CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

LIFT STATIONS
No. 059, 061, 073, 083, 094, 126 and 129
EMERGENCY GENERATORS
PROJECT No.: CIP 0217_P

FEBRUARY 2021

BUDDY DYER
MAYOR

JIM GRAY
COMMISSIONER DISTRICT 1

TONY ORTIZ
COMMISSIONER DISTRICT 2

ROBERT F. STUART
COMMISSIONER DISTRICT 3

PATTY SHEEHAN
COMMISSIONER DISTRICT 4

REGINA I. HILL
COMMISSIONER DISTRICT 5

BAKARI F. BURNS
COMMISSIONER DISTRICT 6

RICHARD M. HOWARD, P.E.
DIRECTOR OF PUBLIC WORKS

DAVID J. BASS, P.E.
WATER RECLAMATION DIVISION MANAGER

ALAN OYLER, P.E.
PROJECT MANAGER

ATKINS

Ferdinand Vasquez, P.E.
ATKINS Project Manager

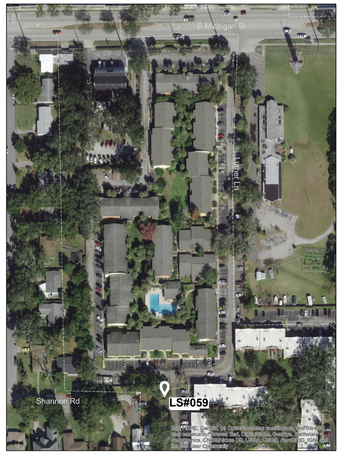
482 SOUTH KELLER ROAD
Orlando, Fl 32810-6101
TEL. 407) 647-7275
FAX. (407) 647-0624
www.atkinsglobal.com

5300 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24

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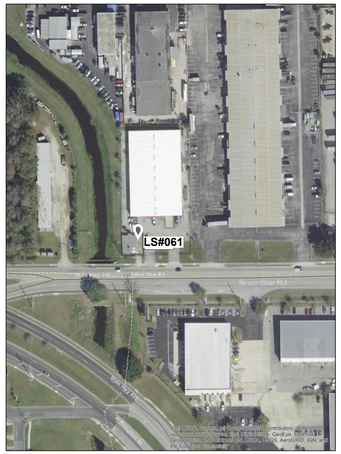


VICINITY MAP



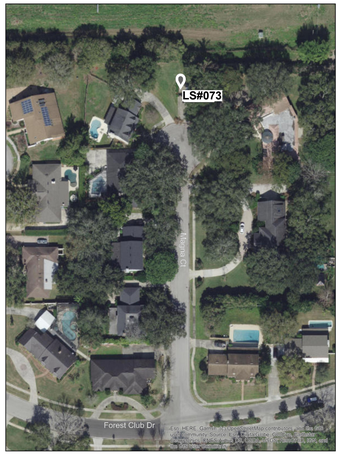
LOCATION MAP

716 E Michigan St, Orlando FL (LS#059)



LOCATION MAP

4175 Silver Star Rd Orlando FL (LS#061)



LOCATION MAP

1417 Magna Ct, Orlando FL (LS#073)



LOCATION MAP

4210 N. Lake Orlando Parkway Orlando FL (LS#083)



LOCATION MAP

5169 Lido Street, Orlando FL (LS#094)



LOCATION MAP

9099 Lake Nona Club Dr, Orlando FL (LS#126)



LOCATION MAP

9653 Lupine Avenue, Orlando FL (LS#129)

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT:
CITY OF ORLANDO

PROJECT:
LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129
EMERGENCY GENERATORS

SHEET TITLE:
VICINITY AND LOCATION MAPS

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24

LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	G-200
REV.	△

PLOT DATE: Jan 04, 2021 - 7:23am
FILE NAME: U:\WO\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\02 - G-200.dwg

LEGEND

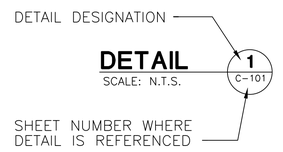
DESCRIPTION	SYMBOL: PROPOSED	SYMBOL: EXISTING
CENTER LINE	℄	℄
PROPERTY LINE	P	P
RIGHT-OF-WAY	R/W	R/W
MATCH LINE		SAME
FORCE MAIN	FM	FM
WATER MAIN	WM	WM
GAS MAIN	GM	GM
UNDERGROUND UTILITIES	UT	UT
ELECTRICAL MANHOLE		
ELECTRICAL JUNCTION BOX/MANHOLE		
SANITARY SEWER MANHOLE		
STORM SEWER MANHOLE		
STORM SEWER INLET		
POWER POLE		
FIRE HYDRANT		
YARD HYDRANT		
HOSE BIBB		
MONUMENT		
FENCE	x x	x x
TREE		
90° BEND		
BEND OR ELBOW LESS THAN 90°		
CROSS		
TEE		
LATERAL/WYE		
REDUCER		
PLUG		
GATE VALVE		
BUTTERFLY VALVE		
CHECK VALVE		
PLUG VALVE		
FLANGED		
MECHANICAL JOINT		
COUPLING		
FLG. ADAPTER		
BALL VALVE		
PRESSURE REGULATOR		

GENERAL ABBREVIATIONS

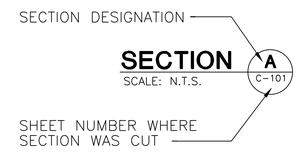
AB.	ABOVE
A/C	AIR CONDITIONING
ADJ.	ADJACENT
ADMIN.	ADMINISTRATION
ALT.	ALTERNATE
ALUM.	ALUMINUM
ANCH.	ANCHOR
APPROX.	APPROXIMATELY
ASB.	ASBESTOS
ASPH.	ASPHALT
ASSOC.	ASSOCIATION
ASSY.	ASSEMBLY
BLK.	BLOCK
B.M.	BENCH MARK
BOTT.	BOTTOM
CA.	COMPRESSED AIR
CE.	CLARIFIER EFFLUENT
CL.	CHLORINE SOLUTION
C.M.P.	CORRIGATED METAL PIPE
C.O.	CLEANOUT
CONC.	CONCRETE
CONSTR.	CONSTRUCTION
CONT.	CONTINUOUS
DBL.	DOUBLE
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
D.I.P.	DUCTILE IRON PIPE
DO.	DISSOLVED OXYGEN
DR.	DRAIN
DWGS.	DRAWINGS
E.	EAST
EFF.	EFFLUENT
EL.	ELEVATION
ELECT.	ELECTRICAL
ELL.	ELBOW
EMERG.	EMERGENCY
EQUIP.	EQUIPMENT
E.W.	EACH WAY
EXIST.	EXISTING
EXH.	EXHAUST
EXP. JT.	EXPANSION JOINT
EXT.	EXTERIOR
FB.	FILTER BACKWASH
F.D.	FLOOR DRAIN
FE.	FILTER EFFLUENT
F.H.	FIRE HYDRANT
FLG.	FLANGE
F.M.	FORCE MAIN
GALV.	GALVANIZED
GEN.	GENERATOR
G.P.M.	GALLONS PER MINUTE
GR.	GRADE
H.P.	HIGH POINT
HP.	HORSEPOWER
HT.	HEIGHT
H.W.L.	HIGH WATER LEVEL
I.D.	INSIDE DIAMETER
IN.	INCH
INF.	INFLUENT
INV.	INVERT
JT.	JOINT
LBS.	POUNDS
L.F.	LINEAR FEET
L.P.	LOW POINT
L.W.L.	LOW WATER LEVEL
LTG.	LIGHTING
MAINT.	MAINTENANCE
MAX.	MAXIMUM
M.C.C.	MOTOR CONTROL CENTER
MECH.	MECHANICAL
MET.	METAL
MFG.	MANUFACTURING
M.G.D.	MILLION GALLONS/DAY
MH.	MANHOLE
MM	MILLIMETER
MIN.	MINIMUM
M.J.	MECHANICAL JOINT
ML.	MIXED LIQUOR
N.	NORTH
NaOCL	SODIUM HYPO CHLORITE
NPW	NONPOTABLE WATER
N.T.S.	NOT TO SCALE
N.W.L.	NORMAL WATER LEVEL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
P.C.	POINT OF CURVATURE
PE.	PRETREATMENT EFFLUENT
P.E.	PLAIN END
PH.	PHASE
P.I.	POINT OF INTERSECTION
PL.	PLATE
PROD.	PRODUCT
PROP.	PROPOSED
P.R.V.	PRESSURE RELIEF VALVE
P.S.I.	POUNDS/SQUARE INCH
P.T.	POINT OF TANGENCY
P.V.	PLUG VALVE
P.V.C.	POLYVINYLCHLORIDE
PVMT.	PAVEMENT
QTY.	QUANTITY
RAS.	RETURN ACTIVATED SLUDGE
R.C.P.	REINFORCED CONCRETE PIPE
RD.	ROAD
RED.	REDUCER
REF.	REFERENCE
REQ'D.	REQUIRED
R.J.	RESTRAINED JOINT
RM.	REUSE MAIN
R.P.M.	REVOLUTIONS/MINUTE
RS.	RAW SEWAGE
RW.	RECLAIMED WATER
SCH.	SCHEDULE
SC.	SCUM
SPECS.	SPECIFICATIONS
ST.STL.	STAINLESS STEEL
STA.	STATION
S.T.P.	SEWAGE TREATMENT PLANT
SW.	SEAL WATER
T&B	TOP & BOTTOM
TCP	TRAFFIC CONTROL SUPERVISOR
TEMP.	TEMPERED
THICK.	THICKNESS
T/CURB	TOP OF CURB
TS.	THICKENED SLUDGE
T/SLAB	TOP OF SLAB
T/WALL	TOP OF WALL
TYP.	TYPICAL
VB.	VALVE BOX
VENT.	VENTILATION
VERT.	VERTICAL
WAS.	WASTE ACTIVATED SLUDGE
W.	WEST
W/	WITH
W.L.	WATER LEVEL
W.M.	WATER MAIN
W/O	WITHOUT
WT.	WEIGHT
Y.H.	YARD HYDRANT

DRAWING INDEX

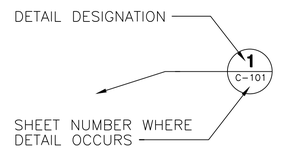
SHEET NO.	PAGE TITLE
G-100	COVER SHEET
G-200	VICINITY AND LOCATION MAPS
G-300	LEGEND, GENERAL ABBREVIATIONS AND DRAWING INDEX
G-400	GENERAL NOTES
E-001	ELECTRICAL SYMBOLS, NOTES & ABBREVIATIONS
	LIFT STATION 059
C-100	BOUNDARY & TOPOGRAPHIC SURVEY LIFT STATION NO. 059 (710 EAST MICHIGAN ST.)
C-101	LIFT STATION No. 059 SITE DEMOLITION PLAN AND PROPOSED SITE PLAN
E-101	LIFT STATION NO. 059 ELECTRICAL PLAN
E-102	LIFT STATION NO. 059 SINGLE LINE DIAGRAM
E-103	LIFT STATION NO. 059 EQUIPMENT RACK ELEVATION
	LIFT STATION 061
C-200	BOUNDARY & TOPOGRAPHIC SURVEY LIFT STATION NO. 061 (4175 SILVER STAR ROAD)
C-201	LIFT STATION No. 061 SITE PLAN
E-201	LIFT STATION NO. 061 ELECTRICAL PLAN
E-202	LIFT STATION NO. 061 SINGLE LINE DIAGRAM
E-203	LIFT STATION NO. 061 EQUIPMENT RACK ELEVATION
	LIFT STATION 073
C-300	BOUNDARY & TOPOGRAPHIC SURVEY LIFT STATION NO. 073 (1417 MAGNA COURT)
C-301	LIFT STATION No. 073 SITE DEMOLITION PLAN AND PROPOSED SITE PLAN
E-301	LIFT STATION NO. 073 ELECTRICAL DEMOLITION PLAN & PROPOSED ELECTRICAL PLAN
E-302	LIFT STATION NO. 073 SINGLE LINE DIAGRAM
E-303	LIFT STATION NO. 073 EQUIPMENT RACK ELEVATION
	LIFT STATION 083
C-400	BOUNDARY & TOPOGRAPHIC SURVEY LIFT STATION NO. 083 (4210 N. LAKE ORLANDO PARKWAY)
C-401	LIFT STATION No. 083 SITE DEMOLITION PLAN AND PROPOSED SITE PLAN
E-401	LIFT STATION NO. 083 ELECTRICAL DEMOLITION PLAN & PROPOSED ELECTRICAL PLAN
E-402	LIFT STATION NO. 083 SINGLE LINE DIAGRAM
E-403	LIFT STATION NO. 083 EQUIPMENT RACK ELEVATION
	LIFT STATION 094
C-500	BOUNDARY & TOPOGRAPHIC SURVEY LIFT STATION NO. 094 (5169 LIDO ST. DOVER MANOR)
C-501	LIFT STATION No. 094 SITE DEMOLITION PLAN AND PROPOSED SITE PLAN
E-501	LIFT STATION NO. 094 ELECTRICAL PLAN
E-502	LIFT STATION NO. 094 SINGLE LINE DIAGRAM
E-503	LIFT STATION NO. 094 EQUIPMENT RACK ELEVATION
	LIFT STATION 126
C-600	BOUNDARY & TOPOGRAPHIC SURVEY LIFT STATION NO. 126 (9099 LAKE NONA-LAKE NONA ESTATES)
C-601	LIFT STATION No. 126 SITE DEMOLITION PLAN AND PROPOSED SITE PLAN
E-601	LIFT STATION NO. 126 ELECTRICAL PLAN
E-602	LIFT STATION NO. 126 SINGLE LINE DIAGRAM
E-603	LIFT STATION NO. 126 EQUIPMENT RACK ELEVATION
	LIFT STATION 129
C-700	BOUNDARY & TOPOGRAPHIC SURVEY LIFT STATION NO. 129 (9653 LUPINE AVENUE)
C-701	LIFT STATION No. 129 SITE DEMOLITION PLAN AND PROPOSED SITE PLAN
E-701	LIFT STATION NO. 129 ELECTRICAL PLAN
E-702	LIFT STATION NO. 129 SINGLE LINE DIAGRAM
E-703	LIFT STATION NO. 129 EQUIPMENT RACK ELEVATION
C-800	STANDARD DETAILS
C-801	STANDARD DETAILS
C-802	STANDARD DETAILS
C-803	STANDARD DETAILS



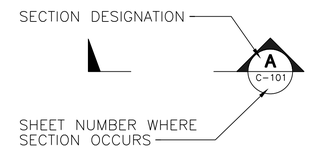
DETAIL TITLE TARGET



SECTION TITLE TARGET



DETAIL TARGET



SECTION TARGET

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO. 41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

SHEET TITLE: LEGEND, GENERAL ABBREVIATIONS, AND DRAWING INDEX

ATKINS

CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FIPR CERTIFICATE OF AUTHORIZATION NO.24

LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500

www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	G-300 REV.

PLOT DATE: Feb 03, 2021 - 12:46pm
FILE NAME: U:\WO\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\03 - G-300.dwg

GENERAL NOTES:

1. CONTRACTOR SHALL ENSURE THAT ALL REQUIRED PERMITS ARE IN-HAND BEFORE BEGINNING ANY CONSTRUCTION.

2. ALL CONSTRUCTION SHALL MEET CURRENT REQUIREMENTS OF FDEP, AWWA, CITY OF ORLANDO AND ORLANDO UTILITIES COMMISSION FOR MATERIALS OF CONSTRUCTION, DESIGN, AND INSTALLATION.

3. ALL EXISTING UNDERGROUND UTILITIES THAT ARE ACTIVE SHALL REMAIN IN PLACE UNTIL THE NEW FACILITIES ARE OPERATIONAL.

4. UNDER NO CIRCUMSTANCES SHALL THE ACTIVITIES OF THE CONTRACTOR OR HIS SUBCONTRACTORS CAUSE ANY INTERRUPTIONS TO THE SERVICE OPERATION OF EXISTING UTILITIES WITHOUT WRITTEN AUTHORIZATION FROM THE AUTHORIZED OWNER'S REPRESENTATIVE. LIFT STATIONS SHALL BE OPERABLE OR BY-PASSED BY CONTRACTOR AT ALL TIMES.

5. CONTRACTOR SHALL NOTIFY THE VARIOUS UTILITIES AND MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE UTILITIES, WITH THE OWNER OF THE UTILITY, PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL INSURE THAT THE UTILITY OWNERS AND THE CITY OF ORLANDO CONSTRUCTION MANAGER ARE PROPERLY NOTIFIED OF ANY TEMPORARY DISRUPTION OF SERVICE AT LEAST 1 WEEK IN ADVANCE.

6. AT LEAST 14 DAYS BEFORE CONSTRUCTION, THE CONTRACTOR SHALL, VERIFY ALL EXISTING PUBLIC AND PRIVATE UTILITY LOCATIONS IN THREE DIMENSIONS AT EACH PROJECT SITE. THE CONTRACTOR SHALL UTILIZE MANUAL OR NONDESTRUCTIVE (E.G., VACUUM EXCAVATION) METHODS TO PHYSICALLY EXPOSE UTILITIES FOR MEASUREMENT AND DATA RECORDING. ACCURACIES SHALL BE TO ONE HALF (0.5) INCH VERTICAL AND TO APPLICABLE HORIZONTAL SURVEY AND MAPPING ACCURACY. EXCAVATE TEST HOLES EXPOSING THE UTILITY TO BE MEASURED. COMPLY WITH APPLICABLE UTILITY DAMAGE PREVENTION LAWS, PERMITS, AND SPECIFICATIONS AND COORDINATE WITH UTILITY AND OTHER INSPECTORS, AS REQUIRED. DETERMINE (A) THE HORIZONTAL AND VERTICAL LOCATION OF THE TOP AND/OR BOTTOM OF THE UTILITY; (B) THE ELEVATION OF THE EXISTING GRADE OVER THE UTILITY AT A TEST HOLE; (C) THE OUTSIDE DIAMETER OF THE UTILITY AND CONFIGURATION OF NON-ENCASED, MULTI-CONDUIT SYSTEMS; (D) THE UTILITY STRUCTURE MATERIAL COMPOSITION, WHEN REASONABLY ASCERTAINABLE; (E) THE BENCHMARKS AND/OR PROJECT SURVEY DATA USED TO DETERMINE ELEVATIONS; (F) THE PAVING THICKNESS AND TYPE, WHERE APPLICABLE; (G) THE GENERAL SOIL TYPE AND SITE CONDITIONS; AND (H) SUCH OTHER PERTINENT INFORMATION AS IS REASONABLY ASCERTAINABLE FROM EACH TEST HOLE SITE. IF THERE IS A POTENTIAL CONFLICT, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. ANY DAMAGE TO UTILITIES, STRUCTURES AND/OR SERVICES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE IN A MANNER APPROVED BY AND COORDINATED WITH THE UTILITY OWNER.

7. FOR CONNECTIONS TO AN EXISTING PIPE, THE CONTRACTOR SHALL EXCAVATE THE CONNECTION SITE TO VERIFY THE PIPE TYPE, ELEVATION, SIZE AND CONDITION, AND CHECK FOR OBSTRUCTIONS AND JOINT LOCATIONS PRIOR TO ORDERING MATERIALS AND INSTALLATION OF THE NEW PIPELINE.

8. THE CONTRACTOR HAS THE OPTION TO MOVE/RELOCATE THE ALIGNMENT (HORIZONTAL AND VERTICAL) TO AVOID CONFLICT WITH EXISTING UTILITIES OR FOR EASE OF WORK, SUBJECT TO APPROVAL FROM THE CITY. IF THE CONTRACTOR CHANGES THE VERTICAL ALIGNMENT, THE CONTRACTOR SHALL INSTALL ANY NECESSARY AIR RELEASE VALVES AND FITTINGS AT HIS EXPENSE.

9. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING BEFORE COMMENCING CONSTRUCTION WORK.

10. WHEN ENCOUNTERED, UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE EXCAVATED MATERIALS AND BACKFILLED WITH SUITABLE MATERIALS. UNSUITABLE MATERIALS SHALL BE REMOVED FROM THE JOB SITE AND DISPOSED OF IN A TIMELY AND LEGAL MANNER AS APPROVED BY THE CITY.

11. INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS. EROSION CONTROL AT ALL INLET DRAINAGE STRUCTURES DURING CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH CITY STANDARDS AND THE APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPPP).

12. PRIOR TO BEGINNING ANY CLEARING ACTIVITIES ON CITY PROPERTY, THE CONTRACTOR SHALL GET APPROVAL FROM PARKS DEPARTMENT FOR TREE REMOVAL, THEN CLEARLY MARK WITH FLAGGING TAPE OR OTHER APPROVED METHOD, ALL EXISTING TREES TO REMAIN ON THE PROJECT SITE. ALL TREES TO BE REMOVED SHALL BE MARKED WITH SPRAY PAINT OR OTHER APPROVED METHOD SO THAT DURING CLEARING, THERE ARE NO MISUNDERSTANDINGS AS TO WHICH TREES ARE TO BE REMOVED AND WHICH ARE TO REMAIN.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF DAMAGED TREES WITH TREES OF SIMILAR QUALITIES, SIZE AND SPECIES AT NO COST TO THE CITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF NEWLY PLANTED GRASS OR VEGETATION UNTIL THE WORK HAS BEEN ACCEPTED BY THE CITY.

14. DEWATERING SYSTEM SHALL BE UTILIZED BY THE CONTRACTOR IN ACCORDANCE WITH GOOD STANDARD PRACTICES AND MUST BE SUFFICIENT ENOUGH TO LOWER THE WATER LEVEL IN ADVANCE OF EXCAVATION TO KEEP THE TRENCH BOTTOM AND SIDES FIRM AND DRY, AT LEAST 2' MINIMUM BELOW THE TRENCH BOTTOM. POLLUTED WATER SHALL NOT BE DISCHARGED INTO SANITARY SEWER, STORM SYSTEM RETENTION POND, OR BODIES OF WATER. ANY DISCHARGE INTO SANITARY SEWER SYSTEM SHALL BE PRE-APPROVED BY THE WATER RECLAMATION DIVISION. DEWATERED LIQUID MUST BE TESTED FOR CONTAMINANTS PRIOR TO DISCHARGE. IF CITY APPROVES DISCHARGE TO SANITARY SEWER, CITY HAS RIGHT TO CHARGE WASTEWATER FEES BASED ON CURRENT RATES. CONTAINMENT TESTING TO BE PAID FOR BY CONTRACTOR.

15. EXCAVATIONS SHALL CONFORM TO THE REQUIREMENTS OF THE OSHA TRENCH SAFETY ACT. THE DISPOSAL OF EXCESS EARTHWORK MATERIALS SHALL BE THE RESPONSIBILITY/PROPERTY OF THE CONTRACTOR.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF EMBANKMENTS AND SHALL REPLACE ANY PORTION WHICH HAS BECOME DISPLACED DUE TO EROSION OR DUE TO CARELESSNESS OR NEGLIGENCE ON THE PART OF THE CONTRACTOR.

21. TEMPORARY DRAINAGE SHALL BE PROVIDED DURING CONSTRUCTION TO ELIMINATE ANY FLOODING OF PRIVATE PROPERTY AND EXISTING ROADWAYS CAUSED BY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL PROVIDE ADDITIONAL DRAINAGE AT NO EXTRA COST TO THE OWNER.

22. HYDROSTATIC PRESSURE AND LEAKAGE TESTS SHALL BE CONDUCTED ONLY FOR INSTALLED FACILITIES. ALL TESTS SHALL BE WITNESSED AND ACCEPTED BY THE CITY CONSTRUCTION MANAGER BEFORE ANY PAVEMENT IS PUT IN PLACE.

23. ALL PIPING SHALL BE CLEAN AND FREE OF ALL DIRT, DEBRIS, AND BIOLOGY BEFORE PRESSURE TESTING AND SHALL BE INCIDENTAL TO PIPE INSTALLATION COST.

24. CONCRETE FORMS SHALL BE CONSTRUCTED FROM SOUND WOOD, METAL OR OTHER APPROVED MATERIALS. FORMS SHALL BE SUITABLE TO PROVIDE A FLAT, UNIFORM SURFACE AND TO WITHSTAND CONSTRUCTION LOADS WITHOUT SAGGING OR DEFLECTING. WOOD FORMS IN CONTACT WITH THE CONCRETE SHALL BE COATED WITH AN EFFECTIVE RELEASE AGENT. FORMS SHALL REMAIN IN PLACE PER ACI 301 AND ACI 347. FORMS SHALL REMAIN STRAIGHT, LEVEL, PLUMB AND TRUE TO SHAPE TO WITHIN 1/4" PER 10'.

25. MOLDING, BEVELS OR OTHER TYPES OF CHAMFER STRIPS SHALL BE PLACED TO PRODUCE A 3/4-INCH CHAMFER AT ALL HORIZONTAL AND VERTICAL PROJECTION CORNERS AND FOR BLOCKOUTS.

26. CONCRETE REINFORCEMENT SHALL BE NEW, RUST FREE STEEL BARS THAT CONFORM TO ASTM A615, GRADE 60. TIE WIRE SHALL BE A MINIMUM OF 16-GAUGE, BLACK ANNEALED WIRE. CHAIRS SHALL BE PROVIDED AS NECESSARY TO PREVENT DISPLACEMENT DURING POUR.

27. SYNTHETIC REINFORCING FIBER MAY BE USED IN LIEU OF STEEL REINFORCEMENT BARS FOR SMALL SLAB ON GRADE CONSTRUCTION AS INDICATED ON THE PLANS. FIBERS SHALL BE 100% POLYPROPYLENE THAT ARE COLLATED AND FIBRILLATED AS MANUFACTURED BY FIBERMESH COMPANY OF SYNTHETIC INDUSTRIES. FIBER LENGTH AND QUANTITY SHALL BE IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS, AND SOILS MUST BE COMPACTED TO 95% DRY DENSITY ON GREEN AREAS AND 98% DRY DENSITY ON ROAD AREA.

28. MINIMUM REINFORCEMENT STEEL AND CONCRETE COVER SHALL BE IN ACCORDANCE WITH ACI-318 AND THESE DRAWINGS AND SPECIFICATIONS.

29. CAST-IN-PLACE CONCRETE SHALL BE A MINIMUM OF 3500 PSI STRENGTH. PRECAST CONCRETE SHALL BE 4,000 PSI STRENGTH AND SHALL BE PRODUCED AND PLACED, IN ACCORDANCE WITH ACI STANDARDS AND MUST MEET THE 28-DAY STRENGTH REQUIREMENTS.

30. A COMPLETE SET OF AS BUILT DRAWINGS (36" X 24" HARD COPY & AutoCAD FILE), AND ALL INSPECTION AND TEST RECORDS MUST BE SUBMITTED TO THE CITY OF ORLANDO WATER RECLAMATION DIVISION AND APPROVED BEFORE THE NEW SYSTEM IS ALLOWED TO BE PUT INTO SERVICE. THE DRAWINGS MUST INCLUDE ACCURATE LAYOUT, SIZING, AND STATE PLANE COORDINATES FOR ALL VALVES, PIPING BENDS, BRANCHES, ENDS, OUTLETS, CONNECTION POINTS, METER BOXES AND LOCATOR BALLS, OR ANY ITEM LISTED ABOVE. THE CONFORMED DRAWINGS SHALL BE MODIFIED TO REFLECT AS-BUILT CONDITIONS.

31. ALL WATER, SEWER, AND RECLAIMED WATER PIPE, PIPE FITTINGS AND APPURTENANCES INSTALLED UNDER THIS PROJECT WILL BE COLOR CODED OR MARKED IN ACCORDANCE WITH SUBPARAGRAPH 62-555.320 (21) (b) 3, FAC, USING BLUE AS A PREDOMINANT COLOR FOR WATER; GREEN FOR WASTEWATER; PANTONE PURPLE 522C FOR RECLAIMED WATER.

32. ALL BACKFILL SHALL BE COMPACTED TO NOT LESS THAN 95% OF MAXIMUM DRY DENSITY AS MEASURED BY AASHTO T-180 METHOD "D" TEST (MODIFIED PROCTOR) IN OPEN AREAS AND TO NOT LESS THAN 98% MAXIMUM DRY DENSITY AS MEASURED BY AASHTO T-180 METHOD "D" TEST (MODIFIED PROCTOR) UNDER ASPHALT OR CONCRETE PAVEMENT. ALL SOIL & CONSTRUCTION MATERIAL TESTING TO BE COORDINATED WITH THE CITY. THE CONTRACTOR SHALL PROVIDE ALL REASONABLE ASSISTANCE DURING SOIL & CONSTRUCTION MATERIALS TESTING.

33. WHEN USING SCALED DATA CONSIDER THAT THESE PLANS MAY HAVE BEEN ALTERED IN SIZE DURING REPRODUCTION.

34. PIPE LENGTHS SHOWN ON PLANS ARE APPROXIMATE.

35. SUPPORT & PROTECT ALL EXISTING UTILITIES. CONTRACTOR SHALL CONTACT UTILITY OWNERS FOR LOCATION OF ALL EXISTING FACILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH UTILITY OWNERS AND BE RESPONSIBLE FOR PROVIDING TEMPORARY SUPPORT FOR UTILITY POLES AND ALL OTHER UTILITIES FACILITIES.

36. IF REQUIRED BY DEWATERING ACTIVITIES, CONTRACTOR SHALL APPLY FOR AND OBTAIN A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) AND COMPLY WITH ALL NPDES REQUIREMENTS DURING CONSTRUCTION OF THE PROJECT.

37. EXERCISE EXTREME CAUTION WHEN EXCAVATING NEAR WASTEWATER FORCE MAINS AND GRAVITY SEWERS. EXPOSE AND VERIFY LOCATION OF MAINS PRIOR TO EXCAVATION.

38. PROTECT EXISTING IMPROVEMENTS TO THE MAXIMUM EXTENT POSSIBLE. ALL DAMAGED SIDEWALK, ROADWAY PAVEMENT, GRASS, LANDSCAPING AND OTHER IMPROVEMENTS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER.

39. BENCHMARK LOCATIONS AND ELEVATION ARE SHOWN IN THE PLANS AS REPRESENTED BY SURVEYOR AT THE TIME OF THE SURVEY. CONTRACTOR SHALL VERIFY ITS CORRECTNESS AT THE TIME OF CONSTRUCTION AND INSTALL HIS OWN TEMPORARY BENCHMARKS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CITY FIELD REPRESENTATIVE AND EOR.

40. CONTRACTOR SHALL PROVIDE ALL NECESSARY LINE-STOPS, BY-PASS PIPING, PUMPING, TANKER TRUCKS AND ANY OTHER ITEMS NEEDED TO MAINTAIN UNINTERRUPTED SERVICE AT ALL TIMES.

41. WHEN WORKING IN CONFINED SPACES AT THE SITE, CONTRACTOR EMPLOYEES SHALL MEET ALL OSHA CONFINED SPACE ENTRY REQUIREMENTS, INCLUDING BUT NOT LIMITED TO PERMITTING, ATMOSPHERE TESTING, CHECKLISTS, SEWER ENTRY AND RESCUE TEAMS AS REQUIRED BY OSHA 29 CFR 1910 AND PROVIDE CERTIFICATIONS TO THE CITY.

42. APPROVED HOURS CONTRACTOR MAY WORK ONSITE ARE 7:00AM TO 3:30PM DAILY EXCLUSIVE OF SATURDAYS, SUNDAYS OR HOLIDAYS. ANY WORK OUTSIDE THE STATED TIME MUST BE APPROVED BY THE CITY CONSTRUCTION MANAGER.

43. CONTRACTOR SHALL AT ALL TIMES MAINTAIN ACCESS WAYS FOR CITY VEHICLES AND PERSONNEL TO MAINTAIN LIFT STATION FOR MAINTENANCE/EMERGENCY SITUATIONS.

44. CONTRACTOR TO PROVIDE TEMPORARY 6-FT CHAIN LINK SECURITY FENCING FOR WORK AREA SAFETY AND PROTECTION AT THE END OF THE DAY.

MOT NOTES:

1. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION AND REVISIONS) AND THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN STANDARDS (LATEST EDITION AND REVISIONS).

2. IF NEEDED, CONTRACTOR SHALL PAY FOR AND SUBMIT (INCLUDING REQUIRED REVISIONS) TO THE TRANSPORTATION ENGINEERING DIVISION A MAINTENANCE OF TRAFFIC PLAN THAT IS DESIGNED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA, FOR REVIEW AND APPROVAL PRIOR TO START OF WORK. THE PLAN SHALL BE PREPARED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND FDOT TRAFFIC DESIGN STANDARDS (LATEST EDITIONS AND REVISIONS).

3. ANY CHANGES MADE TO THE TRAFFIC CONTROL PLAN BY EOR OR THE CONTRACTOR, SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER AND APPROVED BY THE TRAFFIC CONTROL MANAGER PRIOR TO IMPLEMENTATION.

4. THE CITY OF ORLANDO RESERVES THE RIGHT TO REQUIRE ADDITIONAL DEVICES AND/OR CHANGES TO THE TRAFFIC CONTROL PLAN BASED UPON CHANGING TRAFFIC CONDITIONS.

5. THE CONTRACTOR SHALL CALL (407) 246-3704 ONE (1) WEEK PRIOR TO THE START OF ANY PHASE OF WORK TO REQUEST STREET, LANE OR SIDEWALK CLOSURE AUTHORIZATION.

6. LOCAL RESIDENTIAL ACCESS SHALL BE MAINTAINED AT ALL TIMES. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE RESIDENTS/BUSINESSES AFFECTED BY CONSTRUCTION ACTIVITIES, ONE (1) WEEK IN ADVANCE OF THE START OF ANY PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE COPIES OF THE NOTIFICATION TO THE TRAFFIC CONTROL MANAGER PRIOR TO DISTRIBUTION.

7. THE CONTRACTOR SHALL NOTIFY THE ORANGE COUNTY SCHOOL BOARD, SAFETY MANAGER, (407) 521-2339 ONE (1) WEEK IN ADVANCE OF THE START OF ANY PHASE OF CONSTRUCTION TO COORDINATE SCHOOL BUS RE-ROUTING.

8. CONTRACTOR SHALL NOTIFY LYNX AT (407) 841-2279 A MINIMUM OF ONE (1) WEEK PRIOR TO IMPLEMENTING ANY STREET CLOSURE TO COORDINATE BUS RE-ROUTING.

9. TEMPORARY MARKINGS REQUIRED ON FINAL SURFACES OR SURFACES NOT BEING REPAVED SHALL BE INSTALLED USING 3M BRAND STAMARK REMOVABLE TAPE, SERIES 780, WET REFLECTIVE TEMPORARY TAPE OR APPROVED EQUAL. THE USE OF "FOIL BACK" TYPES OF TEMPORARY TAPE IS NOT PERMITTED.

10. 3M BRAND REMOVABLE BLACK MASK TAPE, SERIES 145, IS THE ONLY APPROVED MATERIAL FOR "BLACKING OUT" OF EXISTING PAVEMENT MARKINGS ON FINAL ROADWAY SURFACES OR SURFACES NOT BEING REPAVED. UNDER NO CIRCUMSTANCES WILL BLACK PAINT OR GRINDING BE PERMITTED.

11. PAINT PRODUCTS AND RETRO-REFLECTIVE PAVEMENT MARKERS WILL BE CONSIDERED TEMPORARY PAVEMENT MARKING MATERIALS ON SURFACES THAT ARE TO BE MILLED AND RESURFACED.

12. EXISTING PAVEMENT MARKINGS, WHICH ARE TO BE OBLITERATED, SHALL BE RESTORED TO ORIGINAL CONDITION UPON COMPLETION OF CONSTRUCTION AND PRIOR TO REINSTATING VEHICULAR TRAFFIC.

13. ALL SIGNS AND TRAFFIC CONTROL DEVICES SHALL BE NEW OR LIKE NEW CONDITION. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE INDICATED.

14. CHANNELIZING DRUMS SHALL BE USED ON NEWLY PAVED ROADWAYS.

15. DURING NON-WORKING HOURS, NO EQUIPMENT, VEHICLES OR MATERIAL SHALL BE PARKED OR STORED WITHIN THE CLEAR ZONE OF A ROADWAY OPEN TO VEHICULAR TRAFFIC.

16. EXISTING REGULATORY AND WARNING SIGNS ARE TO BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE NOTED.

17. WATER FILLED BARRIER SHALL BE INSTALLED PER THE MANUFACTURERS SPECIFICATIONS.

18. DUE TO THE NUMEROUS SPECIAL EVENTS THAT OCCUR, THE CONTRACTOR MAY BE REQUIRED TO SUSPEND WORK ACTIVITIES DURING EVENTS.

19. ON STREET PARKING IS FOR THE GENERAL PUBLIC AND SHALL NOT BE USED FOR ANY OF THE FOLLOWING; CONTRACTOR OR SUB CONTRACTOR CONSTRUCTION VEHICLE PARKING, CONSTRUCTION STAGING, TRUCK STAGING, STORING OF MATERIALS, ETC. CONTRACTOR'S EMPLOYEES MAY PARK PERSONAL VEHICLES ON STREET. PARKING IS NOT ALLOWED IN ANY CITY PARK AT ANY TIME.

20. DELIVERY TRUCKS SHALL NOT BLOCK TRAFFIC.

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING EACH EMPLOYEE SUPERVISING THE SELECTION AND PLACEMENT OF MAINTENANCE OF TRAFFIC (MOT) CONTROL DEVICES IS PROPERLY TRAINED BY ATTENDING AND SUCCESSFULLY COMPLETING A FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) APPROVED MOT COURSE. THE TRAINING SHALL BE AT A LEVEL APPLICABLE TO THE EMPLOYEE'S LEVEL OF INVOLVEMENT. COPIES OF CERTIFICATIONS SHALL BE PROVIDED TO THE CITY TRANSPORTATION ENGINEERING DIVISION PRIOR TO IMPLEMENTING ANY PHASE OF MOT.

22. THE CONTRACTOR SHALL PROVIDE A FULLY QUALIFIED TRAFFIC CONTROL SUPERVISOR (TCS) WHO IS RESPONSIBLE FOR INITIATING, INSTALLING AND MAINTAINING ALL TRAFFIC CONTROL DEVICES.

23. THE NAMES, QUALIFICATIONS AND CONTACT INFORMATION OF THE TCS SHALL BE PROVIDED TO THE CITY CONSTRUCTION MANAGER PRIOR TO MOT IMPLEMENTATION. THE TCS SHALL BE AVAILABLE ON A 24-HOUR PER DAY BASIS, PARTICIPATE IN ALL CHANGES TO TRAFFIC CONTROL AND REVIEW THE PROJECT ON A DAY-TO-DAY BASIS.

24. THE TCS SHALL BE PRESENT DURING THE INITIAL SETUP OF THE TRAFFIC CONTROL PLAN AND ALL SUBSEQUENT PHASES OR CHANGES TO THE TRAFFIC CONTROL.

25. THE TCS SHALL IMMEDIATELY CORRECT ALL DEFICIENCIES.

26. THE CONTRACTOR SHALL ENSURE THE TCS BE AVAILABLE ON SITE WITHIN 45 MINUTES OF NOTIFICATION OF AN EMERGENCY SITUATION AND IS PREPARED TO RESPOND TO AND CORRECT THE TRAFFIC CONTROL OR PROVIDE ALTERNATE ARRANGEMENTS FOR CORRECTIVE ACTIONS.

27. THE TCS SHALL BE RESPONSIBLE FOR PERFORMING WEEKLY, DAYTIME AND NIGHTTIME INSPECTIONS OF ALL TRAFFIC CONTROL DEVICES, TRAFFIC FLOW, PEDESTRIAN, BICYCLIST MOVEMENT THROUGH THE WORK AREAS AND BUSINESS ACCOMMODATIONS.

28. THE CITY MAY DISQUALIFY AND REMOVE FROM THE PROJECT A TRAFFIC CONTROL SUPERVISOR THAT FAILS TO COMPLY WITH THESE PROVISIONS. THE CITY MAY ALSO SUSPEND ALL WORK ACTIVITIES UNTIL ALL THE CORRECTIVE ACTIONS HAVE BEEN COMPLETED.

REV	DATE	ISSUED FOR
		ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO. 41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

SHEET TITLE: GENERAL NOTES

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	G-400
REV.	△

PLOT DATE: Jan 20, 2021 - 8:38am
FILENAME: U:\WO\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\04 - G-400.dwg

PLAN SYMBOLS

- HOME RUN TO PANELBOARD. NO. OF ARROWS INDICATE NO. OF CIRCUITS, HASH MARKS INDICATE NO. OF #12 AWG. CONDUCTORS. NO HASH MARKS INDICATE 2 #12 CONDUCTORS.
- CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING
- CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.
- CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.
- FLEXIBLE CONDUIT WITH EQUIPMENT CONNECTION.
- POLE MOUNTED LIGHTING FIXTURE.
- (47) ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.
- ELECTRIC HEATER
- (T) THERMOSTAT
- (FE) FLOW ELEMENT
- (LE) LEVEL ELEMENT
- (LS) LIMIT SWITCH
- (PS) PRESSURE SWITCH
- (SV) SOLENOID VALVE
- (LLS) LIQUID LEVEL SWITCH
- [FIT] FLOW INDICATING TRANSMITTER
- (LD) LEAK DETECTION SWITCH
- SURFACE MOUNTED GROUND FAULT DUPLEX RECEPTACLE 20A, 125V, 3W – MOUNTED 18" ABOVE FINISHED GRADE
- WALL MOUNTED COMBINATION MOTOR STARTER

RISER & CONTROL DIAGRAM SYMBOLS

- (V) VOLTMETER
- (A) AMMETER
- [VS] THREE PHASE VOLT SWITCH
- [AS] THREE PHASE AMP SWITCH
- (GFI) GROUND FAULT INTERRUPTER
- FUSE
- MOLDED CASE CIRCUIT BREAKER
- SERVICE OR EQUIPMENT GROUND.
- NON–FUSIBLE DISCONNECT SWITCH, 30A,3P OTHERWISE INDICATED
- CURRENT TRANSFORMERS
- POTENTIAL TRANSFORMERS
- DUPLEX RECEPTACLE
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- FLOAT SWITCH, NORMALLY OPEN
- FLOAT SWITCH, NORMALLY CLOSED
- FLOW SWITCH, NORMALLY OPEN
- FLOW SWITCH, NORMALLY CLOSED
- TEMPERATURE SWITCH, NORMALLY OPEN
- TEMPERATURE SWITCH, NORMALLY CLOSED
- NORMALLY OPEN, TIMED TO CLOSE CONTACT
- NORMALLY CLOSED, TIMED TO OPEN CONTACT
- NORMALLY CLOSED, TIMED TO CLOSE CONTACT
- NORMALLY OPEN, TIMED TO OPEN CONTACT

RISER & CONTROL DIAGRAM SYMBOLS

- (LS) LIMIT SWITCH (PUMP DISAGREE SWITCH)
- (XS) TORQUE SWITCH
- (PS) PRESSURE SWITCH
- (ZS) ZERO SPEED SWITCH
- (SV) SOLENOID VALVE
- (LLS) LIQUID LEVEL SWITCH
- (VS) VIBRATION SWITCH
- (AR) ALARM RELAY
- (AT) ALARM TIMER
- (CR) CONTROL RELAY
- (M) MOTOR STARTER
- (TR) TIMING RELAY
- (A) ALARM INDICATING LIGHT
- (R) RUN INDICATING LIGHT
- MOMENTARY CONTACT PUSHBUTTON
- MOMENTARY BREAK PUSHBUTTON OR RESET
- K KEYED SWITCH
- MAINTAINED CONTACT ON–OFF SWITCH
- START/STOP(S/S) CONTROL SWITCH MAINTAINED CONTACT
- THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH
- CONTROL POWER TRANSFORMER
- REMOTE TERMINAL BLOCK POINT

ABBREVIATIONS

A	AMPERES
AFF	ABOVE FINISHED FLOOR
AH	ALARM HORN
AIC	AMPS INTERRUPTING CURRENT
AL	ALARM LIGHT
ATS	AUTOMATIC TRANSFER SWITCH
ASB	ALTERNATOR TEST SWITCH
BKR	BREAKER
CCB	CONTROL CIRCUIT BREAKER
CCT	CONTROL CIRCUIT TRANSFORMER
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CU	COPPER
DH	DATA HIGHWAY
DISC	DISCONNECT
DPST	DOUBLE POLE SINGLE THROW
DR	DUPLEX RECEPTACLE
EFF	EFFLUENT
ELEC	ELECTRICAL
ELR	EMERGENCY LOCK–OUT RELAY
EM	EMERGENCY
ENCL	ENCLOSURE
EP	EXPLOSION PROOF
ESB	ENERGY SAVING BALLAST
ETM	ELAPSED TIME METER
EUH	ELECTRIC UNIT HEATER
EVA	ELECTRIC VALVE ACTUATOR
EXH	EXHAUST
EXIST	EXISTING
F	FUSE
FL	FLASHER
FR	FLOAT REGULATOR
FVNR	FULL VOLTAGE NON–REVERSING
GEN	GENERATOR
GFR	GROUND FAULT RECEPTACLE
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
HOA	HAND–OFF–AUTOMATIC
HOLR	HAND–OFF–LOCAL–REMOTE
HOR	HAND–OFF–REMOTE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HSS	HORN SILENCE SWITCH
HWY	HIGHWAY
KVA	KILO VOLT–AMPERES
KW	KILOWATT
LA	LIGHTNING ARRESTOR
LDP	LEAK DETECTION PANEL
LF	LINEAR FEET
LIT	LEVEL INDICATING TRANSMITTER
LTG	LIGHTING
MAX	MAXIMUM
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MPZ	MINI POWER ZONE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MS	MOTOR STARTER
MT	MOISTURE AND TEMPERATURE FAIL LIGHT
NEC	NATIONAL ELECTRIC CODE
N	NEUTRAL
NTS	NOT TO SCALE
OCP	ODOR CONTROL PANEL
OFP	OPTICAL FLOAT PANEL
OH	OVERHEAD
OL	OVERLOAD HEATER
P	POLE
PA	POWER AVAILABLE LIGHT
PAA	PUMP AUTOMATIC ALTERNATOR
PCP	PUMP CONTROL PANEL
PEF	PROGRESS ENERGY OF FLORIDA
PM	PHASE MONITOR
PNL	PANEL
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
R	RELAY
RL	RUNNING LIGHT
RTS	REGULATOR TERMINAL STRIP
PRI	PRIMARY
SC	SURGE CAPACITOR
SEC	SECONDARY
SH	SHIELDED
SPD	SURGE PROTECTION DEVICE
SS	STAINLESS STEEL
STR	STARTER
SUPP	SUPPRESSOR
SW	SWITCH
TBR	TO BE REMOVED
TC	TIME CLOCK
TLS	TROUBLE LIGHT SWITCH
TS	TERMINAL STRIP
TTS	THERMAL TERMINAL STRIP
TYP	TYPICAL
UG	UNDERGROUND
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
w/	WITH
WP	WEATHERPROOF
Φ	PHASE

NOTES

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED.
2. ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC... THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
3. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE, THE 2017 NATIONAL ELECTRICAL CODE, CITY OF ORLANDO STANDARDS AND SHALL COMPLY WITH ALL LOCAL RULES AND ORDINANCES.
4. MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING, UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE COPPER.
5. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
6. ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER ARTICLE 250.122 OF THE NATIONAL ELECTRIC CODE (UNLESS OTHERWISE NOTED).
7. ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
8. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE TESTED AND CONFIRMED TO BE FULLY OPERATIVE BEFORE ACCEPTANCE BY ENGINEER/OWNER.
9. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN TWO YEARS FROM DATE OF ACCEPTANCE.
10. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
11. THE ELECTRICAL INSTALLATION SHALL MEET ALL STANDARD REQUIREMENTS OF THE 2017 NATIONAL ELECTRIC CODE AND THE 2020 FLORIDA BUILDING CODE.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
13. ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/DIRECTORIES (NEW & EXISTING).
14. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
15. DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO THE APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT DIMENTIONS OF ALL EQUIPMENT.
16. SHADED TEXT DENOTES EXISTING EQUIPMENT OR STRUCTURES. NON–SHADED TEXT DENOTES NEW EQUIPMENT, STRUCTURES AND WORK. *SLANTED TEXT (NOT SHADED)* DENOTES FUTURE EQUIPMENT, STRUCTURES AND WORK.
17. CONTRACTOR SHALL PROVIDE NAMEPLATE AT THE MAIN BREAKER INDICATING THE CALCULATED FAULT CURRENT INCLUDING THE DATE.
18. THE PLANS REFLECT SYSTEM VOLTAGE DROPS AS PER F.B.C. ENERGY CONSERVATION 2017, SIXTH C405.6.3 FEEDER CONDUCTORS ARE SIZED FOR A MAXIMUM VOLTAGE DROP OF 2 PERCENT AT DESIGN LOAD. BRANCH CIRCUIT CONDUCTORS ARE SIZED FOR A MAXIMUM VOLTAGE DROP OF 3 PERCENT AT DESIGN LOAD.
19. CONTRACTOR SHALL MAINTAIN PUMP STATION OPERATION. PROVIDE TEMPORARY POWER, PUMPING, ETC AS REQUIRED/SEE SPECIFICATIONS.

REV.	DATE	ISSUED FOR

REV.	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT:
CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE
ELECTRICAL SYMBOLS, NOTES & ABBREVIATIONS

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FISPR CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL: 407.647.7275
FAX: 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-001
REV.	△

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745–5604
FAX: (407) 745–5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

PLOT DATE:
FILE NAME:

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 1, TOWNSHIP 23 SOUTH, RANGE 29 EAST, IN THE CITY OF ORLANDO, ORANGE COUNTY, FLORIDA.

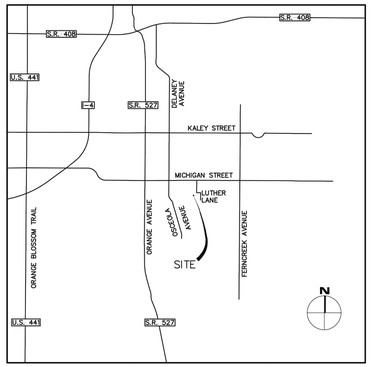
SAID PARCEL OF LAND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 1, TOWNSHIP 23 SOUTH, RANGE 29 EAST, THENCE RUN S00°10'36"W, A DISTANCE OF 318.13 FEET; THENCE RUN DUE WEST S90°00'00"W, A DISTANCE OF 132.00 FEET; THENCE RUN S00°07'25"W, A DISTANCE OF 512.76 FEET; THENCE RUN S89°56'43"E, 169.01 FEET TO THE POINT OF BEGINNING; THENCE RUN N00°22'06"E, A DISTANCE OF 4.61 FEET; THENCE RUN S89°37'54"E, A DISTANCE OF 25.00 FEET; THENCE RUN S00°22'06"W, A DISTANCE OF 36.00 FEET; THENCE RUN N89°37'54"W, A DISTANCE OF 25.00 FEET; THENCE RUN N00°22'06"E, A DISTANCE OF 31.39 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINING 900 SQUARE FEET, MORE OR LESS.

CERTIFICATIONS:

TO: CITY OF ORLANDO

VICINITY MAP: *NOT TO SCALE

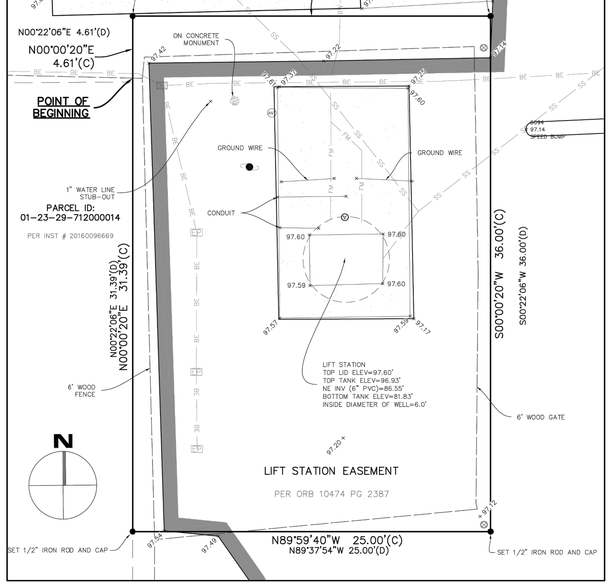


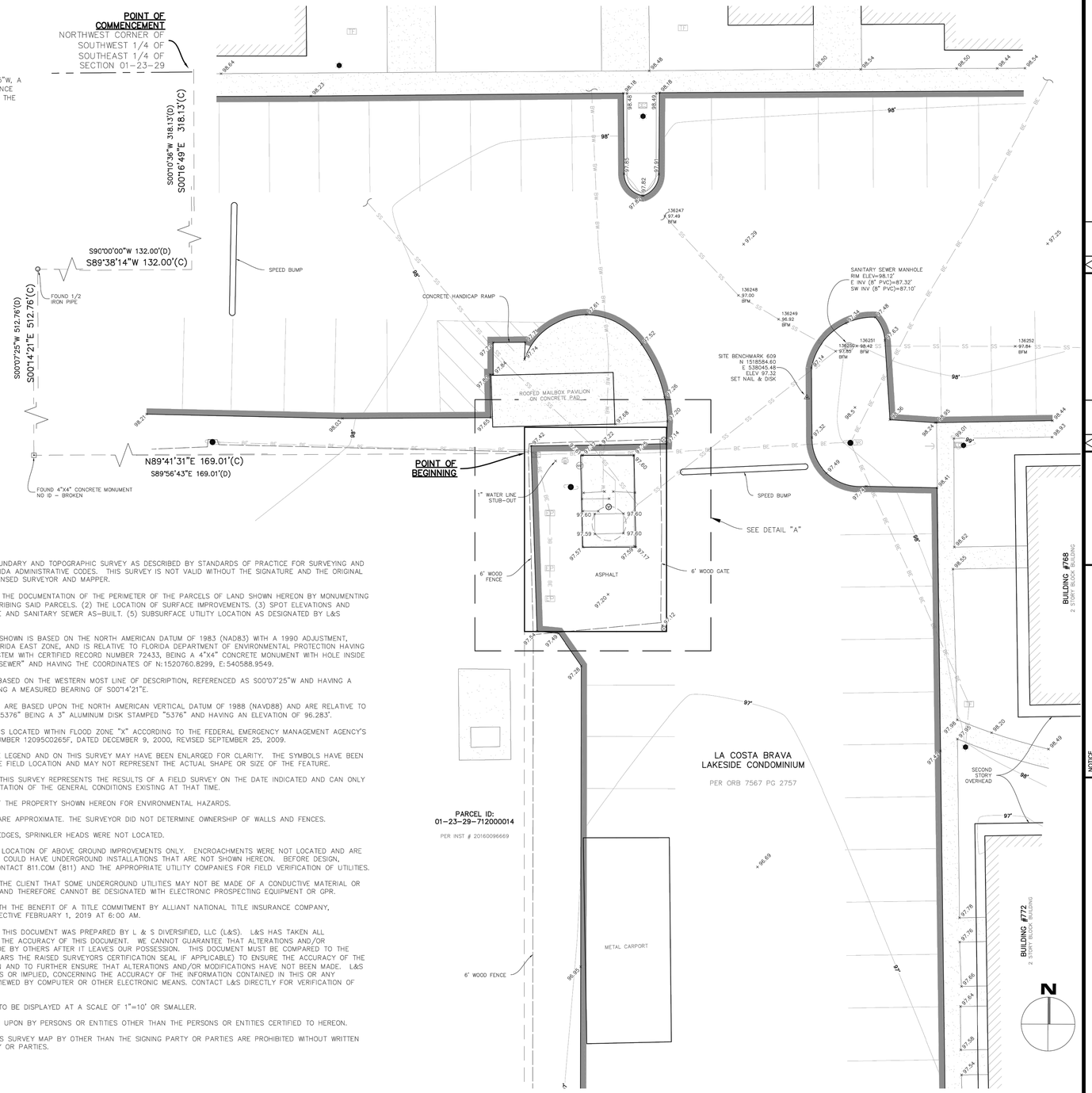
SYMBOL AND ABBREVIATION LEGEND:

- ELECTRICAL CABINET
- CONCRETE LIGHT POLE
- CONCRETE POWER POLE
- GUY WIRE
- ELECTRICAL PANEL
- TRANSFORMER
- ELECTRICAL VAULT
- BOLLARD
- ANTENNA
- UNKNOWN VENT
- SANITARY SEWER MANHOLE
- SET TRAVERSE POINT OR BENCHMARK
- TELECOMMUNICATION RISER
- WATER AIR RELEASE VALVE
- BACKFLOW PREVENTER
- (D) DESCRIBED MEASUREMENT
- E EAST/EASTING
- ELEV ELEVATION
- INST INSTRUMENT
- INV INVERT
- (C) CALCULATED MEASUREMENT

- N NORTH/NORTHING
- ORB OFFICIAL RECORDS BOOK
- PG(S) PAGE(S)
- PVC POLYVINYL CHLORIDE PIPE
- S SOUTH
- TYP TYPICAL
- CONTOUR
- SPOT ELEVATION
- W WEST
- BURIED ELECTRICAL
- ABOVE-GROUND FORCE MAIN
- BURIED SANITARY SEWER
- BURIED WATER
- CENTERLINE
- CONTINUOUS
- DASHED LINE
- FENCE LINE
- BUILDING LINE
- EDGE OF PAVEMENT

DETAIL "A" SCALE: 1"=5'





SURVEY NOTES:

1. THIS SURVEY REPRESENTS A BOUNDARY AND TOPOGRAPHIC SURVEY AS DESCRIBED BY STANDARDS OF PRACTICE FOR SURVEYING AND MAPPING, CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODES. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. THIS SURVEY IS LIMITED TO: (1) THE DOCUMENTATION OF THE PERIMETER OF THE PARCELS OF LAND SHOWN HEREON BY MONUMENTING THE BOUNDARY LINES FOR DESCRIBING SAID PARCELS. (2) THE LOCATION OF SURFACE IMPROVEMENTS. (3) SPOT ELEVATIONS AND CONTOURS. (4) STORM DRAINAGE AND SANITARY SEWER AS-BUILT. (5) SUBSURFACE UTILITY LOCATION AS DESIGNATED BY L&S DIVERSIFIED.
3. THE HORIZONTAL SURVEY DATA SHOWN IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83) WITH A 1990 ADJUSTMENT, STATE PLANE COORDINATES, FLORIDA EAST ZONE, AND IS RELATIVE TO FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION HAVING LOCAL GROUND COORDINATE SYSTEM WITH CERTIFIED RECORD NUMBER 72433, BEING A 4"X4" CONCRETE MONUMENT WITH HOLE INSIDE CAST IRON WELL BOX MARKED "SEWER" AND HAVING THE COORDINATES OF N:1520760.8299, E:540588.9549.
4. BEARINGS SHOWN HEREON ARE BASED ON THE WESTERN MOST LINE OF DESCRIPTION, REFERENCED AS S00°07'25"W AND HAVING A DISTANCE OF 512.76 FEET, HAVING A MEASURED BEARING OF S00°14'21"E.
5. THE ELEVATIONS SHOWN HEREON ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND ARE RELATIVE TO CITY OF ORLANDO BENCHMARK "5376" BEING A 3" ALUMINUM DISK STAMPED "5376" AND HAVING AN ELEVATION OF 96.283'.
6. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN FLOOD ZONE "X" ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP NUMBER 12095C0265F, DATED DECEMBER 9, 2000, REVISED SEPTEMBER 25, 2009.
7. THE SYMBOLS REFLECTED IN THE LEGEND AND ON THIS SURVEY MAY HAVE BEEN ENLARGED FOR CLARITY. THE SYMBOLS HAVE BEEN PLOTTED AT THE CENTER OF THE FIELD LOCATION AND MAY NOT REPRESENT THE ACTUAL SHAPE OR SIZE OF THE FEATURE.
8. THE INFORMATION DEPICTED ON THIS SURVEY REPRESENTS THE RESULTS OF A FIELD SURVEY ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS A REPRESENTATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.
9. THE SURVEYOR DID NOT INSPECT THE PROPERTY SHOWN HEREON FOR ENVIRONMENTAL HAZARDS.
10. FENCES AND WALL DIMENSIONS ARE APPROXIMATE. THE SURVEYOR DID NOT DETERMINE OWNERSHIP OF WALLS AND FENCES.
11. TREES, ORNAMENTAL PLANTS, HEDGES, SPRINKLER HEADS WERE NOT LOCATED.
12. THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. ENCROACHMENTS WERE NOT LOCATED AND ARE NOT SHOWN HEREON. THIS SITE COULD HAVE UNDERGROUND INSTALLATIONS THAT ARE NOT SHOWN HEREON. BEFORE DESIGN, CONSTRUCTION EXCAVATIONS, CONTACT 811.COM (811) AND THE APPROPRIATE UTILITY COMPANIES FOR FIELD VERIFICATION OF UTILITIES.
13. IT SHOULD BE UNDERSTOOD BY THE CLIENT THAT SOME UNDERGROUND UTILITIES MAY NOT BE MADE OF A CONDUCTIVE MATERIAL OR MAY NOT RETURN A GPR ECHO AND THEREFORE CANNOT BE DESIGNATED WITH ELECTRONIC PROSPECTING EQUIPMENT OR GPR.
14. THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A TITLE COMMITMENT BY ALLIANT NATIONAL TITLE INSURANCE COMPANY, COMMITMENT NO. 19002004, EFFECTIVE FEBRUARY 1, 2019 AT 6:00 AM.
15. THE INFORMATION CONTAINED IN THIS DOCUMENT WAS PREPARED BY L & S DIVERSIFIED, LLC (L&S). L&S HAS TAKEN ALL REASONABLE STEPS TO ENSURE THE ACCURACY OF THIS DOCUMENT. WE CANNOT GUARANTEE THAT ALTERATIONS AND/OR MODIFICATIONS WILL NOT BE MADE BY OTHERS AFTER IT LEAVES OUR POSSESSION. THIS DOCUMENT MUST BE COMPARED TO THE ORIGINAL HARD COPY (WHICH BEARS THE RAISED SURVEYORS CERTIFICATION SEAL IF APPLICABLE) TO ENSURE THE ACCURACY OF THE INFORMATION CONTAINED HEREON AND TO FURTHER ENSURE THAT ALTERATIONS AND/OR MODIFICATIONS HAVE NOT BEEN MADE. L&S MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OF THE INFORMATION CONTAINED IN THIS OR ANY DOCUMENT TRANSMITTED OR REVIEWED BY COMPUTER OR OTHER ELECTRONIC MEANS. CONTACT L&S DIRECTLY FOR VERIFICATION OF ACCURACY.
16. THIS SURVEY MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=10' OR SMALLER.
17. THIS SURVEY CANNOT BE RELIED UPON BY PERSONS OR ENTITIES OTHER THAN THE PERSONS OR ENTITIES CERTIFIED TO HEREON.
18. ADDITIONS OR DELETIONS TO THIS SURVEY MAP BY OTHER THAN THE SIGNING PARTY OR PARTIES ARE PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

CITY OF ORLANDO LIFT STATION # 59

ATKINS

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN

SECTION 1, TOWNSHIP 23 SOUTH, RANGE 29 EAST
CITY OF ORLANDO
ORANGE COUNTY, FLORIDA

GRAPHIC SCALE

20' 0 5' 10' 20'

1 INCH = 10 FEET

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY REPRESENTED HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF. IT HAS BEEN PREPARED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN CHAPTER 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE PURSUANT TO 15 CHAPTERS 177 AND 472 OF THE FLORIDA STATUTES.

Digitally signed by Sherry Manor Lee
2020.06.05 13:14:27 -04'00'

SHERRY LEE MANOR, PSM - LS# 6961
THIS SURVEY MAP AND/OR REPORT IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF THE ABOVE.

L & S Diversified
Professional Surveyors and Mappers
405 LAKE HOWELL ROAD | SUITE 1001 | MAITLAND, FL | 32751
PHONE 407.681.3836 | FAX 407.681.6041
WWW.LSSURVEYOR.COM | INFO@LSSURVEYOR.COM
PROFESSIONAL SURVEYOR & MAPPER BUSINESS LICENSE | LB#7829

REV.	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

SHEET TITLE: BOUNDARY AND TOPOGRAPHICAL SURVEY LIFT STATION No. 059

ATKINS

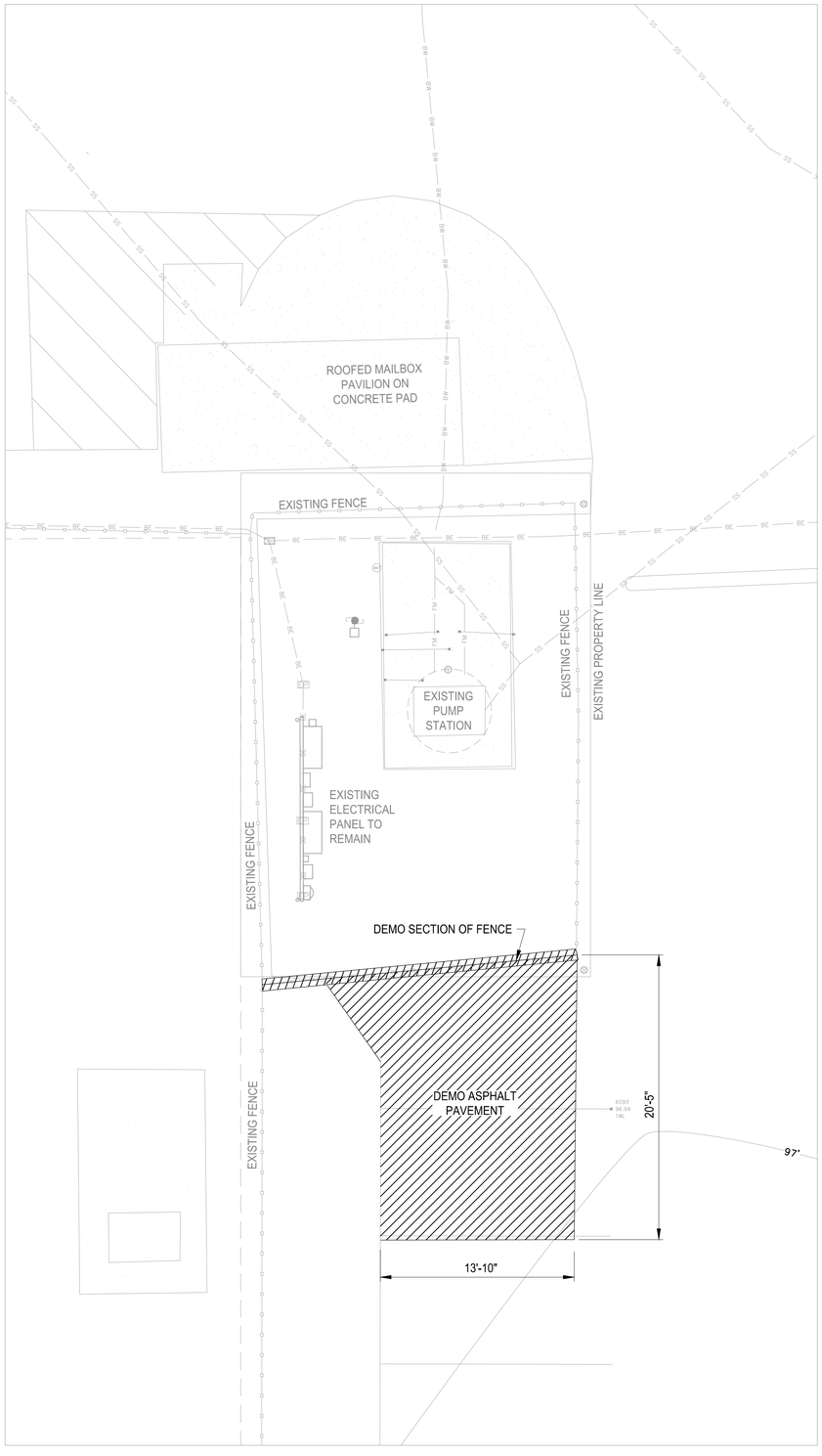
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24
www.atkinsglobal.com

LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4000

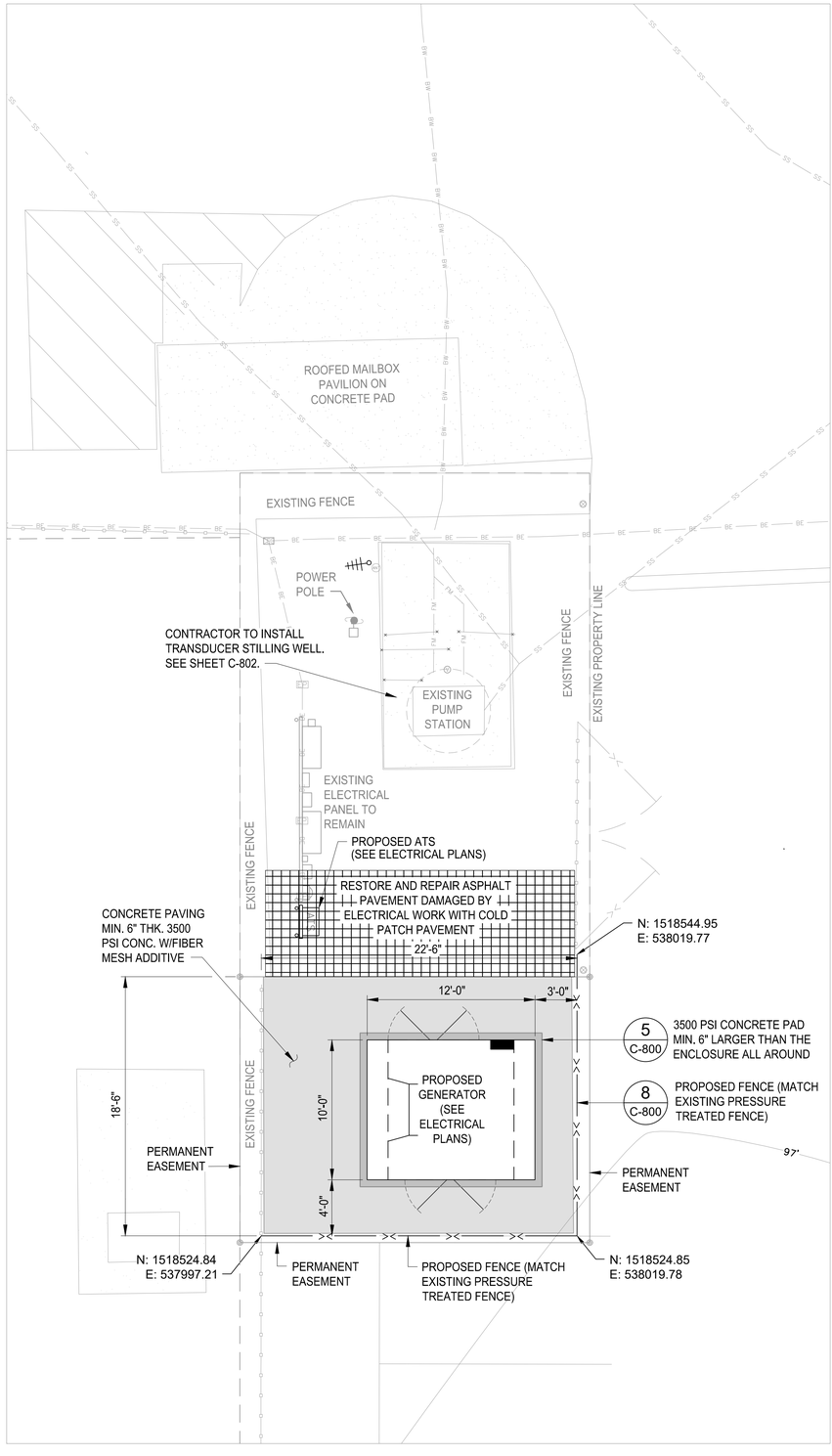
JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO:	C-100
REV.	△

PLOT DATE: Nov 12, 2020 - 4:27pm
FILE NAME: \\enablis.com\Projects\SOU\Orlando\DATA1\ECIVIL\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-100 through C-700.dwg

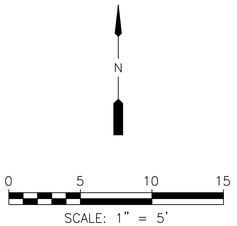
NOTES:
1. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING BEFORE COMMENCING CONSTRUCTION WORK.
2. COORDINATE AND SCHEDULE ACCESS TO THE SITE BEFORE COMMENCING CONSTRUCTION WORK.



LIFT STATION No. 059 SITE DEMOLITION PLAN



LIFT STATION No. 059 PROPOSED SITE PLAN



REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

SHEET TITLE: STATION No. 059 SITE PLAN
SITE DEMOLITION PLAN AND PROPOSED SITE PLAN

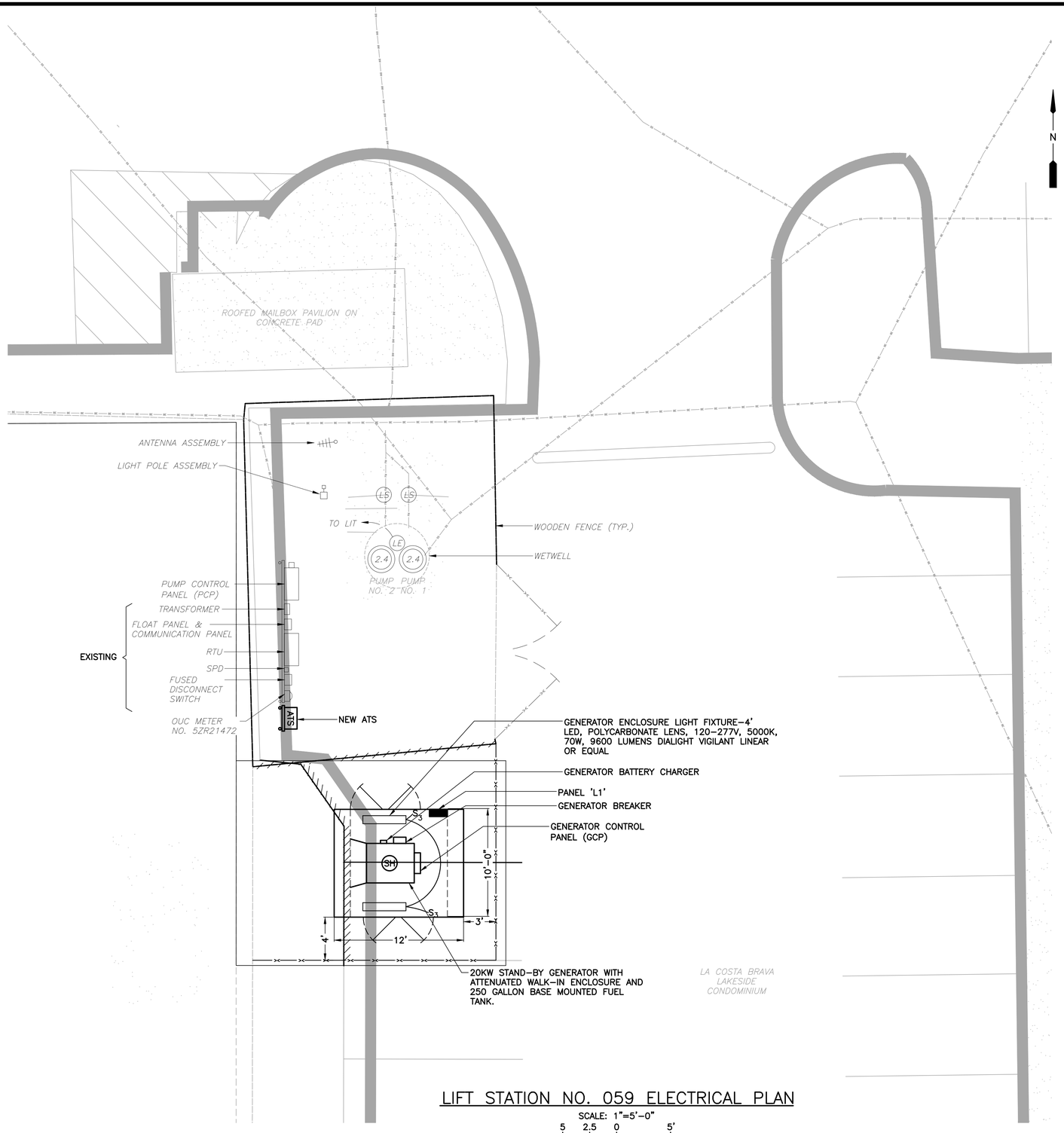
ATKINS
CORPORATE OFFICE
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPE CERTIFICATE OF AUTHORIZATION NO.24

LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL: 407.647.7275
FAX: 407.806.4500
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-101
REV.	△

PLOT DATE: Jan 28, 2021 - 8:24am
FILE NAME: U:\WO-Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-101.dwg

LIFT STATION #059
716 E. MICHIGAN ST.



NOTES:

1. ALL ITEMS SHOWN BEING REMOVED BY CONTRACTOR THAT ARE NOT DESIGNATED TO BE RETURNED TO OWNER SHALL BE DISPOSED BY THE CONTRACTOR AT THE APPROPRIATE DISPOSAL SITE.

LIFT STATION NO. 059 ELECTRICAL PLAN

SCALE: 1"=5'–0"

5 2.5 0 5'

100% SUBMITTAL

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745–5604
FAX: (407) 745–5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT:
CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

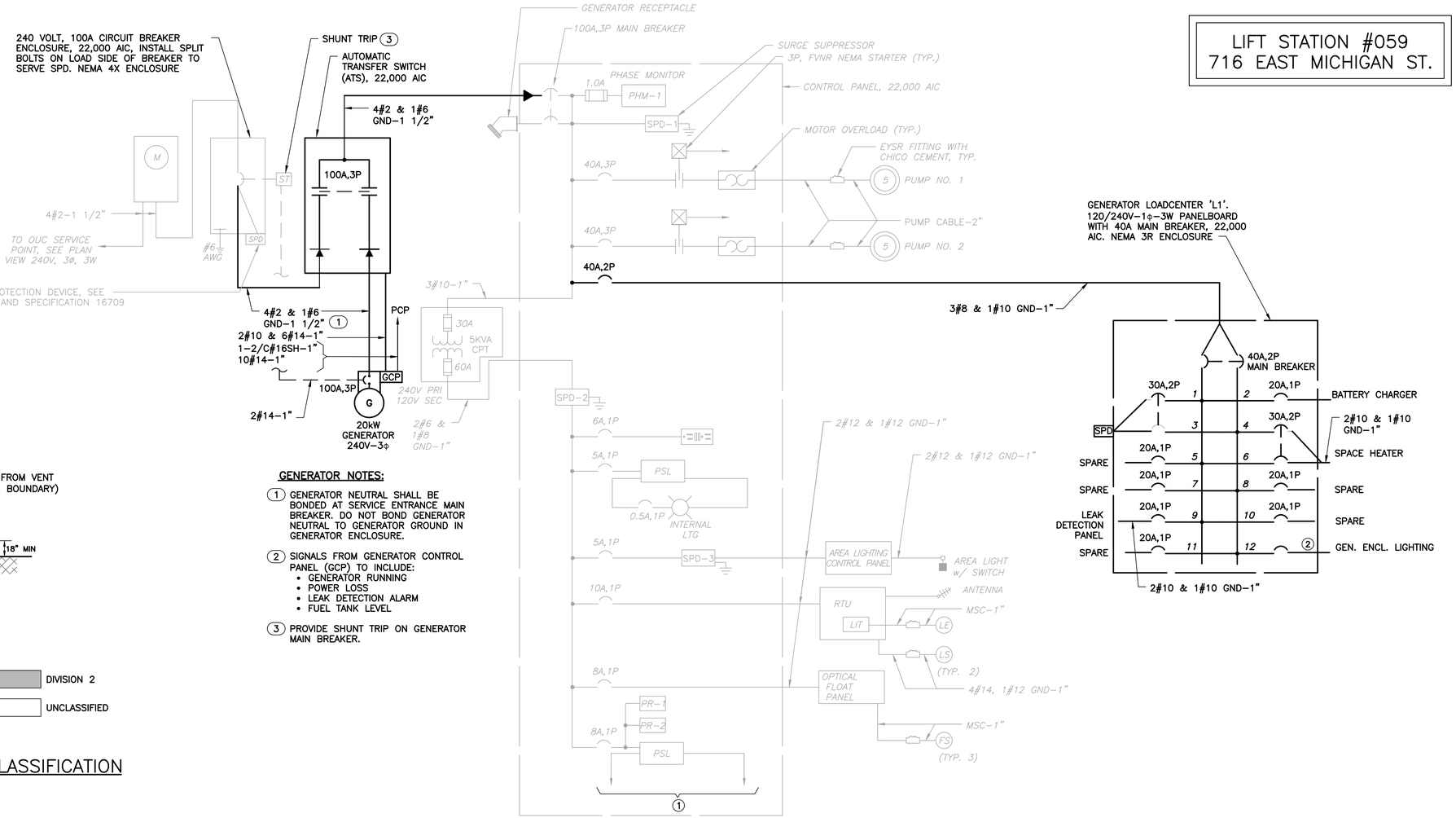
SHEET TITLE
LIFT STATION NO. 059 ELECTRICAL PLAN

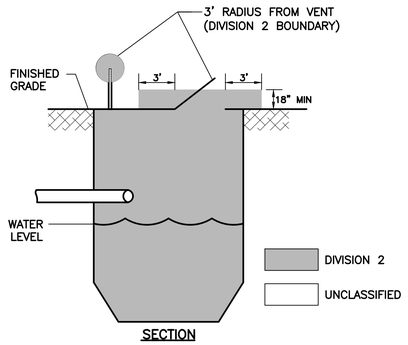
ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.34
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-101
REV.	△

PLOT DATE:
FILE NAME:

LIFT STATION #059
716 EAST MICHIGAN ST.





NFPA BOUNDARY CLASSIFICATION

N.T.S.

GENERATOR NOTES:

1. GENERATOR NEUTRAL SHALL BE BONDED AT SERVICE ENTRANCE MAIN BREAKER. DO NOT BOND GENERATOR NEUTRAL TO GENERATOR GROUND IN GENERATOR ENCLOSURE.
2. SIGNALS FROM GENERATOR CONTROL PANEL (GCP) TO INCLUDE:
   - GENERATOR RUNNING
   - POWER LOSS
   - LEAK DETECTION ALARM
   - FUEL TANK LEVEL
3. PROVIDE SHUNT TRIP ON GENERATOR MAIN BREAKER.

NFPA NOTES:

1. THE AREA INSIDE THE WET WELL IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
2. THE AREA WITHIN 3 FEET FROM THIS HATCH AND 1.5 FEET ABOVE THE WET WELL SLAB IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
3. THE AREA WITHIN A 3 FOOT RADIUS FROM THE VENT OPENING IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
4. PROVIDE U.L. LISTED MECHANICAL INTERLOCK SO THAT ONLY ONE CIRCUIT BREAKER CAN BE CLOSED AT A TIME.
5. ALL CONDUITS SHALL ENTER THE RTU AND CONTROL PANEL FROM THE BOTTOM UNLESS OTHERWISE SHOWN IN DRAWINGS.
6. PROVIDE WIRING METHODS AND MATERIALS SUITABLE FOR A CLASS 1, DIVISION 2 AREA WITHIN ALL HAZARDOUS AREAS. USE CROUSE-HINDS MODEL EYSR RETROFIT SEALING FITTING.
7. FIELD PANEL LOCATIONS ARE TO BE FIELD VERIFIED AND ARE SHOWN FOR CLARITY ONLY.
8. MAIN CIRCUIT BREAKERS AND MOTOR CIRCUIT BREAKERS TO BE SIZED ACCORDING TO MOTOR H.P. AND SYSTEM LOAD.
9. CONDUIT EXTENDING FROM THE WETWELL SHALL BE PVC SCHEDULE 80 AND SHALL BE ENCASED IN A CONCRETE ENVELOPE NO LESS THAN 2 INCHES THICK AND SHALL HAVE A COVER OF NO LESS THAN 24 INCHES. THREADED RIGID METAL CONDUIT SHALL BE USED FOR THE LAST 24 INCHES OF THE UNDERGROUND RUN TO EMERGENCE. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED TO PROVIDE ELECTRICAL CONTINUITY. INSTALLATION SHALL BE IN ACCORDANCE WITH NEC 70, ARTICLE 501, PART II, 501.10.

LS NO. 059 SINGLE LINE DIAGRAM

SCALE: N.T.S.

LS NO. 059 SERVICE LOAD TABULATION

SERVICE VOLTAGE: 240V-3ø-3W

DESCRIPTION	LOAD		AMPACITY
PUMP	2 @ 5 HP	=	30.40 AMPS
PSL-1	-	=	1.00 AMPS
GFI RECEPTACLE	-	=	2.00 AMPS
RTU	-	=	3.00 AMPS
LEVEL TRANSDUCER	-	=	2.00 AMPS
AREA LIGHTING	@ 125%	=	2.00 AMPS
GEN PANEL	-	=	10.00 AMPS
	CONNECTED LOAD	=	50.40 AMPS

(1) MINIMUM SERVICE ENTRANCE = 50.40 AMPS + (0.25)(15.20) = (54.20) AMPS

NOTES:

(1) SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 430, TABLE 430.250 OF THE NATIONAL ELECTRICAL CODE.

SPECIFIC NOTES:

(1) LIFT STATION CONTROL PANEL (22,000 AIC), SEE APPENDIX SHEETS 202A THRU 211.

(2) 2#12 & 1#12 GND-1".

(3) PROVIDE ADDITIONAL CONTACTS FOR SHUNT TRIP TO TRIP GENERATOR MAIN BEAKER.

NOTES:

1. REFERENCES TO APPENDIX OR DETAIL CALLOUTS REFER TO CITY OF ORLANDO PUBLIC WORKS DEPARTMENT LIFT STATION STANDARDS.

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

REV.	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT: CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT: LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE: LIFT STATION NO. 059 SINGLE LINE DIAGRAM

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
ISRP CERTIFICATE OF AUTHORIZATION NO.24

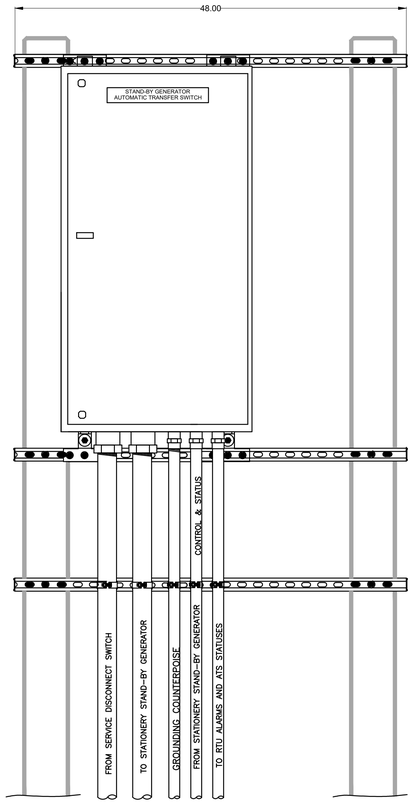
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-102
REV.	△

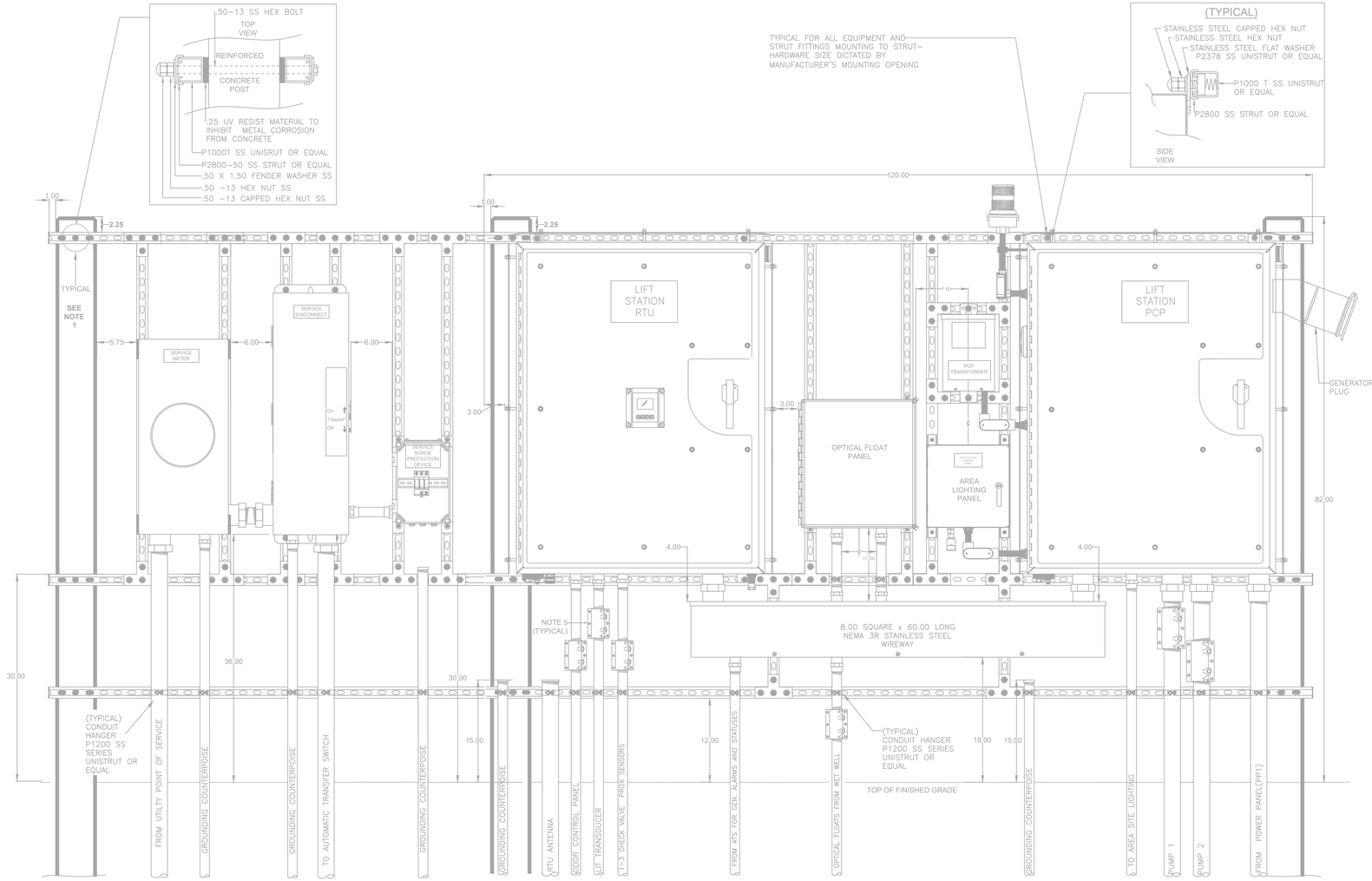
PLOT DATE:
FILE NAME:

NOTES:

1. 6.00 INCH SQUARE REINFORCED CONCRETE POST WITH 4500 PSI MINIMUM CONCRETE AND (4) # 4 REBARS SPACED 4 INCHES SQUARE IN CENTER OF POST. ALL EDGES SHALL HAVE .50 INCH WIDE CHAMFER.
2. EQUIPMENT UTILIZED SHALL CONFORM BY SPECIFICATIONS SPECIFIED IN DIVISIONS 13 AND 16. NO SUBSTITUTION WITHOUT OWNER'S WRITTEN APPROVAL.
3. DIMENSIONS IN INCHES.
4. ALL CONDUIT PENETRATIONS INTO ALL ENCLOSURES SHALL BE FITTED WITH A THREADED HUB CONNECTOR, SSTG SERIES, COOPER CROUSE HINDS, OR EQUAL.
5. CONDUIT SEAL OFF FITTINGS SHALL BE CROUSE HINDS TYPE EYSR OR EQUAL.



ATS RACK ELEVATION



FRONT ELEVATION EXISTING EQUIPMENT

L.S. NO. 059 EQUIPMENT ELEVATIONS

SCALE: N.T.S.

PROPOSED ELEVATION SHOWN FOR CONTRACTOR USE.
REFER TO CITY OF ORLANDO LIFT STATION STANDARDS AND SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

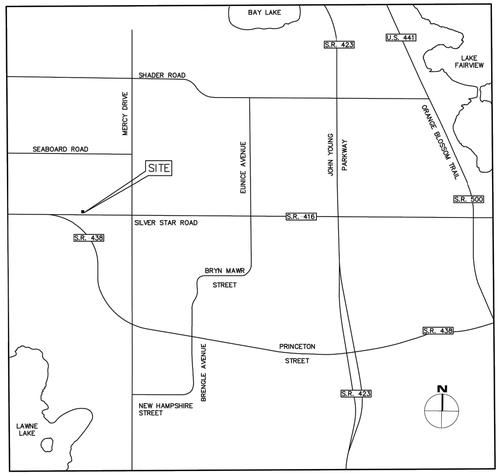
REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

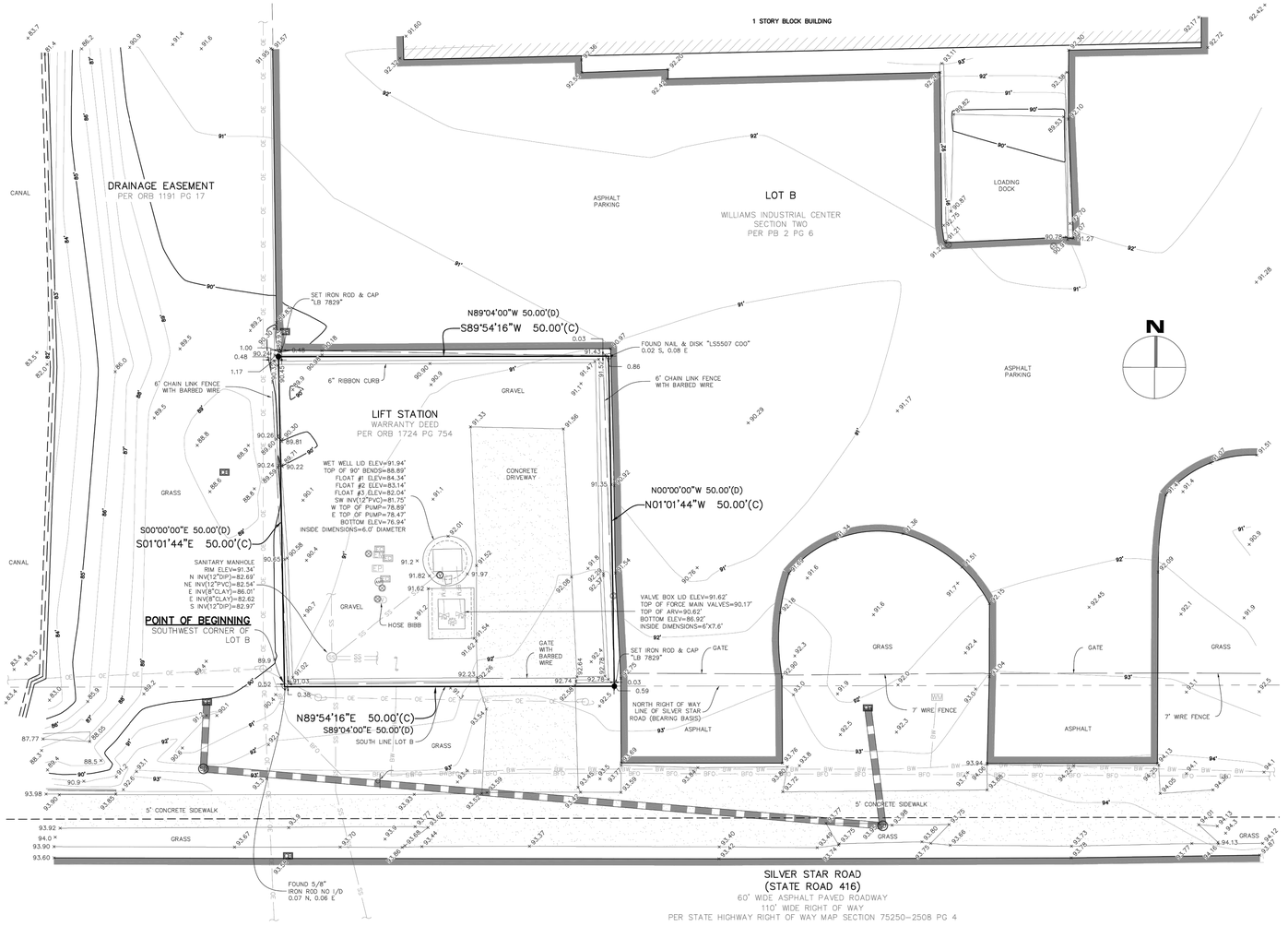
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VICINITY MAP: *NOT TO SCALE



SURVEY NOTES:

1. THIS SURVEY REPRESENTS A BOUNDARY AND TOPOGRAPHIC SURVEY AS DESCRIBED BY STANDARDS OF PRACTICE FOR SURVEYING AND MAPPING, CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODES. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. THIS SURVEY IS LIMITED TO: (1) THE DOCUMENTATION OF THE PERIMETER OF PARCELS OF LAND SHOWN HEREON BY MONUMENTING THE BOUNDARY LINES FOR THE PURPOSE OF DESCRIBING SAID PARCELS. (2) THE LOCATION OF SURFACE IMPROVEMENTS WITHIN PROJECT LIMITS AS DESCRIBED IN THE CONTRACT. (3) SPOT ELEVATIONS AND CONTOURS. (4) SUBSURFACE UTILITIES AS DESIGNATED BY L & S.
3. THE SURVEYED PROPERTY SHOWN HEREON CONTAINS A TOTAL AREA OF 0.057 ACRES (2,500 SQUARE FEET) MORE OR LESS.
4. THE HORIZONTAL SURVEY DATA SHOWN IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD83)/M WITH A 1990 ADJUSTMENT, STATE PLANE COORDINATES, FLORIDA EAST ZONE, AND IS RELATIVE TO FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION HAVING LOCAL GROUND COORDINATE SYSTEM WITH CERTIFIED RECORD NUMBER 111429, BEING A NAIL AND DISK WITH NO IDENTIFICATION NUMBER AND HAVING THE COORDINATES OF N:1539127.6505, E:519278.5604.
5. BEARINGS SHOWN HEREON ARE BASED ON THE NORTH RIGHT OF WAY LINE OF SILVER STAR ROAD, REFERENCED AS BEING S89°04'E, AND MEASURED AS BEING N89°54'16"E.
6. THE ELEVATIONS SHOWN HEREON ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND ARE RELATIVE TO CITY OF ORLANDO BENCHMARK "11-048" BEING A 3" ALUMINUM DISK STAMPED "11-048 BALONEY CREW" AND HAVING AN ELEVATION OF 94.138'.
7. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN FLOOD ZONE "X" ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP NUMBER 12095C0235F, DATED DECEMBER 6, 2000, REVISED SEPTEMBER 25, 2009.
8. THE SYMBOLS REFLECTED IN THE LEGEND AND ON THIS SURVEY MAY HAVE BEEN ENLARGED FOR CLARITY. THE SYMBOLS HAVE BEEN PLOTTED AT THE CENTER OF THE FIELD LOCATION AND MAY NOT REPRESENT THE ACTUAL SHAPE OR SIZE OF THE FEATURE.
9. THE INFORMATION DEPICTED ON THIS SURVEY REPRESENTS THE RESULTS OF A FIELD SURVEY ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS A REPRESENTATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.
10. THE SURVEYOR DID NOT INSPECT THE PROPERTY SHOWN HEREON FOR ENVIRONMENTAL HAZARDS.
11. FENCES AND WALL DIMENSIONS ARE APPROXIMATE. THE SURVEYOR DID NOT DETERMINE OWNERSHIP OF WALLS AND FENCES.
12. TREES, ORNAMENTAL PLANTS, HEDGES, SPRINKLER HEADS WERE NOT LOCATED.
13. THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. FOUNDATIONS AND ENCROACHMENTS WERE NOT LOCATED AND ARE NOT SHOWN HEREON. THIS SITE COULD HAVE UNDERGROUND INSTALLATIONS THAT ARE NOT SHOWN HEREON. BEFORE DESIGN, CONSTRUCTION EXCAVATIONS, CONTACT 811.COM (811) AND THE APPROPRIATE UTILITY COMPANIES FOR FIELD VERIFICATION OF UTILITIES.
14. IT SHOULD BE UNDERSTOOD BY THE CLIENT THAT SOME UNDERGROUND UTILITIES MAY NOT BE MADE OF A CONDUCTIVE MATERIAL OR MAY NOT RETURN A GPR ECHO AND THEREFORE CANNOT BE DESIGNATED WITH ELECTRONIC PROSPECTING EQUIPMENT OR GPR.
15. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT. THERE MAY BE ADDITIONAL RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.
16. THE INFORMATION CONTAINED IN THIS DOCUMENT WAS PREPARED BY L & S DIVERSIFIED, LLC (L&S). L&S HAS TAKEN ALL REASONABLE STEPS TO ENSURE THE ACCURACY OF THIS DOCUMENT. WE CANNOT GUARANTEE THAT ALTERATIONS AND/OR MODIFICATIONS WILL NOT BE MADE BY OTHERS AFTER IT LEAVES OUR POSSESSION. THIS DOCUMENT MUST BE COMPARED TO THE ORIGINAL HARD COPY (WHICH BEARS THE RAISED SURVEYORS CERTIFICATION SEAL IF APPLICABLE) TO ENSURE THE ACCURACY OF THE INFORMATION CONTAINED HEREON AND TO FURTHER ENSURE THAT ALTERATIONS AND/OR MODIFICATIONS HAVE NOT BEEN MADE. L&S MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OF THE INFORMATION CONTAINED IN THIS OR ANY DOCUMENT TRANSMITTED OR REVIEWED BY COMPUTER OR OTHER ELECTRONIC MEANS. CONTACT L&S DIRECTLY FOR VERIFICATION OF ACCURACY.
17. THIS SURVEY MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=10' OR SMALLER.
18. THIS SURVEY CANNOT BE RELIED UPON BY PERSONS OR ENTITIES OTHER THAN THE PERSONS OR ENTITIES CERTIFIED TO HEREON.
19. ADDITIONS OR DELETIONS TO THIS SURVEY MAP BY OTHER THAN THE SIGNING PARTY OR PARTIES ARE PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.



LEGAL DESCRIPTION: (PER ORB 1724, PG 754)

BEGIN AT THE SOUTHWEST CORNER OF LOT B, WILLIAMS INDUSTRIAL CENTER SECTION TWO AS RECORDED IN PLAT BOOK 2, PAGE 6, PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA, RUN SOUTH 89°04' EAST ALONG THE SOUTH LINE OF SAID LOT A DISTANCE OF 50 FEET, THENCE NORTH 50 FEET, THENCE NORTH 89°04' WEST 50 FEET, THENCE SOUTH 50 FEET TO THE POINT OF BEGINNING.

CERTIFICATIONS:

TO: CITY OF ORLANDO

SYMBOL AND ABBREVIATION LEGEND:

EC	ELECTRICAL CABINET	⁂	SET TRAVERSE POINT OR BENCHMARK	25	CONTOUR
EP	ELECTRICAL PANEL	⟷	BACKFLOW PREVENTER	24.7	SPOT ELEVATION
	WOODEN POWER POLE	WM	WATER METER	W	WEST
FMAR	FORCE MAIN AIR RELEASE VALVE	WR	WATER RISER	BFO	BURIED FIBER OPTIC
FMV	FORCE MAIN VALVE	ARV	AIR RELEASE VALVE	BFM	BURIED FORCE MAIN
	BOLLARD	(D)	DESCRIBED MEASUREMENT	SS	BURIED SANITARY SEWER
ANT	ANTENNA	DIP	DUCTILE IRON PIPE	BW	BURIED WATER
	SINGLE STAND SIGN	E	EAST/EASTING	OE	OVERHEAD ELECTRICAL
V	UNKNOWN VENT	ELEV	ELEVATION		CONTINUOUS
SMH	SANITARY SEWER MANHOLE	N	NORTH/NORTHING		DASHED LINE
SMH	STORM MANHOLE	(C)	CALCULATED MEASUREMENT		FENCE LINE
CB	CATCH BASIN	ORB	OFFICIAL RECORDS BOOK		DRAINAGE PIPE
	FOUND CONCRETE MONUMENT	PB	PLAT BOOK		BUILDING LINE
	FOUND IRON PIPE	PG	PAGE		EDGE OF PAVEMENT
	FOUND IRON ROD	PVC	POLYVINYL CHLORIDE PIPE		CONCRETE
	FOUND NAIL & DISK	S	SOUTH		

CITY OF ORLANDO LIFT STATION #61

ATKINS

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN

SECTION 17, TOWNSHIP 22 SOUTH, RANGE 29 EAST
CITY OF ORLANDO
ORANGE COUNTY, FLORIDA

GRAPHIC SCALE

10' 0 5' 10' 20'

1 INCH = 10 FEET

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY REPRESENTED HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF. IT HAS BEEN PREPARED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN CHAPTER 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE PURSUANT TO 53 CHAPTERS 177 AND 472 OF THE FLORIDA STATUTES.

Digitally signed by Sherry Manor
Date: 20.2016.03.13:13:50 -04'00'

SHERRY LEE MANOR, PSM - LS# 6961
THIS SURVEY MAP AND/OR REPORT IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF THE ABOVE.

L & S Diversified
Professional Surveyors and Mappers
405 LAKE HOWELL ROAD | SUITE 1005 | MAITLAND, FL | 32751
PHONE 407.681.3836 | FAX 407.681.6541
WWW.LSSURVEYOR.COM | INFO@LSSURVEYOR.COM
PROFESSIONAL SURVEYOR & MAPPER BUSINESS LICENSE | LB#7829

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

SHEET TITLE: BOUNDARY AND TOPOGRAPHICAL SURVEY LIFT STATION No. 061

ATKINS

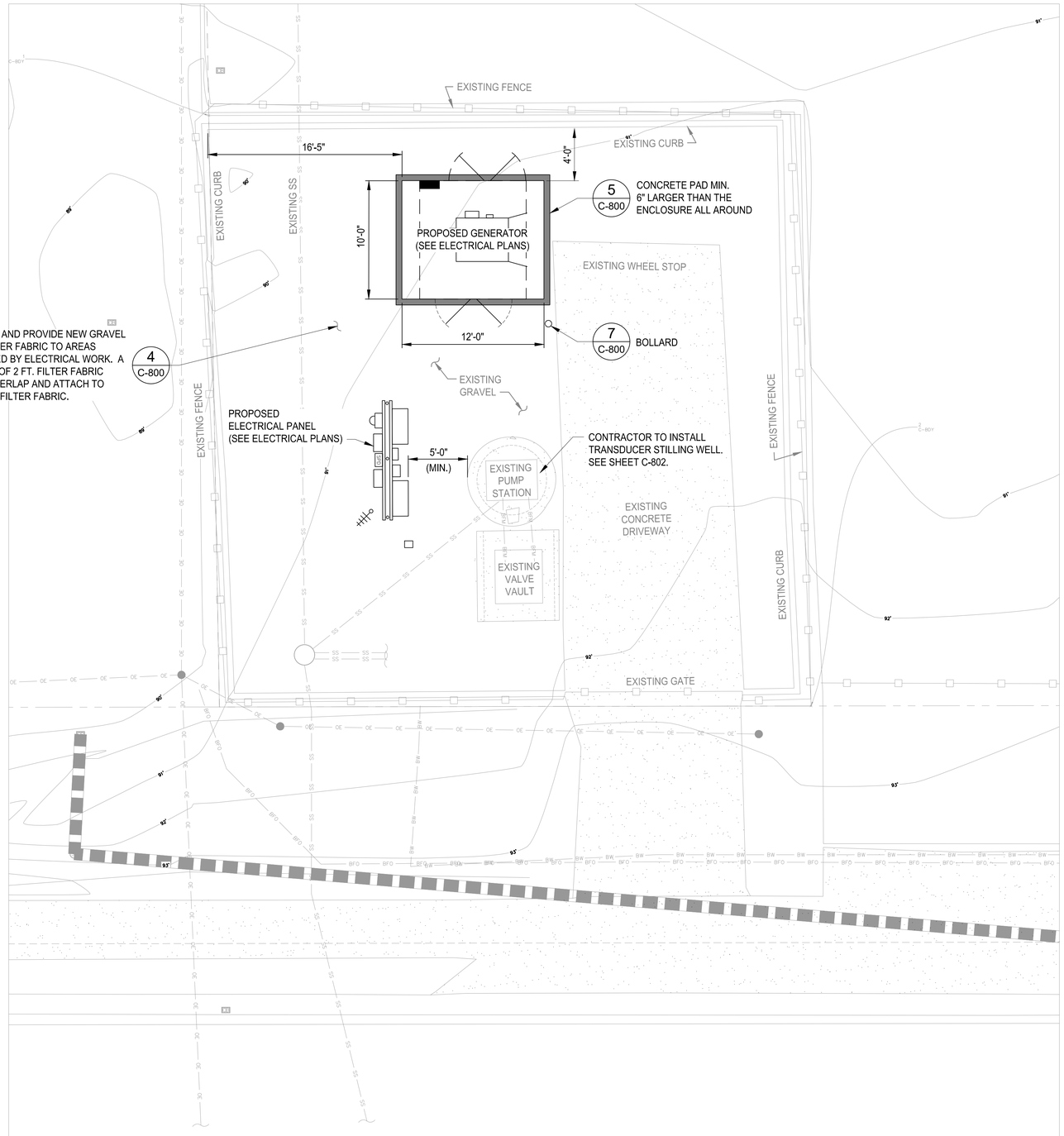
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24

LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.896.4000
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-200 REV.

PLOT DATE: Nov 12, 2020 - 4:28pm
FILE NAME: \\enatlnts.com\Projects\SOL\ADsrv\DATA\EDOT\ENV\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-100 through C-700.dwg

NOTES:
1. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING BEFORE COMMENCING CONSTRUCTION WORK.
2. COORDINATE AND SCHEDULE ACCESS TO THE SITE BEFORE COMMENCING CONSTRUCTION WORK.



LIFT STATION No. 061 SITE PLAN

N

0 5 10 15

SCALE: 1" = 5'

PLOT DATE: Jan 25, 2021 - 7:22am
FILE NAME: U:\WO\Projects\City of Orlando\Lift Station Emer Generators\15_Plan\Design\01 - Sheet Files\C-201.dwg

REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

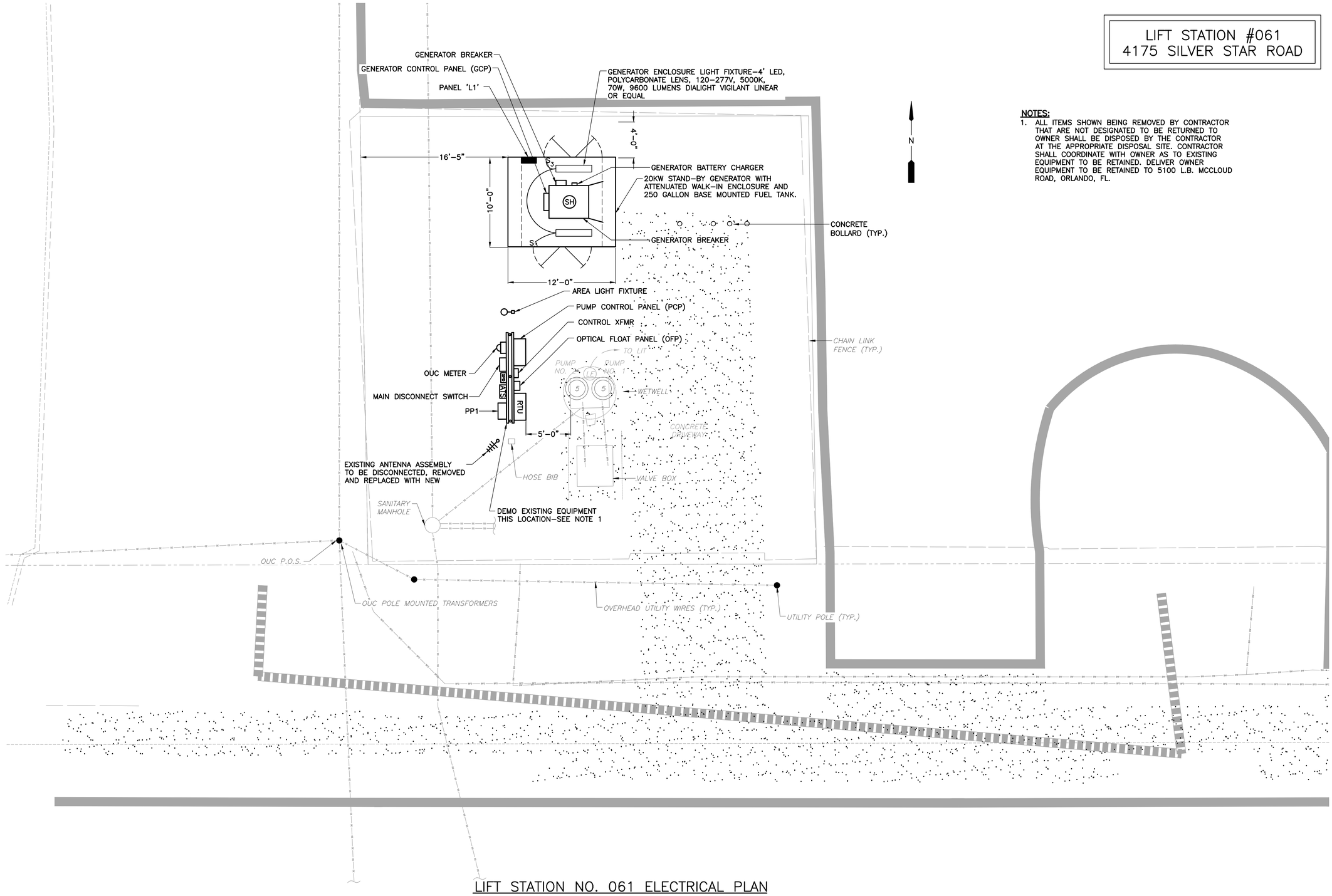
PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

SHEET TITLE: LIFT STATION No. 061 SITE PLAN

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPE CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4000
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO:	C-201
REV.	△

LIFT STATION #061
4175 SILVER STAR ROAD



NOTES:

1. ALL ITEMS SHOWN BEING REMOVED BY CONTRACTOR THAT ARE NOT DESIGNATED TO BE RETURNED TO OWNER SHALL BE DISPOSED BY THE CONTRACTOR AT THE APPROPRIATE DISPOSAL SITE. CONTRACTOR SHALL COORDINATE WITH OWNER AS TO EXISTING EQUIPMENT TO BE RETAINED. DELIVER OWNER EQUIPMENT TO BE RETAINED TO 5100 L.B. MCCLOUD ROAD, ORLANDO, FL.

LIFT STATION NO. 061 ELECTRICAL PLAN

SCALE: 1"=5'–0"

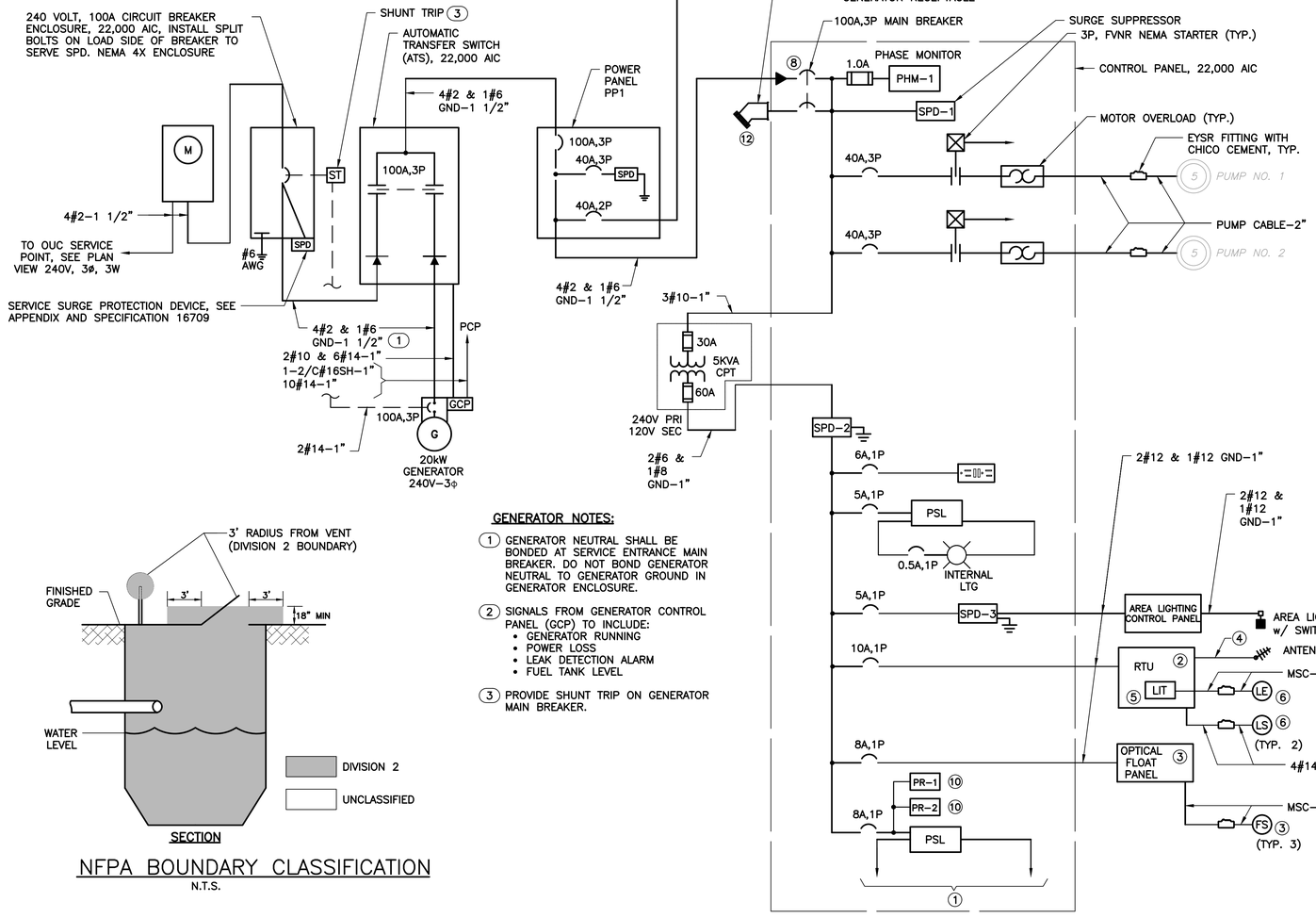
5 2.5 0 5'

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745–5604
FAX: (407) 745–5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

REV	DATE	ISSUED FOR

LIFT STATION #061
4175 SILVER STAR ROAD.



NFPA BOUNDARY CLASSIFICATION

N.T.S.

NFPA NOTES:

1. THE AREA INSIDE THE WET WELL IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
2. THE AREA WITHIN 3 FEET FROM THIS HATCH AND 1.5 FEET ABOVE THE WET WELL SLAB IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
3. THE AREA WITHIN A 3 FOOT RADIUS FROM THE VENT OPENING IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
4. PROVIDE U.L. LISTED MECHANICAL INTERLOCK SO THAT ONLY ONE CIRCUIT BREAKER CAN BE CLOSED AT A TIME.
5. ALL CONDUITS SHALL ENTER THE RTU AND CONTROL PANEL FROM THE BOTTOM UNLESS OTHERWISE SHOWN ON DRAWINGS.
6. PROVIDE WIRING METHODS AND MATERIALS SUITABLE FOR A CLASS 1, DIVISION 2 AREA WITHIN ALL HAZARDOUS AREAS. USE CROUSE-HINDS MODEL EYSR RETROFIT SEALING FITTING.
7. FIELD PANEL LOCATIONS ARE TO BE FIELD VERIFIED AND ARE SHOWN FOR CLARITY ONLY.
8. MAIN CIRCUIT BREAKERS AND MOTOR CIRCUIT BREAKERS TO BE SIZED ACCORDING TO MOTOR H.P. AND SYSTEM LOAD.
9. CONDUIT EXTENDING FROM THE WETWELL SHALL BE PVC SCHEDULE 80 AND SHALL BE ENCASED IN A CONCRETE ENVELOPE NO LESS THAN 2 INCHES THICK AND SHALL HAVE A COVER OF NO LESS THAN 24 INCHES. THREADED RIGID METAL CONDUIT SHALL BE USED FOR THE LAST 24 INCHES OF THE UNDERGROUND RUN TO EMERGENCE. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED TO PROVIDE ELECTRICAL CONTINUITY. INSTALLATION SHALL BE IN ACCORDANCE WITH NEC 70, ARTICLE 501, PART II, 501.10.

GENERATOR NOTES:

1. GENERATOR NEUTRAL SHALL BE BONDED AT SERVICE ENTRANCE MAIN BREAKER. DO NOT BOND GENERATOR NEUTRAL TO GENERATOR GROUND IN GENERATOR ENCLOSURE.
2. SIGNALS FROM GENERATOR CONTROL PANEL (GCP) TO INCLUDE:
   - GENERATOR RUNNING
   - POWER LOSS
   - LEAK DETECTION ALARM
   - FUEL TANK LEVEL
3. PROVIDE SHUNT TRIP ON GENERATOR MAIN BREAKER.

LS NO. 061 SINGLE LINE DIAGRAM

SCALE: N.T.S.

LS NO. 061 SERVICE LOAD TABULATION

SERVICE VOLTAGE: 240V-3ø-3W

DESCRIPTION	LOAD		AMPACITY
PUMP	2 @ 5 HP	=	30.40 AMPS
PSL-1	–	=	1.00 AMPS
GFI RECEPTACLE	–	=	2.00 AMPS
RTU	–	=	3.00 AMPS
LEVEL TRANSDUCER	–	=	2.00 AMPS
AREA LIGHTING	@ 125%	=	2.00 AMPS
GEN PANEL	–	=	10.00 AMPS
	CONNECTED LOAD	=	50.40 AMPS

(1) MINIMUM SERVICE ENTRANCE = 50.40 AMPS + (0.25)(15.20) = (54.20) AMPS

NOTES:

(1) SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 430, TABLE 430.250 OF THE NATIONAL ELECTRICAL CODE.

SPECIFIC NOTES:

(1) LIFT STATION CONTROL PANEL (22,000 AIC), SEE APPENDIX SHEETS 202 THRU 211.

(2) RTU, SEE SPECIFICATIONS FOR REQUIREMENTS, INCLUDING APPENDIX SHEETS 303 THRU 317.

(3) OPTICAL FLOAT PANEL, SEE APPENDIX SHEETS 702 THRU 706.

(4) ANTENNA TO RADIO CONNECTION, SEE APPENDIX SHEETS 924 AND 925.

(5) LEVEL ELEMENT, SEE APPENDIX SHEET 919. LIT SHALL BE WILKERSON LM1000 MONITOR AND CONTROL UNIT AND ASSOCIATED LEVEL ELEMENT.

(6) CHECK VALVE POSITION SWITCH, SEE APPENDIX SHEET 923, DETAIL 2.

(7) SEE APPENDIX SHEETS 902 THRU 907 FOR GROUNDING DETAILS.

(8) AMPACITY SHOWN REPRESENTS TRIP SETTINGS, SEE APPENDIX FOR ADDITIONAL REQUIREMENTS.

(9) SEE APPENDIX SHEET 802 THRU 805 FOR AREA LIGHTING CONTROL PANEL.

(10) PUMP PROTECTION RELAY. CONTRACTOR TO CONFIRM PUMP MANUFACTURER W/OWNER IN ORDER TO PROVIDE CORRECT MOTOR OVERLOAD RELAY.

(11) 2#12 & 1#12 GND-1".

(12) GENERATOR RECEPTACLE-SEE SPECIFICATION 16050 PARAGRAPH 2.21 THROUGH 2.24.

NOTES:

1. REFERENCES TO APPENDIX OR DETAIL CALLOUTS REFER TO CITY OF ORLANDO PUBLIC WORKS DEPARTMENT LIFT STATION STANDARDS.

REV.	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT: CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT: LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE: LIFT STATION NO. 061 SINGLE LINE DIAGRAM

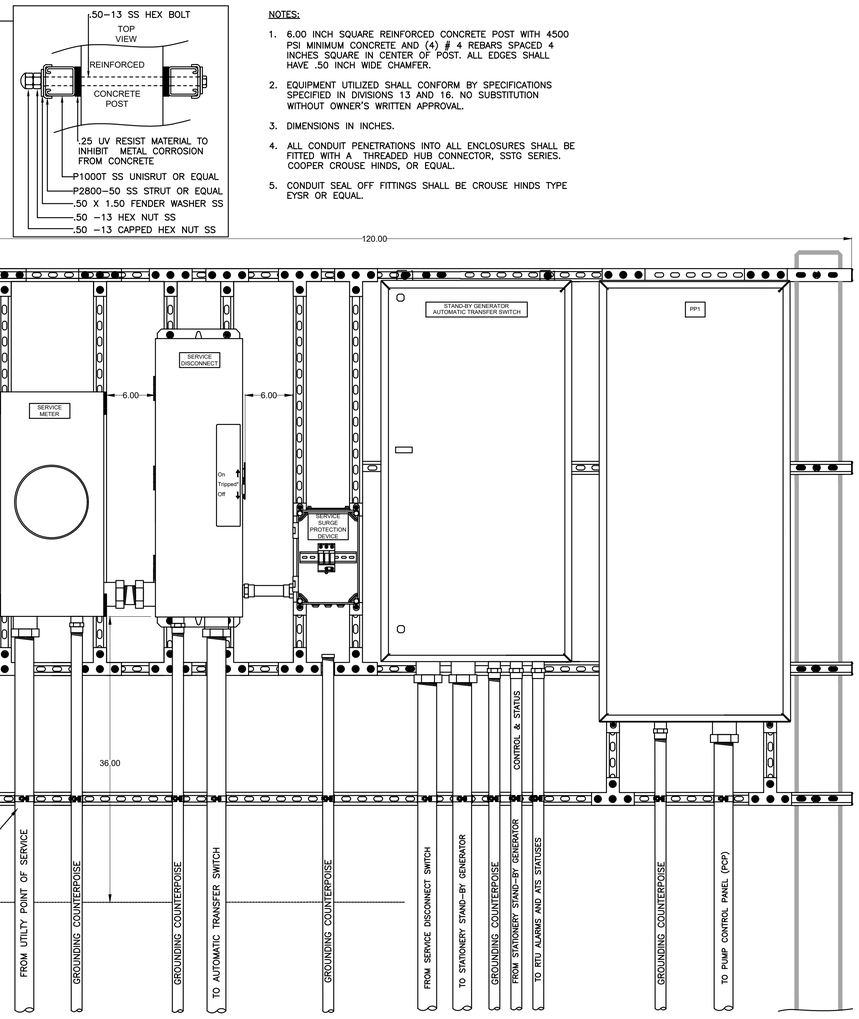
ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FIBPR CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-202
REV.	△

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
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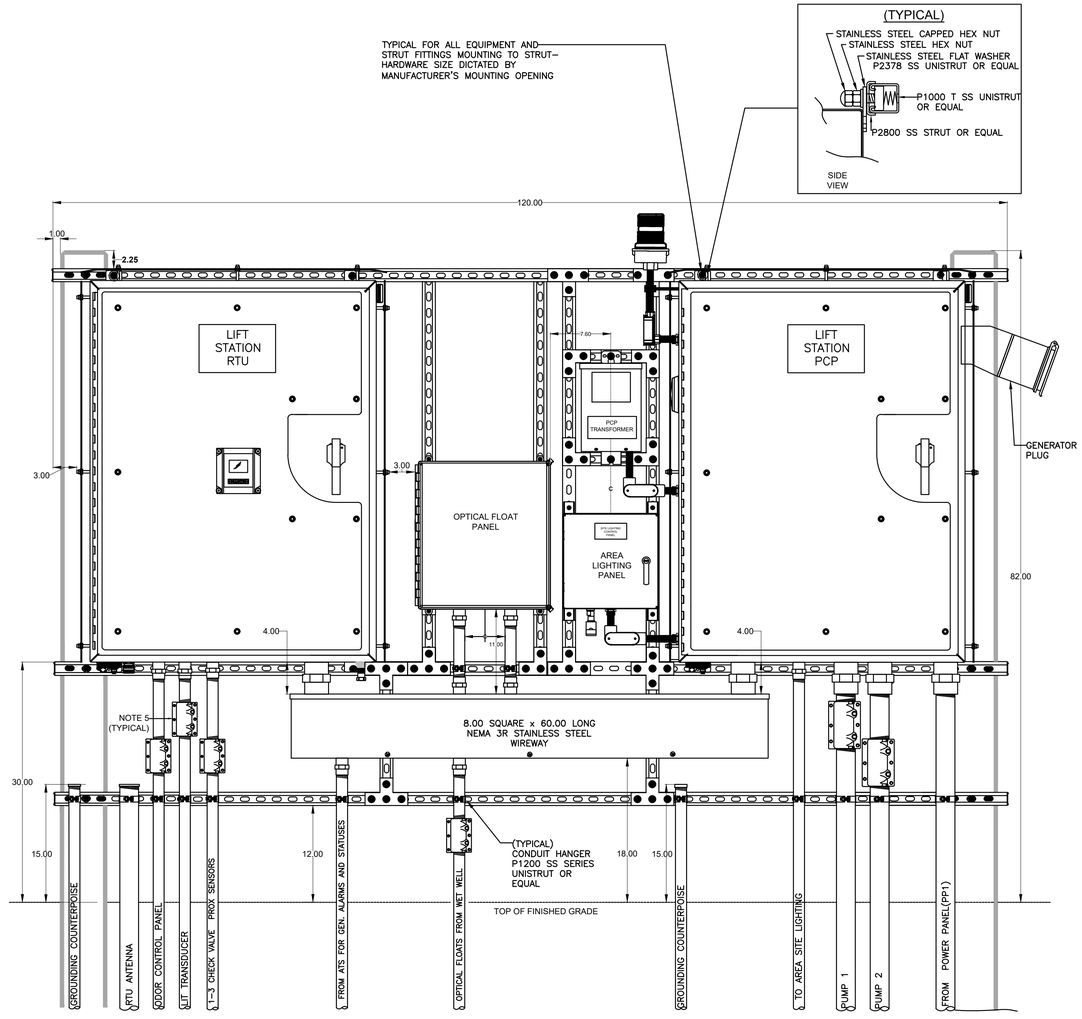
PLOT DATE:
FILE NAME:



NOTES:

1. 6.00 INCH SQUARE REINFORCED CONCRETE POST WITH 4500 PSI MINIMUM CONCRETE AND (4) # 4 REBARS SPACED 4 INCHES SQUARE IN CENTER OF POST. ALL EDGES SHALL HAVE .50 INCH WIDE CHAMFER.
2. EQUIPMENT UTILIZED SHALL CONFORM BY SPECIFICATIONS SPECIFIED IN DIVISIONS 13 AND 16. NO SUBSTITUTION WITHOUT OWNER'S WRITTEN APPROVAL.
3. DIMENSIONS IN INCHES.
4. ALL CONDUIT PENETRATIONS INTO ALL ENCLOSURES SHALL BE FITTED WITH A THREADED HUB CONNECTOR, SSTG SERIES. COOPER CROUSE HINDS, OR EQUAL.
5. CONDUIT SEAL OFF FITTINGS SHALL BE CROUSE HINDS TYPE EYSR OR EQUAL.

REAR ELEVATION



FRONT ELEVATION
(FACING WETWELL)

L.S. NO. 061 EQUIPMENT ELEVATION

SCALE: N.T.S.

PROPOSED ELEVATION SHOWN FOR CONTRACTOR USE. REFER TO CITY OF ORLANDO LIFT STATION STANDARDS AND SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS

EDA
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FLORIDA REG. NO.42017

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CLIENT:
CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

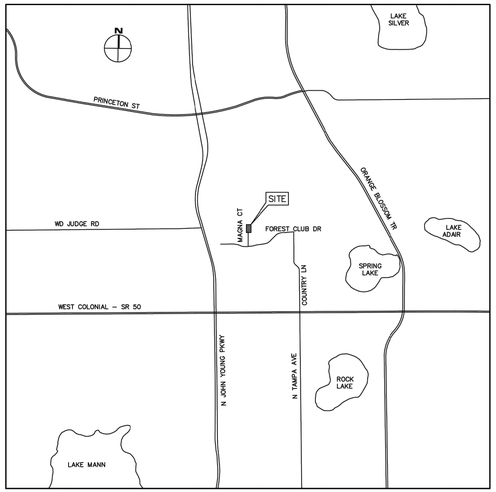
SHEET TITLE
LS NO. 061 EQUIPMENT RACK ELEVATION

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.34
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

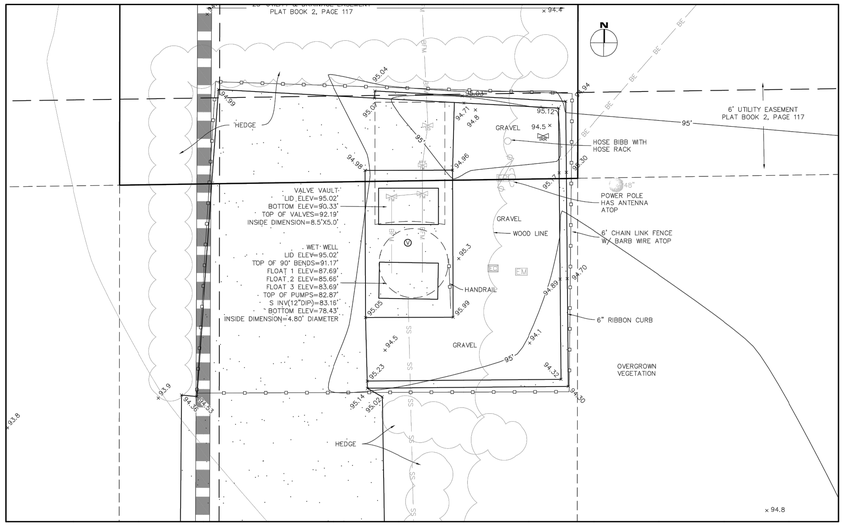
JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-203
REV.	△

PLOT DATE:
FILE NAME:

VICINITY MAP: *NOT TO SCALE



DETAIL "A"
SCALE: 1 INCH = 5 FEET

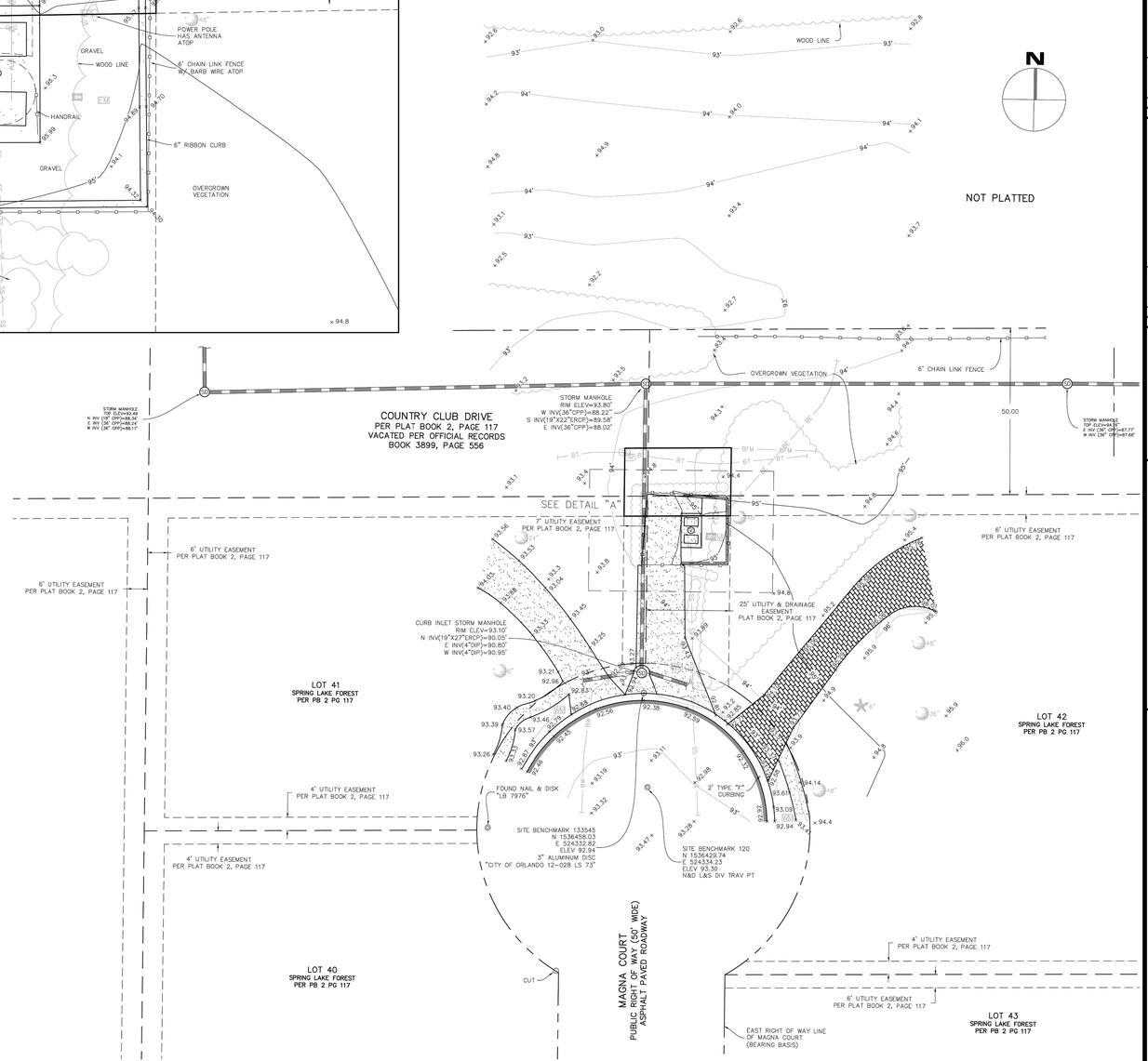


SURVEY NOTES:

1. THIS SURVEY REPRESENTS A TOPOGRAPHIC SURVEY AS DESCRIBED BY STANDARDS OF PRACTICE FOR SURVEYING AND MAPPING, CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODES. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. THIS SURVEY IS LIMITED TO: (1) THE LOCATION OF SURFACE IMPROVEMENTS. (2) SPOT ELEVATIONS AND CONTOURS. (3) STORM DRAINAGE AND SANITARY SEWER AS–BUILT. (5) SUBSURFACE UTILITIES AS DESIGNATED BY L & S DIVERSIFIED.
3. THIS IS NOT A BOUNDARY SURVEY. ANY PARCEL OR BOUNDARY INFORMATION SHOWN IS FOR REFERENCE ONLY.
4. THE HORIZONTAL SURVEY DATA SHOWN IS BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83), WITH A 1990 ADJUSTMENT, STATE PLANE COORDINATES, FLORIDA EAST ZONE, AND IS RELATIVE TO FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION HAVING LOCAL GROUND COORDINATE SYSTEM WITH CERTIFIED RECORD NUMBER 70558, BEING A 6"X6" CONCRETE MONUMENT (W/ BROKEN TOP – NO ID) AND HAVING THE COORDINATES OF N:1536571.2505, E:524608.3730.
5. THE VERTICAL DATUM AND ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88), CITY OF ORLANDO BENCHMARK #12–028 BEING A 3" ALUMINUM DISC STAMPED "12–028 L.S. 73" AND HAVING AN ELEVATION OF 92.936 FEET.
6. BEARINGS SHOWN HEREON ARE BASED ON THE EAST RIGHT OF WAY LINE OF MAGNA COURT, BEING NORTH 00°04'44" EAST.
7. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN FLOOD ZONE "X", ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP NUMBER 12095C0245F, PANEL 245 OF 750, REVISED SEPTEMBER 25, 2009.
8. THE SYMBOLS REFLECTED IN THE LEGEND AND ON THIS SURVEY MAY HAVE BEEN ENLARGED FOR CLARITY. THE SYMBOLS HAVE BEEN PLOTTED AT THE CENTER OF THE FIELD LOCATION AND MAY NOT REPRESENT THE ACTUAL SHAPE OR SIZE OF THE FEATURE.
9. THE INFORMATION DEPICTED ON THIS SURVEY REPRESENTS THE RESULTS OF A FIELD SURVEY ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS A REPRESENTATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.
10. THE SURVEYOR DID NOT INSPECT THE PROPERTY SHOWN HEREON FOR ENVIRONMENTAL HAZARDS.
11. FENCES AND WALL DIMENSIONS ARE APPROXIMATE. THE SURVEYOR DID NOT DETERMINE OWNERSHIP OF WALLS AND FENCES.
12. THIS FIRM IDENTIFIED VARIOUS TYPES OF TREES LOCATED ON THIS SITE BASED ON COMMON KNOWLEDGE OF TREE SPECIES. A QUALIFIED LANDSCAPE ARCHITECT SHOULD BE EMPLOYED FOR POSITIVE IDENTIFICATION OF TREE SPECIES. TREE DIAMETERS ARE APPROXIMATE AND WERE MEASURED AT BREAST HEIGHT. ONLY TREES 3 CALIPER INCHES OR LARGER WERE LOCATED AND SHOWN ON THE SURVEY. HEDGES AND GROUND COVER WERE NOT LOCATED AND ARE NOT SHOWN. EXOTIC TREES SUCH AS MELALEUCA, BRAZILIAN PEPPER AND AUSTRALIAN PINE WERE NOT LOCATED OR SHOWN HEREON.
13. UNLESS SHOWN, ORNAMENTAL PLANTS, HEDGES, SPRINKLER HEADS WERE NOT LOCATED.
14. A SUNSHINE 811 "DESIGN" TICKET #320808229 WAS OBTAINED TO DETERMINE THE UTILITY PROVIDERS WITHIN THE PROJECT LIMITS. THE PROJECT WAS SCANNED FOR UNDERGROUND UTILITIES USING ELECTRONIC DETECTION DEVICES AND GROUND PENETRATING RADAR (GPR). ANY UTILITIES FOUND WITHIN THE PROJECT LIMITS WERE SURFACE PAINTED AND FLAGGED WITH THE APPROPRIATE COLOR AS RECOGNIZED BY THE NATIONAL UTILITY LOCATING CONTRACTORS ASSOCIATION (NULCA). ANY UTILITIES MARKED BY ANOTHER FIRM HAVE BEEN VERIFIED BY AN L&S DIVERSIFIED UTILITY LOCATOR.
15. IT SHOULD BE UNDERSTOOD BY THE CLIENT THAT SOME UNDERGROUND UTILITIES MAY NOT BE MADE OF A CONDUCTIVE MATERIAL OR MAY NOT RETURN A GPR ECHO AND THEREFORE CANNOT BE DESIGNATED WITH ELECTRONIC PROSPECTING EQUIPMENT OR GPR.
15. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT. THERE MAY BE ADDITIONAL RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.
16. THE INFORMATION CONTAINED IN THIS DOCUMENT WAS PREPARED BY L & S DIVERSIFIED, LLC (L&S). L&S HAS TAKEN ALL REASONABLE STEPS TO ENSURE THE ACCURACY OF THIS DOCUMENT. WE CANNOT GUARANTEE THAT ALTERATIONS AND/OR MODIFICATIONS WILL NOT BE MADE BY OTHERS AFTER IT LEAVES OUR POSSESSION. THIS DOCUMENT MUST BE COMPARED TO THE ORIGINAL HARD COPY (WHICH BEARS THE RAISED SURVEYORS CERTIFICATION SEAL IF APPLICABLE) TO ENSURE THE ACCURACY OF THE INFORMATION CONTAINED HEREON AND TO FURTHER ENSURE THAT ALTERATIONS AND/OR MODIFICATIONS HAVE NOT BEEN MADE. L&S MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OF THE INFORMATION CONTAINED IN THIS OR ANY DOCUMENT TRANSMITTED OR REVIEWED BY COMPUTER OR OTHER ELECTRONIC MEANS. CONTACT L&S DIRECTLY FOR VERIFICATION OF ACCURACY.
17. THIS SURVEY MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=20' OR SMALLER. DETAIL MAP INTENDED TO BE DISPLAYED AT 1"=5'.
18. THIS SURVEY CANNOT BE RELIED UPON BY PERSONS OR ENTITIES OTHER THAN THE PERSONS OR ENTITIES CERTIFIED TO HEREON.
19. ADDITIONS OR DELETIONS TO THIS SURVEY MAP BY OTHER THAN THE SIGNING PARTY OR PARTIES ARE PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

SYMBOL AND ABBREVIATION LEGEND:

- WOODEN POWER POLE
- ELECTRICAL PANEL
- ELECTRIC CABINET
- ELECTRICAL VAULT
- ELECTRICAL METER
- CLEANOUT
- SINGLE STAND SIGN
- UNKNOWN VENT
- SANITARY SEWER MANHOLE
- SANITARY SEWER VALVE
- MITERED END SECTION
- FOUND IRON ROD
- FOUND NAIL & DISK
- TREE OAK
- TREE PALM
- BACKFLOW PREVENTER
- WATER METER
- C — CHORD DISTANCE
- CD — CHORD BEARING
- CPP — CORRUGATED PLASTIC PIPE
- Δ — DELTA
- DIA — DIAMETER
- E — EAST/EASTING
- ELEV — ELEVATION
- INV — INVERT
- L — ARC LENGTH
- LB — LICENSED BUSINESS
- SET TRAVERSE POINT OR BENCHMARK
- CHANGE IN DIRECTION
- TELECOMMUNICATION RISER
- CABLE RISER
- N — NORTH/NORTHING
- PVC — POLYVINYL CHLORIDE PIPE
- R — RADIUS
- S — SOUTH
- CONTOUR
- SPOT ELEVATION
- W — WEST
- CENTERLINE
- CONTINUOUS
- HEDGE/LANDSCAPE
- BE — BURIED ELECTRICAL
- BFM — BURIED FORCE MAIN
- SS — BURIED SANITARY SEWER
- BT — BURIED TELECOMMUNICATION
- BW — BURIED WATER
- DASHED LINE
- FENCE LINE
- DRAINAGE PIPE
- BUILDING LINE
- EDGE OF PAVEMENT
- CONCRETE
- BRICK PAVERS



CITY OF ORLANDO - LS #73

ATKINS

TOPOGRAPHIC SURVEY
LIFT STATION NO. 73 (1417 MAGNA COURT)

LOCATED IN

SECTION 21, TOWNSHIP 22 SOUTH, RANGE 29 EAST
CITY OF ORLANDO
ORANGE COUNTY, FLORIDA

GRAPHIC SCALE

20' 0 10' 20' 20'

1 INCH = 20 FEET

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY REPRESENTED HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF. IT HAS BEEN PREPARED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN CHAPTER 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE PURSUANT TO TO CHAPTERS 177 AND 472 OF THE FLORIDA STATUTES.

Digitally signed by Sherry Manor
Date: 2020.06.05 13:11:47 -04'00'

SHERRY LEE MANOR, PSM - LS# 6961

THIS SURVEY MAP AND/OR REPORT IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF THE ABOVE.

L & S Diversified
Professional Surveyors and Mappers
405 LAKE HOWELL ROAD | SUITE 1001 | MAITLAND, FL | 32751
PHONE: 407.681.3838 | FAX 407.681.6343
WWW.LSSURVEYOR.COM | INFO@LSSURVEYOR.COM

PROFESSIONAL SURVEYOR & MAPPER BUSINESS LICENSE | LB#7829

REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129
EMERGENCY GENERATORS

SHEET TITLE: BOUNDARY AND TOPOGRAPHICAL SURVEY
LIFT STATION No. 073

ATKINS

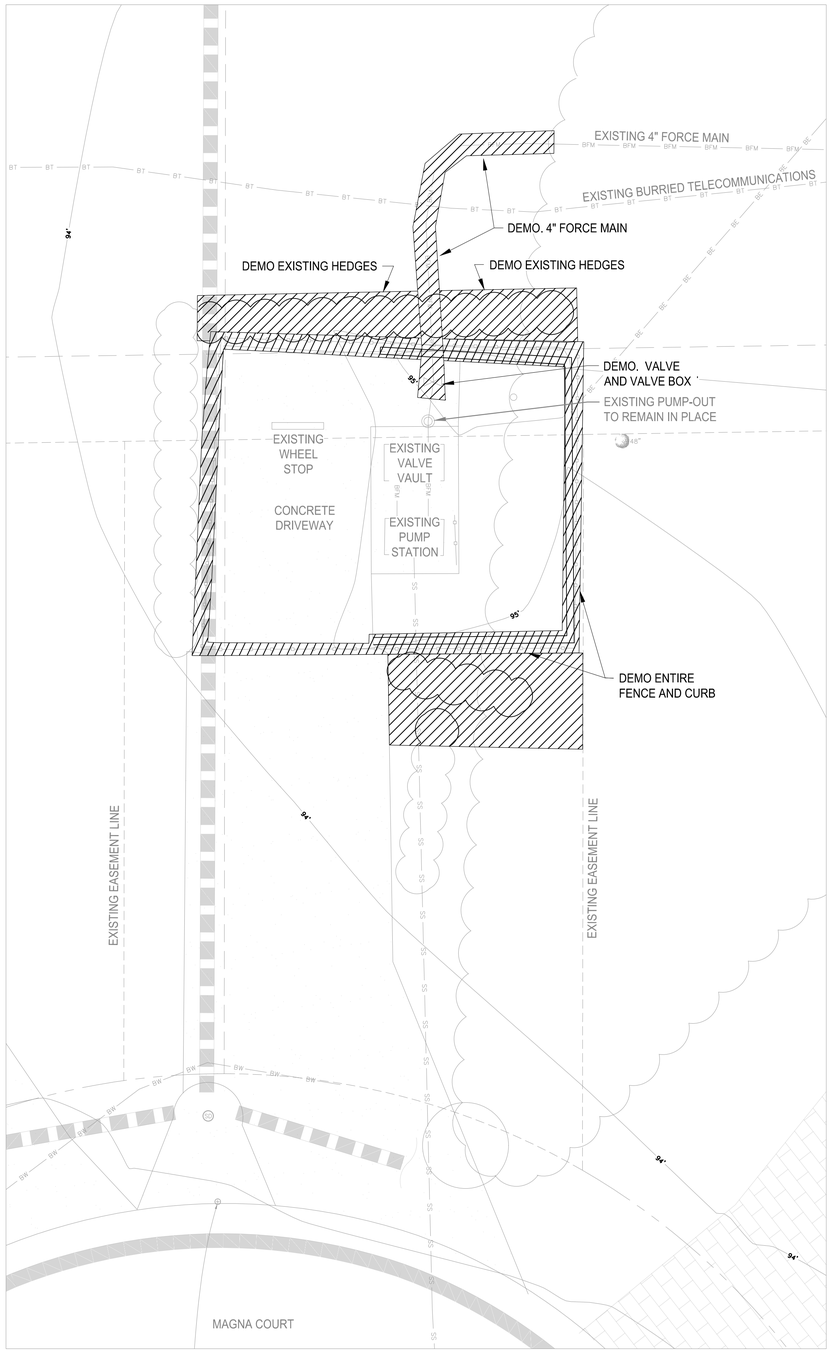
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4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF
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LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4000
www.atkinsglobal.com

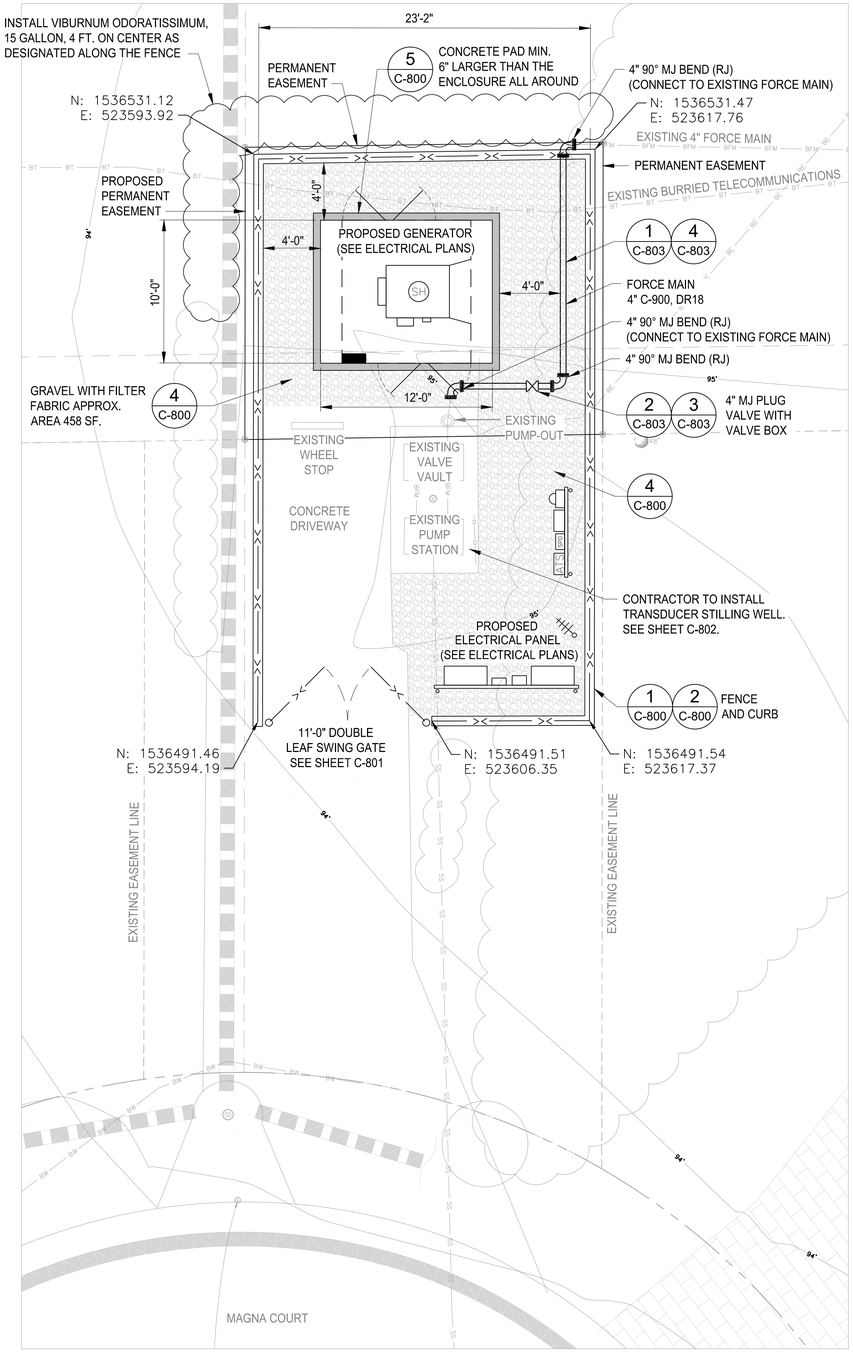
JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-300
REV.	△

PLOT DATE: Nov 12, 2020 - 4:28pm
FILE NAME: \\atkinsfs.com\Projects\SOU\Orl\DATA1\EDOT\ECIW\Projects\City of Orlando\Lift Station Emergency Generators\15_Plans\Design\01 - Sheet Files\C-100 through C-700.dwg

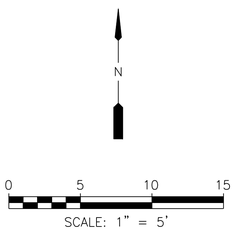
NOTES:
1. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING BEFORE COMMENCING CONSTRUCTION WORK.
2. COORDINATE AND SCHEDULE ACCESS TO THE SITE BEFORE COMMENCING CONSTRUCTION WORK.



LIFT STATION No. 073 SITE DEMOLITION PLAN



LIFT STATION No. 073 PROPOSED SITE PLAN



REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO. 41210

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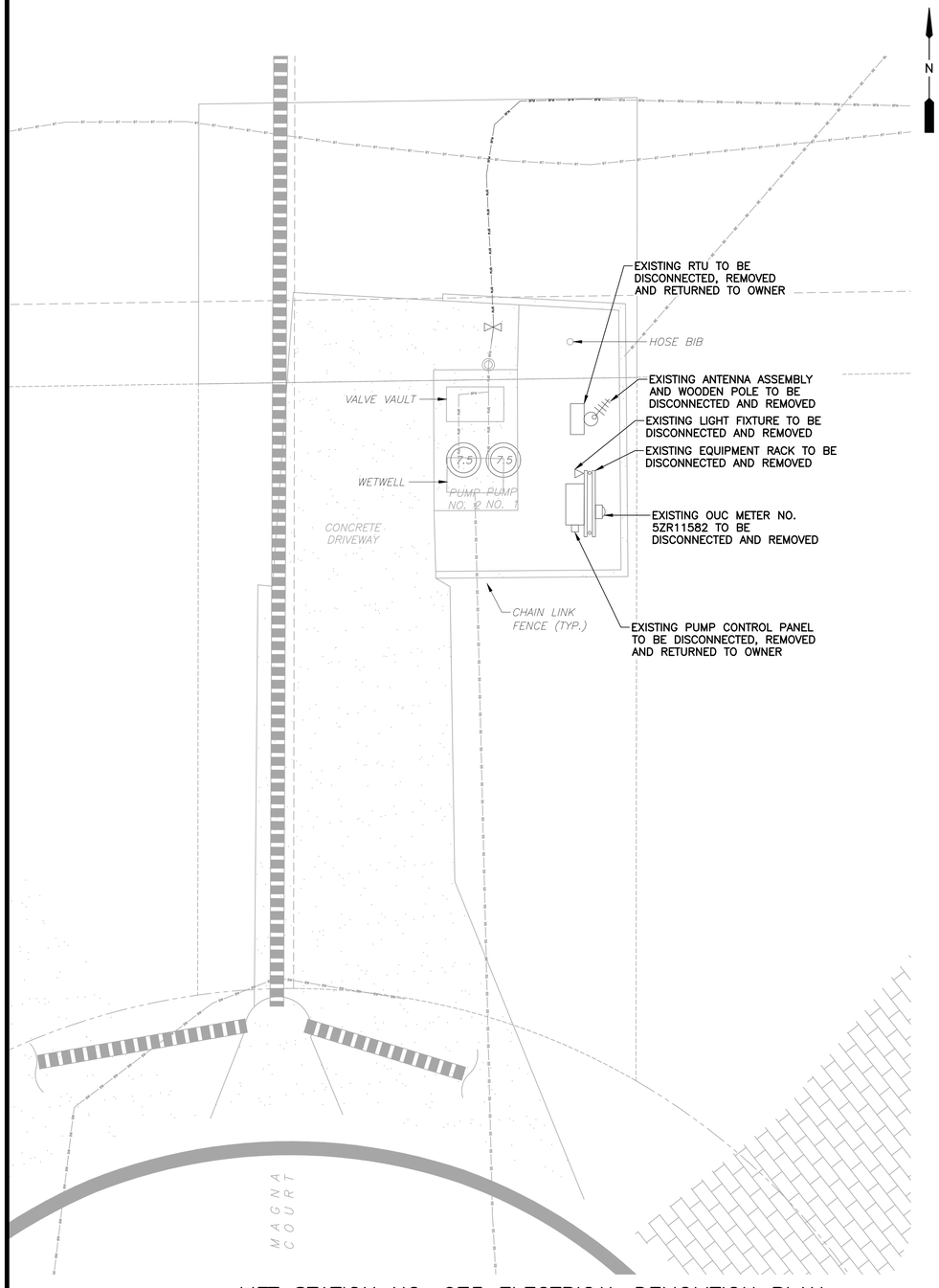
PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

SHEET TITLE: LIFT STATION No. 073 SITE DEMOLITION PLAN AND PROPOSED SITE PLAN

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-301
REV.	△

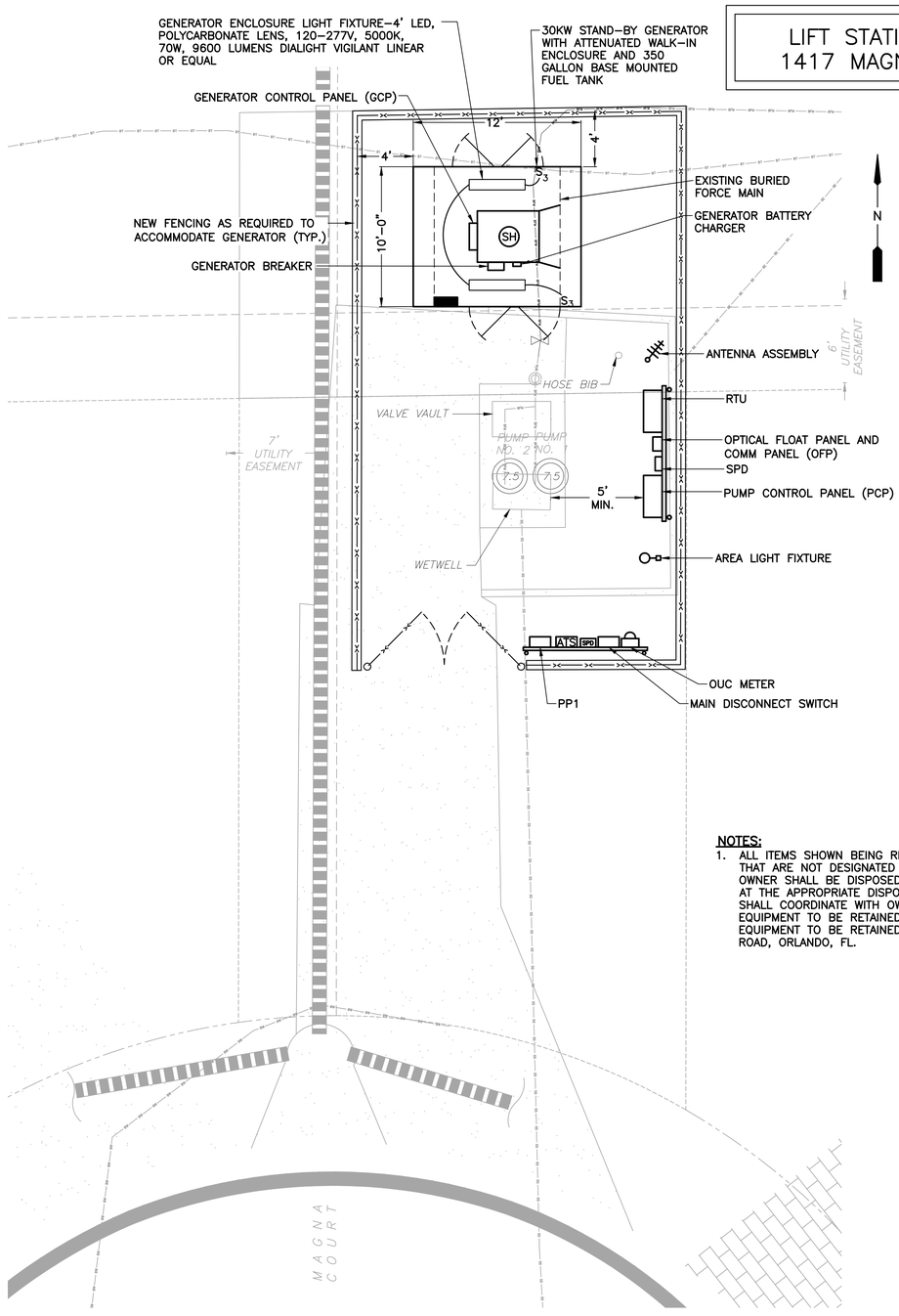
PLOT DATE: Feb 22, 2021 - 12:45pm
FILE NAME: U:\WO\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-301.dwg



LIFT STATION NO. 073 ELECTRICAL DEMOLITION PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'



LIFT STATION NO. 073 PROPOSED ELECTRICAL PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'

NOTES:

1. ALL ITEMS SHOWN BEING REMOVED BY CONTRACTOR THAT ARE NOT DESIGNATED TO BE RETURNED TO OWNER SHALL BE DISPOSED BY THE CONTRACTOR AT THE APPROPRIATE DISPOSAL SITE. CONTRACTOR SHALL COORDINATE WITH OWNER AS TO EXISTING EQUIPMENT TO BE RETAINED. DELIVER OWNER EQUIPMENT TO BE RETAINED TO 5100 L.B. MCCLOUD ROAD, ORLANDO, FL.

LIFT STATION #073
1417 MAGNA COURT

REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT:
CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE
LIFT STATION NO. 073
ELECTRICAL DEMOLITION PLAN
& PROPOSED ELECTRICAL PLAN

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.34
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

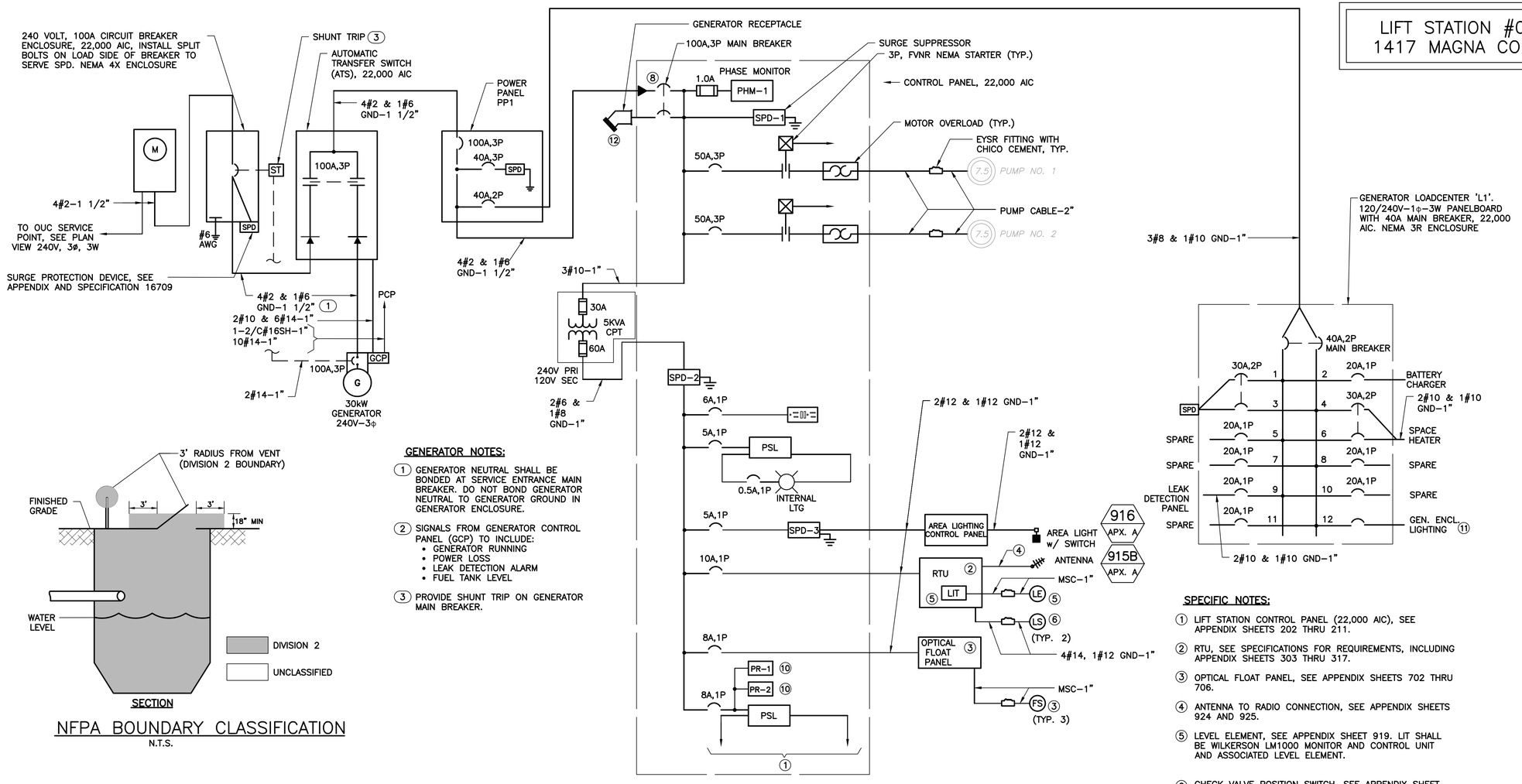
JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-301
REV.	△

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

PLOT DATE:
FILE NAME:

LIFT STATION #073
1417 MAGNA COURT



GENERATOR NOTES:

(1) GENERATOR NEUTRAL SHALL BE BONDED AT SERVICE ENTRANCE MAIN BREAKER. DO NOT BOND GENERATOR NEUTRAL TO GENERATOR GROUND IN GENERATOR ENCLOSURE.

(2) SIGNALS FROM GENERATOR CONTROL PANEL (GCP) TO INCLUDE:
- GENERATOR RUNNING
- POWER LOSS
- LEAK DETECTION ALARM
- FUEL TANK LEVEL

(3) PROVIDE SHUNT TRIP ON GENERATOR MAIN BREAKER.

SPECIFIC NOTES:

(1) LIFT STATION CONTROL PANEL (22,000 AIC), SEE APPENDIX SHEETS 202 THRU 211.

(2) RTU, SEE SPECIFICATIONS FOR REQUIREMENTS, INCLUDING APPENDIX SHEETS 303 THRU 317.

(3) OPTICAL FLOAT PANEL, SEE APPENDIX SHEETS 702 THRU 706.

(4) ANTENNA TO RADIO CONNECTION, SEE APPENDIX SHEETS 924 AND 925.

(5) LEVEL ELEMENT, SEE APPENDIX SHEET 919. LIT SHALL BE WILKERSON LM1000 MONITOR AND CONTROL UNIT AND ASSOCIATED LEVEL ELEMENT.

(6) CHECK VALVE POSITION SWITCH, SEE APPENDIX SHEET 923, DETAIL 2.

(7) SEE APPENDIX SHEETS 902 THRU 907 FOR GROUNDING DETAILS.

(8) AMPACITY SHOWN REPRESENTS TRIP SETTINGS, SEE APPENDIX FOR ADDITIONAL REQUIREMENTS.

(9) SEE APPENDIX SHEET 802 THRU 805 FOR AREA LIGHTING CONTROL PANEL.

(10) PUMP PROTECTION RELAY. CONTRACTOR TO CONFIRM PUMP MANUFACTURER W/OWNER IN ORDER TO PROVIDE CORRECT MOTOR OVERLOAD RELAY.

(11) 2#12 & 1#12 GND-1".

(12) GENERATOR RECEPTACLE-SEE SPECIFICATION 16050 PARAGRAPH 2.21 THROUGH 2.24.

NOTES:

1. REFERENCES TO APPENDIX OR DETAIL CALLOUTS REFER TO CITY OF ORLANDO PUBLIC WORKS DEPARTMENT LIFT STATION STANDARDS.

NFPA BOUNDARY CLASSIFICATION

N.T.S.

NFPA NOTES:

1. THE AREA INSIDE THE WET WELL IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
2. THE AREA WITHIN 3 FEET FROM THIS HATCH AND 1.5 FEET ABOVE THE WET WELL SLAB IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
3. THE AREA WITHIN A 3 FOOT RADIUS FROM THE VENT OPENING IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
4. PROVIDE U.L. LISTED MECHANICAL INTERLOCK SO THAT ONLY ONE CIRCUIT BREAKER CAN BE CLOSED AT A TIME.
5. ALL CONDUITS SHALL ENTER THE RTU AND CONTROL PANEL FROM THE BOTTOM UNLESS OTHERWISE SHOWN ON DRAWINGS.
6. PROVIDE WIRING METHODS AND MATERIALS SUITABLE FOR A CLASS 1, DIVISION 2 AREA WITHIN ALL HAZARDOUS AREAS. USE CROUSE-HINDS MODEL EYSR RETROFIT SEALING FITTING.
7. FIELD PANEL LOCATIONS ARE TO BE FIELD VERIFIED AND ARE SHOWN FOR CLARITY ONLY.
8. MAIN CIRCUIT BREAKERS AND MOTOR CIRCUIT BREAKERS TO BE SIZED ACCORDING TO MOTOR H.P. AND SYSTEM LOAD.
9. CONDUIT EXTENDING FROM THE WETWELL SHALL BE PVC SCHEDULE 80 AND SHALL BE ENCASED IN A CONCRETE ENVELOPE NO LESS THAN 2 INCHES THICK AND SHALL HAVE A COVER OF NO LESS THAN 24 INCHES. THREADED RIGID METAL CONDUIT SHALL BE USED FOR THE LAST 24 INCHES OF THE UNDERGROUND RUN TO EMERGENCE. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED TO PROVIDE ELECTRICAL CONTINUITY. INSTALLATION SHALL BE IN ACCORDANCE WITH NEC 70, ARTICLE 501, PART II, 501.10.

LS NO. 073 SINGLE LINE DIAGRAM

SCALE: N.T.S.

LS NO. 073 SERVICE LOAD TABULATION

SERVICE VOLTAGE: 240V-3ø-3W

DESCRIPTION	LOAD		AMPACITY
PUMP	2 @ 7.5 HP	=	44.00 AMPS
PSL-1	–	=	1.00 AMPS
GFI RECEPTACLE	–	=	2.00 AMPS
RTU	–	=	3.00 AMPS
LEVEL TRANSDUCER	–	=	2.00 AMPS
AREA LIGHTING	@ 125%	=	2.00 AMPS
GEN PANEL	–	=	10.00 AMPS
	CONNECTED LOAD	=	62.00 AMPS

(1) MINIMUM SERVICE ENTRANCE = 62 AMPS + (0.25)(22.0) = (67.5) AMPS

NOTES:

(1) SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 430, TABLE 430.250 OF THE NATIONAL ELECTRICAL CODE.

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

NOTICE:
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CLIENT: CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT: LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE: LIFT STATION NO.073 SINGLE LINE DIAGRAM

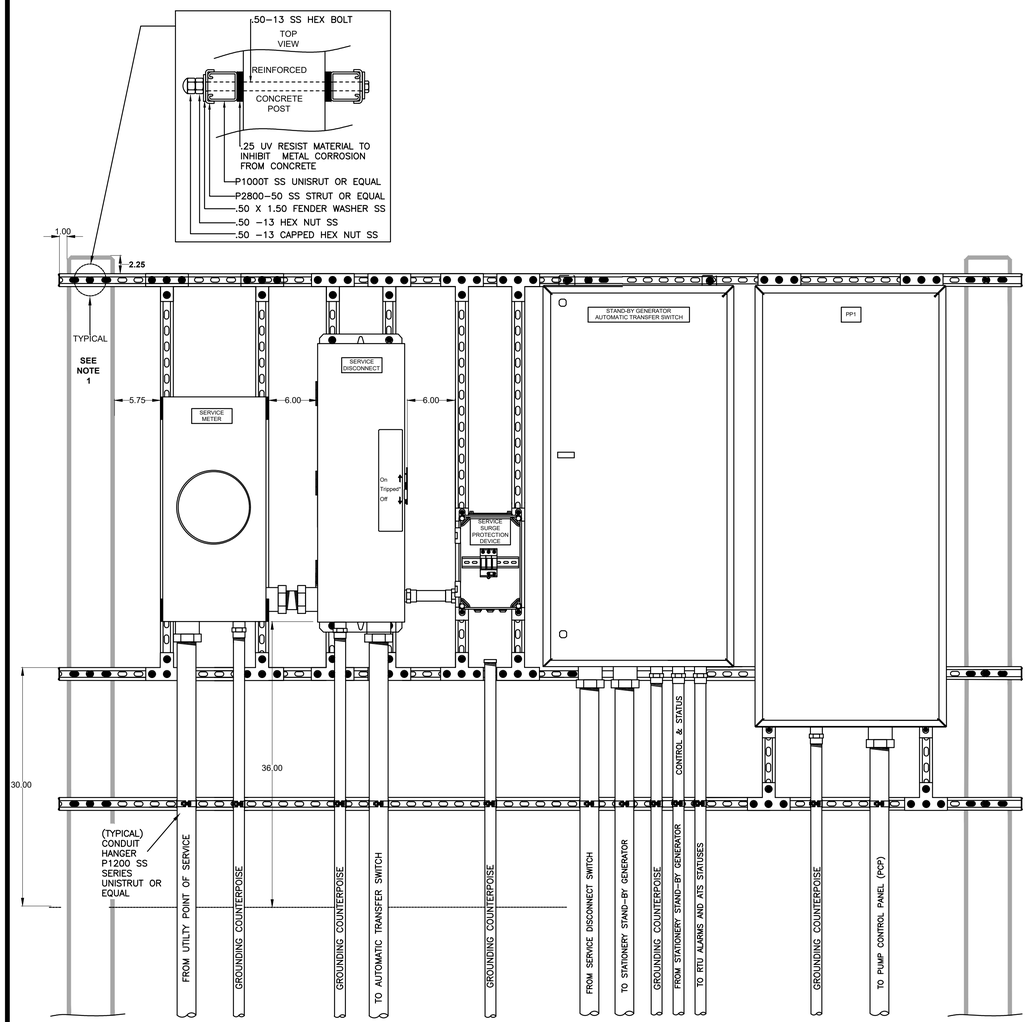
ATKINS
CORPORATE OFFICE: 4030 W. BOY SCOUT BOULEVARD TAMPA, FLORIDA 33607 FBPE CERTIFICATE OF AUTHORIZATION NO.28
LOCAL OFFICE: 482 SOUTH KELLER ROAD ORLANDO, FL 32810 TEL. 407.647.7275 FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-302 REV. △

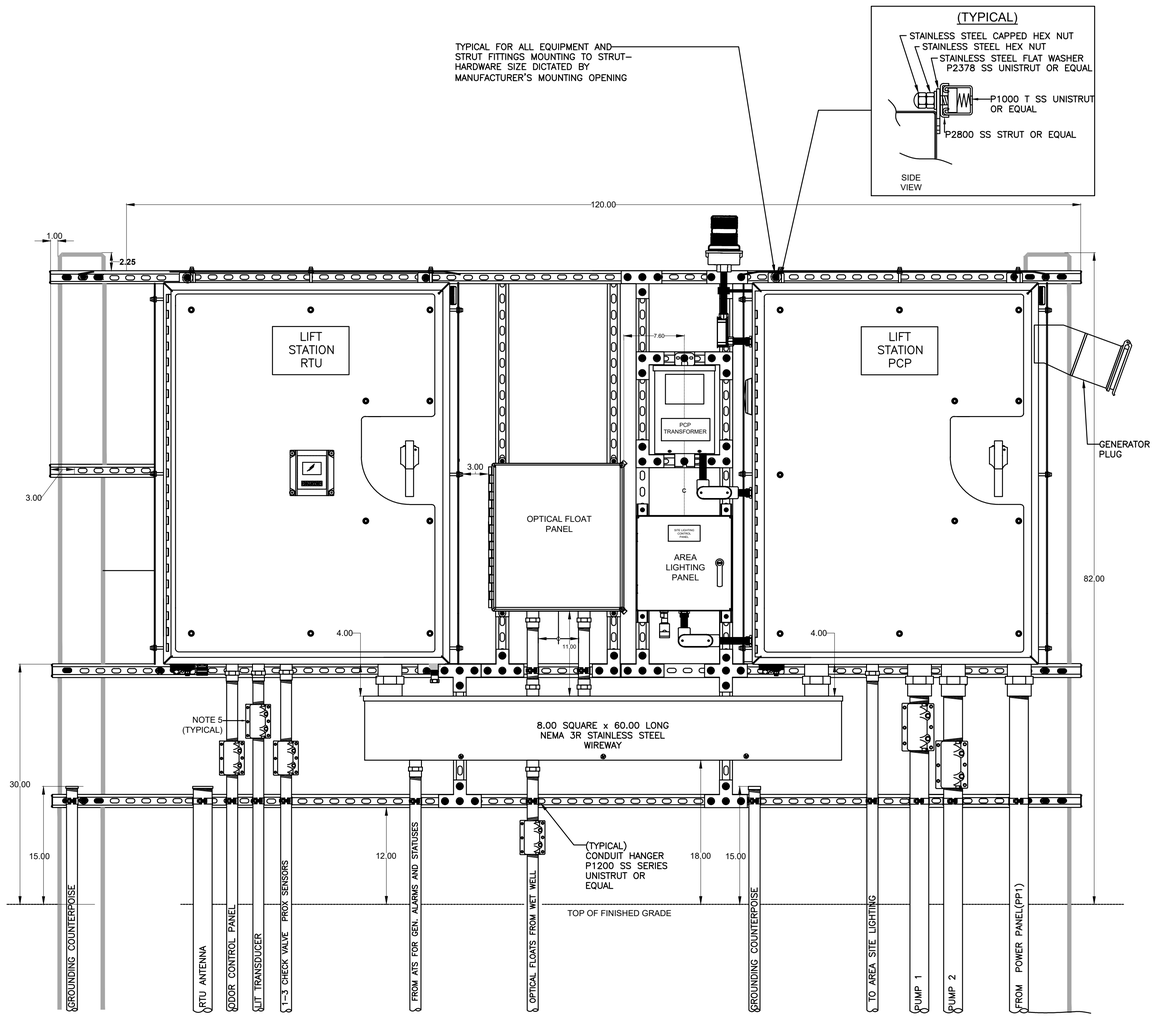
EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

PLOT DATE:
FILE NAME:



REAR ELEVATION RACK NO. 1



FRONT ELEVATION RACK NO. 2
(FACING WETWELL)

L.S. NO. 073 EQUIPMENT ELEVATION

SCALE: N.T.S.

PROPOSED ELEVATION SHOWN FOR CONTRACTOR USE. REFER TO CITY OF ORLANDO LIFT STATION STANDARDS AND SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS

NOTES:

1. 6.00 INCH SQUARE REINFORCED CONCRETE POST WITH 4500 PSI MINIMUM CONCRETE AND (4) # 4 REBARS SPACED 4 INCHES SQUARE IN CENTER OF POST. ALL EDGES SHALL HAVE .50 INCH WIDE CHAMFER.
2. EQUIPMENT UTILIZED SHALL CONFORM BY SPECIFICATIONS SPECIFIED IN DIVISIONS 13 AND 16. NO SUBSTITUTION WITHOUT OWNER'S WRITTEN APPROVAL.
3. DIMENSIONS IN INCHES.
4. ALL CONDUIT PENETRATIONS INTO ALL ENCLOSURES SHALL BE FITTED WITH A THREADED HUB CONNECTOR, SSTG SERIES. COOPER CROUSE HINDS, OR EQUAL.
5. CONDUIT SEAL OFF FITTINGS SHALL BE CROUSE HINDS TYPE EYSR OR EQUAL.

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745–5604
FAX: (407) 745–5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT: CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT: LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

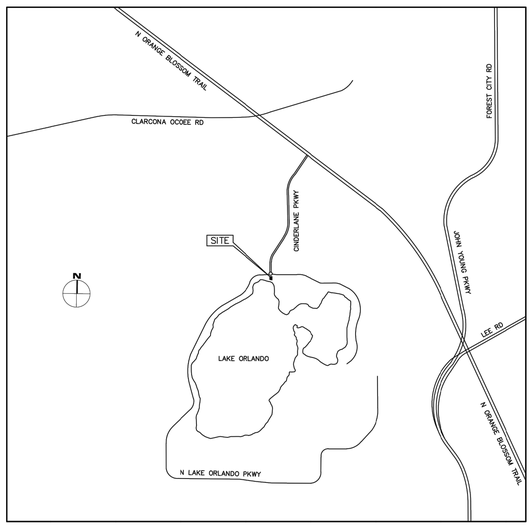
SHEET TITLE: LS NO. 073 EQUIPMENT RACK ELEVATIONS

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.34
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-303
REV.	△

PLOT DATE:
FILE NAME:

VICINITY MAP: NOT TO SCALE

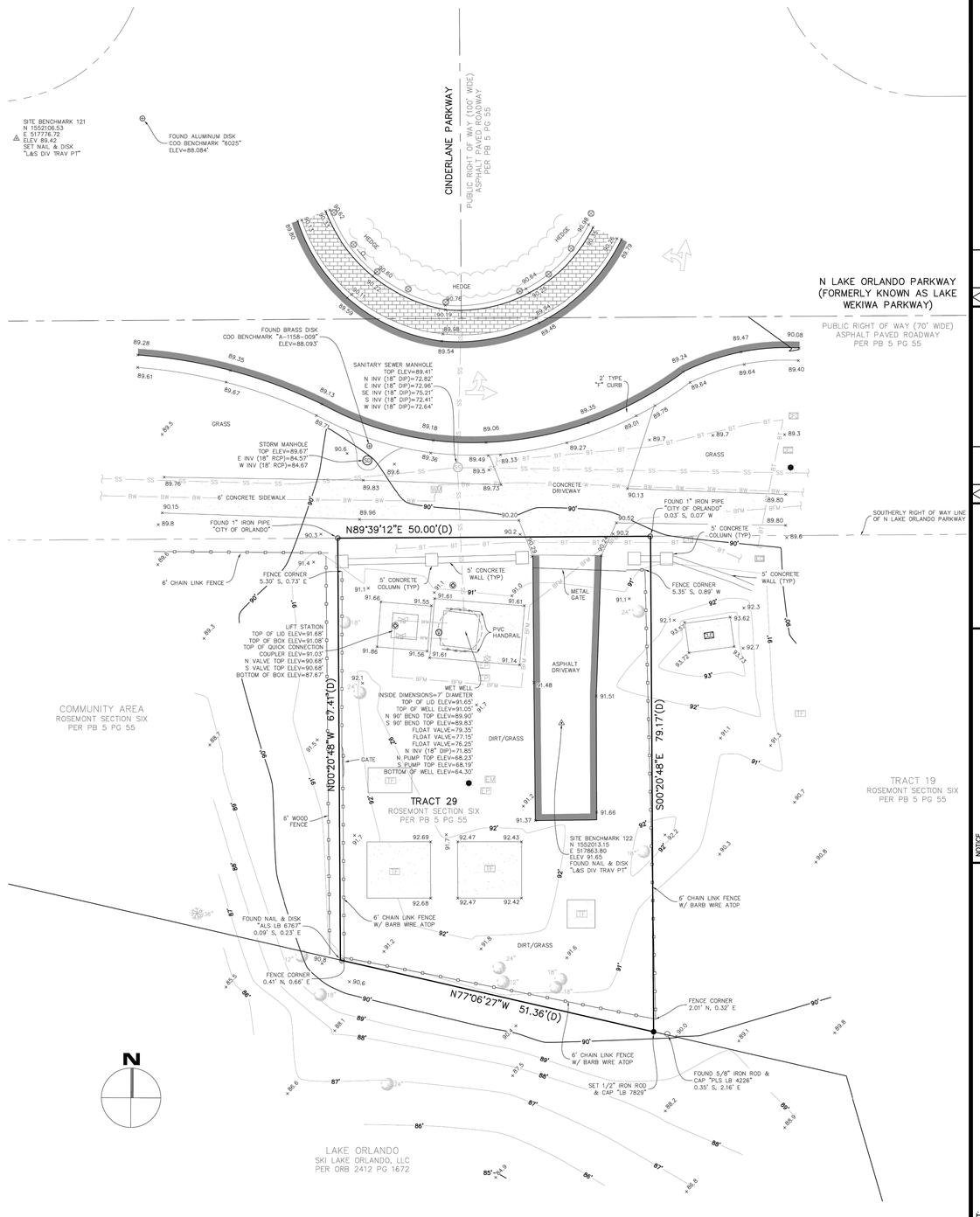


SYMBOL AND ABBREVIATION LEGEND:

- CONCRETE LIGHT POLE
- METAL LIGHT POLE
- ELECTRICAL PANEL
- TRANSFORMER
- ELECTRICAL VAULT
- ELECTRIC CABINET
- ELECTRIC METER
- FIBER OPTIC VAULT
- FORCE MAIN VALVE
- FORCE MAIN AIR RELEASE VALVE
- SINGLE STAND SIGN
- WELL
- LIFT STATION VENT
- SANITARY SEWER MANHOLE
- CATCH BASIN
- STORM DRAINAGE MANHOLE
- FOUND BRASS OR ALUMINUM DISK
- FOUND CONCRETE MONUMENT
- FOUND IRON ROD
- FOUND NAIL & DISK
- SET IRON ROD
- SET NAIL & DISK
- SET TRAVERSE POINT OR BENCHMARK
- TELECOMMUNICATION RISER
- BACKFLOW PREVENTER
- WATER METER
- WATER VALVE
- UNKNOWN VAULT
- BOLLARD
- CLEANOUT
- TREE – OAK
- TREE – CYPRESS
- (D) DESCRIBED MEASUREMENT

ARV	AIR RELEASE VALVE
COO	CITY OF ORLANDO
DIP	DUCTILE IRON PIPE
E	EAST/EASTING
ELEV	ELEVATION
LB	LICENSED BUSINESS
N	NORTH/NORTHING
ORB	OFFICIAL RECORDS BOOK
PB	PLAT BOOK
PG(S)	PAGE(S)
PLS	PROFESSIONAL LAND SURVEYOR
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
TYP	TYPICAL
S	SOUTH
25 / +24.1	CONTOUR / SPOT ELEVATION
W	WEST

- CENTERLINE
- CONTINUOUS
- DASHED LINE
- FENCE LINE
- EASEMENT
- DRAINAGE PIPE
- BUILDING LINE
- EDGE OF PAVEMENT
- BUR — BURIED ELECTRICAL
- BFM — BURIED FORCE MAIN
- SS — BURIED SANITARY SEWER
- BT — BURIED TELECOMMUNICATION
- BW — BURIED WATER
- CONCRETE
- BRICK PAVERS



LEGAL DESCRIPTION:

TRACT 29, ROSEMONT SECTION SIX, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 5, PAGES 55–56, IN THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.

ADDRESS:

5110 N LAKE ORLANDO PARKWAY
ORLANDO, FL 32808

CERTIFICATIONS:

TO: CITY OF ORLANDO

SURVEY NOTES:

1. THIS SURVEY REPRESENTS A BOUNDARY AND TOPOGRAPHIC SURVEY AS DESCRIBED BY STANDARDS OF PRACTICE FOR SURVEYING AND MAPPING, CHAPTER 5J–17, FLORIDA ADMINISTRATIVE CODES. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. THIS SURVEY IS LIMITED TO: (1) THE DOCUMENTATION OF THE PERIMETER OF THE PARCELS OF LAND SHOWN HEREON BY MONUMENTING THE BOUNDARY LINES FOR THE PURPOSE OF DESCRIBING SAID PARCELS. (2) THE LOCATION OF SURFACE IMPROVEMENTS. (3) SPOT ELEVATIONS AND CONTOURS. (4) STORM DRAINAGE AND SANITARY SEWER AS–BUILT. (5) SUBSURFACE UTILITIES ARE DESGNATED BY L & S DIVERSIFIED.
3. THE SURVEYED PROPERTY SHOWN HEREON CONTAINS A TOTAL AREA OF 0.084 ACRES (3,664 SQUARE FEET) MORE OR LESS.
4. BEARINGS SHOWN HEREON ARE BASED ON THE SOUTHERLY RIGHT OF WAY LINE OF N LAKE ORLANDO PARKWAY AS BEING NORTH 89°39'12" EAST, AS RECORDED IN PLAT BOOK 5, PAGES 55–56.
5. THE HORIZONTAL SURVEY DATA SHOWN IS BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83), WITH A 1990 ADJUSTMENT, STATE PLANE COORDINATES, FLORIDA EAST ZONE, AND IS RELATIVE TO FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION HAVING LOCAL GROUND COORDINATE SYSTEM WITH CERTIFIED RECORD NUMBER 70527, BEING A 6"X6" CONCRETE MONUMENT (NO ID) AND HAVING THE COORDINATES OF N:1552446.4459, E:513908.5080.
6. THE VERTICAL DATUM AND ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88), CITY OF ORLANDO BENCHMARK #6025 BEING A 3" ALUMINUM DISC STAMPED "6025" AND HAVING AN ELEVATION OF 88.08 FEET.
7. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN FLOOD ZONE AE, AN AREA WHERE BASE FLOOD ELEVATION HAVE BEEN DETERMINED (86.9') & ZONE X, AN AREA DETERMINED TO BE OUTSIDE THE 2.0% ANNUAL CHANCE FLOODPLAIN, PER PANEL NUMBER 235 OF 750, MAP NUMBER 12095C0235F WITH AN EFFECTIVE DATE OF SEPTEMBER 25, 2009.
8. THE SYMBOLS REFLECTED IN THE LEGEND AND ON THIS SURVEY MAY HAVE BEEN ENLARGED FOR CLARITY. THE SYMBOLS HAVE BEEN PLOTTED AT THE CENTER OF THE FIELD LOCATION AND MAY NOT REPRESENT THE ACTUAL SHAPE OR SIZE OF THE FEATURE.
9. THE INFORMATION DEPICTED ON THIS SURVEY REPRESENTS THE RESULTS OF A FIELD SURVEY ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS A REPRESENTATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.
10. THE SURVEYOR DID NOT INSPECT THE PROPERTY SHOWN HEREON FOR ENVIRONMENTAL HAZARDS.
11. FENCES AND WALL DIMENSIONS ARE APPROXIMATE. THE SURVEYOR DID NOT DETERMINE OWNERSHIP OF WALLS AND FENCES.
12. THIS FIRM IDENTIFIED VARIOUS TYPES OF TREES LOCATED ON THIS SITE BASED ON COMMON KNOWLEDGE OF TREE SPECIES. A QUALIFIED LANDSCAPE ARCHITECT SHOULD BE EMPLOYED FOR POSITIVE IDENTIFICATION OF TREE SPECIES. TREE DIAMETERS ARE APPROXIMATE AND WERE MEASURED AT BREAST HEIGHT. ONLY TREES 4 CALIPER INCHES OR LARGER WERE LOCATED AND SHOWN ON THE SURVEY. HEDGES AND GROUND COVER WERE NOT LOCATED AND ARE NOT SHOWN. EXOTIC TREES SUCH AS MELALEUCA, BRAZILIAN PEPPER AND AUSTRALIAN PINE WERE NOT LOCATED OR SHOWN HEREON.
13. ORNAMENTAL PLANTS, HEDGES AND SPRINKLER HEADS WERE NOT LOCATED.
14. THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. FOUNDATIONS AND ENCROACHMENTS WERE NOT LOCATED AND ARE NOT SHOWN HEREON. THIS SITE COULD HAVE UNDERGROUND INSTALLATIONS THAT ARE NOT SHOWN HEREON. BEFORE DESIGN, CONSTRUCTION EXCAVATIONS, CONTACT 811.COM (811) AND THE APPROPRIATE UTILITY COMPANIES FOR FIELD VERIFICATION OF UTILITIES.
15. A SUNSHINE 811 "DESIGN" TICKET (#320802937) WAS OBTAINED TO DETERMINE THE UTILITY PROVIDERS WITHIN THE PROJECT LIMITS. THE PROJECT WAS SCANNED FOR UNDERGROUND UTILITIES USING ELECTRONIC DETECTION DEVICES AND GROUND PENETRATING RADAR (GPR). ANY UTILITIES FOUND WITHIN THE PROJECT LIMITS WERE SURFACE PAINTED AND FLAGGED WITH THE APPROPRIATE COLOR AS RECOGNIZED BY THE NATIONAL UTILITY LOCATING CONTRACTORS ASSOCIATION (NULCA). ANY UTILITIES MARKED BY ANOTHER FIRM WILL BE VERIFIED BY AN L&S DIVERSIFIED UTILITY LOCATOR.
16. IT SHOULD BE UNDERSTOOD BY THE CLIENT THAT SOME UNDERGROUND UTILITIES MAY NOT BE MADE OF A CONDUCTIVE MATERIAL OR MAY NOT RETURN A GPR ECHO AND THEREFORE CANNOT BE DESIGNATED WITH ELECTRONIC PROSPECTING EQUIPMENT OR GPR.
17. L&S DIVERSIFIED WAS UNABLE TO ACCURATELY DESIGNATE THE EXISTING FORCE MAIN WITHIN 5 FEET OF THE WET WELL AND VALVE VAULT. THE EXISTING FORCE MAIN SHOWN WITHIN 5 FEET OF THE WET WELL AND VALVE VAULT IS SHOWN TO ASCE 38–02 QUALITY LEVEL D AND WAS DETERMINED BY A COMBINATION OF EXISTING FIELD CONDITIONS, RECORD DRAWINGS AND SUBSURFACE UTILITY ENGINEERING BEST PRACTICES.
18. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE COMMITMENT. THERE MAY BE ADDITIONAL RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.
19. THE INFORMATION CONTAINED IN THIS DOCUMENT WAS PREPARED BY L & S DIVERSIFIED, LLC (L&S). L&S HAS TAKEN ALL REASONABLE STEPS TO ENSURE THE ACCURACY OF THIS DOCUMENT. WE CANNOT GUARANTEE THAT ALTERATIONS AND/OR MODIFICATIONS WILL NOT BE MADE BY OTHERS AFTER IT LEAVES OUR POSSESSION. THIS DOCUMENT MUST BE COMPARED TO THE ORIGINAL HARD COPY (WHICH BEARS THE RAISED SURVEYORS CERTIFICATION SEAL IF APPLICABLE) TO ENSURE THE ACCURACY OF THE INFORMATION CONTAINED HEREON AND TO FURTHER ENSURE THAT ALTERATIONS AND/OR MODIFICATIONS HAVE NOT BEEN MADE. L&S MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OF THE INFORMATION CONTAINED IN THIS OR ANY DOCUMENT TRANSMITTED OR REVIEWED BY COMPUTER OR OTHER ELECTRONIC MEANS. CONTACT L&S DIRECTLY FOR VERIFICATION OF ACCURACY.
20. THIS SURVEY MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1/10 OR SMALLER.
21. THIS SURVEY CANNOT BE RELIED UPON BY PERSONS OR ENTITIES OTHER THAN THE PERSONS OR ENTITIES CERTIFIED TO HEREON.
22. ADDITIONS OR DELETIONS TO THIS SURVEY MAP BY OTHER THAN THE SIGNING PARTY OR PARTIES ARE PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
23. THE DESCRIPTION OF THE SUBJECT PROPERTY FORMS A MATHEMATICALLY CLOSED FIGURE WITH NO GORES, GAPS, OVERLAPS OR HIATUS.

CITY OF ORLANDO LIFT STATION #83

ATKINS

BOUNDARY &
TOPOGRAPHIC SURVEY

LOCATED IN

SECTION 5, TOWNSHIP 22, RANGE 29
CITY OF ORLANDO
ORANGE COUNTY, FLORIDA

GRAPHIC SCALE

10' 0 5' 10' 20'

1 INCH = 10 FEET

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY REPRESENTED HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF. IT HAS BEEN PREPARED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN CHAPTER 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE PURSUANT TO TO CHAPTERS 177 AND 472 OF THE FLORIDA STATUTES.

Digitally signed by Sherry Manor
Date: 2020.05.05 13:14:50 -04'00'

SHERRY LEE MANOR, PSM - LS# 6961

THIS SURVEY MAP AND/OR REPORT IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF THE ABOVE.

L & S Diversified
Professional Surveyors and Mappers
405 LAKE HOWELL ROAD | SUITE 1001 | MAITLAND, FL | 32751
PHONE 407.681.5836 | FAX 407.681.6541
WWW.LSSURVEYOR.COM | INFO@LSSURVEYOR.COM

PROFESSIONAL SURVEYOR & MAPPER BUSINESS LICENSE | LB#7829

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129
EMERGENCY GENERATORS

SHEET TITLE: BOUNDARY AND TOPOGRAPHICAL SURVEY
LIFT STATION No. 083

ATKINS

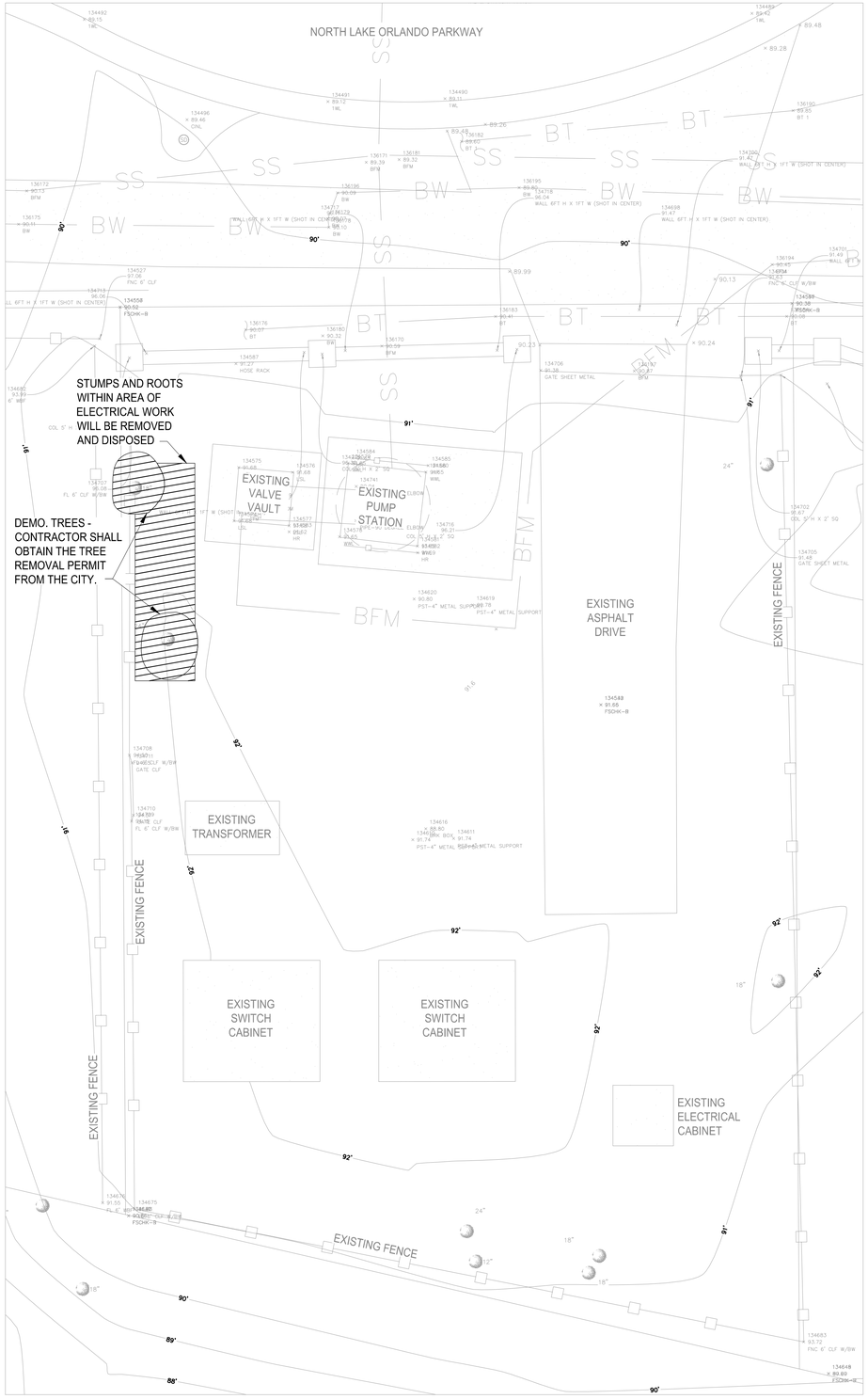
CORPORATE OFFICE
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24

LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

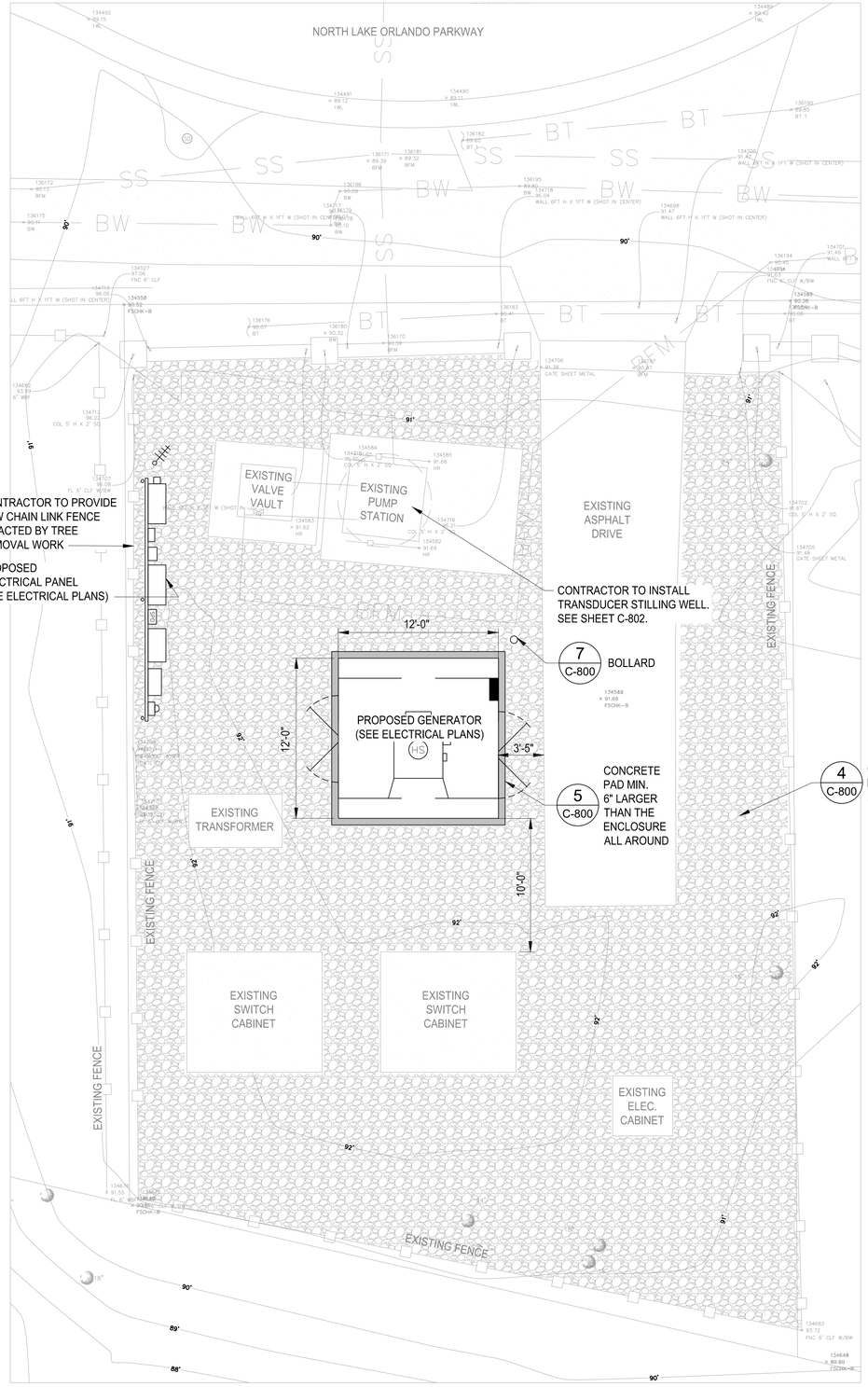
JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-400
REV.	△

PLOT DATE: Nov 12, 2020 - 4:28pm
FILE NAME: I:\atkins.com\Projects\USO\Atlanta\DATA\ECO\ECIWO\Projects\City of Orlando\Lift Station Emer Generators\15_Permit\Design\01 - Sheet Files\C-100 through C-700.dwg

NOTES:
1. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING BEFORE COMMENCING CONSTRUCTION WORK.
2. COORDINATE AND SCHEDULE ACCESS TO THE SITE BEFORE COMMENCING CONSTRUCTION WORK.



LIFT STATION No. 083 SITE DEMOLITION PLAN



LIFT STATION No. 083 PROPOSED SITE PLAN

SCALE: 1" = 5'

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

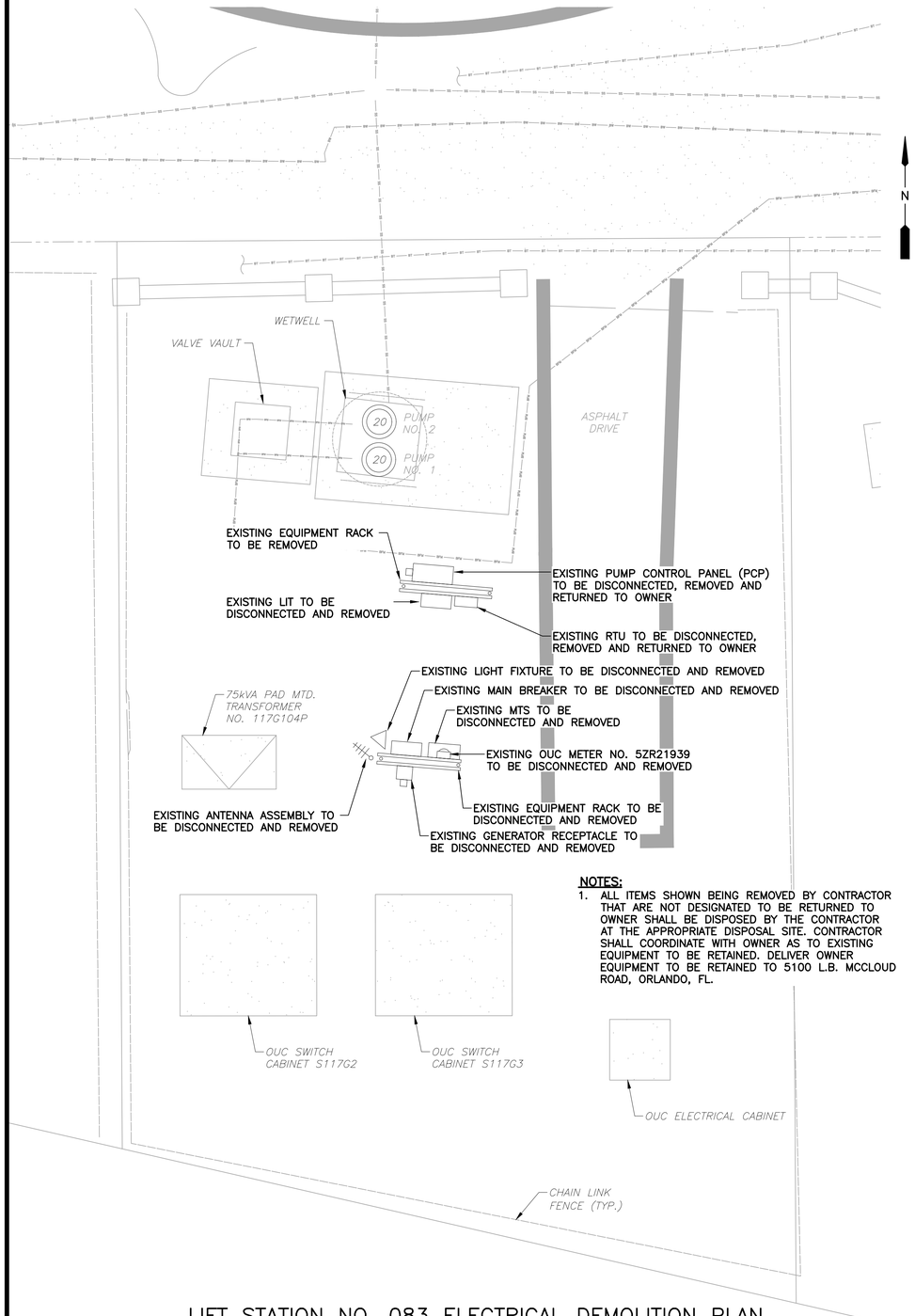
SHEET TITLE: LIFT STATION No. 083 SITE DEMOLITION PLAN AND PROPOSED SITE PLAN

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPE CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-401
REV.	△

PLOT DATE: Jan 25, 2021 - 7:57am
FILE NAME: U:\WO\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-401.dwg

LIFT STATION #083
4210 N. LAKE ORLANDO PKWY



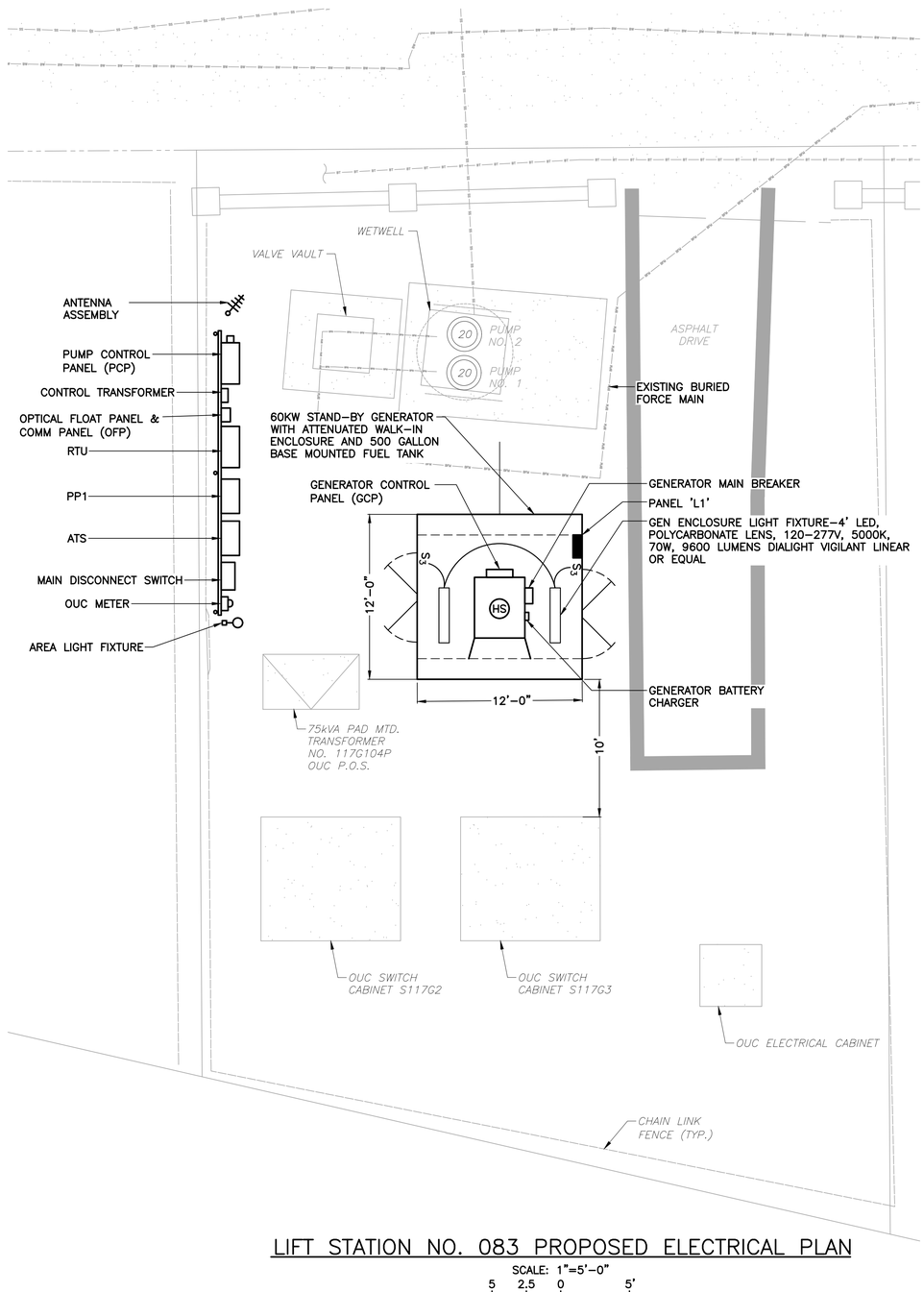
NOTES:

1. ALL ITEMS SHOWN BEING REMOVED BY CONTRACTOR THAT ARE NOT DESIGNATED TO BE RETURNED TO OWNER SHALL BE DISPOSED BY THE CONTRACTOR AT THE APPROPRIATE DISPOSAL SITE. CONTRACTOR SHALL COORDINATE WITH OWNER AS TO EXISTING EQUIPMENT TO BE RETAINED. DELIVER OWNER EQUIPMENT TO BE RETAINED TO 5100 L.B. MCCLOUD ROAD, ORLANDO, FL.

LIFT STATION NO. 083 ELECTRICAL DEMOLITION PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'



LIFT STATION NO. 083 PROPOSED ELECTRICAL PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'

100% SUBMITTAL

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

REV.	DATE	ISSUED FOR

REV.	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT:
CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE
LIFT STATION NO. 083
ELECTRICAL DEMOLITION PLAN
& PROPOSED ELECTRICAL PLAN

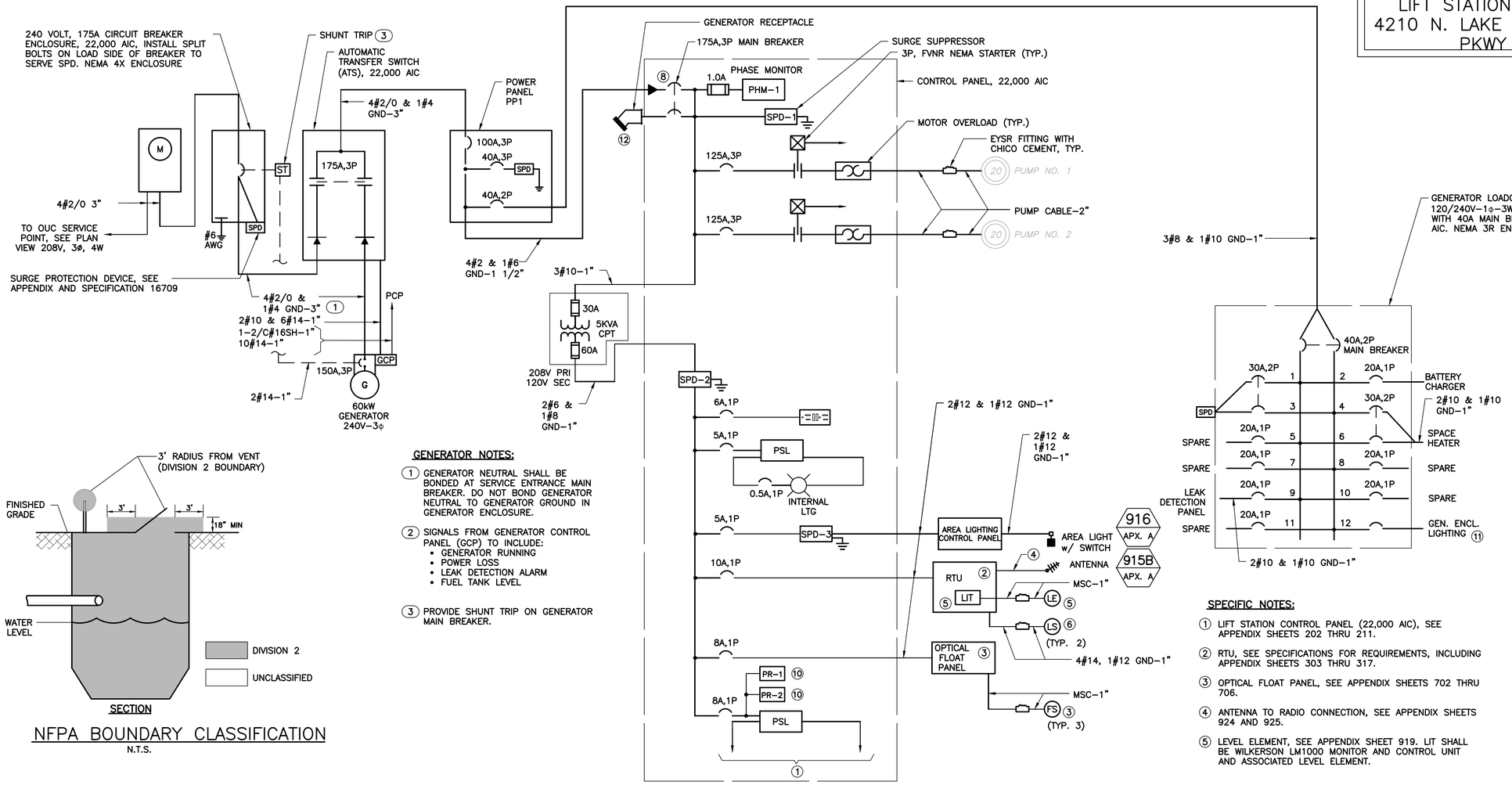
ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24

LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-401
REV.	△

PLOT DATE:
FILE NAME:

LIFT STATION #083
4210 N. LAKE ORLANDO PKWY



NFPA BOUNDARY CLASSIFICATION

N.T.S.

NFPA NOTES:

1. THE AREA INSIDE THE WET WELL IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
2. THE AREA WITHIN 3 FEET FROM THIS HATCH AND 1.5 FEET ABOVE THE WET WELL SLAB IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
3. THE AREA WITHIN A 3 FOOT RADIUS FROM THE VENT OPENING IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
4. PROVIDE U.L. LISTED MECHANICAL INTERLOCK SO THAT ONLY ONE CIRCUIT BREAKER CAN BE CLOSED AT A TIME.
5. ALL CONDUITS SHALL ENTER THE RTU AND CONTROL PANEL FROM THE BOTTOM UNLESS OTHERWISE SHOWN ON DRAWINGS.
6. PROVIDE WIRING METHODS AND MATERIALS SUITABLE FOR A CLASS 1, DIVISION 2 AREA WITHIN ALL HAZARDOUS AREAS. USE CROUSE-HINDS MODEL EYSR RETROFIT SEALING FITTING.
7. FIELD PANEL LOCATIONS ARE TO BE FIELD VERIFIED AND ARE SHOWN FOR CLARITY ONLY.
8. MAIN CIRCUIT BREAKERS AND MOTOR CIRCUIT BREAKERS TO BE SIZED ACCORDING TO MOTOR H.P. AND SYSTEM LOAD.
9. CONDUIT EXTENDING FROM THE WETWELL SHALL BE PVC SCHEDULE 80 AND SHALL BE ENCASED IN A CONCRETE ENVELOPE NO LESS THAN 2 INCHES THICK AND SHALL HAVE A COVER OF NO LESS THAN 24 INCHES. THREADED RIGID METAL CONDUIT SHALL BE USED FOR THE LAST 24 INCHES OF THE UNDERGROUND RUN TO EMERGENCE. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED TO PROVIDE ELECTRICAL CONTINUITY. INSTALLATION SHALL BE IN ACCORDANCE WITH NEC 70, ARTICLE 501, PART II, 501.10.

GENERATOR NOTES:

(1) GENERATOR NEUTRAL SHALL BE BONDED AT SERVICE ENTRANCE MAIN BREAKER. DO NOT BOND GENERATOR NEUTRAL TO GENERATOR GROUND IN GENERATOR ENCLOSURE.

(2) SIGNALS FROM GENERATOR CONTROL PANEL (GCP) TO INCLUDE:
- GENERATOR RUNNING
- POWER LOSS
- LEAK DETECTION ALARM
- FUEL TANK LEVEL

(3) PROVIDE SHUNT TRIP ON GENERATOR MAIN BREAKER.

LS NO. 083 SINGLE LINE DIAGRAM

SCALE: N.T.S.

LS NO. 083 SERVICE LOAD TABULATION

SERVICE VOLTAGE: 208V-3ø-3W

DESCRIPTION	LOAD		AMPACITY
PUMP	2 @ 20 HP	=	124.0 AMPS
PSL-1	–	=	1.00 AMPS
GFI RECEPTACLE	–	=	2.00 AMPS
RTU	–	=	3.00 AMPS
LEVEL TRANSDUCER	–	=	2.00 AMPS
AREA LIGHTING	@ 125%	=	2.00 AMPS
GEN PANEL	–	=	10.00 AMPS
	CONNECTED LOAD	=	144.0 AMPS

(1) MINIMUM SERVICE ENTRANCE = 144.0 AMPS + (0.25)(62) = (159.5) AMPS

NOTES:

(1) SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 430, TABLE 430.250 OF THE NATIONAL ELECTRICAL CODE.

SPECIFIC NOTES:

(1) LIFT STATION CONTROL PANEL (22,000 AIC), SEE APPENDIX SHEETS 202 THRU 211.

(2) RTU, SEE SPECIFICATIONS FOR REQUIREMENTS, INCLUDING APPENDIX SHEETS 303 THRU 317.

(3) OPTICAL FLOAT PANEL, SEE APPENDIX SHEETS 702 THRU 706.

(4) ANTENNA TO RADIO CONNECTION, SEE APPENDIX SHEETS 924 AND 925.

(5) LEVEL ELEMENT, SEE APPENDIX SHEET 919. LIT SHALL BE WILKERSON LM1000 MONITOR AND CONTROL UNIT AND ASSOCIATED LEVEL ELEMENT.

(6) CHECK VALVE POSITION SWITCH, SEE APPENDIX SHEET 923, DETAIL 2.

(7) SEE APPENDIX SHEETS 902 THRU 907 FOR GROUNDING DETAILS.

(8) AMPACITY SHOWN REPRESENTS TRIP SETTINGS, SEE APPENDIX FOR ADDITIONAL REQUIREMENTS.

(9) SEE APPENDIX SHEET 802 THRU 805 FOR AREA LIGHTING CONTROL PANEL.

(10) PUMP PROTECTION RELAY. CONTRACTOR TO CONFIRM PUMP MANUFACTURER W/OWNER IN ORDER TO PROVIDE CORRECT MOTOR OVERLOAD RELAY.

(11) 2#12 & 1#12 GND-1".

(12) GENERATOR RECEPTACLE-SEE SPECIFICATION 16050 PARAGRAPH 2.21 THROUGH 2.24.

NOTES:

1. REFERENCES TO APPENDIX OR DETAIL CALLOUTS REFER TO CITY OF ORLANDO PUBLIC WORKS DEPARTMENT LIFT STATION STANDARDS.

ISSUED FOR | DATE | REV.

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT: CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT: LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE: LIFT STATION NO. 083 SINGLE LINE DIAGRAM

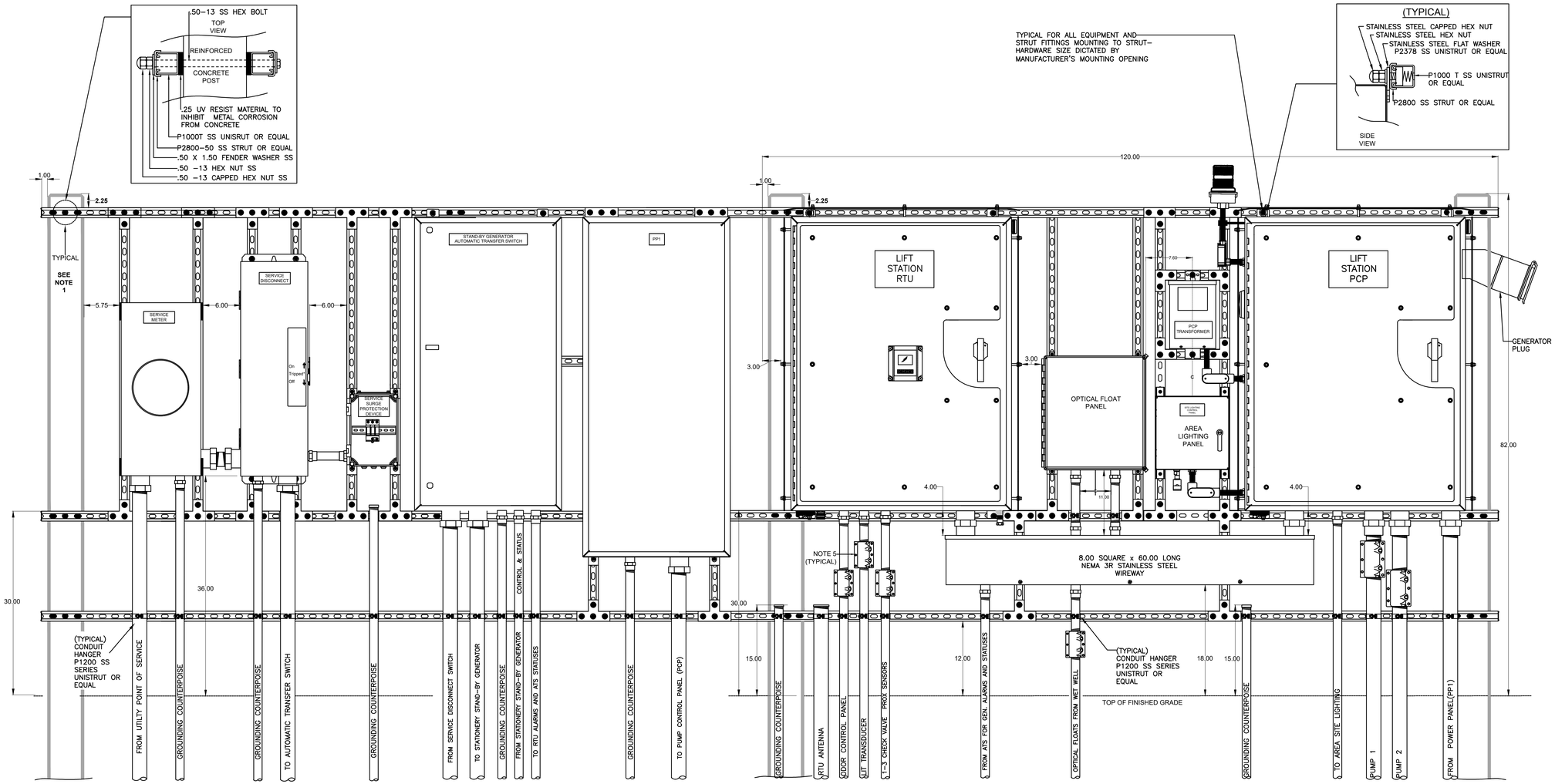
ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL: 407.647.7275
FAX: 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-402
REV.	△

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

PLOT DATE:
FILE NAME:



FRONT ELEVATION

NOTES:

1. 6.00 INCH SQUARE REINFORCED CONCRETE POST WITH 4500 PSI MINIMUM CONCRETE AND (4) # 4 REBARS SPACED 4 INCHES SQUARE IN CENTER OF POST. ALL EDGES SHALL HAVE .50 INCH WIDE CHAMFER.
2. EQUIPMENT UTILIZED SHALL CONFORM BY SPECIFICATIONS SPECIFIED IN DIVISIONS 13 AND 16. NO SUBSTITUTION WITHOUT OWNER'S WRITTEN APPROVAL.
3. DIMENSIONS IN INCHES.
4. ALL CONDUIT PENETRATIONS INTO ALL ENCLOSURES SHALL BE FITTED WITH A THREADED HUB CONNECTOR, SSTG SERIES. COOPER CROUSE HINDS, OR EQUAL.
5. CONDUIT SEAL OFF FITTINGS SHALL CROUSE HINDS TYPE EYSR OR EQUAL.

L.S. NO. 083 EQUIPMENT ELEVATION

SCALE: N.T.S.

PROPOSED ELEVATION SHOWN FOR CONTRACTOR USE. REFER TO CITY OF ORLANDO LIFT STATION STANDARDS AND SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS

100% SUBMITTAL

Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745–5604
FAX: (407) 745–5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

REV	DATE	ISSUED FOR

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WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT: CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT: LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE: LS NO. 083 EQUIPMENT RACK ELEVATIONS

ATKINS

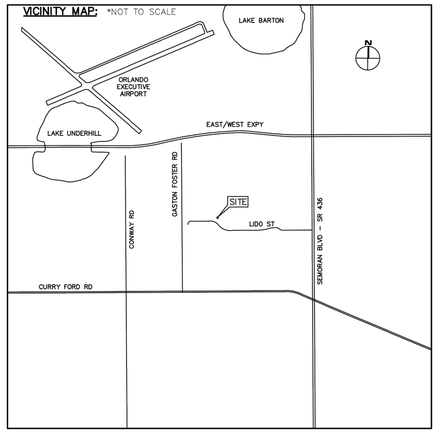
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FISPR CERTIFICATE OF AUTHORIZATION NO.24

LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
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APPROVED:	W.N.
SHEET NO.	E-403
REV.	△

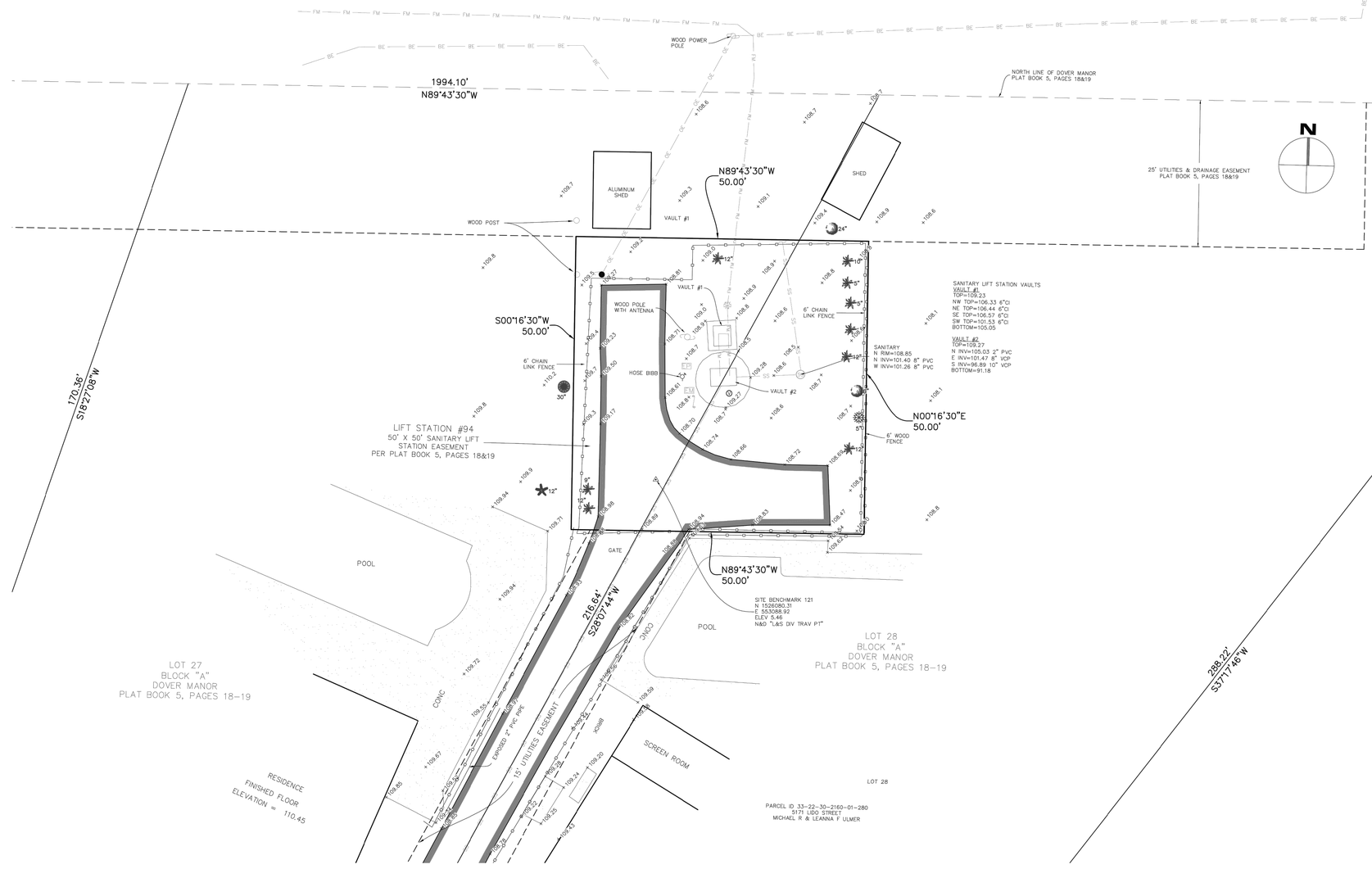
PLOT DATE:
FILE NAME:

VICINITY MAP: *NOT TO SCALE



SURVEY NOTES:

1. THIS SURVEY REPRESENTS A BOUNDARY AND TOPOGRAPHIC SURVEY AS DESCRIBED BY STANDARDS OF PRACTICE FOR SURVEYING AND MAPPING, CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODES. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. THIS SURVEY IS LIMITED TO: (1) THE LOCATION OF SUBSURFACE UTILITIES AS DESIGNATED BY L & S DIVERSIFIED.
3. ABOVE GROUND TOPOGRAPHIC FEATURES AND PARCEL LINES SHOWN HEREON WERE PERFORMED BY SOUTHEASTERN SURVEYING AND MAPPING COMPANY, AND WAS PROVIDED TO L&S DIVERSIFIED BY CLIENT.
4. THE SURVEYED PROPERTY SHOWN HEREON CONTAINS A TOTAL AREA OF 0.057 ACRES (2,500 SQUARE FEET) MORE OR LESS.
5. BEARINGS SHOWN HEREON ARE BASED ON THE NORTH LINE OF THE SW 1/4 OF SECTION 33, TOWNSHIP 22 SOUTH, RANGE 30 EAST AS BEING NORTH 89°43'30" EAST, AS RECORDED IN PLAT BOOK 5, PAGES 18 & 19.
6. THE HORIZONTAL SURVEY DATA SHOWN IS BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83), WITH A 1990 ADJUSTMENT, STATE PLANE COORDINATES, FLORIDA EAST ZONE, AND IS RELATIVE TO FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION HAVING LOCAL GROUND COORDINATE SYSTEM WITH CERTIFIED RECORD NUMBER 71730, BEING AN AXEL IN WELL BOX, HAVING THE COORDINATES OF N:1528791.2294, E:553799.2896.
7. THE VERTICAL DATUM AND ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88), CITY OF ORLANDO BENCHMARK "BM LAKE C", BEING A 2" ALUMINUM DISC STAMPED "LAKE C" AND HAVING AN ELEVATION OF 108.723 FEET.
8. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN FLOOD ZONE AE, AN AREA WHERE BASE FLOOD ELEVATION HAS BEEN DETERMINED (110'), PER PANEL NUMBER 265 OF 750, MAP NUMBER 12095C0265F WITH AN EFFECTIVE DATE OF SEPTEMBER 25, 2009.
9. THE SYMBOLS REFLECTED IN THE LEGEND AND ON THIS SURVEY MAY HAVE BEEN ENLARGED FOR CLARITY. THE SYMBOLS HAVE BEEN PLOTTED AT THE CENTER OF THE FIELD LOCATION AND MAY NOT REPRESENT THE ACTUAL SHAPE OR SIZE OF THE FEATURE.
10. THE INFORMATION DEPICTED ON THIS SURVEY REPRESENTS THE RESULTS OF A FIELD SURVEY ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS A REPRESENTATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.
11. THE SURVEYOR DID NOT INSPECT THE PROPERTY SHOWN HEREON FOR ENVIRONMENTAL HAZARDS.
12. FENCES AND WALL DIMENSIONS ARE APPROXIMATE. THE SURVEYOR DID NOT DETERMINE OWNERSHIP OF WALLS AND FENCES.
13. THIS FIRM IDENTIFIED VARIOUS TYPES OF TREES LOCATED ON THIS SITE BASED ON COMMON KNOWLEDGE OF TREE SPECIES. A QUALIFIED LANDSCAPE ARCHITECT SHOULD BE EMPLOYED FOR POSITIVE IDENTIFICATION OF TREE SPECIES. TREE DIAMETERS ARE APPROXIMATE AND WERE MEASURED AT BREAST HEIGHT. ONLY TREES 4 CALIPER INCHES OR LARGER WERE LOCATED AND SHOWN ON THE SURVEY. HEDGES AND GROUND COVER WERE NOT LOCATED AND ARE NOT SHOWN. EXOTIC TREES SUCH AS MELALEUCA, BRAZILIAN PEPPER AND AUSTRALIAN PINE WERE NOT LOCATED OR SHOWN HEREON.
14. UNLESS SHOWN, ORNAMENTAL PLANTS, HEDGES AND SPRINKLER HEADS WERE NOT LOCATED.
15. THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. FOUNDATIONS AND ENCROACHMENTS WERE NOT LOCATED AND ARE NOT SHOWN HEREON. THIS SITE COULD HAVE UNDERGROUND INSTALLATIONS THAT ARE NOT SHOWN HEREON. BEFORE DESIGN, CONSTRUCTION EXCAVATIONS, CONTACT 811.COM (811) AND THE APPROPRIATE UTILITY COMPANIES FOR FIELD VERIFICATION OF UTILITIES.
16. A SUNSHINE 811 "DESIGN" TICKET 320804813 WAS OBTAINED TO DETERMINE THE UTILITY PROVIDERS WITHIN THE PROJECT LIMITS. THE PROJECT WAS SCANNED FOR UNDERGROUND UTILITIES USING ELECTRONIC DETECTION DEVICES AND GROUND PENETRATING RADAR (GPR). ANY UTILITIES FOUND WITHIN THE PROJECT LIMITS WERE SURFACE PAINTED AND FLAGGED WITH THE APPROPRIATE COLOR AS RECOGNIZED BY THE NATIONAL UTILITY LOCATING CONTRACTORS ASSOCIATION (NULCA). ANY UTILITIES MARKED BY ANOTHER FIRM WILL BE VERIFIED BY AN L&S DIVERSIFIED UTILITY LOCATOR.
17. IT SHOULD BE UNDERSTOOD BY THE CLIENT THAT SOME UNDERGROUND UTILITIES MAY NOT BE MADE OF A CONDUCTIVE MATERIAL OR MAY NOT RETURN A GPR ECHO AND THEREFORE CANNOT BE DESIGNATED WITH ELECTRONIC PROSPECTING EQUIPMENT OR GPR.
18. L & S DIVERSIFIED, LLC DID NOT SEARCH THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA FOR OWNERSHIP, RIGHTS-OF-WAY, EASEMENTS OR OTHER MATTERS AFFECTING THE PROPERTY BEING SURVEYED. THERE MAY BE ADDITIONAL RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.
19. THE INFORMATION CONTAINED IN THIS DOCUMENT WAS PREPARED BY L & S DIVERSIFIED, LLC (L&S). L&S HAS TAKEN ALL REASONABLE STEPS TO ENSURE THE ACCURACY OF THIS DOCUMENT. WE CANNOT GUARANTEE THAT ALTERATIONS AND/OR MODIFICATIONS WILL NOT BE MADE BY OTHERS AFTER IT LEAVES OUR POSSESSION. THIS DOCUMENT MUST BE COMPARED TO THE ORIGINAL HARD COPY (WHICH BEARS THE RAISED SURVEYORS CERTIFICATION SEAL IF APPLICABLE) TO ENSURE THE ACCURACY OF THE INFORMATION CONTAINED HEREON AND TO FURTHER ENSURE THAT ALTERATIONS AND/OR MODIFICATIONS HAVE NOT BEEN MADE. L&S MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OF THE INFORMATION CONTAINED IN THIS OR ANY DOCUMENT TRANSMITTED OR REVIEWED BY COMPUTER OR OTHER ELECTRONIC MEANS. CONTACT L&S DIRECTLY FOR VERIFICATION OF ACCURACY.
20. THIS SURVEY MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1/10 OR SMALLER.
21. THIS SURVEY CANNOT BE RELIED UPON BY PERSONS OR ENTITIES OTHER THAN THE PERSONS OR ENTITIES CERTIFIED TO HEREON.
22. ADDITIONS OR DELETIONS TO THIS SURVEY MAP BY OTHER THAN THE SIGNING PARTY OR PARTIES ARE PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
23. THE DESCRIPTION OF THE SUBJECT PROPERTY FORMS A MATHEMATICALLY CLOSED FIGURE WITH NO GORES, GAPS, OVERLAPS OR HIATUS.



CERTIFICATIONS:

TO: CITY OF ORLANDO

LEGAL DESCRIPTION:

SANITARY LIFT STATION EASEMENT, DOVER MANOR, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 5, PAGES 18 & 19, OF THE PUBLIC RECORD ORANGE COUNTY, FLORIDA.

SYMBOL AND ABBREVIATION LEGEND:

WOODEN POWER POLE	FOUND IRON ROD	DIA	DIAMETER	S	SOUTH
ELECTRICAL PANEL	FOUND NAIL & DISK	E	EAST/EASTING	25	CONTOUR
ELECTRIC CABINET	SET TRAVERSE POINT OR BENCHMARK	ELEV	ELEVATION	+24.1	SPOT ELEVATION
ELECTRICAL VAULT	CHANGE IN DIRECTION	INV	INVERT	W	WEST
ELECTRICAL METER	TELECOMMUNICATION RISER	L	ARC LENGTH	ss	SANITARY SEWER LINE
CLEANOUT	TREE OAK	LB	LICENSED BUSINESS	fm	FORCE MAIN
SINGLE STAND SIGN	TREE CAMPHER	be	BURIED ELECTRICAL		DASHED LINE
UNKNOWN VENT	TREE PALM	bt	BURIED TELECOMMUNICATION		FENCE LINE
SANITARY SEWER MANHOLE	TREE CHERRY	bw	BURIED WATER		DRAINAGE PIPE
SANITARY SEWER VALVE	BUSH VIBURNUM	N	NORTH/NORTHING		BUILDING LINE
FORCE MAIN AIR RELEASE VALVE	CHORD BEARING	PVC	POLYVINYL CHLORIDE PIPE		EDGE OF PAVEMENT
CONCRETE LIGHT POLE	DELTA	R	RADIUS		CONCRETE
	CHORD DISTANCE		BACKFLOW PREVENTER	WM	WATER METER

COO LS 94 LIDO STREET

ATKINS

BOUNDARY & TOPOGRAPHIC SURVEY
LIFT STATION NO. 94 (5169 LIDO ST. DOVER MANOR)

LOCATED IN

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 30 EAST
CITY OF ORLANDO
ORANGE COUNTY, FLORIDA

GRAPHIC SCALE

10' 0 5' 10' 20'

1 INCH = 10 FEET

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY REPRESENTED HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF. IT HAS BEEN PREPARED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN CHAPTER 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE PURSUANT TO TO CHAPTERS 177 AND 472 OF THE FLORIDA STATUES.

Digitally signed by Sherry Manor
Date: 2020.06.05 13:20:27 -04'00'

SHERRY LEE MANOR, PSM - LS# 6961

THIS SURVEY MAP AND/OR REPORT IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF THE MAPPER.

L & S Diversified
Professional Surveyors and Mappers
405 LAKE HOWELL ROAD | SUITE 1005 | MAITLAND, FL | 32751
PHONE 407.681.3836 | FAX 407.681.6542
WWW.LSSURVEYOR.COM | INFO@LSSURVEYOR.COM

PROFESSIONAL SURVEYOR & MAPPER BUSINESS LICENSE | LB#7829

REV.	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

SHEET TITLE: BOUNDARY AND TOPOGRAPHICAL SURVEY LIFT STATION No. 094

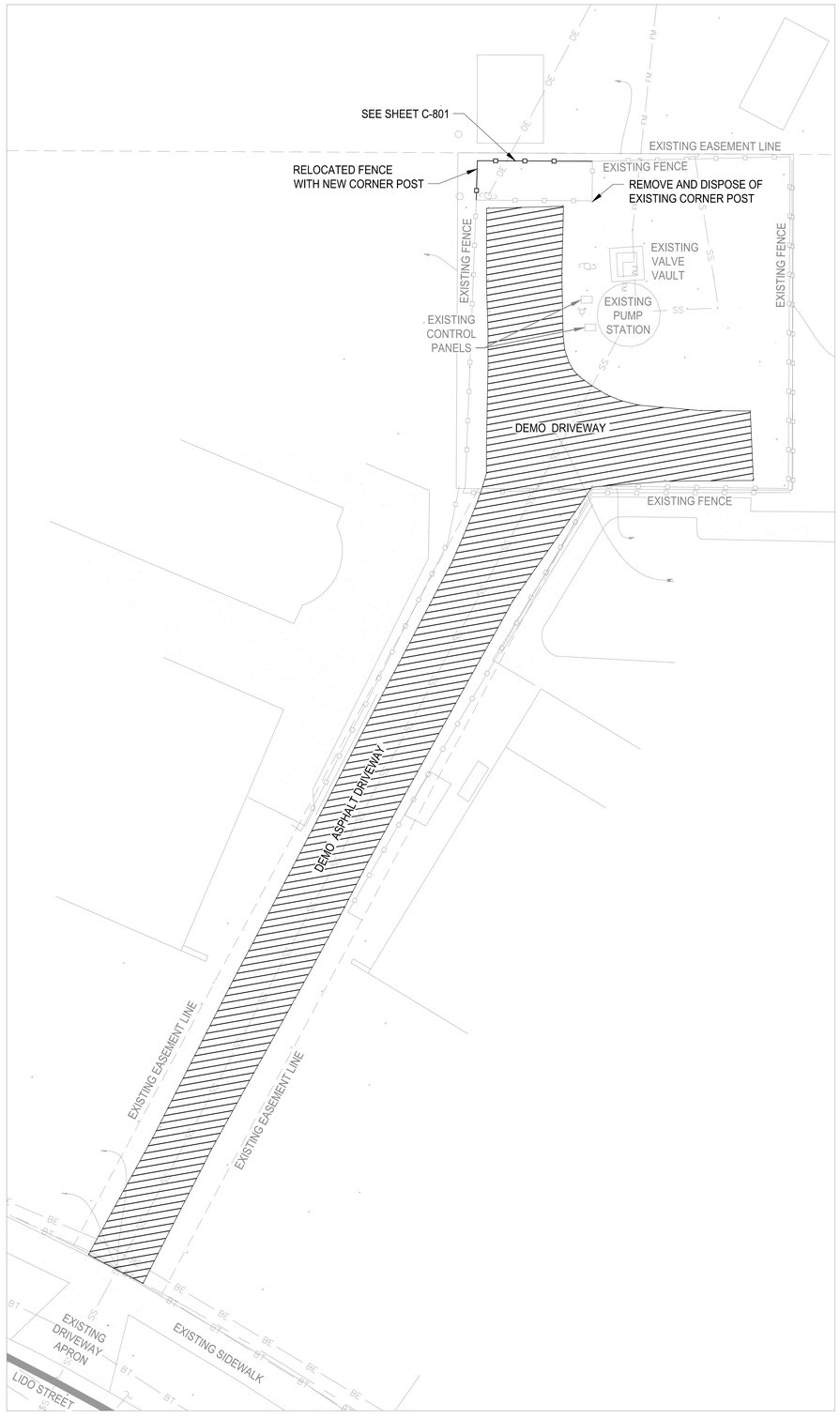
ATKINS

CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24
www.atkinsglobal.com

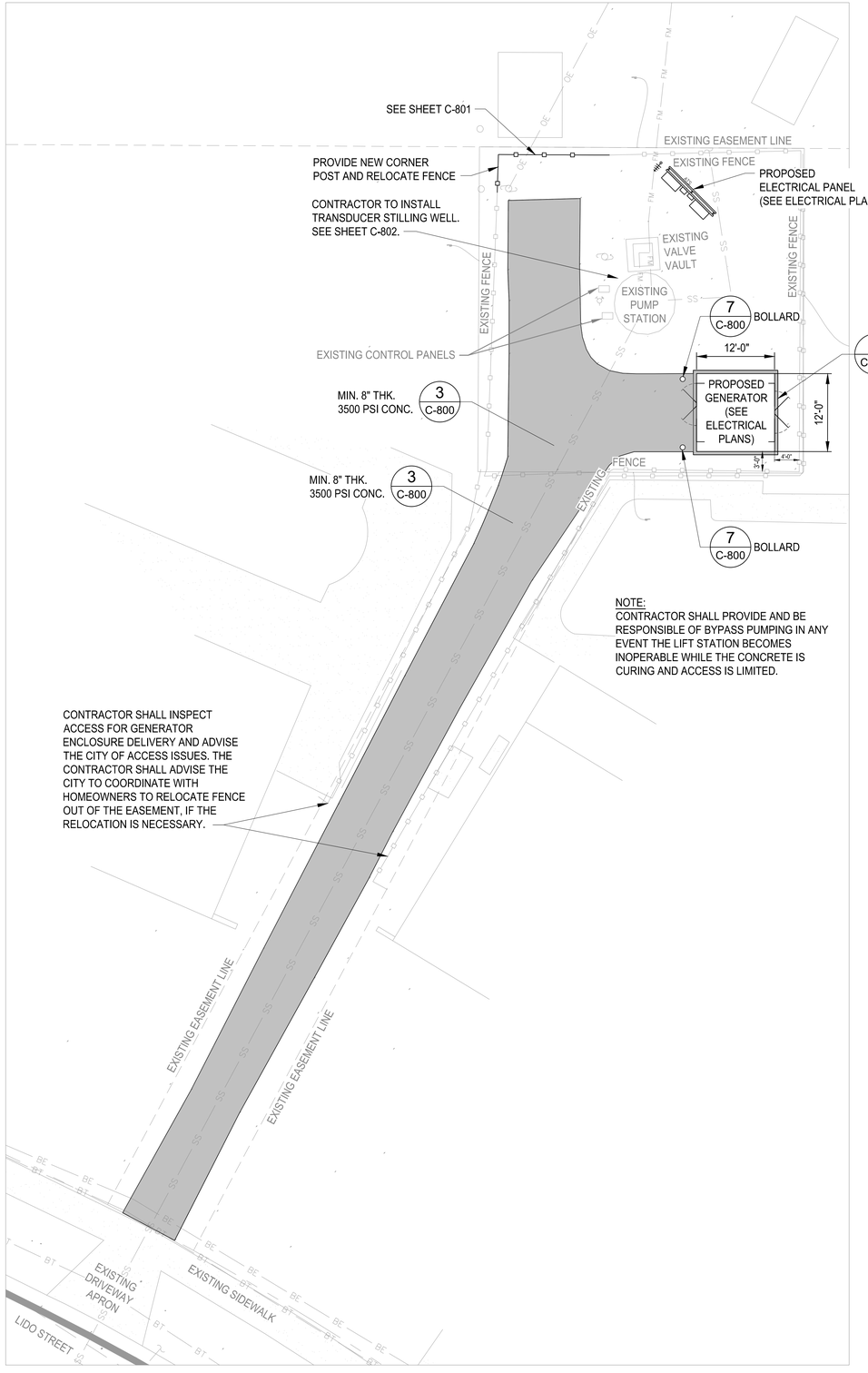
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-500 REV.

PLOT DATE: Nov 12, 2020 - 4:28pm
FILE NAME: I:\waterks.com\Projects\USO_ATJobs\DATA1\ESO\PECW\OProjects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-100 through C-700.dwg



LIFT STATION No. 094 SITE DEMOLITION PLAN



NOTE:
CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE OF BYPASS PUMPING IN ANY EVENT THE LIFT STATION BECOMES INOPERABLE WHILE THE CONCRETE IS CURING AND ACCESS IS LIMITED.

CONTRACTOR SHALL INSPECT ACCESS FOR GENERATOR ENCLOSURE DELIVERY AND ADVISE THE CITY OF ACCESS ISSUES. THE CONTRACTOR SHALL ADVISE THE CITY TO COORDINATE WITH HOMEOWNERS TO RELOCATE FENCE OUT OF THE EASEMENT, IF THE RELOCATION IS NECESSARY.

LIFT STATION No. 094 PROPOSED SITE PLAN

NOTES:
1. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING BEFORE COMMENCING CONSTRUCTION WORK.
2. COORDINATE AND SCHEDULE ACCESS TO THE SITE BEFORE COMMENCING CONSTRUCTION WORK.

N

0 10 20 30
SCALE: 1" = 10'

REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129
EMERGENCY GENERATORS

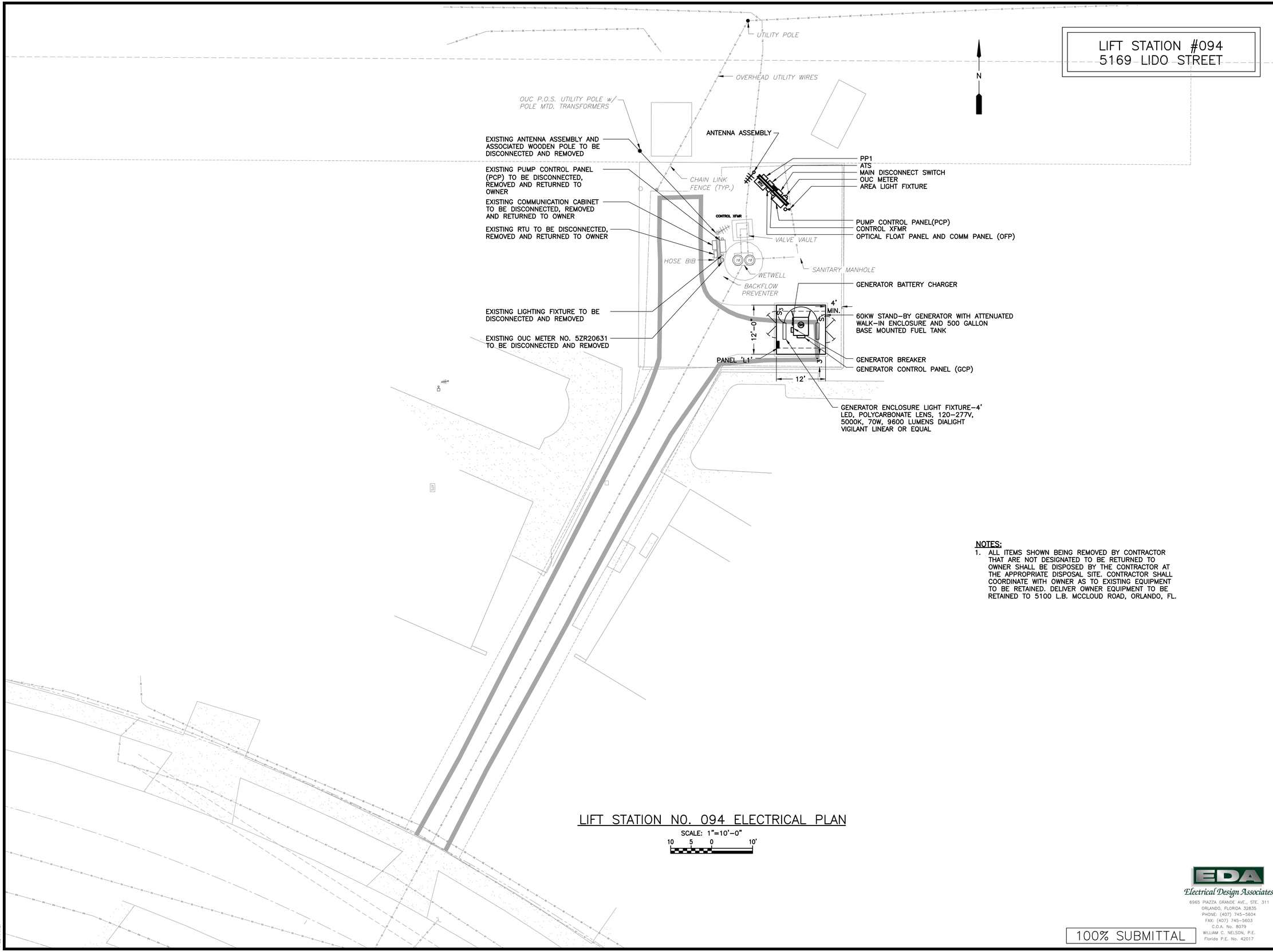
SHEET TITLE: LIFT STATION No. 094
SITE DEMOLITION PLAN AND PROPOSED SITE PLAN

ATKINS
CORPORATE OFFICE
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPH CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-501
REV.	△

PLOT DATE: Jan 25, 2021 - 8:18am
FILE NAME: L:\WO-Projects\City of Orlando\Lift Station Emer Generators\16_Plans\Design\01 - Sheet Files\C-501.dwg

LIFT STATION #094
5169 LIDO STREET



NOTES:

1. ALL ITEMS SHOWN BEING REMOVED BY CONTRACTOR THAT ARE NOT DESIGNATED TO BE RETURNED TO OWNER SHALL BE DISPOSED BY THE CONTRACTOR AT THE APPROPRIATE DISPOSAL SITE. CONTRACTOR SHALL COORDINATE WITH OWNER AS TO EXISTING EQUIPMENT TO BE RETAINED. DELIVER OWNER EQUIPMENT TO BE RETAINED TO 5100 L.B. MCCLOUD ROAD, ORLANDO, FL.

LIFT STATION NO. 094 ELECTRICAL PLAN

SCALE: 1"=10'-0"

10 5 0 10'

100% SUBMITTAL

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

PLOT DATE:
FILE NAME:

REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT:
CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

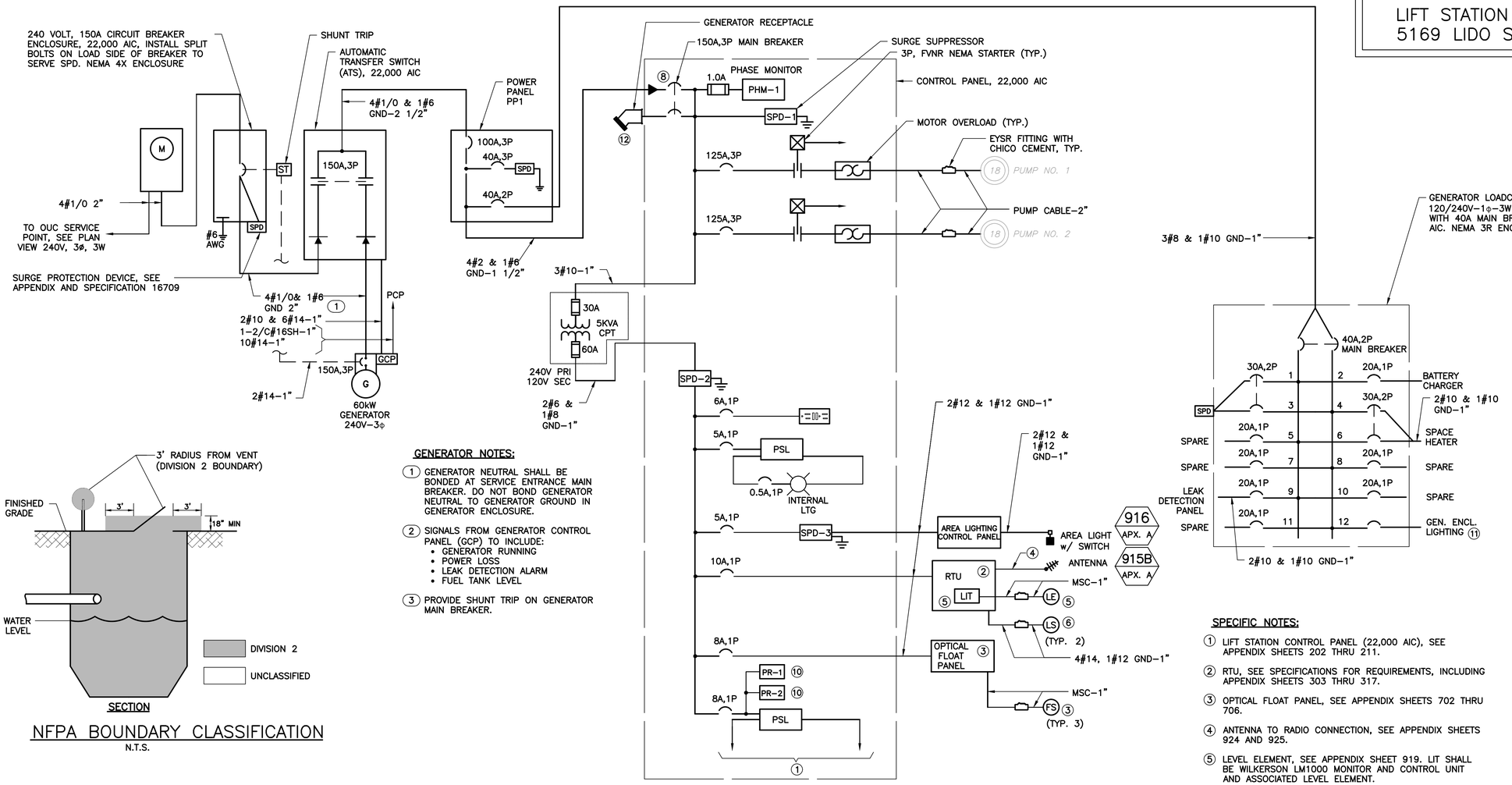
SHEET TITLE
LIFT STATION NO. 094 ELECTRICAL PLAN

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.34

LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-501
REV.	△

LIFT STATION #094
5169 LIDO STREET



GENERATOR NOTES:

1. GENERATOR NEUTRAL SHALL BE BONDED AT SERVICE ENTRANCE MAIN BREAKER. DO NOT BOND GENERATOR NEUTRAL TO GENERATOR GROUND IN GENERATOR ENCLOSURE.
2. SIGNALS FROM GENERATOR CONTROL PANEL (GCP) TO INCLUDE:
   - GENERATOR RUNNING
   - POWER LOSS
   - LEAK DETECTION ALARM
   - FUEL TANK LEVEL
3. PROVIDE SHUNT TRIP ON GENERATOR MAIN BREAKER.

SPECIFIC NOTES:

1. LIFT STATION CONTROL PANEL (22,000 AIC), SEE APPENDIX SHEETS 202 THRU 211.
2. RTU, SEE SPECIFICATIONS FOR REQUIREMENTS, INCLUDING APPENDIX SHEETS 303 THRU 317.
3. OPTICAL FLOAT PANEL, SEE APPENDIX SHEETS 702 THRU 706.
4. ANTENNA TO RADIO CONNECTION, SEE APPENDIX SHEETS 924 AND 925.
5. LEVEL ELEMENT, SEE APPENDIX SHEET 919. LIT SHALL BE WILKERSON LM1000 MONITOR AND CONTROL UNIT AND ASSOCIATED LEVEL ELEMENT.
6. CHECK VALVE POSITION SWITCH, SEE APPENDIX SHEET 923, DETAIL 2.
7. SEE APPENDIX SHEETS 902 THRU 907 FOR GROUNDING DETAILS.
8. AMPACITY SHOWN REPRESENTS TRIP SETTINGS, SEE APPENDIX FOR ADDITIONAL REQUIREMENTS.
9. SEE APPENDIX SHEET 802 THRU 805 FOR AREA LIGHTING CONTROL PANEL.
10. PUMP PROTECTION RELAY. CONTRACTOR TO CONFIRM PUMP MANUFACTURER W/OWNER IN ORDER TO PROVIDE CORRECT MOTOR OVERLOAD RELAY.
11. 2#12 & 1#12 GND–1".
12. GENERATOR RECEPTACLE–SEE SPECIFICATION 16050 PARAGRAPH 2.21 THROUGH 2.24.

NOTES:

1. REFERENCES TO APPENDIX OR DETAIL CALLOUTS REFER TO CITY OF ORLANDO PUBLIC WORKS DEPARTMENT LIFT STATION STANDARDS.

SECTION

NFPA BOUNDARY CLASSIFICATION

N.T.S.

NFPA NOTES:

1. THE AREA INSIDE THE WET WELL IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
2. THE AREA WITHIN 3 FEET FROM THIS HATCH AND 1.5 FEET ABOVE THE WET WELL SLAB IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
3. THE AREA WITHIN A 3 FOOT RADIUS FROM THE VENT OPENING IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
4. PROVIDE U.L. LISTED MECHANICAL INTERLOCK SO THAT ONLY ONE CIRCUIT BREAKER CAN BE CLOSED AT A TIME.
5. ALL CONDUITS SHALL ENTER THE RTU AND CONTROL PANEL FROM THE BOTTOM UNLESS OTHERWISE SHOWN ON DRAWINGS.
6. PROVIDE WIRING METHODS AND MATERIALS SUITABLE FOR A CLASS 1, DIVISION 2 AREA WITHIN ALL HAZARDOUS AREAS. USE CROUSE–HINDS MODEL EYSR RETROFIT SEALING FITTING.
7. FIELD PANEL LOCATIONS ARE TO BE FIELD VERIFIED AND ARE SHOWN FOR CLARITY ONLY.
8. MAIN CIRCUIT BREAKERS AND MOTOR CIRCUIT BREAKERS TO BE SIZED ACCORDING TO MOTOR H.P. AND SYSTEM LOAD.
9. CONDUIT EXTENDING FROM THE WETWELL SHALL BE PVC SCHEDULE 80 AND SHALL BE ENCASED IN A CONCRETE ENVELOPE NO LESS THAN 2 INCHES THICK AND SHALL HAVE A COVER OF NO LESS THAN 24 INCHES. THREADED RIGID METAL CONDUIT SHALL BE USED FOR THE LAST 24 INCHES OF THE UNDERGROUND RUN TO EMERGENCE. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED TO PROVIDE ELECTRICAL CONTINUITY. INSTALLATION SHALL BE IN ACCORDANCE WITH NEC 70, ARTICLE 501, PART II, 501.10.

LS NO. 094 SINGLE LINE DIAGRAM

SCALE: N.T.S.

LS NO. 094 SERVICE LOAD TABULATION

SERVICE VOLTAGE: 240V–3ø–3W

DESCRIPTION	LOAD		AMPACITY
PUMP	2 @ 18 HP	=	98.4 AMPS
PSL–1	–	=	1.00 AMPS
GFI RECEPTACLE	–	=	2.00 AMPS
RTU	–	=	3.00 AMPS
LEVEL TRANSDUCER	–	=	2.00 AMPS
AREA LIGHTING	@ 125%	=	2.00 AMPS
GEN PANEL	–	=	10.00 AMPS
	CONNECTED LOAD	=	118.4 AMPS

① MINIMUM SERVICE ENTRANCE = 118.4 AMPS + (0.25)(49.2) = (130.7) AMPS

NOTES:

① SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 430, TABLE 430.250 OF THE NATIONAL ELECTRICAL CODE.

100% SUBMITTAL

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745–5604
FAX: (407) 745–5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT: CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

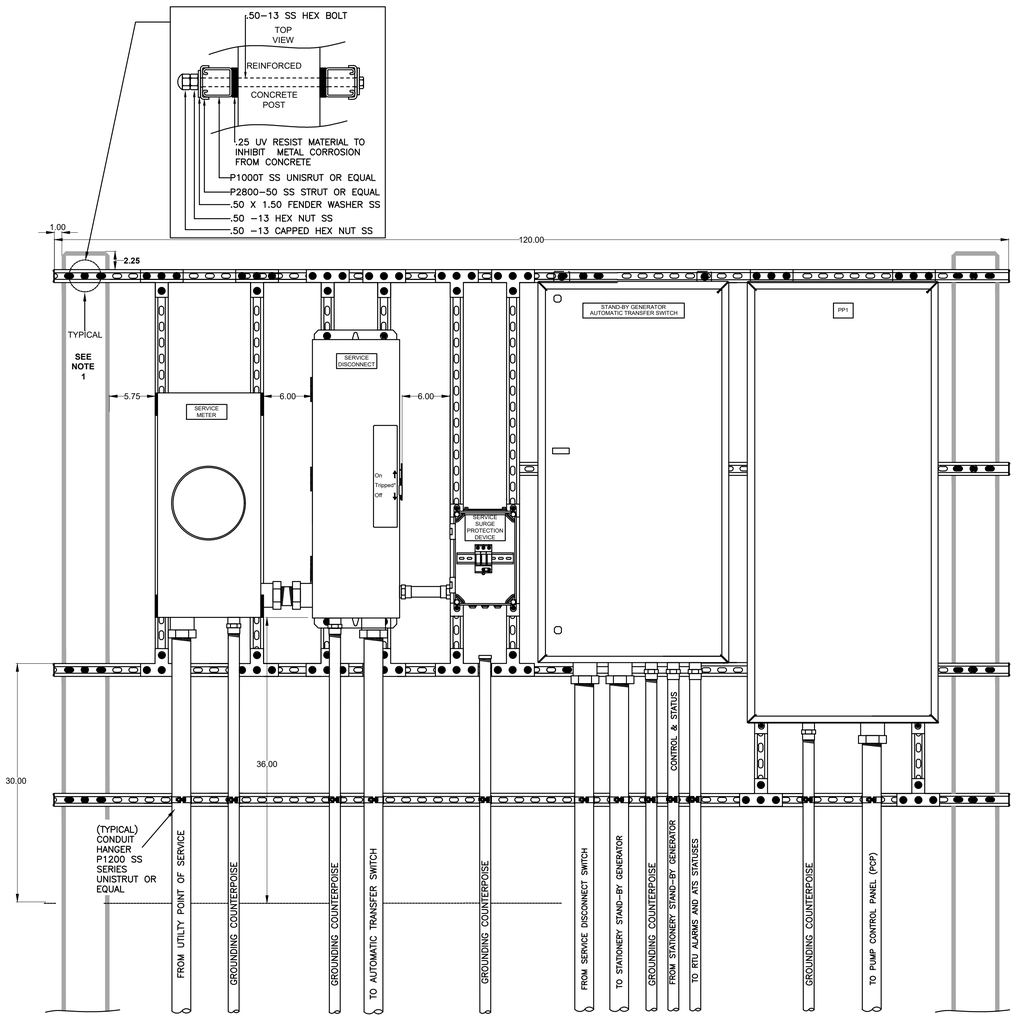
PROJECT: LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE: LIFT STATION NO. 094 SINGLE LINE DIAGRAM

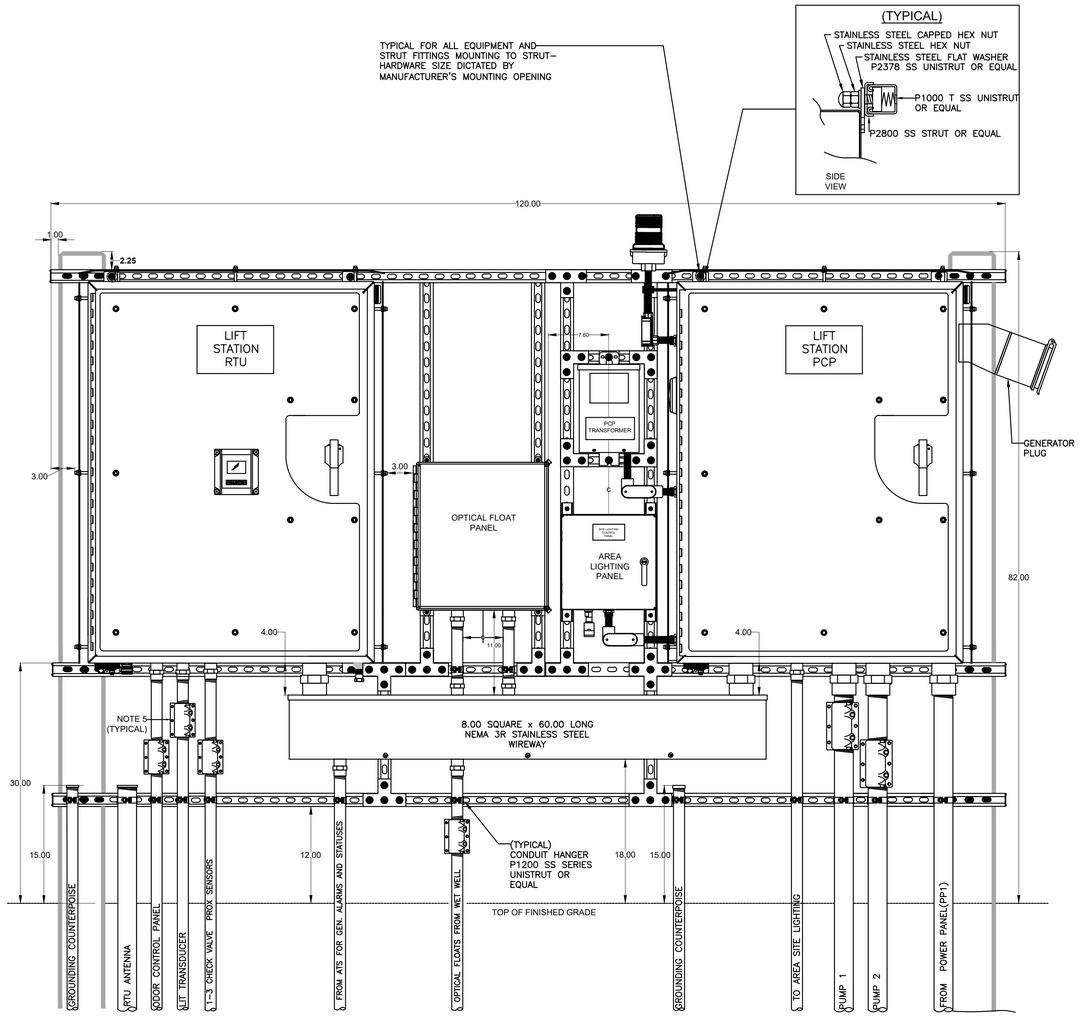
ATKINS
CORPORATE OFFICE: 4030 W. BOY SCOUT BOULEVARD TAMPA, FLORIDA 33607 FBPR CERTIFICATE OF AUTHORIZATION NO.34
LOCAL OFFICE: 482 SOUTH KELLER ROAD ORLANDO, FL 32810 TEL: 407.647.7275 FAX: 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-502
REV.	△

PLOT DATE:
FILE NAME:



REAR ELEVATION



FRONT ELEVATION
(FACING WETWELL)

NOTES:

1. 6.00 INCH SQUARE REINFORCED CONCRETE POST WITH 4500 PSI MINIMUM CONCRETE AND (4) # 4 REBARS SPACED 4 INCHES SQUARE IN CENTER OF POST. ALL EDGES SHALL HAVE .50 INCH WIDE CHAMFER.
2. EQUIPMENT UTILIZED SHALL CONFORM BY SPECIFICATIONS SPECIFIED IN DIVISIONS 13 AND 16. NO SUBSTITUTION WITHOUT OWNER'S WRITTEN APPROVAL.
3. DIMENSIONS IN INCHES.
4. ALL CONDUIT PENETRATIONS INTO ALL ENCLOSURES SHALL BE FITTED WITH A THREADED HUB CONNECTOR, SSTG SERIES. COOPER CROUSE HINDS, OR EQUAL.
5. CONDUIT SEAL OFF FITTINGS SHALL CROUSE HINDS TYPE EYSR OR EQUAL.

L.S. NO. 094 EQUIPMENT ELEVATION

SCALE: N.T.S.

PROPOSED ELEVATION SHOWN FOR CONTRACTOR USE. REFER TO CITY OF ORLANDO LIFT STATION STANDARDS AND SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS

100% SUBMITTAL

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745–5604
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WILLIAM C. NELSON, P.E.
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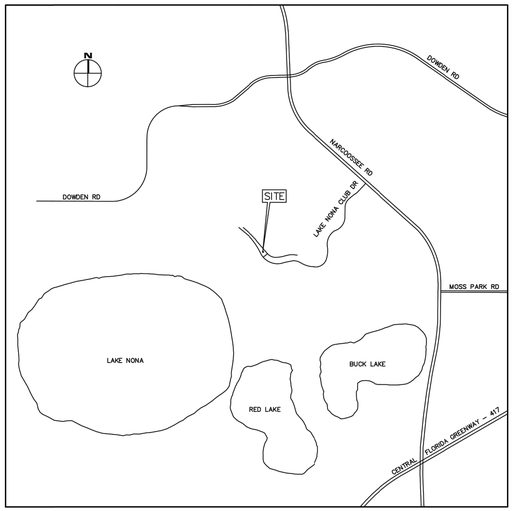
REV	DATE	ISSUED FOR

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WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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VICINITY MAP: NOT TO SCALE



ADDRESS:

9099 LAKE NONA CLUB DRIVE
ORLANDO, FL 32827

LEGAL DESCRIPTION:

A PORT OF THE NORTHWEST 1/4, SECTION 7, TOWNSHIP 24 SOUTH, RANGE 31 EAST, ORANGE COUNTY,FLORIDA, DESCRIBED NS FOLLOWS:

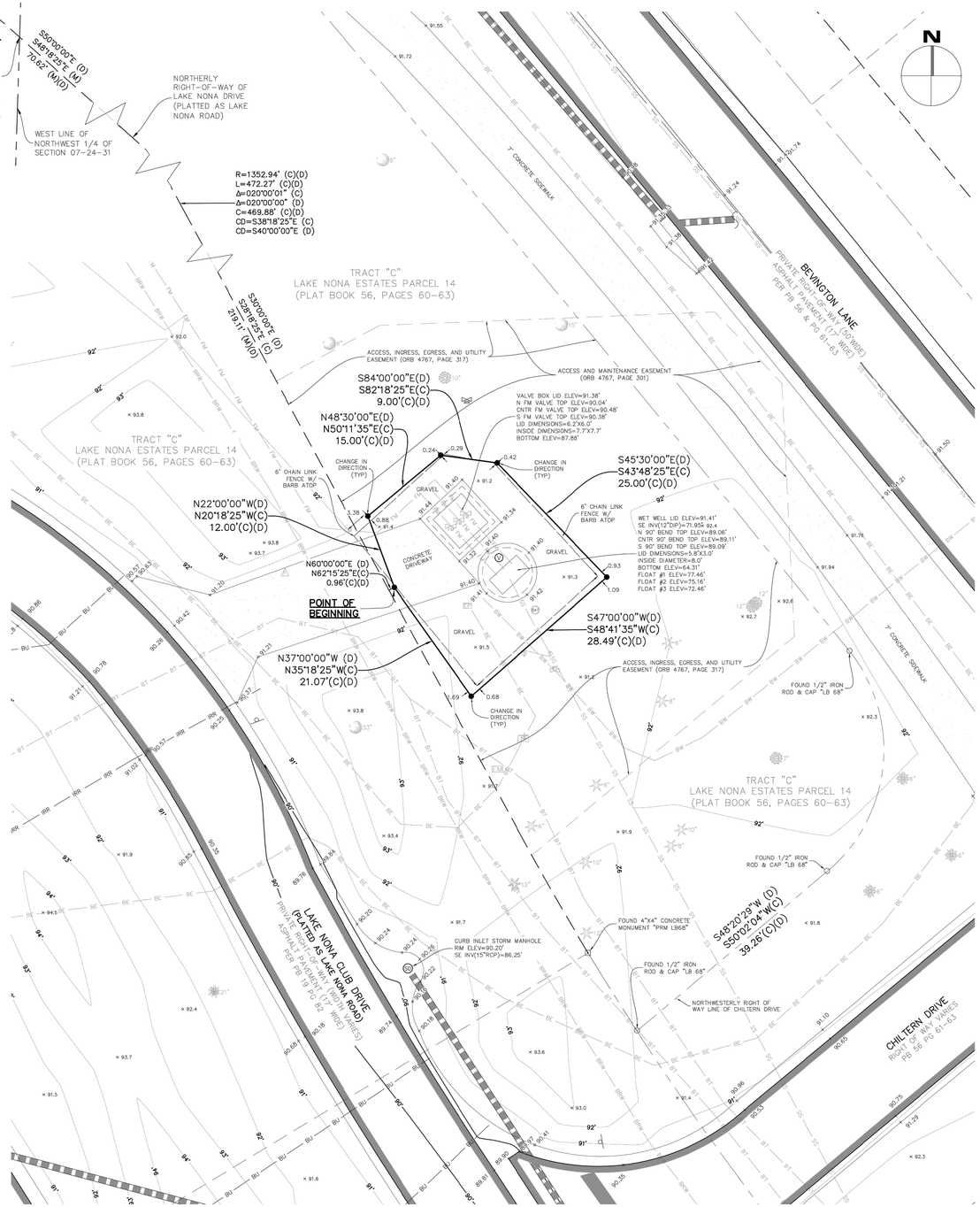
COMMENCE AT THE INTERSECTION OF THE WEST LINE OF THE NORTHWEST 1/4 OF SAID SECTION 7, WITH THE NORTHERLY RIGHT OF WAY OF LAKE NONA ROAD ACCORDING TO THE PLAT OF LAKE NONA CLUB – ENTRANCE ROAD PHASE 1, AS RECORDED IN PLAT BOOK 19, PAGE 82, PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA; THENCE ALONG SAID NORTHERLY RIGHT OF WAY LINE THE FOLLOWING THREE (3) COURSES AND DISTANCES: RUN S. 50°00'00" E., 70.62 FEET TO A POINT OF CURVATURE OF A CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 1352.94 FEET AND A CENTRAL ANGEL OF 20°00'00"; THENCE RUN 472.27 FEET ALONG THE OF ARC OF SAID CURVE TO THE POINT OF TANGENCY THEREOF; THENCE S. 30°00'00" E., 219.11 FEET; THENCE N. 60°00'00" E., 0.96 FEET TO THE POINT OF BEGINNING: THENCE N. 22°00'00 W., 12.00 FEET; THENCE N. 48°30'00" E., 15.00 FEET; THENCE S. 84°00'00" E., 9.00 FEET; THENCE S. 45°30'00" E., 25.00 FEET; THENCE S. 47°00'00" W., 28.49 FEET; THENCE N. 37°00'00" W., 21.07 FEET TO THE POINT OF BEGINNING.

SURVEY NOTES:

1. THIS SURVEY REPRESENTS A BOUNDARY AND TOPOGRAPHIC SURVEY AS DESCRIBED BY STANDARDS OF PRACTICE FOR SURVEYING AND MAPPING, CHAPTER 5J–17, FLORIDA ADMINISTRATIVE CODES. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. THIS SURVEY IS LIMITED TO: (1) THE DOCUMENTATION OF THE PERIMETER OF THE PARCELS OF LAND SHOWN HEREON BY MONUMENTING THE BOUNDARY LINES FOR THE PURPOSE OF DESCRIBING SAID PARCELS. (2) THE LOCATION OF SURFACE IMPROVEMENTS. (3) SPOT ELEVATIONS AND CONTOURS. (4) STORM DRAINAGE AND SANITARY SEWER AS–BUILT. (5) SUBSURFACE UTILITIES ARE DESGNATED BY L & S DIVERSIFIED.
3. THE SURVEYED PROPERTY SHOWN HEREON CONTAINS A TOTAL AREA OF 0.018 ACRES (798 SQUARE FEET) MORE OR LESS.
4. BEARINGS SHOWN HEREON ARE BASED ON THE NORTHWESTERLY RIGHT OF WAY LINE OF CHILTERN DRIVE AS BEING SOUTH 50°02'04" WEST, AS RECORDED IN PLAT BOOK 56, PAGES 60–63.
5. THE HORIZONTAL SURVEY DATA SHOWN IS BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83), WITH A 1990 ADJUSTMENT, STATE PLANE COORDINATES, FLORIDA EAST ZONE, AND IS RELATIVE TO FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION HAVING LOCAL GROUND COORDINATE SYSTEM WITH CERTIFIED RECORD NUMBER 75511, BEING A 6"X6" CONCRETE MONUMENT (W/ X–CUT) AND HAVING THE COORDINATES OF N:1486198.2540, E:569859.2589.
6. THE VERTICAL DATUM AND ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88), CITY OF ORLANDO BENCHMARK #8001 BEING A 2" ALUMINUM DISC STAMPED "8001" AND HAVING AN ELEVATION OF 92.69 FEET.
7. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN FLOOD ZONE X, AN AREA DETERMINED TO BE OUTSIDE THE 2.0% ANNUAL CHANCE FLOODPLAIN, PER PANEL NUMBER 445 OF 750, MAP NUMBER 12095C0445G WITH AN EFFECTIVE DATE OF JUNE 20, 2018.
8. THE SYMBOLS REFLECTED IN THE LEGEND AND ON THIS SURVEY MAY HAVE BEEN ENLARGED FOR CLARITY. THE SYMBOLS HAVE BEEN PLOTTED AT THE CENTER OF THE FIELD LOCATION AND MAY NOT REPRESENT THE ACTUAL SHAPE OR SIZE OF THE FEATURE.
9. THE INFORMATION DEPICTED ON THIS SURVEY REPRESENTS THE RESULTS OF A FIELD SURVEY ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS A REPRESENTATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.
10. THE SURVEYOR DID NOT INSPECT THE PROPERTY SHOWN HEREON FOR ENVIRONMENTAL HAZARDS.
11. FENCES AND WALL DIMENSIONS ARE APPROXIMATE. THE SURVEYOR DID NOT DETERMINE OWNERSHIP OF WALLS AND FENCES.
12. THIS FIRM IDENTIFIED VARIOUS TYPES OF TREES LOCATED ON THIS SITE BASED ON COMMON KNOWLEDGE OF TREE SPECIES. A QUALIFIED LANDSCAPE ARCHITECT SHOULD BE EMPLOYED FOR POSITIVE IDENTIFICATION OF TREE SPECIES. TREE DIAMETERS ARE APPROXIMATE AND WERE MEASURED AT BREAST HEIGHT. ONLY TREES 4 CALIPER INCHES OR LARGER WERE LOCATED AND SHOWN ON THE SURVEY. HEDGES AND GROUND COVER WERE NOT LOCATED AND ARE NOT SHOWN. EXOTIC TREES SUCH AS MELALEUCA, BRAZILIAN PEPPER AND AUSTRALIAN PINE WERE NOT LOCATED OR SHOWN HEREON.
13. ORNAMENTAL PLANTS, HEDGES AND SPRINKLER HEADS WERE NOT LOCATED.
14. THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. FOUNDATIONS AND ENCROACHMENTS WERE NOT LOCATED AND ARE NOT SHOWN HEREON. THIS SITE COULD HAVE UNDERGROUND INSTALLATIONS THAT ARE NOT SHOWN HEREON. BEFORE DESIGN, CONSTRUCTION EXCAVATIONS, CONTACT 811.COM (811) AND THE APPROPRIATE UTILITY COMPANIES FOR FIELD VERIFICATION OF UTILITIES.
15. A SUNSHINE 811 "DESIGN" TICKET 320808229 WAS OBTAINED TO DETERMINE THE UTILITY PROVIDERS WITHIN THE PROJECT LIMITS. THE PROJECT WAS SCANNED FOR UNDERGROUND UTILITIES USING ELECTRONIC DETECTION DEVICES AND GROUND PENETRATING RADAR (GPR). ANY UTILITIES FOUND WITHIN THE PROJECT LIMITS WERE SURFACE PAINTED AND FLAGGED WITH THE APPROPRIATE COLOR AS RECOGNIZED BY THE NATIONAL UTILITY LOCATING CONTRACTORS ASSOCIATION (NULCA). ANY UTILITIES MARKED BY ANOTHER FIRM WILL BE VERIFIED BY AN L&S DIVERSIFIED UTILITY LOCATOR.
16. IT SHOULD BE UNDERSTOOD BY THE CLIENT THAT SOME UNDERGROUND UTILITIES MAY NOT BE MADE OF A CONDUCTIVE MATERIAL OR MAY NOT RETURN A GPR ECHO AND THEREFORE CANNOT BE DESIGNATED WITH ELECTRONIC PROSPECTING EQUIPMENT OR GPR.
17. L & S DIVERSIFIED, LLC DID NOT SEARCH THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA FOR OWNERSHIP, RIGHTS–OF–WAY, EASEMENTS OR OTHER MATTERS AFFECTING THE PROPERTY BEING SURVEYED. THERE MAY BE ADDITIONAL RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.
18. THE INFORMATION CONTAINED IN THIS DOCUMENT WAS PREPARED BY L & S DIVERSIFIED, LLC (L&S). L&S HAS TAKEN ALL REASONABLE STEPS TO ENSURE THE ACCURACY OF THIS DOCUMENT. WE CANNOT GUARANTEE THAT ALTERATIONS AND/OR MODIFICATIONS WILL NOT BE MADE BY OTHERS AFTER IT LEAVES OUR POSSESSION. THIS DOCUMENT MUST BE COMPARED TO THE ORIGINAL HARD COPY (WHICH BEARS THE RAISED SURVEYORS CERTIFICATION SEAL IF APPLICABLE) TO ENSURE THE ACCURACY OF THE INFORMATION CONTAINED HEREON AND TO FURTHER ENSURE THAT ALTERATIONS AND/OR MODIFICATIONS HAVE NOT BEEN MADE. L&S MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OF THE INFORMATION CONTAINED IN THIS OR ANY DOCUMENT TRANSMITTED OR REVIEWED BY COMPUTER OR OTHER ELECTRONIC MEANS. CONTACT L&S DIRECTLY FOR VERIFICATION OF ACCURACY.
19. THIS SURVEY MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1/10 OR SMALLER.
20. THIS SURVEY CANNOT BE RELIED UPON BY PERSONS OR ENTITIES OTHER THAN THE PERSONS OR ENTITIES CERTIFIED TO HEREON.
21. ADDITIONS OR DELETIONS TO THIS SURVEY MAP BY OTHER THAN THE SIGNING PARTY OR PARTIES ARE PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
22. THE DESCRIPTION OF THE SUBJECT PROPERTY FORMS A MATHEMATICALLY CLOSED FIGURE WITH NO GORES, GAPS, OVERLAPS OR HIATUS.

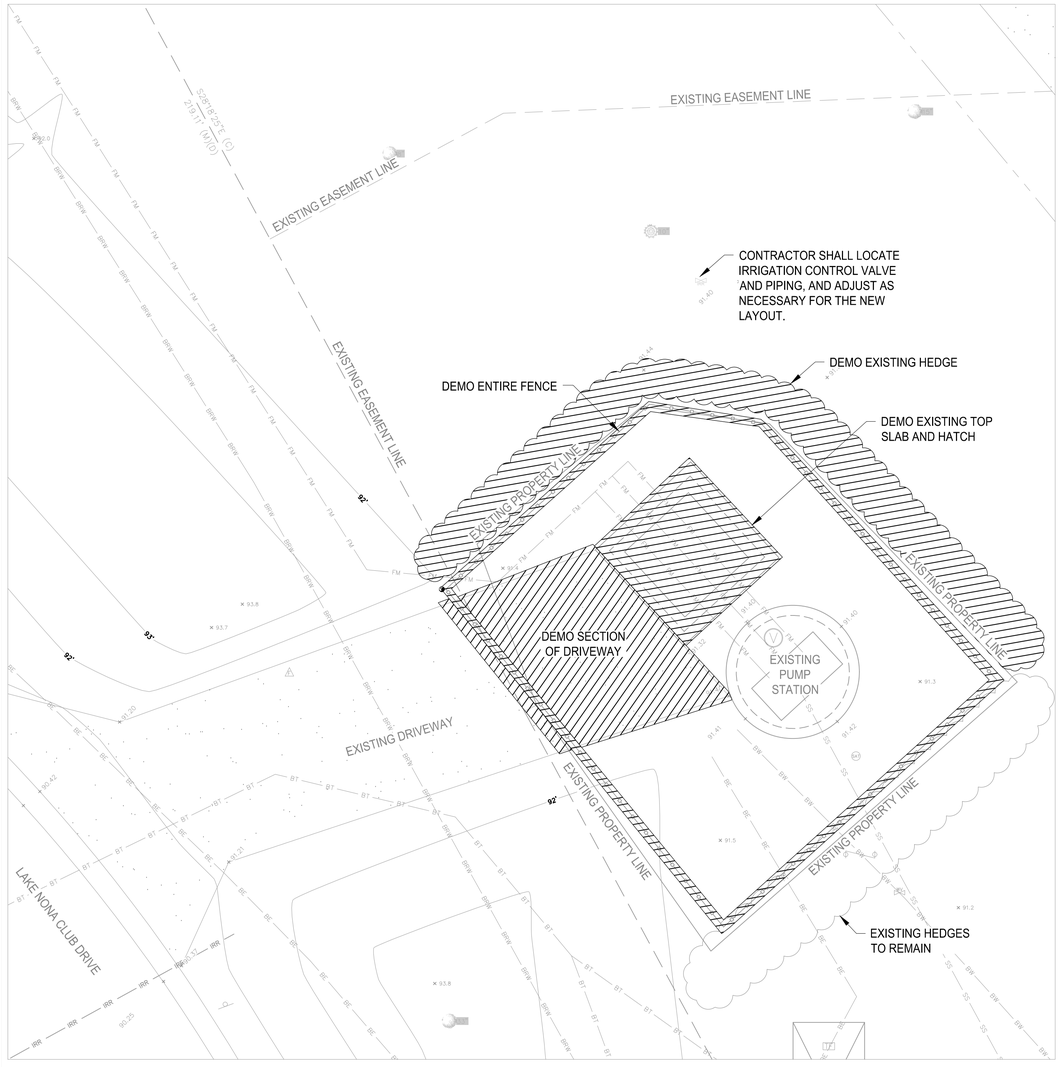
SYMBOL AND ABBREVIATION LEGEND:

ELECTRICAL CABINET		(D)	DEED
CONCRETE LIGHT POLE		DIP	DUCTILE IRON PIPE
METAL LIGHT POLE		E	EAST/EASTING
ELECTRICAL METER		ELEV	ELEVATION
ELECTRICAL PANEL		FM	FORCE MAIN
TRANSFORMER		INV	INVERT
ELECTRICAL VAULT		L	ARC LENGTH
FIBER OPTIC MARKER		LB	LICENSED BUSINESS
FIBER OPTIC VAULT		N	NORTH/NORTHING
FORCE MAIN AIR RELEASE VALVE		PB	PLAT BOOK
FORCE MAIN VALVE		PG(S)	PAGE(S)
IRRIGATION VALVE		PRM	PERMANENT REFERENCE MONUMENT
CLEANOUT		R	RADIUS
ANTENNA		RCP	REINFORCED CONCRETE PIPE
SINGLE STAND SIGN		S	SOUTH
UNKNOWN VAULT		TYP	TYPICAL
LIFT STATION VENT		26	CONTOUR
WELL		+24.1	SPOT ELEVATION
SANITARY SEWER MANHOLE		W	WEST
CATCH BASIN		BE	BURIED ELECTRICAL
STORM DRAINAGE MANHOLE		BFM	BURIED FORCE MAIN
FOUND CONCRETE MONUMENT		BRW	BURIED RECLAIMED WATER
FOUND IRON ROD		SS	BURIED SANITARY SEWER
CHANGE IN DIRECTION		BT	BURIED TELECOMMUNICATION
TELECOMMUNICATION RISER		BU	BURIED UNKNOWN
TREE CEDAR		BW	BURIED WATER
TREE LIVE OAK			CENTERLINE
TREE MAGNOLIA			CONTINUOUS
TREE PINE			DASHED LINE
TREE CREPE MYRTLE			FENCE LINE
BACKFLOW PREVENTER			EASEMENT
WATER METER		IRR	IRRIGATION LINE
WATER VALVE			DRAINAGE PIPE
CHORD DISTANCE			BUILDING LINE
CHORD BEARING			EDGE OF PAVEMENT
CENTER			EDGE OF WATER
DELTA			

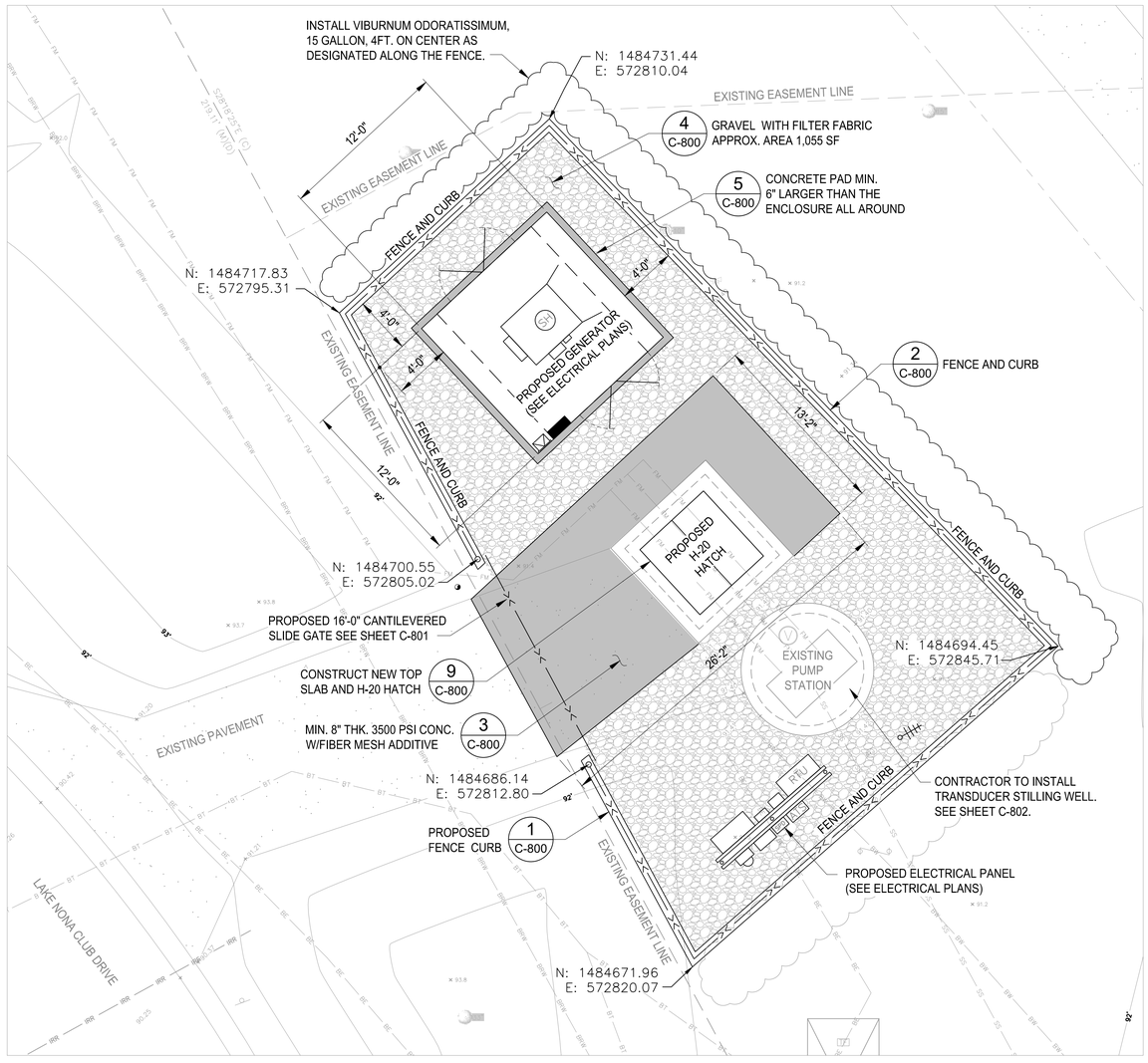


REV	DATE	ISSUED FOR

NOTES:
1. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING BEFORE COMMENCING CONSTRUCTION WORK.
2. COORDINATE AND SCHEDULE ACCESS TO THE SITE BEFORE COMMENCING CONSTRUCTION WORK.



LIFT STATION No. 126 SITE DEMOLITION PLAN



LIFT STATION No. 126 PROPOSED SITE PLAN

N

0 5 10 15
SCALE: 1" = 5'

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

NOTICE
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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

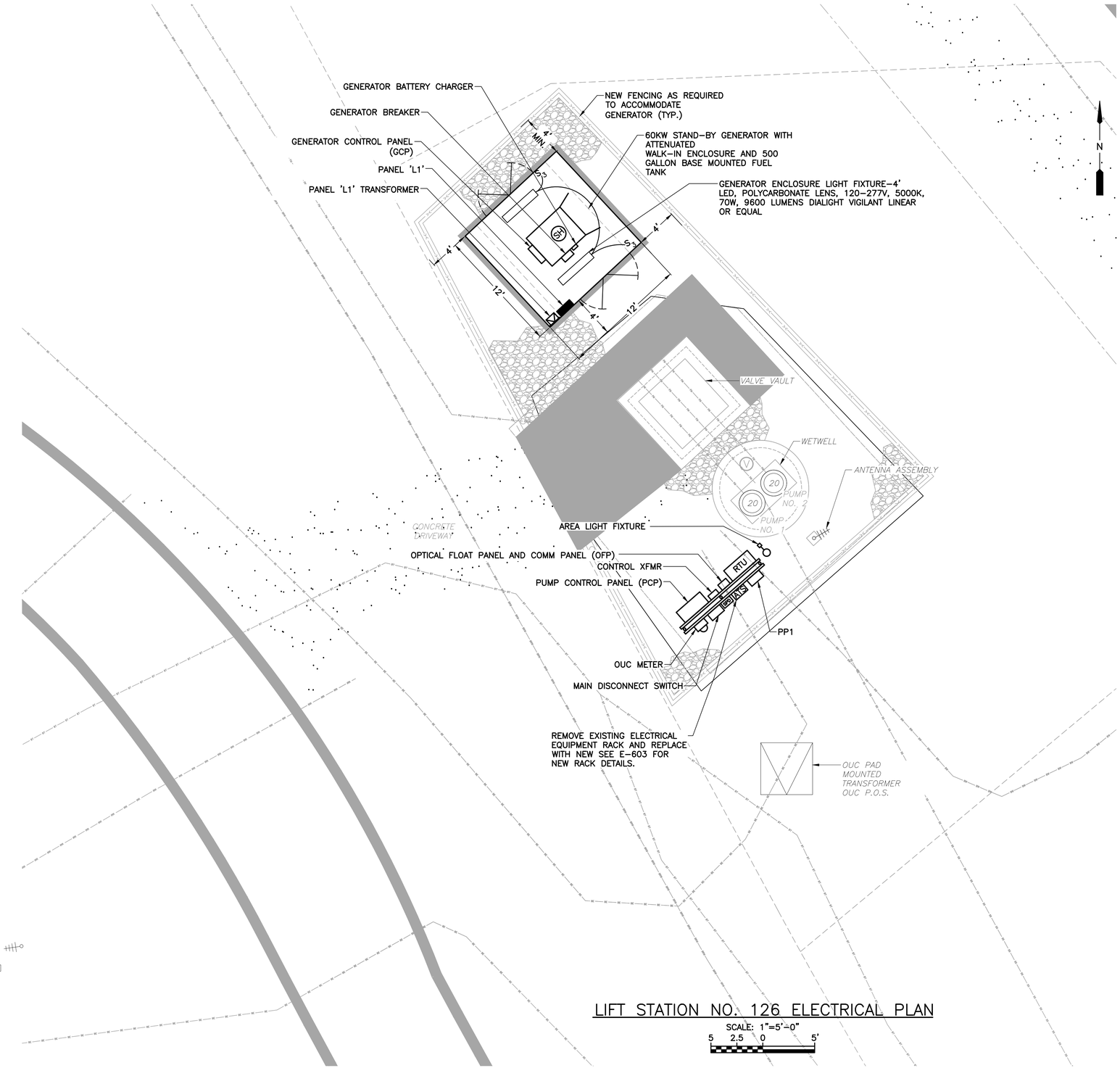
SHEET TITLE: LIFT STATION No. 126 SITE DEMOLITION PLAN AND PROPOSED SITE PLAN

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPE CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL: 407.647.7275
FAX: 407.806.4500
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-601 REV. △

PLOT DATE: Feb 02, 2021 - 8:38am
FILE NAME: U:\WO\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-601.dwg

LIFT STATION #126
9099 LAKE NONA RD.



LIFT STATION NO. 126 ELECTRICAL PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'

NOTES:

1. ALL ITEMS SHOWN BEING REMOVED BY CONTRACTOR THAT ARE NOT DESIGNATED TO BE RETURNED TO OWNER SHALL BE DISPOSED BY THE CONTRACTOR AT THE APPROPRIATE DISPOSAL SITE. CONTRACTOR SHALL COORDINATE WITH OWNER AS TO EXISTING EQUIPMENT TO BE RETAINED. DELIVER OWNER EQUIPMENT TO BE RETAINED TO 5100 L.B. MCCLOUD ROAD, ORLANDO, FL.

REV.	DATE	ISSUED FOR

REV.	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT:
CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129 EMERGENCY GENERATORS

SHEET TITLE
LIFT STATION NO. 126 ELECTRICAL PLAN

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL: 407.647.7275
FAX: 407.806.4500
www.atkinsglobal.com

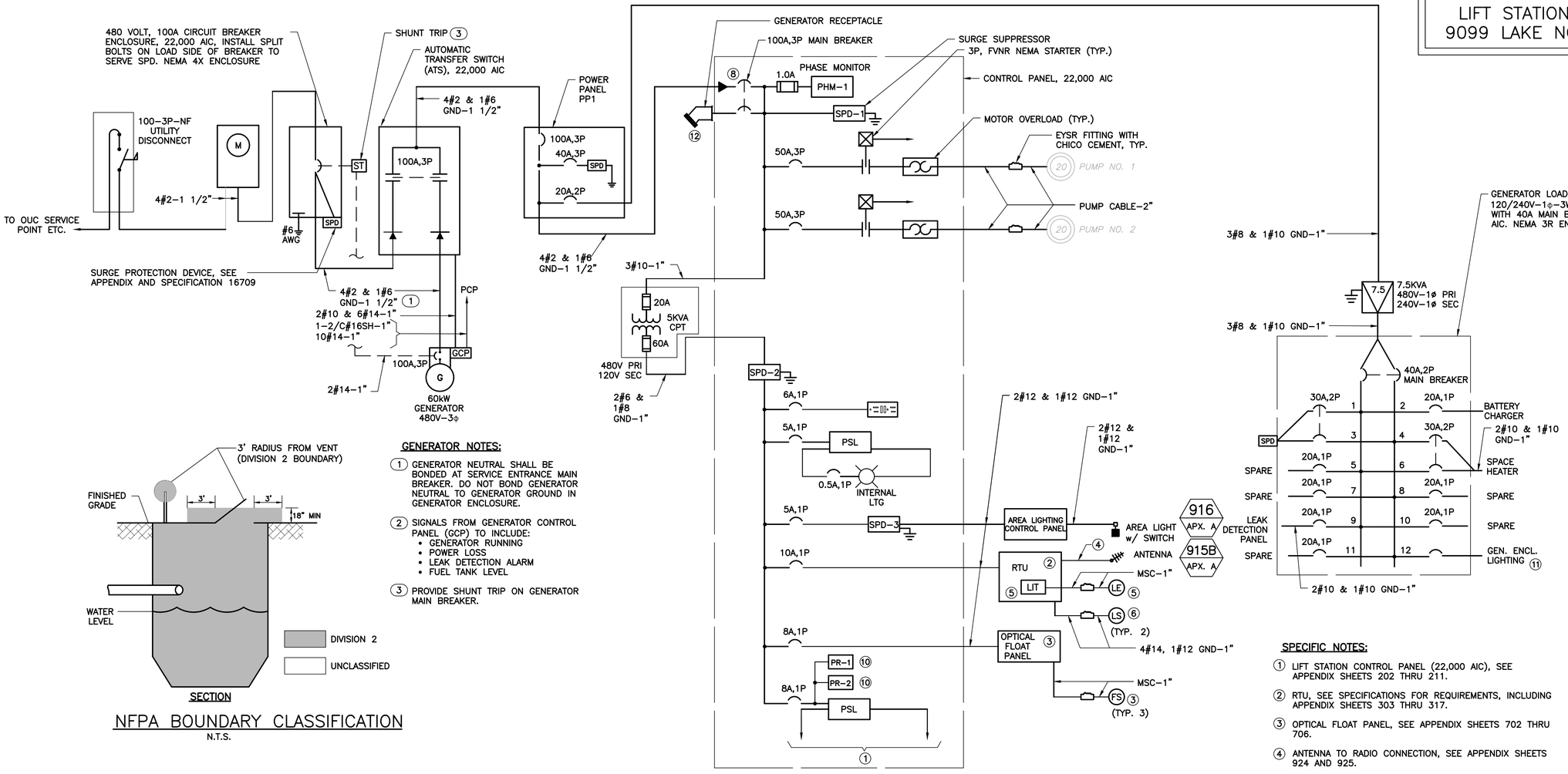
JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-601
REV.	△

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

PLOT DATE:
FILE NAME:

LIFT STATION #126
9099 LAKE NONA RD.



NFPA BOUNDARY CLASSIFICATION

N.T.S.

GENERATOR NOTES:

(1) GENERATOR NEUTRAL SHALL BE BONDED AT SERVICE ENTRANCE MAIN BREAKER. DO NOT BOND GENERATOR NEUTRAL TO GENERATOR GROUND IN GENERATOR ENCLOSURE.

(2) SIGNALS FROM GENERATOR CONTROL PANEL (GCP) TO INCLUDE:
- GENERATOR RUNNING
- POWER LOSS
- LEAK DETECTION ALARM
- FUEL TANK LEVEL

(3) PROVIDE SHUNT TRIP ON GENERATOR MAIN BREAKER.

NFPA NOTES:

1. THE AREA INSIDE THE WET WELL IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
2. THE AREA WITHIN 3 FEET FROM THIS HATCH AND 1.5 FEET ABOVE THE WET WELL SLAB IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
3. THE AREA WITHIN A 3 FOOT RADIUS FROM THE VENT OPENING IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
4. PROVIDE U.L. LISTED MECHANICAL INTERLOCK SO THAT ONLY ONE CIRCUIT BREAKER CAN BE CLOSED AT A TIME.
5. ALL CONDUITS SHALL ENTER THE RTU AND CONTROL PANEL FROM THE BOTTOM UNLESS OTHERWISE SHOWN ON DRAWINGS.
6. PROVIDE WIRING METHODS AND MATERIALS SUITABLE FOR A CLASS 1, DIVISION 2 AREA WITHIN ALL HAZARDOUS AREAS. USE CROUSE-HINDS MODEL EYSR RETROFIT SEALING FITTING.
7. FIELD PANEL LOCATIONS ARE TO BE FIELD VERIFIED AND ARE SHOWN FOR CLARITY ONLY.
8. MAIN CIRCUIT BREAKERS AND MOTOR CIRCUIT BREAKERS TO BE SIZED ACCORDING TO MOTOR H.P. AND SYSTEM LOAD.
9. CONDUIT EXTENDING FROM THE WETWELL SHALL BE PVC SCHEDULE 80 AND SHALL BE ENCASED IN A CONCRETE ENVELOPE NO LESS THAN 2 INCHES THICK AND SHALL HAVE A COVER OF NO LESS THAN 24 INCHES. THREADED RIGID METAL CONDUIT SHALL BE USED FOR THE LAST 24 INCHES OF THE UNDERGROUND RUN TO EMERGENCE. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED TO PROVIDE ELECTRICAL CONTINUITY. INSTALLATION SHALL BE IN ACCORDANCE WITH NEC 70, ARTICLE 501, PART II, 501.10.

LS NO. 126 SINGLE LINE DIAGRAM

SCALE: N.T.S.

LS NO. 126 SERVICE LOAD TABULATION

SERVICE VOLTAGE: 480V-3ø-3W

DESCRIPTION	LOAD		AMPACITY
PUMP	2 @ 20 HP	=	54 AMPS
PSL-1	-	=	0.5 AMPS
GFI RECEPTACLE	-	=	1.00 AMPS
RTU	-	=	1.50 AMPS
LEVEL TRANSDUCER	-	=	1.00 AMPS
AREA LIGHTING	@ 125%	=	1.00 AMPS
GEN PANEL	-	=	10.00 AMPS
	CONNECTED LOAD	=	69 AMPS

(1) MINIMUM SERVICE ENTRANCE = 69 AMPS + (0.25)(27) = 75.8 AMPS

NOTES:

(1) SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 430, TABLE 430.250 OF THE NATIONAL ELECTRICAL CODE.

(2) MISC. LOADS SHOWN AT 480V

SPECIFIC NOTES:

(1) LIFT STATION CONTROL PANEL (22,000 AIC), SEE APPENDIX SHEETS 202 THRU 211.

(2) RTU, SEE SPECIFICATIONS FOR REQUIREMENTS, INCLUDING APPENDIX SHEETS 303 THRU 317.

(3) OPTICAL FLOAT PANEL, SEE APPENDIX SHEETS 702 THRU 706.

(4) ANTENNA TO RADIO CONNECTION, SEE APPENDIX SHEETS 924 AND 925.

(5) LEVEL ELEMENT, SEE APPENDIX SHEET 919. LIT SHALL BE WILKERSON LM1000 MONITOR AND CONTROL UNIT AND ASSOCIATED LEVEL ELEMENT.

(6) CHECK VALVE POSITION SWITCH, SEE APPENDIX SHEET 923, DETAIL 2.

(7) SEE APPENDIX SHEETS 902 THRU 907 FOR GROUNDING DETAILS.

(8) AMPACITY SHOWN REPRESENTS TRIP SETTINGS, SEE APPENDIX FOR ADDITIONAL REQUIREMENTS.

(9) SEE APPENDIX SHEET 802 THRU 805 FOR AREA LIGHTING CONTROL PANEL.

(10) PUMP PROTECTION RELAY. CONTRACTOR TO CONFIRM PUMP MANUFACTURER W/OWNER IN ORDER TO PROVIDE CORRECT MOTOR OVERLOAD RELAY.

(11) 2#12 & 1#12 GND-1".

(12) GENERATOR RECEPTACLE-SEE SPECIFICATION 16050 PARAGRAPH 2.21 THROUGH 2.24.

NOTES:

1. REFERENCES TO APPENDIX OR DETAIL CALLOUTS REFER TO CITY OF ORLANDO PUBLIC WORKS DEPARTMENT LIFT STATION STANDARDS.

100% SUBMITTAL

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT: CITY OF ORLANDO
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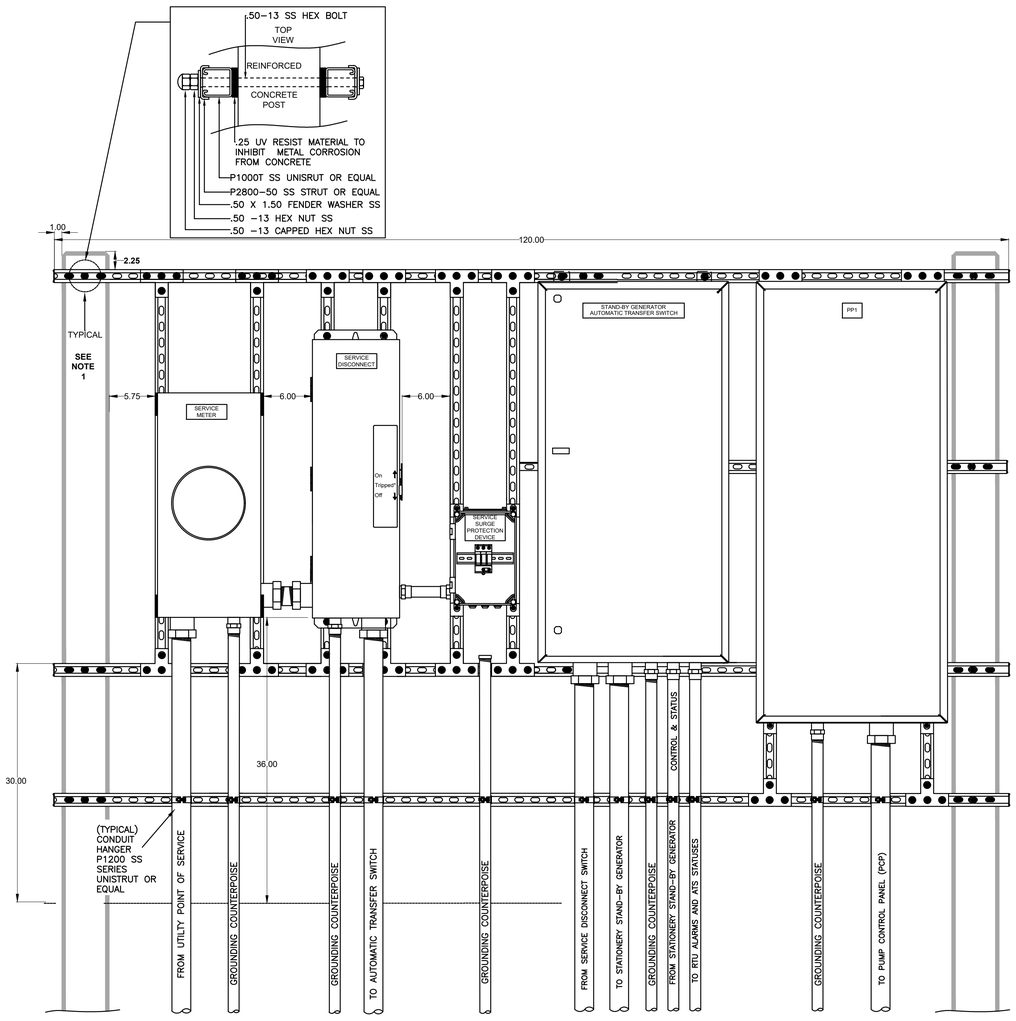
PROJECT: LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE: LIFT STATION NO. 126 SINGLE LINE DIAGRAM

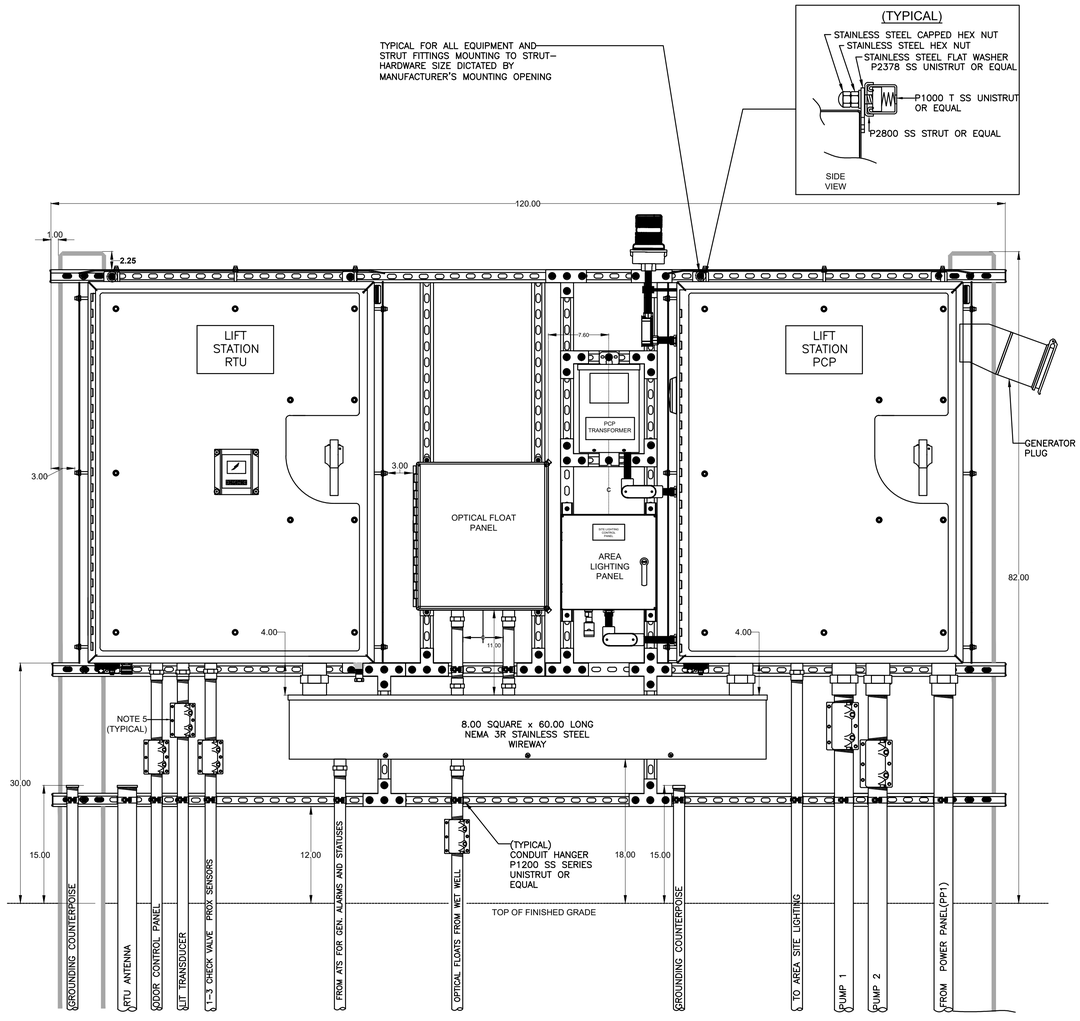
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CORPORATE OFFICE: 4030 W. BOY SCOUT BOULEVARD TAMPA, FLORIDA 33607 FBPR CERTIFICATE OF AUTHORIZATION NO.34
LOCAL OFFICE: 482 SOUTH KELLER ROAD ORLANDO, FL 32810 TEL: 407.647.7275 FAX: 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-602
REV.	△

PLOT DATE:
FILE NAME:



REAR ELEVATION



FRONT ELEVATION
(FACING WETWELL)

NOTES:

1. 6.00 INCH SQUARE REINFORCED CONCRETE POST WITH 4500 PSI MINIMUM CONCRETE AND (4) # 4 REBARS SPACED 4 INCHES SQUARE IN CENTER OF POST. ALL EDGES SHALL HAVE .50 INCH WIDE CHAMFER.
2. EQUIPMENT UTILIZED SHALL CONFORM BY SPECIFICATIONS SPECIFIED IN DIVISIONS 13 AND 16. NO SUBSTITUTION WITHOUT OWNER'S WRITTEN APPROVAL.
3. DIMENSIONS IN INCHES.
4. ALL CONDUIT PENETRATIONS INTO ALL ENCLOSURES SHALL BE FITTED WITH A THREADED HUB CONNECTOR, SSTG SERIES. COOPER CROUSE HINDS, OR EQUAL.
5. CONDUIT SEAL OFF FITTINGS SHALL CROUSE HINDS TYPE EYSR OR EQUAL.

L.S. NO. 126 EQUIPMENT ELEVATION

SCALE: N.T.S.

PROPOSED ELEVATION SHOWN FOR CONTRACTOR USE. REFER TO CITY OF ORLANDO LIFT STATION STANDARDS AND SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS

REV	DATE	ISSUED FOR
REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT:
CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE
LS NO. 126 EQUIPMENT RACK ELEVATION

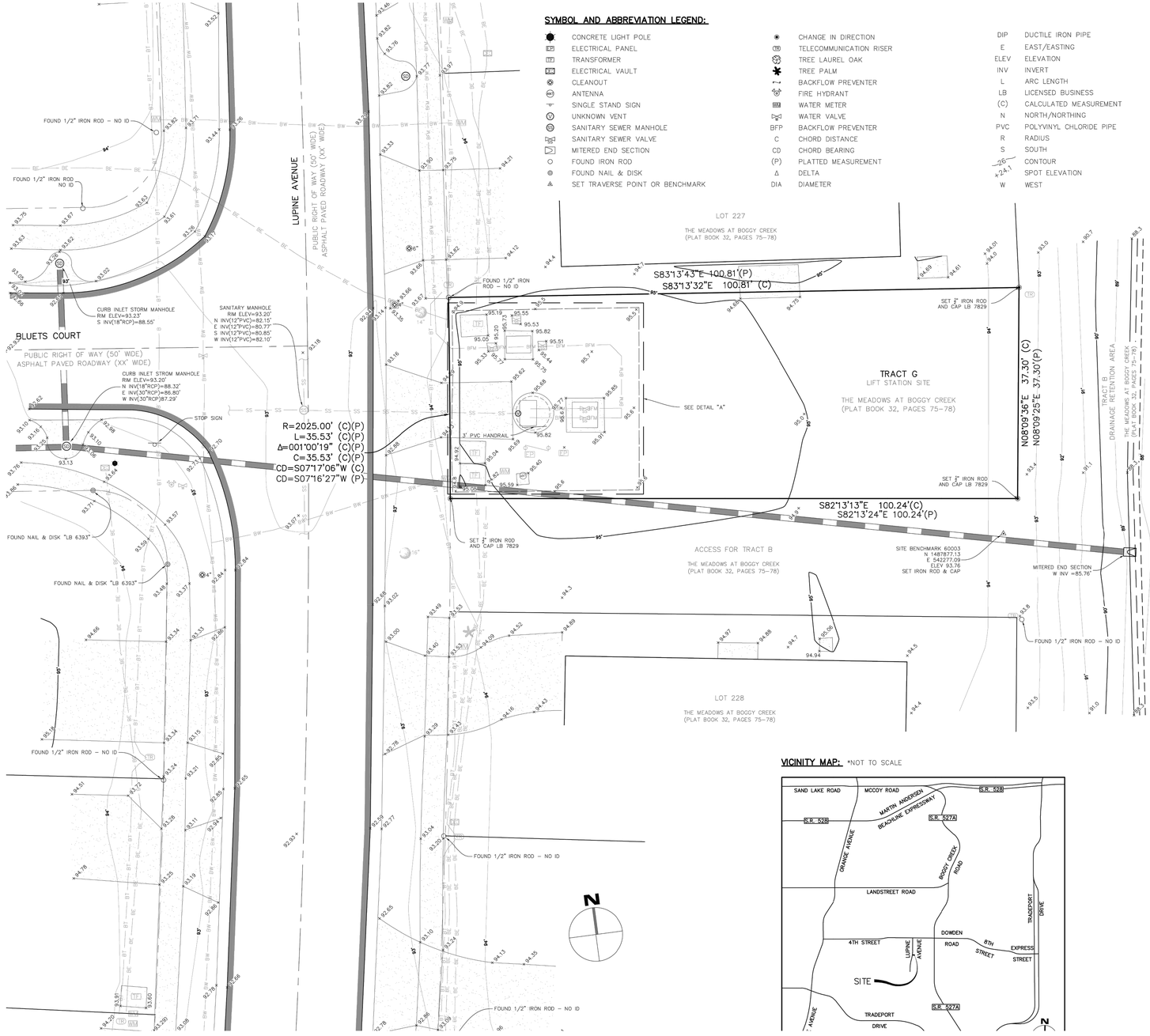
ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.34
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-603
REV.	△

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745–5604
FAX: (407) 745–5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

100% SUBMITTAL

PLOT DATE:
FILE NAME:



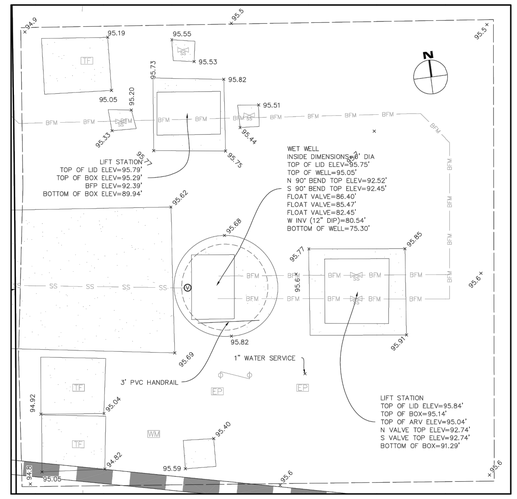
SYMBOL AND ABBREVIATION LEGEND:

CONCRETE LIGHT POLE	CHANGE IN DIRECTION	DIP	DUCTILE IRON PIPE
ELECTRICAL PANEL	TELECOMMUNICATION RISER	E	EAST/EASTING
TRANSFORMER	TREE LAUREL OAK	ELEV	ELEVATION
ELECTRICAL VAULT	TREE PALM	INV	INVERT
CLEANOUT	BACKFLOW PREVENTER	L	ARC LENGTH
ANTENNA	FIRE HYDRANT	LB	LICENSED BUSINESS
SINGLE STAND SIGN	WATER METER	(C)	CALCULATED MEASUREMENT
UNKNOWN VENT	WATER VALVE	N	NORTH/NORTHING
SANITARY SEWER MANHOLE	BACKFLOW PREVENTER	PVC	POLYVINYL CHLORIDE PIPE
SANITARY SEWER VALVE	CHORD DISTANCE	R	RADIUS
MITERED END SECTION	CHORD BEARING	S	SOUTH
FOUND IRON ROD	PLATTED MEASUREMENT	25	CONTOUR
FOUND NAIL & DISK	DELTA	+24.1	SPOT ELEVATION
SET TRAVERSE POINT OR BENCHMARK	DIAMETER	W	WEST

- BE — BURIED ELECTRICAL
- BFM — BURIED FORCE MAIN
- SS — BURIED SANITARY SEWER
- BT — BURIED TELECOMMUNICATION
- BW — BURIED WATER
- CENTERLINE
- CONTINUOUS
- DASHED LINE
- FENCE LINE
- DRAINAGE PIPE
- BUILDING LINE
- EDGE OF PAVEMENT
- CONCRETE

DETAIL "A"

SCALE: 1 INCH = 5 FEET



LEGAL DESCRIPTION:

TRACT G, THE MEADOWS AT BOGGY CREEK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 32, PAGE 76.

CERTIFICATIONS:

TO: CITY OF ORLANDO

SURVEY NOTES:

1. THIS SURVEY REPRESENTS A BOUNDARY AND TOPOGRAPHIC SURVEY AS DESCRIBED BY STANDARDS OF PRACTICE FOR SURVEYING AND MAPPING, CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODES. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
2. THIS SURVEY IS LIMITED TO; (1) THE DOCUMENTATION OF THE PERIMETER OF THE PARCELS OF LAND SHOWN HEREON BY MONUMENTING THE BOUNDARY LINES FOR THE PURPOSE OF DESCRIBING SAID PARCELS. (2) THE LOCATION OF SURFACE IMPROVEMENTS. (3) SPOT ELEVATIONS AND CONTOURS. (4) BUILDINGS ELEVATIONS. (5) TREE SURVEY. (6) STORM DRAINAGE AND SANITARY SEWER AS-BUILT. (7) SUBSURFACE UTILITIES AS DESIGNATED BY L & S.
3. THE SURVEYED PROPERTY SHOWN HEREON CONTAINS A TOTAL AREA OF 0.084 ACRES (3658 SQUARE FEET) MORE OR LESS.
4. THE HORIZONTAL SURVEY DATA SHOWN IS BASED ON NORTH AMERICAN DATUM OF 1983 (NAD83), WITH A 1990 ADJUSTMENT, STATE PLANE COORDINATES, FLORIDA EAST ZONE, AND IS RELATIVE TO NATIONAL GEODETIC SURVEY CONTROL POINT #N-122, BEING A 2" DISK STAMPED "N 122 1945" AND HAVING THE COORDINATES OF N:1493207.236, E:547894.256.
5. THE VERTICAL DATUM AND ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88), NATIONAL GEODETIC SURVEY CONTROL POINT #N-122, HAVING AN ELEVATION OF 90.90 FEET.
6. BEARINGS SHOWN HEREON ARE BASED ON THE EAST LINE OF TRACT G, REFERENCED AS HAVING A PLAT BEARING OF N08°09'25"E AND A DISTANCE OF 37.30', HAVING A MEASURED BEARING OF N08°09'36"E.
7. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN FLOOD ZONE "X", ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAP NUMBER 12095C0440F, DATED DECEMBER 6, 2000, AND REVISED SEPTEMBER 25, 2009.
8. THE SYMBOLS REFLECTED IN THE LEGEND AND ON THIS SURVEY MAY HAVE BEEN ENLARGED FOR CLARITY. THE SYMBOLS HAVE BEEN PLOTTED AT THE CENTER OF THE FIELD LOCATION AND MAY NOT REPRESENT THE ACTUAL SHAPE OR SIZE OF THE FEATURE.
9. THE INFORMATION DEPICTED ON THIS SURVEY REPRESENTS THE RESULTS OF A FIELD SURVEY ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS A REPRESENTATION OF THE GENERAL CONDITIONS EXISTING AT THAT TIME.
10. THE SURVEYOR DID NOT INSPECT THE PROPERTY SHOWN HEREON FOR ENVIRONMENTAL HAZARDS.
11. FENCES AND WALL DIMENSIONS ARE APPROXIMATE. THE SURVEYOR DID NOT DETERMINE OWNERSHIP OF WALLS AND FENCES.
12. THIS FIRM IDENTIFIED VARIOUS TYPES OF TREES LOCATED ON THIS SITE BASED ON COMMON KNOWLEDGE OF TREE SPECIES. A QUALIFIED LANDSCAPE ARCHITECT SHOULD BE EMPLOYED FOR POSITIVE IDENTIFICATION OF TREE SPECIES. TREE DIAMETERS ARE APPROXIMATE AND WERE MEASURED AT BREAST HEIGHT. ONLY TREES 3 CALIPER INCHES OR LARGER WERE LOCATED AND SHOWN ON THE SURVEY. HEDGES AND GROUND COVER WERE NOT LOCATED AND ARE NOT SHOWN. EXOTIC TREES SUCH AS MELALEUCA, BRAZILIAN PEPPER AND AUSTRALIAN PINE WERE NOT LOCATED OR SHOWN HEREON.
13. ORNAMENTAL PLANTS, HEDGES, SPRINKLER HEADS WERE NOT LOCATED.
14. THIS SURVEY IS LIMITED TO THE LOCATION OF ABOVE GROUND IMPROVEMENTS ONLY. ENCROACHMENTS WERE NOT LOCATED AND ARE NOT SHOWN HEREON. THIS SITE COULD HAVE UNDERGROUND INSTALLATIONS THAT ARE NOT SHOWN HEREON. BEFORE DESIGN, CONSTRUCTION EXCAVATIONS, CONTACT 811.COM (811) AND THE APPROPRIATE UTILITY COMPANIES FOR FIELD VERIFICATION OF UTILITIES.
15. IT SHOULD BE UNDERSTOOD BY THE CLIENT THAT SOME UNDERGROUND UTILITIES MAY NOT BE MADE OF A CONDUCTIVE MATERIAL OR MAY NOT RETURN A GPR ECHO AND THEREFORE CANNOT BE DESIGNATED WITH ELECTRONIC PROSPECTING EQUIPMENT OR GPR.
16. L & S DIVERSIFIED, LLC DID NOT SEARCH THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA FOR OWNERSHIP, RIGHTS-OF-WAY, EASEMENTS OR OTHER MATTERS AFFECTING THE PROPERTY BEING SURVEYED. THERE MAY BE ADDITIONAL RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.
17. THE INFORMATION CONTAINED IN THIS DOCUMENT WAS PREPARED BY L & S DIVERSIFIED, LLC (L&S). L&S HAS TAKEN ALL REASONABLE STEPS TO ENSURE THE ACCURACY OF THIS DOCUMENT. WE CANNOT GUARANTEE THAT ALTERATIONS AND/OR MODIFICATIONS WILL NOT BE MADE BY OTHERS AFTER IT LEAVES OUR POSSESSION. THIS DOCUMENT MUST BE COMPARED TO THE ORIGINAL HARD COPY (WHICH BEARS THE RAISED SURVEYORS CERTIFICATION SEAL IF APPLICABLE) TO ENSURE THE ACCURACY OF THE INFORMATION CONTAINED HEREON AND TO FURTHER ENSURE THAT ALTERATIONS AND/OR MODIFICATIONS HAVE NOT BEEN MADE. L&S MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OF THE INFORMATION CONTAINED IN THIS OR ANY DOCUMENT TRANSMITTED OR REVIEWED BY COMPUTER OR OTHER ELECTRONIC MEANS. CONTACT L&S DIRECTLY FOR VERIFICATION OF ACCURACY.
18. THIS SURVEY MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=10' OR SMALLER.
19. THIS SURVEY CANNOT BE RELIED UPON BY PERSONS OR ENTITIES OTHER THAN THE PERSONS OR ENTITIES CERTIFIED TO HEREON.
20. ADDITIONS OR DELETIONS TO THIS SURVEY MAP BY OTHER THAN THE SIGNING PARTY OR PARTIES ARE PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

VICINITY MAP: *NOT TO SCALE

CITY OF ORLANDO LIFT STATION #129

ATKINS

BOUNDARY & TOPOGRAPHIC SURVEY

LOCATED IN

SECTION 6, TOWNSHIP 24 SOUTH, RANGE 30 EAST
CITY OF ORLANDO
ORANGE COUNTY, FLORIDA

GRAPHIC SCALE

10' 0 5' 10' 20'

1 INCH = 10 FEET

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY REPRESENTED HEREON IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF. IT HAS BEEN PREPARED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN CHAPTER 5J-17 OF THE FLORIDA ADMINISTRATIVE CODE PURSUANT TO TO CHAPTERS 177 AND 472 OF THE FLORIDA STATUES.

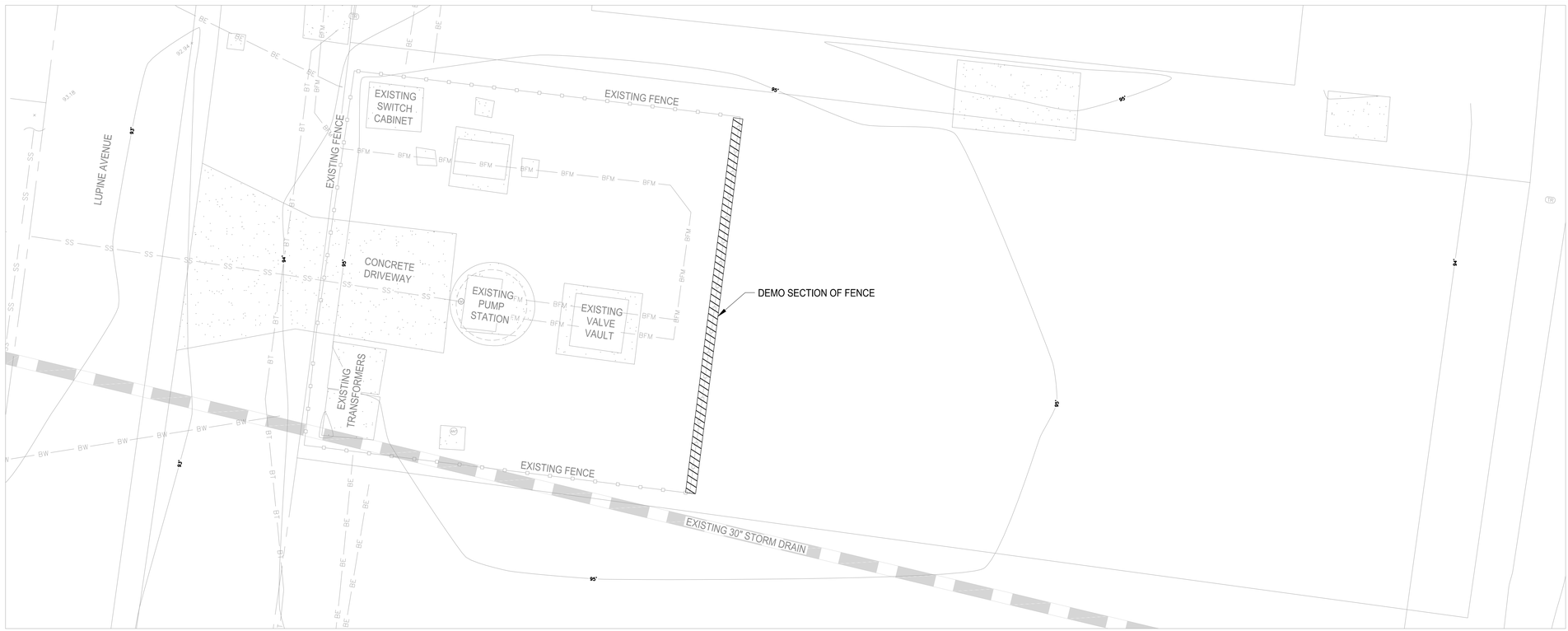
Digitally signed by Sherry Manor
Date: 2020.06.05 13:12:11 -04'00'

SHERRY LEE MANOR, PSM - LS# 6961
THIS SURVEY MAP AND/OR REPORT IS NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF THE NOTARY.

L & S Diversified
Professional Surveyors and Mappers
405 LAKE HOWELL ROAD | SUITE 100 | MAITLAND, FL | 32751
PHONE 407.681.3836 | FAX 407.681.6541
WWW.LSSURVEYOR.COM | INFO@LSSURVEYOR.COM

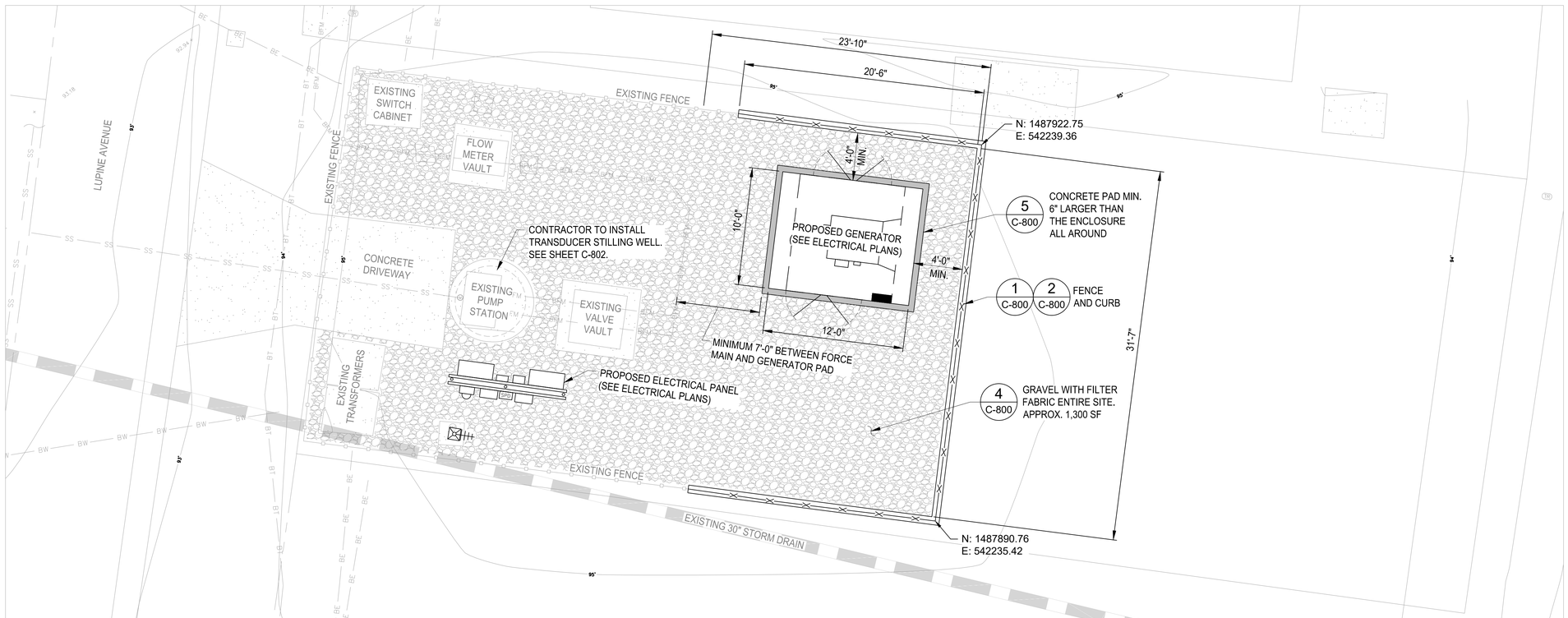
PROFESSIONAL SURVEYOR & MAPPER BUSINESS LICENSE | LB#7829

REV.	DATE	ISSUED FOR



NOTES:
1. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION EXISTING BEFORE COMMENCING CONSTRUCTION WORK.
2. COORDINATE AND SCHEDULE ACCESS TO THE SITE BEFORE COMMENCING CONSTRUCTION WORK.

LIFT STATION No. 129 SITE DEMOLITION PLAN



LIFT STATION No. 129 PROPOSED SITE PLAN

N

0 5 10 15

SCALE: 1" = 5'

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

REV	DATE	ISSUED FOR

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CLIENT:
CITY OF ORLANDO

PROJECT:
LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129
EMERGENCY GENERATORS

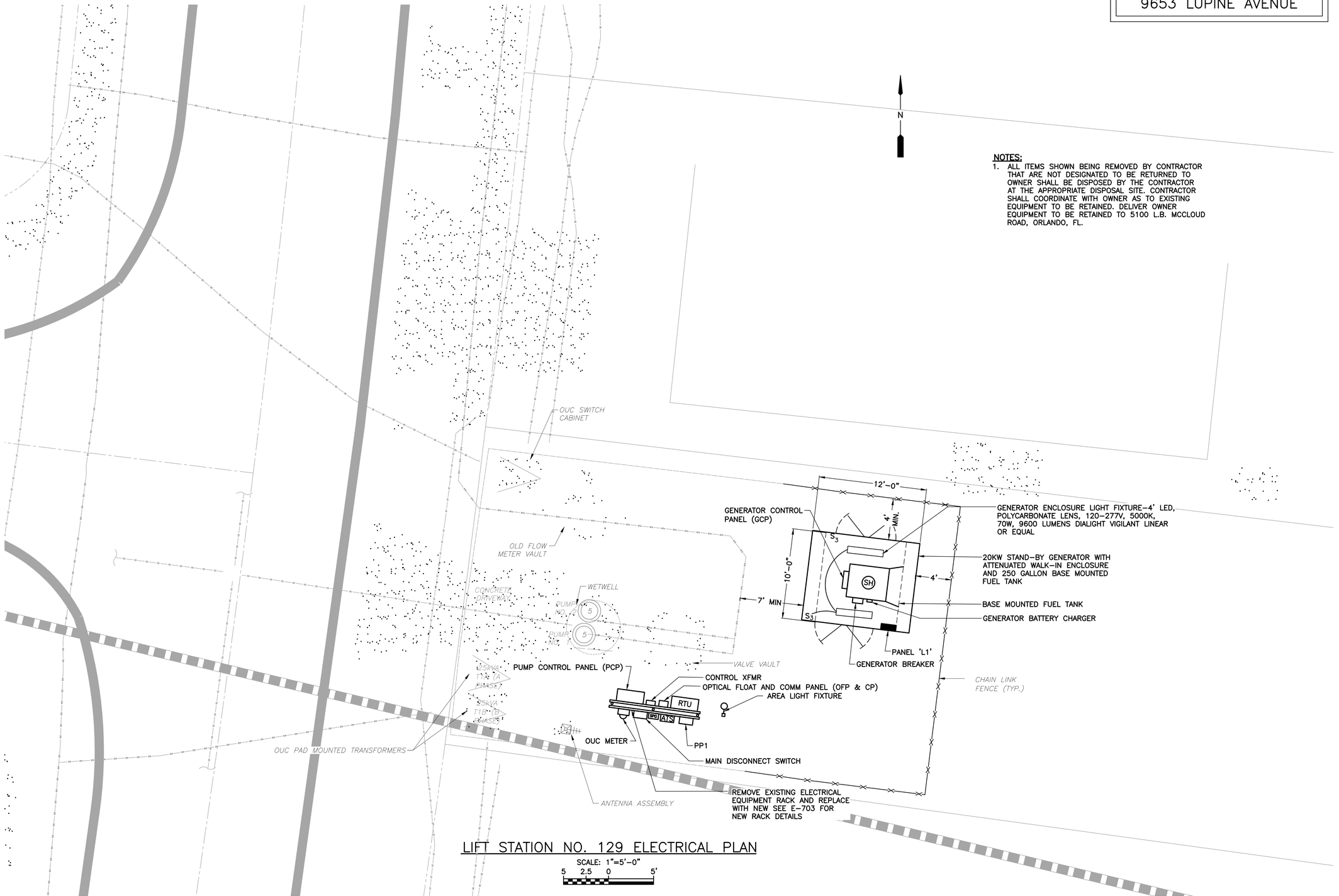
SHEET TITLE
LIFT STATION No. 129
SITE DEMOLITION PLAN AND PROPOSED SITE PLAN

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF
AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-701
REV.	△

PLOT DATE: Feb 23, 2021 - 12:40pm
FILE NAME: U:\HO\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-701.dwg

LIFT STATION #129
9653 LUPINE AVENUE



NOTES:

1. ALL ITEMS SHOWN BEING REMOVED BY CONTRACTOR THAT ARE NOT DESIGNATED TO BE RETURNED TO OWNER SHALL BE DISPOSED BY THE CONTRACTOR AT THE APPROPRIATE DISPOSAL SITE. CONTRACTOR SHALL COORDINATE WITH OWNER AS TO EXISTING EQUIPMENT TO BE RETAINED. DELIVER OWNER EQUIPMENT TO BE RETAINED TO 5100 L.B. MCCLOUD ROAD, ORLANDO, FL.

LIFT STATION NO. 129 ELECTRICAL PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'

100% SUBMITTAL

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
FLORIDA REG. NO.42017

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CLIENT:
CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS

PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

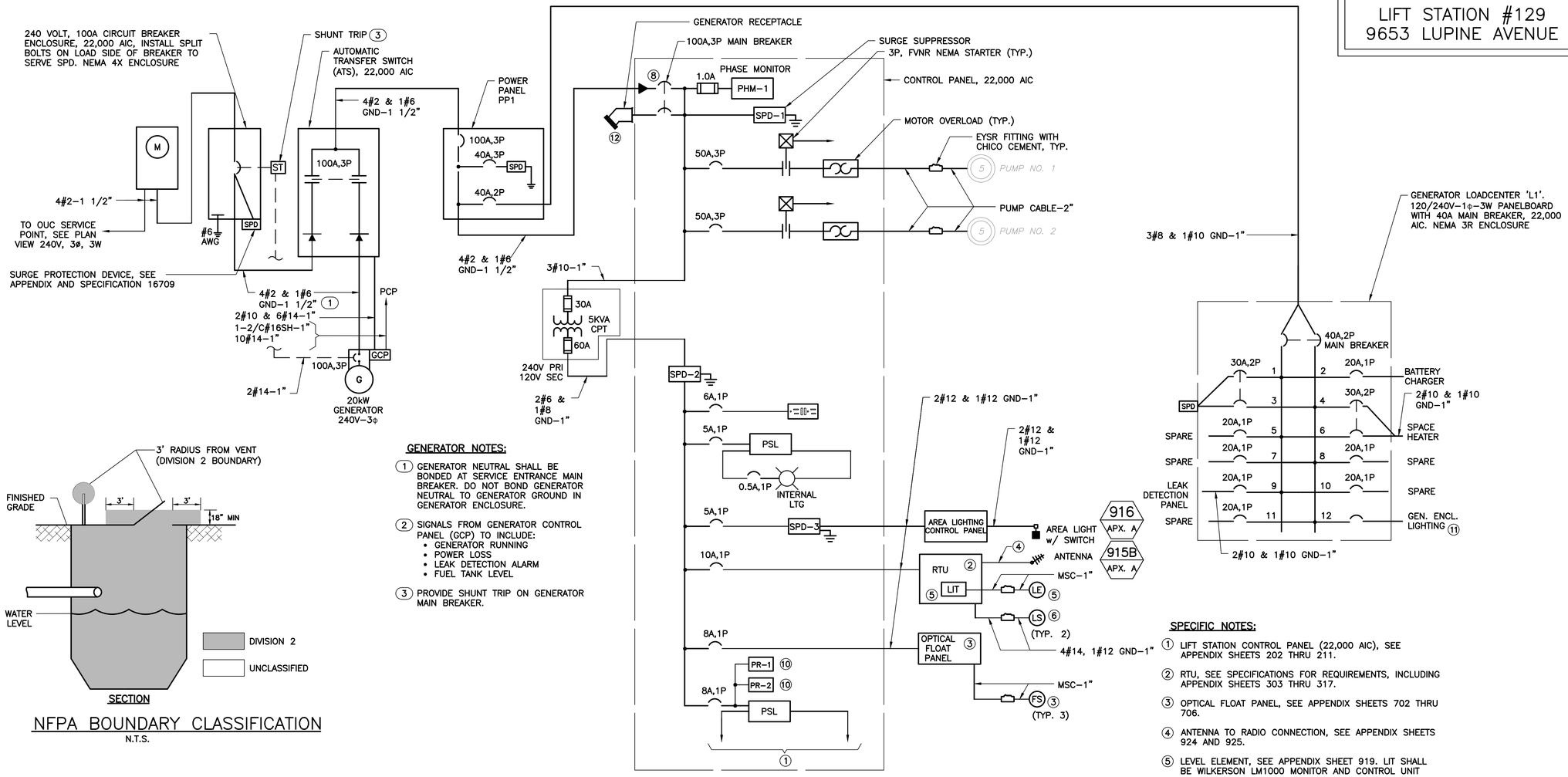
SHEET TITLE
LIFT STATION NO. 129 ELECTRICAL PLAN

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPA CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-701
REV.	△

PLOT DATE:
FILE NAME:

LIFT STATION #129
9653 LUPINE AVENUE



NFPA BOUNDARY CLASSIFICATION

N.T.S.

GENERATOR NOTES:

(1) GENERATOR NEUTRAL SHALL BE BONDED AT SERVICE ENTRANCE MAIN BREAKER. DO NOT BOND GENERATOR NEUTRAL TO GENERATOR GROUND IN GENERATOR ENCLOSURE.

(2) SIGNALS FROM GENERATOR CONTROL PANEL (GCP) TO INCLUDE:
- GENERATOR RUNNING
- POWER LOSS
- LEAK DETECTION ALARM
- FUEL TANK LEVEL

(3) PROVIDE SHUNT TRIP ON GENERATOR MAIN BREAKER.

SPECIFIC NOTES:

(1) LIFT STATION CONTROL PANEL (22,000 AIC), SEE APPENDIX SHEETS 202 THRU 211.

(2) RTU, SEE SPECIFICATIONS FOR REQUIREMENTS, INCLUDING APPENDIX SHEETS 303 THRU 317.

(3) OPTICAL FLOAT PANEL, SEE APPENDIX SHEETS 702 THRU 706.

(4) ANTENNA TO RADIO CONNECTION, SEE APPENDIX SHEETS 924 AND 925.

(5) LEVEL ELEMENT, SEE APPENDIX SHEET 919. LIT SHALL BE WILKERSON LM1000 MONITOR AND CONTROL UNIT AND ASSOCIATED LEVEL ELEMENT.

(6) CHECK VALVE POSITION SWITCH, SEE APPENDIX SHEET 923, DETAIL 2.

(7) SEE APPENDIX SHEETS 902 THRU 907 FOR GROUNDING DETAILS.

(8) AMPACITY SHOWN REPRESENTS TRIP SETTINGS, SEE APPENDIX FOR ADDITIONAL REQUIREMENTS.

(9) SEE APPENDIX SHEET 802 THRU 805 FOR AREA LIGHTING CONTROL PANEL.

(10) PUMP PROTECTION RELAY. CONTRACTOR TO CONFIRM PUMP MANUFACTURER W/OWNER IN ORDER TO PROVIDE CORRECT MOTOR OVERLOAD RELAY.

(11) 2#12 & 1#12 GND-1".

(12) GENERATOR RECEPTACLE-SEE SPECIFICATION 16050 PARAGRAPH 2.21 THROUGH 2.24.

NOTES:

1. REFERENCES TO APPENDIX OR DETAIL CALLOUTS REFER TO CITY OF ORLANDO PUBLIC WORKS DEPARTMENT LIFT STATION STANDARDS.

NFPA NOTES:

1. THE AREA INSIDE THE WET WELL IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
2. THE AREA WITHIN 3 FEET FROM THIS HATCH AND 1.5 FEET ABOVE THE WET WELL SLAB IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
3. THE AREA WITHIN A 3 FOOT RADIUS FROM THE VENT OPENING IS A HAZARDOUS, CLASS 1, DIV. 2 LOCATION.
4. PROVIDE U.L. LISTED MECHANICAL INTERLOCK SO THAT ONLY ONE CIRCUIT BREAKER CAN BE CLOSED AT A TIME.
5. ALL CONDUITS SHALL ENTER THE RTU AND CONTROL PANEL FROM THE BOTTOM UNLESS OTHERWISE SHOWN ON DRAWINGS.
6. PROVIDE WIRING METHODS AND MATERIALS SUITABLE FOR A CLASS 1, DIVISION 2 AREA WITHIN ALL HAZARDOUS AREAS. USE CROUSE-HINDS MODEL EYSR RETROFIT SEALING FITTING.
7. FIELD PANEL LOCATIONS ARE TO BE FIELD VERIFIED AND ARE SHOWN FOR CLARITY ONLY.
8. MAIN CIRCUIT BREAKERS AND MOTOR CIRCUIT BREAKERS TO BE SIZED ACCORDING TO MOTOR H.P. AND SYSTEM LOAD.
9. CONDUIT EXTENDING FROM THE WETWELL SHALL BE PVC SCHEDULE 80 AND SHALL BE ENCASED IN A CONCRETE ENVELOPE NO LESS THAN 2 INCHES THICK AND SHALL HAVE A COVER OF NO LESS THAN 24 INCHES. THREADED RIGID METAL CONDUIT SHALL BE USED FOR THE LAST 24 INCHES OF THE UNDERGROUND RUN TO EMERGENCY. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INCLUDED TO PROVIDE ELECTRICAL CONTINUITY. INSTALLATION SHALL BE IN ACCORDANCE WITH NEC 70, ARTICLE 501, PART II, 501.10.

LS NO. 129 SINGLE LINE DIAGRAM

SCALE: N.T.S.

LS NO. 129 SERVICE LOAD TABULATION

SERVICE VOLTAGE: 240V-3ø-3W

DESCRIPTION	LOAD		AMPACITY	
PUMP	2 @ 5 HP	=	30.40	AMPS
PSL-1	–	=	1.00	AMPS
GFI RECEPTACLE	–	=	2.00	AMPS
RTU	–	=	3.00	AMPS
LEVEL TRANSDUCER	–	=	2.00	AMPS
AREA LIGHTING	@ 125%	=	2.00	AMPS
GEN PANEL	–	=	10.00	AMPS
	CONNECTED LOAD	=	50.40	AMPS

(1) MINIMUM SERVICE ENTRANCE = 50.40 AMPS + (0.25)(15.20) = (54.20) AMPS

NOTES:

(1) SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 430, TABLE 430.250 OF THE NATIONAL ELECTRICAL CODE.

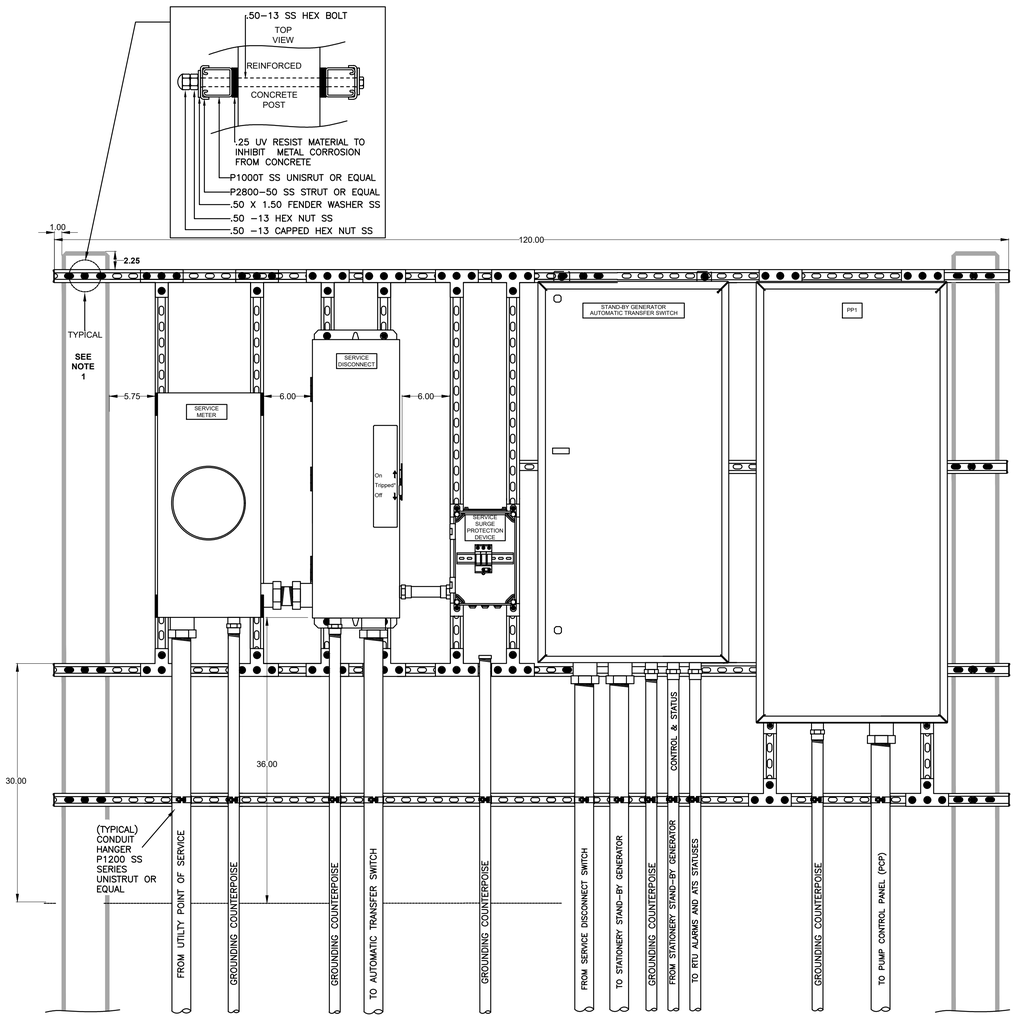
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EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

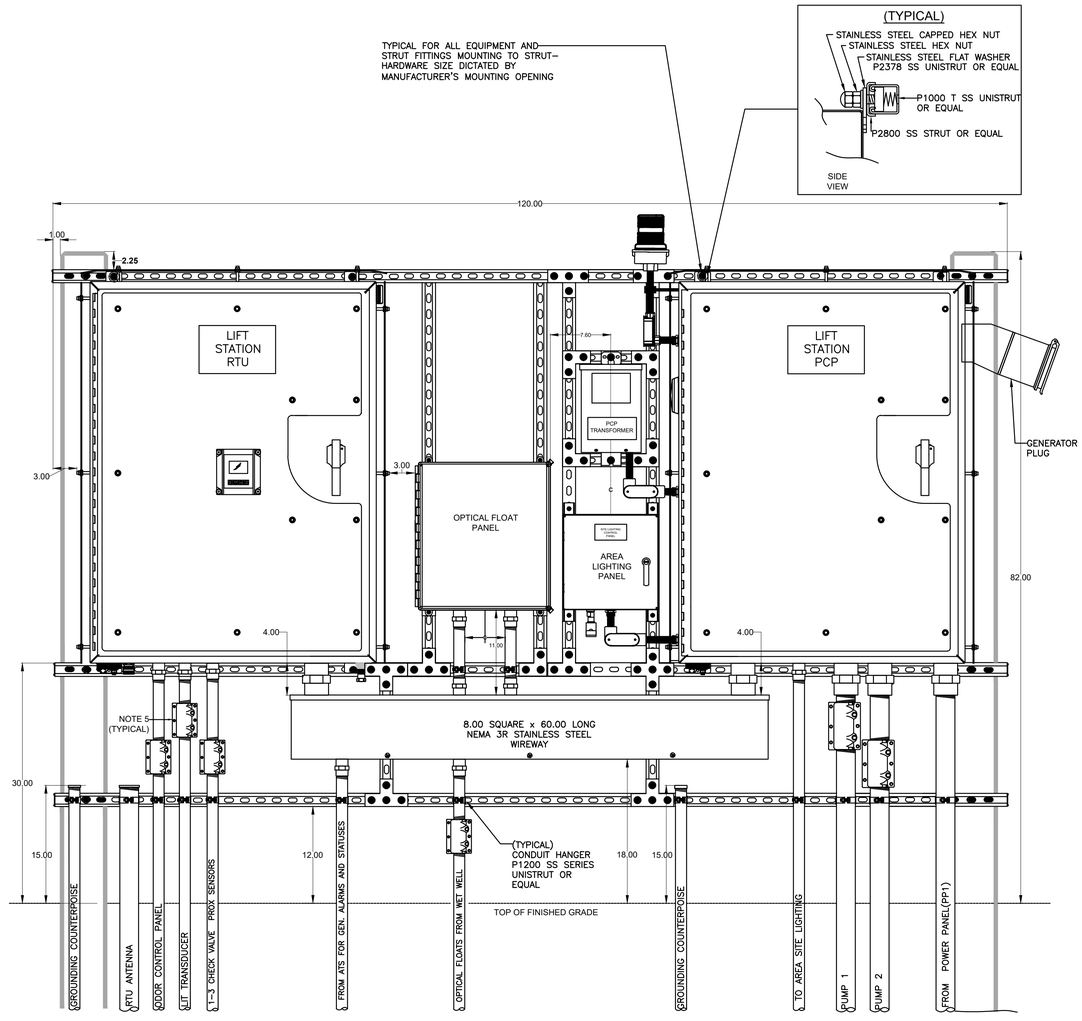
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REAR ELEVATION



FRONT ELEVATION

NOTES:

1. 6.00 INCH SQUARE REINFORCED CONCRETE POST WITH 4500 PSI MINIMUM CONCRETE AND (4) # 4 REBARS SPACED 4 INCHES SQUARE IN CENTER OF POST. ALL EDGES SHALL HAVE .50 INCH WIDE CHAMFER.
2. EQUIPMENT UTILIZED SHALL CONFORM BY SPECIFICATIONS SPECIFIED IN DIVISIONS 13 AND 16. NO SUBSTITUTION WITHOUT OWNER'S WRITTEN APPROVAL.
3. DIMENSIONS IN INCHES.
4. ALL CONDUIT PENETRATIONS INTO ALL ENCLOSURES SHALL BE FITTED WITH A THREADED HUB CONNECTOR, SSTG SERIES. COOPER CROUSE HINDS, OR EQUAL.
5. CONDUIT SEAL OFF FITTINGS SHALL CROUSE HINDS TYPE EYSR OR EQUAL.

L.S. NO. 129 EQUIPMENT ELEVATION

SCALE: N.T.S.

PROPOSED ELEVATION SHOWN FOR CONTRACTOR USE. REFER TO CITY OF ORLANDO LIFT STATION STANDARDS AND SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS

100% SUBMITTAL

EDA
Electrical Design Associates
6965 PIAZZA GRANDE AVE., STE. 311
ORLANDO, FLORIDA 32835
PHONE: (407) 745–5604
FAX: (407) 745–5603
C.O.A. No. 8079
WILLIAM C. NELSON, P.E.
Florida P.E. No. 42017

REV	DATE	ISSUED FOR

WILLIAM NELSON, P.E.
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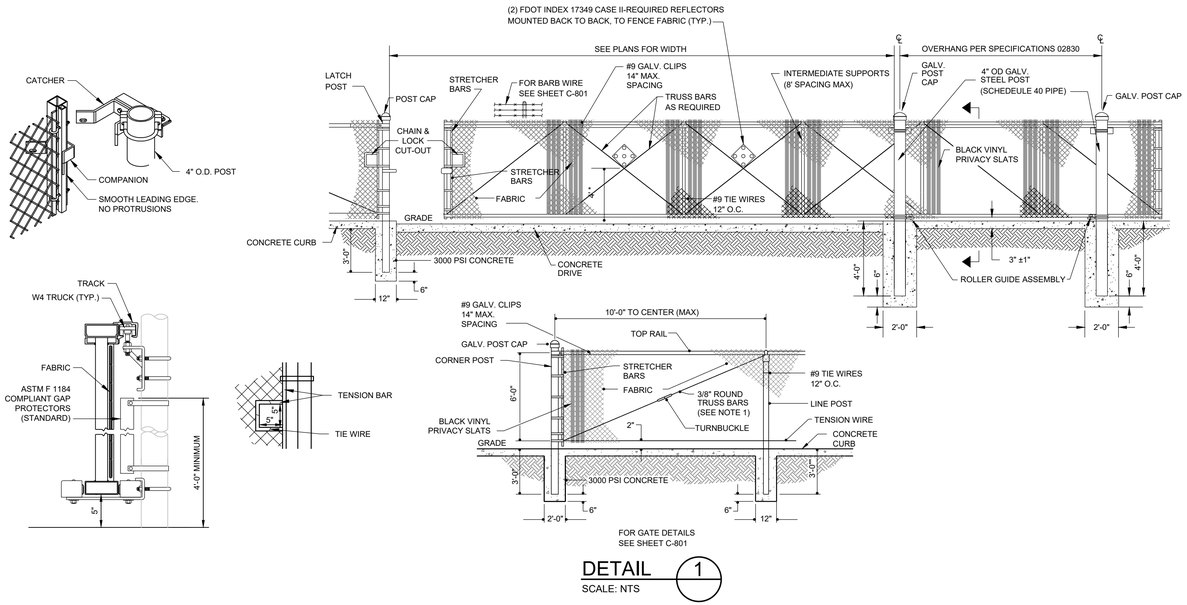
PROJECT:
LIFT STATION NO. 059, 061, 073, 083, 094, 126 AND 129
EMERGENCY GENERATORS

SHEET TITLE
LS NO. 129 EQUIPMENT RACK ELEVATION

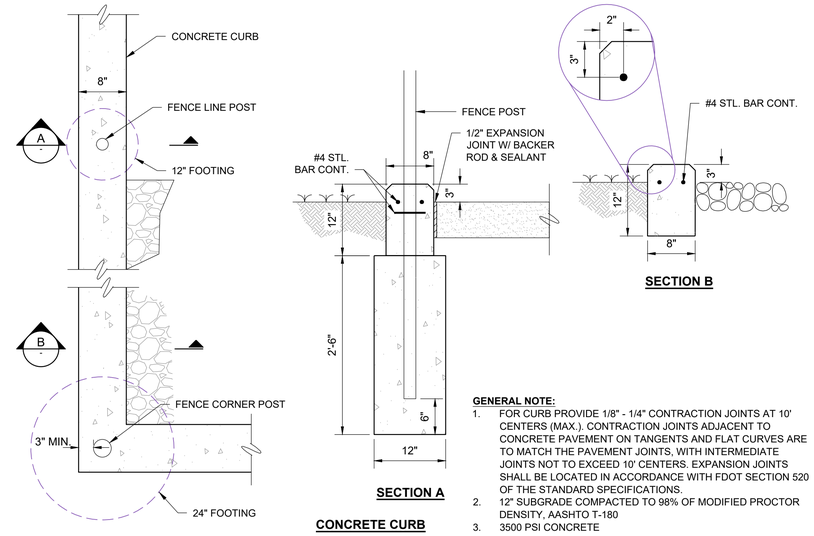
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CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.34
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100050896
PROJECT ENG:	R.S.
DRAWN:	R.M.
CHECKED:	D.D.
APPROVED:	W.N.
SHEET NO.	E-703
REV.	△

PLOT DATE:
FILE NAME:



DETAIL 1
SCALE: NTS



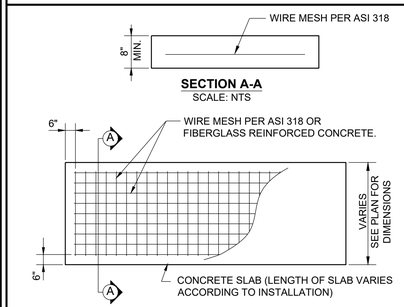
SECTION A

CONCRETE CURB

SECTION B

GENERAL NOTE:
1. FOR CURB PROVIDE 1/8" - 1/4" CONTRACTION JOINTS AT 10' CENTERS (MAX.). CONTRACTION JOINTS ADJACENT TO CONCRETE PAVEMENT ON TANGENTS AND FLAT CURVES ARE TO MATCH THE PAVEMENT JOINTS, WITH INTERMEDIATE JOINTS NOT TO EXCEED 10' CENTERS. EXPANSION JOINTS SHALL BE LOCATED IN ACCORDANCE WITH FDOT SECTION 520 OF THE STANDARD SPECIFICATIONS.
2. 12" SUBGRADE COMPACTED TO 98% OF MODIFIED PROCTOR DENSITY, AASHTO T-180
3. 3500 PSI CONCRETE

DETAIL 2
SCALE: NTS



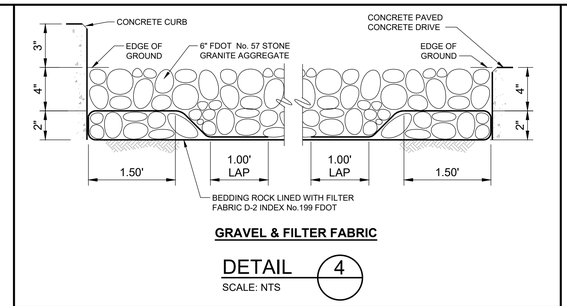
SECTION A-A
SCALE: NTS

SLAB PLAN VIEW
SCALE: NTS

NOTE:
REMOVE ORGANICS & COMPACT SOILS BELOW SLAB TO 95% DRY DENSITY BEFORE SETTING FORMS.

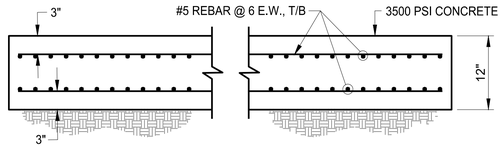
GENERAL SLAB DESIGN

DETAIL 3
SCALE: NTS



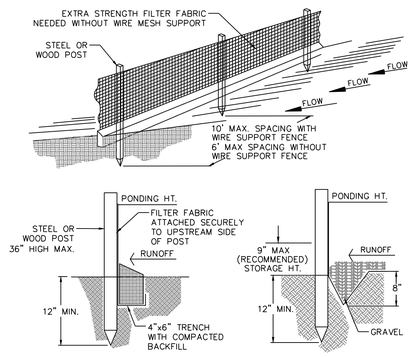
GRAVEL & FILTER FABRIC

DETAIL 4
SCALE: NTS



GENERATOR/FUEL TANK AND ENCLOSURE PAD

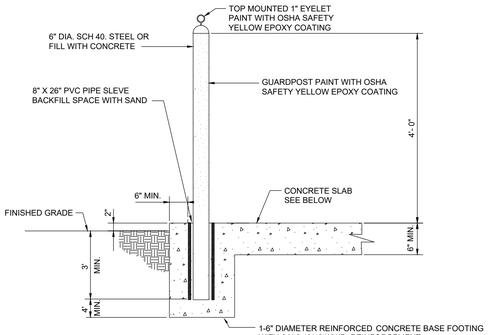
DETAIL 5
SCALE: NTS



NOTES:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE

DETAIL 6
SCALE: NTS

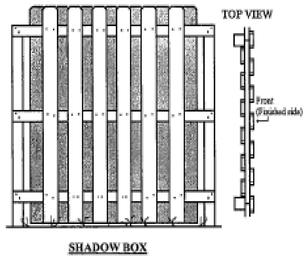


BOLLARD

DETAIL 7
SCALE: NTS

Wood fences not exceeding 6'-0" in height may be constructed to meet the following minimum requirements:

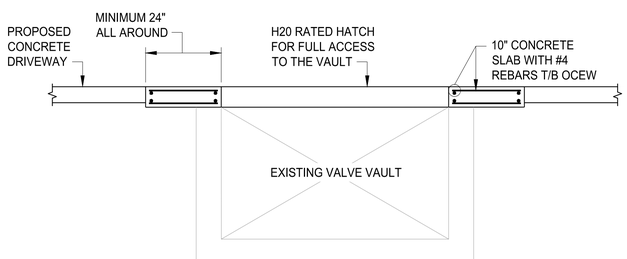
(1) Vertical post of nominal 4x4 spaced a maximum of 4' o/c for 6' high fences; 5' o/c for 5' high fences, 6' o/c for 4' high fence.
(2) Post shall be embedded 2'0" into concrete footing 10" in diameter and 2'0" deep.
(3) 2x4 material shall be fastened with (2) #16D galv. nails at each attachment.
(4) All lumber shall be a minimum of #2 grade or better.
(5) All fasteners shall be corrosion resistant.
(6) Fence boards less than 8" wide shall be fastened with (2) #8 D galv. nails at each connection point.



SHADOW BOX

BOARD ON BOARD

DETAIL 8
SCALE: NTS



DETAIL 9
SCALE: NTS

REV	DATE	ISSUED FOR

GENERAL NOTES:

1. THE CONTRACTOR MAY SUBSTITUTE ANY EQUIVALENT CANTILEVER SLIDE GATE APPROVED BY THE ENGINEER.

   EXTRUDED, ROLLED OR FORMED COMPONENTS THAT PROVIDE EQUAL STRENGTH AND STABILITY MAY BE USED IN LIEU OF THE PIPE COMPONENTS SHOWN; AND, INTERNAL ROLLERS MAY BE USED IN LIEU OF THE EXTERNAL ROLLER UNITS SHOWN.

   GATE COMPONENTS SHALL MEET OR EXCEED THE MATERIAL REQUIREMENTS SPECIFIED ON FDOT INDEX NO. 802.

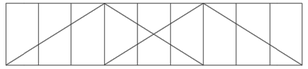
2. STEEL GATE FRAME SHALL BE FABRICATED PRIOR TO GALVANIZING, EXCEPT THAT TRUSS RODS AND TRUSS ROD PLATES MAY BE FABRICATED FOLLOWING FRAME GALVANIZING PROVIDED SURFACES DAMAGED DURING WELDING ARE GALVANIZED IN ACCORDANCE WITH SECTION 24 OF AASHTO M36; OR FABRICATED FROM PIPE COMPONENTS WITH PROTECTIVE COATING MEETING THE REQUIREMENTS OF INDEX 802 THAT ARE TOLERANT OF WELDING (LOW BURN BACK), AND A PROTECTIVE COATING APPLIED TO THE WELD DAMAGE PIPE SURFACES THAT IS EQUIVALENT TO THE PROTECTIVE COATING OF THE FABRICATED PIPE STOCK.

3. ALL FABRIC SHALL BE KNUCKLED TOP & BOTTOM SELVAGES.

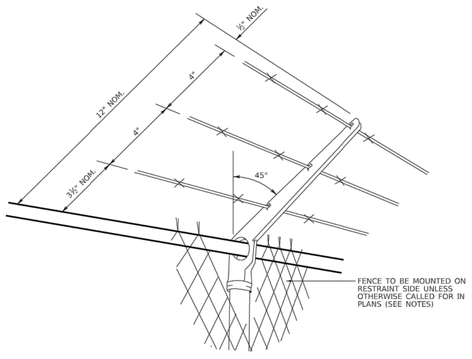
4. CONCRETE BASE SHALL BE EITHER CLASS NS CONCRETE AS SPECIFIED IN SECTION 347 OF THE STANDARD SPECIFICATIONS OR A PACKAGED, DRY MATERIAL MEETING THE REQUIREMENTS OF A CONCRETE UNDER ASTM C-387. MATERIALS FOR CLASS NS CONCRETE MAY BE PROPORTIONED BY VOLUME AND OR BY WEIGHT.



TYPICAL FRAME - 12',16',& 20' OPENING



TYPICAL FRAME - 24' OPENING

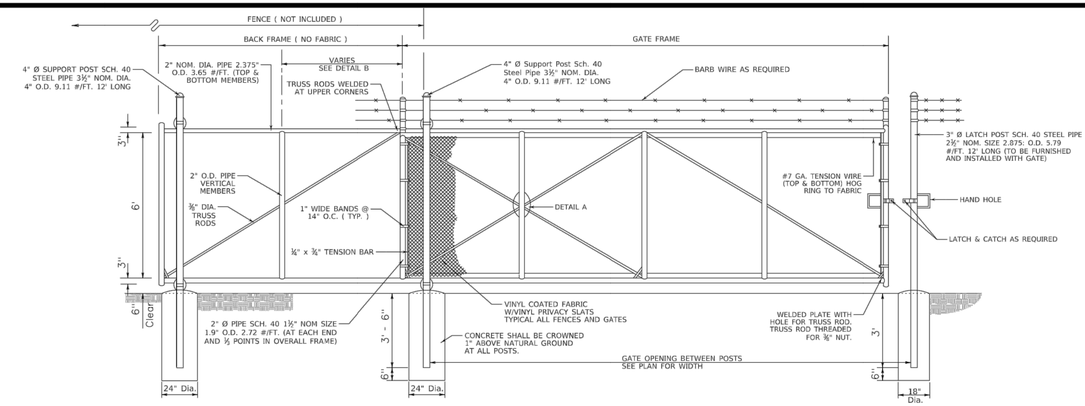


NOTES:

1. ATTACHMENTS TO EXTEND IN DIRECTION OF RESTRAINT, DIRECTION OF RESTRAINT WILL BE OUTWARD.
2. THE CAP-ARM SHALL BE DESIGNED TO PROVIDE A DRIVE FIT OVER THE TOP OF POSTS AND TO EXCLUDE MOISTURE IN POSTS WITH TUBULAR SECTIONS. ALL FENCING REQUIRES TOP RAIL.

BARB WIRE ATTACHMENT
(FDOT INDEX #802)

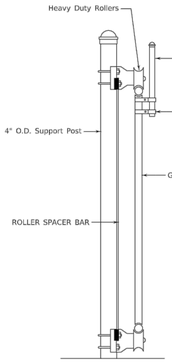
DETAIL 1
SCALE: NTS



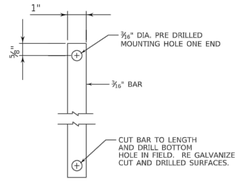
FRONT ELEVATION

NOTE: ALL MATERIALS SHALL MEET THE REQUIREMENTS OF FDOT INDEX 802, 803 AND SECTION 550. GATE MUST MATCH THE HEIGHT OF ADJACENT FENCE. ALL POSTS AND RAILS SHALL MATCH FENCE COLOR.

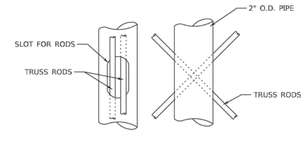
GATE OPENING	GATE FRAME	BACK FRAME
12'	12' - 3"	6'
16'	16' - 3"	8'
20'	20' - 3"	10'
24'	24' - 3"	12'



SUPPORT POST DETAIL



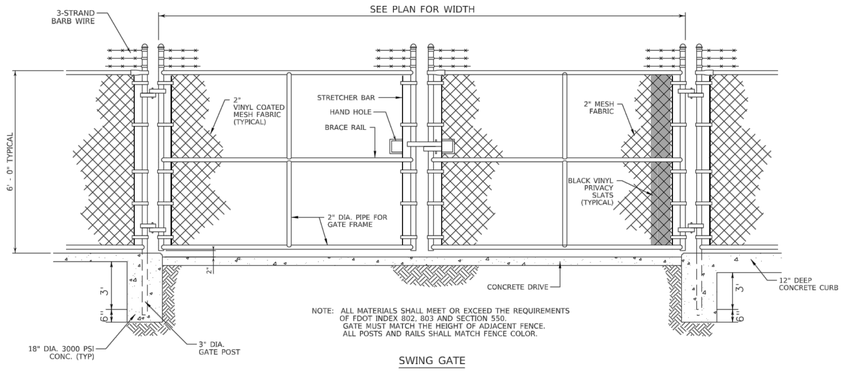
ROLLER SPACER BAR



DETAIL A

CANTILEVER SLIDE GATE
(FDOT INDEX 803)

DETAIL 2
SCALE: NTS



NOTE: ALL MATERIALS SHALL MEET OR EXCEED THE REQUIREMENTS OF FDOT INDEX 802, 803 AND SECTION 550. GATE MUST MATCH THE HEIGHT OF ADJACENT FENCE. ALL POSTS AND RAILS SHALL MATCH FENCE COLOR.

SWING GATE

DETAIL 3
SCALE: NTS

DATE:	BY:	DESCRIPTION

REVISION

Design Start Date:	01/16/2013
30% Review Schedule Date:	
60% Review Schedule Date:	
90% Review Schedule Date	
Final Review Schedule Date:	
Surveyed By:	
Drawn By:	MJ
Designed By:	CCC/MCJ
Checked By:	CCC
Print Date:	9/18/2013

ENGINEER'S CERTIFICATION

I hereby certify that the attached plans and design are in general compliance with the design standards and criteria in effect on this date for the City Of Orlando Public Works Department.

CHARLES C. CONKLIN, P.E.
Engineering Design Manager
Professional Engineer No.43246

Date: _____
Tel No. (407) 246-3182

CITY OF ORLANDO
DEPARTMENT OF PUBLIC WORKS
CAPITAL IMPROVEMENT AND INFRASTRUCTURE DIVISION
400 SOUTH ORANGE AVENUE, 8th FLOOR, ORLANDO, FLORIDA 32801

JOB NO.	6460
FILE NAME:	6460-sheet-29
ARCHIVE DISC:	
SCALE: HORZ.=	N.T.S.
VERT.=	

GATES DETAILS

C502

SHEET 29 OF 31

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

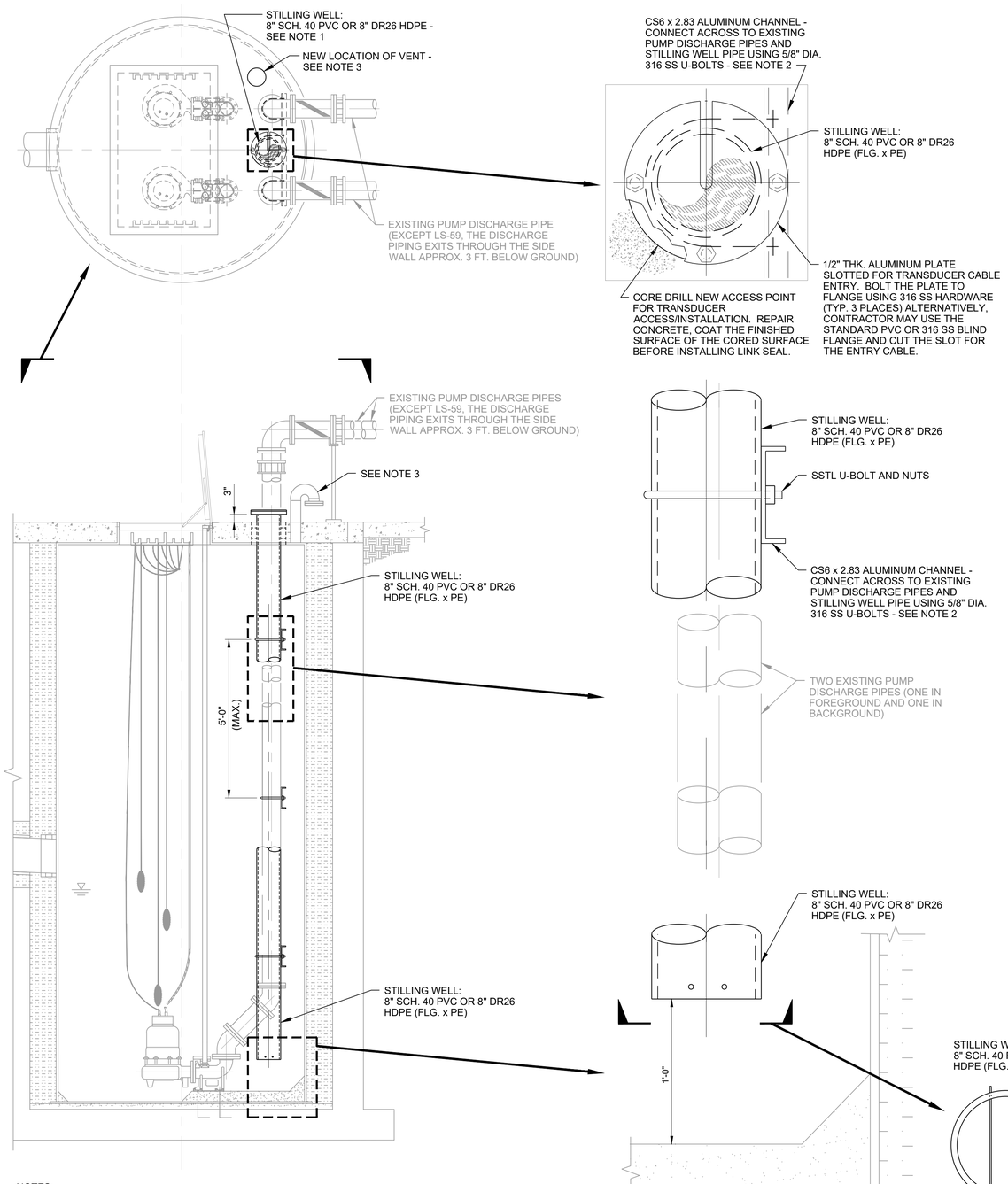
SHEET TITLE: STANDARD DETAILS

ATKINS
CORPORATE OFFICE:
4030 W. BOY SCOUT BOULEVARD
TAMPA, FLORIDA 33607
FBPR CERTIFICATE OF AUTHORIZATION NO.24
LOCAL OFFICE:
482 SOUTH KELLER ROAD
ORLANDO, FL 32810
TEL. 407.647.7275
FAX. 407.806.4500
www.atkinsglobal.com

JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-801
REV.	△

PRINT DATE: 9/17/2013
FILENAME: C:\Work\Orlando\LIft Station Site Improvements\90% Design + Set\Design 2D.dgn
(file).rev.11.13.2012)

PLOT DATE: Jan 25, 2021 - 11:08am
FILENAME: U:\WP\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-800, 801, 802.dwg



NOTES:
1. BASED ON THE EXACT PIPING CONFIGURATION OF EACH PUMP STATION, FIELD COORDINATE THE PLACEMENT OF THE STILLING WELL.
2. THE U-BOLTS WILL BE EITHER DOUBLE NUTTED OR USE LOCK-NUTS SO THEY DON"T VIBRATE LOOSE FROM DISCHARGE PIPES.
3. EXCEPT STATIONS LS 94 AND LS 129, ALL OTHER STATIONS WILL REQUIRE RELOCATION OF VENT AS DIRECTED IN THE FIELD BY THE OWNER.

TRANSDUCER STILLING WELL DETAIL (1)

SCALE: NTS

WETWELL ELEVATION DATA		
STN No.	T/SLAB	B/SLAB
59	**	**
61	**	**
73	96.02	96.85
83	**	**
94	110	92.20
126	84.98	60
129	96.91	76.20

** FOR THESE STATIONS ASSUME MAXIMUM 20-FOOT STILLING WELL LENGTH

REV	DATE	ISSUED FOR

REV	DATE	ISSUED FOR

RAJ SINGH, P.E.
FLORIDA REG. NO.41210

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CLIENT: CITY OF ORLANDO

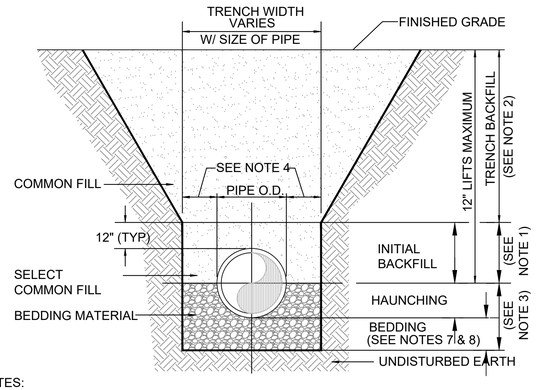
PROJECT: LIFT STATION No. 059, 061, 073, 083, 094, 126, and 129 EMERGENCY GENERATORS

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JOB NO.:	100063340
PROJECT ENG:	R.S.
DRAWN:	JN
CHECKED:	R.S.
APPROVED:	R.S.
SHEET NO.	C-802
REV.	△

PLOT DATE: Jan 05, 2021 - 7:39am
FILE NAME: U:\WO\Projects\City of Orlando\Lift Station Emer Generators\15_Plans\Design\01 - Sheet Files\C-800, 801, 802.dwg

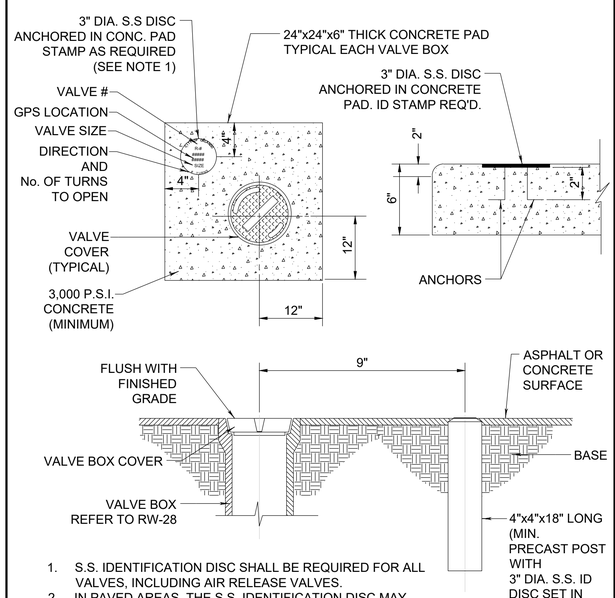


NOTES:

1. INITIAL BACKFILL: SELECT COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. TYPE A BEDDING MATERIAL SHALL CONFORM TO FDOT NO. 57 AGGREGATE.
4. 15" MAX. (12" MIN.) FOR PIPE DIAMETER LESS THAN 24" AND 24" MAX (12" MIN) FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER UP TO 12" AND 6" MINIMUM FOR PIPE DIAMETER 16" AND LARGER.
8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. UTILITIES SHALL DETERMINE IN THE FIELD REQUIRED REMOVAL OF UNSUITABLE MATERIAL TO REACH SUITABLE FOUNDATION.
9. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF R/W UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

BEDDING AND TRENCHING - TYPE A

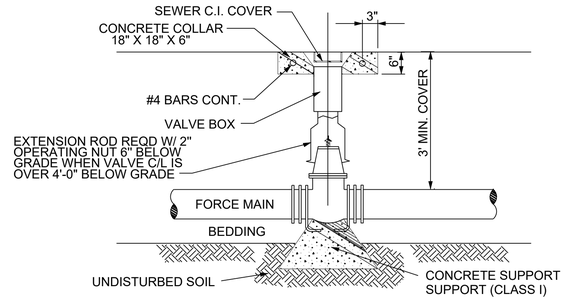
DETAIL 1
SCALE: NTS



1. S.S. IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES, INCLUDING AIR RELEASE VALVES.
2. IN PAVED AREAS, THE S.S. IDENTIFICATION DISC MAY BE MECHANICALLY ATTACHED TO THE BOTTOM OF THE VALVE BOX COVER, OR INSTALLED AS SHOWN ABOVE.
3. PAINT VALVE BOX COVER PURPLE PANTONE 522C.
4. THE VALVE # SHALL BE THE GPS LOCATION OF THE VALVE.

VALVE BOX COLLAR

DETAIL 2
SCALE: NTS



NOTE:

1. IN LIEU OF CONCRETE SUPPORT, CONTRACTOR MAY USE No. 57 STONE FROM CENTER OF VALVE TO UNDISTURBED SOIL (6" MINIMUM) AND 12" BEYOND ALL SIDES AND ENDS OF VALVE.
2. PIN OPERATING ROD TO VALVE OPERATING NUT W/316 STAINLESS STEEL PIN.

VALVE & BOX

DETAIL 3
SCALE: NTS

STANDARD FITTINGS/APPURTENANCES
REQUIRED LENGTH OF RESTRAINED PIPE EACH WAY (FT)

BEND	PIPE DIAMETER														
	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"	54"
11-1/4°	2	2	3	4	4	5	5	6	6	7	8	10	11	12	12
22-1/2°	6	5	6	7	8	9	11	12	13	15	17	19	21	23	25
45°	7	10	12	15	17	20	22	24	26	30	36	40	45	49	52
90°	17	23	30	36	42	48	53	58	63	73	86	97	108	117	127
DEAD END*	42	59	77	93	108	124	138	153	166	194	231	265	296	325	354

*NOTE: IN-LINE VALVES AND TEES (BRANCH) SHALL BE RESTRAINED AS DEAD ENDS.

REDUCERS - REQUIRED LENGTH OF RESTRAINED PIPE AT LARGE SIDE (FT)**

DIAMETER	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"	54"
4"		31	59	75	94	112									
6"			32	57	79	99	117								
8"				31	57	80	101	120	137						
10"					32	59	82	103	122	158					
12"						32	59	83	104	143	192				
14"							31	58	83	126	178				
16"								31	58	106	163				
18"									31	83	145				
20"										58	126	181	227		
24"											81	145	197	241	
30"												80	143	196	245
36"													77	140	197
42"														76	142
48"															78

**A MINIMUM OF 20 FEET OF PIPE SHALL BE RESTRAINED ON THE SMALL SIDE.

1. THE ABOVE REQUIREMENTS WERE CALCULATED IN ACCORDANCE WITH "THRUST RESTRAINT FOR DUCTILE IRON PIPE," THIRD EDITION, 1992, PUBLISHED BY DIPRA, WITH THE FOLLOWING ASSUMPTIONS:
   SOIL CONDITIONS: SAND/SILT
   LAYING CONDITION: 4
   MINIMUM COVER: 3 FT
   IF FIELD CONDITIONS DIFFER FROM THE ABOVE, CONTRACTOR SHALL NOTIFY ENGINEER.
2. THE RESTRAINED JOINT LENGTHS CALCULATED ABOVE FOR BENDS WERE FOR BENDS IN THE HORIZONTAL DIRECTION OR VERTICAL UP DIRECTION. IF A BEND IS ORIENTED IN THE VERTICAL DOWN POSITION , THE RESTRAINED JOINT LENGTH CALCULATED ABOVE FOR THAT BEND SHALL BE MULTIPLIED BY 3.0.
3. POLYETHYLENE WRAPPED PIPING SHALL BE RESTRAINED 1.25 TIMES THE ABOVE SHOWN LENGTHS.

PIPE RESTRAINT, RESTRAINED JOINT

BARE DUCTILE IRON PIPE 150 PSI TEST PRESSURE

RESTRAINED JOINT TABLE FOR SANITARY SEWER FORCEMAINS

DETAIL 4
SCALE: NTS

REV.	DATE	ISSUED FOR