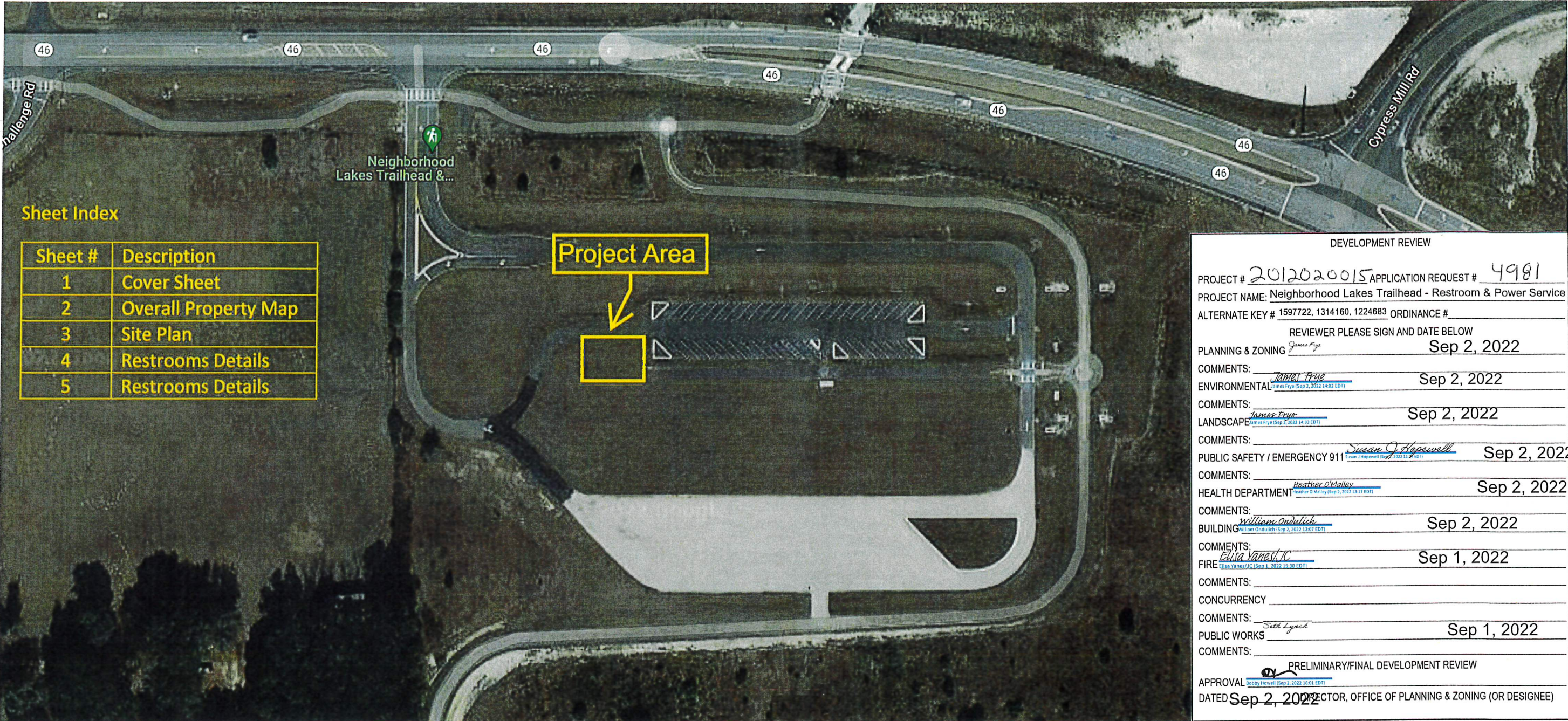


Neighborhood Lakes Trailhead - Minor Site Plan



Installation of Precast Concrete Restroom (10'8" x 23'10", 3 compartments) including concrete pad, potable well and septic system. Refer to attached sheets #4 and 5 for restrooms details.

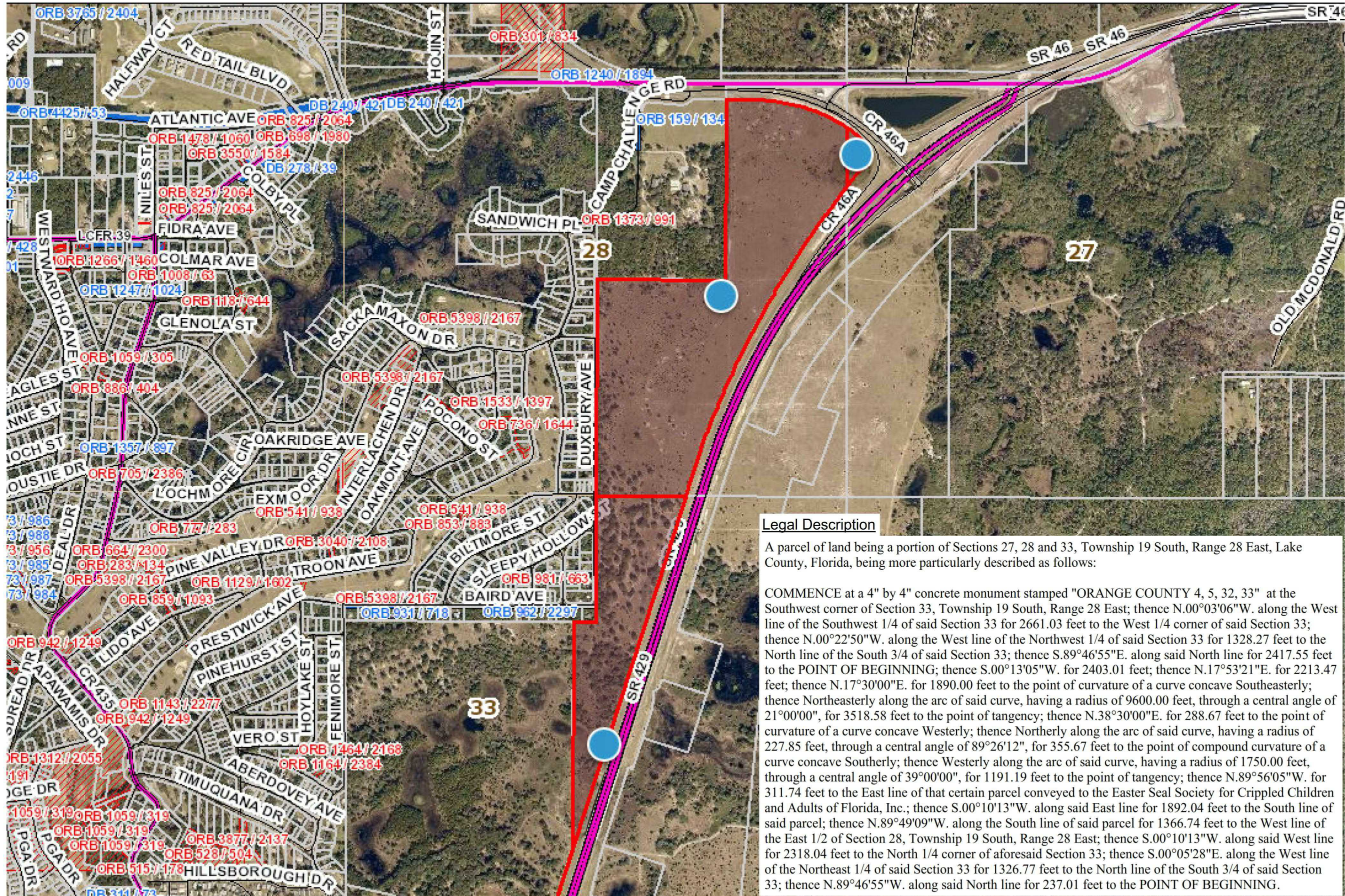
100 ft

Zoning: R-1
 Future Land Use (FLU): Conservation

Parks and Recreation, Passive is a permitted use under R-1 Zoning per Land Development Regulations (LDR) Table 3.01.03 and in the Conservation FLU.

Overall Site Area: approximately 165 acres
 Project Area: 2,500 s.f. (0.057 acres)
 Proposed ISR: .0003 (maximum .3 per LDR Table 3.02.06)
 Setbacks: 50' from CR 46A and SR 429, 10' from adjacent properties

Overall Property Map



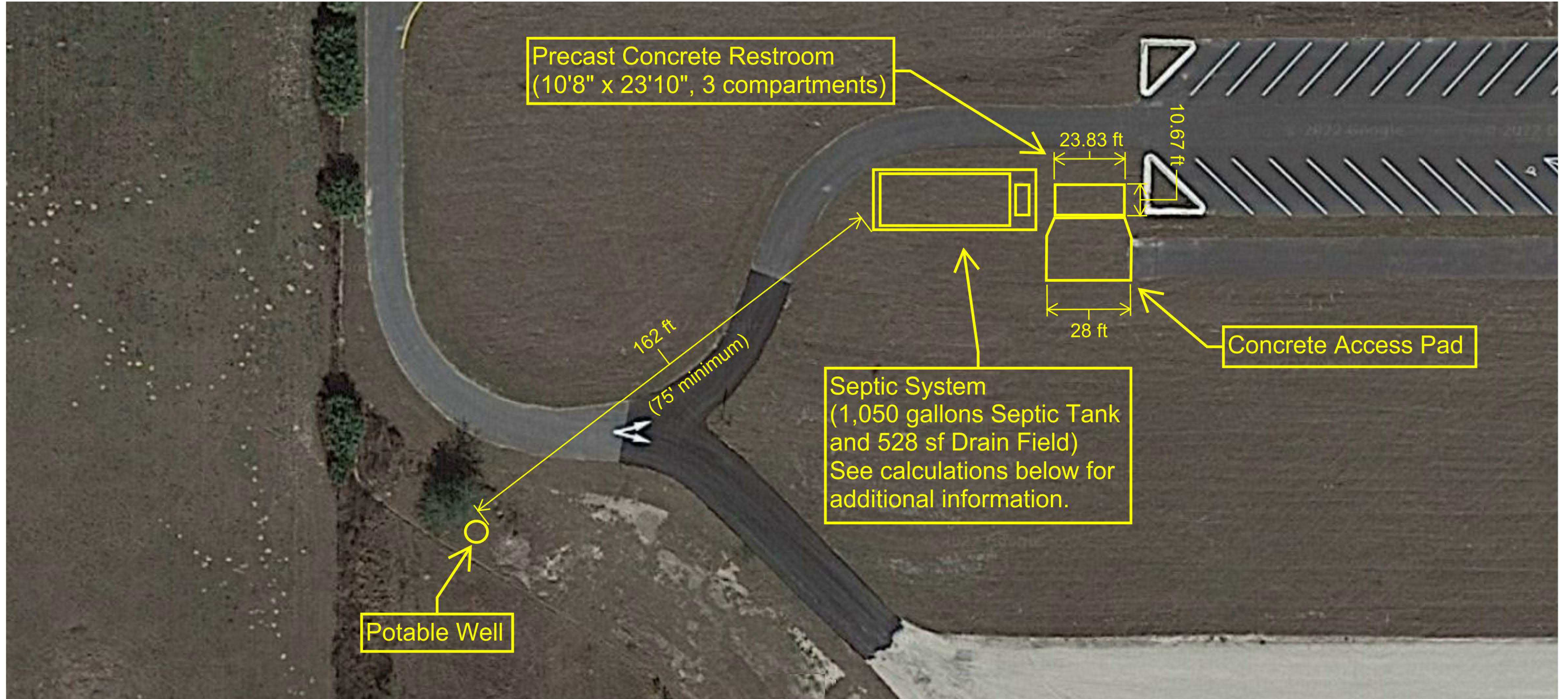
Legal Description

A parcel of land being a portion of Sections 27, 28 and 33, Township 19 South, Range 28 East, Lake County, Florida, being more particularly described as follows:

COMMENCE at a 4" by 4" concrete monument stamped "ORANGE COUNTY 4, 5, 32, 33" at the Southwest corner of Section 33, Township 19 South, Range 28 East; thence N.00°03'06"W. along the West line of the Southwest 1/4 of said Section 33 for 2661.03 feet to the West 1/4 corner of said Section 33; thence N.00°22'50"W. along the West line of the Northwest 1/4 of said Section 33 for 1328.27 feet to the North line of the South 3/4 of said Section 33; thence S.89°46'55"E. along said North line for 2417.55 feet to the POINT OF BEGINNING; thence S.00°13'05"W. for 2403.01 feet; thence N.17°53'21"E. for 2213.47 feet; thence N.17°30'00"E. for 1890.00 feet to the point of curvature of a curve concave Southeasterly; thence Northeasterly along the arc of said curve, having a radius of 9600.00 feet, through a central angle of 21°00'00", for 3518.58 feet to the point of tangency; thence N.38°30'00"E. for 288.67 feet to the point of curvature of a curve concave Westerly; thence Northerly along the arc of said curve, having a radius of 227.85 feet, through a central angle of 89°26'12", for 355.67 feet to the point of compound curvature of a curve concave Southerly; thence Westerly along the arc of said curve, having a radius of 1750.00 feet, through a central angle of 39°00'00", for 1191.19 feet to the point of tangency; thence N.89°56'05"W. for 311.74 feet to the East line of that certain parcel conveyed to the Easter Seal Society for Crippled Children and Adults of Florida, Inc.; thence S.00°10'13"W. along said East line for 1892.04 feet to the South line of said parcel; thence N.89°49'09"W. along the South line of said parcel for 1366.74 feet to the West line of the East 1/2 of Section 28, Township 19 South, Range 28 East; thence S.00°10'13"W. along said West line for 2318.04 feet to the North 1/4 corner of aforesaid Section 33; thence S.00°05'28"E. along the West line of the Northeast 1/4 of said Section 33 for 1326.77 feet to the North line of the South 3/4 of said Section 33; thence N.89°46'55"W. along said North line for 237.01 feet to the POINT OF BEGINNING.

Overall Site Area: approximately 165 acres
 Alternate Key #'s: 1597722, 1314160 and 1224683

Site Plan



Septic System Flow Calculation

1. Estimated Sewage Flow per F.A.C. 64E-6.008 System Size Determinations Table I:

Type of Establishment	Unit Measure	Use Rate	Total Gallons per Day
Parks, public	100 people	4 gallons per day/person	400 gallons per day

2. Septic Tank and Pump Tank Capacity per F.A.C. 64E-6.008 System Size Determinations Table II:

301-400 gallons/day requires 1,050 gallons septic tank.

3. Drainfield size per F.A.C. 64E-6.008 System Size Determinations Table III:

a) Maximum Sewage Loading Rate: .8 gallons per day /sf trench

400 gallons per day / .8 gallons per day /sf = 500 sf drainfield

b) Unobstructed Area = 1.5 x Absorption Area

Unobstructed Area = 1.5 x 500 sf = 750 sf

4. Use a trench system with 4-36" trenches, 44' long

4 trenches x 3 sf/ft x 44 ft = 528 sf

Notes:

1. Drainfield dimensions may be adjusted, however, size must not be reduced.

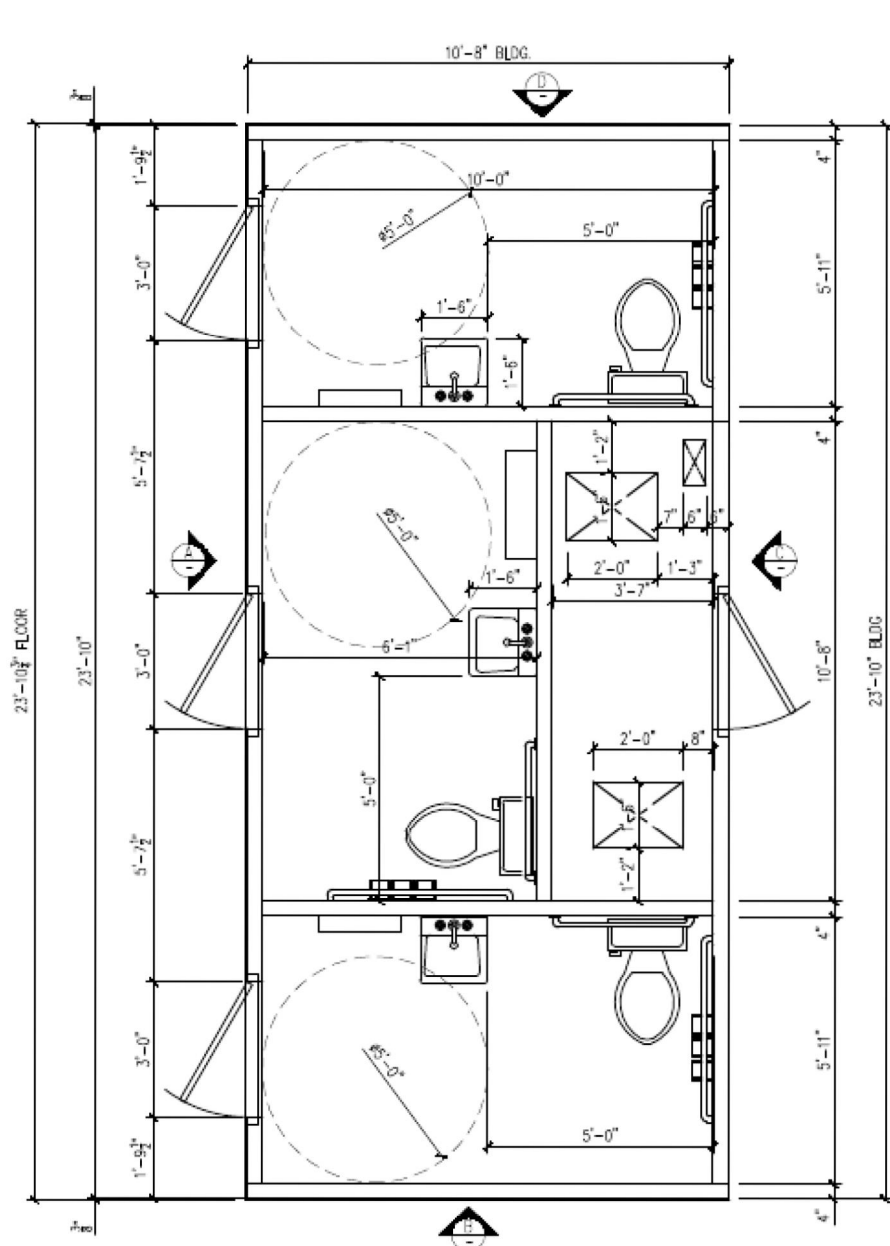
2. Contractor shall verify tank and field depths needed to provide gravity flow and to meet code prior to setting tanks.

3. Setback - System to a Private Potable Well: 75' minimum per F.A.C. 64E-6.015.

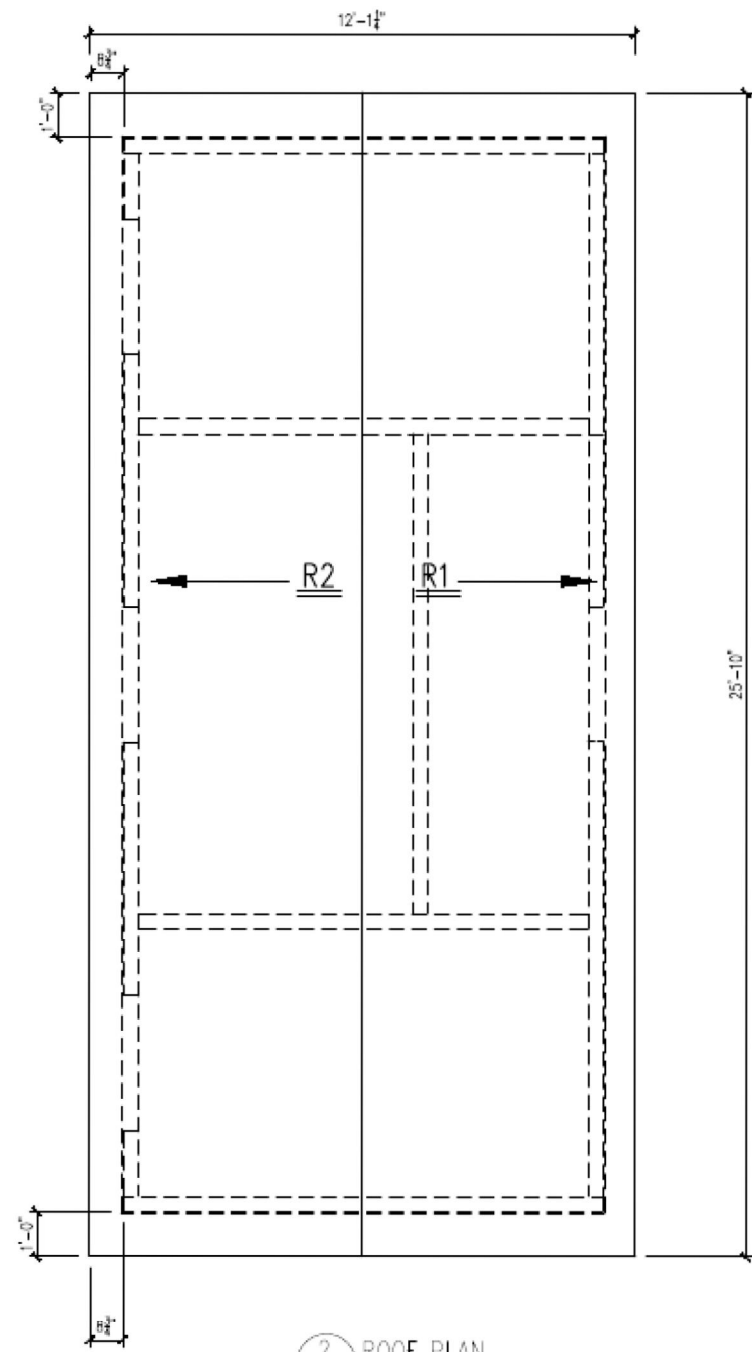
20 ft

N

PLE PLUMBED RESTROOM ITEM



1 FLOOR PLAN



2 ROOF PLAN



NOT FOR CONSTRUCTION DIMENSIONS FOR REFERENCE ONLY

BUILDING WEIGHT IS APPROX 74,590 lbs

NOTE: FINISH OPTIONAL, VARIOUS FINISHES ARE AVAILABLE

- EASI-BRICK
- BARNBOARD
- BROOM
- OTHER: _____

- GENERAL NOTES:
1. ALL REQUIRED OPENINGS FOR ELECTRIC, MECHANICAL, LOUVERS, ETC. MUST BE SIZED AND LOCATED BY BUYER ON THIS DRAWING (OPENING SIZES AND LOCATIONS MAY HAVE TO BE ALTERED IF THEY INTERFERE WITH CONNECTIONS OR REINFORCING)
 2. ALL VIEWS ARE FROM EXTERIOR
 3. A SIGNED COPY MUST BE RETURNED BEFORE BUILDING CAN BE RELEASED FOR PRODUCTION

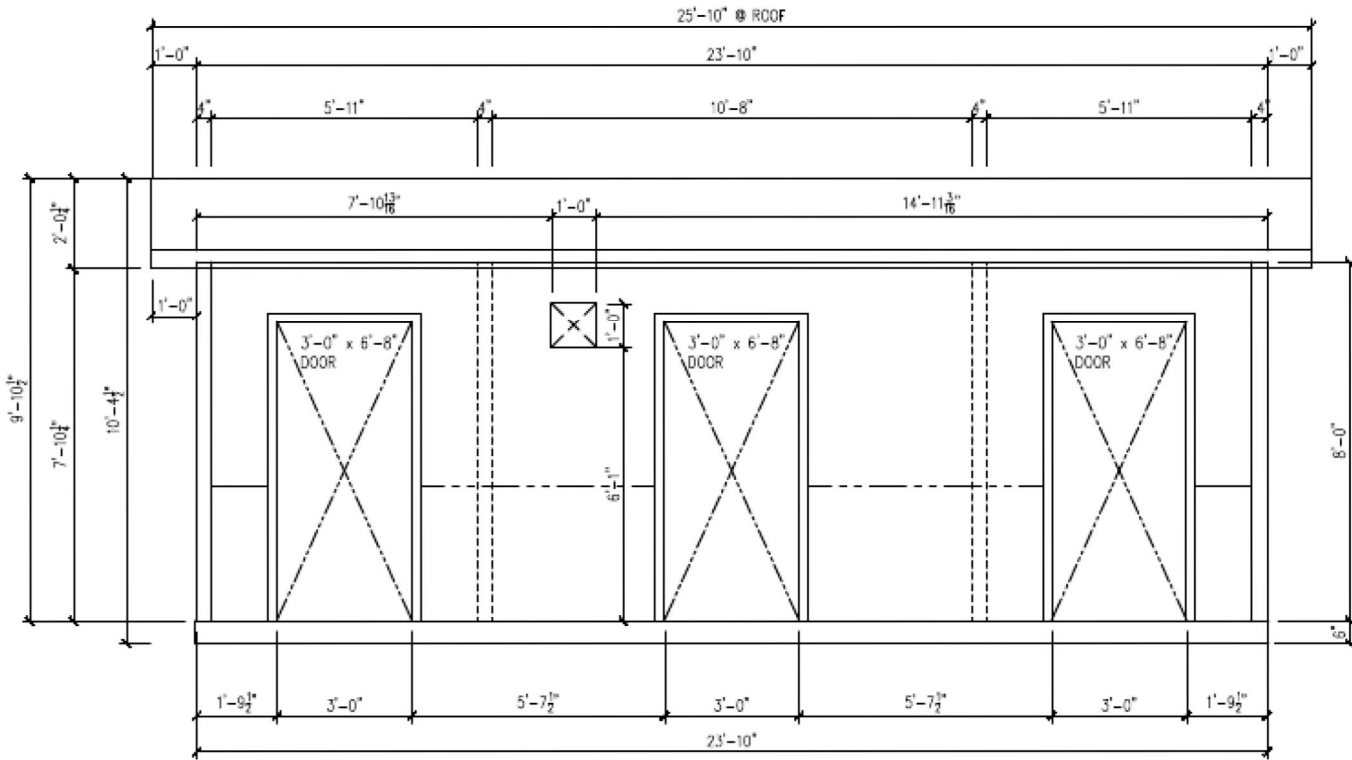
MESSAGE CENTER	
BUILDING FINISH	_____
BUILDING STAIN	-
DOOR COLOR	-
BUILDING WEIGHT	-
CUSTOMER APPROVAL	
APPROVED BY:	DATE:

DATE	DESCRIPTION	INI.	REV.
-	-	-	Δ
-	-	-	Δ
-	-	-	Δ
-	-	-	Δ

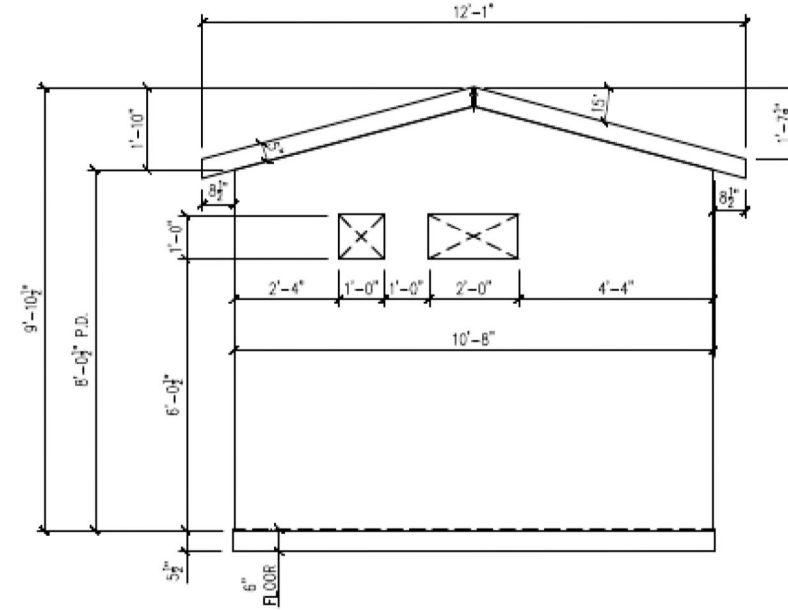
PROJECT: 10'-8" x 23'-10"
 EASI-SET FLUSH RESTROOM
 CONTRACTOR: CONTRACTOR

BUILDING LAYOUT
JOB #
DRAWN BY
CHECK BY
ISSUE DATE 09.22.15
SHEET LAYOUT

PLE PLUMBED RESTROOM ITEI

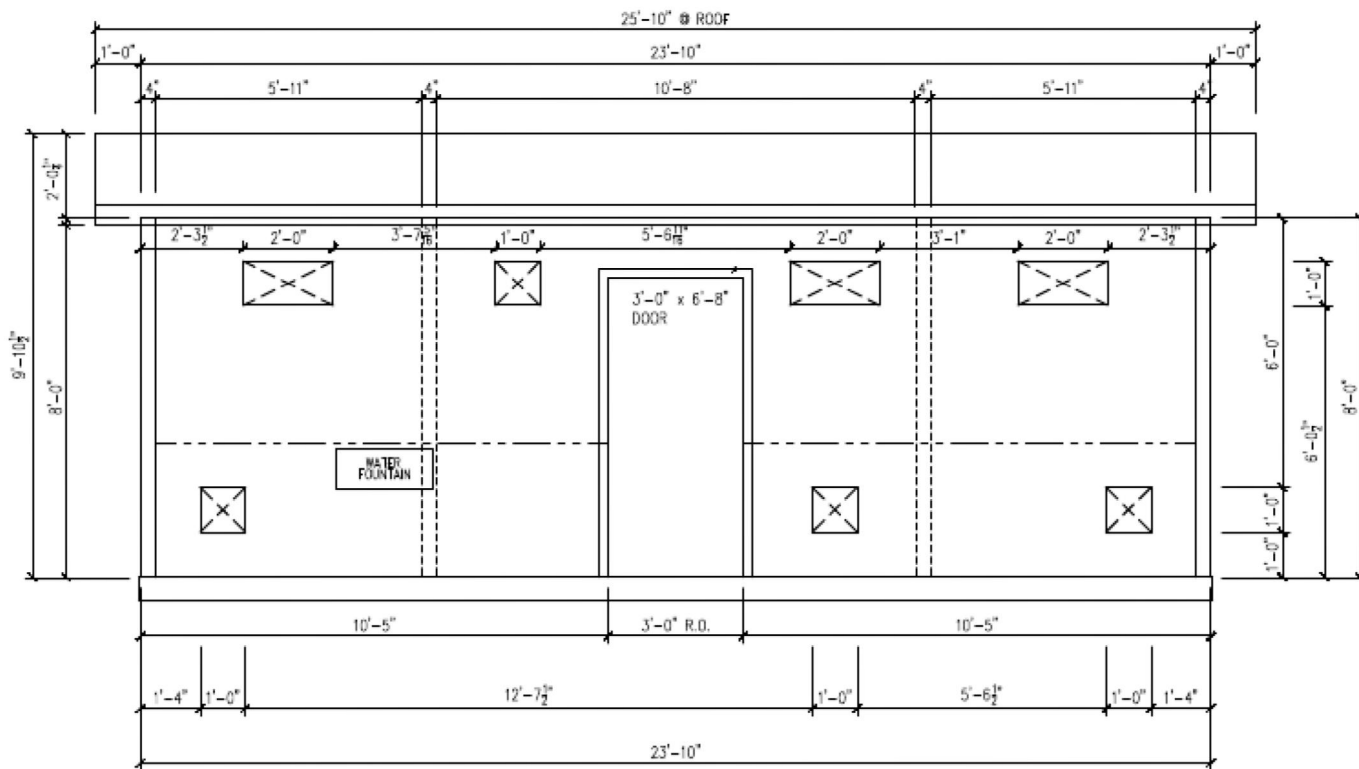


A FRONT ELEVATION

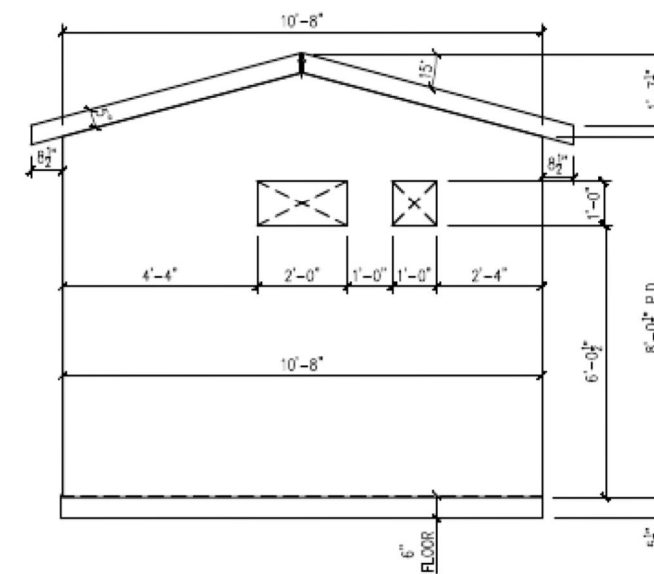


B RIGHT ELEVATION

NOT FOR CONSTRUCTION DIMENSIONS FOR REFERENCE ONLY



C REAR ELEVATION



D LEFT ELEVATION



DATE	DESCRIPTION	INI.	REV
-	-	-	△
-	-	-	△
-	-	-	△
-	-	-	△

PROJECT: 10'-8" x 23'-10"
EASY-SET FLUSH RESTROOM
CONTRACTOR: CONTRACTOR.

BUILDING
ELEVATIONS

JOB #

DRAWN BY

CHECK BY

ISSUE DATE

09.22.15

SHEET
ELEVATIONS

NEIGHBORHOOD LAKES TRAILHEAD ELECTRICAL SERVICE

FOR

LAKE COUNTY

26656 County Rd 46A

Sorrento, FL 32776

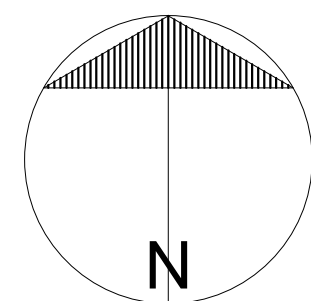
CLIENT PROJECT No. : 20211665

03-02-2022

PROJECT DRAWING INDEX	
SHEET	DESCRIPTION
C-001	COVER PAGE
E-001	ELECTRICAL LEGEND
E-002	ELECTRICAL SPECIFICATIONS
E-101	ELECTRICAL SITE PLAN
E-501	ELECTRICAL DETAILS
E-502	ELECTRICAL DETAILS



SITE LOCATION MAP



LAKE COUNTY BCC
315 WEST MAIN ST.
P.O. BOX 7800
TAVARES, FLORIDA 32778

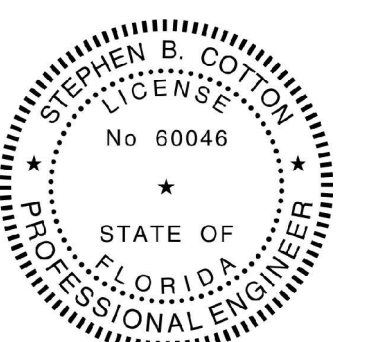


7370 Cabot Court, Suite 103
Melbourne, FL 32940
P 321.636.0274
www.tlc-engineers.com

COA 15

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TLC Project No. : 521200

THINK. LISTEN. CREATE.



This item has been digitally signed and sealed by Stephen B. Cotton, PE 60046 on 03/02/2022 using a Digital Signature.
Printed copies of this document are not considered sign and sealed and the SHA authentication code must be verified on any electronic copies.

Drawing Title:
COVER PAGE

Drawing No.:
C-001

ELECTRICAL GENERAL NOTES

GENERAL REQUIREMENTS

- THE DRAWINGS AND APPLICABLE SPECIFICATIONS SHALL BE CONSIDERED SUPPLEMENTARY. ONE TO THE OTHER AND ARE CONSIDERED THE "CONTRACT DOCUMENTS". ALL WORKMANSHIP METHODS AND/OR MATERIALS DESCRIBED OR IMPLIED BY ONE AND NOT DESCRIBED OR IMPLIED BY THE OTHER SHALL BE PROVIDED, FURNISHED OR PERFORMED AS IT APPEARED IN BOTH SECTIONS. THE TERM "CONTRACT DOCUMENTS" DESCRIBED HEREIN IS NOT LIMITED SOLELY TO THE ELECTRICAL PORTION OF THE DRAWINGS AND SPECIFICATIONS, BUT ENCOMPASSES THE DRAWINGS AND SPECIFICATIONS OF ALL DIVISIONS AS A WHOLE.
- THE DRAWINGS ARE DIAGRAMMATIC AND ARE NOT INTENDED TO SHOW EVERY DETAIL OF CONSTRUCTION, METHODS, MATERIALS AND EQUIPMENT, OR EXACT LOCATIONS, ROUTINGS, ETC. THEY INDICATE THE RESULT TO BE ACHIEVED BY THE ASSEMBLAGE OF SEVERAL SYSTEMS FOR A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM. DO NOT SCALE THE CONTRACT DOCUMENTS. COORDINATE EXACT EQUIPMENT LOCATIONS WITH FIELD CONDITIONS. APPROVED SHOP DRAWINGS.
- THE TERM "PROVIDE" USED IN THE CONTRACT DOCUMENTS INDICATES TO FURNISH AND INSTALL MATERIALS REQUIRED FOR CORRECT INSTALLATION OF A COMPLETE SYSTEM, UNLESS SPECIFICALLY NOTED OTHERWISE.
- UNLESS NOTED AS EXISTING, ALL ELECTRICAL INDICATED ON THE CONTRACT DOCUMENTS SHALL BE NEW, SHALL BE U.L. LISTED, AND SHALL BEAR A U.L. LABEL, IMPULSE LEVEL LABEL, OR LISTING IS AVAILABLE. THE MATERIAL SHALL BE LISTED WITH AN APPROVED, NATIONALLY RECOGNIZED ELECTRICAL TESTING AGENCY.
- PROVIDE EXPERIENCED, QUALIFIED AND RESPONSIBLE SUPERVISION FOR ALL WORK REQUIRED BY THE CONTRACT DOCUMENTS. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER, TO THE SATISFACTION OF THE ENGINEER AND OWNER.
- CARRY ALL INSURANCE REQUIRED TO PROTECT AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THIS PROJECT.
- GUARANTEE ALL MATERIALS AND WORKMANSHIP ARE FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE ENGINEER AND OWNER. UNLESS NOTED OTHERWISE IN DIVISION 1, AT NO ADDITIONAL COSTS, PROVIDE THE CORRECTION OF ANY DEFECTS INCLUDING REPAIR OR REPLACEMENT.
- INCLUDE ALL COSTS ASSOCIATED WITH PERMITS, LICENSES, FEES, INSPECTIONS, TESTING AND TEMPORARY POWER IN THE BID PRICE, UNLESS NOTED OTHERWISE.
- IF HAZARDOUS MATERIALS ARE ENCOUNTERED, COMPLY WITH ALL APPLICABLE RULES, REGULATIONS AND GUIDELINES CONCERNING REMOVAL, HANDLING, DISPOSAL AND PROTECTION AGAINST ENVIRONMENTAL EXPOSURE OR POLLUTION. PROVIDE DOCUMENTATION OF SAID COMPLIANCE.
- PROVIDE ELECTRONIC SUBMITTALS (PRODUCT DATA & SHOP DRAWINGS) FOR EACH MAJOR COMPONENT OF THE ELECTRICAL SYSTEM FOR REVIEW BY THE ENGINEER AND OWNER. MAJOR COMPONENTS INCLUDE, BUT ARE NOT LIMITED TO: RACEWAYS, BOXES, WIRE AND CABLE, EQUIPMENT, DEVICES, SWITCHGEAR, PANELBOARDS, CIRCUIT BREAKERS, SAFETY SWITCHES, ETC. ALL SUBMITTALS ARE TO BE REVIEWED AND APPROVED BY THE CONTRACTOR FOR CONFORMANCE WITH THE PROJECT REQUIREMENTS PRIOR TO SUBMITTING TO THE ENGINEER. ALLOW A MINIMUM OF TEN (10) BUSINESS DAYS FOR REVIEW BY ENGINEER, UNLESS NOTED OTHERWISE IN DIVISION 1.
- THE ELECTRICAL PORTION OF THE CONTRACT DOCUMENTS ARE COORDINATED WITH THE DESIGN BASIS EQUIPMENT SPECIFIED BY DIVISION 26 AND OTHER DIVISIONS. WHERE THE CONTRACTOR ELECTS TO SUBSTITUTE A PRODUCT IN LIEU OF PROVIDING THE DESIGN BASIS, AND SAID SUBSTITUTION IS ACCEPTED BY THE ENGINEER AND OWNER, THE CONTRACTOR SHALL MAKE ALL CORRECTIONS TO THE ELECTRICAL SYSTEM NECESSARY IN ORDER TO ENSURE A COMPLETE AND OPERATIONAL INSTALLATION OF THE EQUIPMENT AT NO ADDITIONAL COSTS. WHERE THE CONTRACTOR'S DESIGN SUBSTITUTION RESULTS IN THE NEED FOR THE ENGINEER TO REVISE THE CONTRACT DOCUMENTS, THE ENGINEER RESERVES THE RIGHT TO REQUEST COMPENSATION FROM THE CONTRACTOR FOR SAID SERVICES.
- MAINTAIN A CURRENT AND ACCURATE SET OF PROJECT RECORD DOCUMENTS (AS-BUILTS) AT THE SITE THROUGHOUT THE DURATION OF THE PROJECT. RECORD DRAWINGS SHALL BE UPDATED EACH DAY TO REFLECT THE ACTUAL LOCATIONS, SIZES, ROUTING, ETC. OF EACH PORTION OF THE ELECTRICAL SYSTEM AFFECTED BY THIS WORK. A FINAL SET OF RECORD DOCUMENTS SHALL BE ISSUED TO THE ENGINEER FOR REVIEW AND THEN SUBMITTED TO THE OWNER WITHIN 30 DAYS AFTER THE DATE OF FINAL ACCEPTANCE. PROVIDE RECORD DRAWINGS OF THE ACTUAL INSTALLATION INCLUDING SINGLE LINE DIAGRAM, POWER RISER DIAGRAM OF THE BUILDING ELECTRICAL DISTRIBUTION SYSTEM, SITE PLANS AND ALL ELECTRICAL FLOOR PLANS, DETAILS, PANEL SCHEDULES, ETC.
- PROVIDE AN OPERATING AND MAINTENANCE MANUAL TO OWNER PRIOR TO THE FINAL ACCEPTANCE. THE MANUAL SHALL INCLUDE, AS A MINIMUM, (1) SUBMITTAL DATA STATING EQUIPMENT RATINGS AND SELECTED OPTIONS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. ALSO PROVIDE TWO OPERATIONS AND MAINTENANCE MANUALS FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE. REQUIRED ROUTINE MAINTENANCE ACTIONS AND METHOD OF OPERATION FOR EQUIPMENT SHALL BE CLEARLY IDENTIFIED, AND THE NAME, PHONE NUMBER AND ADDRESS OF AT LEAST ONE QUALIFIED SERVICE AGENCY.
- INCLUDE ALL COSTS FOR EXCAVATION, SAW CUTTING, DIRECTIONAL BORING, CORE DRILLING, BACKFILLING, SURFACE RESTORATION, REPAIR OF FINISHES, ETC. THAT IS REQUIRED IN ORDER TO MEET THE PROJECT REQUIREMENTS.
- INCLUDE IN BID ALL COSTS ASSOCIATED WITH TEMPORARY ELECTRICAL SERVICE AS REQUIRED FOR USE BY ALL TRADES DURING CONSTRUCTION. REMOVE TEMPORARY POWER AT THE COMPLETION OF THE PROJECT. OBTAIN AND PAY FOR ALL REQUIRED PERMITS FOR TEMPORARY POWER. ENGINEER OF RECORD SHALL BE PROVIDED WITH ADDITIONAL COMPENSATION FROM THE CONTRACTOR WHERE SIGNED & SEALED DRAWINGS ARE REQUESTED BY THE CONTRACTOR TO THE ENGINEER OF RECORD IF REQUIRED BY THE AIA FOR THE TEMPORARY POWER.
- LOCATE, IDENTIFY, PROTECT AND DOCUMENT ALL UTILITY LINES LOCATED WITHIN THE PROJECT BOUNDARY. FOR LOCATING SITE UTILITIES, CONTACT ALL LOCAL MUNICIPALITIES AND UTILITIES AT LEAST 48 HOURS PRIOR TO DIGGING.
- INCLUDE IN BID THE TRANSPORT AND DISPOSAL, OR RECYCLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL RULES, REGULATIONS AND GUIDELINES APPLICABLE. COMPLY FULLY WITH ALL APPLICABLE STATUTES REGARDING MERCURY-CONTAINING DEVICES, AND WITH ALL LOCAL, STATE AND FEDERAL APPLICABLE GUIDELINES AT THE TIME OF DISPOSAL. PROVIDE OWNER WITH WRITTEN CERTIFICATION OF ACCEPTED DISPOSAL.

CONDUCTORS

- ALL CONDUCTORS IN CABINETS MUST BE CAREFULLY FORMED AND HARNESSED SO THAT EACH CONDUCTOR DROPS OFF DIRECTLY OPPOSITE TO TERMINAL.
- ALL WIRE SIZES ARE BASED ON AMPACITIES FOR 90 DEG F TEMPERATURE RATING FROM 0-100A AND 75 DEG F TEMPERATURE RATING LISTED IN NEC FOR 100A AND ABOVE.
- ALL CONDUCTORS SHALL BE COPPER, THINWALL, SOLID FOR #10 AWG AND SMALLER; STRANDED FOR #8 AWG AND LARGER.
- CONDUCTORS USED IN WET LOCATIONS, INCLUDING UNDERGROUND CONDUITS, DUCTBANKS AND EXTERIOR CONDUITS SHALL COMPLY WITH NEC 311.10 AND BE LISTED FOR USE IN WET LOCATIONS.
- ALL POWER CIRCUITS HAVE BEEN DESIGNED TO MEET 2% OR LESS VOLTAGE DROP FOR FEEDERS, AND 3% OR LESS VOLTAGE DROP FOR BRANCH CIRCUITS.

COORDINATION

- THIS PROJECT REQUIRES COORDINATION DRAWINGS BY THE CONTRACTOR. PARTICIPATE IN THE COORDINATION DRAWING PREPARATION PROCESS AND PROVIDE ALL NECESSARY INFORMATION REQUIRED TO COORDINATE ALL TRADE INFORMATION.
- ALL WORK ON THE ELECTRICAL SYSTEM REQUIRED BY THE CONTRACT DOCUMENTS SHALL BE COORDINATED WITH THE WORK OF ALL OTHER DIVISIONS/TRADES PRIOR TO COMMENCEMENT OF WORK. AVOID INTERFERENCES WITH THE PROGRESS OF OTHER DIVISIONS/TRADES.
- WHERE A DISCREPANCY OR CONFLICT IS FOUND BETWEEN ONE DRAWING AND ANOTHER, OR BETWEEN A DRAWING AND APPLICABLE SPECIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY IN WRITTEN FORM. IN GENERAL, THE MOST STRINGENT REQUIREMENT SHALL GOVERN UNLESS THE DISCREPANCY CONFLICTS WITH APPLICABLE CODES OR OWNER'S DESIGN STANDARDS, WHEREIN THE CODE OR OWNER'S DESIGN STANDARDS SHALL GOVERN.
- CAREFULLY EXAMINE THOSE PORTIONS OF THE SITE AFFECTED BY THIS WORK PRIOR TO SUBMITTING BID PRICE, SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND EFFECT EXECUTION OF THE WORK. SUBMISSION OF A BID PRICE SHALL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE. LATER CLAIMS FOR LABOR, EQUIPMENT AND/OR MATERIALS REQUIRED DUE TO DIFFICULTIES ENCOUNTERED THAT COULD HAVE BEEN REASONABLY OBSERVED WILL NOT BE RECOGNIZED.
- COORDINATE ALL PROJECT SCHEDULING AND PHASING REQUIREMENTS WITH ENGINEER AND OWNER PRIOR TO SUBMITTING BID PRICE. THIS PROJECT MAY REQUIRE EXCAVATION AND POTENTIAL PREMIUM TIME WORK AND ALL COSTS FOR SUCH SHALL BE INCLUDED IN THE BID PRICE. PROVIDE ADEQUATE WORK FORCE AND EQUIPMENT, AND INCLUDE PREMIUM TIME AS MAY BE REQUIRED IN ORDER TO ADHERE TO THE PROJECT SCHEDULE. ADDITIONALLY, ENSURE THAT LONG LEAD ITEMS DO NOT IMPACT THE PROJECT'S SCHEDULE OR PHASING.
- ANY TEMPORARY INTERRUPTION OF POWER REQUIRED FOR THE SYSTEM TIE-IN OR SWITCH-OVER FOR ANY PORTION OF THE ELECTRICAL SYSTEM SHALL BE PRE-APPROVED IN WRITING BY THE OWNER AND SCHEDULED IN ADVANCE.
- COORDINATE EXACT REQUIREMENTS WITH THE LOCAL UTILITY COMPANIES AND PROVIDERS AND INCLUDE ALL COSTS FOR PROVIDING TEMPORARY AND PERMANENT SERVICES REQUIRED FOR THIS PROJECT IN THE BID PRICE. BID PRICE SHALL INCLUDE, BUT NOT BE LIMITED TO, EXCAVATION, RACEWAYS, BACKFILL, EQUIPMENT, EQUIPMENT PADS, METERS, GROUNDING, UTILITY ENGINEERING AND IMPACT FEES.
- CONDUCT WORK OPERATIONS AND DEBRIS REMOVAL IN A MANNER THAT ENSURES MINIMUM INTERFERENCE WITH NORMAL BUSINESS OPERATIONS, TRAFFIC, PARKING, ETC. ONCE IN AN ADJACENT OCCUPIED SPACE OR FACILITIES. PROVIDE ALL THAT IS REQUIRED TO EFFECTIVELY PROTECT SURROUNDING OCCUPANTS, EQUIPMENT, FINISHES, ETC. FROM DAMAGE OR EXCESSIVE NOISE THROUGHOUT THE DURATION OF THIS PROJECT. CONTRACTOR IS RESPONSIBLE FOR ANY LOSSES OR ANY DAMAGE RESULTING FROM THE FAILURE TO ADHERE TO THIS REQUIREMENT. RESTORE DAMAGED ELEMENTS TO ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER AND OWNER, AT NO ADDITIONAL COSTS. REPORT OF ANY SUCH OCCURRENCE TO THE ENGINEER AND OWNER IMMEDIATELY AND AHEAD WRITTEN DIRECTION PRIOR TO PROCEEDING WITH REPAIRS.
- REVIEW ALL CONTRACT DRAWINGS TO ASCERTAIN ANY CONFLICTS PRIOR TO BIDDING. OBTAIN CLARIFICATION FROM THE ENGINEER PRIOR TO BID. CONTRACTOR SHALL NOT BE ENTITLED TO ADDITIONAL COMPENSATION FOR WORK REQUIRED TO RELOCATE OUTLET BOXES OR RACEWAYS FOR COORDINATION WITH OTHER TRADES WORK.

- ELECTRICAL EQUIPMENT** SHALL BE OF MATERIALS SUITABLE FOR AND RATED FOR THE ENVIRONMENT IN WHICH THEY ARE TO BE INSTALLED. ALL COMPONENTS OF THE ELECTRICAL SYSTEM LOCATED OUTDOORS SHALL BE WEATHERPROOF, NEMA 3R, AS A MINIMUM, WHETHER INDICATED ON THE CONTRACT DRAWINGS OR NOT.
- TERMINATION PROVISIONS FOR ALL ELECTRICAL EQUIPMENT (PANELBOARDS, SWITCHBOARDS, TRANSFORMERS, DISCONNECT SWITCHES, MOTOR CONTROLLERS, ENCLOSED CIRCUIT BREAKERS, ETC.) SHALL BE LISTED AND IDENTIFIED FOR USE WITH MINIMUM 75 DEG. F CONDUCTORS IN ACCORDANCE WITH NEC.
- WORKING CLEARANCES FOR ELECTRICAL EQUIPMENT SHALL BE IN COMPLIANCE WITH NEC.
- THE ELECTRICAL DEDICATED EQUIPMENT SPACE EXTENDING FROM FLOOR TO 6' ABOVE ELECTRICAL EQUIPMENT WITH A WIDTH AND DEPTH OF THE PANELBOARD OR SWITCHBOARD MUST BE CLEAR OF ALL OTHER EQUIPMENT FOREIGN TO THE ELECTRICAL INSTALLATION IN ACCORDANCE WITH NEC.
- PROVIDE A REINFORCED CONCRETE PAD, SIZED 4" LARGER IN ALL DIRECTIONS THAN THE FOOTPRINT OF THE EQUIPMENT, AND 4" HIGH, FOR ALL FREESTANDING, FLOOR-MOUNTED ELECTRICAL EQUIPMENT. PROVIDE VIBRATION ISOLATORS AND/OR ANCHORS PER MANUFACTURER'S INSTRUCTIONS.
- PROVIDE SURGE PROTECTION DEVICE FOR ALL MAIN SERVICE EQUIPMENT. PROVIDE MINIMUM 30A/SP BREAKER IN BRANCH CIRCUIT PANELBOARDS AND BRANCP IN DISTRIBUTION PANELBOARDS OR SWITCHBOARDS, UNLESS NOTED OTHERWISE, OR PER THE SPD MANUFACTURER'S RECOMMENDATIONS FOR SURGE PROTECTION DEVICE.
- PROVIDE ARC ENERGY REDUCING MAINTENANCE SWITCH FOR ANY BREAKER RATED (OR ABLE TO BE ADJUSTED TO) 1200A OR HIGHER UNLESS OTHER ARC ENERGY REDUCTION MEANS MEETING NEC 240.87 IS INDICATED ON DRAWINGS/SPECIFICATIONS OR OTHERWISE PROVIDED.

GROUNDING

- ALL FEEDERS AND BRANCH CIRCUITS SHALL INCLUDE AN EQUIPMENT GROUND CONDUCTOR. METAL RACEWAYS SHALL NOT BE USED AS THE SOLE EQUIPMENT GROUND.
- WHERE A PHASE CONDUCTOR IS INCREASED IN SIZE DUE TO VOLTAGE DROP, THE EQUIPMENT GROUND CONDUCTOR SHALL BE INCREASED IN SIZE PROPORTIONATELY.

IDENTIFICATION

- PROVIDE TYPED PANEL DIRECTORIES FOR ALL NEW PANELBOARDS AFFECTED BY THIS PROJECT. DIRECTORIES SHALL REFLECT CIRCUIT PANELBOARDS AND BRANCP IN DISTRIBUTION PANELBOARDS OR SWITCHBOARDS, SWITCHGEAR, SAFETY SWITCHES, ENCLOSED CIRCUIT BREAKER, CABINET, STEP-DOWN TRANSFORMER, ETC., AND ANY OTHER MAJOR COMPONENT OF THE ELECTRICAL SYSTEM.
- PROVIDE ENGRAVED PLASTIC LAMINATE NAME TAGS FOR EACH DISTRIBUTION BREAKER OR BRANCH CIRCUIT BREAKER IN SWITCHBOARDS, AND OTHER DISTRIBUTION EQUIPMENT. NAME TAG SHALL INCLUDE LOAD DESCRIPTION FOR EACH LOAD.
- ARC FLASH DANGER WARNING LABELS SHALL BE APPLIED TO SWITCHBOARD, PANELBOARDS, AND EQUIPMENT CONTROLLERS PER NEC.
- PROVIDE LABELS ON THE INSIDE OF EACH DEVICE COVER/PLATE, IDENTIFYING THE PANEL(S) CIRCUIT NUMBER(S) DEVICE IS CONNECTED TO.
- PROVIDE NEATLY HANDWRITTEN IDENTIFICATION ON THE EXTERIOR COVER OF ALL JUNCTION BOXES, PULLBOXES AND DRAWINGS, IDENTIFYING THE PANEL(S) CIRCUIT NUMBER(S) CONTAINED WITHIN.
- PROVIDE A PERMANENT LABEL ON ALL PANELBOARDS, SWITCHGEAR, AND DISTRIBUTION PANELS STATING "DO NOT WORK ON EQUIPMENT WHILE ENERGIZED. LOCK-OUT TAG-OUT REQUIRED".
- PROVIDE REQUIRED IDENTIFICATION PER ANSI STANDARDS, NEC REQUIREMENTS, AND OWNER'S PUBLISHED DESIGN STANDARDS WHERE APPLICABLE.
- PROVIDE ENGRAVED IDENTIFICATION LABEL ON ALL NEW SERVICE EQUIPMENT TO INDICATE THE MAXIMUM AVAILABLE FAULT CURRENT AND THE DATE THE FAULT CURRENT WAS PERFORMED.
- PROVIDE ARC FLASH HAZARD ANALYSIS PER NFPA 70E FOR ANY EQUIPMENT INCLUDED WITHIN THE SCOPE OF WORK. INCIDENT ENERGY VALUES SHALL BE INCLUDED ON THE ARC FLASH WARNING LABELS FOR EACH EQUIPMENT.

RACEWAYS

- FLEXIBLE METAL CONDUIT AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT (FMC & LFMC) SHALL NOT BE USED IN LENGTHS THAT EXCEED 6'-4" UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS THE ENGINEER GRANTS WRITTEN PERMISSION.
- ALL FEEDER AND BRANCH CIRCUIT CONDUCTORS, INCLUDING LOW VOLTAGE SYSTEMS, SHALL BE INSTALLED IN A COMPLETE RACEWAY SYSTEM (CONDUIT) UNLESS SPECIFICALLY NOTED OTHERWISE.
- THE USE OF ELECTRICAL NON-METALLIC TUBING (ENT) AND LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT (LFNC) ARE PROHIBITED UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS THE ENGINEER OR OWNER GRANTS WRITTEN PERMISSION.
- ALL CONDUITS ARE TO BE CONCEALED UNLESS IMPOSSIBLE DUE TO EXISTING CONDITIONS. WHERE EXISTING CONDITIONS DICTATE THAT CONDUITS CANNOT BE CONCEALED, NOTIFY ENGINEER PRIOR TO INSTALLING CONDUIT FOR SOLUTION TO ROUTING.
- PROVIDE ALL PENETRATIONS THROUGH FLOORS. COORDINATE LOCATIONS AND SIZES WITH FIELD CONDITIONS AND WORK OF ALL OTHER DIVISIONS/TRADES. ALL OPENINGS ARE TO BE SEALED WATER-TIGHT.
- ALL RACEWAYS THAT TURN UP THROUGH THE SLAB OR ELECTRICAL EQUIPMENT FROM UNDERGROUND SHALL BE RIGID GALVANIZED STEEL (RGS) WITH BUTYRMASTIC COATING FOR AT LEAST THE FINAL 18" LENGTH. THE USE OF NON-METALLIC CONDUIT ABOVE GRADE IS PROHIBITED.
- PROVIDE POLYOLEFIN, JET-LINE #232 (NYLON PULL STRING) IN EACH EMPTY CONDUIT WITH ENGRAVED METAL TAG INDICATING CONDUIT DESIGNATION.
- CONDUIT SHALL USE SET SCREW TYPE FITTINGS OR COMPRESSION FITTINGS.
- CONTRACTOR SHALL USE COMPRESSION FITTINGS ONLY FOR EMT CONDUIT.
- WHERE RACEWAYS ARE INSTALLED IN SLABS, THE MINIMUM SPACING, MAXIMUM RACEWAY SIZE, AND ANY OTHER STRUCTURAL LIMITATIONS SHALL BE COORDINATED WITH THE ENGINEER PRIOR TO INSTALLATION.

UTILITY COMPANY STANDARDS

- CONTRACTOR SHALL REVIEW AND ADHERE TO CONDUIT AND CONCRETE PAD REQUIREMENTS LISTED ON SHEET E-002.
- ALL CONDUIT SHALL BE INSTALLED A MINIMUM OF 3" BELOW GRADE.
- ALL CONDUIT SHALL BE SCHEDULE 40 GRAY PVC AND MEET ALL UL REQUIREMENTS.
- ALL CONDUIT PATHWAYS SHALL BE CONCRETE ENCASED AT 90-DEGREE BENDS (UTILITY COMPANY REQUIRES 4-80 LB. BAGS FOR 6" CONDUITS AND 3-40 LB. BAGS FOR 4" CONDUITS AT EACH 90-DEGREE BEND).
- AFTER INSTALLATION, EACH CONDUIT SHALL BE HANDBRANDED FOR DEBRIS.
- CONTRACTOR SHALL INSTALL A MINIMUM 48" RADIUS 90-DEGREE BEND FOR 6" CONDUITS AND 36" RADIUS 90-DEGREE BEND ON 4" CONDUITS.
- CONTRACTOR SHALL COORDINATE INSPECTION OF INSTALLATION OF CONDUIT BY UTILITY COMPANY INSPECTOR PRIOR TO BACKFILLING TRENCH. IF TRENCH IS BACKFILLED PRIOR TO INSPECTION, CONTRACTOR SHALL RE-OPEN TRENCH FOR INSPECTION AT NO ADDITIONAL COST TO OWNER AND UTILITY COMPANY.
- IF ANY OF THE ABOVE REQUIREMENTS, INCLUDING INFORMATION CONTAINED IN THESE CONTRACT DOCUMENTS, AND UTILITY COMPANY PUBLISHED STANDARDS, IS NOT MET IN FULL, PROJECT DELAYS MAY OCCUR. THE CONTRACTOR WILL ALSO BE LIABLE FOR ANY ADDITIONAL EXPENSE INCURRED BY THE UTILITY COMPANY DUE TO THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.

APPLICABLE CODES

APPLICABLE CODES:

- ALL WORK UNDER THIS DIVISION SHALL BE IN STRICT COMPLIANCE AND IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE FOLLOWING CODES AND STANDARDS INCLUDING THE REGULATIONS OF GOVERNING LOCAL, STATE, COUNTY AND OTHER APPLICABLE CODES. REFER TO SPECIFICATIONS FOR ADDITIONAL CODE REQUIREMENTS.

BUILDING CODES:

- FLORIDA BUILDING CODE, 7TH EDITION (2020)
- FLORIDA ENERGY CONSERVATION CODE, 7TH EDITION (2020)
- FLORIDA FIRE PREVENTION CODE, 7TH EDITION (2020)

ADDITIONAL CODES, STANDARDS, AND REQUIREMENTS

- AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
- INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
- NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
- REQUIREMENTS OF LOCAL POWER COMPANY.
- THE AMERICANS WITH DISABILITIES ACT (ADA).
- OWNER'S PUBLISHED DESIGN STANDARDS.

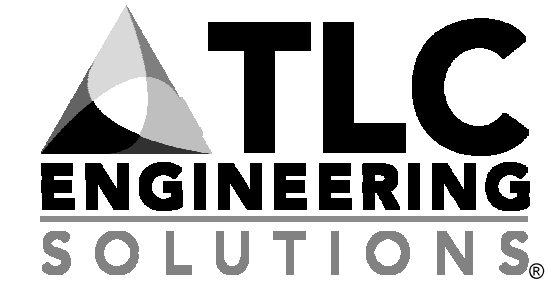
ALL MATERIALS SHALL BE NEW AND FREE OF DEFECTS, AND SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LAB, AS DEFINED BY OSHA. WHERE NO LABELING OR LISTING SERVICE IS AVAILABLE FOR CERTAIN TYPES OF EQUIPMENT, TEST DATA SHALL BE SUBMITTED TO VALIDATE THAT EQUIPMENT MEETS OR EXCEEDS AVAILABLE STANDARDS.

NATIONAL FIRE PROTECTION (NFPA) STANDARDS:
 • NFPA 70, 2017 EDITION, NATIONAL ELECTRICAL CODE®.

ELECTRICAL SYMBOL LEGEND

BASIC MATERIALS		ABBREVIATIONS (CONT.)	
SYMBOL	DESCRIPTION		
DEVICE ABBREVIATION TAGS:			
WP	WEATHERPROOF	AC	ALTERNATING CURRENT
	NOTE: DIAGONAL MARKS INDICATED ON ANY DEVICE REPRESENTS DEVICE CONNECTED TO EMERGENCY CIRCUIT (REG DEVICE FOR RECEPTACLE); TYPICAL FOR ANY DEVICE IN LEGEND	ADA	AMERICANS WITH DISABILITIES ACT
	SINGLE RECEPTACLE	AF	AMPERE FRAME
	DUPLEX RECEPTACLE	AFG	ABOVE FINISHED GRADE
	GFCI RECEPTACLE; "WIP" INDICATES CAST METAL "IN-USE" WEATHERPROOF COVER, WEATHER-RESISTANT LISTED	AIC	AMPERE INTERRUPTING CAPACITY
	SPECIAL PURPOSE RECEPTACLE, NEMA CONFIGURATION AS NOTED	AL	ALUMINUM
	JUNCTION BOX WALL MOUNTED	AMP	AMPERE
	JUNCTION BOX MOUNTED IN OR ABOVE CEILING OR IN STRUCTURE	ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
	GROUND BUS BAR, COPPER	ASA	AMERICAN STANDARDS ASSOCIATION
	SURGE PROTECTIVE DEVICE	AT	AMPERE TRIP
	SHUNT-TRIP PUSHBUTTON; SEMI-FLUSH WALL MOUNTED UNLESS OTHERWISE NOTED; NEMA 3R FOR EXTERIOR LOCATIONS	ATS	AUTOMATIC TRANSFER SWITCH
	MANHOLE	AUX	AUXILIARY
	PULLBOX	AWG	AMERICAN WIRE GAUGE
	HANDHOLE	BC	BARE COPPER
	TRANSFORMER	BL	BASIC IMPULSE LEVEL BREAKER
	AUTOMATIC TRANSFER SWITCH	BRKR OR BKR	CONDUIT OR RACEWAY
	NEMA RATING; NEMA 1 UNLESS OTHERWISE NOTED NF = NON-FUSED AR = AMPERE RATING OF SWITCH 4X SS = NEMA 4X STAINLESS STEEL ENCLOSURE	CAB	CABINET
	NEMA RATING; NEMA 1 UNLESS OTHERWISE NOTED FUSED DISCONNECT AF = AMPERE RATING OF FUSE AR = AMPERE RATING OF SWITCH 4X SS = NEMA 4X STAINLESS STEEL ENCLOSURE	CKT	CIRCUIT
	# OF POLES NEMA RATING; NEMA 1 UNLESS OTHERWISE NOTED	CB	CIRCUIT BREAKER
	COMBINATION MAGNETIC MOTOR STARTER, SIZE AS NOTED, 3-POLE UNLESS OTHERWISE NOTED 4X SS = NEMA 4X STAINLESS STEEL ENCLOSURE NEMA STARTER SIZE	CCO	CONDUIT RACEWAY ONLY CONDUCTOR
	SWITCHBOARD / SWITCHGEAR / DISTRIBUTION PANEL	COND	CONNECTION
	BRANCH CIRCUIT PANELBOARD, OVER 240 VOLTS, SURFACE MOUNTED	CONN	CURRENT TRANSFORMER
	BRANCH CIRCUIT PANELBOARD, OVER 240 VOLTS, FLUSH MOUNTED	CT	COPPER
	BRANCH CIRCUIT PANELBOARD, UNDER 240 VOLTS, SURFACE MOUNTED	CU	DIRECT CURRENT
	BRANCH CIRCUIT PANELBOARD, UNDER 240 VOLTS, FLUSH MOUNTED	DEG	DEGREE
	CONDUIT CONCEALED ABOVE CEILING OR IN WAL	DF	DEMAND FACTOR
	CONDUIT EXPOSED	DISC	DISCONNECT
	CONDUIT CONCEALED IN SLAB, UNDERGROUND OR UNDER FLOOR	DISC SW	DISCONNECT SWITCH
	CONDUIT HOMERUN TO ELECTRICAL PANEL	DN	DOWN
	CONDUIT TURNING UP	DUBT	DOUBLE POLE SINGLE THROW
	CONDUIT TURNING DOWN	EMT	ELECTRIC METALLIC TUBING
	CONDUIT STUBBED OUT OR UP	EO	ELECTRICALLY OPERATED
	CONDUIT CONTINUED	EOL	END OF LINE
	FLEXIBLE CONDUIT	EUR	ENGINEER OF RECORD
	CONDUIT SEAL-OFF FITTING	ETR	EXISTING TO REMAIN
	GROUND OR GROUND ROD AS NOTED	FLA	FLORIDA BUILDING CODE
	EXISTING TO BE REMOVED (HEAVY, DASHED LINE)	FM	FULL LOAD AMPERES
	EXISTING TO REMAIN (LIGHT, SOLID LINE)	FT	FACTORY MUTUAL
	NEW (HEAVY, SOLID LINE)	GF	FEET
		GF	GROUND FAULT
		GFA	GROUND FAULT ALARM
		GFCI	GROUND FAULT CIRCUIT INTERRUPTER
		GFR	GROUND FAULT RELAY
		GND, G	GROUND
		HP	HORSEPOWER
		HOA	HAND-OPERATED AUTOMATIC
		HORIZ	HORIZONTAL
		IBC	INTERNATIONAL BUILDING CODE
		IECC	INTERNATIONAL ENERGY CONSERVATION CODE
		IEEC	INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS
		IMEE	INTERMEDIATE METAL CONDUIT
		IN	INCH
		IPCEA	INSULATED POWER CABLE ENGINEERS ASSOCIATION
		IT	INSTANTANEOUS TRIP
		JB OR J-BOX	JUNCTION BOX
		KCMIL	ONE THOUSAND CIRCULAR MILS
		KV	KILOVOLT
		KVA	KILOVOLT AMPERES
		KW	KILOWATT
		KWH	KILOWATT HOURS
		LBS	POUNDS
		LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND LONG TIME, SHORT TIME, INSTANTANEOUS ALARM
		LSI	LONG TIME, SHORT TIME, INSTANTANEOUS
		MAX	MAXIMUM
		MCA	MINIMUM CIRCUIT AMPS
		MCB	MAIN CIRCUIT BREAKER
		MDP	MAIN SERVICE DISTRIBUTION PANEL
		MIN	MINIMUM
		MLO	MAIN LUGS ONLY
		MOCPP	MAXIMUM OVERCURRENT PROTECTION
		MSB	MAIN SERVICE SWITCHBOARD
		MTD	MOUNTED
		MTCG	MOUNTING
		MTR	MOTOR
		MTS	MANUAL TRANSFER SWITCH
		MVA	MEGA VOLT AMPS
		N	NEUTRAL
		NC	NORMALLY CLOSED
		NEMA	NATIONAL ELECTRICAL CODE
		NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
		NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
		NIC	NOT IN CONTRACT
		NF	NON-FUSED
		NL	NON-LINEAR
		NO	NORMALLY OPEN OR NUMBER
		OL	OVERLOAD
		OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
		P	POLE
		PB	PULLBOX
		PF	POWER FACTOR
		PNL	PANEL
		PR	PAIR
		PRI	PRIMARY
		PT	POTENTIAL TRANSFORMER
		PVC	POLYVINYLCHLORIDE
		PWR	POWER
		REC, RECEPT	RECEPTACLE
		RGS, GRC	RIGID GALVANIZED STEEL CONDUIT
		RLA	RUNNING LOAD AMPERES
		RMS	ROOT-MEAN-SQUARE
		RPM	REVOLUTIONS PER MINUTE
		SCA	SHORT CIRCUIT AMPERES
		SEC	SECONDARY
		SIN	SOLID NEUTRAL
		SPD	SURGE PROTECTIVE DEVICE
		SPRT	SINGLE POLE, SINGLE THROW
		SS	STAINLESS STEEL
		SST	SOLID STATE TRIP
		STD	SHORT TIME TRIP
		SW	SWITCH
		SWBD	SWITCHBOARD
		TRF	TRANSFORMER
		UG	UNDERGROUND
		UNON	UNLESS OTHERWISE NOTED
		UL	UNDERWRITERS LABORATORIES
		UTIL	UTILITY
		V	VOLT
		VA	VOLTAMPERE
		VAR	VOLT AMPERE REACTIVE
		VAV	VARIABLE AIR VOLUME
		W	WIRE
		WP	WEATHER PROOF
		XFRM	TRANSFORMER
		XFR	TRANSFER

NOTE: SOME MATERIALS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT.



7370 Cabot Court, Suite 103
 Melbourne, FL 32940
 P 321.636.0274
 www.tlc-engineers.com

COA 15

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 TLC Project No.: 521200
THINK. LISTEN. CREATE.

NEIGHBORHOOD LAKES TRAILHEAD ELECTRICAL SERVICE

26656 County Rd 46A
 Sorrento, FL 32776

Consultants:

Revisions:

No.	Date	Description

