

ORANGE COUNTY BARNETT PARK SITE LIGHTING

ORANGE COUNTY MAYOR
TERESA JACOBS

DISTRICT 1 COMMISSIONER
BETSY VANDERLEY

DISTRICT 2 COMMISSIONER
ROD A LOVE



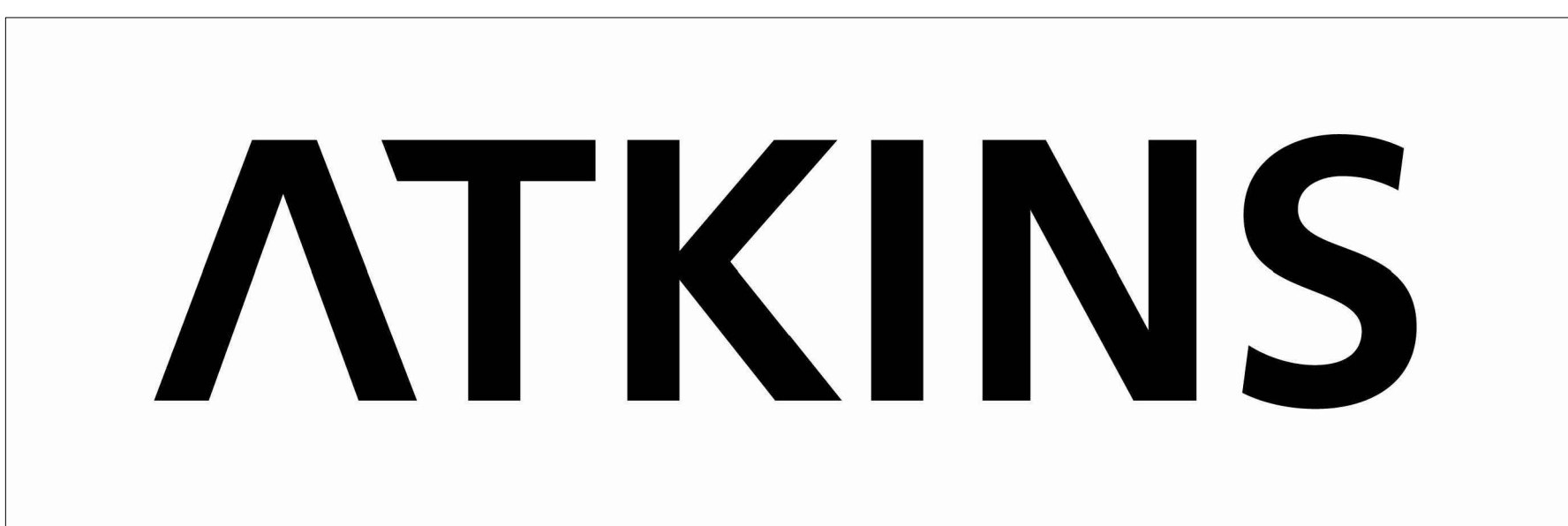
DISTRICT 3 COMMISSIONER
PETE CLARKE

DISTRICT 4 COMMISSIONER
JENNIFER THOMPSON

DISTRICT 5 COMMISSIONER
EMILY BONILLA

DISTRICT 6 COMMISSIONER
VICTORIA P. SIPLIN

BID/PERMIT DOCUMENTS
MAY 9, 2018



482 SOUTH KELLER ROAD
ORLANDO, FLORIDA 32810

| Sheet Number | Sheet Name | Scale | Sheet Issued |
|--------------|---|----------|--------------|
| E-000 | COVER SHEET AND SHEET INDEX | No Scale | Yes |
| E-001 | ELECTRICAL SYMBOLS LEGEND AND NOTES | No Scale | Yes |
| E-101 | SOCCER FIELD PARKING LOT LIGHTING | 1"=30" | Yes |
| E-102 | BASEBALL AND SOFTBALL PARKING LOT LIGHTING | 1"=30" | Yes |
| E-103 | TENNIS COURT PARKING LOT LIGHTING | 1"=30" | Yes |
| E-201 | SOCCER FIELD PARKING LOT PHOTOMETRIC | 1"=30" | Yes |
| E-202 | BASEBALL AND SOFTBALL PARKING LOT PHOTOMETRIC | 1"=30" | Yes |
| E-203 | TENNIS COURT PARKING LOT PHOTOMETRIC | 1"=30" | Yes |
| E-301 | ELECTRICAL DETAILS | No Scale | Yes |
| E-302 | SITE TOPOGRAPHIC SURVEY | 1"=30" | Yes |

ATKINS

482 SOUTH KELLER ROAD
ORLANDO, FL 32810
PHONE: 407.647.7275 FAX: 407.740.8958

CONSULTANT:

CLIENT:



PROJECT NAME:

**ORANGE COUNTY
BARNETT PARK SITE LIGHTING**
4801 W COLONIAL DR, ORLANDO FL 32808
Atkins Project #100058165

| No. | Date | Description |
|-----|-----------|-----------------|
| 1 | 7/24/2018 | PERMIT REVISION |
| | | |
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ISSUE LOG

PROFESSIONAL SEALS:

ANGEL E. LORENZO, P.E.
FLORIDA REG. NO. 31137

SHEET TITLE:

COVER SHEET AND SHEET INDEX

SHEET INFORMATION:

| | |
|--------------------------|--------------------------|
| JOB No. 100058165 | Date Issued: MAY 9, 2018 |
| Designed By: MY | Sheet Number: |
| Checked By: INT | E-000 |
| OC Review: INT | |
| Phase: 100% | |

CONSULTANT:

CLIENT:



PROJECT NAME:

ORANGE COUNTY BARNETT PARK SITE LIGHTING

4801 W COLONIAL DR, ORLANDO FL 32808
Atkins Project #10058165

LEGEND

- A-1 SINGLE CIRCUIT HOMERUN TO PANEL WITH MINIMUM OF 2 #12AWG CIRCUIT WIRES AND 1 #12AWG GROUND WIRE IN A 1" CONDUIT, U.O.N.: "A" INDICATES PANEL DESIGNATION, NUMBER INDICATES CIRCUIT DESIGNATION.
- CONDUIT RUN TURNED DOWN OR AWAY FROM VIEWER.
- CONDUIT RUN TURNED UP OR TOWARDS VIEWER.
- J PULLBOX, SIZED AS INDICATED OR AS REQUIRED BY N.E.C.
- E POWER OR LIGHTING CIRCUIT BREAKERS PANEL.
- R RELAY
- LC DRY TYPE TRANSFORMER, SIZE AS INDICATED
- TR POWER COMPANY TRANSFORMER
- X X EXISTING LIGHTING POLE
- NEW LIGHTING POLE FOR PARKING LOT
- NEW LIGHTING FIXTURE AT TENNIS COURT

NOTE: NOT ALL SYMBOLS APPLY TO THE PROJECT.

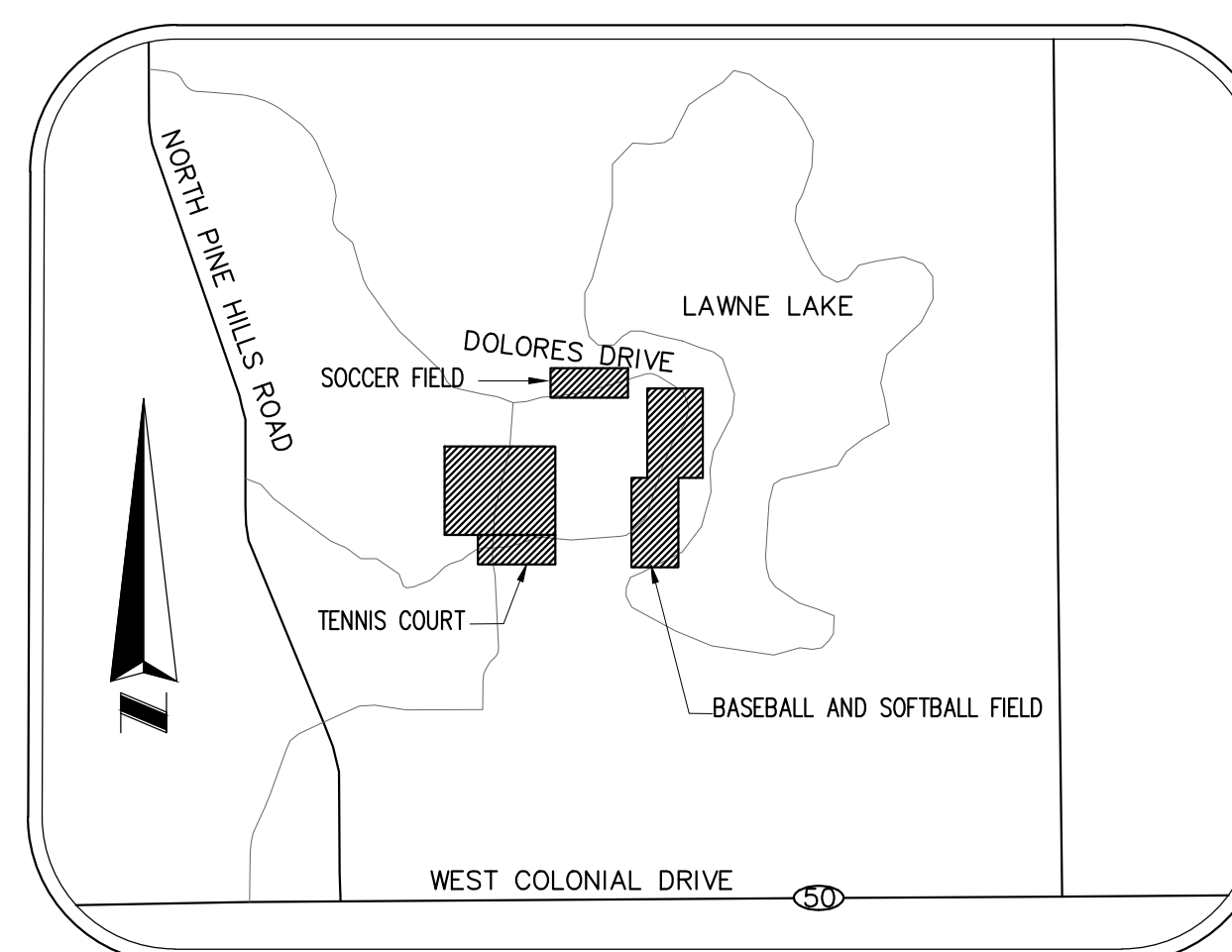
GENERAL NOTES

1. THE WORK PRACTICES EMPLOYED ON THIS PROJECT SHALL AT ALL TIMES COMPLY WITH OR EXCEED THE LATEST ADOPTED EDITION OF THE NEC (NATIONAL ELECTRICAL CODE). CONTRACTOR SHALL PROVIDE OR OBTAIN ALL REQUIRED LABOR, MATERIAL, EQUIPMENT, INSURANCE, TOOLS, PERMITS, INSPECTIONS, ETC. TO PERFORM THE PROJECT ELECTRICAL WORK AS PER NEC, LOCAL AGENCIES, AND OWNER REQUIREMENTS.
2. A COPPER EQUIPMENT GROUNDING CONDUCTOR, SIZED AS PER TABLE 250-122 OF THE 2014 OR LATEST ADOPTED NEC, SHALL BE INSTALLED IN EVERY RACEWAY AND EFFECTIVELY TERMINATED AT EACH DEVICE, UNLESS NOTED OTHERWISE. MINIMUM WIRES SIZE FOR PHASE, NEUTRAL AND GROUND SHALL BE #12AWG AND MINIMUM CONDUIT SIZE SHALL BE 1".
3. ALL CONDUCTORS SHALL BE STRANDED COPPER TYPE THHN/THWN-2 UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL FIELD VERIFY LOCATION AND POWER NEEDS OF EQUIPMENT WITH OWNERS REPRESENTATIVE (REVISE BRANCH CIRCUITS AS REQUIRED).
5. JUNCTION BOXES SHALL BE PROVIDED AS PER NEC REQUIREMENT ACCORDINGLY TO THEIR LOCATION.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CUTTING AND PATCHING REQUIRED TO PERFORM THE ELECTRICAL WORK. OWNER SHALL BE NOTIFIED BEFORE STARTING ANY CUTTING AND PATCHING, AND SHALL BE DONE IN SUCH A MANNER THAT WILL NOT AFFECT THE USE OF THE PARK FACILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE AS A RESULT OF THE CUTTING AND PATCHING AND SHALL PROVIDE A CODE COMPLIANT SOLUTION TO RESTORE THE BROKEN SYSTEMS AT NO EXTRA CHARGE.
7. CONTRACTOR SHALL FOLLOW OWNER, NATIONAL AND LOCAL AGENCIES, ETC. SAFETY REGULATIONS PROCEDURES. CONTRACTOR SHALL PROVIDE ADEQUATE EQUIPMENT AND WORKING AREA PROTECTION TO PREVENT INJURIES TO PEOPLE AND DAMAGE TO PROPERTY.
8. CONTRACTOR SHALL FULLY TEST ALL ELECTRICAL SYSTEMS UPON COMPLETION OF WORK.
9. IT IS THE BIDDER RESPONSIBILITY TO INSPECT THE PROJECT SITE AND CONSTRUCTION DOCUMENTS PRIOR TO BIDDING. FAILURE TO DO SO SHALL NOT RELIEVE THE CONTRACTOR TO COMPLY AND PERFORM ITS WORK RESPONSIBILITIES UNDER THIS CONTRACT.
10. LABEL EACH SWITCH, PANEL, AND JUNCTION BOXES WITH SOURCE PANEL AND CIRCUIT NUMBER.
11. VERIFY PHASE ROTATION ON ALL THREE-PHASE EQUIPMENT (DISCONNECTS, RECEPTACLES, ETC.)
12. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE. CIRCUIT BREAKERS PROTECTING POWER PANELS, AND TRANSFORMERS SHALL BE 100%.
13. CONTRACTOR SHALL FIELD COORDINATE FINAL POLE AND CONDUIT LOCATIONS WITH UNDERGROUND UTILITIES. POLE LOCATIONS AND CONDUIT ROUTING ARE SCHEMATIC. CONTRACTOR SHALL CALL 811 OR 1-800-432-4770 BEFORE DIGGING.
14. CONTRACTOR SHALL PROVIDE THE SERVICES OF FLORIDA REGISTERED STRUCTURAL ENGINEERING FOR THE DESIGN OF THE CONCRETE LIGHTING POLE, INCLUDING DEPTH OF EMBEDMENT. SUBMIT SIGNED AND SEALED POLE DESIGN DOCUMENTS.
15. CONTRACTOR SHALL COMPLY WITH 2017 FLORIDA BUILDING CODE - SIXTH EDITION.

ABBREVIATIONS

- A AMPERES
- A.F.F. ABOVE FINISHED FLOOR
- A.F.C. AVAILABLE FAULT CURRENT
- A.H.J. AUTHORITY HAVING JURISDICTION
- A.I.C. AMPERES INTERRUPTING CAPACITY, SYMMETRICAL
- C.B. CIRCUIT BREAKER
- CKT. CIRCUIT
- COND., C. CONDUIT
- DISC. DISCONNECT
- E.C. EMPTY CONDUIT
- ENCL. ENCLOSURE INDICATES
- FPC FLORIDA POWER CORPORATION
- GFI GROUND FAULT INTERRUPTER
- GND, G. GROUND
- GRS GALVANIZED RIGID STEEL CONDUIT
- HID HIGH INTENSITY DISCHARGE
- HP HORSE POWER
- IES ILLUMINATION ENGINEERING SOCIETY
- JB JUNCTION BOX
- K KEY OPERATED DEVICE
- KW KILOWATT
- NEC NATIONAL ELECTRICAL CODE
- P PILOT LIGHT
- PNL. PANELBOARD
- PVC POLYVINYL CHLORIDE CONDUIT
- SP SPARE CONDUIT
- SW. SWITCH
- U.O.N. UNLESS OTHERWISE NOTED
- XFMR TRANSFORMER
- WP INDICATES WEATHERPROOF EQUIPMENT

| LUMINAIRE SCHEDULE | | | | | | |
|--------------------|--|-------|----------------------------|---------|-----------|--------------------------------|
| SYMBOL | REMARKS | LLF | MOUNTING | VOLTAGE | LAMP TYPE | DESCRIPTION |
| → | SINGLE | 1.000 | POLE MOUNTED 30'-0" AFG | 120/277 | LED | PHILIPS - ECF-S-64L-1A-NW-G2-2 |
| SA POLE | SQUARE TAPERED DIRECT BURIAL CONCRETE POLE | -- | DIRECT BURIAL | -- | -- | USI 25TIS W/2&3/8 TENON |
| • | SINGLE | 1.000 | EXISTING TENNIS COURT POLE | 120/240 | LED | MUSCO - TLC-LED-400 |



VICINITY MAP
NOT TO SCALE

| No. | Date | Description |
|-----|-----------|-----------------|
| 1 | 7/24/2018 | PERMIT REVISION |
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ISSUE LOG

PROFESSIONAL SEALS:

ANGEL E. LORENZO, P.E.
FLORIDA REG. NO. 31137

SHEET TITLE:

ELECTRICAL SYMBOLS LEGEND AND NOTES

| SHEET INFORMATION: | | |
|--------------------------|----------------------------|--|
| JOB No. 100058165 | Date Issued: MAY 9, 2018 | |
| Designed By: M.Y. | Sheet Number: E-001 | |
| Checked By: INT | | |
| OC Review: INT | | |
| Phase: 100% | | |

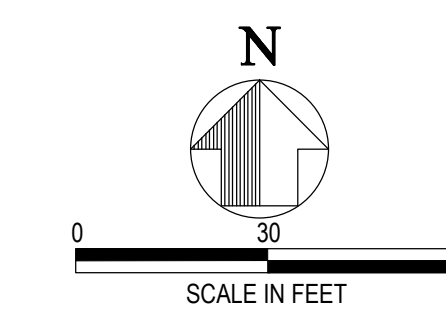
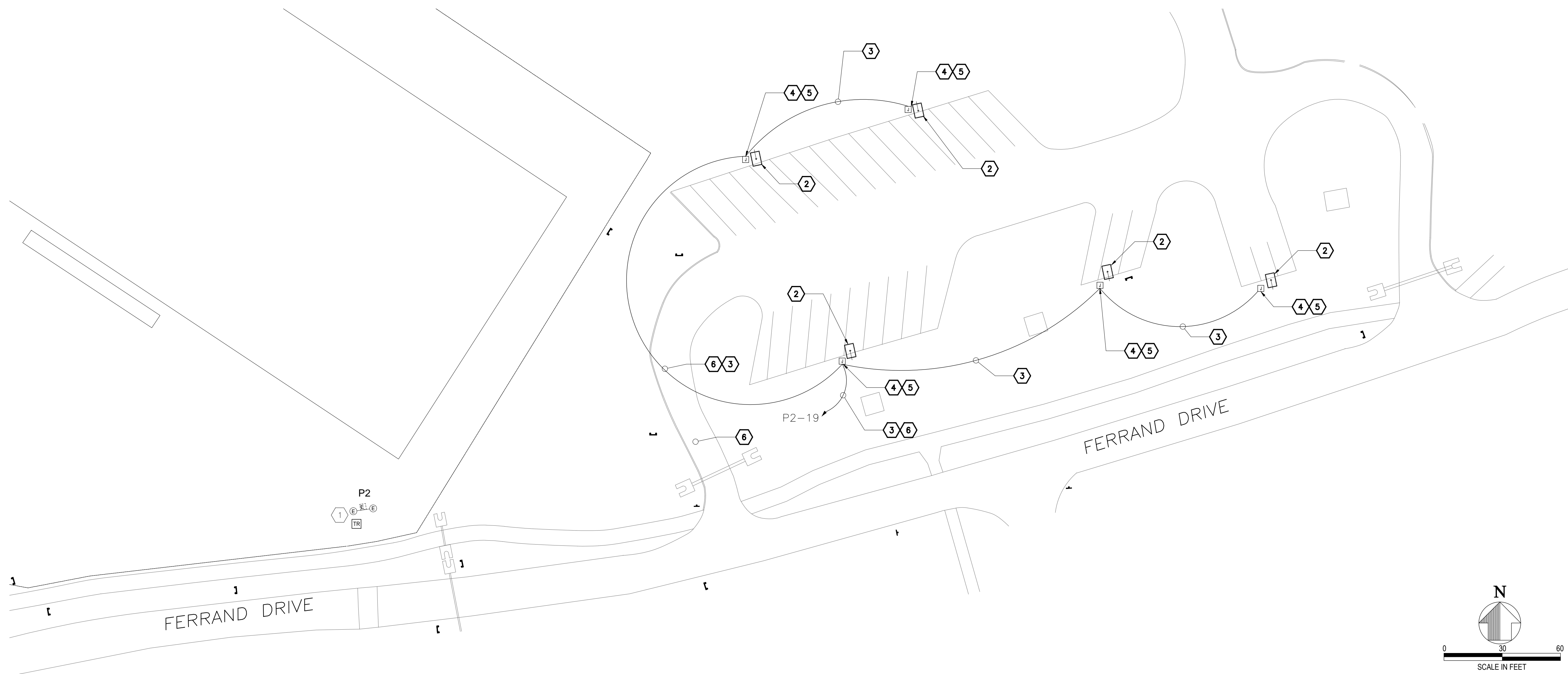
CONSULTANT:

CLIENT:



PROJECT NAME:

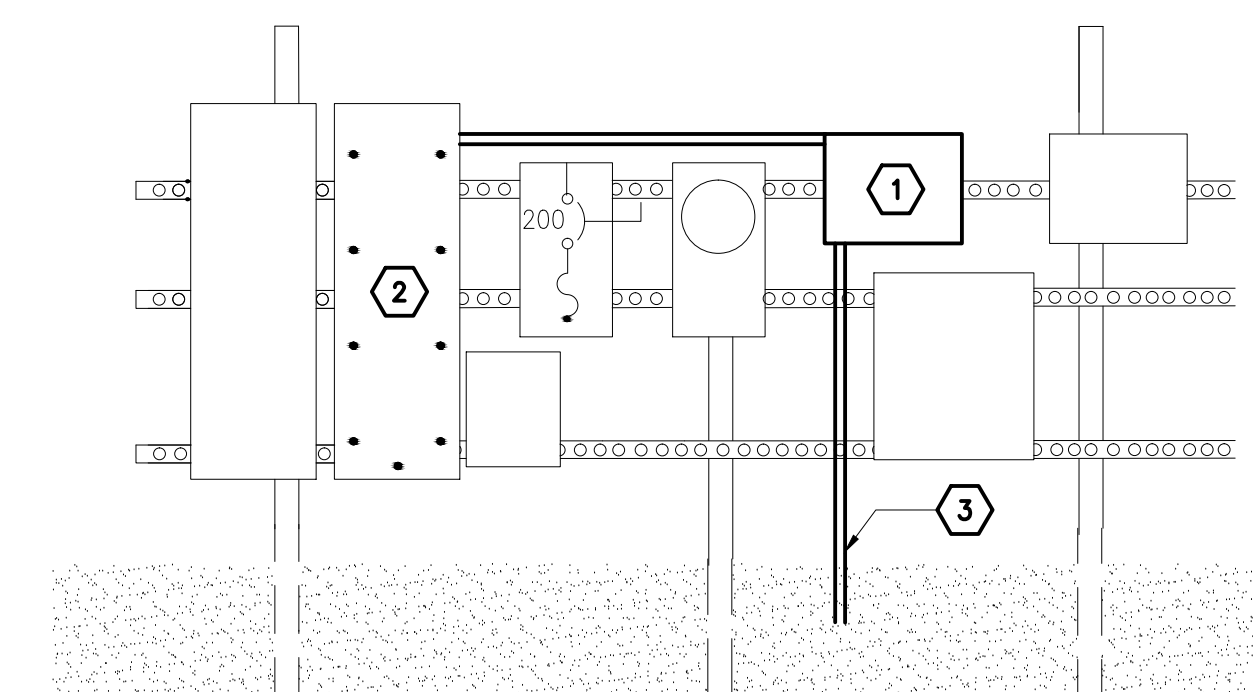
ORANGE COUNTY
BARNETT PARK SITE LIGHTING
 4801 W COLONIAL DR, ORLANDO FL 32808
 Atkins Project #100058165



1 SOCCER FIELD PARKING LOT LIGHTING
SCALE: 1" = 30'-0"

KEY NOTES:

- 1 EXISTING "P2" PANEL TO FEED LIGHTING PARKING POLES. REFER TO DETAIL NUMBER 2 SHEET E-101
- 2 REFER TO LIGHT POLE DETAIL NUMBER 1 SHEET E-301
- 3 (2)#10 AWG, (1)#10 GND IN 1" C PVC SCHEDULE 40
- 4 12"X12X12" QUAZITE PC STYLE POLYMER CONCRETE ASSEMBLY TRAFFIC RATED PULLBOX. REFER TO DETAIL NUMBER 3 SHEET E-301
- 5 (2)#10 AWG AND (1)#10 GND SPLICE AT PULLBOX FOR LIGHTING POLE.
- 6 DIRECTIONAL JACK AND BORE PARKING PATHWAY. CONTRACTOR TO COORDINATE WITH ORANGE COUNTY PROJECT MANGER. CONTRACTOR SHALL NOT TRENCH PARKING LOT.



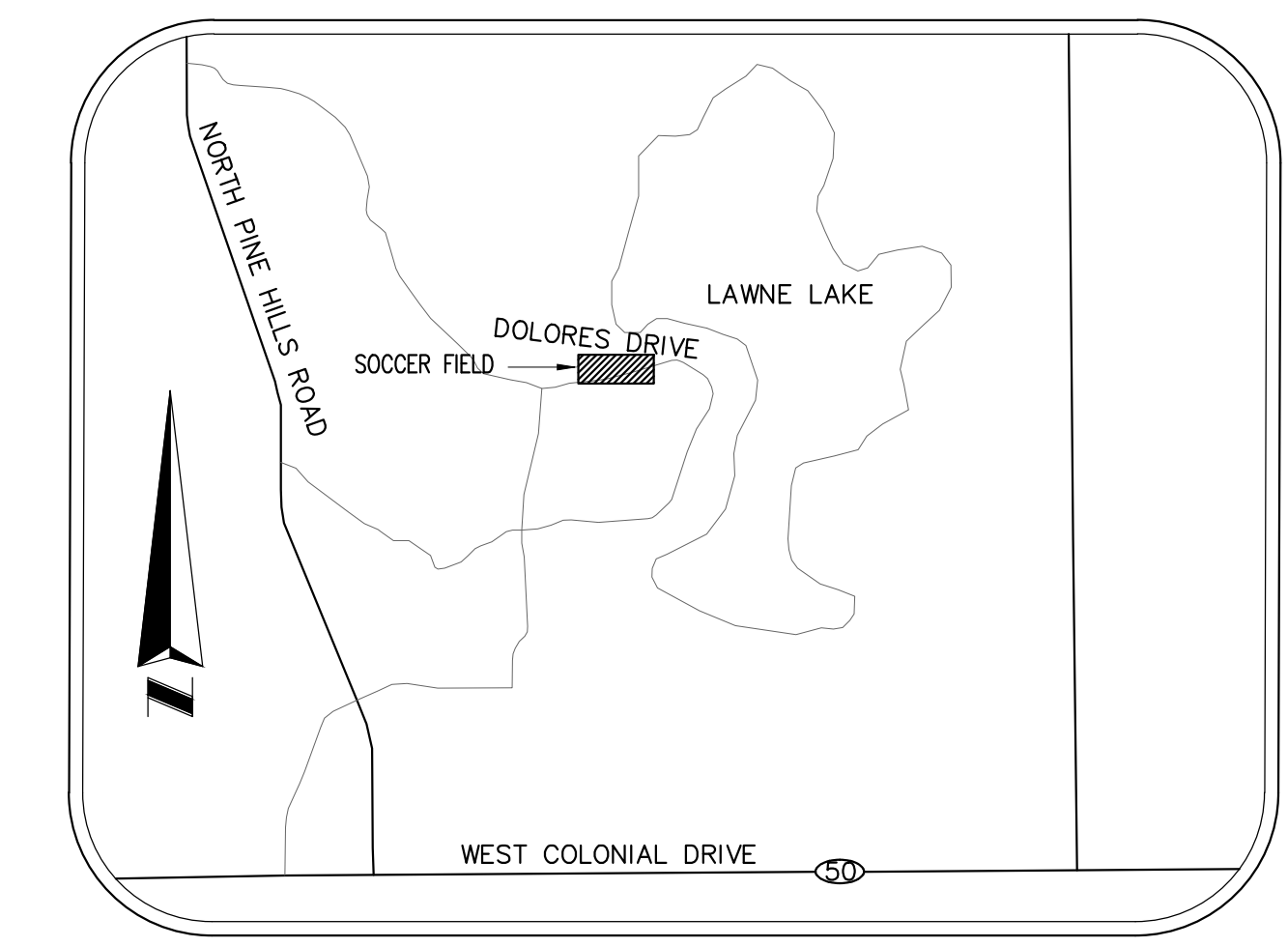
2 ELECTRICAL SOURCE RACK
SCALE: NTS

KEY NOTES:

- 1 PROVIDE DIGITAL TIME CLOCK IN NEMA 4X ENCLOSURE SHALL BE AS MANUFACTURED BY YORK, MODEL NO. DLC400BP. TIME CONTROLLED WITH INTEGRAL PHOTO SENSOR FOR LIGHT LEVEL ACTIVATION FOR CIRCUIT P2-19 FOR PARKING LOT LIGHTING.
- 2 EXISTING PANEL REFER TO "P2" PANEL SCHEDULE.
- 3 CIRCUIT TO LIGHTING POLE

| DESCRIPTION | PHASE A KVA | PHASE B KVA | PHASE C KVA | POLE | TR | CKT NO | TR | POLE | PHASE A KVA | PHASE B KVA | PHASE C KVA | DESCRIPTION |
|--------------------------|-------------|-------------|-------------|------|----|--------|----|------|-------------|-------------|-------------|---------------------------|
| POLE S1 - EXISTING LOAD | - | - | - | 3 | 30 | 1 | 2 | 30 | 3 | - | - | POLE S4 - EXISTING LOAD |
| | | | | | | 3 | 4 | | | | | |
| | | | | | | 5 | 6 | | | | | |
| POLE S2 - EXISTING LOAD | - | - | - | 3 | 30 | 7 | 8 | 30 | 3 | - | - | TVSS - EXISTING LOAD |
| | | | | | | 9 | 10 | | | | | |
| | | | | | | 11 | 12 | | | | | |
| POLE S3 - EXISTING LOAD | - | - | - | 3 | 30 | 13 | 14 | 20 | 3 | - | - | IRRG. TX. - EXISTING LOAD |
| | | | | | | 15 | 16 | | | | | |
| | | | | | | 17 | 18 | | | | | |
| NEW PARKING LOT LIGHTING | 1.39 | - | - | 1 | 20 | 19 | 20 | | | | | SPACE |
| SPACE | | | | | | 21 | 22 | | | | | SPACE |
| SPACE | | | | | | 23 | 24 | | | | | SPACE |
| SPACE | | | | | | 25 | 26 | | | | | SPACE |
| SPACE | | | | | | 27 | 28 | | | | | SPACE |
| SPACE | | | | | | 29 | 30 | | | | | SPACE |
| SPACE | | | | | | 31 | 32 | | | | | SPACE |
| SPACE | | | | | | 33 | 34 | | | | | SPACE |
| SPACE | | | | | | 35 | 36 | | | | | SPACE |
| SPACE | | | | | | 37 | 38 | | | | | SPACE |
| SPACE | | | | | | 39 | 40 | | | | | SPACE |
| SPACE | | | | | | 41 | 42 | | | | | SPACE |
| CONNECTED LOAD | 1.39 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | CONNECTED LOAD |

3 "P2" ELECTRICAL PANEL



LOCATION - MAP
NOT TO SCALE

| No. | Date | Description |
|-----|-----------|-----------------|
| 1 | 7/24/2018 | PERMIT REVISION |
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ISSUE LOG
PROFESSIONAL SEALS:

ANGEL E. LORENZO, P.E.
FLORIDA REG. NO. 31137

SHEET INFORMATION:
JOB No. **100058165** Date Issued: MAY 9, 2018
Designed By: L.F. Sheet Number:
Checked By: A.E.L.
OC Review: A.E.L.
Phase: 100%

E-101

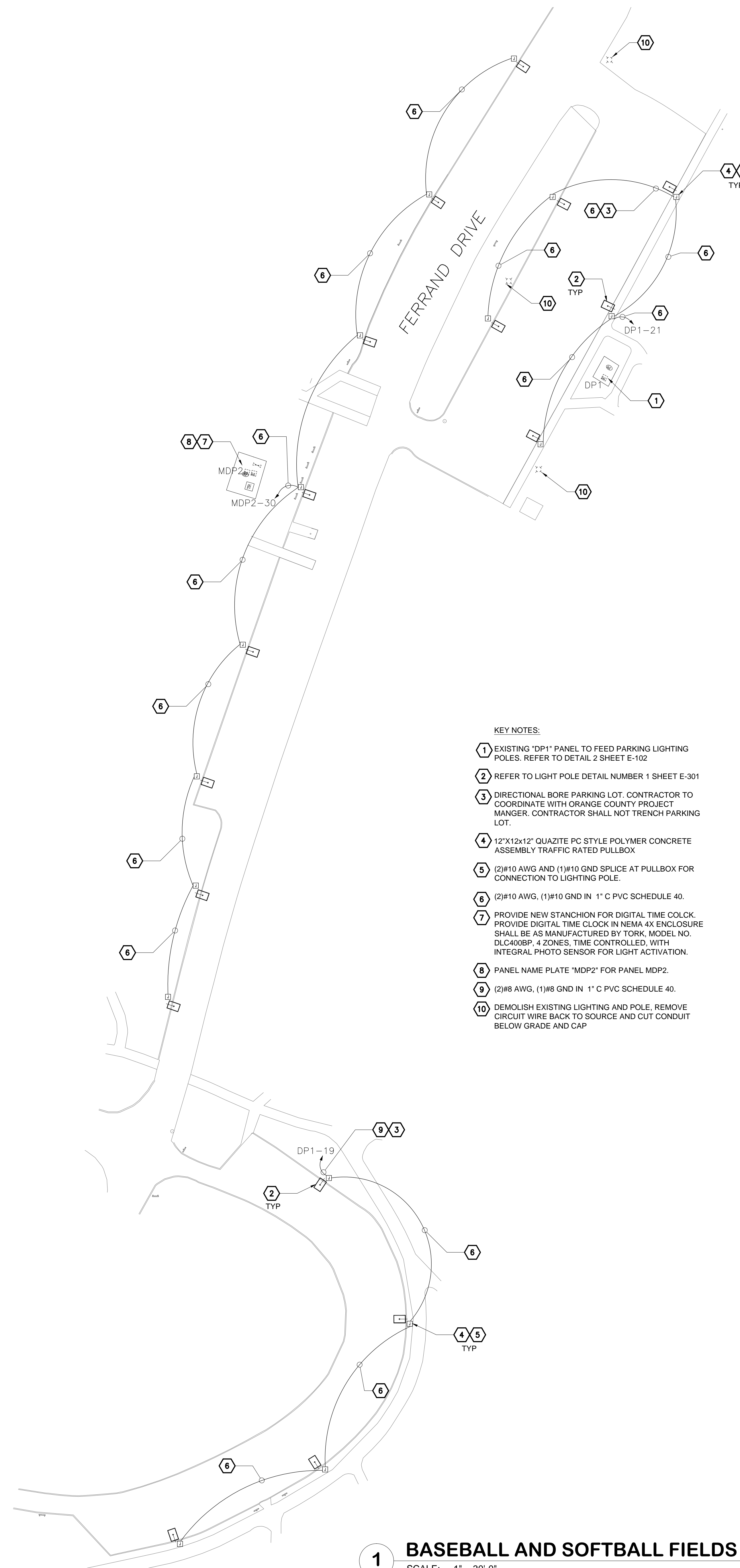
CONSULTANT:

CLIENT:



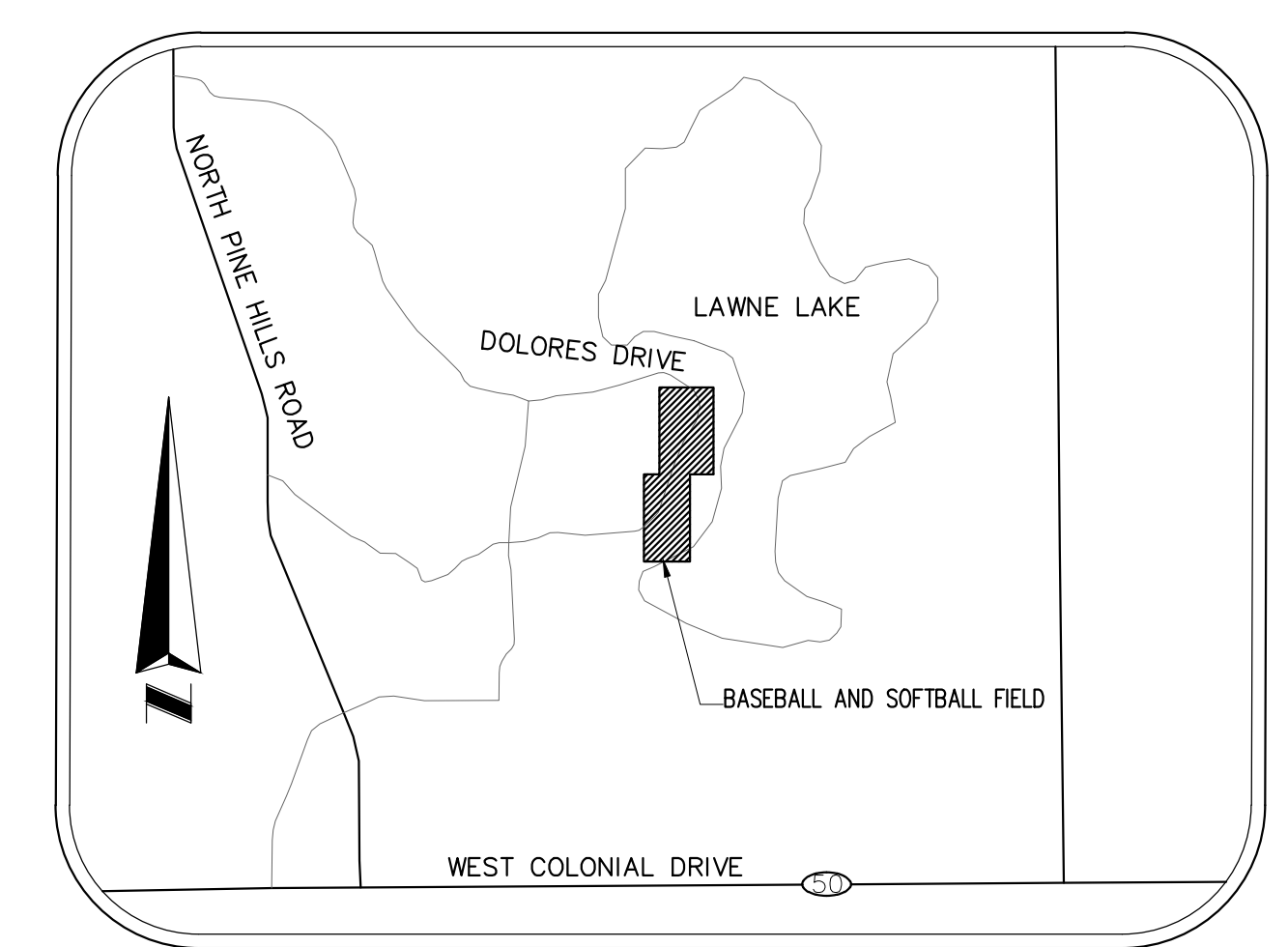
PROJECT NAME:

ORANGE COUNTY
BARNETT PARK SITE LIGHTING
 4801 W COLONIAL DR, ORLANDO FL 32808
 Atkins Project #100058165



- KEY NOTES:**
- 1 EXISTING "DP1" PANEL TO FEED PARKING LIGHTING POLES. REFER TO DETAIL 2 SHEET E-102
 - 2 REFER TO LIGHT POLE DETAIL NUMBER 1 SHEET E-301
 - 3 DIRECTIONAL BORE PARKING LOT. CONTRACTOR TO COORDINATE WITH ORANGE COUNTY PROJECT MANGER. CONTRACTOR SHALL NOT TRENCH PARKING LOT.
 - 4 12" X 12 X 12" QUARTZITE PC STYLE POLYMER CONCRETE ASSEMBLY TRAFFIC RATED PULLBOX
 - 5 (2)#10 AWG AND (1)#10 GND SPLICE AT PULLBOX FOR CONNECTION TO LIGHTING POLE.
 - 6 (2)#10 AWG, (1)#10 GND IN 1" C PVC SCHEDULE 40.
 - 7 PROVIDE NEW STANCHION FOR DIGITAL TIME COLCK. PROVIDE DIGITAL TIME CLOCK IN NEMA 4X ENCLOSURE SHALL BE AS MANUFACTURED BY TORK, MODEL NO. DL400BP, 4 ZONES, TIME CONTROLLED, WITH INTEGRAL PHOTO SENSOR FOR LIGHT ACTIVATION.
 - 8 PANEL NAME PLATE "MDP2" FOR PANEL MDP2.
 - 9 (2)#8 AWG, (1)#8 GND IN 1" C PVC SCHEDULE 40.
 - 10 DEMOLISH EXISTING LIGHTING AND POLE, REMOVE CIRCUIT WIRE BACK TO SOURCE AND CUT CONDUIT BELOW GRADE AND CAP

1 BASEBALL AND SOFTBALL FIELDS PARKING LOT LIGHTING
SCALE: 1" = 30'-0"



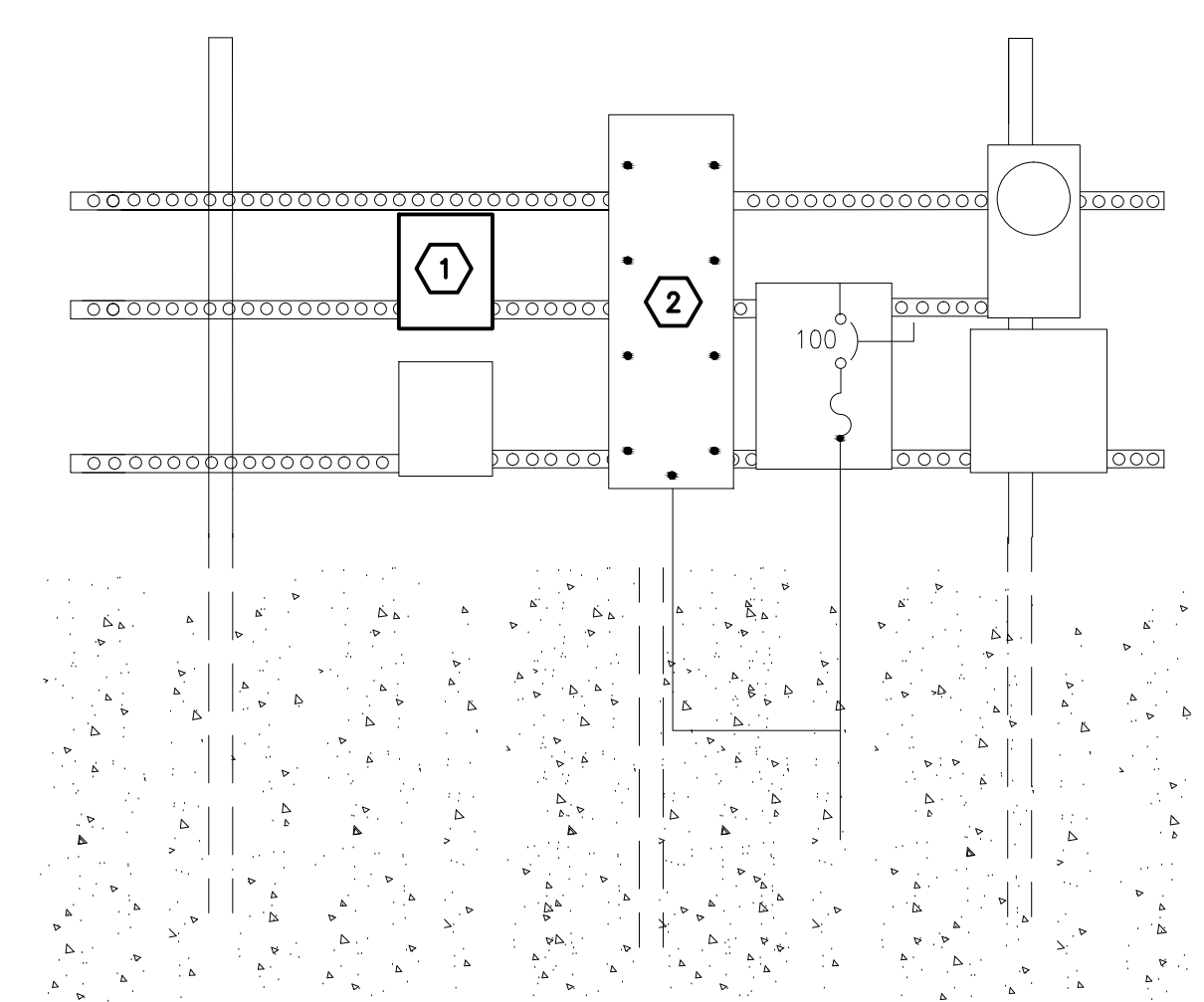
LOCATION - MAP
NOT TO SCALE

3 MDP2 ELECTRICAL PANEL SCHEDULE

| DESCRIPTION | PHASE A KVA | PHASE B KVA | PHASE C KVA | POLE | TR | CKT NO | TR | POLE | PHASE A KVA | PHASE B KVA | PHASE C KVA | DESCRIPTION |
|-------------------------|-------------|-------------|-------------|------|----|--------|----|------|-------------|-------------|-------------|--------------------------------|
| IRRG. TIME - EXISTING | - | - | - | 1 | 20 | 1 | 2 | 30 | 1 | - | - | UNKNOWN LOAD - EXISTING |
| UNKNOWN LOAD - EXISTING | - | - | - | 1 | 20 | 3 | 4 | 30 | 1 | - | - | UNKNOWN LOAD - EXISTING |
| FIELD 1 - EXISTING LOAD | - | - | - | 2 | 30 | 5 | 6 | 30 | 2 | - | - | FIELD 2 - EXISTING LOAD |
| UNKNOWN LOAD - EXISTING | - | - | - | 2 | 30 | 7 | 8 | 30 | 2 | - | - | UNKNOWN LOAD - EXISTING |
| UNKNOWN LOAD - EXISTING | - | - | - | 2 | 40 | 13 | 14 | 50 | 2 | - | - | UNKNOWN LOAD - EXISTING |
| UNKNOWN LOAD - EXISTING | - | - | - | 2 | 50 | 17 | 18 | 50 | 2 | - | - | UNKNOWN LOAD - EXISTING |
| UNKNOWN LOAD - EXISTING | - | - | - | 2 | 50 | 19 | 20 | 50 | 2 | - | - | UNKNOWN LOAD - EXISTING |
| UNKNOWN LOAD - EXISTING | - | - | - | 2 | 50 | 21 | 22 | 50 | 2 | - | - | UNKNOWN LOAD - EXISTING |
| UNKNOWN LOAD - EXISTING | - | - | - | 2 | 50 | 23 | 24 | 50 | 2 | - | - | UNKNOWN LOAD - EXISTING |
| UNKNOWN LOAD - EXISTING | - | - | - | 2 | 50 | 25 | 26 | 50 | 2 | - | - | UNKNOWN LOAD - EXISTING |
| UNKNOWN LOAD - EXISTING | - | - | - | 2 | 50 | 27 | 28 | 50 | 2 | - | - | UNKNOWN LOAD - EXISTING |
| UNKNOWN LOAD - EXISTING | - | - | - | 2 | 50 | 29 | 30 | 20 | 1 | - | - | 1.21 PARKING LOT LIGHT & TIMER |
| MAIN BREAKER | - | - | - | - | - | 31 | 32 | - | - | - | - | SPACE |
| | - | - | - | - | - | 33 | 34 | - | - | - | - | SPACE |
| | - | - | - | - | - | 35 | 36 | - | - | - | - | SPACE |
| | - | - | - | - | - | 37 | 38 | 100 | 3 | - | - | SUB PANEL |
| | - | - | - | - | - | 39 | 40 | - | - | - | - | SPACE |
| | - | - | - | - | - | 41 | 42 | - | - | - | - | SPACE |
| CONNECTED LOAD | 0.00 | 0.00 | 0.00 | | | | | | 0.00 | 0.00 | 1.21 | CONNECTED LOAD |

4 DP1 ELECTRICAL PANEL SCHEDULE

| DESCRIPTION | PHASE A KVA | PHASE B KVA | PHASE C KVA | POLE | TR | CKT NO | TR | POLE | PHASE A KVA | PHASE B KVA | PHASE C KVA | DESCRIPTION |
|------------------------------|-------------|-------------|-------------|------|----|--------|----|------|-------------|-------------|-------------|------------------------|
| LIGHTS - EXISTING LOAD | - | - | - | 1 | 20 | 1 | 2 | 20 | 1 | - | - | LIGHTS - EXISTING LOAD |
| LIGHTS - EXISTING LOAD | - | - | - | 1 | 20 | 3 | 4 | 20 | 1 | - | - | LIGHTS - EXISTING LOAD |
| LIGHTS - EXISTING LOAD | - | - | - | 1 | 20 | 5 | 6 | 20 | 1 | - | - | LIGHTS - EXISTING LOAD |
| LIGHTS - EXISTING LOAD | - | - | - | 1 | 20 | 7 | 8 | 20 | 1 | - | - | LIGHTS - EXISTING LOAD |
| OUTLETS - EXISTING LOAD | - | - | - | 1 | 20 | 9 | 10 | 20 | 1 | - | - | OUTLET - EXISTING LOAD |
| OUTLETS - EXISTING LOAD | - | - | - | 1 | 20 | 11 | 12 | 20 | 1 | - | - | OUTLET - EXISTING LOAD |
| OUTLETS - EXISTING LOAD | - | - | - | 1 | 20 | 13 | 14 | 20 | 1 | - | - | OUTLET - EXISTING LOAD |
| UNKNOW LOAD - EXISTING | - | - | - | 2 | 40 | 15 | 16 | 20 | 1 | - | - | OUTLET - EXISTING LOAD |
| PARKING LOT LIGHTING & TIMER | 0.60 | - | - | 1 | 20 | 17 | 18 | 20 | 2 | - | - | UNKNOW LOAD - EXISTING |
| PARKING LOT LIGHTING | - | 0.73 | - | 1 | 20 | 19 | 20 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 23 | 24 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 25 | 26 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 27 | 28 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 29 | 30 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 31 | 32 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 33 | 34 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 35 | 36 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 37 | 38 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 39 | 40 | - | - | - | - | SPACE |
| SPACE | - | - | - | - | - | 41 | 42 | - | - | - | - | SPACE |
| CONNECTED LOAD | 0.60 | 0.73 | 0.00 | | | | | | 0.00 | 0.00 | 0.00 | CONNECTED LOAD |



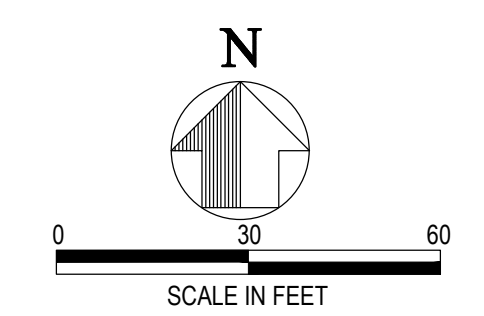
- 2 ELECTRICAL SOURCE RACK**
SCALE: NTS
- ALL EQUIPMENT SHOWN IS EXISTING EXCEPT WHERE NOTED OTHERWISE NOTED.
- KEY NOTES:**
- 1 DIGITAL TIME CLOCK IN NEMA 4X ENCLOSURE SHALL BE AS MANUFACTURED BY TORK, MODEL NO. DL400BP, 4 ZONES, TIME CONTROLLED, WITH INTEGRAL PHOTO SENSOR FOR LIGHT ACTIVATION. CIRCUITS DP1-21, AND DP1-19 TO BE CONNECTED THROUGH CHANNELS SEPARATE TO CREATE 2 ZONES.
 - 2 PROVIDE PANEL NAME PLATE "DP1" FOR EXISTING PANEL DP1.

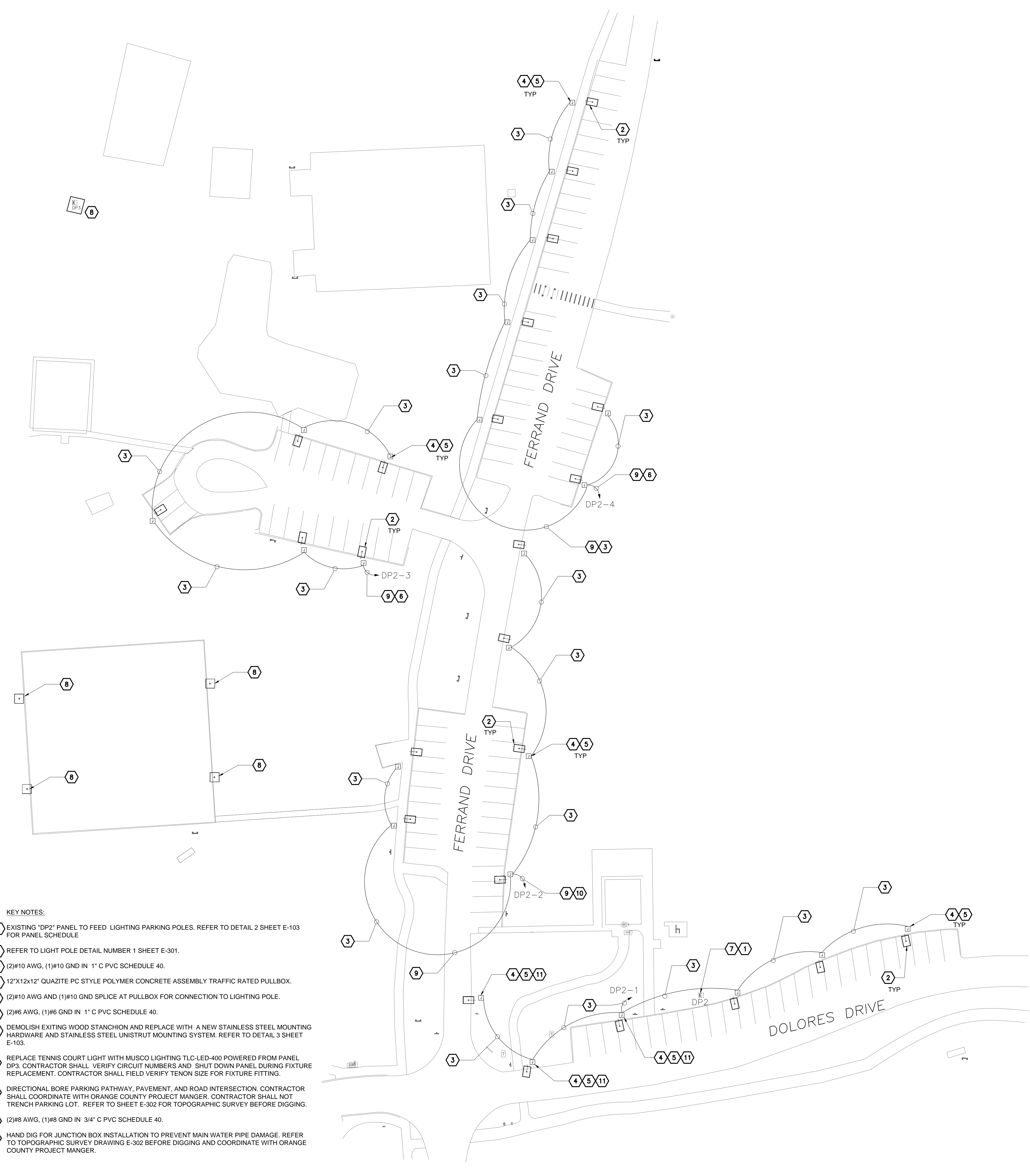
| No. | Date | Description |
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ANGEL E. LORENZO, P.E.
FLORIDA REG. NO. 31137

SHEET TITLE:
BASEBALL AND SOFTBALL PARKING LOT LIGHTING

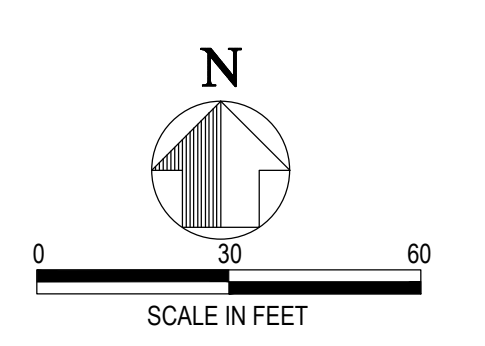
SHEET INFORMATION:
JOB No. **100058165** Date Issued: MAY 9, 2018
Designed By: M.Y. Sheet Number:
Checked By: A.E.L.
OC Review: A.E.L.
Phase: 100% **E-102**





- KEY NOTES:**
- EXISTING "DP2" PANEL TO FEED LIGHTING PARKING POLES. REFER TO DETAIL 2 SHEET E-103 FOR PANEL SCHEDULE.
 - REFER TO LIGHT POLE DETAIL NUMBER 1 SHEET E-301.
 - (2)#10 AWG, (1)#10 GND IN 1" C PVC SCHEDULE 40.
 - 12"X12X12" QUAZITE PC STYLE POLYMER CONCRETE ASSEMBLY TRAFFIC RATED PULLBOX.
 - (2)#10 AWG AND (1)#10 GND SPLICE AT PULLBOX FOR CONNECTION TO LIGHTING POLE.
 - (2)#6 AWG, (1)#6 GND IN 1" C PVC SCHEDULE 40.
 - DEMOLISH EXITING WOOD STANCHION AND REPLACE WITH A NEW STAINLESS STEEL MOUNTING HARDWARE AND STAINLESS STEEL UNISTRUT MOUNTING SYSTEM. REFER TO DETAIL 3 SHEET E-103.
 - REPLACE TENNIS COURT LIGHT WITH MUSCO LIGHTING TLC-LED-400 POWERED FROM PANEL DP3. CONTRACTOR SHALL VERIFY CIRCUIT NUMBERS AND SHUT DOWN PANEL DURING FIXTURE REPLACEMENT. CONTRACTOR SHALL FIELD VERIFY TENON SIZE FOR FIXTURE FITTING.
 - DIRECTIONAL BORE PARKING PATHWAY, PAVEMENT, AND ROAD INTERSECTION. CONTRACTOR SHALL COORDINATE WITH ORANGE COUNTY PROJECT MANGER. CONTRACTOR SHALL NOT TRENCH PARKING LOT. REFER TO SHEET E-302 FOR TOPOGRAPHIC SURVEY BEFORE DIGGING.
 - (2)#8 AWG, (1)#8 GND IN 3/4" C PVC SCHEDULE 40.
 - HAND DIG FOR JUNCTION BOX INSTALLATION TO PREVENT MAIN WATER PIPE DAMAGE. REFER TO TOPOGRAPHIC SURVEY DRAWING E-302 BEFORE DIGGING AND COORDINATE WITH ORANGE COUNTY PROJECT MANGER.

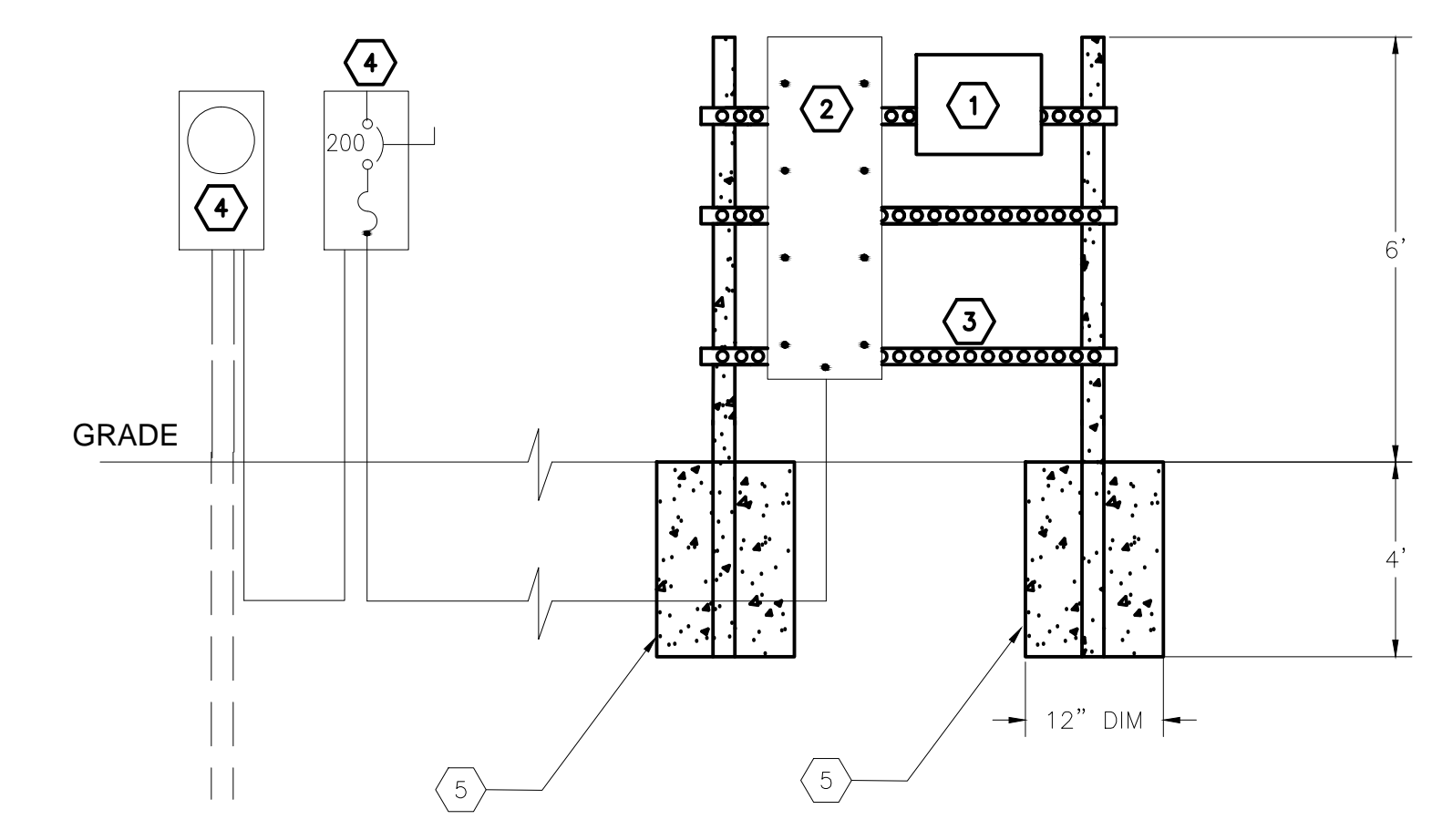
1 TENNIS COURT PARKING LOT LIGHTING
SCALE: 1" = 30'-0"



| DESCRIPTION | PHASE A KVA | PHASE B KVA | PHASE C KVA | POLE | TR | CKT NO | TR | POLE | PHASE A KVA | PHASE B KVA | PHASE C KVA | DESCRIPTION |
|------------------------------|----------------|----------------|----------------|------|----|-----------|----|------|----------------|----------------|----------------|------------------------------|
| ZONE 1 LIGHTING POLES | 0.72 | | | 1 | 20 | 1 | 2 | 20 | 1 | 0.72 | | |
| ZONE 3 LIGHTING POLES | | 0.60 | | 1 | 20 | 3 | 4 | 20 | 1 | | 0.84 | |
| SPACE | | | | | | 5 | 6 | | | | | ZONE 4 LIGHTING POLES |
| SPACE | | | | | | 7 | 8 | | | | | SPACE |
| SPACE | | | | | | 9 | 10 | | | | | SPACE |
| SPACE | | | | | | 11 | 12 | | | | | SPACE |
| SPACE | | | | | | 13 | 14 | | | | | SPACE |
| SPACE | | | | | | 15 | 16 | | | | | SPACE |
| SPACE | | | | | | 17 | 18 | | | | | SPACE |
| SPACE | | | | | | 19 | 20 | | | | | SPACE |
| SPACE | | | | | | 21 | 22 | | | | | SPACE |
| SPACE | | | | | | 23 | 24 | | | | | SPACE |
| SPACE | | | | | | 25 | 26 | | | | | SPACE |
| SPACE | | | | | | 27 | 28 | | | | | SPACE |
| SPACE | | | | | | 29 | 30 | | | | | SPACE |
| SPACE | | | | | | 31 | 32 | | | | | SPACE |
| SPACE | | | | | | 33 | 34 | | | | | SPACE |
| SPACE | | | | | | 35 | 36 | | | | | SPACE |
| SPACE | | | | | | 37 | 38 | | | | | SPACE |
| SPACE | | | | | | 39 | 40 | | | | | SPACE |
| SPACE | | | | | | 41 | 42 | | | | | SPACE |
| CONNECTED LOAD | 0.72 | 0.60 | 0.00 | | | | | | 0.72 | 0.84 | 0.00 | CONNECTED LOAD |
| PHASE A | 1.44 | KVA | | | | | | | DESIGN LOAD: | 4.32 | KVA | |
| PHASE B | 1.44 | KVA | | | | | | | CURRENT: | 20.78 | AMPS | |
| PHASE C | 0.00 | KVA | | | | | | | | | | |
| TOTAL CONNECTED LOAD | 2.88 | KVA | | | | | | | | | | |

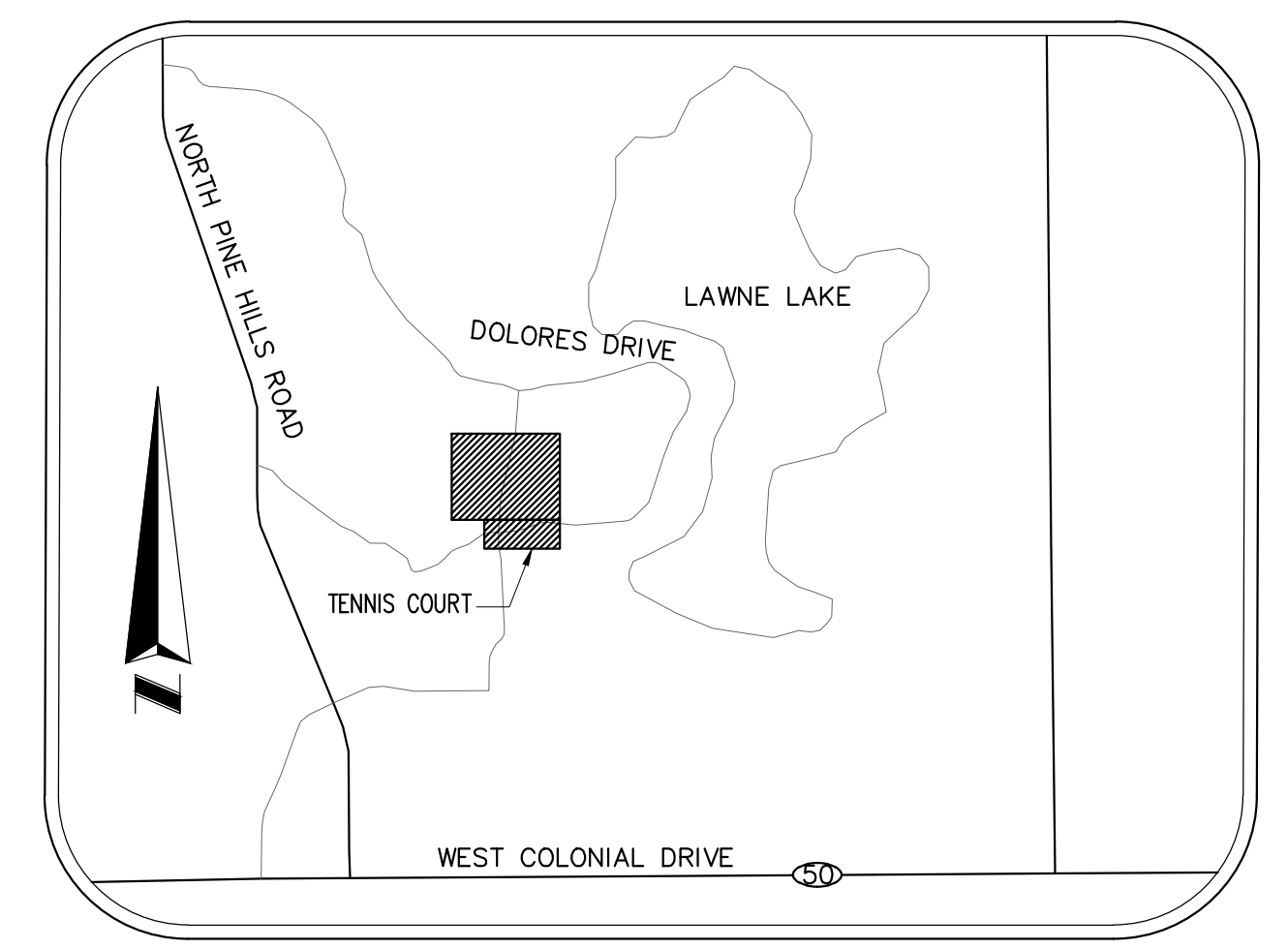
2 DP2 ELECTRICAL PANEL SCHEDULE

CONTRACTOR TO VERIFY EXISTING 20 AMP CIRCUIT BREAKERS SPARES FOR DP2-1 AND DP2-2 AND REPLACE IF NEEDED. PROVIDE NEW 20 AMP CIRCUIT BREAKER TO MATCH EXISTING FOR CIRCUIT DP2-3.

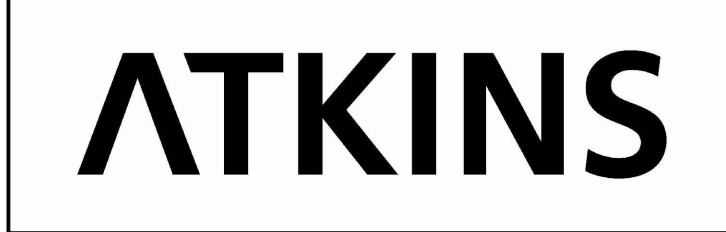


3 ELECTRICAL PANEL DETAIL
SCALE: NTS

- KEY NOTES:**
- DIGITAL TIME CLOCK IN NEMA 4X ENCLOSURE SHALL BE AS MANUFACTURED BY TORK, MODEL NO. DL4008P, 4 ZONES, TIME CONTROLLED, WITH INTEGRAL PHOTO SENSOR FOR LIGHT ACTIVATION. CIRCUITS DP2-1, DP2-2, DP2-3, AND DP2-4 TO BE CONNECTED THROUGH DIFFERENT CHANNELS TO CREATE 4 ZONES.
 - PROVIDE ID TAG FOR EXISTING PANEL "DP2"; *PANEL DP2, 3 PHASE 200 AMP 240/120V, FED FROM 200 AMP DISC./SERVICE DISC.*
 - DEMOLISH EXISTING WOOD STANCHION STRUCTURAL SUPPORT AND REPLACE WITH 6" X 6" X 10' - 0" (OVERALL) CONCRETE PRE-STRESS POSTS, NEW STAINLESS STEEL WITH 316 STAINLESS STEEL MOUNTING HARDWARE AND 316 STAINLESS STEEL UNISTRUT CHANNELS.
 - EXISTING METER AND 200A DISCONNECT SWITCH LOCATED AT DOG PARK FEEDING EXISTING PANEL "DP2".
 - PROVIDE CONCRETE FOUNDATION FOR NEW POST.



LOCATION - MAP
NOT TO SCALE



482 SOUTH KELLER ROAD
ORLANDO, FL 32810
PHONE: 407.647.7275 FAX: 407.740.8958

CONSULTANT:



PROJECT NAME:

**ORANGE COUNTY
BARNETT PARK SITE LIGHTING**
4801 W COLONIAL DR, ORLANDO FL 32808
Atkins Project #100058165

| No. | Date | Description |
|-----|-----------|-----------------|
| 1 | 7/24/2018 | PERMIT REVISION |
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ISSUE LOG
PROFESSIONAL SEALS:

ANGEL E. LORENZO, P.E.
FLORIDA REG. NO. 31137

**TENNIS COURT
PARKING LOT LIGHTING**

SHEET INFORMATION:

| | |
|--------------------------|--------------------------|
| JOB No. 100058165 | Date Issued: MAY 9, 2018 |
| Designed By: M.Y. | Sheet Number: |
| Checked By: A.E.L. | E-103 |
| QC Review: A.E.L. | |
| Phase: 100% | |

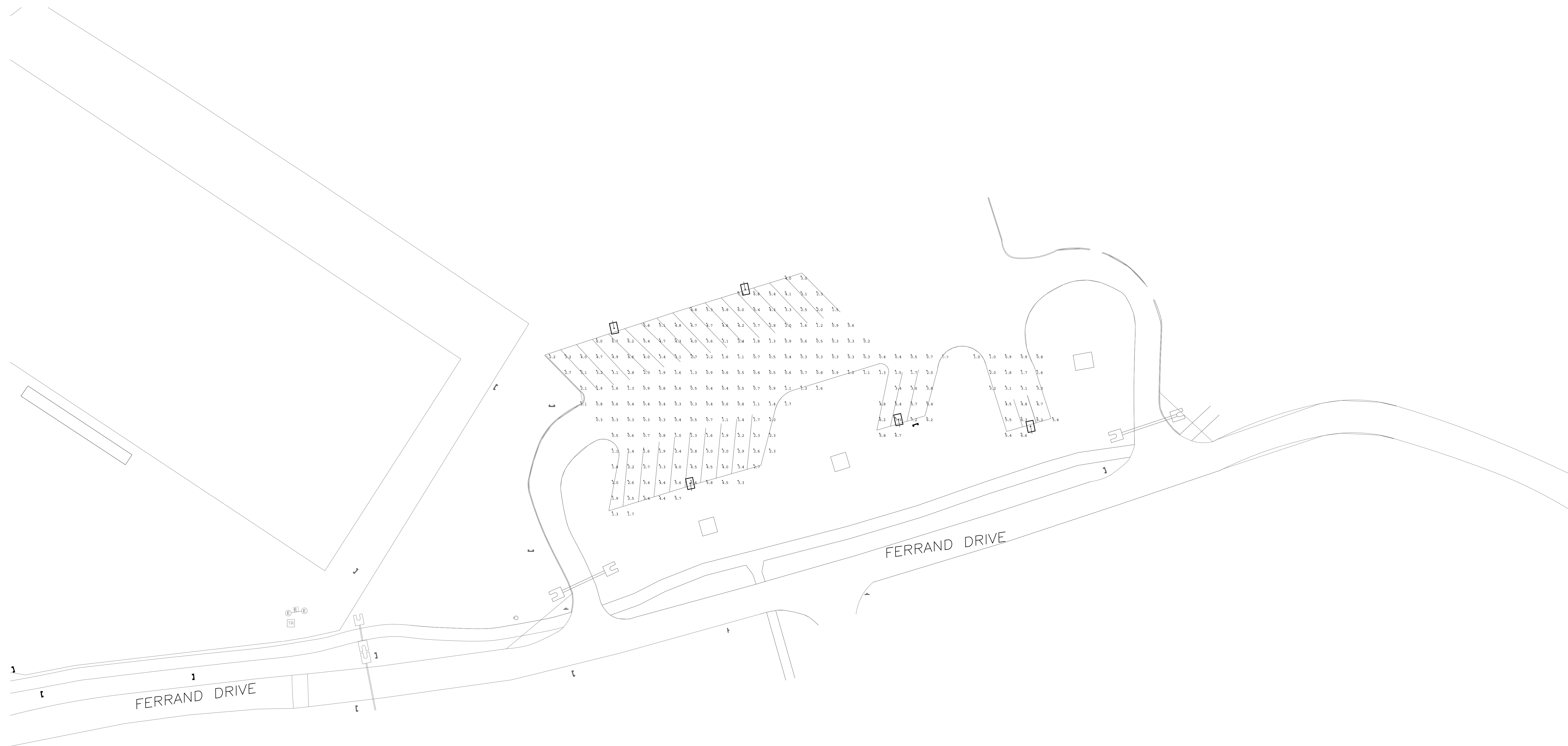
CONSULTANT:

CLIENT:

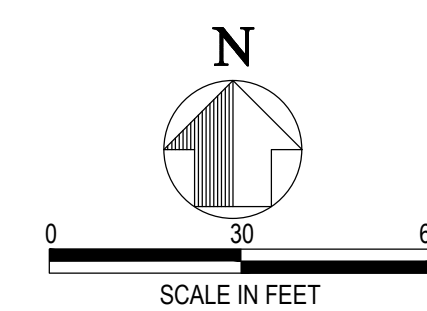


PROJECT NAME:

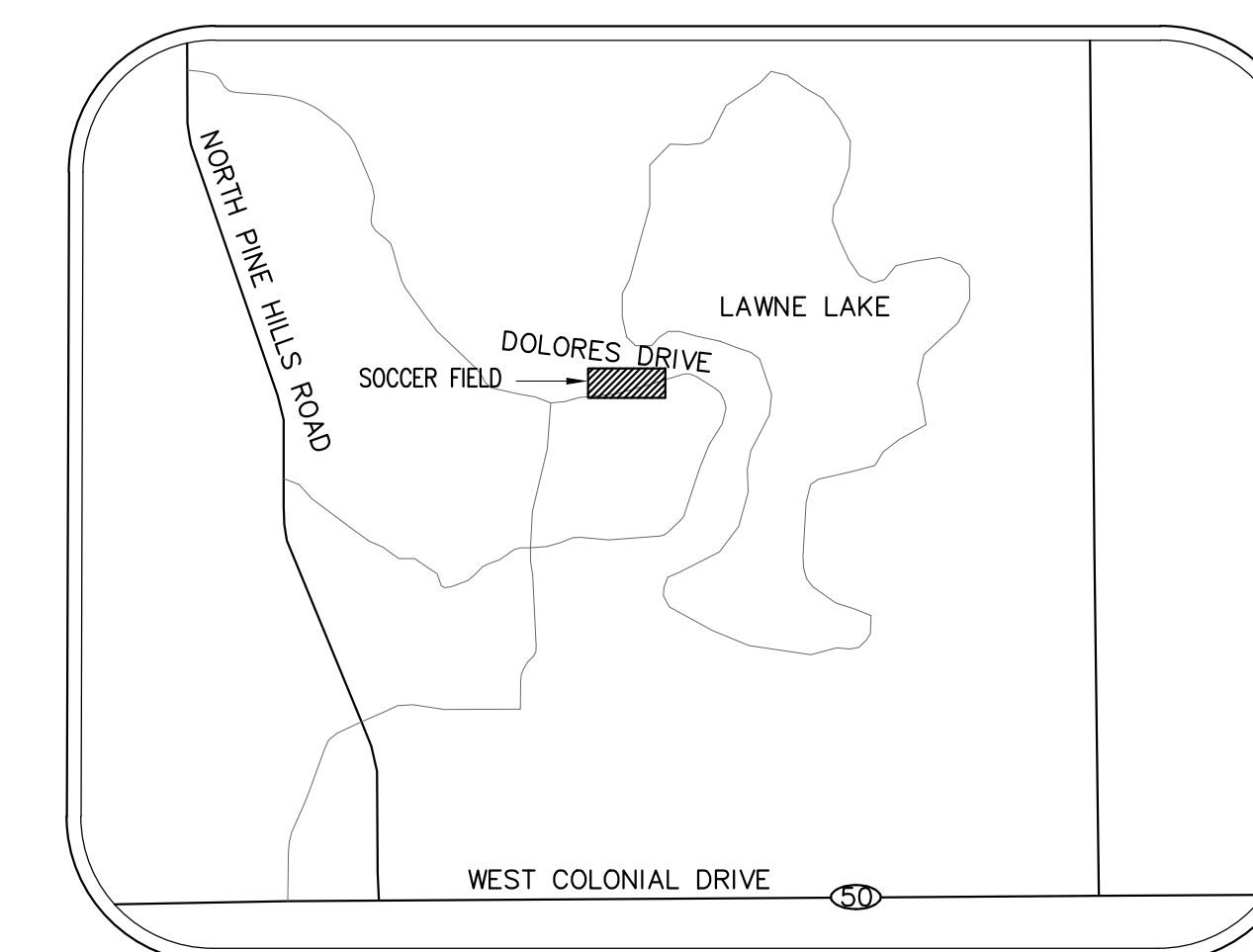
**ORANGE COUNTY
BARNETT PARK SITE LIGHTING**
4801 W COLONIAL DR, ORLANDO FL 32808
Atkins Project #100058165



1 SOCCER FIELD PARKING LOT LIGHTING PHOTOMETRIC
SCALE: 1"=30'-0"



| Calculation Summary | | | | | | | |
|----------------------------------|-------------|-------|------|-----|-----|---------|---------|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| PARKING LOT NEAR TO SOCCER FIELD | Illuminance | Fc | 2.55 | 7.3 | 0.2 | 12.75 | 36.50 |



LOCATION - MAP
NOT TO SCALE

| No. | Date | Description |
|-----|-----------|-----------------|
| 1 | 7/24/2018 | PERMIT REVISION |
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ISSUE LOG
PROFESSIONAL SEALS:

ANGEL E. LORENZO, P.E.
FLORIDA REG. NO. 31137

SHEET TITLE:

**SOCCER FIELD
PARKING LOT PHOTOMETRIC**

SHEET INFORMATION:

| | |
|--------------------------|--------------------------|
| JOB No. 100058165 | Date Issued: MAY 9, 2018 |
| Designed By: M.Y. | Sheet Number: |
| Checked By: A.E.L. | E-201 |
| QC Review: A.E.L. | |
| Phase: 100% | |

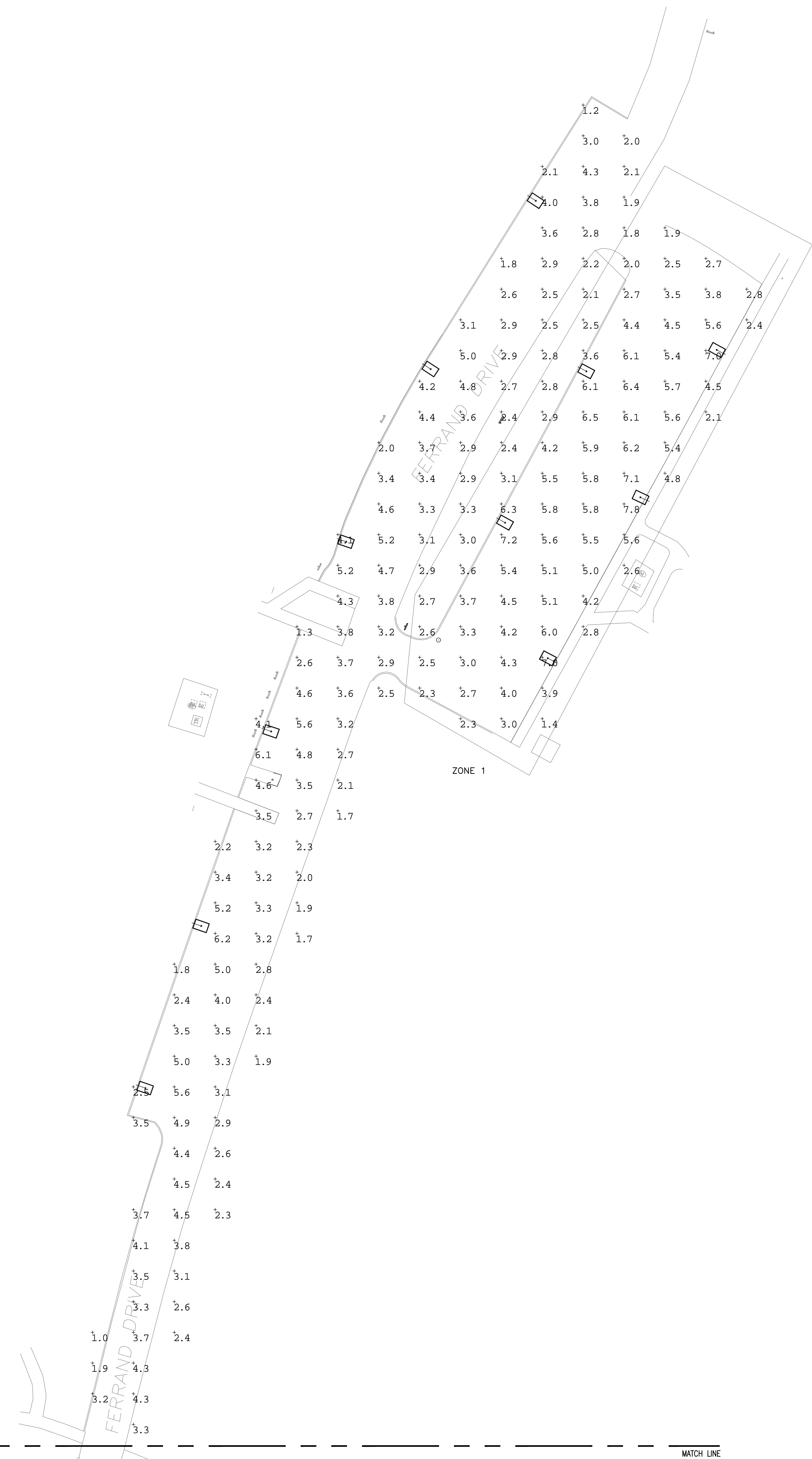
CONSULTANT:

CLIENT:



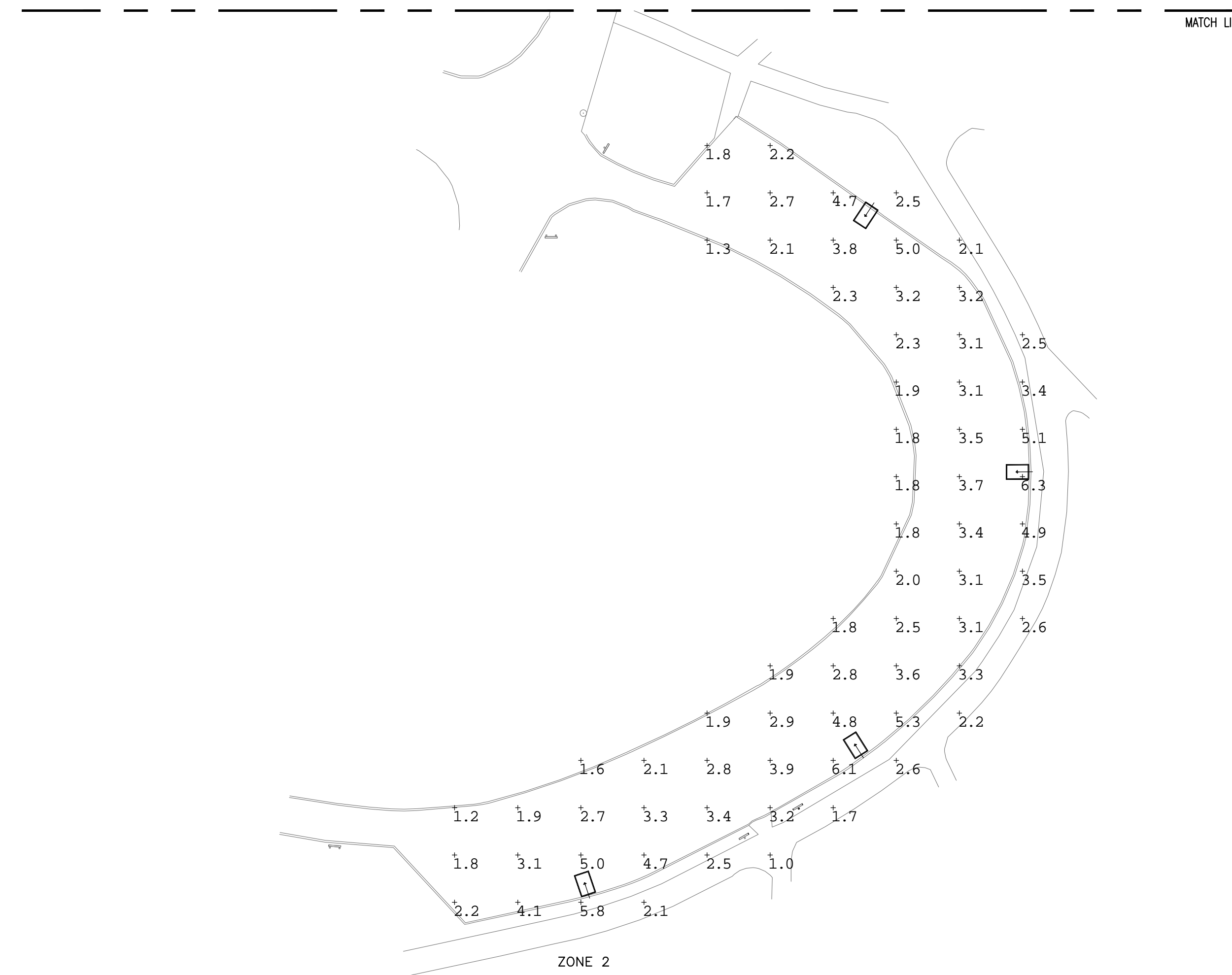
PROJECT NAME:

ORANGE COUNTY BARNETT PARK SITE LIGHTING 4801 W COLONIAL DR, ORLANDO FL 32808 Atkins Project #10058165



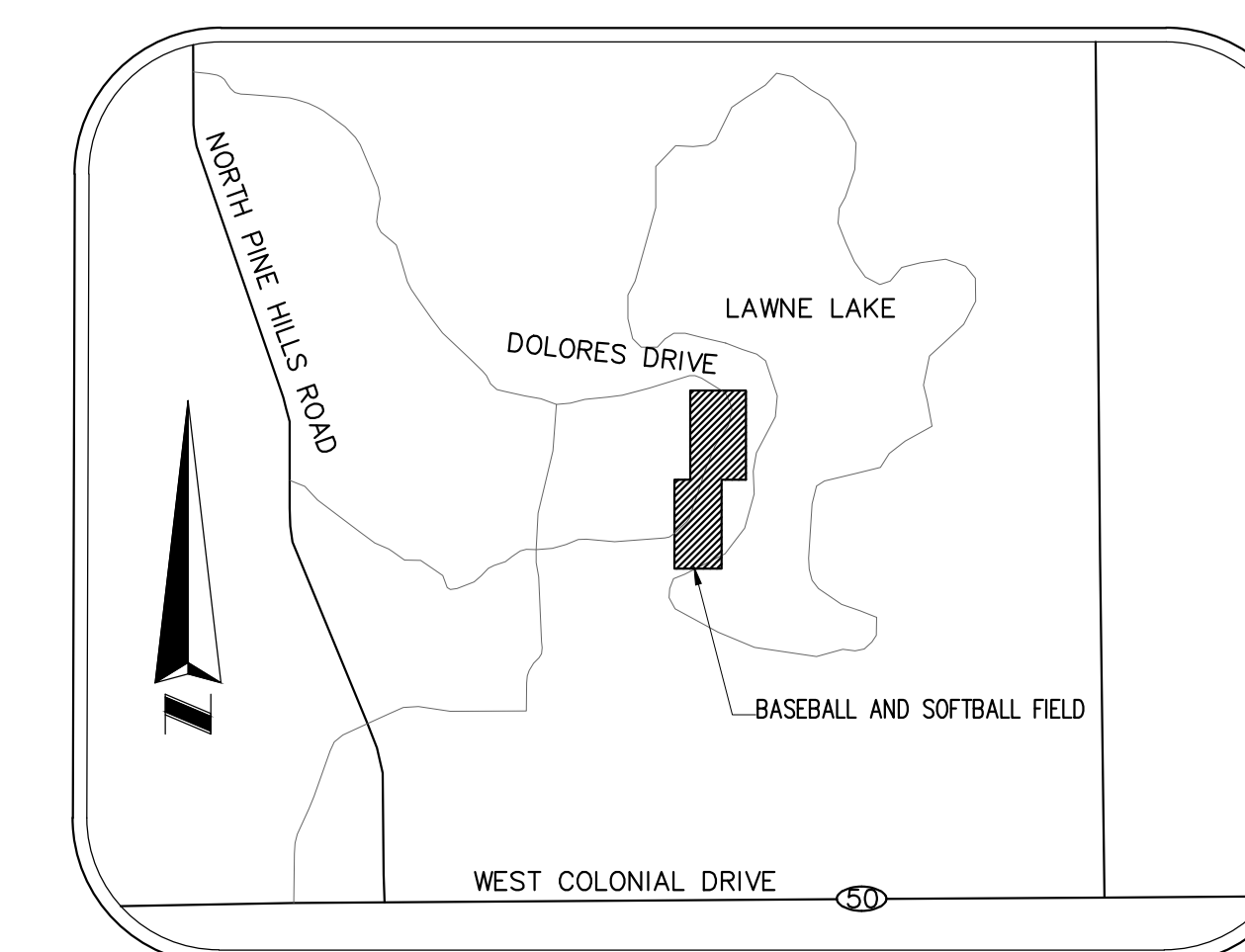
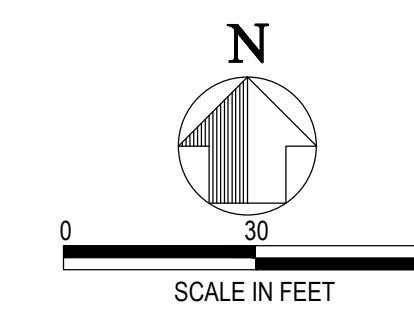
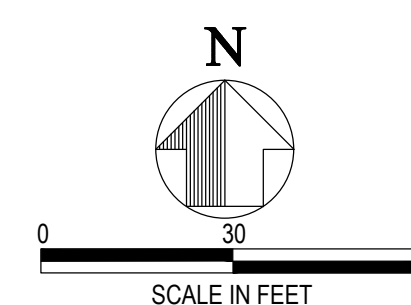
1 PARTIAL - BASEBALL AND SOFTBALL AND ZONE 1 PARKING LOT LIGHTING PHOTOMETRIC
SCALE: 1" = 30'-0"

| Calculation Summary | | | | | | | |
|---|-------------|-------|------|-----|-----|---------|---------|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| PARKING LOT NEAR TO SOFTBALL FIELD AND ZONE 1 | Illuminance | Fc | 2.88 | 6.6 | 0.9 | 3.20 | 7.33 |



2 PARTIAL - ZONE 2 PARKING LOT LIGHTING PHOTOMETRIC
SCALE: 1" = 30'-0"

| Calculation Summary | | | | | | | |
|----------------------------------|-------------|-------|------|-----|-----|---------|---------|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| PARKING LOT NEAR TO SOCCER FIELD | Illuminance | Fc | 3.80 | 7.4 | 1.1 | 3.45 | 6.73 |



LOCATION - MAP
NOT TO SCALE

| No. | Date | Description |
|-----|-----------|-----------------|
| 1 | 7/24/2018 | PERMIT REVISION |

ISSUE LOG
PROFESSIONAL SEALS:

ANGEL E. LORENZO, P.E.
FLORIDA REG. NO. 31137

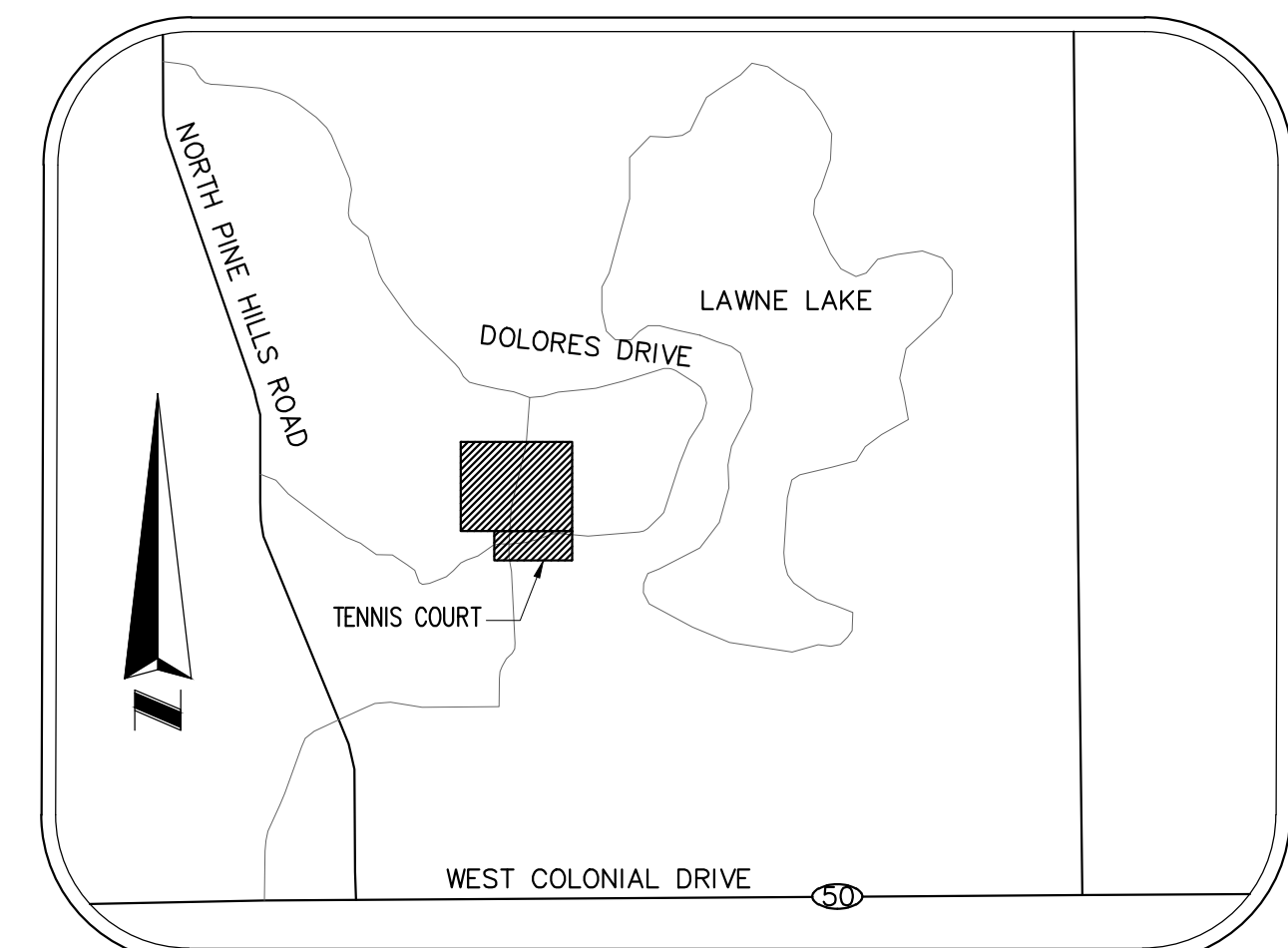
SHEET TITLE:

BASEBALL AND SOFTBALL PARKING LOT PHOTOMETRIC

| SHEET INFORMATION: | | | |
|--------------------------|---------------|-------------|--|
| JOB No. 100058165 | Date Issued: | MAY 9, 2018 | |
| Designed By: M.Y. | Sheet Number: | | |
| Checked By: A.E.L. | E-202 | | |
| OC Review: A.E.L. | | | |
| Phase: 100% | | | |



| Calculation Summary | | | | | | | |
|---------------------|-------------|-------|------|-----|-----|---------|---------|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| ZONE 1 | Illuminance | Fc | 3.55 | 7.5 | 0.6 | 5.92 | 12.50 |
| ZONE 2 | Illuminance | Fc | 5.14 | 8.6 | 2.0 | 2.57 | 4.30 |
| ZONE 3 | Illuminance | Fc | 4.88 | 7.6 | 2.0 | 2.44 | 3.80 |
| ZONE 4 | Illuminance | Fc | 4.86 | 7.7 | 1.2 | 4.05 | 6.42 |
| TENNIS COURT | Illuminance | Fc | 30.8 | 40 | 22 | 1.4 | 1.81 |



LOCATION - MAP
NOT TO SCALE

1 TENNIS COURT PARKING LOT LIGHTING PHOTOMETRIC
SCALE: 1" = 30'-0"

CONSULTANT:

CLIENT:



PROJECT NAME:

**ORANGE COUNTY
BARNETT PARK SITE LIGHTING**
4801 W COLONIAL DR, ORLANDO FL 32808
Atkins Project #100058165

| No. | Date | Description |
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| 1 | 7/24/2018 | PERMIT REVISION |

ISSUE LOG

PROFESSIONAL SEALS:

ANGEL E. LORENZO, P.E.
FLORIDA REG. NO. 31137

SHEET TITLE:

**TENNIS COURT
PARKING LOT PHOTOMETRIC**

| SHEET INFORMATION: | | | |
|--------------------|-----------|---------------|-------------|
| JOB No. | 100058165 | Date Issued: | MAY 9, 2018 |
| Designed By: | M.Y. | Sheet Number: | |
| Checked By: | A.E.L. | | |
| QC Review: | A.E.L. | | |
| Phase: | 100% | | |

CONSULTANT:

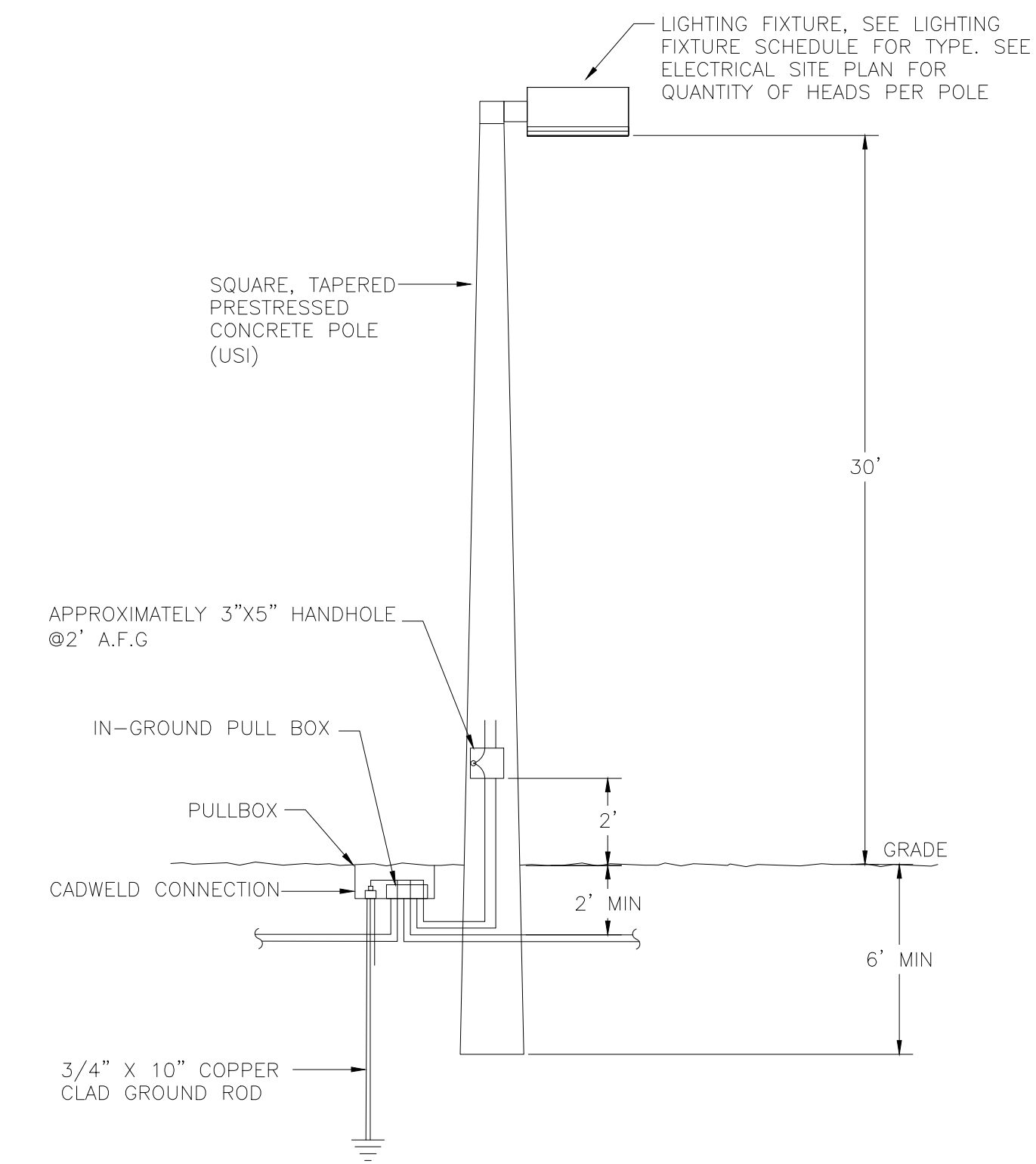
CLIENT:



PROJECT NAME:

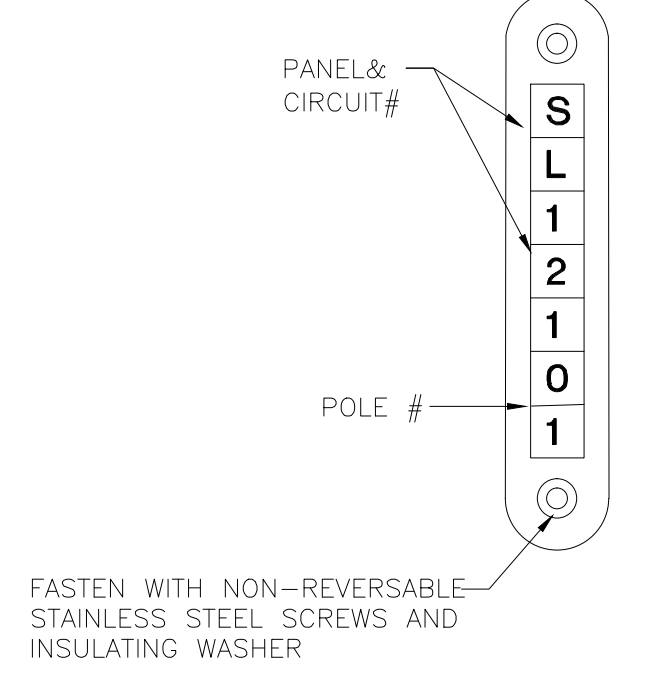
ORANGE COUNTY BARNETT PARK SITE LIGHTING

4801 W COLONIAL DR, ORLANDO FL 32808
Atkins Project #10058165



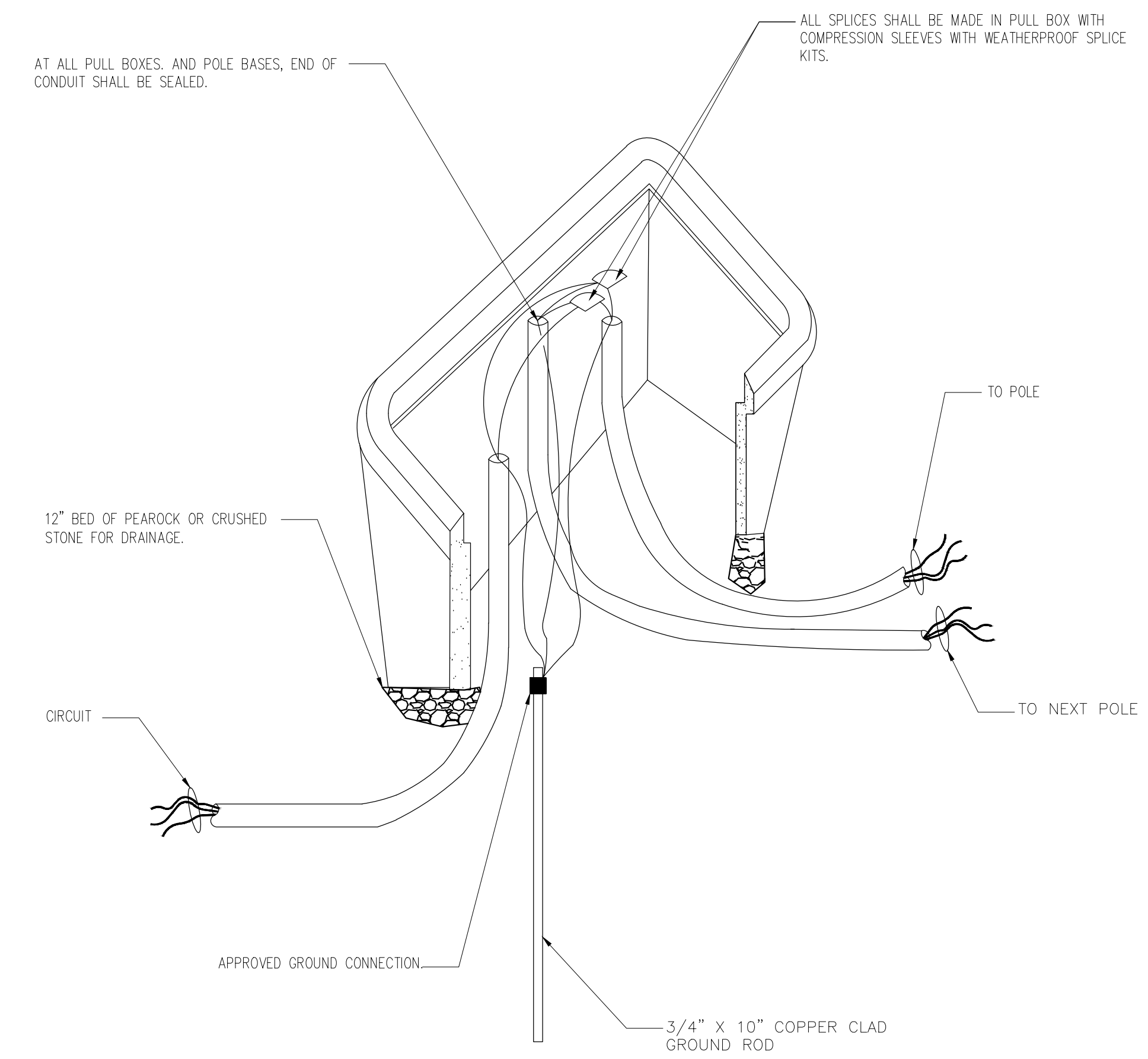
1 SITE FIXTURE POLE DETAIL
SCALE: N.T.S.

- GENERAL NOTES:**
- CONTRACTOR TO SUBMIT DESIGN WIND LOAD CALCULATIONS CERTIFYING CONFORMANCE OF ASSEMBLY AS DICTATED BY FLORIDA BUILDING CODE. EACH CALCULATION SHALL BE SIGNED AND SEALED BY A STATE OF FLORIDA LICENSED STRUCTURAL ENGINEER.
 - POLES SHALL BE FACTORY EQUIPPED WITH GROUNDING STUDS, EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDED TO THE GROUND STUD.
 - PULLBOX TO HAVE HEAVY-DUTY COPOLYMER FULL D.O.T. TRAFFIC RATED COVER (COVER TO READ "ELECTRICAL"), FURNISH AND INSTALL GRAVEL (1FT.) IN BOTTOM OF PULLBOX FOR DRAINAGE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.



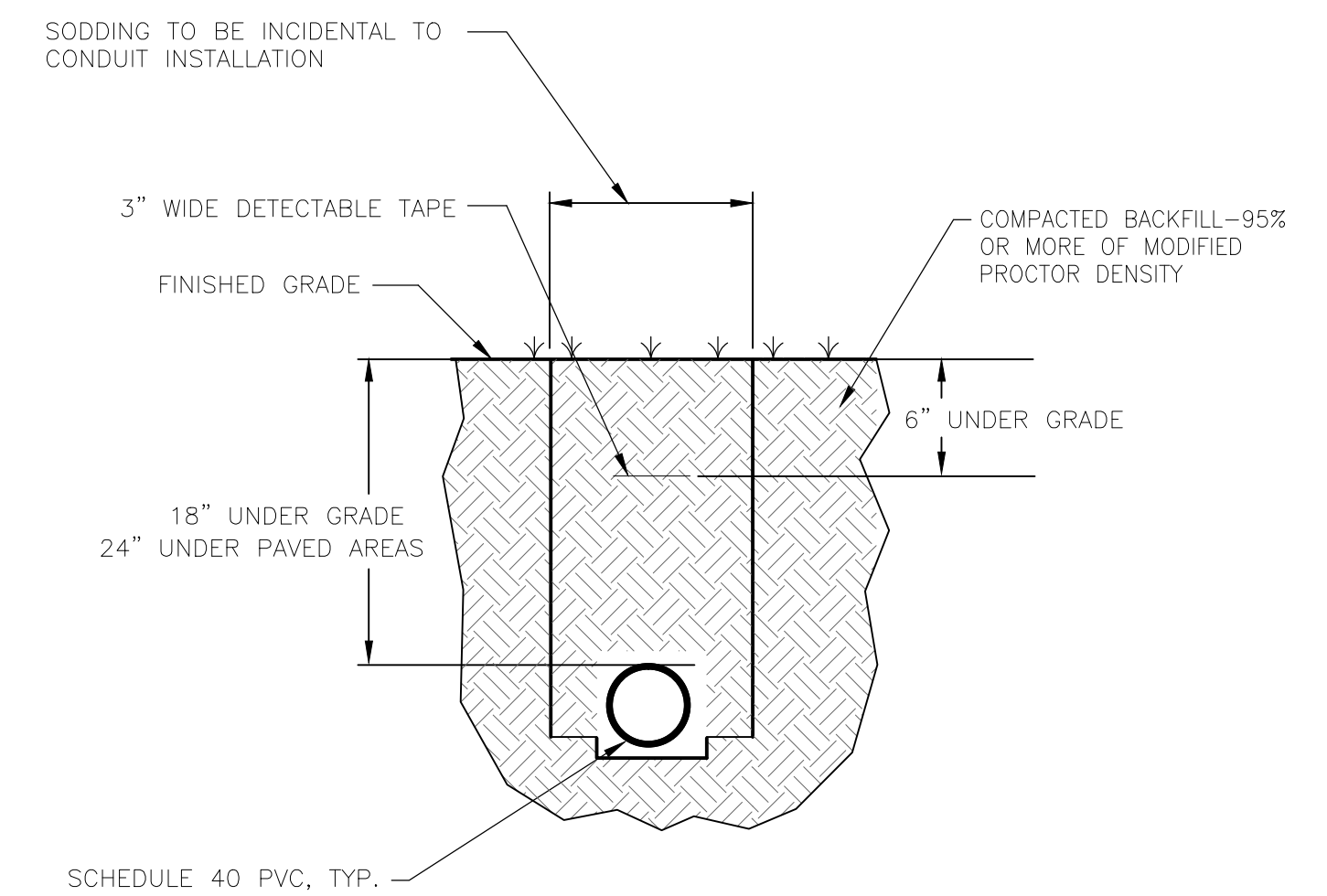
2 POLE IDENTIFICATION DETAIL
SCALE: N.T.S.

- GENERAL NOTES:**
- FURNISH AND INSTALL ALL ALUMINUM IDENTIFICATION TAG ON EACH POLE MOUNTED LIGHTING STANDARD. TAGS SHALL BE 2" X 8" IN SIZE WITH BLACK LETTERS ON YELLOW BACKGROUND.



3 ELECTRICAL PULLBOX
SCALE: N.T.S.

- GENERAL NOTES:**
- HANDHOLE ENCLOSURE SHALL BE UL CERTIFIED FOR THE PURPOSE AND LOCATION INTENDED. HANDHOLE SHALL BE INSTALLED AS PER MANUFACTURE RECOMMENDATIONS AND COMPLY WITH NEC ARTICLE 314 REQUIREMENTS.
 - HOUSING SHALL BE POLYMER CONCRETE REINFORCED WITH HEAVY HEAVY FIBERGLASS REINFORCING WITH THE COMPRESSIVE STRENGTH OF NO LESS THAN 15,000 LBS LESS THAN 10,000 PSI.
 - COVER AND BOX SHALL WITHSTAND A SERVICE LOAD OF NO LESS THAN 15,000 LBS OVER A 10" X 10" AREA.
 - PROVIDE LABEL "ELECTRICAL" FOR POWER MANHOLES.
 - PROVIDE STAINLESS STEEL BOLTS AND INSERTS.



4 UNDERGROUND CONDUIT DETAIL
SCALE: N.T.S.

| No. | Date | Description |
|-----|-----------|-----------------|
| 1 | 7/24/2018 | PERMIT REVISION |
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ISSUE LOG

PROFESSIONAL SEALS:

ANGEL E. LORENZO, P.E.
FLORIDA REG. NO. 31137

SHEET TITLE:

ELECTRICAL DETAILS

SHEET INFORMATION:

| | |
|--------------------------|--------------------------|
| JOB No. 100058165 | Date Issued: MAY 9, 2018 |
| Designed By: M.Y. | Sheet Number: |
| Checked By: INT | E-301 |
| OC Review: INT | |
| Phase: 100% | |