OF THE CONTACTS SHALL NOT BE CAPABLE OF BEING RESTRAINED BY THE OPERATING HANDLE AFTER THE CLOSING OR OPENING ACTION OF THE CONTACTS HAS STARTED.
2. THE OPERATING HANDLE SHALL BE AN INTEGRAL PART OF THE BOX, NOT THE COVER.
3. PROVISIONS FOR PADLOCKING THE SWITCH IN THE OFF POSITION WITH A PADLOCK SHALL BE PROVIDED.
4. THE HANDLE POSITION SHALL TRAVEL AT LEAST 90 DEGREES BETWEEN OFF AND ON POSITIONS TO CLEARLY DISTINGUISH AND INDICATE HANDLE POSITION.
5. ALL SWITCHES SHALL HAVE A DUAL COVER INTERLOCK MECHANISM TO PREVENT UNINTENTIONAL OPENING OF THE SWITCH COVER WHEN THE SWITCH IS ON AND PREVENT TURNING THE SWITCH ON WHEN THE COVER IS OPEN. THE COVER INTERLOCK MECHANISM SHALL HAVE AN EXTERNALLY OPERATED OVERRIDE BUT THE OVERRIDE SHALL NOT PERMANENTLY DISABLE THE INTERLOCK MECHANISM. THE TOOL USED TO OVERRIDE THE COVER INTERLOCK MECHANISM SHALL NOT BE REQUIRED TO ENTER THE ENCLOSURE IN ORDER TO OVERRIDE THE INTERLOCK.
F. SWITCH ENCLOSURE:
1. GENERAL:
a. ALL SWITCHES SHALL HAVE PROVISIONS TO ACCEPT UP TO THREE 3/8 IN HASP PADLOCKS TO LOCK THE OPERATING HANDLE IN THE OFF POSITION.
b. THE ENCLOSURE SHALL HAVE ON AND OFF MARKINGS STAMPED INTO THE COVER.
c. THE OPERATING HANDLE SHALL BE PROVIDED WITH A DUAL COLORED, RED/BLACK POSITION INDICATION.
TYPE 1:
a. TYPE 1 SWITCH COVERS SHALL BE ATTACHED WITH WELDED PIN-TYPE HINGES.
b. TYPE 1 ENCLOSURES SHALL BE FINISHED WITH GREY BAKED ENAMEL PAINT WHICH IS ELECTRODEPOSITED ON CLEANED, PHOSPHATE PRE-TREATED STEEL.
c. TYPE 1 ENCLOSURES FOR SWITCHES RATED 30-200A SHALL BE PROVIDED WITH TANGENTIAL KNOCKOUTS TO FACILITATE EASE OF CONDUIT ENTRY.
TYPE 3R:
a. NEMA 3R SWITCH COVERS SHALL BE TOP HINGED, ATTACHED WITH REMOVABLE SCREWS AND SECURABLE IN THE OPEN POSITION (TYPE 3R)
b. TYPE 3R ENCLOSURES SHALL BE FINISHED WITH GREY BAKED ENAMEL PAINT WHICH IS ELECTRODEPOSITED ON CLEANED, PHOSPHATE PRE-TREATED GALVANNEALED STEEL.
c. TYPE 3R ENCLOSURES FOR SWITCHES RATED 30-200A SHALL BE PROVIDED WITH TANGENTIAL KNOCKOUTS TO FACILITATE EASE OF CONDUIT ENTRY.
d. TYPE 3R ENCLOSURES THROUGH 200 AMPERE SHALL HAVE PROVISIONS FOR INTERCHANGEABLE BOLT-ON HUBS IN THE TOP ENDWALL.



Andrew P. McCaddin
PE - 83318

PROJECT NAME:
**CITY OF GAINESVILLE
DEPOT PARK ELECTRICAL**

OWNER:
CITY OF GAINESVILLE
874 SE 4TH STREET
GAINESVILLE, FL 32601
Gainesville.
Citycentered
People empowered

OWNER'S PROJECT NUMBER:

MG PROJECT NUMBER: 19050

REV	DESC	DATE

ISSUE:
FINAL CONSTRUCTION DOCUMENTS

ISSUE DATE:
08/26/2019

CHECKED BY:
APM

SHEET TITLE:
ELECTRICAL SPECIFICATIONS

SHEET NUMBER:

E3.1

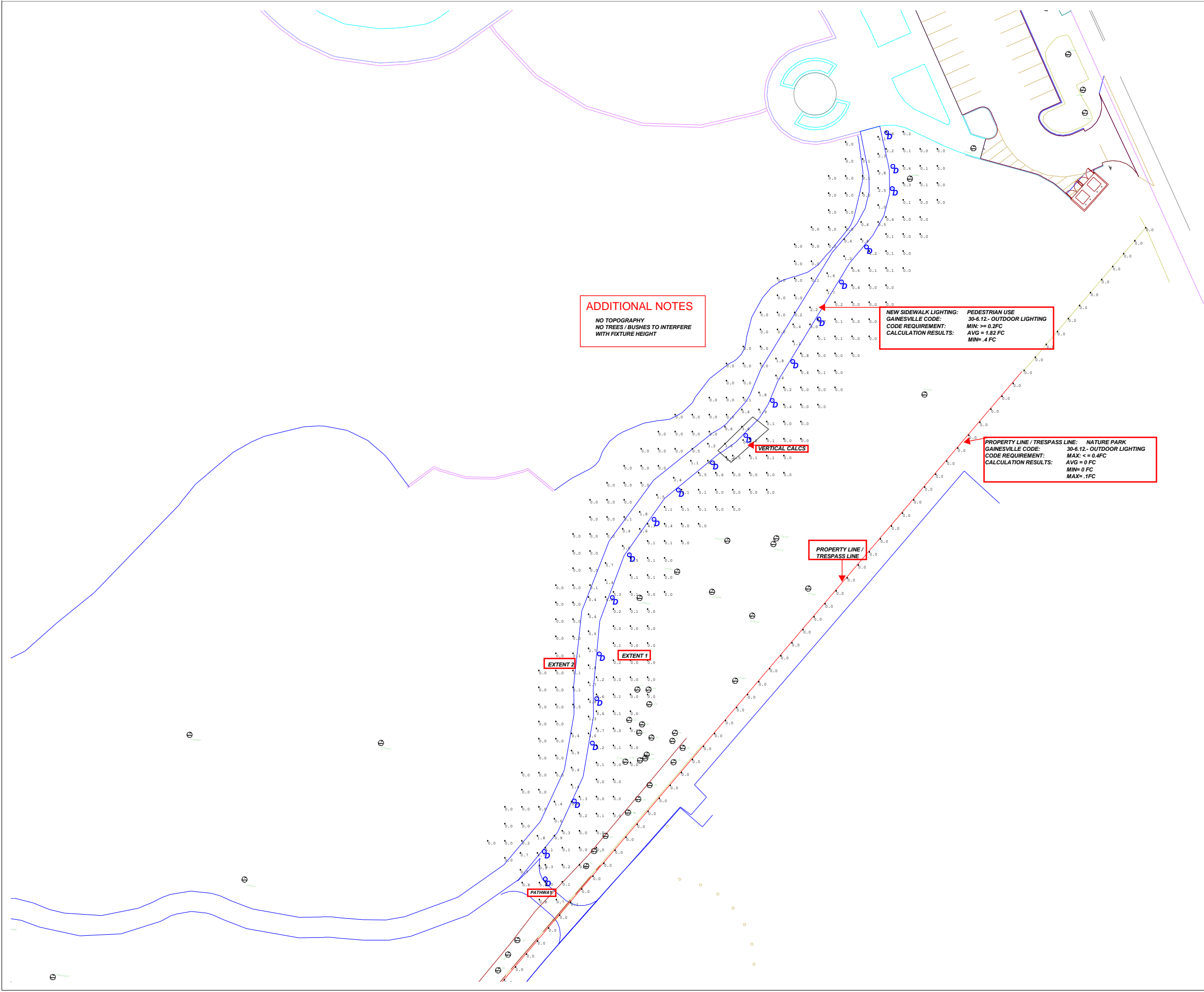
NOTES:

1. MOUNTING HEIGHT OF ALL FIXTURE TYPES = 5' AFG, MEASURED FROM BOTTOM OF FIXTURE.
2. FC POINTS ARE PLACED ON THE GROUND.
3. FC POINTS LAID OUT IN 10' x 10' GRID.

Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Mounting	LLF	Description	Lum. Watts	Mounting Height
⊙	20	D	SINGLE	Bollard	0.900	Signify PBL-14L-200-NW-G2-3-UNV	10.6	5'

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
EMERGENCY & MAINTENANCE ROUTE	Illuminance	Fc	1.82	6.2	0.4	4.55	15.50
EXTENT 1	Illuminance	Fc	0.41	5.8	0.0	N.A.	N.A.
EXTENT 2	Illuminance	Fc	0.02	0.5	0.0	N.A.	N.A.
PATHWAY	Illuminance	Fc	1.68	5.8	0.3	5.60	19.33
PROPERTY LINE	Illuminance	Fc	0.00	0.1	0.0	N.A.	N.A.
VERTICAL CALCS	Illuminance	Fc	0.00	0.0	0.0	N.A.	N.A.





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Project Name:
 DEPOT PARK
 EMERGENCY & MAINTENANCE ROUTE