PUMP STATION R/R PACKAGE No. 4

PS 3990 Arning Drive,
PS 3092/3439 Winfree Drive/Secluded Oaks Drive
and PS 3259 Allwood Place
Improvements

BOARD OF COUNTY COMMISSIONERS

TERESA JACOBS
ORANGE COUNTY MAYOR

S. SCOTT BOYD
DISTRICT 1

BRYAN NELSON
DISTRICT 2

PETE CLARKE
DISTRICT 3

JENNIFER THOMPSON
DISTRICT 4

TED B. EDWARDS
DISTRICT 5

VICTORIA P. SIPLIN
DISTRICT 6

ORANGE COUNTY GOVERNMENT
FLORIDA

AJIT LALCHANDANI
COUNTY ADMINISTRATOR

RAYMOND E. HANSON, P.E.
DIRECTOR ORANGE COUNTY UTILITIES DEPARTMENT

PLANS PREPARED BY:

cph — A Full Service A & E Firm
Architects, Engineers, Environmental, Landscape Architects, M / E / P, Planners, Surveyors, Traffic/Transportation
www.cphcorp.com
1117 East Robinson Street - Orlando, FL 32801
Phone: 407.425.0452
Licenses:
Engineering C.O.A. No. 3215 Architectural Lic. No. AA2600926
Survey L.B. No. 7143 Landscape Lic. No. LC0000298

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA. DIMENSION INFORMATION SHOULD NOT BE OBTAINED BY SCALING THE PLANS.

ORANGE COUNTY UTILITIES DEPARTMENT
ENGINEERING DIVISION
ORANGE COUNTY, FLORIDA

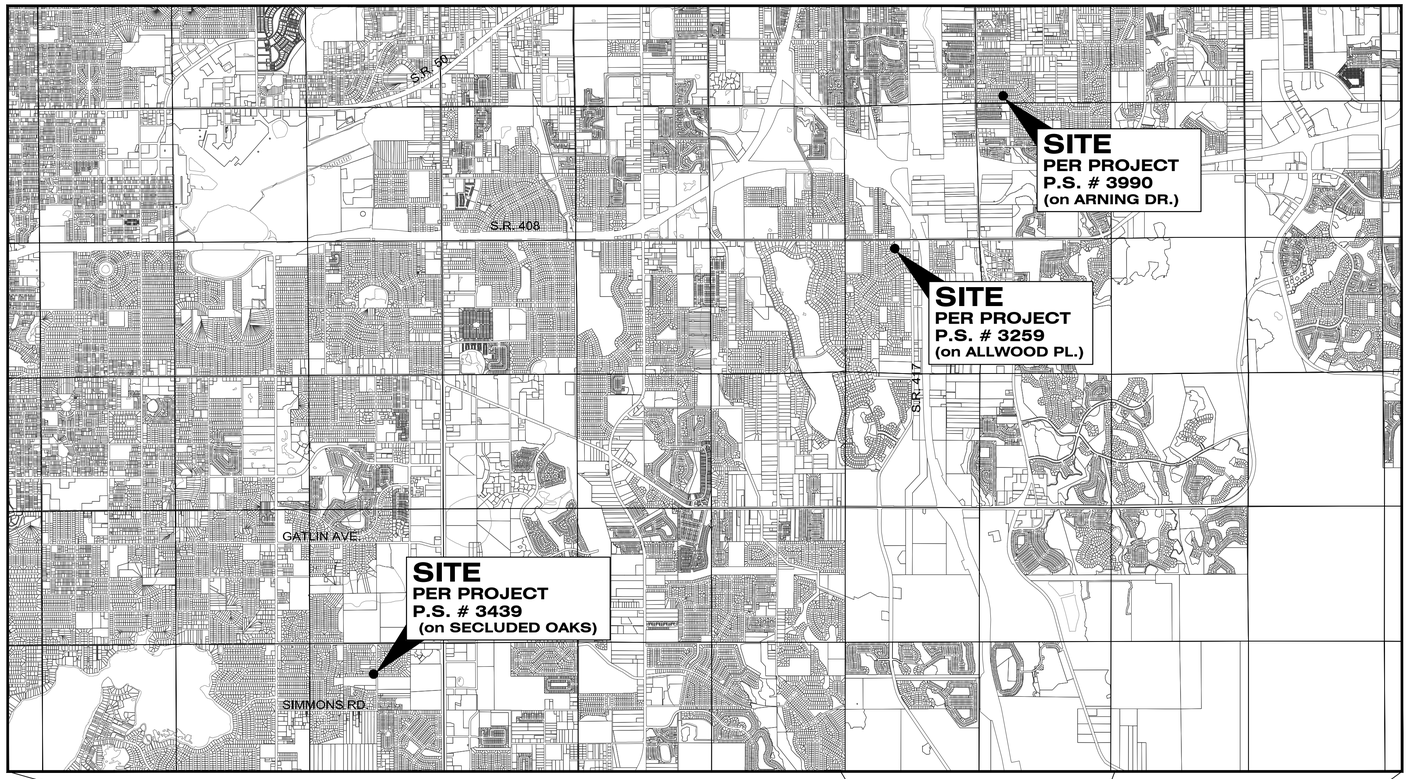
July 2015

BID SET

OCU FILE NO.: 74325

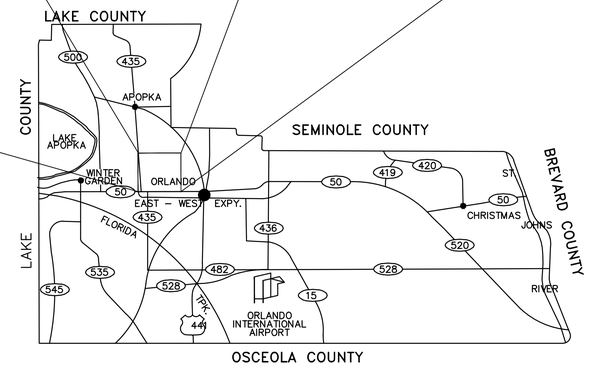
CIP FUNDING CODE:
- 1503-23 (PS 3990)
- 1503-22 (PS 3092)
- 1503-29 (PS 3259)
- 1503-49 (PS 3439)

LOCATION MAP



ORANGE COUNTY, FLORIDA
SCALE: 1" = 3,000'

NOTE:
SEE SURVEYS FOR SPECIFIC LOCATIONS



ORANGE COUNTY, FLORIDA
SCALE: 1" = 50,000'

DRAWING INDEX

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT FLORIDA

ORANGE COUNTY
UTILITIES DEPARTMENT
ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825

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Lndscp. Lic. No. LC0000298
1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

LOCATION MAP AND
DRAWING INDEX

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: Location-Sheet Index.dwg

SCALE: AS SHOWN
DRAWING NO. :
G200
SHEET: 2 OF 40

BID DRAWING

GENERAL NOTES

1. **EXCAVATE CAUTIOUSLY** LOCATIONS OF EXISTING UTILITIES INDICATED HERE IN ARE BASED ON BEST AVAILABLE INFORMATION AND ARE NOT TO BE CONSIDERED ALL INCLUSIVE. CONTRACTOR SHALL VERIFY EXACT LOCATION, CHARACTER AND NATURE OF ALL EXISTING AND PROPOSED UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO FABRICATION OF PIPING AND EQUIPMENT TO ENSURE PROPER ASSEMBLY OF ALL ITEMS.

2. LOCATIONS AND DIMENSION OF EXISTING RIGHTS-OF-WAY AND EASEMENTS ARE BASED ON BEST AVAILABLE INFORMATION. CONTRACTOR SHALL VERIFY THE LIMITS OF THE RIGHTS-OF-WAY AND EASEMENTS IN ORDER TO AVOID ENCROACHMENTS.

3. COVER OVER ALL PIPES SHALL BE THREE (3) FEET MINIMUM, OR AS SHOWN.

4. PIPES SHALL NOT BE DEFLECTED.

5. ALL EXCAVATIONS SHALL BE BACK FILLED AT THE END OF EACH WORK DAY. ALL FINAL BACK FILL IS TO BE COMPACTED TO 98% OF MAXIMUM MODIFIED PROCTOR.

6. ALL SITE WORK SHALL BE COORDINATED WITH THE COUNTY RESIDENT PROJECT REPRESENTATIVE (RPR).

7. THE ELEVATIONS SHOWN ARE BASED ON NAVD **1988 DATUM.**

8. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY-OR VACUUM-TYPE SANITARY SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE3 OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

   AT THE UTILITY CROSSINGS DESCRIBED ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THE ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

9. ALL PROPOSED DUCTILE IRON M.J. FITTINGS, PIPES, OR RESTRAINTS WITHIN FORTY (40) FEET OF EXISTING GAS MAINS SHALL BE POLYETHYLENE ENCASED.

10. ALL EXISTING AND PROPOSED WATER, WASTEWATER AND REUSE VALVES SHALL BE OPERATED BY ORANGE COUNTY UTILITIES AUTHORIZED REPRESENTATIVES. EXISTING VALVE BOXES AND MANHOLES, WHICH ARE TO REMAIN, SHALL BE ADJUSTED TO THE FINISHED GRADE. ALL VALVES UNDER CONSTRUCTION SHALL REMAIN CLOSED DURING CONSTRUCTION.

11. THE CONTRACTOR SHALL PROVIDE TANKERS AND SIGNED DOCUMENT ACKNOWLEDGING THE UNDERSTANDING OF THE ORANGE COUNTY UTILITY "**EMERGENCY WASTEWATER SPILL AND WATER MAIN BREAK PROCEDURES**", IN THE PRE-CONSTRUCTION PACKET FOR THE MEETING.

12. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ON-SITE DURING THE LIFE OF THE PROJECT, A WEATHERPROOF ENCLOSURE CONTAINING A READILY ACCESSIBLE LIST OF EMERGENCY CONTACTS AND PHONE NUMBERS.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SATISFACTION OF ALL REQUIREMENTS OF REGULATORY AGENCY PERMITS WITH REGARD TO CONSTRUCTION ACTIVITIES AND RELATED CONDITIONS.

14. THE CONTRACTOR SHALL CALL SUNSHINE STATE ONE CALL NO LESS THAN FOURTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION. - PHONE - 800-432-4777.

15. **ADVANCE NOTIFICATION OF CONSTRUCTION**
    THE ORANGE COUNTY UTILITY CONSTRUCTION SECTION (407) 254-9798, SHALL BE NOTIFIED AT LEAST SEVEN (7) DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY.

16. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AT ALL INTERSECTIONS OF PROPOSED WORK AND EXISTING UTILITIES. THE EXPLORATORY EXCAVATIONS SHALL BE MADE FORTY-EIGHT (48) HOURS IN ADVANCE OF THE WORK. IF THERE IS A POTENTIAL CONFLICT, THE CONTRACTOR SHALL NOTIFY THE COUNTY RESIDENT PROJECT REPRESENTATIVE IMMEDIATELY WITH INFORMATION WHICH SHALL INCLUDE LOCATION, ELEVATION, UTILITY TYPE, MATERIAL AND SIZE.

17. IN AREAS WHERE CONSTRUCTION ACTIVITIES RESTRICT NORMAL ACCESS TO PROPERTIES, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALTERNATE ACCESS ROUTES WHICH ARE SUBJECT TO APPROVAL BY THE ENGINEER, AS PART OF THE M.O.T. PLAN.

18. THE DISPOSAL OF ANY EXCESS EARTH WORK MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

19. THE CONTRACTOR SHALL REPLACE WITH EQUAL MATERIAL, OR AS DIRECTED BY THE RPR, ALL PAVING, GRASSED AREAS, STABILIZED EARTH, DRIVEWAYS, ETC., DISTURBED OR DAMAGED BY THE CONSTRUCTION OR RELATED ACTIVITIES. ALL DISTURBED AREAS SHALL BE SODDED, EXCEPT DIRT DRIVES AND WHERE INDICATED IN THE DRAWINGS.

20. SALVAGE AND/OR DISPOSAL OF ALL EXISTING EQUIPMENT SHALL BE AT THE DIRECTION OF THE RPR.

21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ALL STRUCTURES, PIPE, CONDUIT, WIRE, FITTINGS, PANELS, ETC. THAT ARE DEMOLISHED, DISASSEMBLED, OR REMOVED, PER SECTION 02080 OF THE SPECIFICATION MANUAL OF THIS PROJECT.

22. **OPERATION OF ORANGE COUNTY PUMP STATIONS** THE CONTRACTOR SHALL COORDINATE ALL PUMP STATION OPERATIONS AND SHUT DOWN CONTROL WITH THE ORANGE COUNTY RPR.

23. THE CONTRACTOR SHALL PROVIDE TEMPORARY BY-PASS PUMPING AS NEEDED FOR EACH PUMP STATION AND/OR MANHOLE TO BE REHABILITATED AND/OR REPLACED PRIOR TO THE START OF ANY WORK. BOTH THE PRIMARY AND THE BACKUP BY-PASS PUMPING SYSTEMS SHALL BE OF ADEQUATE CAPACITIES AND SIZES TO HANDLE THE FLOW AND SHALL MAINTAIN CONTINUOUS SERVICE DURING THE ENTIRE CONSTRUCTION PROCESS UNTIL THE NEW OR REHABILITATED PUMP STATION OR MANHOLE HAS BEEN ACCEPTED BY THE COUNTY. THE BY-PASS PUMPING SYSTEMS SHALL BE APPROVED AND ACCEPTED BY THE COUNTY PRIOR TO INSTALLATION. THE CONTRACTOR SHALL NOT MAINTAIN MORE THAN TWO (2) PUMP STATION BY-PASS OPERATIONS AT THE SAME TIME DURING THE CONSTRUCTION PROCESS.

24. BY-PASS PUMPING SHALL BE LOW NOISE SUITABLE FOR RESIDENTIAL NEIGHBORHOODS (SEE SECTION 01001.1.05B OF THE TECHNICAL SPECIFICATIONS).

25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DE-WATERING REQUIRED DURING CONSTRUCTION AND TO OBTAIN AND PAY FOR ALL PERMITS REQUIRED FOR THE TEMPORARY DEWATERING OF DRAINAGE STRUCTURES.

26. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY PLUGS, BLOCKING, TAPS, AND TESTING EQUIPMENT REQUIRED TO COMPLETE PRESSURE TESTING, AS SPECIFIED.

27. THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL BY THE COUNTY, A COMPREHENSIVE WRITTEN PROCEDURE THAT DESCRIBES THE INTENDED CONSTRUCTION SEQUENCE FOR MAINTAINING AND TRANSFERRING SERVICE FROM THE EXISTING PUMP STATION TO THE NEW PUMP STATION. ITEMS TO ADDRESS SHALL INCLUDE THE FOLLOWING AS A MINIMUM:

    A. LOCATION AND METHOD OF BY-PASS PUMPING.
    B. STATION START-UP AND DRAW-DOWN PROCEDURES.
    C. TIE IN OF THE NEW PUMP STATION.
    D. DISMANTLING OF EQUIPMENT AND CONVERSION OR REMOVAL OF OLD WET WELL.

    THIS PROCEDURE SHALL BE SUBMITTED WITH THE PROJECT SCHEDULE.

28. THE CONTRACTOR SHALL NOTIFY THE COUNTY SEVEN (7) WORKING DAYS IN ADVANCE OF ANY SANITARY FORCE MAIN SHUT-DOWN.

29. ALL CONNECTIONS TO EXISTING FORCE MAINS SHALL BE MADE BY THE CONTRACTOR ONLY AFTER THE CONNECTION PROCEDURE AND THE WORK SCHEDULING HAS BEEN REVIEWED AND APPROVED BY THE COUNTY. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE COUNTY A MINIMUM OF SEVEN (7) WORKING DAYS PRIOR TO SCHEDULING SAID CONNECTIONS. THE REQUEST SHALL OUTLINE THE FOLLOWING:

    A. POINTS OF CONNECTION, FITTINGS TO BE USED, AND METHOD OF FLUSHING.
    B. ESTIMATED CONSTRUCTION TIME FOR SAID CONNECTIONS.

30. THE COUNTY SHALL REVIEW THE SUBMITTAL WITHIN SEVEN (7) WORKING DAYS AFTER RECEIPT AND INFORM THE CONTRACTOR REGARDING APPROVAL OR DENIAL OF THE REQUEST. IF THE REQUEST IS REJECTED BY THE COUNTY, THE CONTRACTOR SHALL RESUBMIT THE WRITTEN REQUEST, WHICH HAS BEEN MODIFIED IN A MANNER ACCEPTABLE TO THE COUNTY. ALL CONNECTIONS SHALL BE MADE ONLY ON THE AGREED UPON DATE AND TIME. IF THE CONTRACTOR DOES NOT INITIATE AND COMPLETE THE CONNECTION WORK IN THE AGREED UPON MANNER, HE SHALL BE REQUIRED TO RESCHEDULE THE SAID CONNECTIONS BY FOLLOWING THE PROCEDURE OUTLINED IN NOTE 29.

31. **ADVANCE NOTIFICATION OF PENDING CONNECTION**
    THE ORANGE COUNTY UTILITY WATER DIVISION AND THE ORANGE COUNTY UTILITY WATER RECLAMATION DIVISION SHALL BE NOTIFIED AT LEAST SEVEN (7) DAYS IN ADVANCE TO SCHEDULE MAIN TIE-INS AND VALVE OPERATIONS.

32. ANY WORK PROPOSED FOR THE POTABLE WATER SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS AND DETAILS OF THE APPROPRIATE UTILITY PROVIDER.

33. **REPAIR IMMEDIATELY**
ALL DAMAGE TO ORANGE COUNTY MAINS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. IF THE REPAIR IS NOT DONE IN A TIMELY MANER, AS DETERMINED BY THE ORANGE COUNTY UTILITY INSPECTOR, ORANGE COUNTY MAY PERFORM REPAIRS AND THE CONTRACTOR WILL BE CHARGED FOR SAID REPAIRS.

34. **TELEPHONE NOTIFICATIONS**
THE ORANGE COUNTY DISPATCH OPERATOR SHALL BE NOTIFIED IMMEDIATELY IN THE EVENT OF A FORCEMAIN, GRAVITY SEWER, OR WATER MAIN BREAK OR DAMAGE AT (407)836-2777 (24-HOURS ASSISTANCE).

35. ALL WORK AND MATERIAL SHALL CONFORM TO THE ORANGE COUNTY UTILITIES STANDARDS AND CONSTRUCTION SPECIFICATIONS MANUAL, LATEST EDITION OR AS INDICATED IN THE PROJECT SPECIFICATIONS OR DRAWINGS.

EMERGENCY NUMBER

CABLE	ADELPHIA LEVEL 3 ----------	321-308-0250
CABLE	BRIGHT HOUSE NETWORKS----------	407-532-8511
ELECTRIC	DUKE ENERGY FLORIDA----------	407-850-2785
GAS	TECO PEOPLES GAS----------	407-420-2678
LOCATES	SUNSHINE ONE CALL----------	800-432-4770
TELEPHONE	AT&T NETWORK OPERATIONS----------	407-273-2803
UTILITIES	ORANGE COUNTY DISPATCH ----------	407-836-2777 (24-HR ASSISTANCE)
WASTEWATER	ORANGE COUNTY UTILITIES (O. C. U.) ----------	407-254-9680
WATER	ORANGE COUNTY UTILITIES (O. C. U.) ----------	407-254-9850
WATER/ELE.	ORLANDO UTILITIES COMMISSION (O. U. C.) ---	407-423-9100

LEGEND

	GUY WIRE AND ANCHOR		EXISTING STORM PIPE
	CAP	BT	EXISTING BURIED TELEPHONE
	PLUG	FO	EXISTING FIBER OPTIC CABLE
	BENCHMARK	BEL	EXISTING BURIED ELECTRIC
	TREE (TYPE & SIZE NOTED)	OE	EXISTING OVERHEAD ELECTRIC
	SHRUB	BCL	EXISTING CABLE TV (BURIED)
XX.XX	PROPOSED ELEVATION	XX.XX	EXISTING ELEVATION
	PROPOSED FORCE MAIN	FM	EXISTING FORCE MAIN
	PROPOSED GRAVITY MAIN	SS	EXISTING GRAVITY MAIN
WM	PROPOSED WATER SERVICE	UW	EXISTING WATER MAIN
X X	PROPOSED CHAIN-LINK FENCE		EXISTING CHAN-LINK FENCE
	PROPOSED WOOD FENCE		EXISTING WOOD FENCE
POLE_ID	PROPOSED POWER POLE	POLE_ID	EXISTING POWER POLE
	PROPOSED MANHOLE (SPECIFY)	S	EXISTING MANHOLE (SPECIFY)
	PROPOSED VALVE (SPECIFY)		EXISTING VALVE (SPECIFY)
	PROPOSED WATER METER		EXISTING WATER METER
	PROPOSED BACK-FLOW PREVENTER		EXISTING BACK-FLOW PREVENTER
	PROPOSED SILT FENCE		

PRECAST STRUCTURAL NOTES

1. PRECAST STRUCTURES SHALL BE ENGINEERED PRODUCTS OF A PRECAST MANUFACTURER AND SHALL BE SPECIFICALLY DESIGNED FOR THE SERVICE AND APPLICATION AS SHOWN ON THESE DRAWINGS. THE PRECAST MANUFACTURER IS SOLELY RESPONSIBLE FOR DESIGN AND MANUFACTURE OF EACH STRUCTURE. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INSTALLATION OF THESE PRODUCTS AND CONFORMANCE OF SAME WITH ALL PROJECT DOCUMENTS. THE CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS FOR ALL SUCH PRECAST STRUCTURES ON THE PROJECT FOR REVIEW AND APPROVAL, PRIOR TO THE ORDERING OF ANY STRUCTURES OR MATERIALS.

2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF THE CAST-IN-PLACE REINFORCEMENT AND CONCRETE PLACEMENT USED IN THE INSTALLATION OF SADDLE MANHOLES FOR REVIEW AND APPROVAL BY THE COUNTY, PRIOR TO THE ORDERING OF ANY MATERIALS.

3. STRUCTURAL DESIGN STANDARDS - ACI STANDARD 318-89 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND ACI 350R-83, "CONCRETE SANITARY ENGINEERING STRUCTURES". PRECAST WALL SECTIONS ASTM C478.

4. ALL CONCRETE SHALL HAVE A SPECIFIED MINIMUM COMPRESSIVE STRENGTH OF fc' = 4000 P.S.I. AT 28 DAYS, UNLESS NOTED ON DRAWINGS.

5. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60. MINIMUM YIELD STRENGTH SHALL BE 60,000 P.S.I..

6. CONTRACTOR SHALL COORDINATE WET WELL HATCH OPENING SIZE AND LOCATION AS REQUIRED BY PUMP MANUFACTURER/SUPPLIER WITH THE PRECAST CONCRETE SUPPLIER PRIOR TO CASTING. SHOP DRAWINGS OF THE PRECAST SHALL BE PROVIDED TO THE COUNTY FOR REVIEW.

7. THE FLOOR GROUT (FILLET) SHALL BE FULL CIRCUMFERENCE OF THE STRUCTURE.

POWER AND WATER SUPPLY NOTES:

1. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY PROVIDER FOR POWER AND WATER SERVICE, AND SHALL INCLUDE IN HIS BID ALL PROVIDER CHARGES FOR MATERIALS, LABOR, ONE-TIME NONRECURRING CONSTRUCTION COSTS AND OTHER COSTS, INCLUDING WATER METER, ASSESSED BY THE PROVIDER, WHETHER OR NOT INDICATED ON THE DRAWINGS, OR SPECIFIED.

2. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE POWER SUPPLY AND THE WATER SYSTEM RELOCATION AND INSTALLATION WITH THE SUPPLIER.

3. THE POWER PROVIDER SHALL MAKE ALL SECONDARY TERMINATIONS AT POWER TRANSFORMERS.

4. THE WATER SUPPLIER WILL PERFORM THE REQUIRED RELOCATIONS AND MAKE ALL CONNECTIONS TO THE EXISTING WATER SYSTEM, INCLUDING WATER METER INSTALLATION.

5. POWER SUPPLIER: DUKE ENERGY (P.S. # 3259)
   (P.S. # 3439)
   (P.S. # 3990)

6. WATER SUPPLIER: O. C. U. (P.S. # 3259)
   (P.S. # 3439)
   (P.S. # 3990)

ABBREVIATIONS

AKA	ALSO KNOWN AS	L.S.	LIFT STATION
AC	ASBESTOS CEMENT	LT	LEFT
ALUM.	ALUMINUM	L.W.L.	LOW WATER LEVEL
APPROX.	APPROXIMATELY	MAX.	MAXIMUM
ASPH.	ASPHALT	MATL	MATERIAL
ASSEM.	ASSEMBLY	M.H.	MANHOLE
BE	BURIED ELECTRIC	MIN.	MINIMUM
BL	BASELINE	MOD	MODIFIED
B.M.	BENCHMARK	M.O.T.	MAINTENANCE OF TRAFFIC
B.O.	BLOWOFF	M.J.	MECHANICAL JOINT
BCL	BURRIED CABLE LINE	N.G.	NATURAL GROUND
BT	BURIED TELEPHONE	NO.	NUMBER
B.F.V.	BUTTERFLY VALVE	NPW	NON-POTABLE WATER
CATV	CABLE TELEVISION	N.T.S.	NOT TO SCALE
C.B.	CATCH BASIN	O.C.U.	ORANGE COUNTY UTILITIES
C.F.S.	CUBIC FEET PER SECOND	O.D.	OUTSIDE DIAMETER
CIP	CAST IRON PIPE	O.H.E.	OVERHEAD ELECTRIC
CL	CENTERINE	O.U.C.	ORLANDO UTILITY COMMISSION
C.M.	CONCRETE MONUMENT	PAVT.	PAVEMENT
C.M.P.	CORRUGATED METAL PIPE	P.B.	PULL BOX
CONC.	CONCRETE	PG.	PAGE
CONN.	CONNECTION	P.I.	POINT OF INTERSECTION
CONST.	CONSTRUCT	PL	PROPERTY LINE
CONT.	CONTINUOUS	POLY.	POLYETHYLENE
CORP.	CORPORATION	PP	POWER POLE
C.V.	CHECK VALVE	PROP.	PROPOSED
C.Y.	CUBIC YARD	PS	PUMP STATION
DBL.	DOUBLE	P.S.I.	POUNDS PER SQUARE INCH
DHW	DESIGN HIGH WATER	P.U.E.	PERMANENT UTILITY EASEMENT
DIA.	DIAMETER	PV	PLUG VALVE
DIP	DUCTILE IRON PIPE	RAD. PT.	RADIUS POINT
DWLS.	DOWELS	R	RADIUS
DWG.	DRAWING	RCP	REINFORCED CONCRETE PIPE
ELEC	ELECTRIC	REINF.	REINFORCED
EA.	EACH	REQ.	REQUIRED
EFF	EFFLUENT	RPZ	REDUCED PRESSURE ZONE BACKFLOW PREVENTER
ELEV.	ELEVATION	RT.	RIGHT
EMB.	EMBED OR EMBEDDED	RW	RECLAIMED WATER
E/P	EDGE OF PAVEMENT	R/W	RIGHT OF WAY
ESMT.	EASEMENT	SAN.	SANITARY SEWER
E.W.	EACH WAY	SCH.	SCHEDULE
EXIST.	EXISTING	S.D.	STORM DRAIN
EXP. JT.	EXPANSION JOINT	S.F.	SQUARE FEET
F.D.	FLOOR DRAIN	SHT.	ENVIRONMENTAL PROTECTION SHEET
F.D.E.P.	FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION	SPECS.	TRANSPORTATION SPECIFICATIONS
F.D.O.T.	FLORIDA DEPT. OF TRANSPORTATION	SQ.	SQUARE
F.F.	FINISHED FLOOR	SS	STAINLESS STEEL
F.H.	FIRE HYDRANT	STA.	STATION
FKA	FORMALLY KNOWN AS	STD.	STANDARD
FLG.	FLANGE	STL.	STEEL
FL.	FLOW LINE	S.Y.	SQUARE YARDS
FM	FORCEMAIN	TEL	TELEPHONE
FT.	FEET	T&B	TOP AND BOTTOM
FTG.	FOOTING	TBM	TEMPORARY BENCH MARK
GA	GAUGE	TCE	TEMPORARY CONSTRUCTION EASEMENT
GAL.	GALLONS	TEMP.	TEMPORARY
GEN.	GENERATOR	THD.	THREADED
GRD.	GROUND	THK.	THICK
G.S.P.	GALVANIZED STEEL PIPE	TYP.	TYPICAL
GM	GAS MAIN	U.G.	UNDERGROUND
GPM	GALLONS PER MINUTE	VAC	VOLTABE ALTERNATING CURRENT
GV	GATE VALVE	VCP	VITRIFIED CLAY PIPE
HB	HOSE BIBB	VDC	VOLTAGE DIRECT CURRENT
HDWL.	HEADWALL	VERT.	VERTICAL
HT.	HEIGHT	V.V.H.	VERIFIED VERTICALLY & HORIZONTALLY
HP	HIGH POINT	W/	WITH
HORIZ.	HORIZONTAL	WM	WATERMAIN
H.W.L.	HIGH WATER LEVEL	W/M	WATER METER
I.E.	INVERT ELEVATION	WP	WALL PIPE
I.D.	INSIDE DIAMETER	WS	WATER SERVICE
IN.	INCHES	W.S.	WATER SURFACE
INV.	INVERT	WWF	WELDED WIRE FABRIC
I.P.	IRON PIPE	"X"	SPOT ELEVATION
I.R.	IRON ROD		
J.B.	JUNCTION BOX		
JUNC.	JUNCTION		
LAT.	LATERAL		
LF	LINEAR FEET		

REF:NNNNN REFERENCE MADE TO AN APPLICABLE SECTION(S) OF THE TECHNICAL SPECIFICATIONS FOR THIS PROJECT.

ADDRESSES FOR THE PUMP STATIONS:

PS # 3259 - 9237 ALLWOOD PLACE, ORLANDO, FL. 32825

PS # 3439 - 5260 SECLUDED OAKS DRIVE, ORLANDO, FL. 32812

PS # 3990 750 - ARNING DRIVE, ORLANDO, FL. 32825

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ABBREVIATIONS AND LEGEND

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

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DRAWN BY: DGH/GCM
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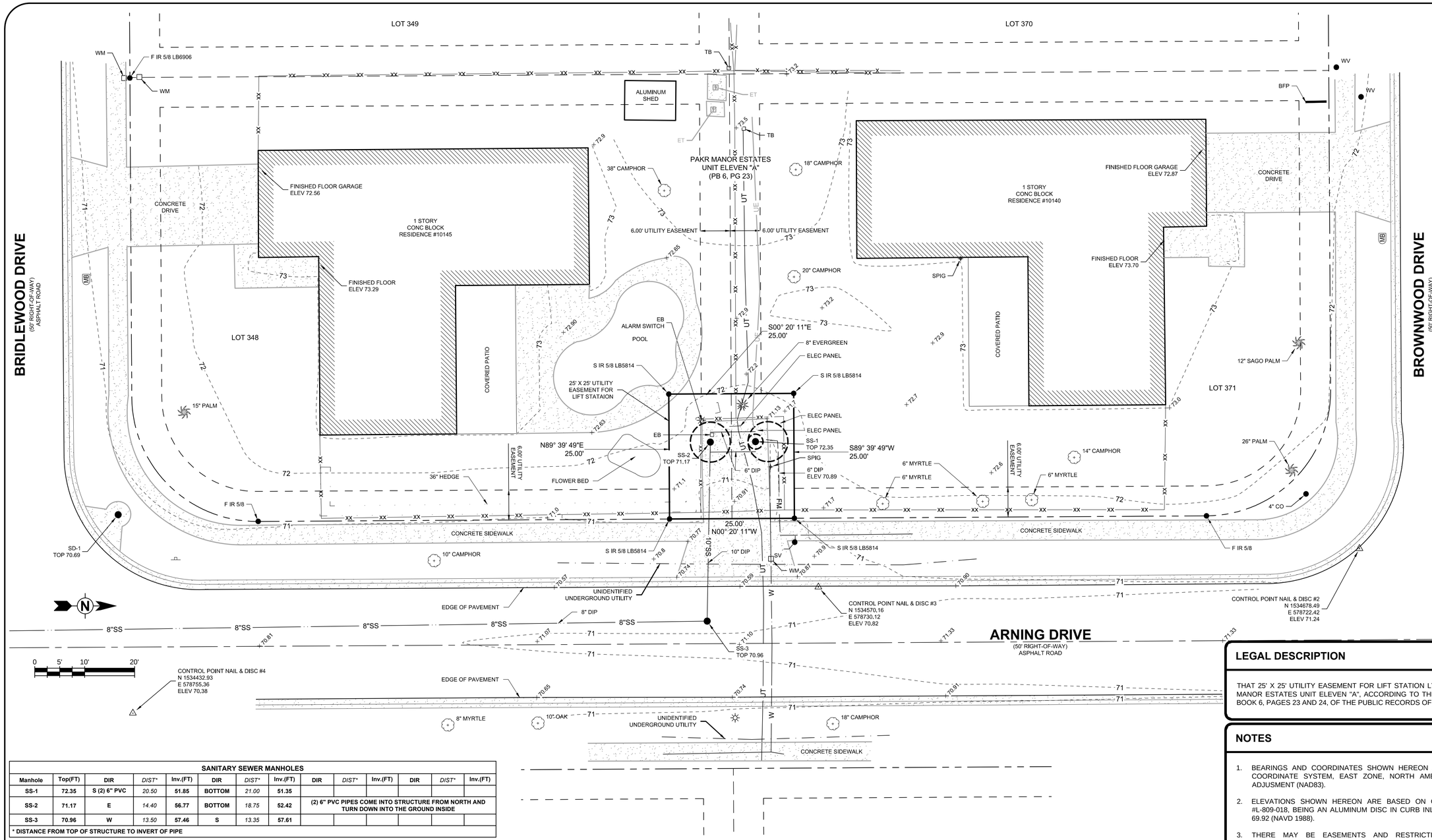
CADD FILE: General Notes.dwg

SCALE: NONE
DRAWING NO. : G300
SHEET: 3 OF 40

BID DRAWING



SANITARY SEWER MANHOLES

Manhole	Top(FT)	DIR	*DIST**	Inv.(FT)	DIR	*DIST**	Inv.(FT)	DIR	*DIST**	Inv.(FT)	DIR	*DIST**	Inv.(FT)
SS-1	**72.35**	**S (2) 6" PVC**	*20.50*	**51.85**	**BOTTOM**	*21.00*	**51.35**						
SS-2	**71.17**	**E**	*14.40*	**56.77**	**BOTTOM**	*18.75*	**52.42**	**(2) 6" PVC PIPES COME INTO STRUCTURE FROM NORTH AND TURN DOWN INTO THE GROUND INSIDE**					
SS-3	**70.96**	**W**	*13.50*	**57.46**	**S**	*13.35*	**57.61**						

*** DISTANCE FROM TOP OF STRUCTURE TO INVERT OF PIPE**

LEGEND

- BM BENCHMARK
- ND NAIL & DISK
- TP TRAVERSE POINT
- F FOUND IRON (TYPE)
- S SET IRON (TYPE)
- F FOUND MONUMENT (TYPE)
- S SET MONUMENT (TYPE)
- SC SECTION CORNER
- CO CLEANOUT
- DECIDUOUS TREE
- ELECTRIC TRANSFORMER
- EVERGREEN TREE
- FIRE HYDRANT
- FLAG (AS SHOWN)
- GUY ANCHOR
- LIGHT POLE
- MB MAIL BOX
- PALM TREE
- P POST
- SATELITE DISH
- SPIGOT
- SPRINKLER HEAD
- TRAFFIC SIGN
- UTILITY MARKER (AS SHOWN)
- UTILITY MANHOLE (AS SHOWN)
- UTILITY METER (AS SHOWN)
- UTILITY RISER (AS SHOWN)
- UTILITY VALVE (AS SHOWN)
- UTILITY POLE (AS SHOWN)
- WELL

ABBREVIATIONS

ANT	ANTENNA	EM	ELECTRIC METER	JBL	JURISDICTIONAL BOUNDARY LINE	PG	PAGE
BM	BENCHMARK	ET	ELECTRIC TRANSFORMER	PK	PK NAIL	TEL	TELEPHONE
(C)	CALCULATED	F	FOUND	(M)	MEASURED	TP	TRAVERSE POINT
CO	CLEANOUT	FF	FINISHED FLOOR	MB	MAILBOX	TSP	TRAFFIC SIGNAL POLE
CONC	CONCRETE	FH	FIRE HYDRANT	MH	MANHOLE	TV	CABLE TELVISION
CM	CONCRETE MONUMENT	FO	FIBER OPTIC	MW	MONITORING WELL	UE	UNDERGROUND UTILITY LINES
CMP	CORREGATED METAL PIPE	G	GAS	ND	NAIL & DISK	W	WATER
CPP	CORREGATED PLASTIC PIPE	GM	GAS METER	NL	NAIL	WH	WOODEN HUB
(D)	AS DESCRIBED	GV	GAS VALVE	OE	OVERHEAD UTILITY LINES	WM	WATER METER
DIP	DUCTILE IRON PIPE	INV	INVERT	OR	OFFICIAL RECORDS	WV	WATER VALVE
DH	DRILL HOLE	IP	IRON PIPE	P	POST	XC	X CUT
EB	ELECTRIC RISER	IR	IRON ROD	(P)	PER PLAT		
ELEC	ELECTRIC	IRRV	IRRIGATION VALVE	PB	PLAT BOOK	TB	TELEPHONE RISER

LEGAL DESCRIPTION

THAT 25' X 25' UTILITY EASEMENT FOR LIFT STATION LYING WITHIN LOT 348 AND LOT 371, PARK MANOR ESTATES UNIT ELEVEN "A", ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 6, PAGES 23 AND 24, OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA

NOTES

1. BEARINGS AND COORDINATES SHOWN HEREON ARE BASED ON FLORIDA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NORTH AMERICAN VERTICAL DATUM OF 1983/1990 ADJUSMENT (NAD83).
2. ELEVATIONS SHOWN HEREON ARE BASED ON ORANGE COUNTY SURVEY BENCHMARK #L-809-018, BEING AN ALUMINUM DISC IN CURB INLET, HAVING A PUBLISHED ELEVATION OF 69.92 (NAVD 1988).
3. THERE MAY BE EASEMENTS AND RESTRICTIONS OF RECORDS AND/OR PRIVATE AGREEMENTS NOT FURNISHED TO THIS SURVEYOR THAT MAY AFFECT PROPERTY RIGHTS AND/OR LAND USE RIGHTS OF THE LANDS SHOWN HEREON.
4. NO UNDERGROUND INSTALLATIONS, FOUNDATION FOOTINGS OR IMPROVEMENTS HAVE BEEN LOCATED EXCEPT AS NOTED.
5. THIS SURVEY WAS PERFORMED IN ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS FOR SURVEYS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS, CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE.
6. BASED ON THE NATIONAL FLOOD INSURANCE PROGRAM "FIRM" MAP COMMUNITY - PANEL NUMBER 120179 0290 F DATED 9/25/2009 THE ABOVE DESCRIBED PROPERTY IS LOCATED IN ZONE "X".
7. THIS FIELD SURVEY WAS PERFORMED ON NOVEMBER 11, 2010.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT FLORIDA

ORANGE COUNTY
UTILITIES DEPARTMENT
ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825

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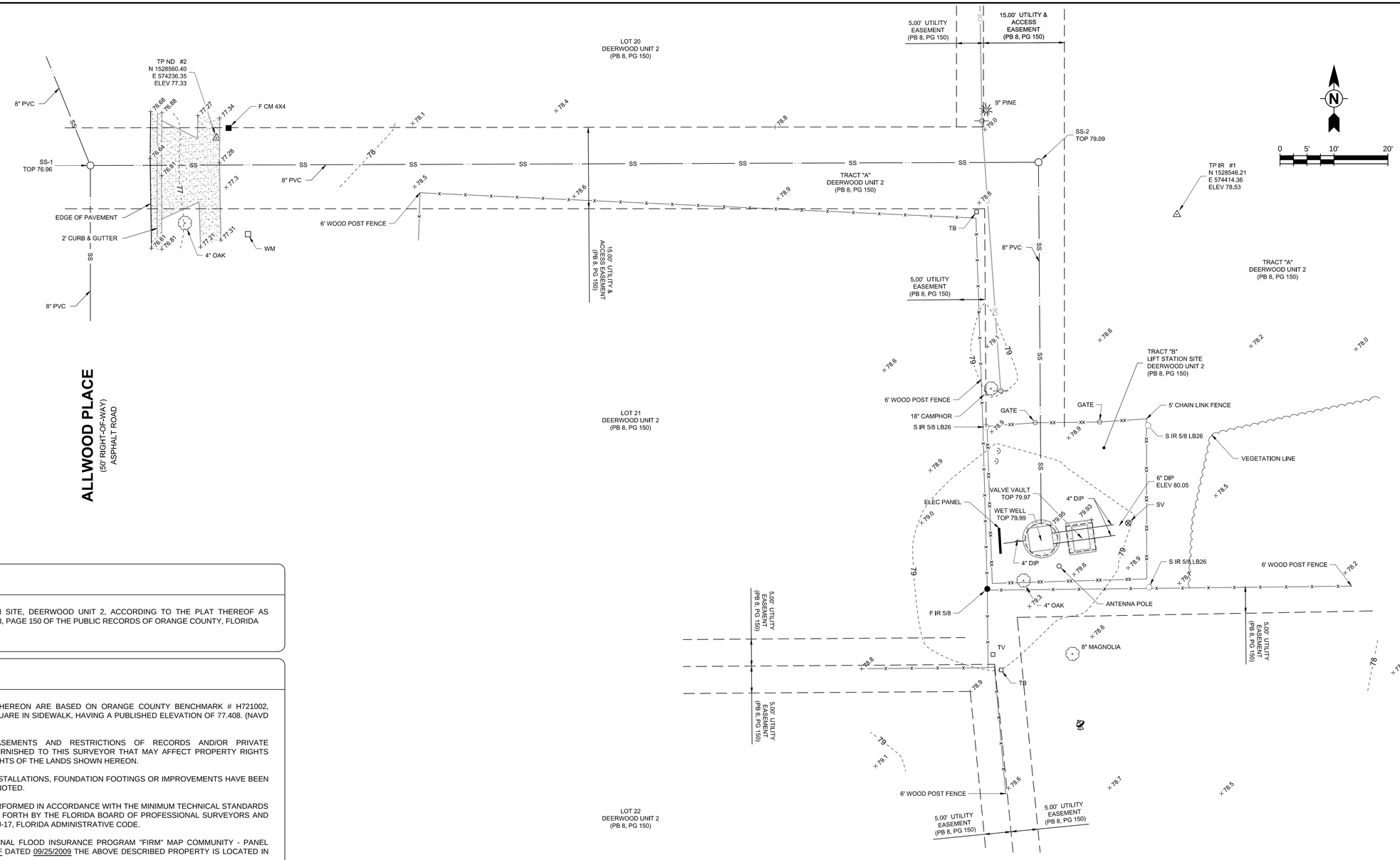
1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

P.S. # 3990 ARNING
BOUNDARY AND TOPOGRAPHIC SURVEY

SURVEY PROVIDED BY TETRA TECH
PROJECT NO.: 200-09074-11001

OCU FILE NO.: 74325
DESIGNED BY:
DRAWN BY:
CHECKED BY:
CADD FILE: Arning Blvd Survey.dwg

SCALE: AS SHOWN
DRAWING NO. :
V100
SHEET: 4 OF 40



DESCRIPTION

TRACT "B" - LIFT STATION SITE, DEERWOOD UNIT 2, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 8, PAGE 150 OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA

DESCRIPTION

1. ELEVATIONS SHOWN HEREON ARE BASED ON ORANGE COUNTY BENCHMARK # H721002, BEING A CHISELED SQUARE IN SIDEWALK, HAVING A PUBLISHED ELEVATION OF 77.408. (NAVD 1988)
2. THERE MAY BE EASEMENTS AND RESTRICTIONS OF RECORDS AND/OR PRIVATE AGREEMENTS NOT FURNISHED TO THIS SURVEYOR THAT MAY AFFECT PROPERTY RIGHTS AND/OR LAND USE RIGHTS OF THE LANDS SHOWN HEREON.
3. NO UNDERGROUND INSTALLATIONS, FOUNDATION FOOTINGS OR IMPROVEMENTS HAVE BEEN LOCATED EXCEPT AS NOTED.
4. THIS SURVEY WAS PERFORMED IN ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS FOR SURVEYS AS SET FORTH BY THE FLORIDA BOARD OF PROFESSIONAL SURVEYORS AND MAPPERS, CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE.
7. BASED ON THE NATIONAL FLOOD INSURANCE PROGRAM "FIRM" MAP COMMUNITY - PANEL NUMBER 120179 0270 F DATED 09/25/2009 THE ABOVE DESCRIBED PROPERTY IS LOCATED IN ZONE "X" .
8. THIS FIELD SURVEY WAS PERFORMED ON JULY 21, 2011.

SANITARY SEWER MANHOLES

Manhole	Top(FT)	DIR	DIST*	Inv.(FT)	DIR	DIST*	Inv.(FT)	DIR	DIST*	Inv.(FT)	DIR	DIST*	Inv.(FT)
SS-1	76.96	NW	14.25	62.71	E	14.65	62.31	S	14.55	62.41			
SS-2	79.09	S	17.25	61.84	W	17.15	61.94						
VALVE VAULT	79.97	E & W (2 DISCHARGE PIPES MEASURED TO TOP)	4.25	75.72							BOTTOM	6.50	73.47
WET WELL	79.99	E (2 DISCHARGE PIPES MEASURED TO TOP)	4.15	75.84	W	5.50	74.49	N	18.20	61.79	BOTTOM	23.00	56.99

* DISTANCE FROM TOP OF STRUCTURE TO INVERT OF PIPE

LEGEND

BM BENCHMARK	CO CLEANOUT	MB MAIL BOX	UTILITY MARKER (AS SHOWN)
ND NAIL & DISK	DECIDUOUS TREE	PALM TREE	UTILITY MANHOLE (AS SHOWN)
TP TRAVERSE POINT	ELECTRIC TRANSFORMER	P POST	UTILITY METER (AS SHOWN)
F FOUND IRON (TYPE)	EVERGREEN TREE	SATELITE DISH	UTILITY RISER (AS SHOWN)
S SET IRON (TYPE)	FIRE HYDRANT	SPIGOT	UTILITY VALVE (AS SHOWN)
F FOUND MONUMENT (TYPE)	FLAG (AS SHOWN)	SPRINKLER HEAD	UTILITY POLE (AS SHOWN)
S SET MONUMENT (TYPE)	GUY ANCHOR	TRAFFIC SIGN	WELL
SC SECTION CORNER	LIGHT POLE		

ABBREVIATIONS

ANT	ANTENNA	EM	ELECTRIC METER	IRRV	IRRIGATION VALVE	(P)	PER PLAT
BM	BENCHMARK	ET	ELECTRIC TRANSFORMER	JBL	JURISDICTIONAL BOUNDARY	PB	PLAT BOOK
(C)	CALCULATED	F	FOUND		LINE	PG	PAGE
CO	CLEANOUT	FDC	FIRE DEPT CONNECTION	(M)	MEASURED	PK	PK NAIL
CONC	CONCRETE	FF	FINISHED FLOOR	MB	MAILBOX	RCP	REINFORCED CONC PIPE
CM	CONCRETE MONUMENT	FH	FIRE HYDRANT	MH	MANHOLE	RR	RAILROAD
CMP	CORREGATED METAL PIPE	FO	FIBER OPTIC	MW	MONITORING WELL	RW	RECLAIMED WATER
CPP	CORREGATED PLASTIC PIPE	G	GAS	ND	NAIL & DISK	S	SET
(D)	AS DESCRIBED	GM	GAS METER	NL	NAIL	SC	SECTION CORNER
DIP	DUCTILE IRON PIPE	GV	GAS VALVE	OE	OVERHEAD UTILITY LINES	SH	SPRINKLER HEAD
DH	DRILL HOLE	INV	INVERT	OR	OFFICIAL RECORDS	SPIG	WATER SPIGOT
EB	ELECTRIC RISER	IP	IRON PIPE	P	POST	SS	SANITARY SEWER
ELEC	ELECTRIC	IR	IRON ROD			SD	STORM DRAIN

SV	SANITARY SEWER VALVE	
TB	TELEPHONE RISER	
TEL	TELEPHONE	
TP	TRAVERSE POINT	
TSC	TRAFFIC SIGNAL CONTROL	
TSP	TRAFFIC SIGNAL POLE	
TV	CABLE TELVISION	
UE	UNDERGROUND UTILITY LINES	
W	WATER	
WM	WATER METER	
WV	WATER VALVE	
XC	X CUT	

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT FLORIDA

ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION

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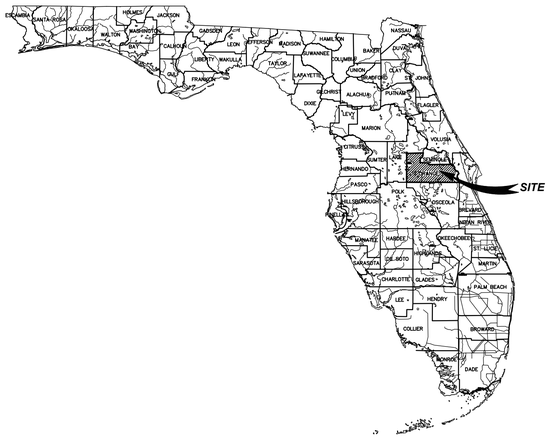
P.S. # 3259 ALLWOOD
BOUNDARY AND TOPOGRAPHIC SURVEY

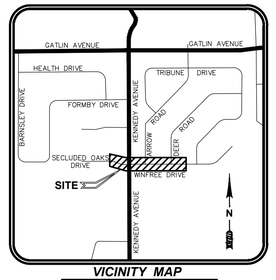
SURVEY PROVIDED BY TETRA TECH
PROJECT NO.: 200-09074-11002

OCU FILE NO.: 74325
DESIGNED BY:
DRAWN BY:
CHECKED BY:
CADD FILE: Allwood Survey.dwg

SCALE: AS SHOWN
DRAWING NO. : V200
SHEET: 5 OF 40



TOPOGRAPHIC SURVEY
FOR
ORANGE COUNTY UTILITIES
AT
WINFREE DRIVE
LYING IN
SECTION 16-TOWNSHIP 23 SOUTH-RANGE 30 EAST
ORANGE COUNTY, FLORIDA



VICINITY MAP
NOT TO SCALE

Topographic Site Limits:

THAT PORTION OF WINFREE DRIVE BEGINNING 290' WESTERLY OF THE CENTER LINE OF KENNEDY AVENUE AND EXTENDING EASTERLY 190' EAST OF DEER ROAD AND THE NORTH 150' FROM THE CENTERLINE OF WINFREE DRIVE ALONG KENNEDY AVENUE, ARROW ROAD AND DEER ROAD ALL LYING IN GATLIN HEIGHTS SUBDIVISION PER PLAT BOOK 4, PAGE 126 AND SECLUDED OAKS PER PLAT BOOK 21, PAGE 128 PUBLIC RECORDS ORANGE COUNTY FLORIDA.

Survey Notes:

1. "SURVEY MAP AND REPORT OR THE COPIES THEREOF ARE NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER."
2. "ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES."
3. THE SITE BENCHMARKS FOR THIS TOPOGRAPHIC SURVEY ARE DISPLAYED ON THE RESPECTIVE SURVEY FILE. THESE BENCHMARKS ARE BASED ON A CLOSED VERTICAL CONTROL LOOP HAVING AN ACTUAL ERROR OF CLOSURE OF 0.005' WHICH MEETS THE ALLOWABLE CLOSURE OF 0.027'. THIS FIELDWORK WAS PERFORMED USING A TOPCON LEVEL MODEL # DL-101C AND REFERENCES THE FOLLOWING PUBLISHED BENCHMARKS AS ESTABLISHED BY THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) AND SAID ELEVATIONS ARE MATCHED TO THE VERTICAL CONTROL BENCHMARKS PER TETRA TECH SURVEY PROJECT NO. 200-09074-11001 (LIFT STATION #3092 WINFREE DRIVE) AS FOLLOWS:

   a) CONTROL POINT NAIL & DISC #2
      ELEVATION = 102.58 (NAVD) '88

   b) CONTROL POINT NAIL & DISC #3
      ELEVATION = 103.02 (NAVD) '88

   SITE BENCHMARKS ARE AS SHOWN ON SHEET 2 OF 2.
4. THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 2 OF 2.
5. THE LAST DAY FIELD WORK WAS PERFORMED WAS APRIL 17, 2014; ALL BOUNDARY CORNERS WERE RECOVERED OR SET AS NOTED HEREON.
6. THE APPARENT USE OF THE LAND, AS CLASSIFIED BY THE MINIMUM TECHNICAL STANDARDS RULE CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE ESTABLISHES THAT THE MINIMUM RELATIVE ACCURACY FOR THIS TYPE OF BOUNDARY SURVEY MEET THE HORIZONTAL CONTROL ACCURACY OF 1'/7,500 FEET FOR A SUBURBAN SURVEY. THE MEASUREMENTS AND CALCULATIONS OF THE CLOSED GEOMETRIC FIGURES WERE FOUND TO MEET THIS ACCURACY REQUIREMENT. THE EQUIPMENT USED TO VERIFY THE HORIZONTAL CONTROL ON THE SUBJECT SURVEY WAS A TOPCON GPT 2005.
7. HORIZONTAL WELL-IDENTIFIED FEATURES IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED HORIZONTAL POSITIONAL ACCURACY OF 0.05 (FT). THE EQUIPMENT USED TO LOCATE THE FEATURES WAS A TOPCON GPT 2005 AND LEICA SCANSTATION C10.
8. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OR OPINION OF TITLE. NO INSTRUMENTS OF RECORD REFLECTING EASEMENTS, RIGHTS-OF-WAY, AND/OR OWNERSHIP WERE FURNISHED TO THIS SURVEYOR EXCEPT AS NOTED.
9. THIS SURVEY DOES NOT IDENTIFY THE LIMITS OR EXTENT OF POTENTIAL JURISDICTIONAL WETLAND BOUNDARIES.
10. FENCES EXISTING ON, OVER OR ADJACENT TO SUBJECT PROPERTY, ARE DISPLAYED HEREON; OWNERSHIP WHETHER SINGULAR OR JOINT WAS NOT DETERMINED BY THIS SURVEY.
11. VERTICAL FEATURE ACCURACY: "ELEVATIONS OF WELL-IDENTIFIED FEATURES CONTAINED IN THIS SURVEY AND MAP HAVE BEEN MEASURED TO AN ESTIMATED VERTICAL POSITIONAL ACCURACY OF 0.05 (FT)."
12. STATE PLANE INFORMATION SHOWN HEREON IS BASED ON THE NORTH AMERICAN DATUM OF 1983 (2007) USING CONTROL POINTS FROM TETRA TECH SURVEY PROJECT NO. 200-09074-11001 (LIFT STATION #3092 WINFREE DRIVE) WHICH ARE AS FOLLOWS:

   a) CONTROL POINT NAIL & DISC #2
      N 1511672.55 FEET, E 554324.75 FEET

   b) CONTROL POINT NAIL & DISC #3
      N 1511693.35 FEET, E 554225.18 FEET

   THE EQUIPMENT USED TO TRANSFER THE STATE PLANE INFORMATION FROM THE ABOVE REFERENCED CONTROL POINTS TO THE SUBJECT SURVEY WAS A TOPCON GPS HIPER PRO.
13. DIMENSIONS ARE SHOWN RELATIVE TO UNITED STATES STANDARD FEET AND DECIMALS THEREOF, UNLESS THE OBJECT SHOWN IS COMMONLY IDENTIFIED IN INCHES, I.E. TREE DIAMETER, PIPE DIAMETER, ETC.
14. THE UNDERGROUND UTILITIES LABELED UE, FM, AND UW DISPLAYED ON SHEET 2 OF 2 ARE A RESULT OF THE FIELD LOCATION OF THE FLAGS AND MARKINGS ESTABLISHED BY ORANGE COUNTY UTILITIES DEPARTMENT.
15. THE UNDERGROUND UTILITIES DEPICTED BY PIPE LINETYPES ARE APPROXIMATE IN NATURE BASED UPON AN INSPECTION OF THE MANHOLE, GRATE, ETC. OF EACH FACILITY. EXISTING PIPES WERE NOT LAMPED OR REMOTELY VIEWED FOR OBSTRUCTIONS OR CONNECTIVITY.
16. BEARINGS SHOWN HEREON ARE RELATIVE TO A LINE BETWEEN TWO NGS PUBLISHED BENCHMARKS WITH PID NUMBERS AK7130 AND AK7287, LINE BEARING N 69°34'33" W.
17. THE PURPOSE OF THIS TOPOGRAPHIC SURVEY IS TO PROVIDE TOPOGRAPHIC INFORMATION OF EXISTING IMPROVEMENTS FROM TRACT "B" EAST TO DEER ROAD AS PERFORMED WITHIN THE PLATTED RIGHTS OF WAY.
18. TREE SYMBOLS ARE NOT TO SCALE.

Abbreviation Legend:

(A)	– ACTUAL	MH	– MANHOLE
A/C	– AIR CONDITIONER	MLP	– METAL LIGHT POLE
ACSM	– AMERICAN CONGRESS ON SURVEYING & MAPPING	MPH	– MILES PER HOUR
ADA	– AMERICANS WITH DISABILITIES ACT	MPP	– METAL POWER POLE
ALTA	– AMERICAN LAND TITLE ASSOCIATION	N/A	– NOT APPLICABLE
APPROX	– APPROXIMATE	NAVD	– NORTH AMERICAN VERTICAL DATUM
ARV	– AIR RELEASE VALVE	NAD	– NORTH AMERICAN DATUM
AVE	– AVENUE	NG	– NATURAL GROUND
AVG	– AVERAGE	NGS	– NATIONAL GEODETIC SURVEY
(BB)	– BEARING BASIS	NGVD	– NATIONAL GEODETIC VERTICAL DATUM
BFP	– BACK FLOW PREVENTER	N & D	– NAIL AND DISK
BLK	– BLOCK	NO.	– NUMBER
BLDG	– BUILDING	NR	– NON-RADIAL
BLVD	– BOULEVARD	NSPS	– NATIONAL SOCIETY OF PROFESSIONAL SURVEYORS
BM	– BENCH MARK		
BOC	– BACK OF CURB	NT	– NON-TANGENT
BOW	– BACK OF WALK	NTS	– NOT TO SCALE
BSL	– BUILDING SETBACK LINE	OD	– OUTSIDE DIAMETER
BWF	– BARBED WIRE FENCE	ORB	– OFFICIAL RECORDS BOOK
C-X	– DENOTES SHEET NUMBERING FOR ENGINEERING PLANS	OR	– OFFICIAL RECORDS
(C)	– CALCULATED	OUL	– OVERHEAD UTILITY LINES
C	– CHORD	OTL	– OVERHEAD TRAFFIC LINES
CATV	– CABLE TELEVISION RISER	(P)	– PLAT
CB	– CHORD BEARING	PB	– PLAT BOOK
CBS	– CONCRETE BLOCK STRUCTURE	PC	– POINT OF CURVATURE
C & G	– CURB & GUTTER	PCC	– POINT OF COMPOUND CURVATURE
CI	– CATCH INLET	PCP	– PERMANENT CONTROL POINT
C/L	– CENTERLINE	PFF	– PROPOSED FINISHED FLOOR
CLF	– CHAIN LINK FENCE	PG	– PAGE
CM	– CONCRETE MONUMENT	PGS	– PAGES
CMP	– CORRUGATED METAL PIPE	PI	– POINT OF INTERSECTION
CO	– CLEANOUT	PK	– PARKER KAYLON
CONC	– CONCRETE	POB	– POINT OF BEGINNING
COR	– CORNER	POC	– POINT OF COMMENCEMENT
CPP	– CORRUGATED PLASTIC PIPE	POL	– POINT ON LINE
CUE	– COUNTY UTILITY EASEMENT	PP	– POWER POLE
CWS	– CROSSWALK SIGNAL	PRC	– POINT OF REVERSE CURVATURE
Δ	– DELTA	PRM	– PERMANENT REFERENCE MONUMENT
(D)	– DESCRIPTION	PSM	– PROFESSIONAL SURVEYOR & MAPPER
DB	– DEED BOOK	PT	– POINT OF TANGENCY
DBH	– DIAMETER AT BREAST HEIGHT IN INCHES	PVC	– POLYVINYL CHLORIDE PIPE
DE	– DRAINAGE EASEMENT	PVMT	– PAVEMENT
DEPT	– DEPARTMENT	R30E	– RANGE 30 EAST
DIP	– DUCTILE IRON PIPE	R	– RADIUS
DR	– DRIVE	RAD	– RADIAL
D/U	– DRAINAGE AND UTILITY EASEMENT	RCP	– REINFORCED CONCRETE PIPE
(E)	– ENGINEERING PLAN	REC	– RECOVERED
EJB	– ELECTRIC JUNCTION BOX	REV	– REVISION
EL	– UNDERGROUND ELECTRICAL LINES	RP	– RADIUS POINT
ELEC	– ELECTRIC	R/W	– RIGHT-OF-WAY
ELEV	– ELEVATION	RLS	– REGISTERED LAND SURVEYOR
ELLIP	– ELLIPTICAL	RP	– RADIUS POINT
EOI	– END OF INFORMATION	RWL	– UNDERGROUND RECLAIM WATER LINE
EOP	– EDGE OF PAVEMENT	RWM	– RECLAIMED WATER METER
FB	– FIELD BOOK	SE	– SPECIAL EASEMENT
FDOT	– FLORIDA DEPARTMENT OF TRANSPORTATION	SEC 16	– SECTION 16
FF	– FINISH FLOOR	SMH	– SANITARY SEWER MANHOLE
FGI	– FLAT GRATE INLET	SQ	– SQUARE
FGLP	– FIBERGLASS LIGHT POLE	SQ FT	– SQUARE FEET
FHYD	– FIRE HYDRANT	ST	– STREET
FM	– FORCE MAIN	STMH	– STORM DRAINAGE MANHOLE
FND	– FOUND	S/W	– SIDEWALK
FP&L	– FLORIDA POWER AND LIGHT	T	– TANGENT
(G)	– GRID (STATE PLANE)	TB	– TANGENT BEARING
GL	– UNDERGROUND GAS LINES	T23S	– TOWNSHIP 23 SOUTH
GOV'T	– GOVERNMENT	TELE	– TELEPHONE
GPR	– GROUND PENETRATING RADAR	TL	– OVERHEAD TRAFFIC SIGNAL LINES
GTMH	– GREASE TRAP MANHOLE	TOB	– TOP OF BANK
HDPE	– HIGH DENSITY POLYETHYLENE PIPE	TOE	– TOE OF SLOPE
HWF	– HOG WIRE FENCE	TR	– TELEPHONE RISER
ID	– IDENTIFICATION	TRANS	– TRANSFORMER PAD
ICV	– IRRIGATION CONTROL VALVE	TSB	– TRAFFIC SIGNAL BOX
INFO	– INFORMATION	TSSP	– TRAFFIC SIGNAL SUPPORT POLE
INV	– INVERT	TVL	– UNDERGROUND CABLE TV LINES
IP	– IRON PIPE	(TYP)	– TYPICAL
IP&C	– IRON PIPE & CAP	U.E.	– UTILITY EASEMENT
IR	– IRON ROD	UNK	– UNKNOWN
IR&C	– IRON REBAR & CAP	UTL	– UNDERGROUND TELEPHONE LINES
IRR	– IRRIGATION	W/	– WITH
L	– ARC LENGTH	WL	– UNDERGROUND WATER LINE
LB#	– LICENSED BUSINESS NUMBER	WLP	– WOOD LIGHT POLE
LP	– LIGHT POLE	WM	– WATER METER
(M)	– MEASURED	WP	– WORK PROGRAM
MB	– MAILBOX	WPF	– WOOD POST FENCE
MES	– MITERED END SECTION	WPP	– WOOD POWER POLE
		WV	– WATER VALVE

Line Legend:
NOT TO SCALE

- 1 = 1 FOOT CONTOURS
- 5 = 5 FOOT CONTOURS
- = ADJOINER PROPERTY LINES
- X X = BARBED WIRE FENCE
- = BROKEN LINE
- VC = BURIED CABLE
- UCTV = BURIED CABLE TELEVISION
- UE = BURIED ELECTRIC
- UFOC = BURIED FIBER OPTICS CABLE
- UG = BURIED GAS
- RWM = BURIED RECLAIMED MAIN/LINE
- SAN = BURIED SANITARY SEWER LINES
- FM = BURIED SANITARY SEWER FORCE MAIN LINE
- TC = BURIED TRAFFIC CONTROL
- UT = BURIED TELEPHONE LINE
- WM = BURIED WATER MAIN/LINES
- = CENTER LINE R/W
- = CHAIN LINK FENCE
- = EASEMENT LINES (EXISTING)
- = EASEMENT LINES (PROPOSED)
- EOW = EDGE OF WATER LINES
- = EXISTING DRAINAGE PIPES
- = EXISTING DRAINAGE PIPES (OUTFALL NOT LOCATED)
- HW = HOT WATER SUPPLY LINES
- IRR = IRRIGATION LINES
- OTL = OVERHEAD TRAFFIC LINES
- OHU = OVERHEAD UTILITY LINES
- = RAILROAD TRACK LINES
- = RIGHT-OF-WAY LINES
- = SECTION LINES
- = LANDSCAPE AREA
- TOB = TOP OF BANK LINES
- TOE = TOE OF SLOPE LINES
- = TREE LINES
- TRAV = TRAVERSE LINES
- UKN = UNKNOWN BURIED LINES
- // = VINYL FENCE
- = WOOD FENCE
- = WETLAND LINE

Symbol Legend:
NOT TO SCALE

- ARV – AIR RELEASE VALVE
- – BORING HOLE LOCATION
- CTV – CABLE TV RISER
- – CENTRAL ANGLE
- – CONCRETE
- – CLEAN OUT
- – CONCRETE MITERED END SECTION
- – CONCRETE RIP RAP
- – CONCRETE UTILITY POLE
- 221 – COUNTY ROAD SYMBOL
- – DUAL SUPPORT SIGN
- – ELECTRICAL MANHOLE
- – ELECTRIC OUTLET
- – ELECTRIC RISER
- – FIRE HYDRANT
- – FLOOD LIGHT
- – FOUND CONCRETE MONUMENT (AS NOTED)
- – FOUND IRON PIPE (AS NOTED)
- – FOUND IRON REBAR (AS NOTED)
- – GAS VALVE
- – GRATE INLET
- – GREASE TRAP MANHOLE
- – GUY ANCHOR
- – HANDICAP PARKING SPACE
- – INTERSTATE SYMBOL
- – IRRIGATION CONTROL VALVE
- – CONCRETE LIGHT POLE
- – LIGHT POLE
- – LIGHT POLE (DUAL)
- – LIGHT POLE (TRIPLE)
- – LIGHT POLE (QUAD)
- – MAILBOX
- – MONITOR WELLS
- – BRICK PAVERS
- – GARBAGE CAN
- – PULL BOX AS NOTED
- – TRAFFIC SIGNAL SUPPORT POLE
- – NAIL & DISC (AS NOTED)
- 2 – PARKING SPACES (2)
- 3 – REVISION NUMBER (3)
- – RECLAIMED WATER METER
- – RECLAIMED WATER VALVE
- – ROOF DRAIN
- S – SANITARY SEWER MANHOLE
- – SANITARY SEWER VALVE
- 8 – SCHEDULE B ITEM NUMBER (8)
- – GROUND LIGHT
- – SECTION CORNER
- – 4" X 4" CM LB #7143
- – 5/8" IR&C LB #7143
- – SIGN
- – SITE BENCH MARK
- D – STORM SEWER MANHOLE
- – STRIPING (DIRECTIONAL)
- – TELEPHONE CABLE RISER
- T – TELEPHONE MANHOLE
- – TEST HOLE
- – TRANSFORMER PAD
- – UTILITY RISER
- – WATER METER
- WS – WATER SERVICE
- – WATER SPIGOT
- WS – WATER SPRINKLER
- – WATER VALVE
- W – WELL
- – WETLAND FLAG
- – WOOD UTILITY POLE
- U – UNKNOWN MANHOLE
- – CONCRETE PAVERS
- – DETECTABLE WARNING AREA
- – CONCRETE LIGHT POLE (DUAL)
- – CONCRETE LIGHT POLE (TRIPLE)
- – CONCRETE LIGHT POLE (QUAD)
- – UNKNOWN RISER

Sign Legend:
NOT TO SCALE

- (A1) – AISLE SIGN
- (B) – BUS STOP SIGN
- (DNE) – DO NOT ENTER SIGN (R5-1)
- (HC) – HANDICAP SIGN
- (KR) – KEEP RIGHT SIGN
- (ME) – MEDIAN SIGN
- (ND) – NO DUMPING SIGN
- (NL) – NO LEFT TURN SIGN (R3-2)
- (NLI) – NO LITTERING SIGN
- (FL) – NO PARKING FIRE LANE SIGN
- (NOR) – NO RIGHT TURN SIGN (R3-1)
- (NOT) – NO TRUCKS (R5-2)
- (NP) – NO PARKING SIGN
- (1W) – ONE WAY SIGN (R6-2)
- (PE) – PEDESTRIAN CROSSING SIGN
- (RTO) – RIGHT TURN ONLY
- (SL) – SPEED LIMIT SIGN
- (ST) – STOP SIGN (R1-1)
- (SS) – STREET SIGN
- (TZ) – TOW AWAY ZONE SIGN
- (TE) – TRUCK ENTRANCE SIGN
- (U) – UNKNOWN SIGN
- (WL) – WEIGHT LIMIT SIGN
- (WW) – WRONG WAY SIGN
- (Y) – YIELD SIGN

NOTE:
THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 2 OF 2.

Reference Material

1) TETRA TECH SURVEY PROJECT NO. 200-09074-11001 (LIFT STATION #3092 WINFREE DRIVE)
2) SECLUDED OAKS, PLAT BOOK 21, PAGE 128.
3) GATLIN HEIGHTS SUBDIVISION, PLAT BOOK 4, PAGE 126.

Index of Sheets

TITLE BLOCK ABBREVIATIONS
Eng. = ENGINEERING L.B. = LICENSED BUSINESS
C.O.A. = CERTIFICATE OF AUTHORIZATION Arch.= ARCHITECTURAL
Landscp. = LANDSCAPE N/A = NOT APPLICABLE Lic. = LICENSED
No. = NUMBER P.O. = POST OFFICE © = COPYRIGHT

Surveyor's Certification:

I hereby certify that the attached "Topographic Survey" of the hereon-described property is true and correct to the best of my knowledge, information and belief as surveyed in the field on April 17, 2014. I further certify that this "Topographic Survey" meets the minimum technical standards set forth in Rule Chapter 5J-17 of the Florida Administrative Code.

For the Firm By: _____
Thomas J. Galloway
Professional Surveyor and Mapper
Florida Registration No. 6549

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT FLORIDA

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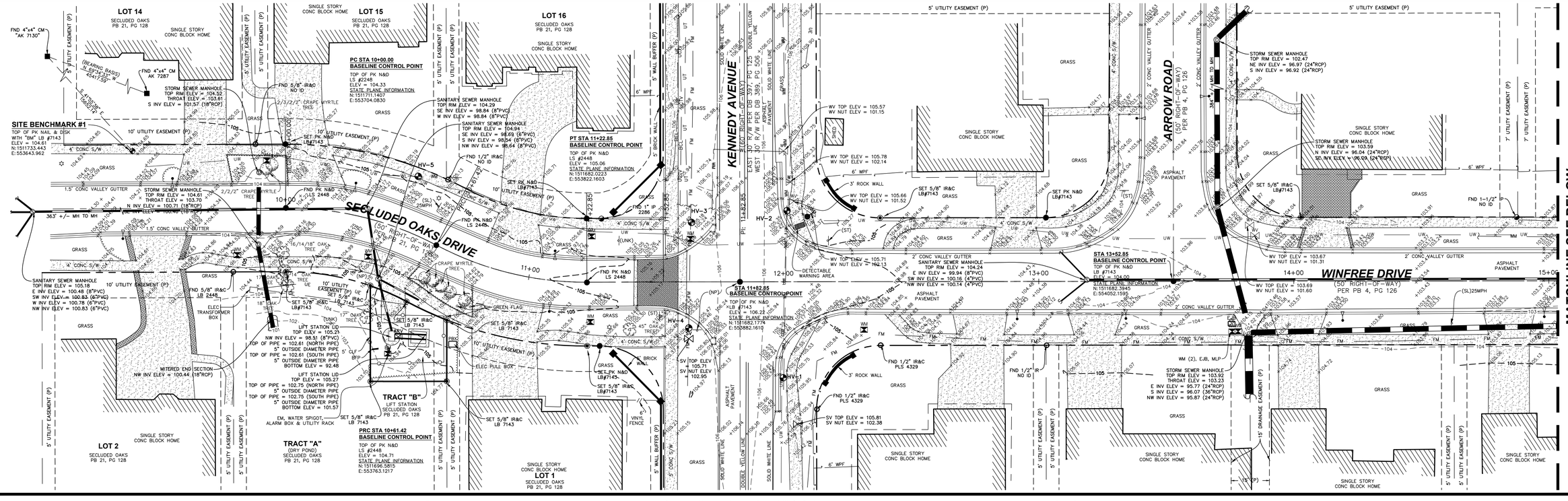
500 West Fulton Street ~ Sanford, FL 32771 ~ Phone: 407.322.6841

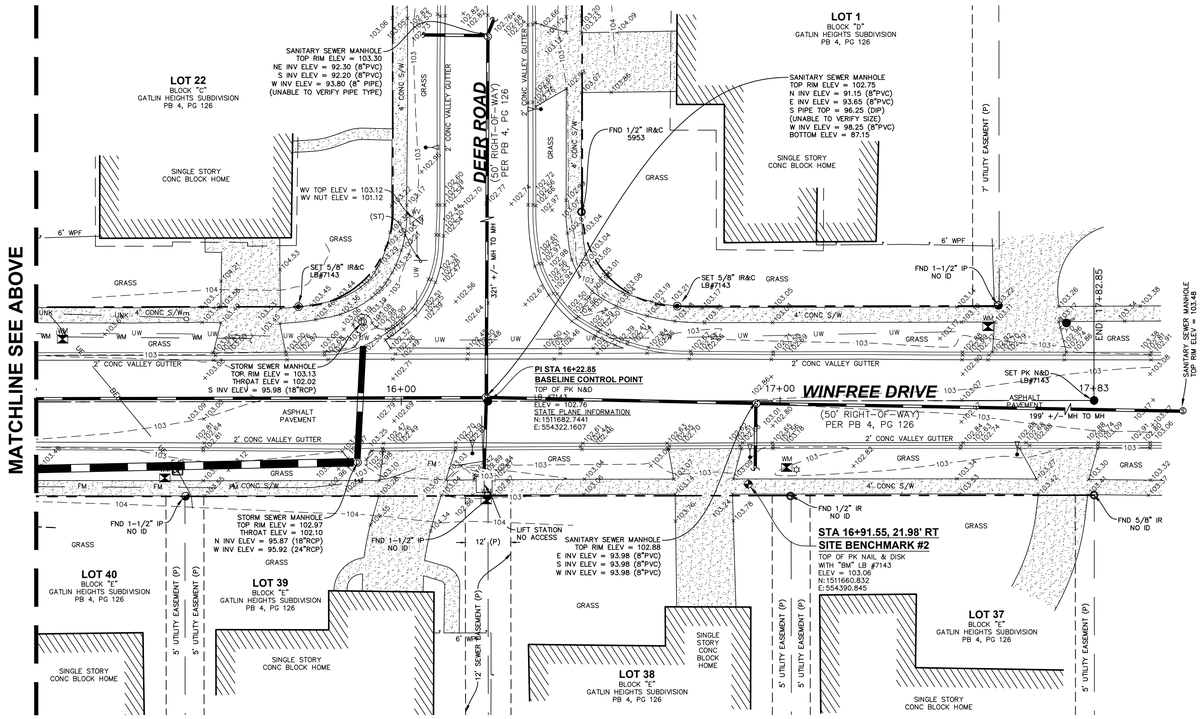
P.S. # 3092 / P.S. # 3439 SURVEY
NOTES AND LEGENDS

Survey Prepared By:
CPH, Inc.
500 West Fulton St.
Sanford, Fl. 32771
Ph: 407.322.6841
Licenses:
Eng. C.O.A. No. 3215
Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Lndscp. Lic. No. LC0000298

OCU FILE NO.: 74325
APPROVED BY: TJG
DRAWN BY: JAB/JYR
CHECKED BY: RLR
CADD FILE: PS 3439 Survey.dwg

SCALE: N/A
DRAWING NO. : V300
SHEET: 6 OF 40





TEST HOLE DATA:

LOCATION ID	HORIZONTAL COORDIANTES	ELEVATION		UTILITY OWNER	SIZE & MATERIAL
		GROUND	TOP OF UTILITY		
HV-1	N 1511645 E 553899	105.8	101.4	ORANGE COUNTY	16-1/2" (OD) METAL
HV-2	N 1511710 E 553901	105.2	99.4	ORANGE COUNTY	16-1/2" (OD) METAL
HV-3	N 1511705 E 553863	105.7	101.7	ORANGE COUNTY	4-1/2" (OD) PVC
HV-4	N 1511664 E 553862	105.6	102.2	ORANGE COUNTY	4-1/2" (OD) PVC
HV-5	N 1511724 E 553756	105.0	100.9	ORANGE COUNTY	8-1/2" (OD) PVC

NOTE:
TEST HOLE INFORMATION WAS PROVIDED BY A SUBCONSULTANT
SEE THIS SHEET FOR LOCATIONS OF VH#-TEST HOLE NUMBER

N

cph

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

NOTE:
THIS SURVEY IS NOT VALID WITHOUT SHEETS 1 THROUGH 2 OF 2.

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WINFREE DRIVE / SECLUDED OAKS DRIVE
BOUNDARY AND TOPOGRAPHIC SURVEY

Survey Prepared By:
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Survey L.B. No. 7143
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Lndscp. Lic. No. LC0000298

OCU FILE NO.: 74325
APPROVED BY: TJG
DRAWN BY: JAB/JYR
CHECKED BY: RLR
CADD FILE: PS 3439 Survey.dwg

SCALE: 1" = 20'
DRAWING NO. : V400
SHEET: 7 **OF** 40

DEMOLITION LEGEND:

DENOTES ITEMS TO BE REMOVED AND / OR DEMOLISHED

cph N

0 10 20

GRAPHIC SCALE IN FEET

BRIDLEWOOD DRIVE (50' RIGHT-OF-WAY) ASPHALT ROAD

BROWNWOOD DRIVE (50' RIGHT-OF-WAY) ASPHALT ROAD

ARNING DRIVE (50' RIGHT-OF-WAY) ASPHALT ROAD

F IR 5/8 LB6906

TB

ET

ET

TB

BFP

38" CAMPHOR

18" CAMPHOR

FINISHED FLOOR GARAGE ELEV 72.56

FINISHED FLOOR GARAGE ELEV 72.87

6.00' UTILITY EASEMENT

6.00' UTILITY EASEMENT

UT

UE

20" CAMPHOR

FINISHED FLOOR ELEV 73.29

FINISHED FLOOR ELEV 73.70

REMOVE EXISTING WET WELL CONCRETE TOP SLAB

EB ALARM SWITCH

REMOVE EXISTING LIGHT POLE

S IR 5/8 LB5814

8" EVERGREEN

S IR 5/8 LB5814

REMOVE EXISTING ELEC. PANELS

REMOVE EXISTING DRY WELL, HARDWARE, PUMPS, PIPING AND VALVES

REMOVE EXISTING LANDSCAPE

EB

REMOVE EXISTING CHAIN LINK FENCE

THIS PORTION OF EXISTING FORCE MAIN TO BE REMOVE UP TO NEW LINE STOP

15" PALM

12" SAGO PALM

26" PALM

14" CAMPHOR

6" MYRTLE

6" MYRTLE

6" MYRTLE

36" HEDGE

S IR 5/8 LB5814

4" CO

F IR 5/8

F IR 5/8

SD-1 TOP 70,69

10" CAMPHOR

S IR 5/8 LB5814

FM

FM

FM

EXISTING WM

REMOVE EXISTING CONCRETE SIDEWALK

EXISTING FORCE MAIN TO REMAIN

EXISTING WATER METER TO BE REMOVED

CONTROL POINT NAIL & DISC #2
N 1534678.49
E 578722.42
ELEV 71.24

8"SS 8"SS 8"SS 8"SS 8"SS

00

11+00

MH 39900001

12+00

12+90

CONTROL POINT NAIL & DISC #3
N 1534570.16
E 578730.12
ELEV 70.82

REMOVE EXISTING CONCRETE DRIVEWAY

CONTROL POINT NAIL & DISC #4
N 1534432.93
E 578755.36
ELEV 70,38

8" MYRTLE

10" OAK

18" CAMPHOR

F IR 5/8

UW

F IR 5/8

CUT AND CAP EXISTING WATER SERVICE LINE

REMOVE EXISTING CONCRETE SIDEWALK

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

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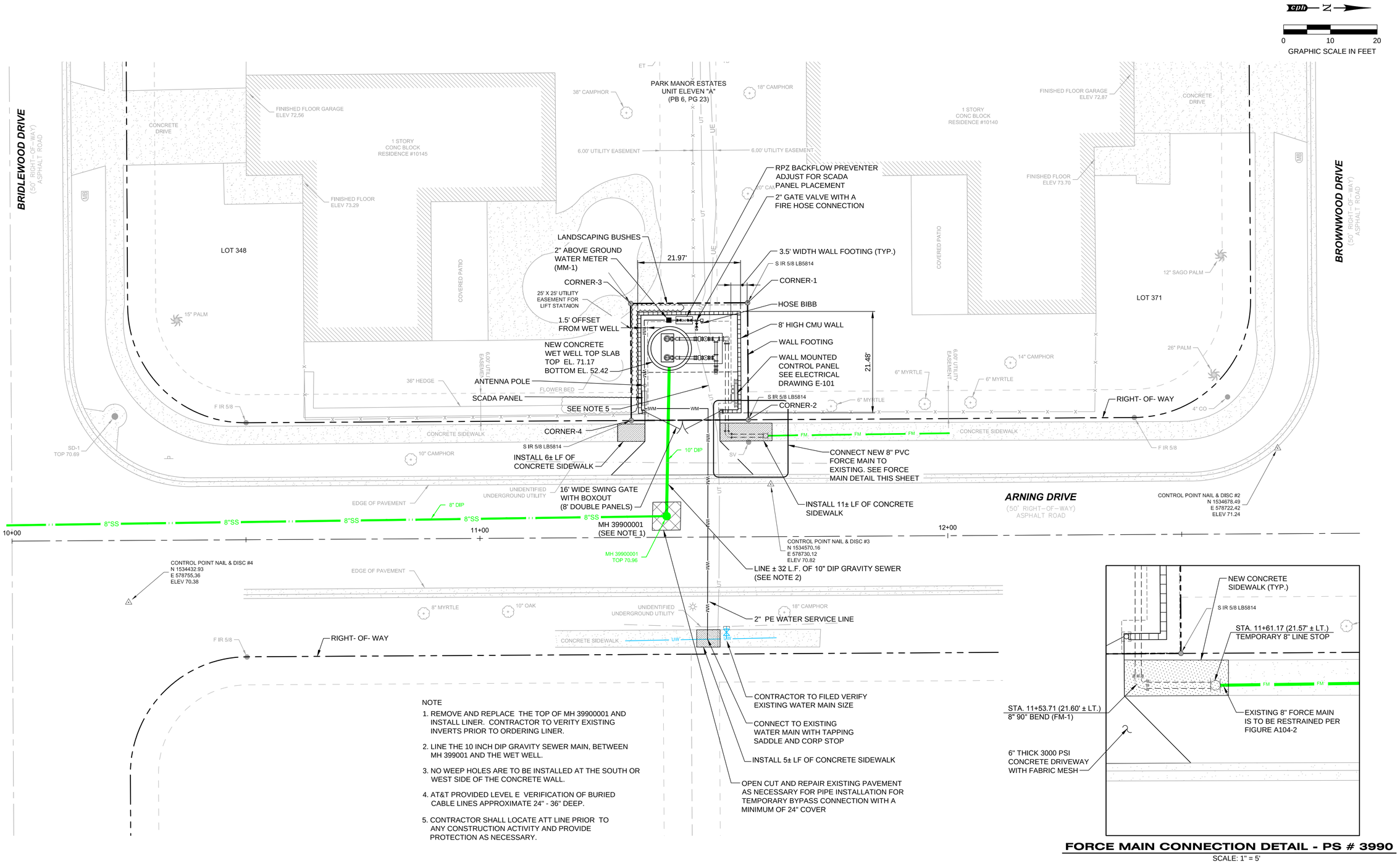
P.S. # 3990 ARNING DRIVE DEMOLITION SITE PLAN

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3990 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. : C100
SHEET: 8 OF 40



NOTE

1. REMOVE AND REPLACE THE TOP OF MH 39900001 AND INSTALL LINER. CONTRACTOR TO VERITY EXISTING INVERTS PRIOR TO ORDERING LINER.
2. LINE THE 10 INCH DIP GRAVITY SEWER MAIN, BETWEEN MH 399001 AND THE WET WELL.
3. NO WEEP HOLES ARE TO BE INSTALLED AT THE SOUTH OR WEST SIDE OF THE CONCRETE WALL.
4. AT&T PROVIDED LEVEL E VERIFICATION OF BURIED CABLE LINES APPROXIMATE 24" - 36" DEEP.
5. CONTRACTOR SHALL LOCATE ATT LINE PRIOR TO ANY CONSTRUCTION ACTIVITY AND PROVIDE PROTECTION AS NECESSARY.

FORCE MAIN CONNECTION DETAIL - PS # 3990

SCALE: 1" = 5'

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

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P.S. # 3990 ARNING DRIVE
SITE PLAN

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3990 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. :
C101
SHEET: 9 OF 40

BID DRAWING

GDN N

0 10 20

GRAPHIC SCALE IN FEET

LOT 349

LOT 370

LOT 348

LOT 371

F IR 5/8 LB6906

TB

ET

ALUMINUM SHED

PARK MANOR ESTATES
UNIT ELEVEN "A"
(PB 6, PG 23)

NOTE:
ALL DISTURBED AREAS
TO BE SODDED.

BRIDLEWOOD DRIVE
(50' RIGHT-OF-WAY)
ASPHALT ROAD

BROWNWOOD DRIVE
(50' RIGHT-OF-WAY)

ARNING DRIVE
(50' RIGHT-OF-WAY)
ASPHALT ROAD

1 STORY
CONC BLOCK
RESIDENCE #10145

1 STORY
CONC BLOCK
RESIDENCE #10140

FINISHED FLOOR GARAGE
ELEV 72.56

FINISHED FLOOR
ELEV 73.29

FINISHED FLOOR GARAGE
ELEV 72.87

FINISHED FLOOR
ELEV 73.70

CONCRETE
DRIVE

6.00' UTILITY EASEMENT

20" CAMPHOR

38" CAMPHOR

18" CAMPHOR

WET WELL
TOP EL: 71.17
BOTTOM EL: 52.42

POOL

ALARM SWITCH
S IR 5/8 LB5814

S IR 5/8 LB5814

21.97'

70.92
FG

25' X 25' UTILITY
EASEMENT FOR
LIFT STATAION

EXPANSION
JOINTS (TYP.)

6" THICK 3000, PSI CONCRETE
MESH FABRIC

21.67'

COVERED PATIO

15" PALM

12" SAGO PALM

26" PALM

4" CO

14" CAMPHOR

6" MYRTLE

36" HEDGE

FLOWER BED

F IR 5/8

SD-1
TOP 70.69

CONCRETE SIDEWALK

10" CAMPHOR

MATCH
EXISTING

UNIDENTIFIED
UNDERGROUND UTILITY

EDGE OF PAVEMENT

16' WIDE SWING GATE
WITH BOXOUT
(8' DOUBLE PANELS)

CONCRETE SIDEWALK
(TYP.)

CONTROL POINT NAIL & DISC #2
N 1534678.49
E 578722.42
ELEV 71.24

CONTROL POINT NAIL & DISC #3
N 1534570.16
E 578730.12
ELEV 70.82

CONTROL POINT NAIL & DISC #4
N 1534432.93
E 578755.36
ELEV 70.38

8" MYRTLE

10" OAK

18" CAMPHOR

10+00

11+00

12+00

REV	DATE	DESCRIPTION

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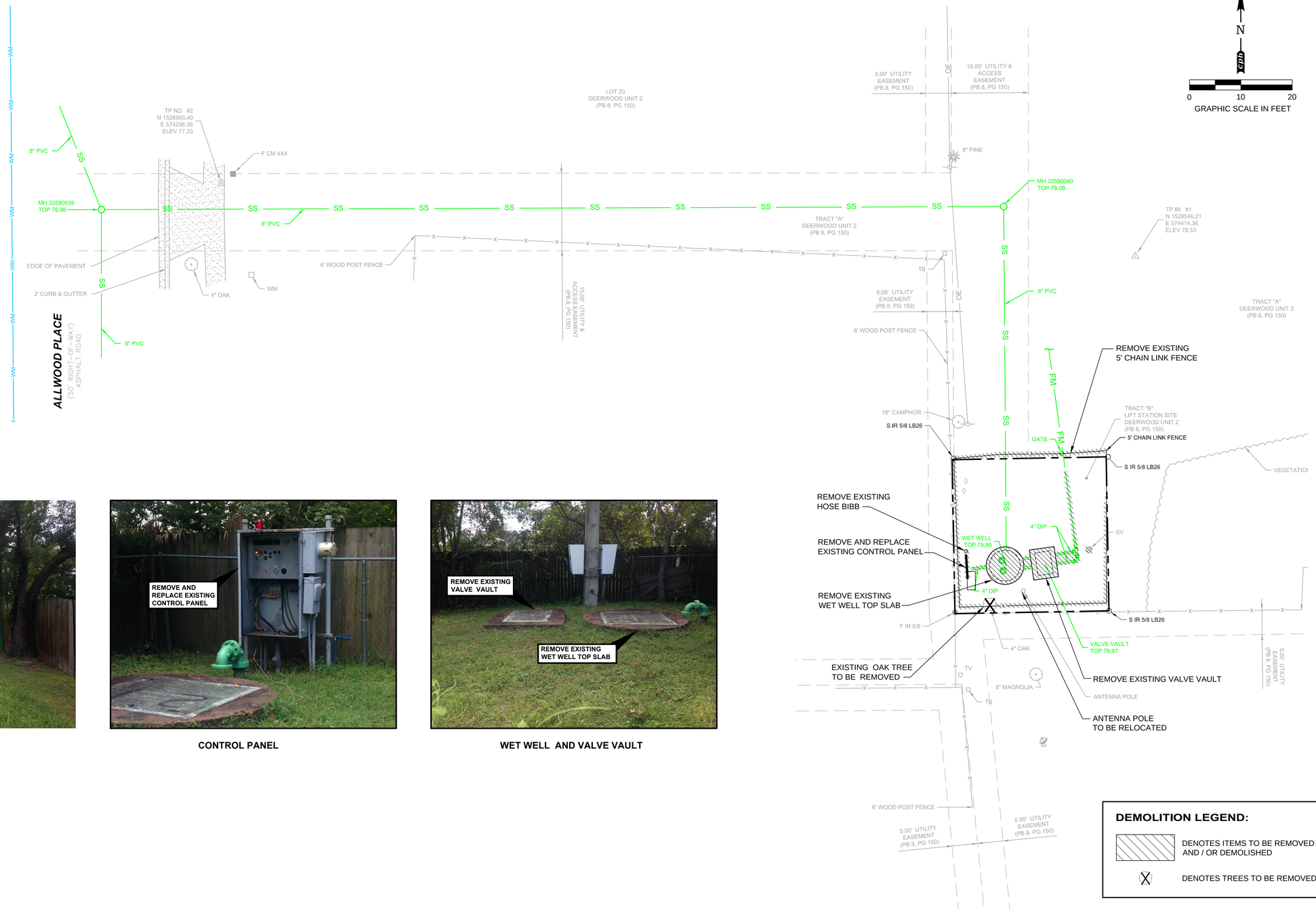
P.S. # 3990 ARNING DRIVE
SITE GRADING PLAN

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3990 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. : C102
SHEET: 10 OF 40

BID DRAWING



PUMP STATION FENCE SITE

CONTROL PANEL

WET WELL AND VALVE VAULT

DEMOLITION LEGEND:

DENOTES ITEMS TO BE REMOVED AND / OR DEMOLISHED

DENOTES TREES TO BE REMOVED

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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Lndscp. Lic. No. LC0000298
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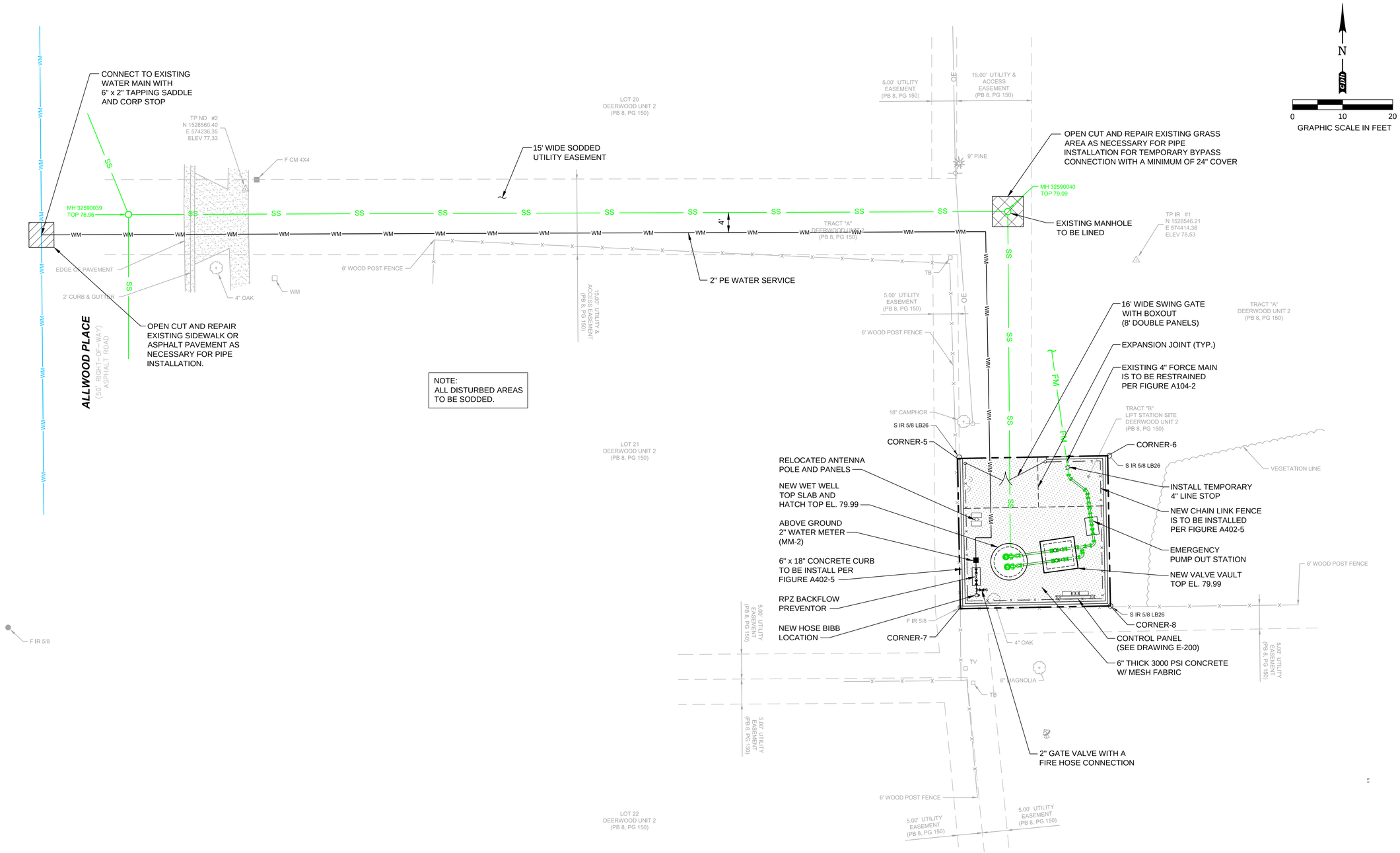
P.S. # 3259 ALLWOOD PLACE
DEMOLITION SITE PLAN

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3259 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. : C200
SHEET: 11 OF 40

BID DRAWING



REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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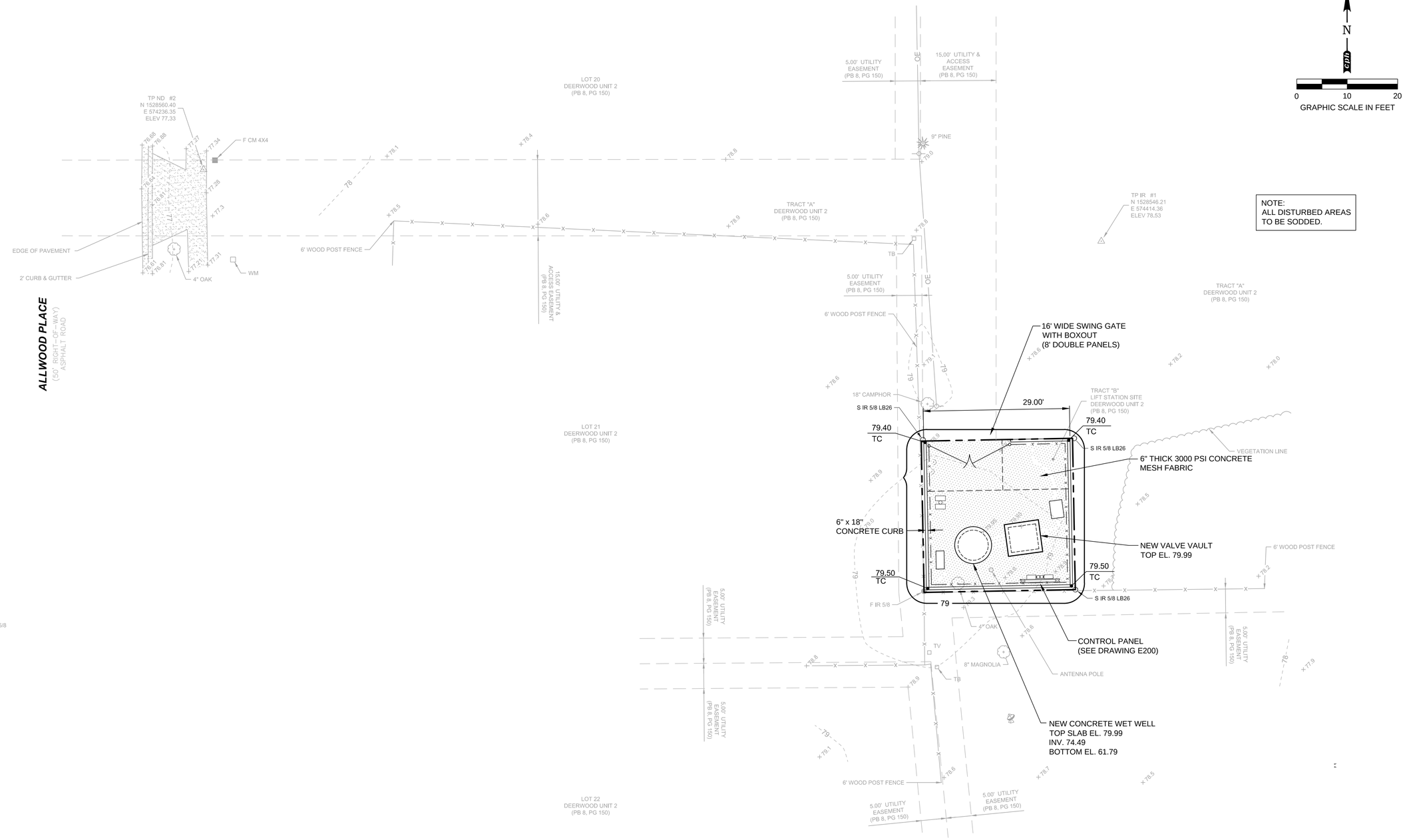
P.S. # 3259 ALLWOOD PLACE
SITE PLAN

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3259 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. :
C201
SHEET: 12 OF 40

BID DRAWING



REV	DATE	DESCRIPTION

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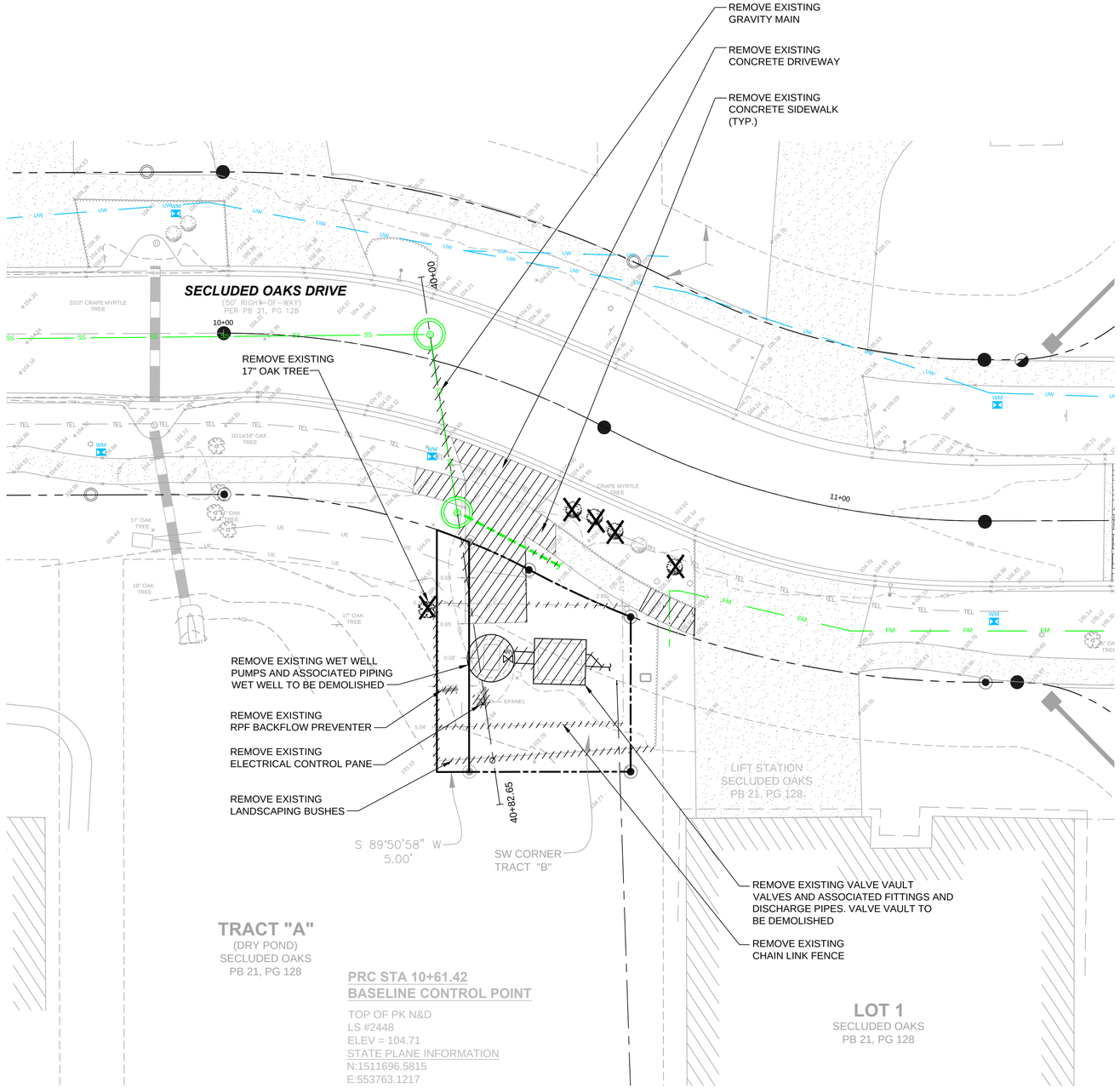
P.S. # 3259 ALLWOOD PLACE
SITE GRADING PLAN

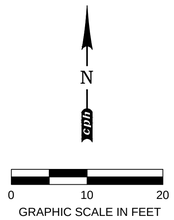
SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3259 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. :
C202
SHEET: 13 OF 40

BID DRAWING





DEMOLITION LEGEND:

- DENOTES ITEMS TO BE REMOVED AND / OR DEMOLISHED
- DENOTES TREES TO BE REMOVED

BID DRAWING

REV	DATE	DESCRIPTION

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1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

P.S. # 3439 SECLUDED OAKS DRIVE
DEMOLITION SITE PLAN

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3439 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. : C300
SHEET: 14 OF 40

EXISTING MH 34390002 TO BE LINED

NEW 12± LF OF 4' WIDE CONCRETE SIDE WALK

CONNECT TO EXISTING 6" WATER MAIN WITH 2" x 6" TAPPING SADDLE AND CORP STOP

14' WIDE CONCRETE DRIVEWAY 6" THICK 3000 PSI WITH FABRIC MESH

CONTRACT SHALL REMOVE, AND RESTORE THE DECORATIVE ENTRANCE TO SECLUDED OAKS IN KIND. "CONTRACTOR TO PROVIDE TEMPORARY ACCESS LANES DURING CONSTRUCTION FOR SECLUDED OAKS DRIVE" (SEE PHOTO BELOW)

HV-5

2" PE WATER SERVICE LINE

40+00

SECLUDED OAKS DRIVE
(50' RIGHT-OF-WAY)
PER PB 21, PG 128

10+00

SEE NOTE 1

CONNECT NEW 4" FORCE MAIN TO EXISTING. SEE FORCE MAIN CONNECTION DETAIL THIS SHEET

NEW 8± LF OF 4' WIDE CONCRETE SIDE WALK

HV-3

HV-2

FOR GRAVITY SEWER CONTINUATION SEE SHEET C303

COORDINATE WITH POWER COMPANY TO REROUTE DURING CONSTRUCTION

27± LF OF 8" OF EXISTING GRAVITY SEWER

NEW 8± LF OF 4' WIDE CONCRETE SIDE WALK

NEW 6" SANITARY SEWER LATERAL WITH CLEANOUT (SEE NOTE 1)

REMOVE AND REPLACE EXISTING MH TO BE LINED MH-34390004

CORNER-9

11+00

GRAVITY SEWER

12+00

INSTALL± 23 L.F. OF 8" PVC GRAVITY SEWER

CORNER-10

CONTRACTOR SHALL PROTECT TREES DURING SIDEWALK INSTALLMENT

NOTE:
A&TT LEVEL E VERIFICATION OF A&TT CABLE BURIED 24" TO 36" DEEP. CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION.

PROPOSED TEMPORARY CONSTRUCTION EASEMENT LIMITS

EXPANSION JOINT (TYP.)

16' WIDE SWING GATE WITH BOXOUT (8' DOUBLE PANELS)

14.00'

DRIVEWAY

C.O. 3

HV-4

LIMIT OF ASPHALT RESTORATION

REMOVE AND REPLACE 11± SY OF CONCRETE

NEW WET WELL
TOP EL. 105.00
N. INV.88.00 - 8" PVC
BOTTOM EL. 83.09

22.00'

S 00°01'20" E (P)
24.00' (P)

NEW 25± LF OF 4' WIDE CONCRETE SIDE WALK

RPZ BACKFLOW PREVENTER

CONTRACTOR SHALL PROTECT DRAINAGE STRUCTURE, DURING CONSTRUCTION.

4" #57 STONE W/ GEO FABRIC WEED CONTROL UNDER STORE

NEW CHAIN LINK FENCE TO BE INSTALLED PER FIGURE FIGURE A402-5

MINIMUM SHEET PILE DIMENSION FOR WET WELL INSTALLATION. ADDITIONAL SPACING AVAILABLE TOWARDS THE STORMWATER POND

WM

WM

S 89°50'58" W (P) 25'

5.00'

25' OFFSET FROM BUILDING

LIFT STATION
SECLUDED OAKS
21, PG 128

CORNER-12

40+82.65

30.02'

HOSE BIBB

CORNER-11

NEW VALVE VAULT
TOP EL. 105.0
(TO BE COATED)

CONTROL PANEL
(SEE DRAWING E300)

DEMOLISH AND REPLACE EXISTING PUMP STATION

ANTENNA POLE

5' UTILITY EASEMENT (P)

5' UTILITY EASEMENT (P)

KENNEDY AVENUE
(60' RIGHT-OF-WAY)
EAST 30' R/W PER DB 397, PG 125
WEST 30' R/W PER DB 389, PG 506

HV-1

STA
BASEL
TOP OF
LB #71
ELEV =
STATE
N: 15116
E: 5538

TO BE REMOVED 4" FORCE MAIN UP TO KENNEDY AVENUE

RESTRAINED EXISTING FORCE MAIN

4" CAP (FM-3)

4" LINE STOP (LS-2)

N

0 10 20
GRAPHIC SCALE IN FEET

PRC STA 10+61.42
BASELINE CONTROL POINT
TOP OF PK N&D
LS #2448
ELEV = 104.71

EXISTING 6" FORCE MAIN IS TO BE RESTRAINED PER FIGURE A104-2

STA. 10+80.94 (23.90' ± RT.)
6" x 4" TAPPING SLEEVE AND VALVE (TSV-1)

STA. 10+79.08 (24.69' ± RT.)
4" PLUG VALVE (PV-1)

ABOVE GROUND 2" WATER METER (MM-3)

5' MIN.

6"x18" CONC. CURB

STA. 10+81.48 (25.79' ± RT.)
6" LINE STOP (LS-1)

STA. 10+81.90 (27.31' ± RT.)
6" CAP (FM-2)

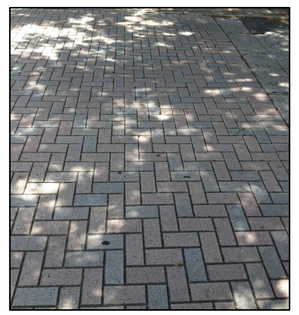
6" x 8" CONCRETE CURB AS PER FIGURE A402-5

STA. 10+77.18 (35.12' ± RT.)
4" 90° BEND

ABOVE GROUND EMERGENCY PUMP OUT STATION

RPZ BACKFLOW PREVENTER

FORCE MAIN CONNECTION DETAIL - PS # 3439
SCALE: 1" = 5'



NOTE: CONTRACTOR SHALL REMOVE, STORE AND REINSTALL EXISTING PAVERS WITH REINFORCING MAT AND CONCRETE LAYER

EXISTING BRICK PAVERS

TEST HOLE DATA:

LOCATION ID	HORIZONTAL COORDINATES	ELEVATION		UTILITY OWNER	SIZE & MATERIAL
		GROUND	TOP OF UTILITY		
HV-1	N 1511645 E 553899	105.8	101.4	ORANGE COUNTY	16-1/2" (OD) METAL
HV-2	N 1511710 E 553901	105.2	99.4	ORANGE COUNTY	16-1/2" (OD) METAL
HV-3	N 1511705 E 553863	105.7	101.7	ORANGE COUNTY	4-1/2" (OD) PVC
HV-4	N 1511664 E 553862	105.6	102.2	ORANGE COUNTY	4-1/2" (OD) PVC
HV-5	N 1511724 E 553756	105.0	100.9	ORANGE COUNTY	8-1/2" (OD) PVC

NOTE: TEST HOLE INFORMATION WAS PROVIDED BY A SUBCONSULTANT
SEE THIS SHEET FOR LOCATIONS OF VH#-TEST HOLE NUMBER

NOTES:
1. ESTIMATED LOCATION OF 6" SERVICE LATERAL AND CLEANOUT CONTRACTOR TO PROVIDE TEMPORARY BY-PASS PUMPING TO EXISTING PUMP STATION DURING CONSTRUCTION AND CONNECT NEW CLEANOUT AND LATERAL TO NEW 8-INCH GRAVITY MAIN.
2. DEMOLISH AND REPLACE EXISTING PUMP STATION.
3. CONTRACTOR TO KEEP THE SITE CLEAN AND ANY DEBRIS FROM CONSTRUCTION ACTIVITIES SHALL BE KEPT AWAY FROM THE POND AND INLETS.
4. AT&T PROVIDED LEVEL E VERIFICATION OF BURIED CABLE LINE APPROXIMATE 24" - 36" DEEP.

LEGEND

- PROPOSED DRIVEWAY, CURB OR SIDEWALK REPLACEMENT
- OPEN CUT AND RESTORE ROADWAY
- REMOVE AND REPLACE EXISTING PAVERS
- PROPOSED ADA SIDEWALK CURB RAMP
- FM — EXISTING FORCE MAIN
- UW — EXISTING WATER MAIN
- SS — EXISTING SANITARY SEWER MAIN
- EXISTING SANITARY MAIN TO BE REMOVED
- EXISTING SANITARY SEWER LATERAL W/ CLEANOUTS TO BE REMOVED
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY SEWER LATERAL W/ CLEANOUTS
- RIGHT OF WAY
- DENOTES TREES TO BE REMOVED

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT FLORIDA

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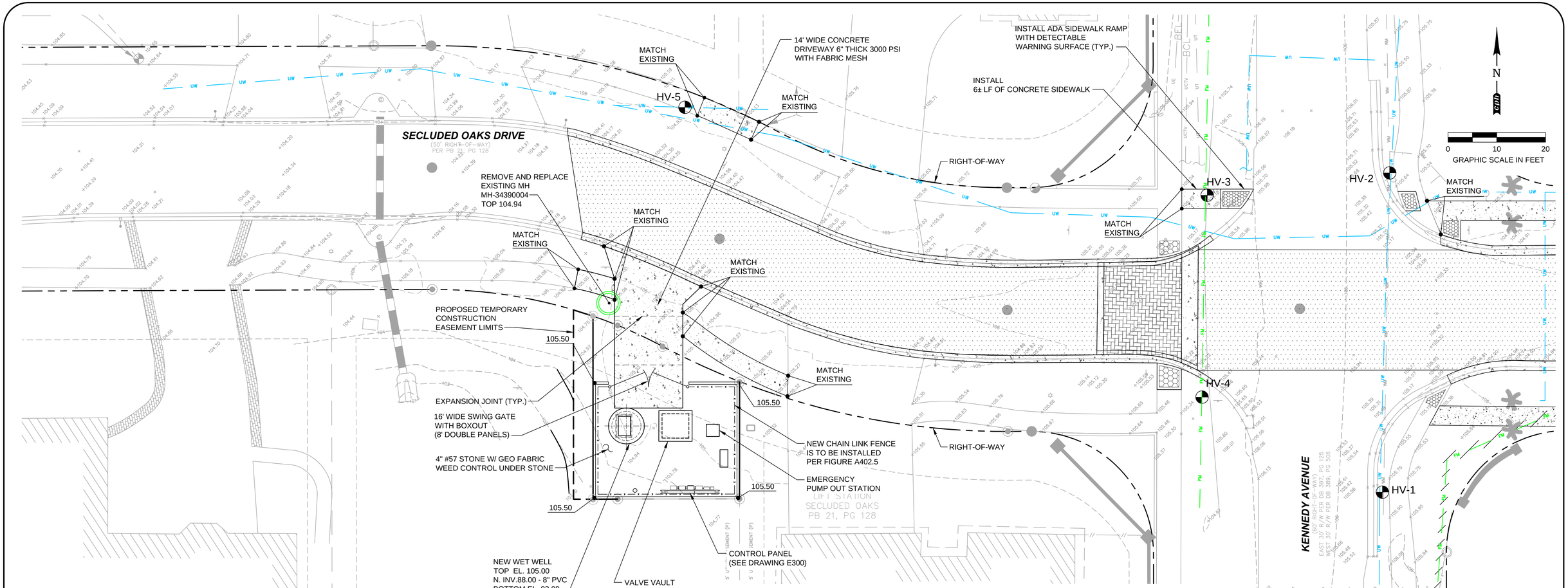
P.S. 3439 SECLUDED OAKS DRIVE
SITE PLAN

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3439 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. : C301
SHEET: 15 OF 40



TEST HOLE DATA:

LOCATION ID	HORIZONTAL COORDINATES	ELEVATION		UTILITY OWNER	SIZE & MATERIAL
		GROUND	TOP OF UTILITY		
HV-1	N 1511645 E 553899	105.8	101.4	ORANGE COUNTY	16-1/2" (OD) METAL
HV-2	N 1511710 E 553901	105.2	99.4	ORANGE COUNTY	16-1/2" (OD) METAL
HV-3	N 1511705 E 553863	105.7	101.7	ORANGE COUNTY	4-1/2" (OD) PVC
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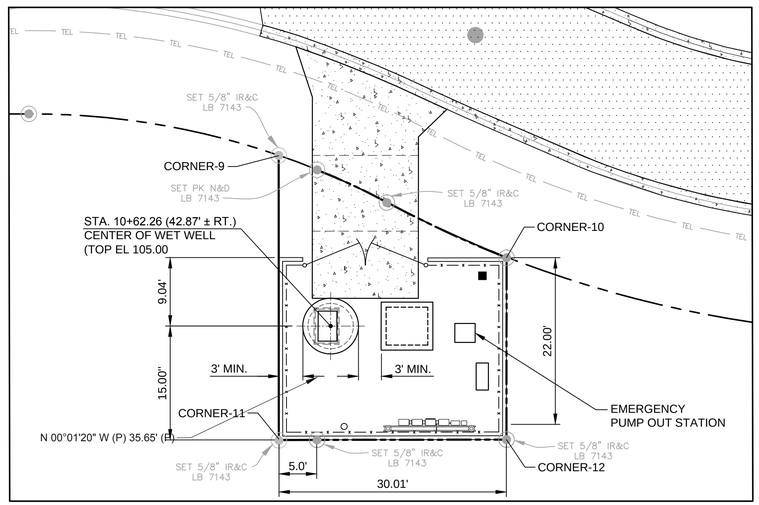
HV-5	N 1511724 E 553756	105.0	100.9	ORANGE COUNTY	8-1/2" (OD) PVC

NOTE: TEST HOLE INFORMATION WAS PROVIDED BY A SUBCONSULTANT
SEE THIS SHEET FOR LOCATIONS OF YHA-TEST HOLE NUMBER



WET WELL DIMENSION DETAIL - PS # 3439

SCALE: 1" = 10'

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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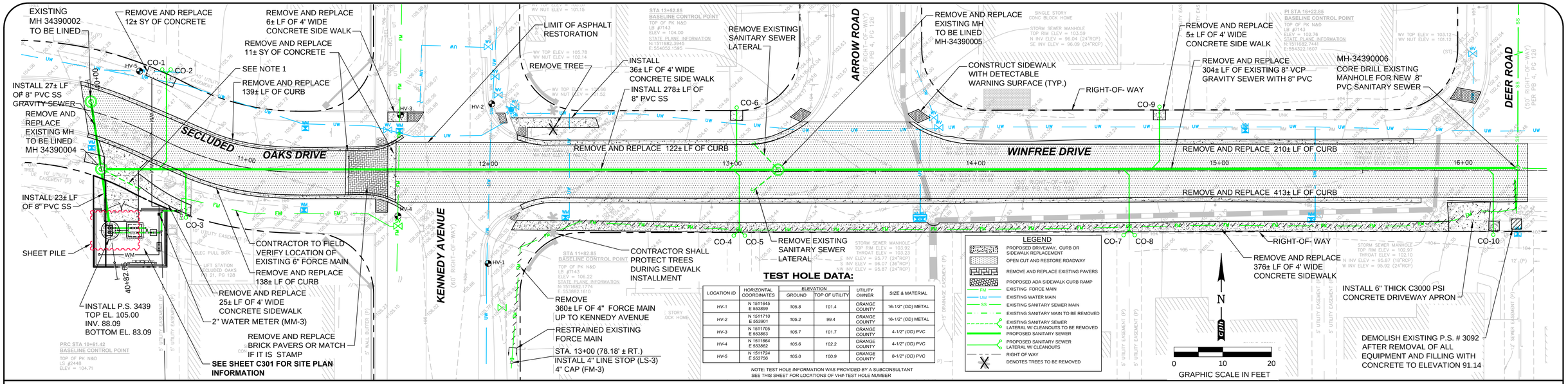
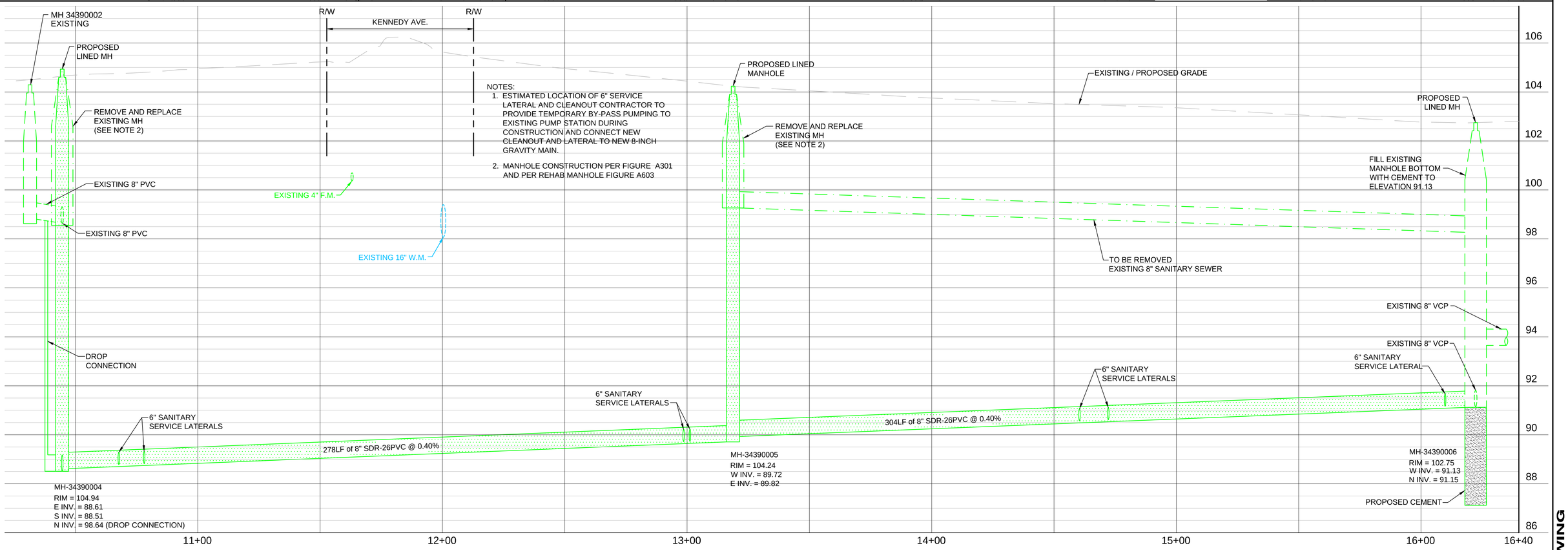
P.S. 3439 SECLUDED OAKS DRIVE
SITE GRADING PLAN

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3439 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. : C302
SHEET: 16 OF 40





REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

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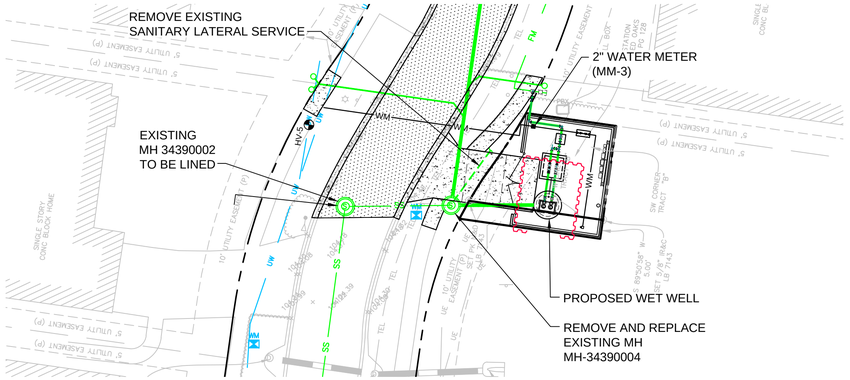
P.S. # 3439 SECLUDED OAKS DRIVE GRAVITY MAIN IMPROVEMENTS PLAN AND PROFILE

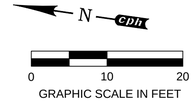
SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

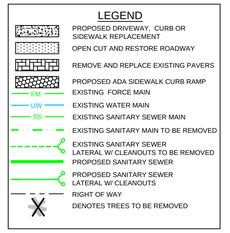
OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3439 Site Plan.dwg

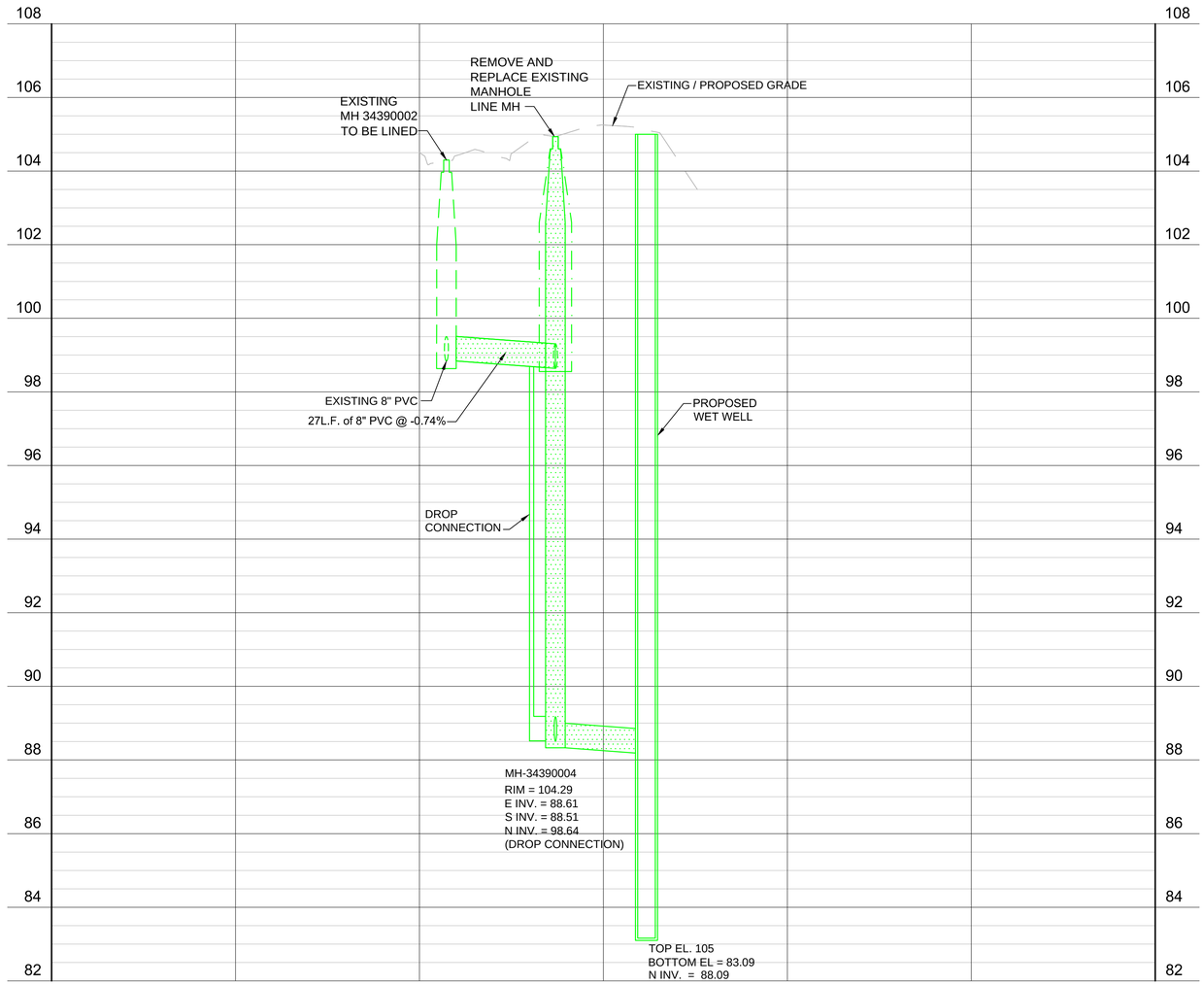
SCALE: 1" = 20'
DRAWING NO. : C303
SHEET: 17 OF 40

BID DRAWING









REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

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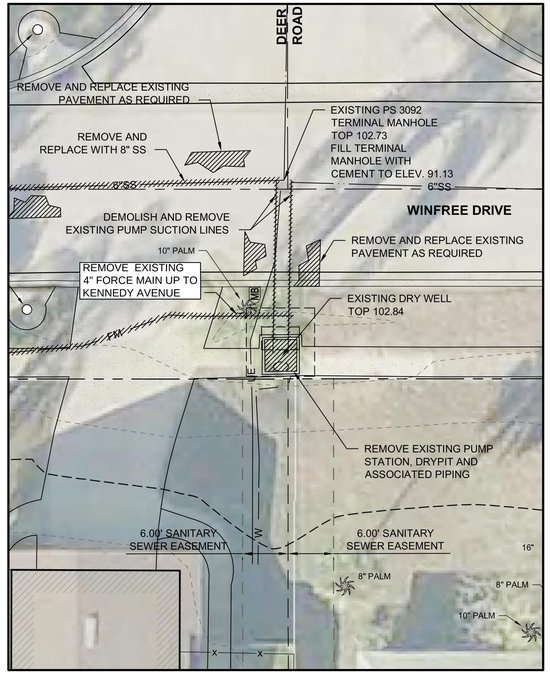
SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3439 Site Plan.dwg

SCALE: 1" = 20'
DRAWING NO. :
C304
SHEET: 18 OF 40

BID DRAWING



EXISTING SITE PIPING PLAN

N

GRADD

0 10 20

GRAPHIC SCALE IN FEET

DRY WELL AND TERMINAL MANHOLE

EXISTING PUMPS AND PIPING

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
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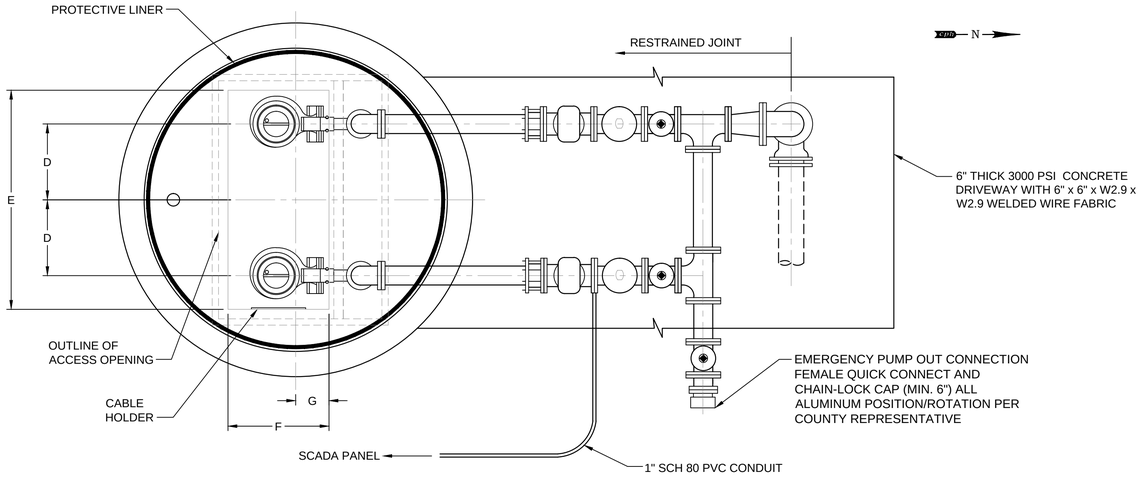
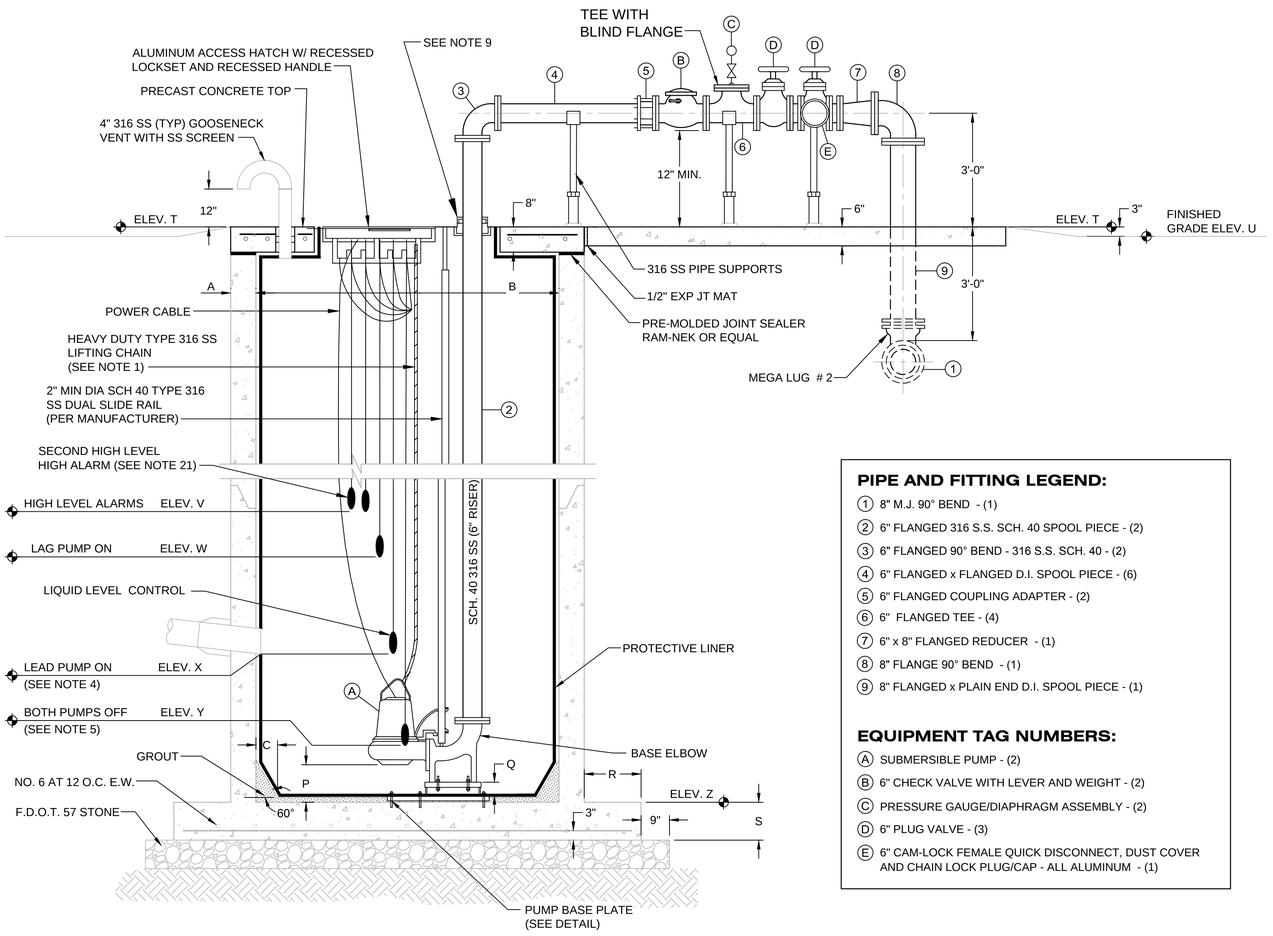
P.S. # 3092 WINFREE DRIVE
DEMOLITION SITE PLAN

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: PS 3092 Site Plan.dwg

SCALE: 1" = 10'
DRAWING NO. :
C400
SHEET: 19 OF 40





PIPE AND FITTING LEGEND:

1. 8" M.J. 90° BEND - (1)
2. 6" FLANGED 316 S.S. SCH. 40 SPOOL PIECE - (2)
3. 6" FLANGED 90° BEND - 316 S.S. SCH. 40 - (2)
4. 6" FLANGED x FLANGED D.I. SPOOL PIECE - (6)
5. 6" FLANGED COUPLING ADAPTER - (2)
6. 6" FLANGED TEE - (4)
7. 6" x 8" FLANGED REDUCER - (1)
8. 8" FLANGE 90° BEND - (1)
9. 8" FLANGED x PLAIN END D.I. SPOOL PIECE - (1)

EQUIPMENT TAG NUMBERS:

- (A) SUBMERSIBLE PUMP - (2)
- (B) 6" CHECK VALVE WITH LEVER AND WEIGHT - (2)
- (C) PRESSURE GAUGE/DIAPHRAGM ASSEMBLY - (2)
- (D) 6" PLUG VALVE - (3)
- (E) 6" CAM-LOCK FEMALE QUICK DISCONNECT, DUST COVER AND CHAIN LOCK PLUG/CAP - ALL ALUMINUM - (1)

GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ORANGE COUNTY UTILITIES STANDARDS AND SPECIFICATIONS MANUAL (LATEST EDITION), AND/OR AS SPECIFIED HEREIN.
2. ALL EXPOSED METAL OUTSIDE OF THE WET WELL SHALL BE IN ACCORDANCE WITH THE ORANGE COUNTY UTILITIES STANDARDS AND SPECIFICATIONS MANUAL.
3. A CRYSTALLINE WATER PROOFING ADMIXTURE SHALL BE ADDED TO THE CONCRETE DURING THE MIXING CYCLE FOR THE WET WELL AND VALVE VAULT PRECAST STRUCTURES. THE CRYSTALLINE WATER PROOFING ADMIXTURE SHALL BE APPROVED PRODUCT AS LISTED IN OCU APPENDIX D.
4. THE INSIDE OF THE WET WELL AND VALVE VAULT SHALL BE LINED WITH AN FRP LINER AS LISTED IN APPENDIX D.
5. WET WELL ACCESS OPENING SHALL BE COVERED ON ALL FOUR VERTICAL SIDES WITH A PROTECTIVE LINER.
6. WET WELL ACCESS HATCH AND COVER SHALL BE ALUMINUM, WITH 316 STAINLESS STEEL HARDWARE AND LOCK BRACKET PLATE WITH THE WORDS "CONFINED SPACE" STAMPED (ETCHED) ON THE TOP SIDE.
7. ALL HARDWARE IN THE WET WELL SHALL BE 316 STAINLESS STEEL.
8. THERE SHALL BE NO VALVES OR ELECTRICAL JUNCTION BOXES IN THE WET WELL.
9. ALL PIPING AND CONDUIT PENETRATIONS THROUGH CONCRETE SHALL BE WATERTIGHT. CAST-IN-PLACE SLEEVES SHALL BE PLACED IN ALL OPENINGS WHERE PRESSURE PIPE ENTER OR LEAVE THE WET WELL. PENETRATIONS THROUGH WET WELL SHALL BE A COMPRESSION TYPE SEAL, SUCH AS "LINK-SEAL", OR AN ACCEPTABLE EQUAL AS LISTED IN OCU APPENDIX D.
10. ALL CONNECTIONS WITHIN THE WET WELL SHALL BE FLANGED JOINTS. ALL REMAINING JOINTS BETWEEN THE WET WELL AND THE CONNECTION TO THE EXISTING FORCE MAIN SHALL BE RESTRAINED MECHANICAL JOINTS. (SEE TABLE ON DETAIL SHEET D100).
11. ALL PIPING WITHIN THE WET WELL SHALL BE STAINLESS STEEL 316 SCHEDULE 40.
12. PIPE SUPPORTS SHALL BE 316 STAINLESS STEEL, PROVIDED AND INSTALLED TO SUPPORT AND ANCHOR THE PIPING SECURELY IN THE VALVE VAULT.
13. CONTRACTOR SHALL, AS DIRECTED BY THE COUNTY REPRESENTATIVE, REMOVE AND SALVAGE TO THE COUNTY, ALL EXISTING PUMP STATION EQUIPMENT, INCLUDING PUMPS, CHECK VALVES, SHUTOFF VALVES, AND CONTROL PANEL.
14. CONTRACTOR SHALL DEMOLISH AND REMOVE FR0M SITE ALL DEBRIS RESULTING FROM THE REMOVAL OF THE EXISTING STRUCTURES.
15. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO ORDERING ANY MATERIALS OR EQUIPMENT.
16. CONTRACTOR SHALL GROUT FLOOR OF WET WELL, AS REQUIRED BY MANUFACTURER'S SPECIFICATIONS, TO ACCOMMODATE INSTALLATION OF THE NEW PUMPS.
17. STRUCTURAL DESIGN OF THE PRECAST WET WELL, TOP, AND VALVE VAULT SHALL BE THE RESPONSIBILITY OF THE PRECAST MANUFACTURER. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE PRECAST WET WELL, THE PRECAST WET WELL TOP AND HATCH COVER, RISERS AND THE VALVE VAULT, TO THE ENGINEER.
18. 100-YEAR FLOOD ELEVATION: OUT OF THE 100-YEAR FLOOD ZONE.
19. ALL EXTERNAL JOINTS SHALL BE COVERED WITH A HIGH STRENGTH, WATER TIGHT, PRESS-TO-SEAL TYPE TAPE/AS LISTED IN OCU APPENDIX D.
20. A SECOND HIGH LEVEL ALARM LIQUID FLOAT SHALL BE INSTALLED TO PROVIDE DRY CONTACT FOR SCADA. REFER TO PUMP CONTROL SCHEMATIC.
21. ALL SPOOLS SHALL BE MINIMUM OF SIX INCHES WHERE SPACE ALLOWS.
22. CONTRACTOR SHALL BE RESPONSIBLE FOR ALIGNMENT FROM THE BASE PLATE TO THE RISER PLATE AT NO EXTRA COST TO OCU.

DESIGN SPECIFICATIONS

MANUFACTURER: ABS
MODEL: XFP150E CB1
IMP: 8.46 IN
DIA: 215 MM.
SPEED: 1760 RPM
DISCHARGE SIZE: 6 IN

VOLTAGE: 240 V
PHASE: 3
H.P.: 12
MAX. SOLID SIZE (3 IN MIN): 3 7/8 IN
CURVE NUMBER: XFP150E CB1

SHUT OFF HEAD: 75 FEET TDH
HIGH HEAD CONDITION: 440 GPM AT 50 FEET TDH
MINIMUM HEAD CONDITION: 1480 GPM AT 12 FEET TDH

DESCRIPTION	SYMBOL	DIMENSION	ELEVATION
THICKNESS OF WALL	A	8"	—
DIAMETER OF WET WELL	B	8'	—
WIDTH OF BOTTOM FILLET	C	SEE NOTE 1	—
C/L OF WET WELL TO C/L OF PIPES	D	SEE NOTE 1	—
LENGTH OF PUMP ACCESS OPENING	E	SEE NOTE 1	—
WIDTH OF PUMP ACCESS OPENING	F	SEE NOTE 1	—
CENTER OF WET WELL TO EDGE OF HATCH	G	SEE NOTE 1	—
VALVE BOX HATCH OPENING	H	N/A	—
VALVE BOX HATCH OPENING	I	N/A	—
LIP WIDTH OF WETWELL BASE	R	18"	—
THICKNESS OF WETWELL BASE	S	12"	—
TOP OF WET WELL	T	—	71.17
FINISHED GRADE	U	—	70.92
HIGH LEVEL ALARMS	V	—	59.42
LAG PUMP ON	W	—	58.92
LEAD PUMP ON / INFLUENT PIPE INVERT	X	—	58.42
PUMPS OFF (TOP OF PUMP VOLUTE)	Y	—	53.92
BOTTOM OF PUMP TO FLOOR OF WET WELL	P	4 3/4"	51.84
STEP HEIGHT (IF REQUIRED)	Q		-
FLOOR OF WET WELL	Z	—	52.42

NOTES:
1. PER PUMP MANUFACTURER'S REQUIREMENTS
2. DIMENSION P AND ELEVATIONS Y AND Z MUST MEET ABS REQUIREMENTS.
3. ELEVATION X - ELEVATION Z ≥ 5 FEET
4. TOP ELEVATION OF WET WELL SHALL BE A MINIMUM OF 1' ABOVE THE 100 YEAR FLOOD ELEVATION AND THE ELEVATION OF THE CROWN OF THE ROAD.
5. SYMBOLS SHOWN IN TABLE ARE USED IN PLAN AND SECTION VIEW THIS SHEET.

FLYGT PUMPS DO NOT MEET PUMP STATION CONDITIONS PER OCU STANDARD DESIGN REQUIREMENTS

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT FLORIDA

ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825

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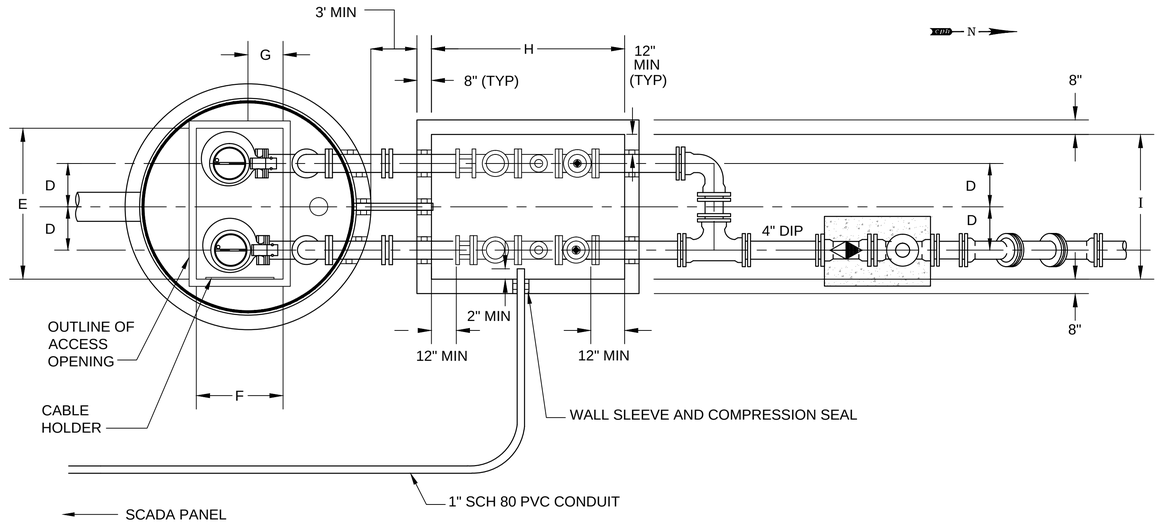
1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

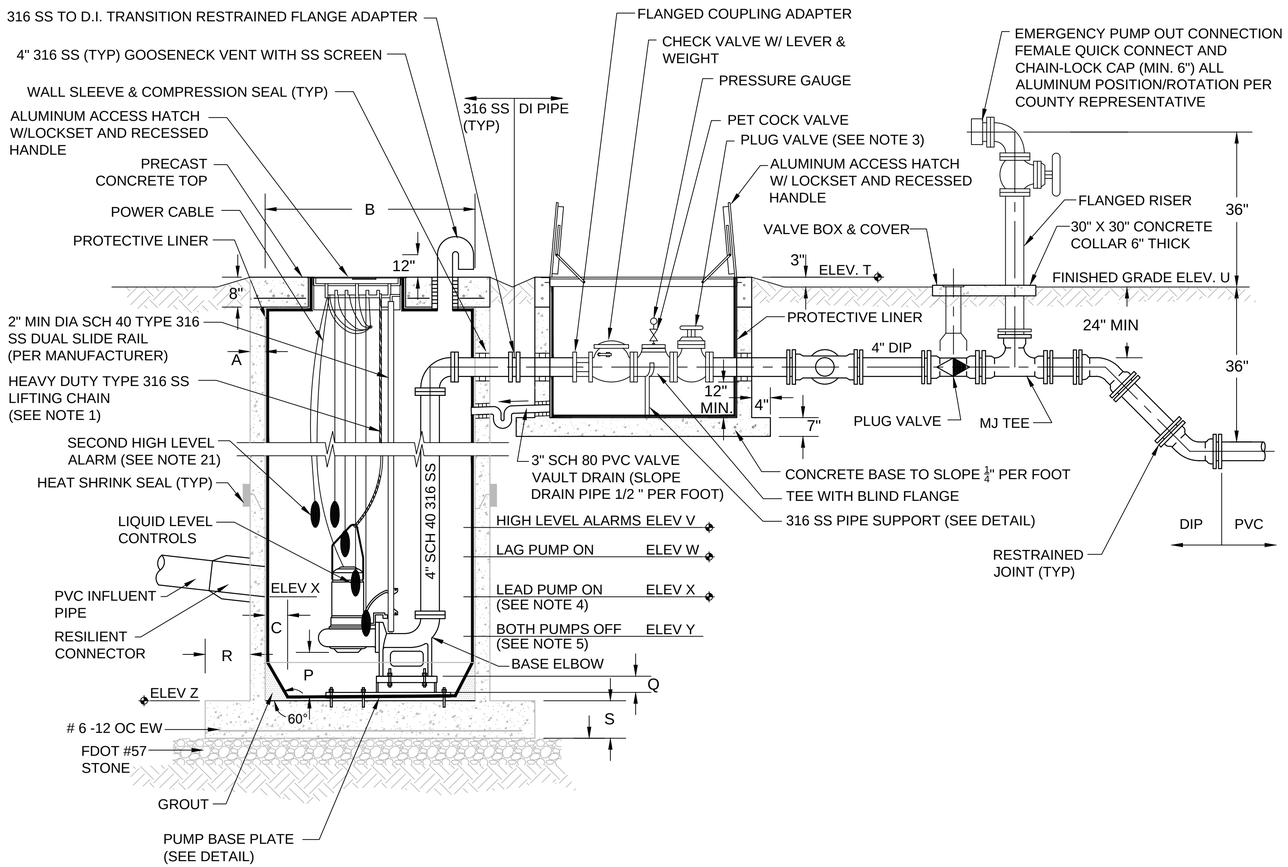
P.S. # 3990 ARNING DRIVE
PUMP PLAN, SECTION AND DETAIL

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: Pump Station Details.dwg

SCALE: N.T.S.
DRAWING NO. : P100
SHEET: 20 OF 40





GENERAL NOTES:

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE ORANGE COUNTY UTILITIES STANDARDS AND SPECIFICATIONS MANUAL (LATEST EDITION), AND/OR AS SPECIFIED HEREIN.
2. ALL EXPOSED METAL OUTSIDE OF THE WET WELL SHALL BE IN ACCORDANCE WITH THE ORANGE COUNTY UTILITIES STANDARDS AND SPECIFICATIONS MANUAL.
3. A CRYSTALLINE WATER PROOFING ADMIXTURE SHALL BE ADDED TO THE CONCRETE DURING THE MIXING CYCLE FOR THE WET WELL AND VALVE VAULT PRECAST STRUCTURES. THE CRYSTALLINE WATER PROOFING ADMIXTURE SHALL BE APPROVED PRODUCT AS LISTED IN OCU APPENDIX D.
4. THE INSIDE OF THE WET WELL AND VALVE VAULT SHALL BE LINED WITH AN FRP LINER AS LISTED IN APPENDIX D.
5. WET WELL ACCESS OPENING SHALL BE COVERED ON ALL FOUR VERTICAL SIDES WITH A PROTECTIVE LINER.
6. WET WELL ACCESS HATCH AND COVER SHALL BE ALUMINUM, WITH 316 STAINLESS STEEL HARDWARE AND LOCK BRACKET PLATE WITH THE WORDS "CONFINED SPACE" STAMPED (ETCHED) ON THE TOP SIDE.
7. ALL HARDWARE IN THE WET WELL SHALL BE 316 STAINLESS STEEL.
8. THERE SHALL BE NO VALVES OR ELECTRICAL JUNCTION BOXES IN THE WET WELL.
9. ALL PIPING AND CONDUIT PENETRATIONS THROUGH CONCRETE SHALL BE WATERTIGHT. CAST-IN-PLACE SLEEVES SHALL BE PLACED IN ALL OPENINGS WHERE PRESSURE PIPE ENTER OR LEAVE THE WET WELL AND/OR VALVE VAULT. PENETRATIONS THROUGH WET WELL AND VALVE VAULT SHALL BE A COMPRESSION TYPE SEAL, SUCH AS "LINK-SEAL", OR AN ACCEPTABLE EQUAL AS LISTED IN OCU APPENDIX D.
10. ALL CONNECTIONS WITHIN THE WET WELL AND THE VALVE VAULT SHALL BE FLANGED JOINTS. ALL REMAINING JOINTS BETWEEN THE WET WELL AND THE CONNECTION TO THE EXISTING FORCE MAIN SHALL BE RESTRAINED MECHANICAL JOINTS. (SEE TABLE ON DETAIL SHEET D100).
11. ALL PIPING WITHIN THE WET WELL AND VALVE VAULT SHALL BE STAINLESS STEEL 316 SCHEDULE 40.
12. VALVE VAULT SHALL BE SIZED TO PERMIT EASY REMOVAL OF CHECK VALVE SPINDLES, WITH MINIMUM CLEARANCE, AS SHOWN FOR 6" DIAMETER PIPE, OR SMALLER.
13. PIPE SUPPORTS SHALL BE 316 STAINLESS STEEL, PROVIDED AND INSTALLED TO SUPPORT AND ANCHOR THE PIPING SECURELY IN THE VALVE VAULT.
14. CONTRACTOR SHALL, AS DIRECTED BY THE COUNTY REPRESENTATIVE, REMOVE AND SALVAGE TO THE COUNTY, ALL EXISTING PUMP STATION EQUIPMENT, INCLUDING PUMPS, CHECK VALVES, SHUTOFF VALVES, AND CONTROL PANEL.
15. CONTRACTOR SHALL DEMOLISH AND REMOVE FR0M SITE ALL DEBRIS RESULTING FROM THE REMOVAL OF THE EXISTING STRUCTURES.
16. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO ORDERING ANY MATERIALS OR EQUIPMENT.
17. CONTRACTOR SHALL GROUT FLOOR OF WET WELL, AS REQUIRED BY MANUFACTURER'S SPECIFICATIONS, TO ACCOMMODATE INSTALLATION OF THE NEW PUMPS.
18. STRUCTURAL DESIGN OF THE PRECAST WET WELL, TOP, AND VALVE VAULT SHALL BE THE RESPONSIBILITY OF THE PRECAST MANUFACTURER. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE PRECAST WET WELL, THE PRECAST WET WELL TOP AND HATCH COVER, RISERS AND THE VALVE VAULT, TO THE ENGINEER.
19. 100-YEAR FLOOD ELEVATION: OUT OF THE 100-YEAR FLOOD ZONE.
20. ALL EXTERNAL JOINTS SHALL BE COVERED WITH A HIGH STRENGTH, WATER TIGHT, PRESS-TO-SEAL TYPE TAPE/AS LISTED IN OCU APPENDIX D.
21. A SECOND HIGH LEVEL ALARM LIQUID FLOAT SHALL BE INSTALLED TO PROVIDE DRY CONTACT FOR SCADA. REFER TO PUMP CONTROL SCHEMATIC.
22. ALL SPOOLS SHALL BE MINIMUM OF SIX INCHES WHERE SPACE ALLOWS.
23. CONTRACTOR SHALL BE RESPONSIBLE FOR ALIGNMENT FROM THE BASE PLATE TO THE RISER PLATE AT NO EXTRA COST TO OCU.

DESIGN SPECIFICATIONS

MANUFACTURER: ABS
MODEL: XFP100E CB1
IMP: 7.28 IN
DIA: 185 MM.
SPEED: 1770 RPM
DISCHARGE SIZE: 4 IN
VOLTAGE: 240 V
PHASE: 3
H.P.: 10
MAX. SOLID SIZE (3 IN MIN): 80 MM
CURVE NUMBER: XFP100E CB1

SHUT OFF HEAD: 48 FEET TDH
HIGH HEAD CONDITION: 158 GPM AT 40 FEET TDH
MINIMUM HEAD CONDITION: 681 GPM AT 11 FEET TDH

DESCRIPTION	SYMBOL	DIMENSION	ELEVATION
THICKNESS OF WALL	A	8"	–
DIAMETER OF WET WELL	B	6'	–
WIDTH OF BOTTOM FILLET	C	SEE NOTE 1	–
C/L OF WET WELL TO C/L OF PIPES	D	SEE NOTE 1	–
LENGTH OF PUMP ACCESS OPENING	E	SEE NOTE 1	–
WIDTH OF PUMP ACCESS OPENING	F	SEE NOTE 1	–
CENTER OF WET WELL TO EDGE OF HATCH	G	SEE NOTE 1	–
VALVE BOX HATCH OPENING	H	66"	–
VALVE BOX HATCH OPENING	I	60"	–
LIP WIDTH OF WETWELL BASE	R	18"	–
THICKNESS OF WETWELL BASE	S	12"	–
TOP OF WET WELL	T	–	79.90
FINISHED GRADE	U	–	79.65
HIGH LEVEL ALARMS	V	–	66.42
LAG PUMP ON	W	–	65.92
LEAD PUMP ON / INFLUENT PIPE INVERT	X	–	74.50
PUMPS OFF (TOP OF PUMP VOLUTE)	Y	–	63.29
BOTTOM OF PUMP TO FLOOR OF WET WELL	P	4.6"	61.42
STEP HEIGHT (IF REQUIRED)	Q		-
FLOOR OF WET WELL	Z	–	61.80

NOTES:
1. PER PUMP MANUFACTURER'S REQUIREMENTS
2. DIMENSION P AND ELEVATIONS Y AND Z MUST MEET ABS REQUIREMENTS.
3. ELEVATION X - ELEVATION Z ≥ 5 FEET
4. TOP ELEVATION OF WET WELL SHALL BE A MINIMUM OF 1' ABOVE THE 100 YEAR FLOOD ELEVATION AND THE ELEVATION OF THE CROWN OF THE ROAD.
5. SYMBOLS SHOWN IN TABLE ARE USED IN PLAN AND SECTION VIEW THIS SHEET.

FLYGT PUMPS DO NOT MEET PUMP STATION CONDITIONS PER OCU STANDARD DESIGN REQUIREMENTS

REV	DATE	DESCRIPTION

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Lndscp. Lic. No. LC0000298
1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

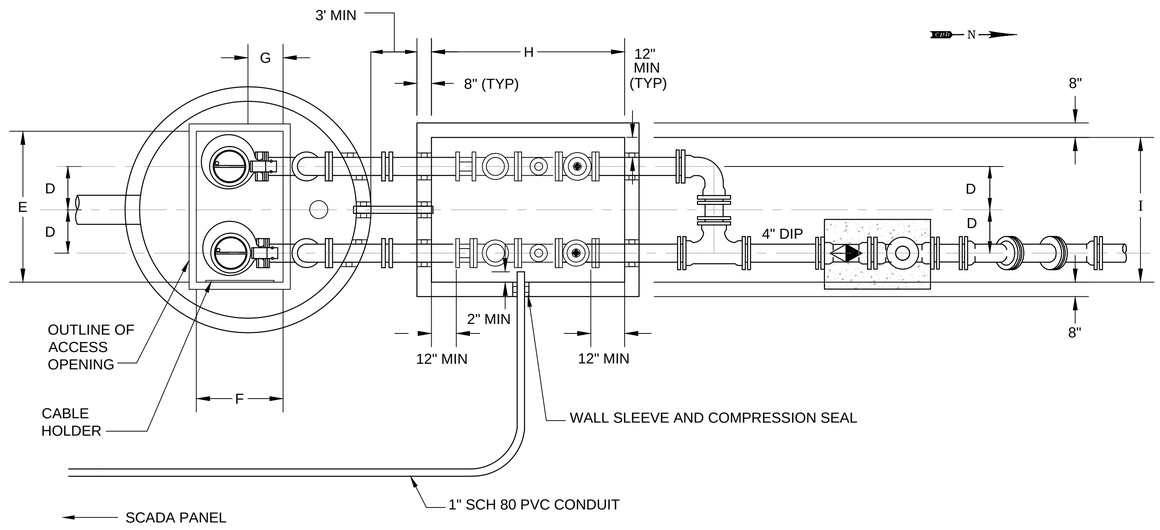
P.S. # 3259 ALLWOOD PLACE
PUMP PLAN, SECTION AND DETAIL

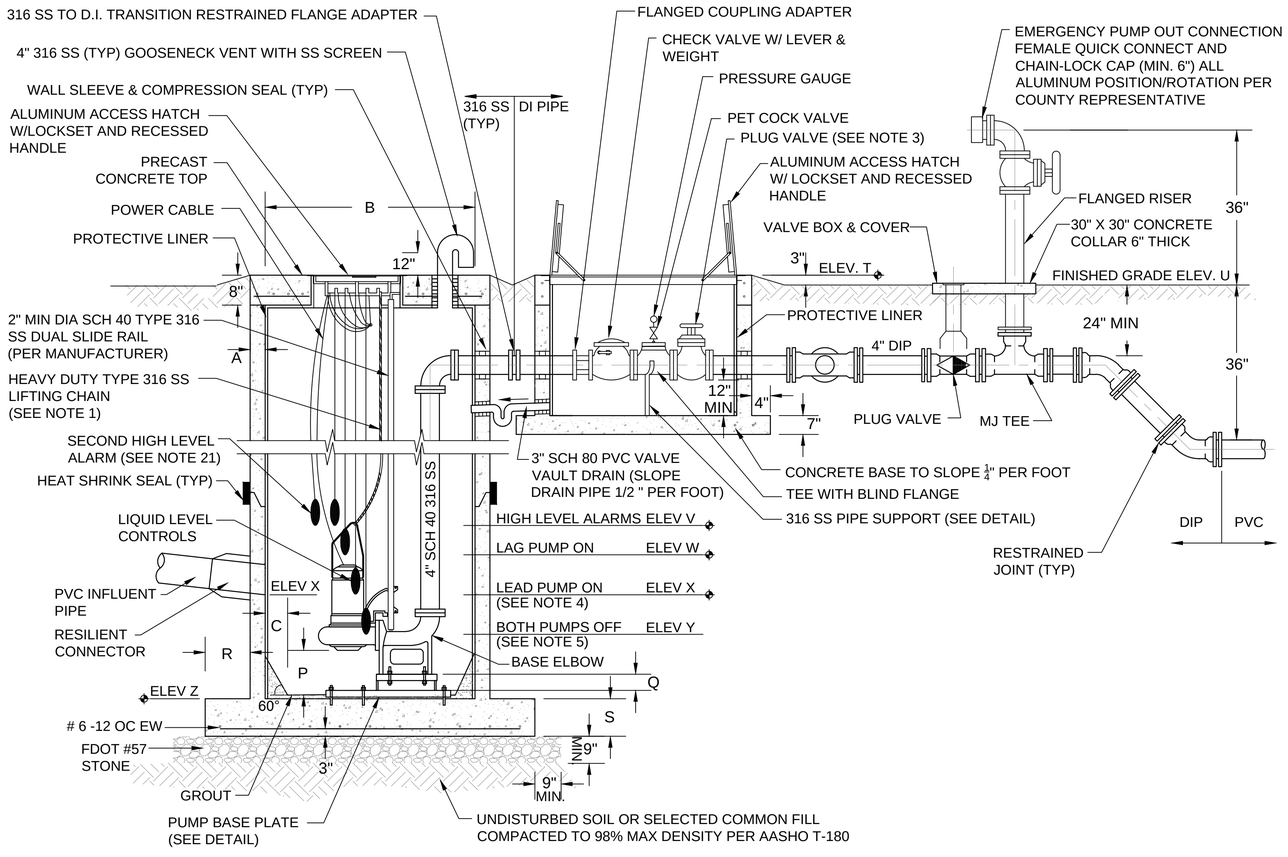
SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: Pump Station Details.dwg

SCALE: N.T.S.
DRAWING NO.: P200
SHEET: 21 OF 40

BID DRAWING





GENERAL NOTES:

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8. THERE SHALL BE NO VALVES OR ELECTRICAL JUNCTION BOXES IN THE WET WELL.
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10. ALL CONNECTIONS WITHIN THE WET WELL AND THE VALVE VAULT SHALL BE FLANGED JOINTS. ALL REMAINING JOINTS BETWEEN THE WET WELL AND THE CONNECTION TO THE EXISTING FORCE MAIN SHALL BE RESTRAINED MECHANICAL JOINTS. (SEE TABLE ON DETAIL SHEET D100).
11. ALL PIPING WITHIN THE WET WELL AND VALVE VAULT SHALL BE STAINLESS STEEL 316 SCHEDULE 40.
12. VALVE VAULT SHALL BE SIZED TO PERMIT EASY REMOVAL OF CHECK VALVE SPINDLES, WITH MINIMUM CLEARANCE, AS SHOWN FOR 6" DIAMETER PIPE, OR SMALLER.
13. PIPE SUPPORTS SHALL BE 316 STAINLESS STEEL, PROVIDED AND INSTALLED TO SUPPORT AND ANCHOR THE PIPING SECURELY IN THE VALVE VAULT.
14. CONTRACTOR SHALL, AS DIRECTED BY THE COUNTY REPRESENTATIVE, REMOVE AND SALVAGE TO THE COUNTY, ALL EXISTING PUMP STATION EQUIPMENT, INCLUDING PUMPS, CHECK VALVES, SHUTOFF VALVES, AND CONTROL PANEL.
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19. 100-YEAR FLOOD ELEVATION: OUT OF THE 100-YEAR FLOOD ZONE.
20. ALL EXTERNAL JOINTS SHALL BE COVERED WITH A HIGH STRENGTH, WATER TIGHT, PRESS-TO-SEAL TYPE TAPE/AS LISTED IN OCU APPENDIX D.
21. A SECOND HIGH LEVEL ALARM LIQUID FLOAT SHALL BE INSTALLED TO PROVIDE DRY CONTACT FOR SCADA. REFER TO PUMP CONTROL SCHEMATIC.
22. ALL SPOOLS SHALL BE MINIMUM OF SIX INCHES WHERE SPACE ALLOWS.
23. CONTRACTOR SHALL BE RESPONSIBLE FOR ALIGNMENT FROM THE BASE PLATE TO THE RISER PLATE AT NO EXTRA COST TO OCU.

DESIGN SPECIFICATIONS

MANUFACTURER: ABS
MODEL: XFP100E CB1
IMP: 7.68 IN
DIA: 195 MM.
SPEED: 1170 RPM
DISCHARGE SIZE: 4 IN
VOLTAGE: 240 V
PHASE: 3
H.P.: 5
MAX. SOLID SIZE (3 IN MIN): 3 1/8 IN
CURVE NUMBER: XFP100E CB1

SHUT OFF HEAD: 29.3 FEET TDH
HIGH HEAD CONDITION: 145 GPM AT 18 FEET TDH
MINIMUM HEAD CONDITION: 480 GPM AT 10 FEET TDH

DESCRIPTION	SYMBOL	DIMENSION	ELEVATION
THICKNESS OF WALL	A	8"	–
DIAMETER OF WET WELL	B	6'	–
WIDTH OF BOTTOM FILLET	C	SEE NOTE 1	–
C/L OF WET WELL TO C/L OF PIPES	D	SEE NOTE 1	–
LENGTH OF PUMP ACCESS OPENING	E	SEE NOTE 1	–
WIDTH OF PUMP ACCESS OPENING	F	SEE NOTE 1	–
CENTER OF WET WELL TO EDGE OF HATCH	G	SEE NOTE 1	–
VALVE BOX HATCH OPENING	H	66"	–
VALVE BOX HATCH OPENING	I	60"	–
LIP WIDTH OF WETWELL BASE	R	18"	–
THICKNESS OF WETWELL BASE	S	12"	–
TOP OF WET WELL	T	–	105.00
FINISHED GRADE	U	–	104.75
HIGH LEVEL ALARMS	V	–	90.59
LAG PUMP ON	W	–	90.09
LEAD PUMP ON / INFLUENT PIPE INVERT	X	–	88.09
PUMPS OFF (TOP OF PUMP VOLUTE)	Y	–	84.59
BOTTOM OF PUMP TO FLOOR OF WET WELL	P	4.6"	82.71
STEP HEIGHT (IF REQUIRED)	Q		–
FLOOR OF WET WELL	Z	–	83.09

NOTES:
1. PER PUMP MANUFACTURER'S REQUIREMENTS
2. DIMENSION P AND ELEVATIONS Y AND Z MUST MEET ABS REQUIREMENTS.
3. ELEVATION X - ELEVATION Z ≥ 5 FEET
4. TOP ELEVATION OF WET WELL SHALL BE A MINIMUM OF 1' ABOVE THE 100 YEAR FLOOD ELEVATION AND THE ELEVATION OF THE CROWN OF THE ROAD.
5. SYMBOLS SHOWN IN TABLE ARE USED IN PLAN AND SECTION VIEW THIS SHEET.

FLYGT PUMPS DO NOT MEET PUMP STATION CONDITIONS PER OCU STANDARD DESIGN REQUIREMENTS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

P.S. # 3439 SECLUDED OAKS DRIVE
PUMP PLAN, SECTION AND DETAIL

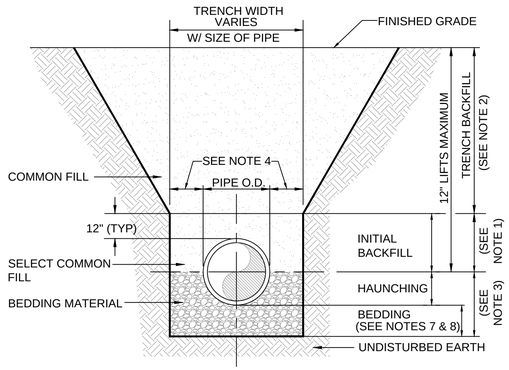
SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: Pump Station Details.dwg

SCALE: N.T.S.
DRAWING NO.: P300
SHEET: 22 OF 40

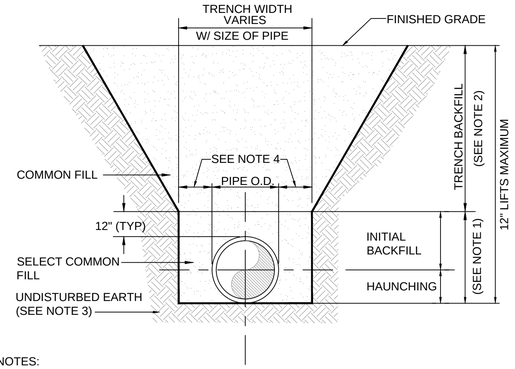
BID DRAWING

DATE: February 11, 2011 **BEDDING AND TRENCHING - TYPE A** **FIGURE A101**



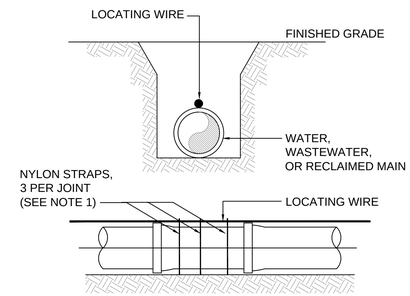
NOTES:
1. INITIAL BACKFILL: SELECT COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. TYPE A BEDDING MATERIAL SHALL CONFORM TO FDOT NO. 57 AGGREGATE.
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 ORANGE COUNTY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF R/W UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

DATE: February 11, 2011 **BEDDING AND TRENCHING - TYPE B** **FIGURE A102**



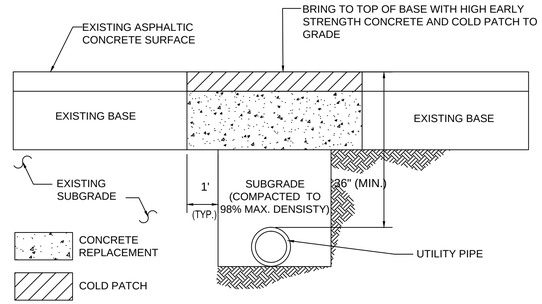
NOTES:
1. INITIAL BACKFILL AND HAUNCHING: SELECT COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY UTILITIES.
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. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN ORANGE COUNTY RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

DATE: February 11, 2011 **PIPE LOCATING WIRE** **FIGURE A114**



NOTES:
1. ALL PIPE SHALL REQUIRE INSULATED LOCATING WIRE (10 GAUGE SOLID COPPER) CAPABLE OF DETECTION BY A CABLE LOCATOR AND SHALL BE WRAPPED WITH NYLON STRAPS TO TOP CENTERLINE OF THE PIPE.
2. LOCATING WIRE SHALL BE CONTINUOUS INSIDE VALVE BOXES AND SHALL EXTEND 12" ABOVE TOP OF COLLAR.
3. WIRE INSULATION SHALL BE COLOR CODED FOR THE TYPE OF PIPE BEING INSTALLED.

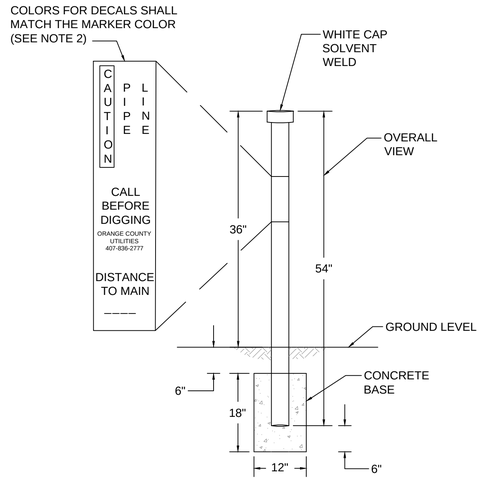
DATE: August 1, 2006 **TEMPORARY PAVEMENT RESTORATION** **FIGURE A613**



GENERAL NOTES:

1. BASE REPLACEMENT SHALL BE 3000 PSI HIGH EARLY STRENGTH CONCRETE.
2. ASPHALTIC CONCRETE SURFACE MATERIAL SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL THAT EXISTED AT THE TIME OF REMOVAL.
3. MINIMUM ASPHALTIC CONCRETE SURFACE OVERLAY THICKNESS SHALL BE (1"- 5") INCH/ES.
4. ALL JOINT CUTS SHALL BE MECHANICALLY SAW-CUT.
5. SUB-GRADE TO BE COMPACTED TO 98% MAX. DENSITY AS DETERMINED BY AASHTO T-180. CUT TO BE REPLACED WITH 3000 PSI HIGH EARLY CONCRETE TO TOP OF EXISTING BASE. CUT AREA TO BE PLATED OR PROTECTED ON DAY OF POUR. TEMPORARY COLD PATCH TO BE APPLIED AND BROUGHT TO GRADE NEXT DAY.

DATE: February 11, 2011 **UTILITY MAIN MARKER** **FIGURE A113**



NOTES:
1. MARKERS ARE REQUIRED WHEN UTILITY MAIN IS LOCATED OVER 30 FEET FROM EDGE OF PAVEMENT OR IN AN EASEMENT NOT ADJACENT TO THE RIGHT OF WAY.
2. MARKERS SHALL BE 4" DIAMETER SCH. 80 OR DR18 PVC: BLUE FOR WATER; GREEN FOR WASTEWATER; AND PANTONE PURPLE 522C FOR RECLAIMED WATER.
3. MARKERS SHALL BE PLACED AT ALL DIRECTIONAL CHANGES AND AT ALL VALVES EXCEPT WATER VALVES NEAR FIRE HYDRANTS. ADDITIONAL MARKERS SHALL BE INSTALLED AS NEEDED SO THAT THE DISTANCE BETWEEN MARKERS DOES NOT EXCEED 1000 FEET.

APPENDIX A **STANDARD DRAWINGS** **GENERAL**

DATE: February 11, 2011 **RESTRAINED PIPE TABLE WASTEWATER FORCE MAINS** **FIGURE A104-2**

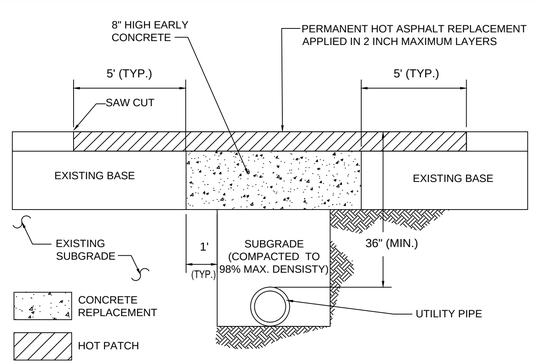
MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)										
TYPE	PVC PIPE SIZE									
	4"	6"	8"	10"	12"	16"	20"	24"	30"	36"
90° BEND	18	24	31	38	43	55	65	75	88	100
45° BEND	8	10	13	15	18	23	26	31	38	43
22-1/2° BEND	4	5	6	8	9	11	13	15	18	20
11-1/4° BEND	2	3	4	5	6	8	9	10	11	13
PLUG OR BRANCH OF TEE	38	50	65	79	90	117	139	163	194	223
VALVE	19	25	32	40	45	59	70	82	98	112
REDUCER	VARIES BY SIZE; TO BE DETERMINED BY THE DESIGN ENGINEER.									

NOTES:
1. FITTINGS SHALL HAVE RESTRAINED JOINTS UNLESS OTHERWISE INDICATED.
2. INSTALL FULL LENGTH JOINTS WITH TOTAL LENGTH EQUAL TO OR GREATER THAN LENGTH SHOWN IN THE TABLE.
3. WHERE TWO OR MORE FITTINGS ARE IN SERIES, SELECT FITTING RESTRAINT LENGTH THAT YIELDS THE LONGEST RESTRAINT DISTANCE.
4. ALL INLINE VALVES SHALL BE RESTRAINED.
5. WHERE INTERNAL RESTRAINED JOINTS ARE USED, THE ENTIRE BELL SHALL BE PAINTED RED.
6. LENGTHS SHOWN IN THE TABLE WERE CALCULATED IN ACCORDANCE WITH PROCEDURES OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" GUIDELINES PUBLISHED BY DIPRA, USING THE ASSUMPTIONS SHOWN BELOW:

   WORKING PRESSURE: 100 PSI
   SOIL DESIGNATION: SM (SAND SILT)
   LAYING CONDITIONS: 3
   DEPTH OF COVER: 3 FT
   SAFETY FACTOR: 1.5
   CONVERSION FACTOR FOR PVC PIPE: 1.25

   THE DESIGN ENGINEER SHALL INCREASE THE VALUES IN THE TABLE AS WARRANTED BY SITE-SPECIFIC PARAMETERS, SUCH AS SOIL DESIGNATIONS AND LAYING CONDITIONS.

DATE: August 1, 2006 **PERMANENT PAVEMENT RESTORATION** **FIGURE A612**



GENERAL NOTES:

1. BASE REPLACEMENT SHALL BE 3000 PSI HIGH EARLY STRENGTH CONCRETE.
2. ASPHALTIC CONCRETE SURFACE MATERIAL SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL THAT EXISTED AT THE TIME OF REMOVAL.
3. MINIMUM ASPHALTIC CONCRETE SURFACE OVERLAY THICKNESS SHALL BE (1"- 5") INCH/ES, OR AS APPROVED BY THE COUNTY ENGINEER.
4. ALL JOINT CUTS SHALL BE MECHANICALLY SAW-CUT.
5. SUB-GRADE TO BE COMPACTED TO 98% MAX. DENSITY AS DETERMINED BY AASHTO T-180. CUT TO BE REPLACED WITH 3000 PSI HIGH EARLY CONCRETE TO TOP OF EXISTING BASE. CUT AREA TO BE PLATED OR PROTECTED ON DAY OF POUR. EXISTING SURFACE TO BE SAW CUT TO AN AREA 5 FEET BEYOND BASE CUT.

PAVEMENT RESTORATION

1. LONGITUDINAL CUTS MAY REQUIRE MILLING AND OVERLAY/RESURFACING OF THE COMPLETE WIDTH OF THE TRAVELLED WAY.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

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CONSTRUCTION DETAILS
MANHOLE AND PIPE INSTALLATION

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

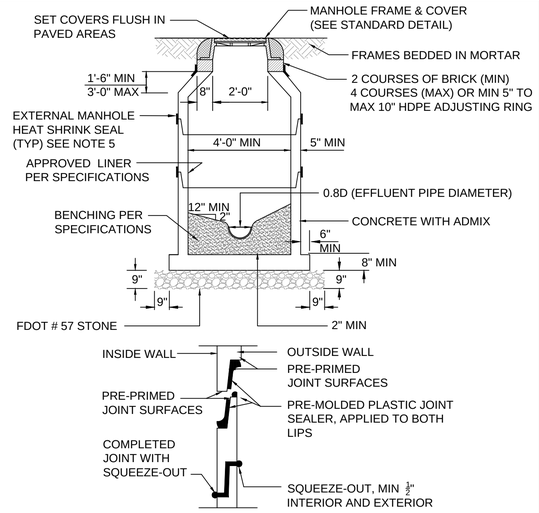
OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: Construction Details.dwg

SCALE: NONE
DRAWING NO. : D100
SHEET: 23 OF 40

BID DRAWING

DATE: February 11, 2011

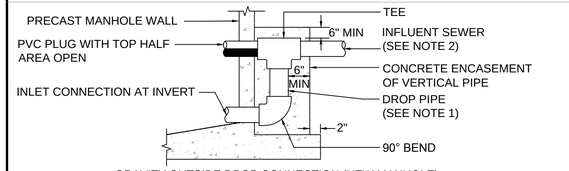
PRECAST CONCRETE MANHOLE — FIGURE A301



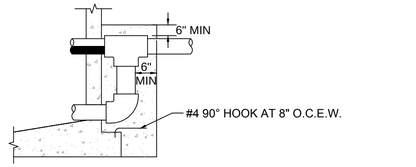
NOTES:
1. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. SEE MANHOLE CONNECTION DETAIL.
2. ECCENTRIC CONE DESIGN MAY BE USED FOR CONFLICT RESOLUTION WITH OCU APPROVAL.
3. A FLOW CHANNEL SHALL BE CONSTRUCTED INSIDE MANHOLE TO DIRECT INFLUENT INTO FLOW STREAM.
4. LIFT HOLES THROUGH STRUCTURE ARE NOT PERMITTED.
5. WRAP TIGHTLY AROUND CASTING JOINTS AND APPLY HIGH INTENSITY PROPANE TORCH TO EFFECTIVELY SEAL THEM FROM GROUND WATER INFILTRATION.
6. HDPE ADJUSTING RINGS MAY BE SUBSTITUTED FOR BRICK RISERS.
7. SECTION HEIGHTS VARY AS REQUIRED, AND AS AVAILABLE, FROM APPROVED MANUFACTURERS LISTED IN APPENDIX D.

DATE: February 11, 2011

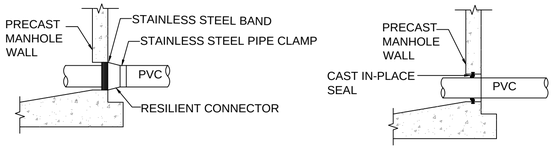
GRAVITY MANHOLE CONNECTION — FIGURE A302



GRAVITY OUTSIDE DROP CONNECTION (NEW MANHOLE)



GRAVITY OUTSIDE DROP CONNECTION (EXISTING MANHOLE)



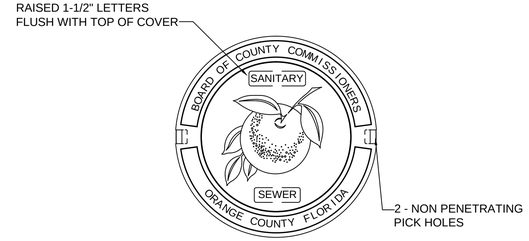
NEW AND EXISTING MANHOLES — NEW MANHOLES ONLY

STANDARD CONNECTION

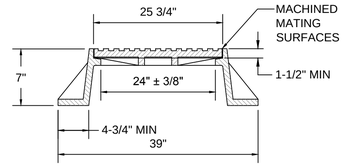
NOTES:
1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
2. AN OUTSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT LINES WHICH HAVE AN INVERT 2' OR MORE ABOVE THE MANHOLE INVERT.
3. CONTRACTOR TO COORDINATE THE PRESENCE OF UTILITIES INSPECTOR DURING CORING AND CONNECTIONS TO EXISTING MANHOLES.

DATE: February 11, 2011

STANDARD MANHOLE FRAME AND COVER — FIGURE A304



PLAN

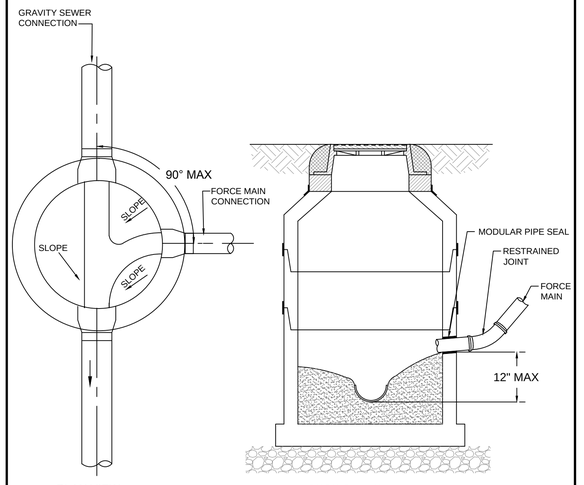


ELEVATION

NOTES:
1. ONLY APPLIES TO UTILITIES OWNED AND MAINTAINED MANHOLES. "ORANGE COUNTY" SHALL NOT APPEAR ON PRIVATE MANHOLES.

DATE: February 11, 2011

FORCE MAIN TO GRAVITY SEWER CONNECTION — FIGURE A306



PLAN VIEW — SECTION VIEW

NOTES:
1. FORCE MAIN ORIENTED TO FACILITATE FLOW AND SHALL ENTER MANHOLE WITHIN 1' ABOVE INVERT OF THE EFFLUENT PIPE.
2. BENCH AS REQUIRED FOR NEW FORCE MAIN.
3. MANHOLE RECEIVING FORCE MAIN AND NEXT MANHOLE SHALL BE LINED. FOR CONNECTIONS TO EXISTING MANHOLES, MANHOLE RECEIVING FORCE MAIN AND NEXT MANHOLE SHALL BE COATED OR LINED PER APPENDIX D.
4. CONTRACTOR TO COORDINATE THE PRESENCE OF UTILITIES INSPECTOR DURING CORING AND CONNECTIONS TO EXISTING MANHOLES.

REV	DATE	DESCRIPTION

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CONSTRUCTION DETAILS
MANHOLE AND PIPE INSTALLATION

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: Construction Details.dwg

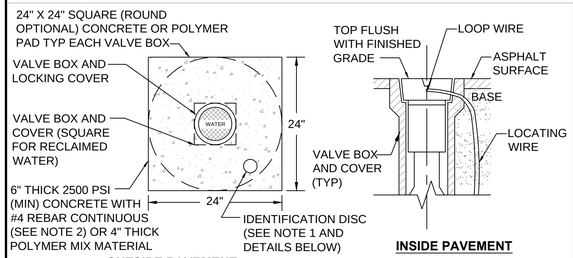
SCALE: NONE
DRAWING NO. : D110
SHEET: 24 OF 40

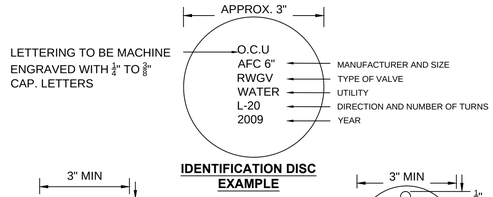
BID DRAWING

DATE: February 11, 2011

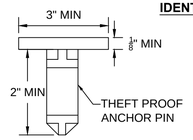
VALVE BOX PAD

FIGURE A112



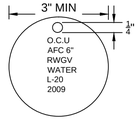


IDENTIFICATION DISC EXAMPLE



DISC TO BE EMBEDDED IN PAD

OUTSIDE PAVEMENT



DISC TO BE HANGING IN THE BOX ANCHORED TO THE LOCATING WIRE.

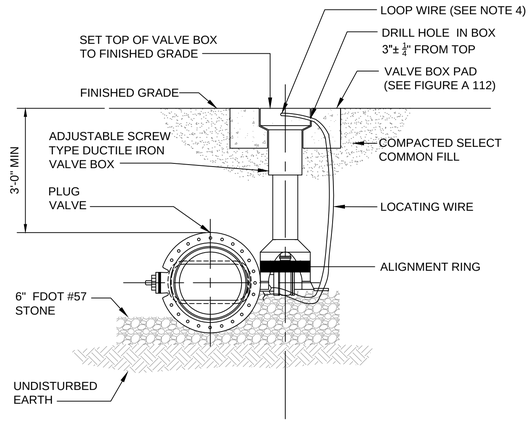
INSIDE PAVEMENT

NOTES:
1. BRONZE (OR STAINLESS STEEL) IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES, EXCEPT HYDRANT VALVES.
2. IN LIEU OF PRECAST CONCRETE PAD, A 6" THICK X 24" (ROUND OR SQUARE) POURED CONCRETE PAD WITH TWO #4 REBAR AROUND PERIMETER MAY BE USED.

DATE: February 11, 2011

PLUG VALVE AND BOX WASTEWATER

FIGURE A109

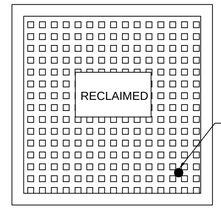


NOTES:
1. PVC PIPE OR DUCTILE IRON PIPE EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
2. THE VALVE ACTUATING NUT SHALL BE EXTENDED TO BE WITHIN 3' OF FINISHED GRADE.
3. PROVIDE A PLASTIC DEBRIS SHIELD / ALIGNMENT RING WHICH INSTALLS BELOW THE VALVE ACTUATING NUT. THIS SHIELD SHALL CENTER THE RISER PIPE BOX OVER THE ACTUATING NUT AND MINIMIZE INFILTRATION.
4. LOCATING WIRE SHALL BE CONTINUOUS WITH NO SPLICES AND SHALL EXTEND 12" ABOVE TOP OF COLLAR. WIRE SHALL BE COLOR CODED TO MATCH THE UTILITY INSTALLED.
5. FOR NEW CONSTRUCTION, THE VALVE BOX SHALL BE ADJUSTED TO MIDRANGE TO ALLOW FOR FUTURE BOX ADJUSTMENTS.
6. REFER TO FIGURE A111 FOR INSTALLATIONS AT A DEPTH OF 6' OR GREATER.

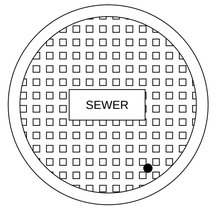
DATE: February 11, 2011

TYPICAL VALVE BOX COVER

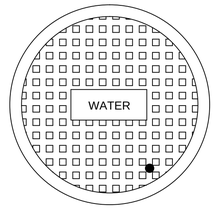
FIGURE A110



RECLAIMED WATER



WASTE WATER



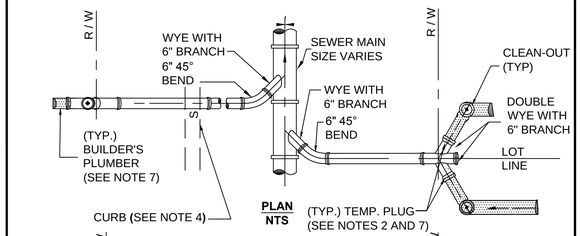
POTABLE WATER

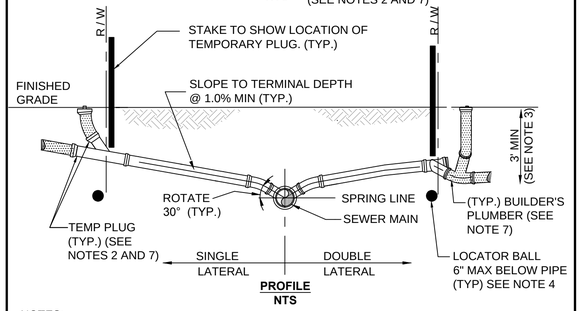
NOTE:
1. LOCKING LIDS ARE REQUIRED ON ALL VALVE BOXES.

DATE: February 11, 2011

SERVICE LATERAL

FIGURE A305





NOTES:
1. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
2. SERVICE LATERAL SHALL BE CAPPED BY DEVELOPER'S SITE-WORK CONTRACTOR.
3. WYE TO BE NO SHALLOWER THAN 3-FEET AND NO DEEPER THAN 5-FEET.
4. LOCATOR BALLS TO BE INSTALLED BY DEVELOPER'S SITE-WORK CONTRACTOR, ONE PER SERVICE.
5. ALL FITTINGS SHOWN ARE TO BE INSTALLED.
6. SERVICE CONNECTIONS SHALL BE PERMANENTLY MARKED BY CUTTING AN "S" IN THE CURB DIRECTLY OVER THE LATERAL.
7. BUILDER'S PLUMBER WILL REMOVE PLUG, INSTALL CLEANOUT, AND CONNECT SERVICE LATERAL TO HOUSE.

REV	DATE	DESCRIPTION

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CONSTRUCTION DETAILS
MANHOLE AND PIPE INSTALLATION

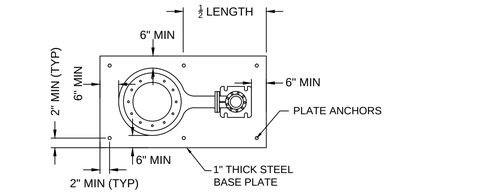
SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: Construction Details.dwg

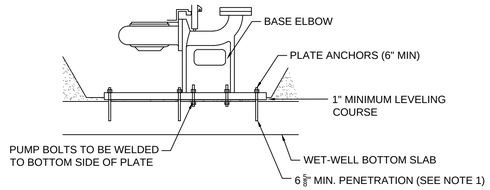
SCALE: NONE
DRAWING NO. :
D120
SHEET: 25 OF 40

BID DRAWING

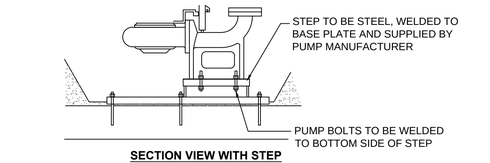
DATE: February 11, 2011 **PUMP BASE PLATE** **FIGURE A403-4**



PLAN VIEW



SECTION VIEW IF NO STEP REQUIRED

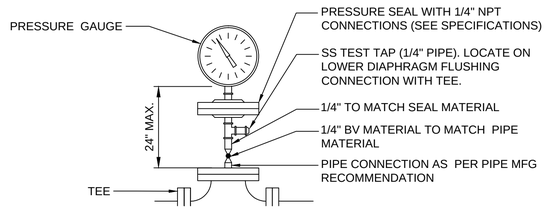


SECTION VIEW WITH STEP

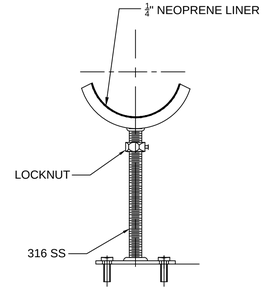
NOTES:

1. PLATE ANCHORS TO BE 6" MIN 3/4" DIAMETER, WITH EPOXY ADHESIVE CAPSULE PROVIDING A MINIMUM EMBEDMENT DEPTH OF 6 5/8".
2. NO EXPANSION ANCHORS ALLOWED
3. PLATE SIZE: 6" LARGER THAN BASE ELBOW & PUMP VOLUTE TYP. ALL AROUND. BASE PLATE SHALL BE TRIMMED TO FIT, IF REQUIRED.
4. BASE ELBOW BOLTS, PLATE ANCHORS AND STUDS TO BE STEEL (MIN ASTM A307 GRADE B AND A563).

DATE: February 11, 2011 **DUPLEX PIPE SUPPORT AND GAUGE DIAPHRAGM ASSEMBLY** **FIGURE A402-6**



GAUGE / DIAPHRAGM ASSEMBLY
NTS



PIPE SUPPORT
NTS

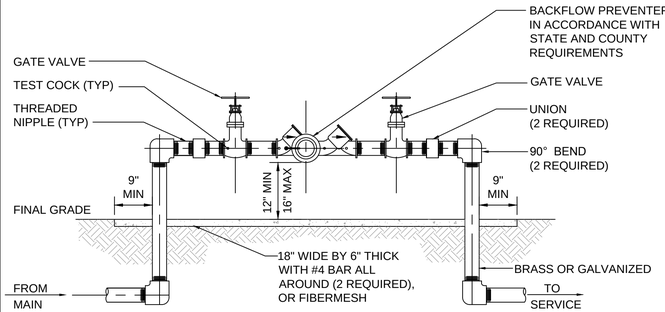
DATE: February 11, 2011 **SEPARATION REQUIREMENTS FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS** **FIGURE A116**

HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS								
PROPOSED UTILITY	POTABLE WATER		RECLAIMED WATER		WASTEWATER (GRAVITY & FM)		STORM SEWER	
	HORIZ	VERT	HORIZ	VERT	HORIZ	VERT	HORIZ	VERT
POTABLE WATER	3' NOTE 1	12"	3' NOTE 1 & 3	12" NOTE 3	6' NOTE 3	12" NOTE 3	3' NOTE 1 & 3	12"/18" NOTE 2 & 3
RECLAIMED WATER	3' NOTE 1 & 3	12" NOTE 3	3' NOTE 1	12"	3' NOTE 1	12"	3' NOTE 1	12"/18" NOTE 2
WASTEWATER (GRAVITY AND FM)	6' NOTE 3	12" NOTE 3	3' NOTE 1	12"	3' NOTE 1	12"	3' NOTE 1	12"/18" NOTE 2
RIGHT OF WAY	3' NOTE 1	N/A	3' NOTE 1	N/A	3' NOTE 1	N/A	N/A	N/A

NOTES:

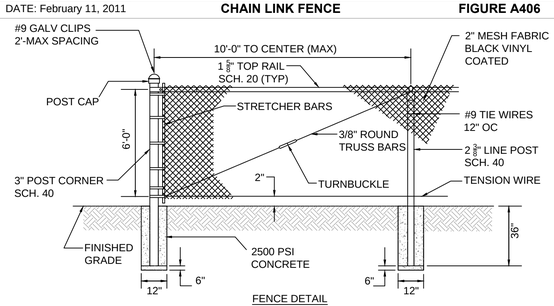
1. THIS SEPARATION REQUIREMENT IS TO PROVIDE ACCESSIBILITY FOR CONSTRUCTION AND MAINTENANCE. THREE FEET OF HORIZONTAL SEPARATION IS THE MINIMUM FOR PIPES WITH THREE FEET OF COVER. FOR PIPES INSTALLED AT GREATER DEPTHS, PROVIDE AN ADDITIONAL FOOT OF SEPARATION FOR EACH ADDITIONAL FOOT OF DEPTH.
2. THE 18-INCH SEPARATION REQUIREMENT APPLIES WHEN THE STORM PIPE CROSSES ABOVE THE OCU MAIN, AND WHEN THE STORM PIPE HAS A DIAMETER EQUAL TO OR GREATER THAN 24 INCHES. OTHERWISE, THE REQUIRED SEPARATION IS 12 INCHES.
3. THIS SEPARATION REQUIREMENT COMPLIES WITH MINIMUM FDEP SEPARATION REQUIREMENTS OUTLINED IN 62-555.314, FAC. VARIANCES FROM THE FDEP REQUIREMENTS MUST COMPLY WITH 62-555.314(5), FAC AND MUST BE APPROVED INDIVIDUALLY BY BOTH FDEP AND OCU.
4. DISTANCES GIVEN ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.
5. NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF SANITARY OR STORM WATER MANHOLE OR STRUCTURE.

DATE: February 11, 2011 **REDUCED PRESSURE BACKFLOW PREVENTER, 2 INCH AND SMALLER** **FIGURE A409**

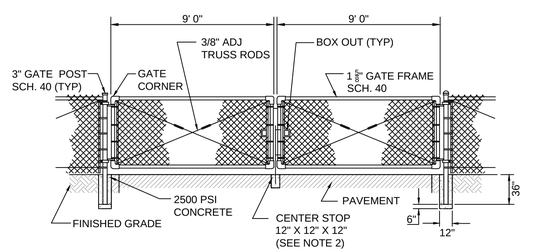


NOTES:
1. ALL PIPE FITTINGS SHALL BE BRASS.
2. PAINTING IN ACCORDANCE WITH THIS MANUAL.

DATE: February 11, 2011 **CHAIN LINK FENCE** **FIGURE A406**



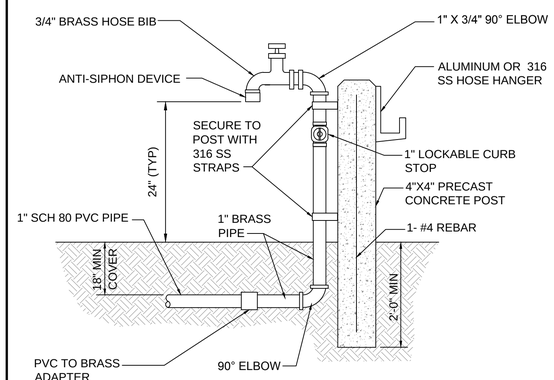
FENCE DETAIL



DOUBLE SWING GATE DETAIL

NOTES:
1. TRUSS BARS ARE REQUIRED FOR EACH GATE SECTION AND THE FIRST SPAN ON EACH SIDE OF A CORNER POST ONLY.
2. PROVIDE CHAIN AND LOCK FOR SECURING GATE.
3. FENCING AND POSTS SHALL BE BLACK, VINYL CLAD.

DATE: February 11, 2011 **HOSE BIBB** **FIGURE A408**



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CONSTRUCTION DETAILS
WET WELL INSTALLATION

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CADD FILE: Construction Details.dwg

SCALE: NONE
DRAWING NO. : D130
SHEET: 26 OF 40

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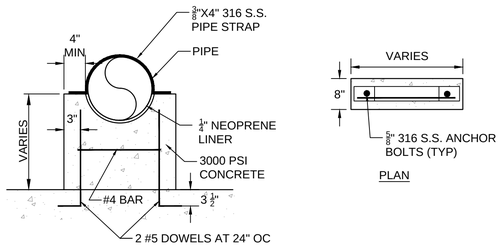
DATE: February 11, 2011

CONCRETE PIPE SUPPORT AND GAUGE

FIGURE A403-6



ABOVE GROUND CONCRETE PIPE SUPPORT

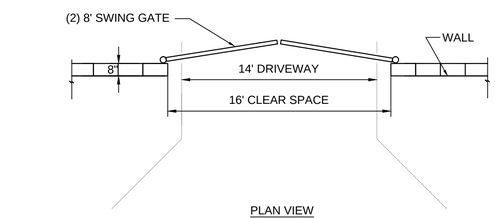
N.T.S.

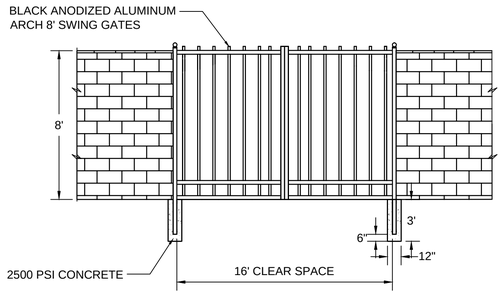
PIPE SIZE	DIM. "A"	DIM. "B"
3/4"	2"	2"
1"	2-1/2"	2-1/2"
1-1/2"	4"	4"
2"	4"	4"
2-1/2"	4"	4"
3"	5"	5"
4"	6"	2-1/2"
6"	10"	2-1/2"
8"	12"	2-3/4"
10"	14"	3"
12"	16"	3-1/2"
14"	18"	3-1/2"
16"	20"	3-3/4"
18"	24"	3-3/4"
20"	24"	3-3/4"
24"	30"	4"
30"	36"	4-1/2"
36"	42"	5"
42"	48"	5-1/2"
48"	54"	5-3/4"
54"	60"	6"

DATE: February 11, 2011

CANTILEVER SWING GATE

FIGURE A407-2



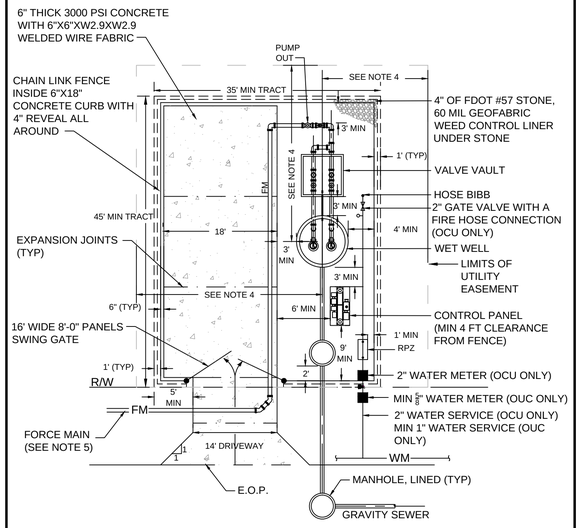


NOTES:
1. GATE POSTS SHALL NOT BE ATTACHED TO THE WALL AND SHALL BE PLACED ON THE INTERIOR SIDE OF THE WALL.

DATE: July 16, 2014

DUPLEX PUMP STATION SITE PLAN

FIGURE A402-5

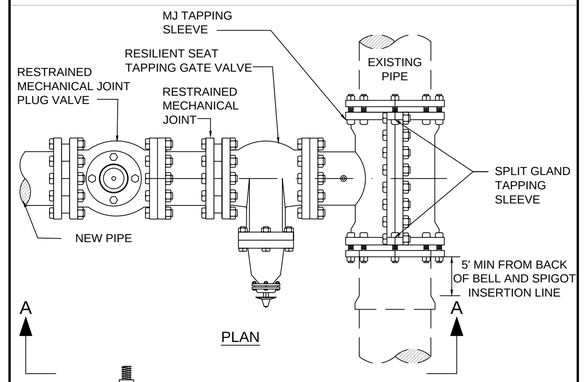


NOTES:
1. THIS DRAWING IS PROVIDED AS REFERENCE ONLY. DESIGN ENGINEER SHALL PROVIDE A SITE SPECIFIC DRAWING TO A SCALE OF 1"=10'.
2. FOR NON-RESIDENTIAL ROADS, DISTANCE BETWEEN EDGE OF PAVEMENT AND GATE SHALL BE 20' MINIMUM.
3. PUMP STATION TRACT (INCLUDING DRIVEWAY) AND UTILITY EASEMENT SHALL BE DEDICATED TO ORANGE COUNTY UTILITIES.
4. THIS DIMENSION, AS MEASURED FROM THE CENTER OF THE WET WELL TO THE PUBLIC UTILITY EASEMENT LIMIT, SHALL BE EQUAL TO OR GREATER THAN THE DEPTH OF THE WET WELL.
5. CONTROL PANEL DOOR HINGES TO BE LOCATED ON THE SIDE OF THE PANEL FARTHEST FROM THE WELL.
6. DRIVEWAY SUBGRADE TO BE 8" THICK. SUBGRADE TO BE COMPACTED TO A MINIMUM DENSITY 98% OF THE MAX DENSITY AS DETERMINED BY ASTM DI557.
7. THE BOUNDARY OF ALL NEW PUMP STATION TRACTS SHALL BE LOCATED A MINIMUM OF 50 FEET AWAY FROM ANY SINGLE FAMILY RESIDENTIAL LOT INCLUDING TOWNHOMES.

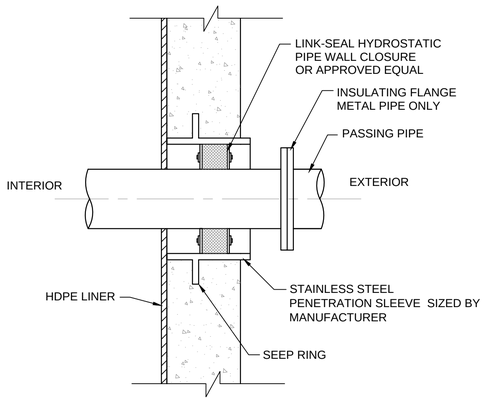
DATE: February 11, 2011

MJ TAPPING SLEEVE AND GATE VALVE WITH PLUG VALVE FOR WASTEWATER

FIGURE A121-2

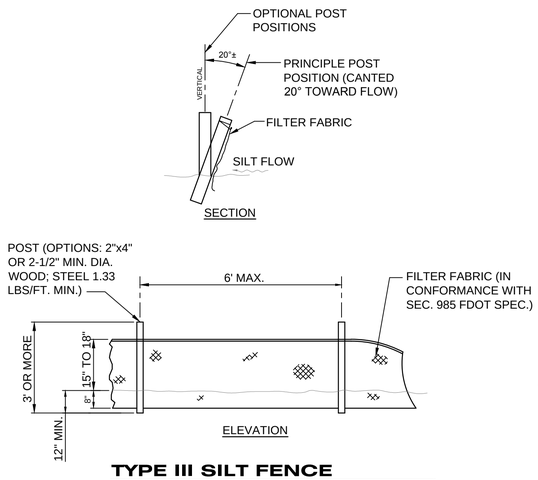


NOTES:
1. PLUG VALVES GREATER THAN 4" SHALL BE GEAR ACTUATED.
2. PLUG VALVE TO BE INSTALLED VERTICALLY, AND TAPPING GATE VALVE TO BE INSTALLED HORIZONTALLY AND ABANDONED IN THE OPEN POSITION.

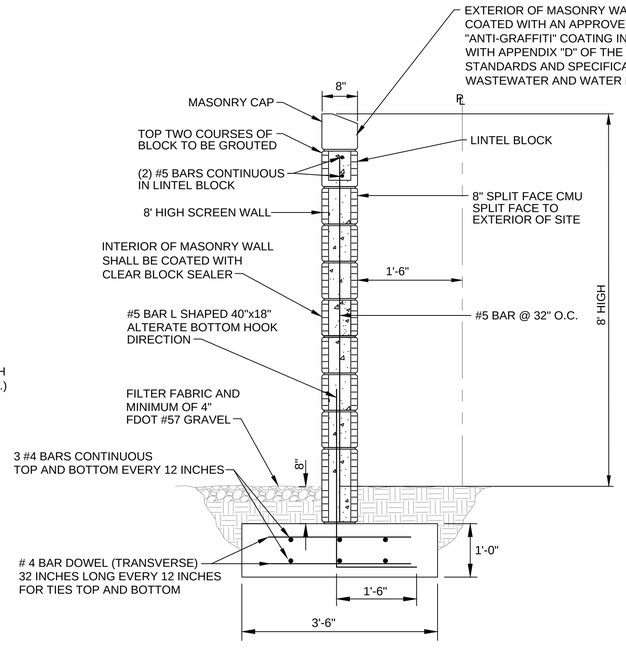


WALL PENETRATION DETAIL FOR PUMP STATION WET WELL

NTS

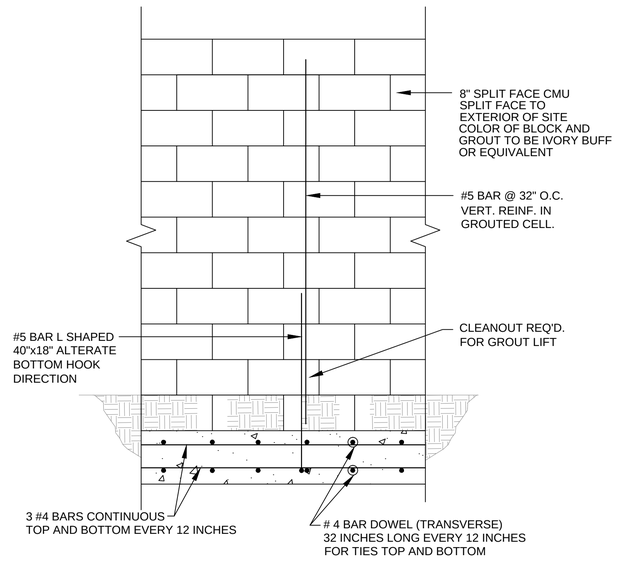


TYPE III SILT FENCE



PERIMETER WALL DETAIL

NOT TO SCALE



REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

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ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION

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Arch. Lic. No. AA2600926
Lndscp. Lic. No. LC0000298
1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

CONSTRUCTION DETAILS
WET WELL INSTALLATION

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

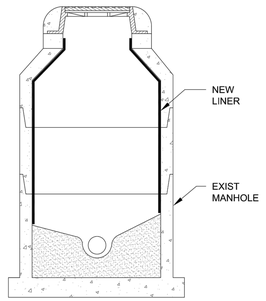
OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: .Construction Details.dwg

SCALE: NONE
DRAWING NO. : D140
SHEET: 27 OF 40

BID DRAWING

APPENDIX A | STANDARD DRAWINGS | GRAVITY R/R

DATE: August 2012 | **MANHOLE LINING** | **FIGURE A603**

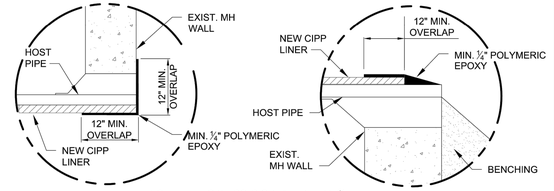


NOTES:

1. LINERS SHALL BE FIBERGLASS, HDPE, OR REINFORCED PLASTIC AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATIONS.
2. PREPARE STRUCTURE INTERIOR, PRESSURE WASH OR SANDBLAST TO REMOVE ALL SCALE, LOOSE MATERIAL, GREASE AND SLUDGE BUILD UP.
3. ACTIVE LEAKS SHALL BE REPAIRED WITH HYDRAULIC MORTAR. ALL OTHER STRUCTURAL REPAIRS DEEMED NECESSARY SHALL BE PERFORMED.

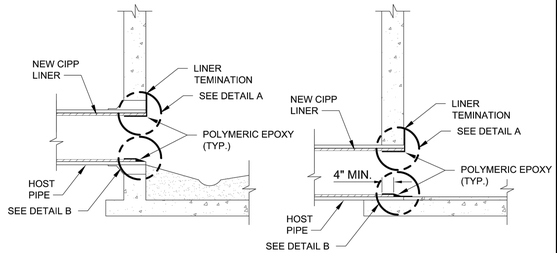
APPENDIX A | STANDARD DRAWINGS | GRAVITY R/R

DATE: Augsut 2012 | **LINER TERMINATION AT MANHOLE** | **FIGURE A604**



NOTE: IF THICKNESS IS GREATER THAN ½", CONTRACTOR MAY USE RAPID SET MOTAR w/ MIN. ¼" THICK POLYMERIC EPOXY TOP COAT.

DETAIL A - AT MH OPENING | **DETAIL B - IN PIPE OR AT MH INVERT**



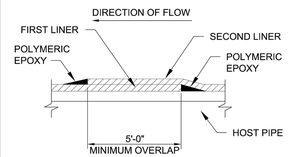
TYPICAL CIPP LINER END

NOTES:

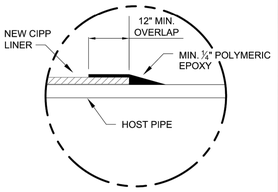
1. CONTRACTOR SHALL REPAIR DETERIORATION ON INSIDE CIRCUMFERENCE OF PIPE WALL TO FORM A SMOOTH SURFACE FOR THE END OF CIPP LINER.
2. IF POLYETHYLENE IS USED FOR INTERIOR OF LINING, CONTRACTOR SHALL ABRADE THE POLYETHYLENE LAYER PRIOR TO APPLYING THE EPOXY.
3. COMPLETE MANHOLE REHABILITATION PRIOR TO PIPE LINING.

APPENDIX A | STANDARD DRAWINGS | GRAVITY R/R

DATE: August 2012 | **LINER TERMINATION IN SANITARY SEWER** | **FIGURE A605**

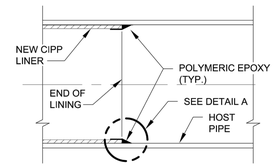


TYPICAL CIPP LINER OVERLAP



NOTE: IF THICKNESS IS GREATER THAN ½", CONTRACTOR MAY USE RAPID SET MOTAR w/ MIN. ¼" THICK POLYMERIC EPOXY TOP COAT.

DETAIL B - IN PIPE OR AT MH INVERT



TYPICAL CIPP LINER END

NOTES:

1. CONTRACTOR SHALL REPAIR DETERIORATION ON INSIDE CIRCUMFERENCE OF PIPE WALL TO FORM A SMOOTH SURFACE FOR THE END OF CIPP LINER.
2. POLYMERIC EPOXY SHALL BE RAVEN 405 OR AQUATAPOXY A-6 EPOXY MORTAR SYSTEMS, BY RAVEN LINING SYSTEMS OR APPROVED EQUIVALENT.
3. IF POLYETHYLENE IS USED FOR INTERIOR OF LINING, CONTRACTOR SHALL ABRADE THE POLYETHYLENE LAYER PRIOR TO APPLYING THE EPOXY.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

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Licenses:
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Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Lndscp. Lic. No. LC0000298

CONSTRUCTION DETAILS
MANHOLE AND PIPE INSTALLATION

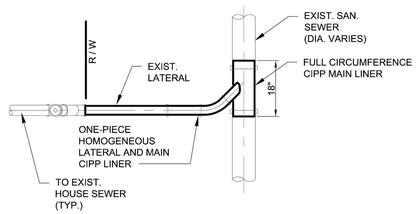
SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: .Construction Details.dwg

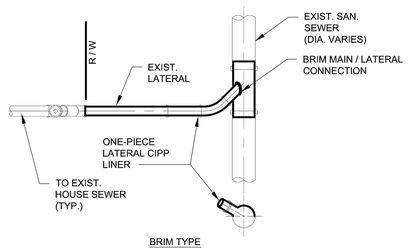
SCALE: NONE
DRAWING NO. :
D150
SHEET: 28 OF 40

BID DRAWING

APPENDIX A	STANDARD DRAWINGS	GRAVITY R/R
DATE: August 2012	**SERVICE LATERAL LINER**	**FIGURE A606**

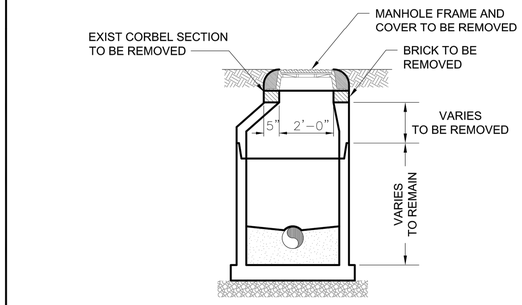


T-LINER
NTS

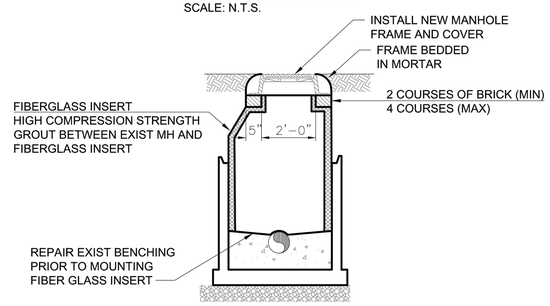


BRIM TYPE
NTS

APPENDIX A	STANDARD DRAWINGS	GRAVITY R/R
DATE: August 2012	**FIBERGLASS MANHOLE INSERT SYSTEM**	**FIGURE A608**



EXIST MANHOLE DETAIL
SCALE: N.T.S.



REHABILITATION DETAIL
SCALE: N.T.S.

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
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(IF NOT SCALE ACCORDINGLY)

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Lndscp. Lic. No. LC0000298

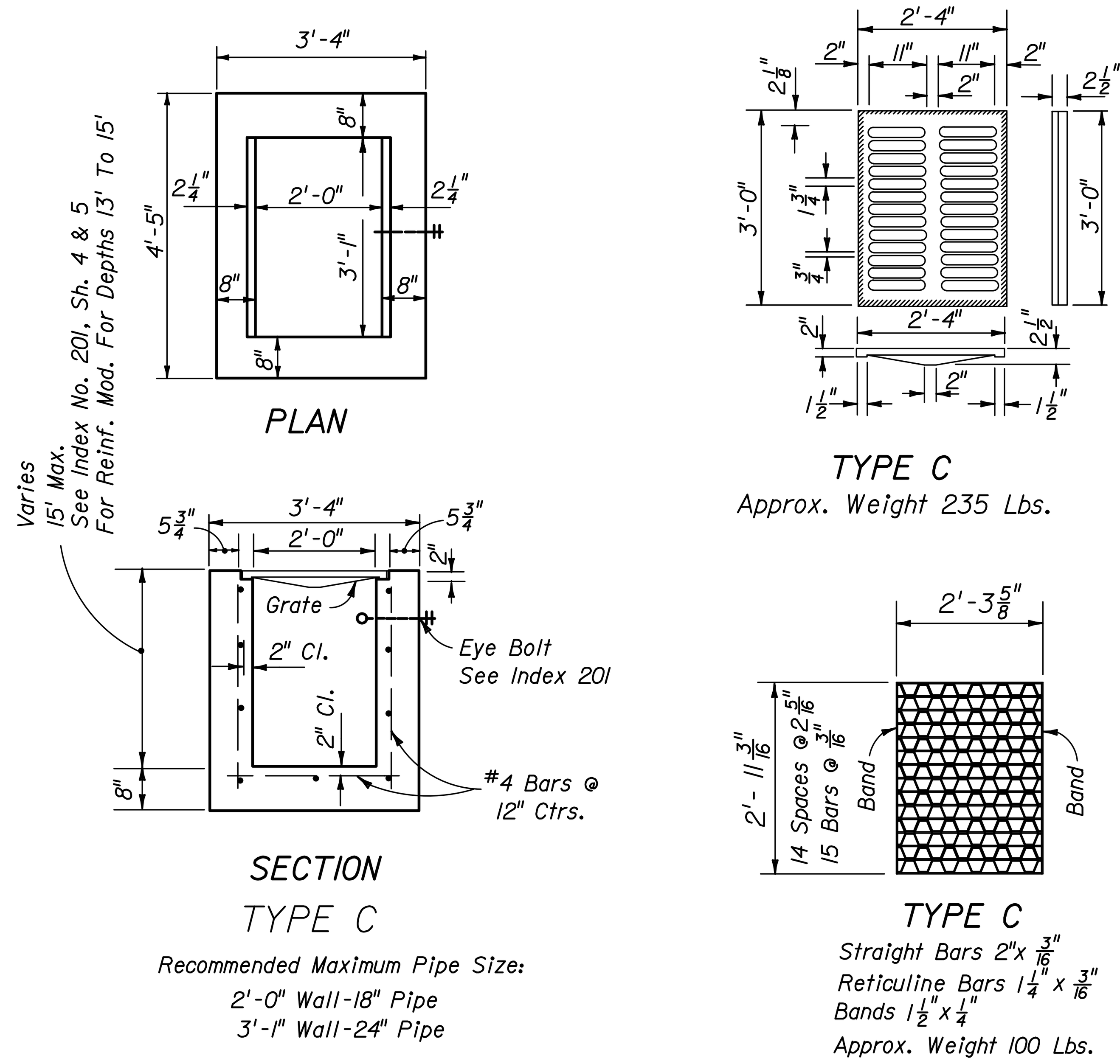
CONSTRUCTION DETAILS
MANHOLE AND PIPE INSTALLATION

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: .Construction Details.dwg

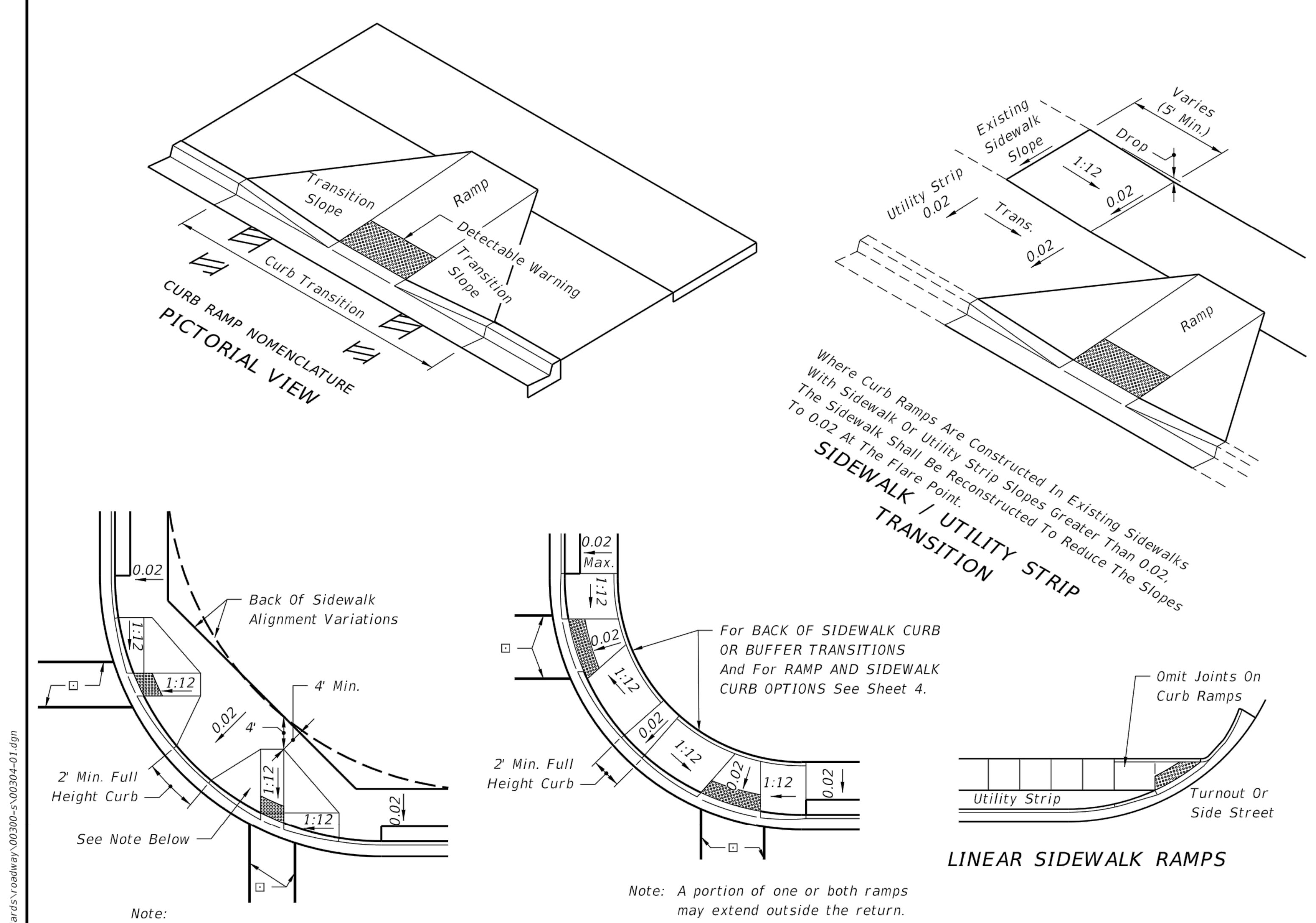
SCALE: NONE
DRAWING NO. :
D160
SHEET: 29 OF 40

BID DRAWING



FDOT TYPE 'C' INLET

NOT TO SCALE



Note:
When crosswalk markings are required, ramp runs must fall within crosswalk limits and where practical, be parallel with the projected crosswalk alignment. The bottom of the ramp beyond the curb line shall have a clear space 48" minimum within the markings of a marked crosswalk. If no crosswalk markings are present, the bottom of the ramp beyond the curb ramp shall have a clear space 48" minimum outside active traffic lanes.

⊡ Crosswalk widths and configuration vary; must conform to Index No. 17344 and 17346.

Note: A portion of one or both ramps may extend outside the return.

TYPICAL PLACEMENT OF PUBLIC SIDEWALK CURB RAMPS AT CURBED RETURNS

GENERAL NOTES

1. Public sidewalk curb ramps shall be constructed in the public right of way at locations that will provide continuous unobstructed pedestrian circulation paths to pedestrian areas, elements and facilities in the public right of way and to accessible pedestrian routes on adjacent sites. Curbed facilities with sidewalks and those without sidewalks are to have curb ramps constructed at all street intersections and at turnouts that have curbed returns. Partial curb returns shall extend to the limit prescribed by Index No. 515 to accommodate curb ramps. Ramps constructed at locations without sidewalks shall have a landing constructed at the top of each ramp, see Sheet 5.

2. The location and orientation of curb ramps shall be as shown in the plans.

3. Curb ramp running slopes at unrestrained sites shall not be steeper than 1:12 and cross slope shall be 0.02 or flatter. Transition slopes shall not be steeper than 1:12.

   When altering existing pedestrian facilities where existing site development precludes the accommodation of a ramp slope of 1:12, a running slope between 1:12 and 1:10 is permitted for a rise of 6" maximum and a running slope of between 1:10 and 1:8 is permitted for a rise of 3" maximum. Where compliance with the requirements for cross slope cannot be fully met, the minimum feasible cross slope shall be provided.

   Ramp running slope is not required to exceed 8' in length, except at sites where the plans specify a greater length.

4. If a curb ramp is located where pedestrians must walk across the ramp, then the walk shall have transition slopes to the ramp; the maximum slope of the transitions shall be 1:12. Ramps with curb returns may be used at locations where other improvements provide guidance away from that portion of curb perpendicular to the sidewalk; improvements for guidance are not required at curb ramps for linear pedestrian traffic.

5. Curb ramp detectable warning surfaces shall extend the full width of the ramp and 24" deep. Detectable warning surfaces shall be constructed in accordance with Specification 527. See Sheet 6 for detectable warning layouts. Transition slopes are not to have detectable warnings. Detectable warnings are required on sidewalks at intersecting roads, streets and railroads. For requirements for detectable warnings on sidewalks at intersecting driveways, see Index 310.

6. Where a curb ramp is constructed within existing curb, curb and gutter and/or sidewalk, the existing curb or curb and gutter shall be removed to the nearest joint beyond the curb transitions or to the extent that no remaining section of curb or curb and gutter is less than 5' long. The existing sidewalk shall be removed to the nearest joint beyond the transition slope or walk around or to the extent that no remaining section of sidewalk is less than 5' long. For details of Concrete Sidewalk See Index 310.

7. Alpha-numeric identifications are for reference (plans, permits, etc.).

8. Public sidewalk curb ramps are to be paid for as follows:

   Ramps, reconstructed sidewalks, walk around sidewalks, sidewalk landings and sidewalk curbs are to be paid for under the contract unit price for Sidewalk Concrete, (__" Thick), SY. Curb transitions and reconstructed curbs are to be paid for under the contract unit price for the parent curb, i.e., Concrete Curb (Type __), LF or Concrete Curb and Gutter (Type __), LF.

   When a separate pay item for the removal and disposal of existing curb, curb and gutter, and/or sidewalk is not provided in the plans, the cost of removal and disposal of these features shall be included in the contract unit price for new curb, curb and gutter and/or sidewalk respectively.

9. Acceptance Criteria for Detectable Warnings:

   a. The ramp detectable warning surface shall be complete and uniform in color and texture
   b. 90% of the individual truncated domes must comply with the design criteria
   c. There may be no more than 4 non-complying domes in any one square foot of surface
   d. No two adjacent domes may be non-compliant
   e. Surface may not deviate more than 0.10" from a true plane

10. All sidewalk surfaces, ramp surfaces, and landings with a cross slope shown in this Index to be 0.02 shall be 0.02 maximum. All ramp surfaces and ramp transition slopes with a slope shown in this Index to be 1:12 shall be 1:12 maximum.

LAST REVISION	REVISION	DESCRIPTION:	FDOT DESIGN STANDARDS 2013	PUBLIC SIDEWALK CURB RAMPS	INDEX NO.	SHEET NO.
01/01/11					304	1

6/28/2012 9:44:04 AM rd960rh C:\d\projects\standards\roadway\00300-s\00304-01.dgn

REV	DATE	DESCRIPTION

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CONSTRUCTION DETAILS

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325	SCALE: NONE
DESIGNED BY: SAB	DRAWING NO.:
DRAWN BY: DGH/GCM	D170
CHECKED BY: SAB/DEM	
CADD FILE: .Construction Details.dwg	SHEET: 30 OF 40

BID DRAWING

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
- (FE) FLOW ELEMENT
- (LE) LEVEL ELEMENT
- (LS) LIMIT SWITCH
- (PS) PRESSURE SWITCH
- (SV) SOLENOID VALVE
- (LIT) LEVEL INDICATING TRANSMITTER
- (LLS) LIQUID LEVEL SWITCH
- (FS) FLOAT SWITCH
- [FIT] FLOW INDICATING TRANSMITTER

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.
- 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

RISER & CONTROL DIAGRAM SYMBOLS

- NORMALLY OPEN, TIMED TO CLOSE CONTACT
- NORMALLY CLOSED, TIMED TO OPEN CONTACT
- NORMALLY CLOSED, TIMED TO CLOSE CONTACT
- NORMALLY OPEN, TIMED TO OPEN CONTACT
- (LS) LIMIT 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
- MINI-POWER ZONE

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
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
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
LF	LINEAR FEET
LTG	LIGHTING
MAX	MAXIMUM
MB	MOTOR BREAKER
MCB	MAIN CIRCUIT BREAKER
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
OH	OVERHEAD
OL	OVERLOAD HEATER
P	POLE
PA	POWER AVAILABLE LIGHT
PAA	PUMP AUTOMATIC ALTERNATOR
PCP	PUMP CONTROL PANEL
PEF	PROGRESS ENERGY OF FLORIDA
PL	PILOT LIGHT
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
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
W	WATT
W/	WITH
WP	WEATHERPROOF
ø	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 NATIONAL ELECTRICAL CODE, ORANGE COUNTY 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. ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C. OR LOCAL CODES. ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250 OF THE NATIONAL ELECTRIC CODE.
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 FULLY OPERATIVE AND ACCEPTED 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 NATIONAL ELECTRIC CODE AND THE 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/ TYPEWRITTEN 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 MECHANICAL DRAWINGS & THE APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION 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.

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FAX: (407) 745-5603
C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT FLORIDA
ORANGE COUNTY UTILITIES DEPARTMENT
ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825

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Arch. Lic. No. AA2600926
Lndscp. Lic. No. LC0000298
1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

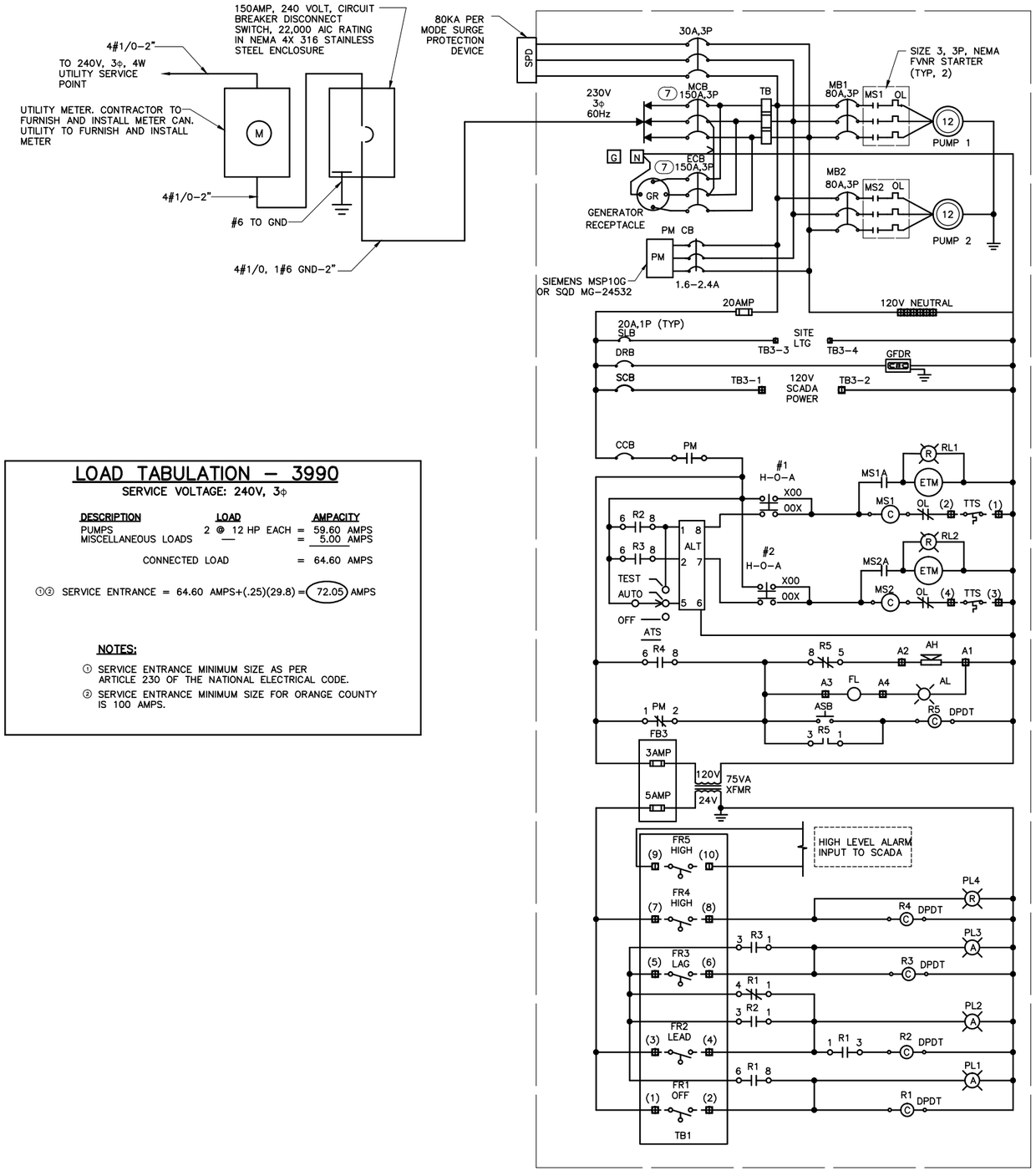
ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS

LILLIAN M. REYES
PROFESSIONAL ENGINEER
FLORIDA LICENSE #50780

OCU FILE NO.: 74325
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: LMR
CADD FILE: E-001 NOTES

SCALE: AS NOTED:
DRAWING NO.: E-001
SHEET: 31 OF 40

PUMP STATION #3990
750 ARNING DRIVE



LOAD TABULATION – 3990

SERVICE VOLTAGE: 240V, 3φ

DESCRIPTION	LOAD	AMPACITY
PUMPS	2 @ 12 HP EACH	= 59.60 AMPS
MISCELLANEOUS LOADS	—	= 5.00 AMPS
CONNECTED LOAD		= 64.60 AMPS

①② SERVICE ENTRANCE = 64.60 AMPS+(.25)(29.8) = (72.05) AMPS

NOTES:

① SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 230 OF THE NATIONAL ELECTRICAL CODE.

② SERVICE ENTRANCE MINIMUM SIZE FOR ORANGE COUNTY IS 100 AMPS.

LEGEND

AH – ALARM HORN
AL – ALARM LIGHT
ALT – ALTERNATOR
ASB – ALARM SILENCE BUTTON
ATS – ALTERNATOR TEST SWITCH
CB – CIRCUIT BREAKER
CCB – CONTROL CIRCUIT BREAKER
DPDT – DOUBLE POLE DOUBLE THROW
DRB – DUPLEX RECEPTACLE BREAKER
ECB – EMERGENCY CIRCUIT BREAKER
ETM – ELAPSED TIME METER
F – FUSE
FB – FUSE BLOCK
FL – FLASHER
FR – FLOAT REGULATOR
GFDR – GROUND FAULT DUPLEX RECEPTACLE
GR – GENERATOR RECEPTACLE
HOA – HAND-OFF-AUTO SELECTOR SWITCH
MB – MOTOR BREAKER
MCB – MAIN CIRCUIT BREAKER
MS – MOTOR STARTER
OL – OVERLOAD
PL – PILOT LIGHT
PM – PHASE MONITOR
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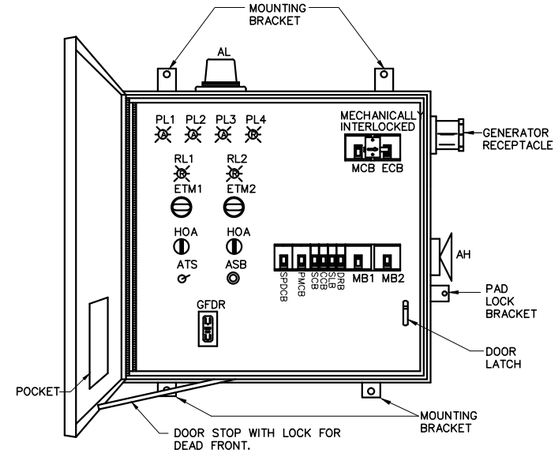
RL – RUNNING LIGHT
SCB – SCADA CIRCUIT BREAKER
SLB – SITE LIGHT BREAKER
TB – TERMINAL BLOCK
TTS – THERMAL TERMINAL STRIP
TVSS – TRANSIENT VOLTAGE SURGE SUPPRESOR
VA – VOLT AMPERE
XFMR – TRANSFORMER



NOTES:

1. DEADFRONT LAYOUT NEMA TYPE 3R S.S. ENCLOSURE W/CONTINUOUS HINGE. ALL HARDWARE TYPE 316 S.S. TYPICAL, ACTUAL LAYOUT MAY VARY WITH HORSEPOWER
2. THIS CONTROL PANEL, INCLUDING THE GENERATOR RECEPTACLE, SHALL COMPLY WITH THE STANDARD LIST OF COMPONENTS REQUIRED BY ORANGE COUNTY UTILITIES.
3. ALL CONTROL WIRE TO BE #14 AWG MINIMUM.
4. CONTROL PANEL SHALL BE U.L. LISTED AND LABELED.
5. CONTROL PANEL SHALL INCLUDE 30 SPARE TERMINALS (TB2).
6. PHASE MONITOR CIRCUIT BREAKER TO BE SIEMENS P/N: MSP10G, OR SQ-D P/N: MG24532.
7. PROVIDE AUXILLARY FORM "C" CONTACT ON MAIN AND EMERGENCY CIRCUIT BREAKERS IN PUMP CONTROL PANEL.
8. ALL 240V CIRCUIT BREAKERS SHALL BE TYPE "HGL"

DUPLEX CONTROL PANEL ENCLOSURE DEAD FRONT LAYOUT

SCALE: N.T.S.

240V DUPLEX PUMP CONTROL SCHEMATIC

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C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY UTILITIES DEPARTMENT
ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825

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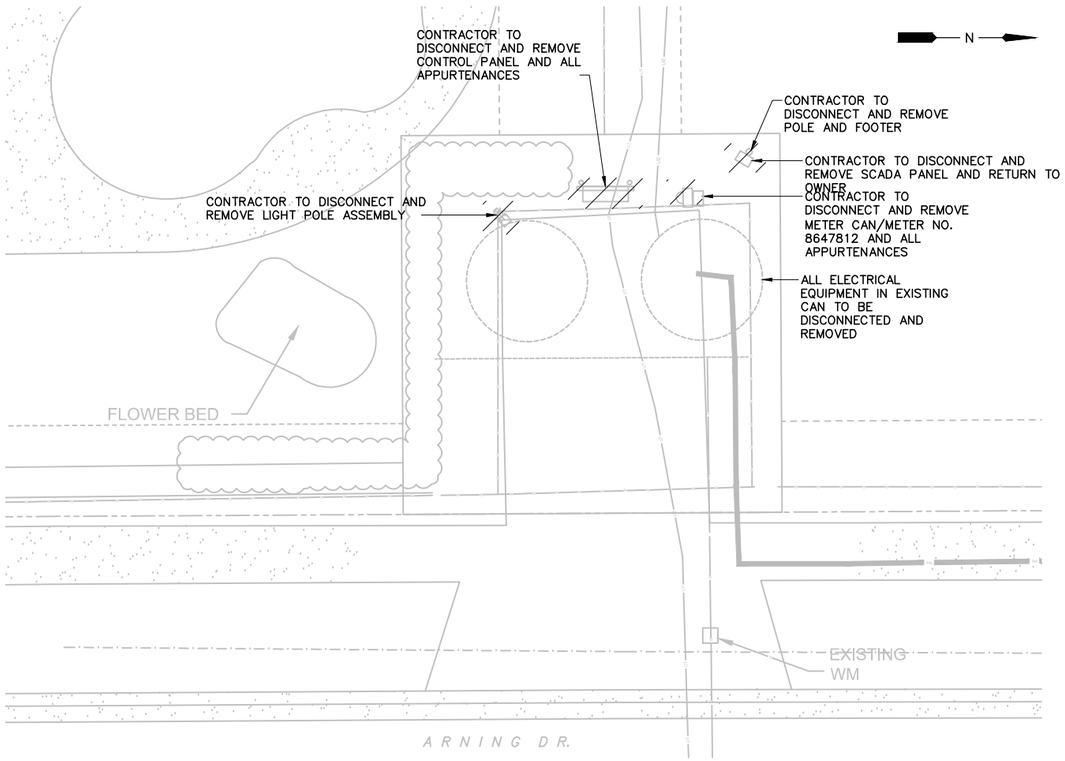
PUMP STATION 3990
DUPLEX PUMP CONTROL PANEL
SINGLE LINE DIAGRAM

LILLIAN M. REYES
PROFESSIONAL ENGINEER
FLORIDA LICENSE #50780

OCU FILE NO.: 74325
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: LMR
CADD FILE: E-100 PS 3990 SLD

SCALE: AS NOTED:
DRAWING NO.: E-100
SHEET: 32 OF 40



PS3990 ELECTRICAL DEMOLITION PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'

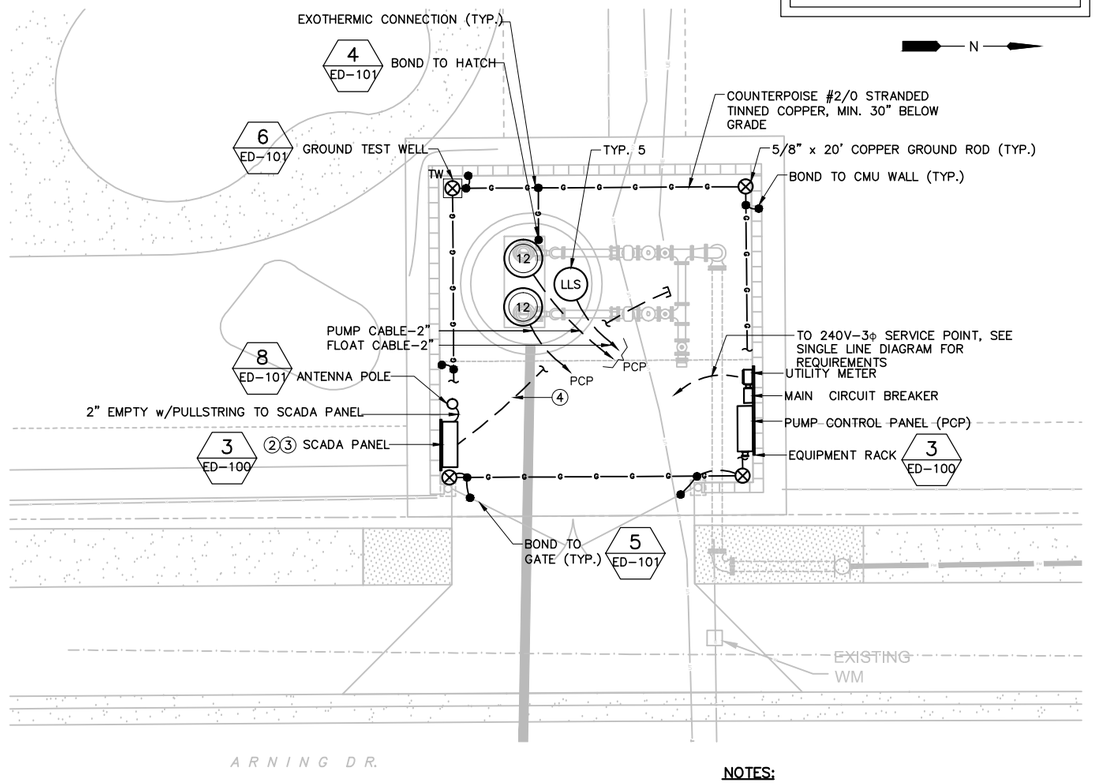
PS3990 FIGURE NO. 1

SCALE: N.T.S.

PS3990 FIGURE NO. 2

SCALE: N.T.S.

PUMP STATION #3990
750 ARNING DRIVE



NOTES:

1. REFER TO SHEET E-001 FOR ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
2. CONTRACTOR TO FURNISH AND INSTALL ANTENNA MAST. OCU TO INSTALL RELOCATED SCADA PANEL, ANTENNA, AND ANTENNA CABLE. ORANGE COUNTY SCADA TO PROVIDE THE INTERCONNECTION BETWEEN THE PCP AND THE SCADA PANEL, INCLUDING ANTENNA CABLE FROM SCADA PANEL TO ANTENNA. CONTRACTOR TO FURNISH AND INSTALL CONDUIT.
3. CONTRACTOR TO FURNISH AND INSTALL THREE (3) 1" CONDUITS WITH PULLSTRING FROM THE SCADA PANEL TO THE PCP.
4. 1" EMPTY WITH PULLSTRING.

PS3990 ELECTRICAL PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'

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LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY UTILITIES DEPARTMENT
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PUMP STATION 3990
ELECTRICAL DEMOLITION
AND ELECTRICAL PLAN

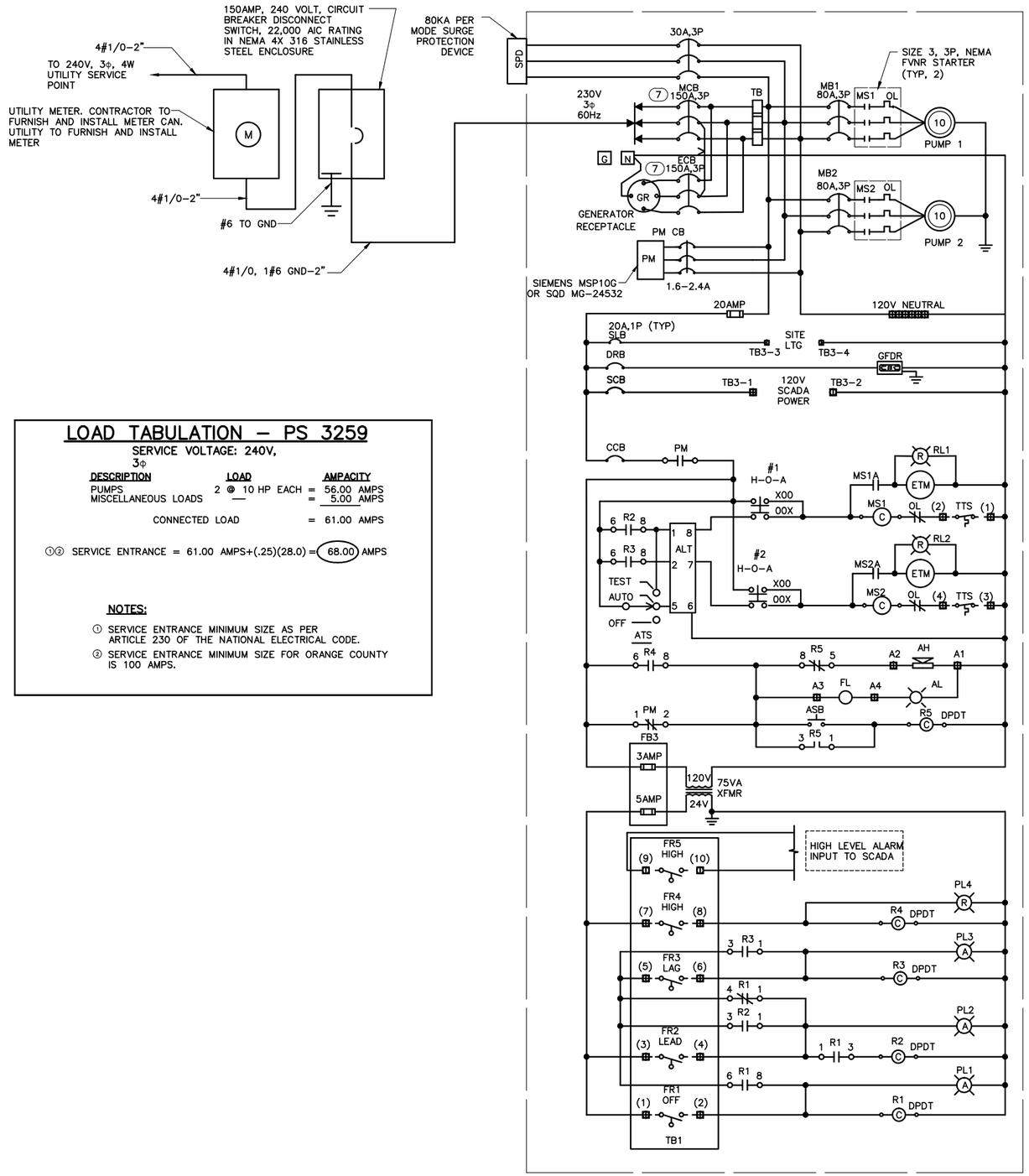
LILLIAN M. REYES
PROFESSIONAL ENGINEER
FLORIDA LICENSE #50780

OCU FILE NO.: 74325
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: LMR
CADD FILE: E-101 PS 3990

SCALE: AS NOTED:
DRAWING NO. : E-101
SHEET: 33 OF 40

BID DRAWING

PUMP STATION #3259
9237 ALLWOOD PLACE



LOAD TABULATION – PS 3259

SERVICE VOLTAGE: 240V, 3φ

DESCRIPTION	LOAD	AMPACITY
PUMPS	2 @ 10 HP EACH	= 56.00 AMPS
MISCELLANEOUS LOADS	—	= 5.00 AMPS
CONNECTED LOAD		= 61.00 AMPS

①② SERVICE ENTRANCE = 61.00 AMPS+(.25)(28.0) = (68.00) AMPS

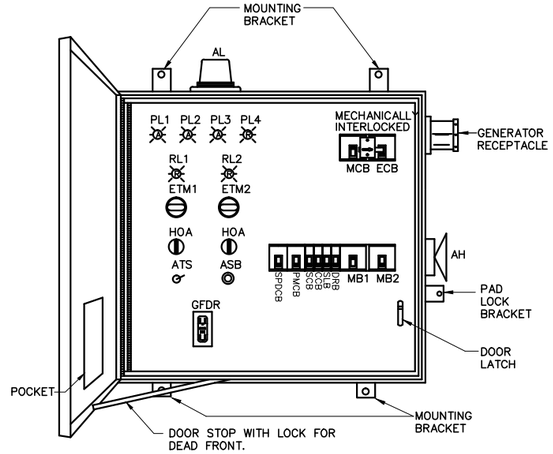
NOTES:

① SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 230 OF THE NATIONAL ELECTRICAL CODE.

② SERVICE ENTRANCE MINIMUM SIZE FOR ORANGE COUNTY IS 100 AMPS.

LEGEND

AH	– ALARM HORN	MB – MOTOR BREAKER
AL	– ALARM LIGHT	MCB – MAIN CIRCUIT BREAKER
ALT	– ALTERNATOR	MS – MOTOR STARTER
ASB	– ALARM SILENCE BUTTON	OL – OVERLOAD
ATS	– ALTERNATOR TEST SWITCH	PL – PILOT LIGHT
CB	– CIRCUIT BREAKER	PM – PHASE MONITOR
CCB	– CONTROL CIRCUIT BREAKER	R – RELAY
DPDT	– DOUBLE POLE DOUBLE THROW	RL – RUNNING LIGHT
DRB	– DUPLEX RECEPTACLE BREAKER	SCB – SCADA CIRCUIT BREAKER
ECB	– EMERGENCY CIRCUIT BREAKER	SLB – SITE LIGHT BREAKER
ETM	– ELAPSED TIME METER	TB – TERMINAL BLOCK
F	– FUSE	TTS – THERMAL TERMINAL STRIP
FB	– FUSE BLOCK	TVSS – TRANSIENT VOLTAGE SURGE SUPPRESOR
FL	– FLASHER	VA – VOLT AMPERE
FR	– FLOAT REGULATOR	XFMR – TRANSFORMER
GFDR	– GROUND FAULT DUPLEX RECEPTACLE	
GR	– GENERATOR RECEPTACLE	
HOA	– HAND-OFF-AUTO SELECTOR SWITCH	



NOTES:

1. DEADFRONT LAYOUT NEMA TYPE 3R S.S. ENCLOSURE W/CONTINUOUS HINGE. ALL HARDWARE TYPE 316 S.S. TYPICAL, ACTUAL LAYOUT MAY VARY WITH HORSEPOWER
2. THIS CONTROL PANEL, INCLUDING THE GENERATOR RECEPTACLE, SHALL COMPLY WITH THE STANDARD LIST OF COMPONENTS REQUIRED BY ORANGE COUNTY UTILITIES.
3. ALL CONTROL WIRE TO BE #14 AWG MINIMUM.
4. CONTROL PANEL SHALL BE U.L. LISTED AND LABELED.
5. CONTROL PANEL SHALL INCLUDE 30 SPARE TERMINALS (TB2).
6. PHASE MONITOR CIRCUIT BREAKER TO BE SIEMENS P/N: MSP10G, OR SQ-D P/N: MG24532.
7. PROVIDE AUXILLARY FORM "C" CONTACT ON MAIN AND EMERGENCY CIRCUIT BREAKERS IN PUMP CONTROL PANEL.
8. ALL 240V CIRCUIT BREAKERS SHALL BE TYPE "HGL"

DUPLEX CONTROL PANEL ENCLOSURE DEAD FRONT LAYOUT

SCALE: N.T.S.

240V DUPLEX PUMP CONTROL SCHEMATIC

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C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
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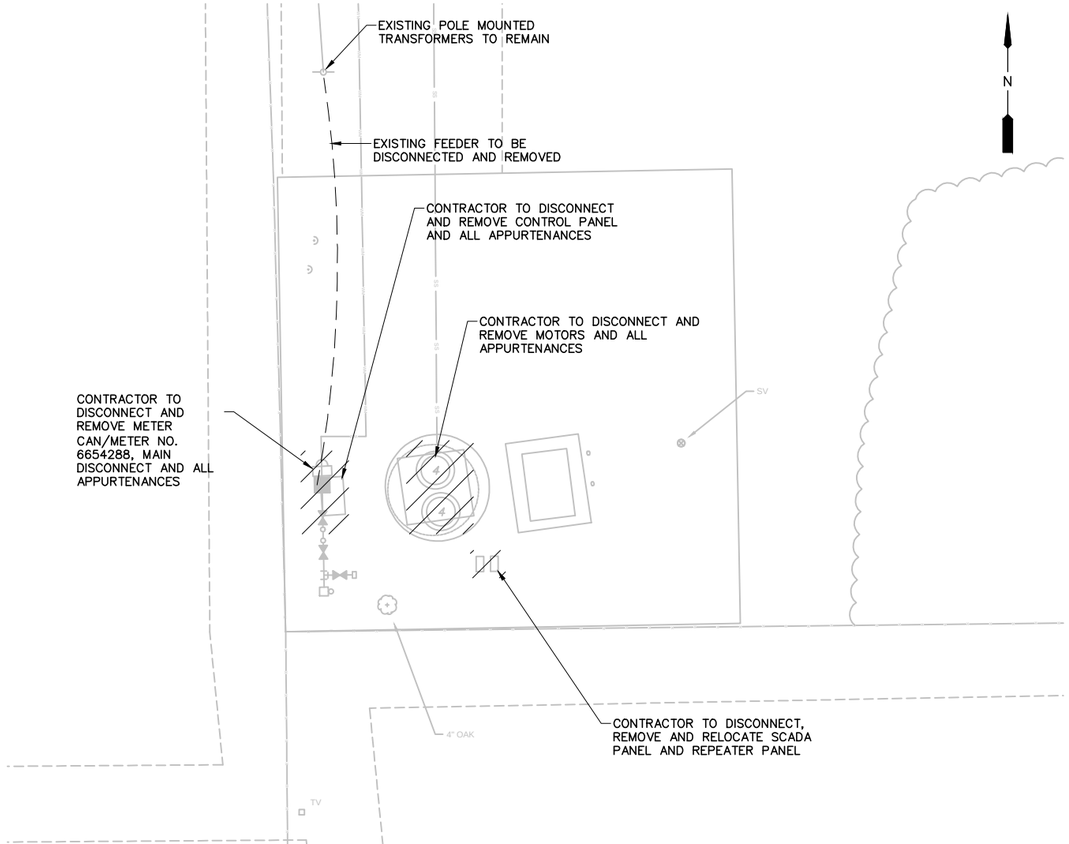
PUMP STATION 3259
DUPLEX PUMP CONTROL PANEL
SINGLE LINE DIAGRAM

LILLIAN M. REYES
PROFESSIONAL ENGINEER
FLORIDA LICENSE #50780

OCU FILE NO.: 74325
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: LMR
CADD FILE: E-200 PS 3259 SLD

SCALE: AS NOTED:
DRAWING NO. : E-200
SHEET: 34 OF 40

BID DRAWING



PS3259 ELECTRICAL DEMOLITION PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'

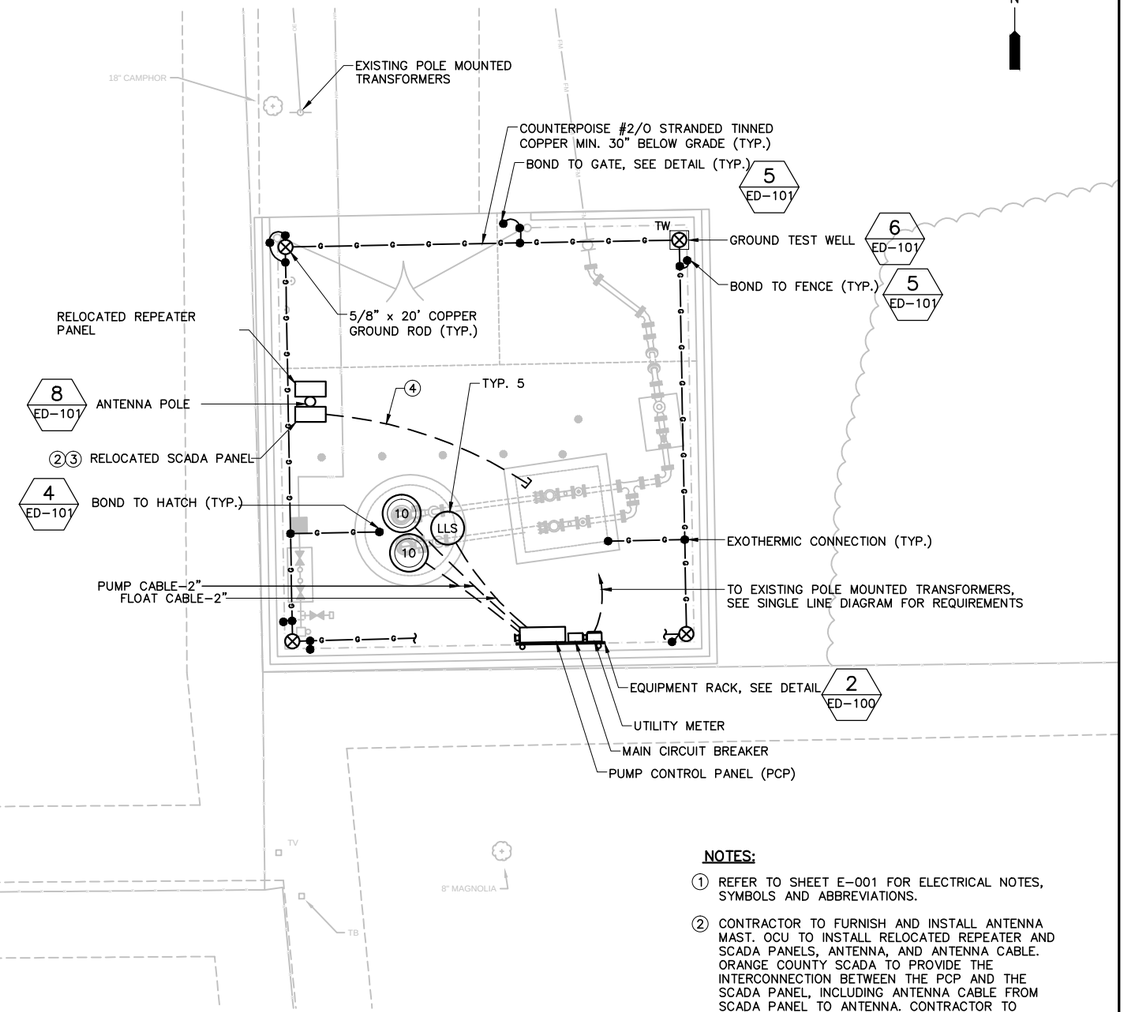
PS3259 FIGURE NO. 1

SCALE: N.T.S.

PS3259 FIGURE NO. 2

SCALE: N.T.S.

PUMP STATION #3259
9237 ALLWOOD PLACE



NOTES:

1. REFER TO SHEET E-001 FOR ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
2. CONTRACTOR TO FURNISH AND INSTALL ANTENNA MAST. OCU TO INSTALL RELOCATED REPEATER AND SCADA PANELS, ANTENNA, AND ANTENNA CABLE. ORANGE COUNTY SCADA TO PROVIDE THE INTERCONNECTION BETWEEN THE PCP AND THE SCADA PANEL, INCLUDING ANTENNA CABLE FROM SCADA PANEL TO ANTENNA. CONTRACTOR TO FURNISH AND INSTALL CONDUIT.
3. CONTRACTOR TO FURNISH AND INSTALL THREE (3) 1" CONDUITS WITH PULLSTRING FROM THE SCADA PANEL TO THE PCP.
4. 1" EMPTY WITH PULLSTRING.

PS 3259 ELECTRICAL PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'

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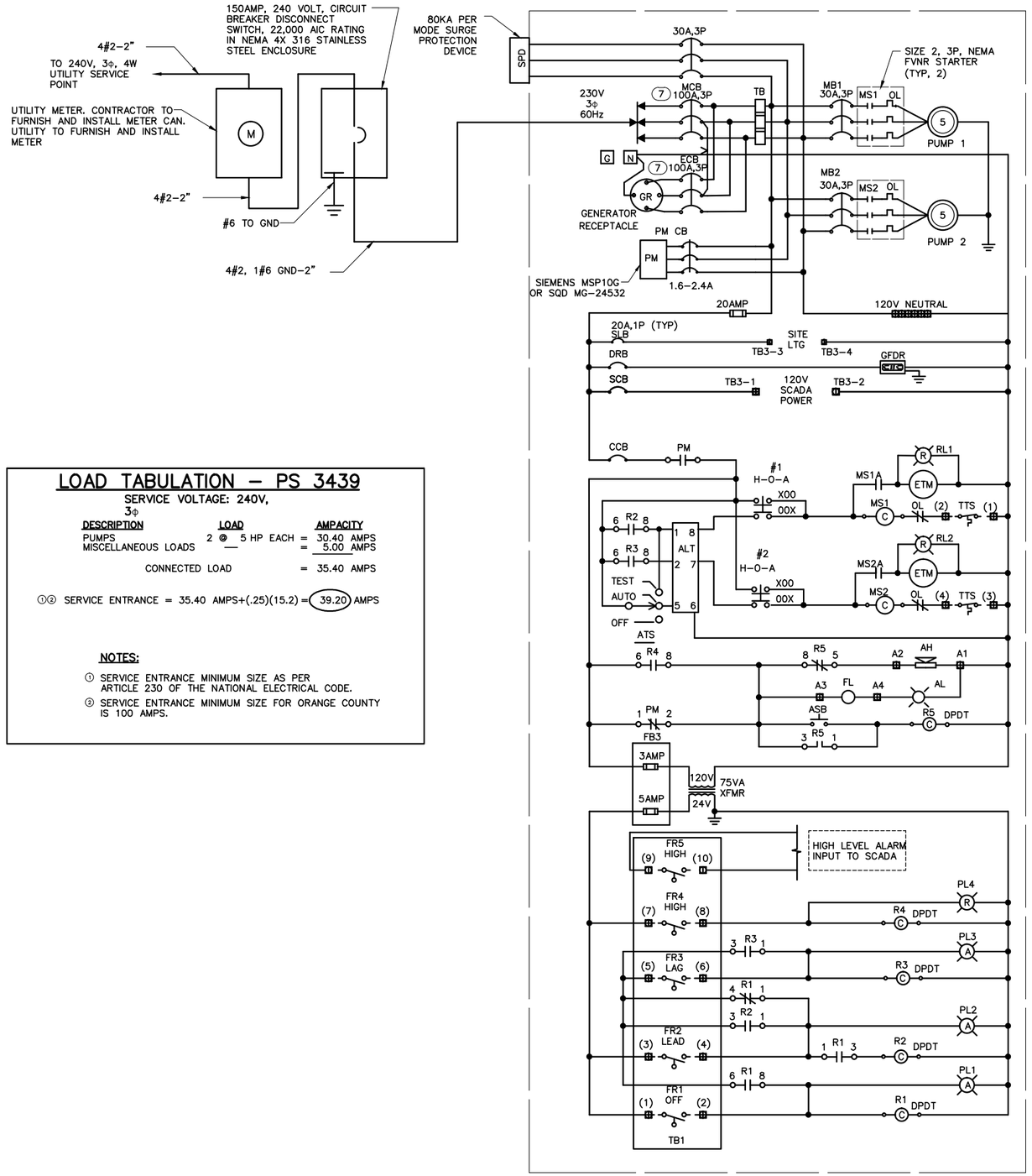
PUMP STATION 3259
ELECTRICAL DEMOLITION
AND ELECTRICAL PLAN

LILLIAN M. REYES
PROFESSIONAL ENGINEER
FLORIDA LICENSE #50780

OCU FILE NO.: 74325
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: LMR
CADD FILE: E-201 PS 3259

SCALE: AS NOTED:
DRAWING NO. : E-201
SHEET: 35 OF 40

PUMP STATION #3439
5267 SECLUDED OAKS DR.



LOAD TABULATION – PS 3439

SERVICE VOLTAGE: 240V, 3φ

DESCRIPTION	LOAD	AMPACITY
PUMPS	2 @ 5 HP EACH	= 30.40 AMPS
MISCELLANEOUS LOADS	—	= 5.00 AMPS
CONNECTED LOAD		= 35.40 AMPS

①② SERVICE ENTRANCE = 35.40 AMPS+(.25)(15.2) = (39.20) AMPS

NOTES:

① SERVICE ENTRANCE MINIMUM SIZE AS PER ARTICLE 230 OF THE NATIONAL ELECTRICAL CODE.

② SERVICE ENTRANCE MINIMUM SIZE FOR ORANGE COUNTY IS 100 AMPS.

LEGEND

AH – ALARM HORN
AL – ALARM LIGHT
ALT – ALTERNATOR
ASB – ALARM SILENCE BUTTON
ATS – ALTERNATOR TEST SWITCH
CB – CIRCUIT BREAKER
CCB – CONTROL CIRCUIT BREAKER
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DRB – DUPLEX RECEPTACLE BREAKER
ECB – EMERGENCY CIRCUIT BREAKER
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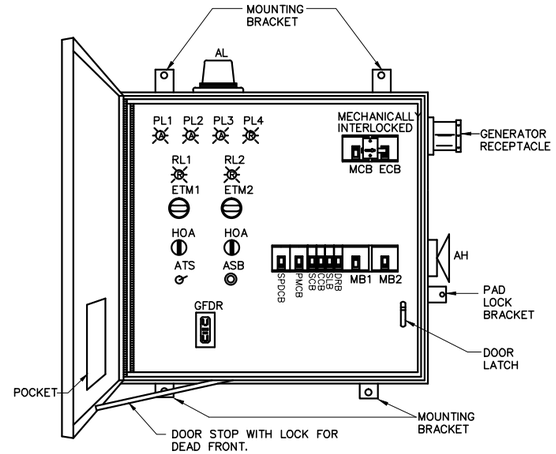

NOTES:

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5. CONTROL PANEL SHALL INCLUDE 30 SPARE TERMINALS (TB2).
6. PHASE MONITOR CIRCUIT BREAKER TO BE SIEMENS P/N: MSP10G, OR SQ-D P/N: MG24532.
7. PROVIDE AUXILLARY FORM "C" CONTACT ON MAIN AND EMERGENCY CIRCUIT BREAKERS IN PUMP CONTROL PANEL.
8. ALL 240V CIRCUIT BREAKERS SHALL BE TYPE "HGL"

DUPLEX CONTROL PANEL ENCLOSURE DEAD FRONT LAYOUT

SCALE: N.T.S.

240V DUPLEX PUMP CONTROL SCHEMATIC

EDA
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FAX: (407) 745-5603
C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY UTILITIES DEPARTMENT
ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825

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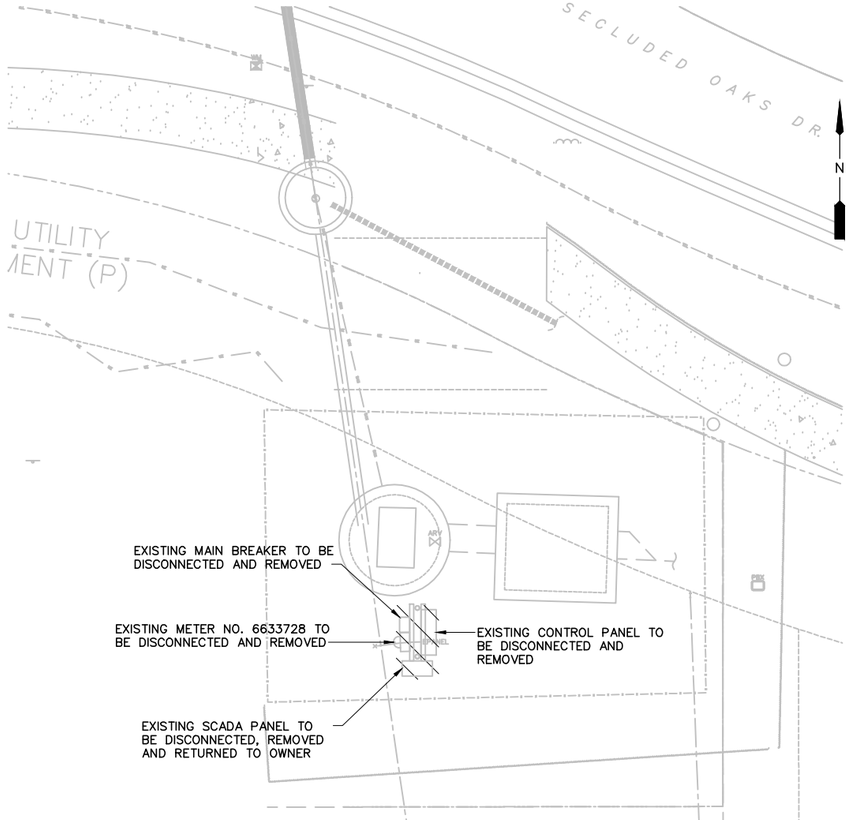
PUMP STATION 3439
DUPLEX PUMP CONTROL PANEL
SINGLE LINE DIAGRAM

LILLIAN M. REYES
PROFESSIONAL ENGINEER
FLORIDA LICENSE #50780

OCU FILE NO.: 74325
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: LMR
CADD FILE: E-300 300 PS 3439 SLD

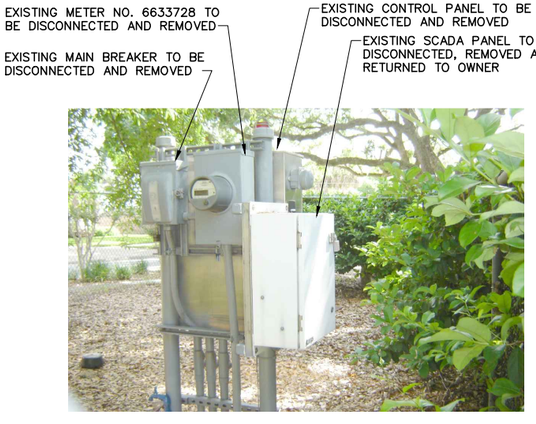
SCALE: AS NOTED:
DRAWING NO.: E-300
SHEET: 36 OF 40



PS3439 ELECTRICAL DEMOLITION PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'



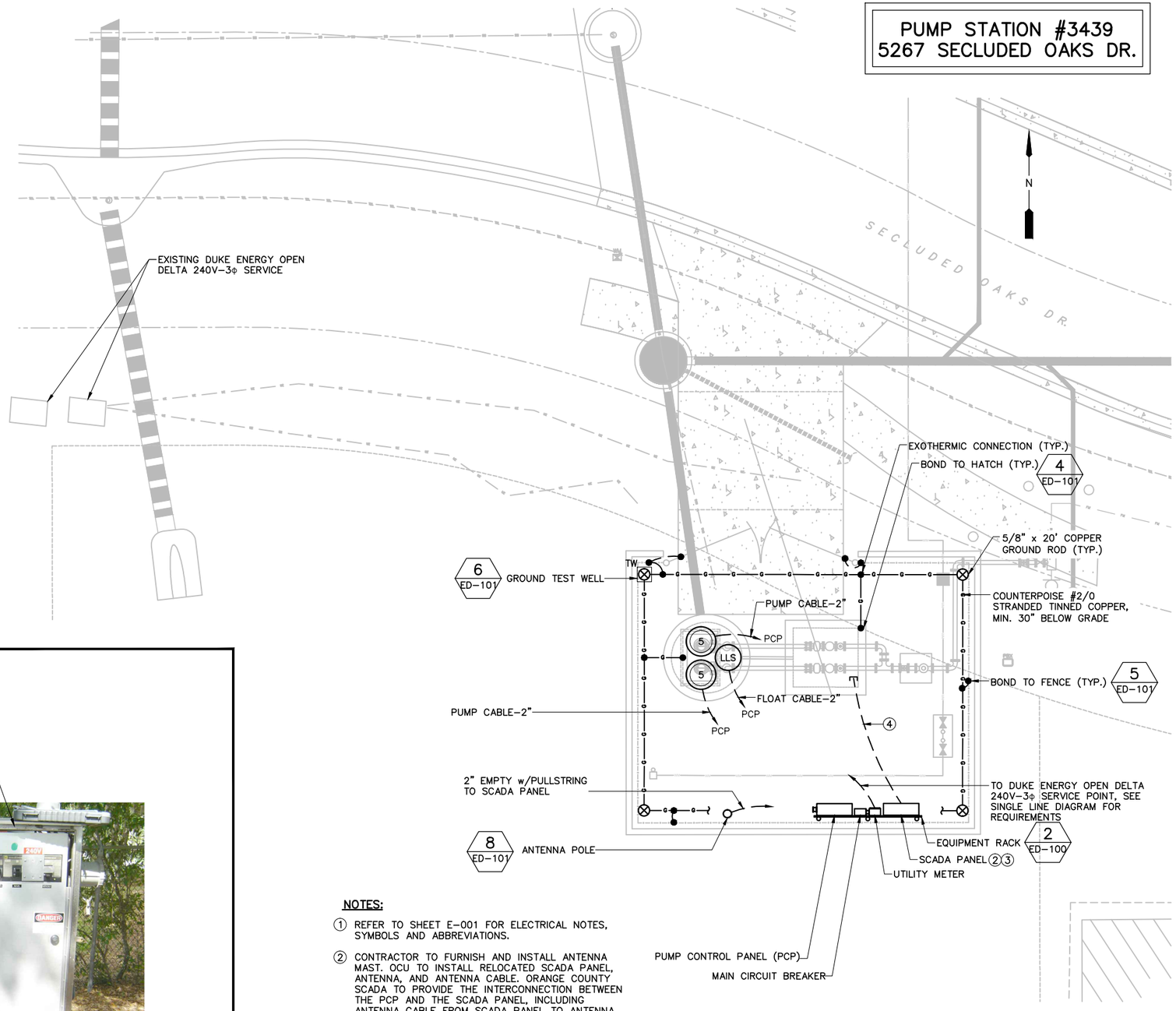
PS3439 FIGURE NO. 1

SCALE: N.T.S.

PS3439 FIGURE NO. 2

SCALE: N.T.S.

PUMP STATION #3439
5267 SECLUDED OAKS DR.



PS3439 ELECTRICAL PLAN

SCALE: 1"=5'-0"

5 2.5 0 5'

NOTES:

1. REFER TO SHEET E-001 FOR ELECTRICAL NOTES, SYMBOLS AND ABBREVIATIONS.
2. CONTRACTOR TO FURNISH AND INSTALL ANTENNA MAST. OCU TO INSTALL RELOCATED SCADA PANEL, ANTENNA, AND ANTENNA CABLE. ORANGE COUNTY SCADA TO PROVIDE THE INTERCONNECTION BETWEEN THE PCP AND THE SCADA PANEL, INCLUDING ANTENNA CABLE FROM SCADA PANEL TO ANTENNA. CONTRACTOR TO FURNISH AND INSTALL CONDUIT.
3. CONTRACTOR TO FURNISH AND INSTALL THREE (3) 1" CONDUITS WITH PULLSTRING FROM THE SCADA PANEL TO THE PCP.
4. 1" EMPTY WITH PULLSTRING.

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LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

REV	DATE	DESCRIPTION

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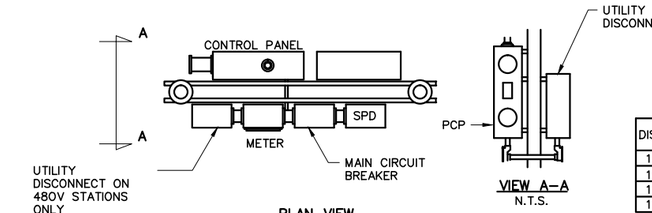
PUMP STATION 3439
ELECTRICAL PLAN

LILLIAN M. REYES
PROFESSIONAL ENGINEER
FLORIDA LICENSE #50780

OCU FILE NO.: 74325
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: LMR
CADD FILE: E-301 PS 3439

SCALE: AS NOTED:
DRAWING NO.: E-301
SHEET: 37 OF 40

BID DRAWING

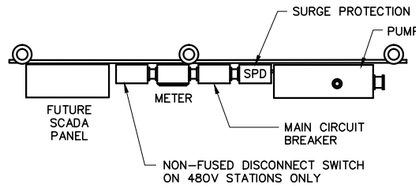


VIEW A–A
N.T.S.

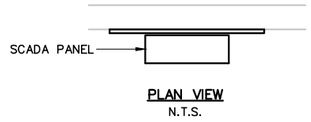
PANEL & SEAL–OFF MOUNTING HEIGHTS

DIST "Y"	DIST "X"	PANEL HEIGHT
18"	36"	36"
15"	30"	42"
12"	24"	48"
12"	24"	60"

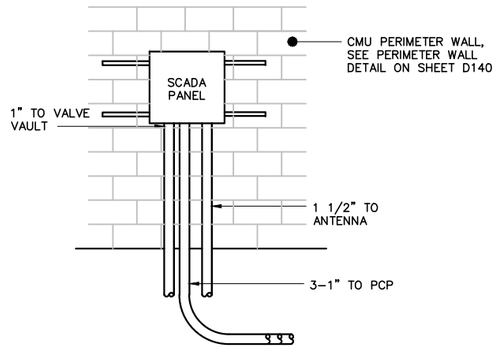
FOR PANELS NOT LISTED ADJUST MOUNTING HEIGHTS ACCORDINGLY



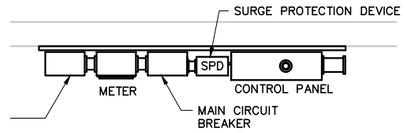
PLAN VIEW
N.T.S.



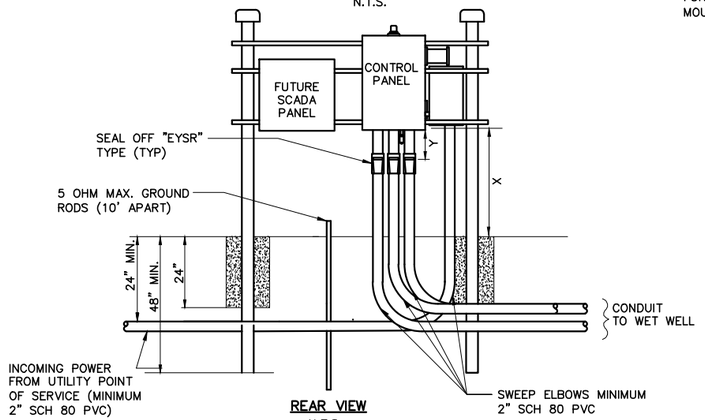
PLAN VIEW
N.T.S.



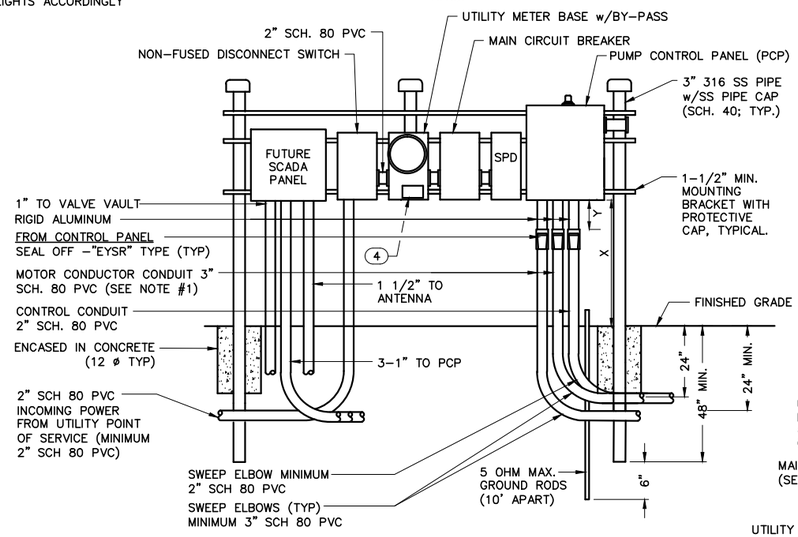
FRONT VIEW
N.T.S.



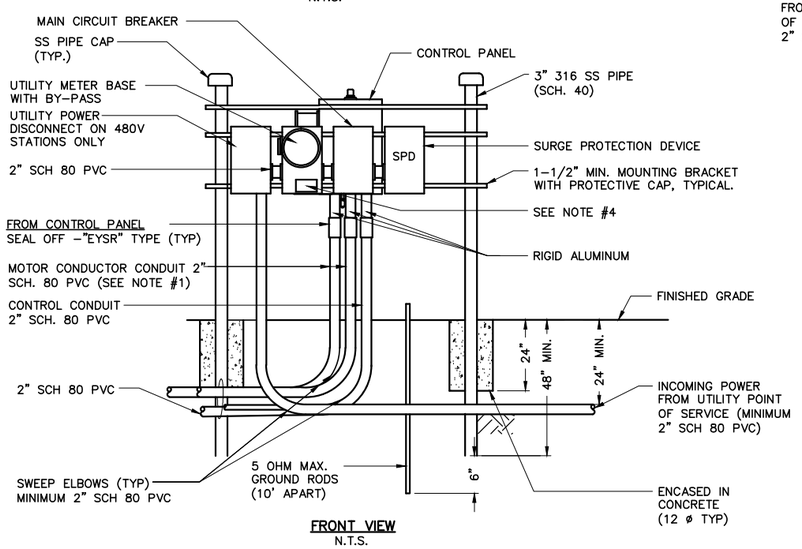
PLAN VIEW
N.T.S.



REAR VIEW
N.T.S.



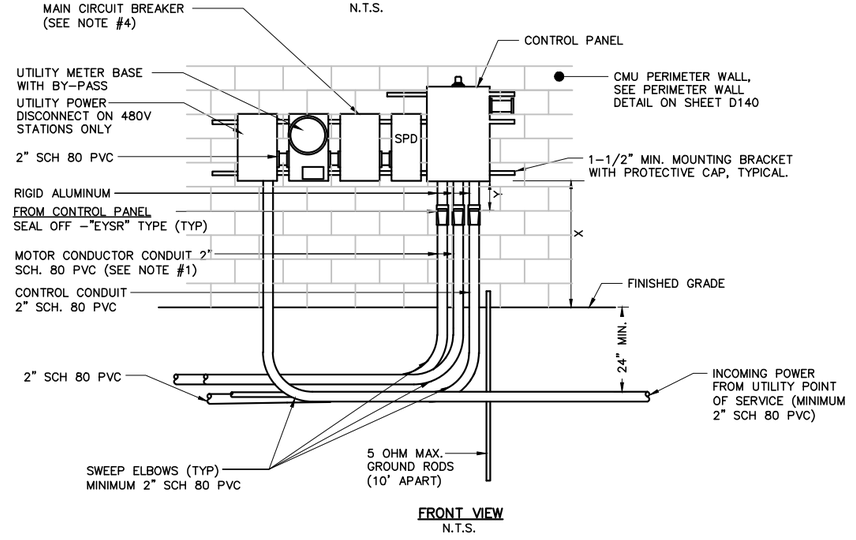
FRONT VIEW
N.T.S.



FRONT VIEW
N.T.S.

1 ED–100 A413–1 & A413–2 BACK TO BACK EQUIPMENT RACK
N.T.S.

2 ED–100 SIDE BY SIDE EQUIPMENT RACK
N.T.S.



FRONT VIEW
N.T.S.

3 ED–100 SPLIT EQUIPMENT RACK
N.T.S.

PANEL INSTALLATION NOTES:

1. PUMP MOTOR CONDUIT SHALL BE SIZED TO ACCOMODATE 40% CONDUIT FILL. MINIMUM CONDUIT SIZE TO BE 2" SCH 80 PVC.
2. POWER SUPPLY SHALL BE UNDERGROUND ON THE LIFT STATION SITE AND SHALL BE 3–PHASE, FROM A 3–PHASE SOURCE ONLY.
3. AN ELECTRICAL GROUNDING SYSTEM SHALL BE INSTALLED AS PER THE NATIONAL ELECTRICAL CODE, LOCAL CODES AND ORDINANCES, AN UNDERGROUND PERIMETER CABLE GROUNDING SYSTEM SHALL BE INSTALLED WITH CONNECTIONS TO AT LEAST WET WELL COVER, VALVE VAULT COVER, CONTROL PANELS, UTILITY COMPANY TRANSFORMER, MANUAL DISCONNECT SWITCH AND METAL FENCE. REFER TO GROUNDING DETAILS.
4. THE STATION NAME, ORANGE COUNTY I.D. NUMBER, AND ADDRESS SHALL BE AFFIXED TO THE FRONT OF THE METER CABINET.
5. ALL MOUNTING HARDWARE, BRACKETS AND ELECTRICAL ENCLOSURES SHALL BE 316 STAINLESS STEEL.
6. THE SCADA PANEL IS SHOWN FOR INFORMATION ONLY AND WILL BE INSTALLED IN THE FUTURE (BY OTHERS).

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FAX: (407) 745–5603
C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY UTILITIES DEPARTMENT
ENGINEERING DIVISION
9150 CURRY FORD ROAD ORLANDO, FL. 32825

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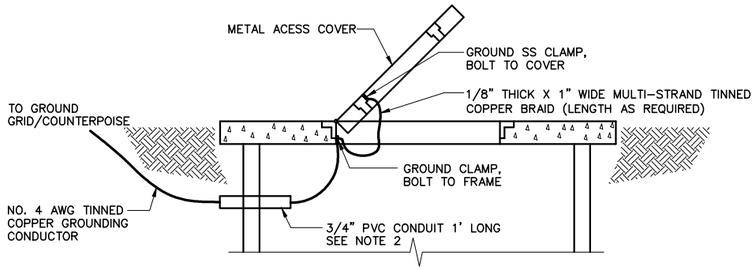
Survey L.B. No. 7143
Arch. Lic. No. AA2600926
Lndscp. Lic. No. LC0000298
1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

ELECTRICAL DETAILS
SHEET 1

LILLIAN M. REYES
PROFESSIONAL ENGINEER
FLORIDA LICENSE #50780

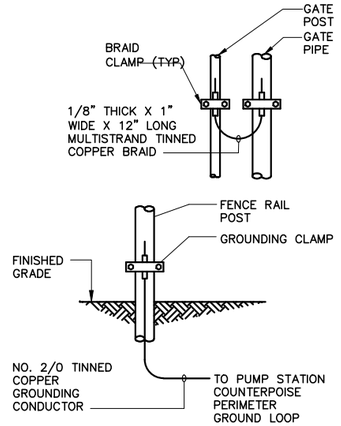
OCU FILE NO.: 74325
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: LMR
CADD FILE: ED-100 DTLS

SCALE: AS NOTED:
DRAWING NO.: ED-100
SHEET: 38 OF 40

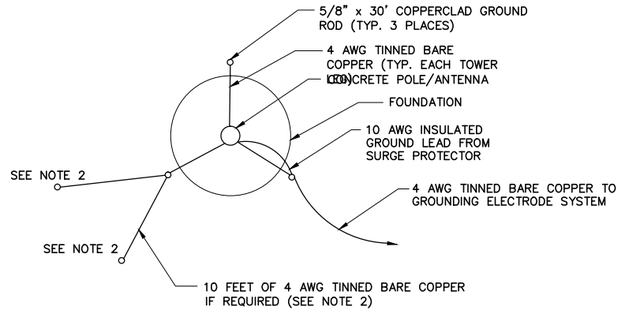


1. ON COVERS WITH MULTIPLE DOORS, PROVIDE BRAID FROM FRAME TO DOOR ON EACH DOOR
2. PROVIDE WATERPROOF CAULKING WHERE GROUND CABLE AND CONDUIT PENETRATES WETWELL TO PREVENT INTRUSION OF GROUND WATER AND ESCAPE OF VAPORS FROM WETWELL.
3. INSTALL GROUND WIRE SO THAT IT WILL NOT CROSS CLEAR OPENING OR PREVENT OR IMPEDE NORMAL METHOD OF REMOVING FLOATS OR PUMPS.

4 / ED-101 **COVER & DOOR GROUNDING DETAIL**
N.T.S.

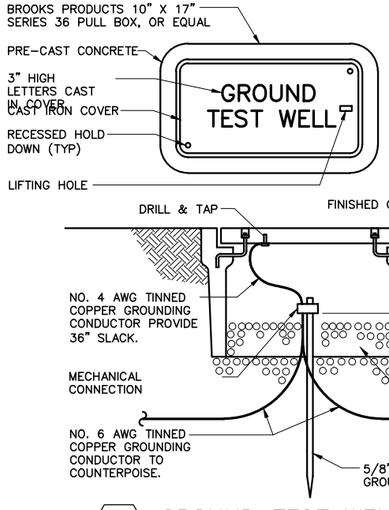


5 / ED-101 **FENCE POST GROUNDING**
N.T.S.

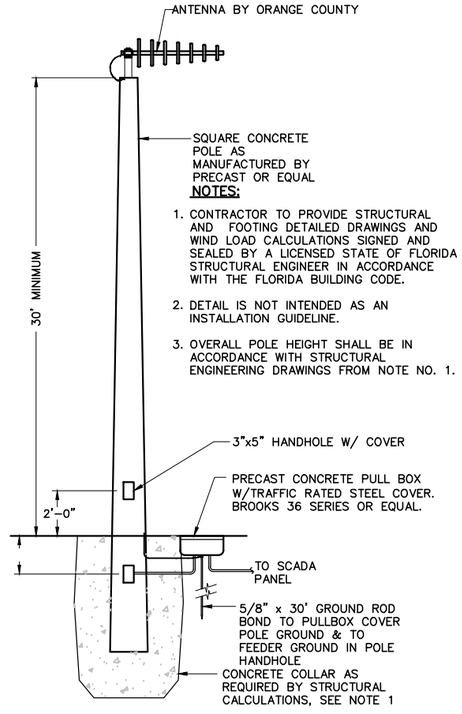


1. MEGGER GROUND SYSTEM FOLLOWING INSTALLATION.
2. IF READING IS GREATER THAN 5 OHMS, INSTALL TWO ADDITIONAL GROUND RODS RADIALLY FROM EACH LEG AS SHOWN UNTIL A VALUE OF 5 OHMS OR LESS IS ATTAINED.
3. IF READING IS STILL ABOVE 5 OHMS, INCREASE THE LENGTH OF EACH ROD IN 10 FEET INCREMENTS UNTIL THE REQUIRED VALUE IS OBTAINED
4. ALL ELECTRODE SYSTEM CONNECTIONS TO BE EXOTHERMALLY BONDED.
5. USE MOST STRINGENT REQUIREMENT OF THESE DETAILS OR APPLICABLE CODES.

7 / ED-101 **MAST GROUNDING PLAN**
N.T.S.



6 / ED-101 **GROUND TEST WELL**
N.T.S.



NOTES:

1. CONTRACTOR TO PROVIDE STRUCTURAL AND FOOTING DETAILED DRAWINGS AND WIND LOAD CALCULATIONS SIGNED AND SEALED BY A LICENSED STATE OF FLORIDA STRUCTURAL ENGINEER IN ACCORDANCE WITH THE FLORIDA BUILDING CODE.
2. DETAIL IS NOT INTENDED AS AN INSTALLATION GUIDELINE.
3. OVERALL POLE HEIGHT SHALL BE IN ACCORDANCE WITH STRUCTURAL ENGINEERING DRAWINGS FROM NOTE NO. 1.

8 / ED-101 **ANTENNA POLE DETAIL**
N.T.S.

EDA
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PHONE: (407) 745-5604
FAX: (407) 745-5603
C.O.A. No. 8079
LILLIAN M. REYES, P.E.
Florida P.E. No. 50780

BID DRAWING

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE (IF NOT SCALE ACCORDINGLY)

ORANGE COUNTY GOVERNMENT FLORIDA

ORANGE COUNTY UTILITIES DEPARTMENT ENGINEERING DIVISION
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ELECTRICAL DETAILS
SHEET 2

LILLIAN M. REYES
PROFESSIONAL ENGINEER
FLORIDA LICENSE #50780

OCU FILE NO.: 74325
DESIGNED BY: LMR
DRAWN BY: RRM
CHECKED BY: LMR
CADD FILE: ED-101 DTLS

SCALE: AS NOTED:
DRAWING NO.: ED-101
SHEET: 39 OF 40

VALVES

ID Number	Plan Sheet #	Easting	Northing	Elevation	Valve Type	Main Type	Size	Valve Manufacturer	Valve Model #	# of Turns to Close	Gear Actuator	Gear Ratio	Side Actuator	Actuator Manufacturer	Comments
LS-1	C301				Line Stop	Force Main	6"								PS 3439
LS-2	C301				Line Stop	Force Main	4"								PS3439
TSV-1	C301				Tapping Sleeve & Valve	Force Main	6"x 4"								PS3439
PV-1	C301				Plug	Force Main	4"								PS 3439

SANITARY MANHOLES

ID Number	Plan Sheet #	Easting	Northing	Rim Elevation	Invert Elv N	Invert Elv NE	Invert Elv E	Invert Elv SE	Invert Elv S	Invert Elv SW	Invert Elv W	Invert Elv NW	Manufacturer	Comments
ID Number	Plan Sheet #	Easting	Northing	Rim Elevation	Invert Elv N	Invert Elv NE	Invert Elv E	Invert Elv SE	Invert Elv S	Invert Elv SW	Invert Elv W	Invert Elv NW	Manufacturer	Comments
MH 34390002	C303			104.29				98.84			98.84			Lined Existing
MH 34390004	C303			104.94	98.64		88.61		88.51					Replace Existing MH 34392001
MH-34390005	C303			104.24			89.92				89.72			Replace Existing MH 30920001
MH-34390006	C303			102.75	91.15						91.13			Replaces demolished PS 3092

FITTINGS

ID Number	Plan Sheet #	Easting	Northing	Elevation	Main Type	Fitting Type	Comments
FM-1	C101				Force Main	Bend 90°	8"
FM-2	C301				Force Main	Cap	6"
FM-3	C301				Force Main	Cap	4"

PUMP STATION

ID Number	Plan Sheet #	Easting	Northing	Elevation	Manufacturer	Comments
PS 3990	C101			71.17		Existing Pump Station to be Rehab
PS 3259	C201			105.00		Existing Pump Station to be Rehab
PS 3439	C302			79.99		Existing Pump Station to be Rehab

CLEANOUTS

ID Number	Plan Sheet #	Easting	Northing	Elevation	Comments
CO-1	C303				
CO-2	C303				
CO-3	C303				
CO-4	C303				
CO-5	C303				
CO-6	C303				
CO-7	C303				
CO-8	C303				
CO-9	C303				
CO-10	C303				

METERS

ID Number	Plan Sheet #	Easting	Northing	Elevation	Main Type	Comments
MM-1	C101				Water Main	Above Ground at PS 3990
MM-2	C201				Water Main	Above Ground at PS 3259
MM-3	C301				Water Main	Above Ground at PS 3439

PUMP STATION TRACT CORNERS

ID Number	Plan Sheet #	Easting	Northing	Elevation	Boundary Corner Type	Comments
Corner-1	C102				Pump Station Tract	N.W. Corner of PS 3990
Corner-2	C102				Pump Station Tract	N.E. Corner of PS 3390
Corner-3	C102				Pump Station Tract	S.W. Corner of PS 3390
Corner-4	C102				Pump Station Tract	S.E. Corner of PS 3390
Corner-5	C201				Pump Station Tract	N.W. Corner of PS 3259
Corner-6	C201				Pump Station Tract	N.E. Corner of PS 3259
Corner-7	C201				Pump Station Tract	S.W. Corner of PS 3259
Corner-8	C201				Pump Station Tract	S.E. Corner of PS 3259
Corner-9	C302				Pump Station Tract	N.W. Corner of PS 3439
Corner-10	C302				Pump Station Tract	N.E. Corner of PS 3439
Corner-11	C302				Pump Station Tract	S.W. Corner of PS 3439
Corner-12	C302				Pump Station Tract	S.E. Corner of PS 3439

REV	DATE	DESCRIPTION

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ORANGE COUNTY GOVERNMENT FLORIDA

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1117 East Robinson Street ~ Orlando, FL 32801 ~ Phone: 407.425.0452

ASSET TABLE

SCOTT A. BREITENSTEIN
PROFESSIONAL ENGINEER
FLORIDA LICENSE #57402

OCU FILE NO.: 74325
DESIGNED BY: SAB
DRAWN BY: DGH/GCM
CHECKED BY: SAB/DEM
CADD FILE: Asset Table.dwg

SCALE: NONE
DRAWING NO. :
X100
SHEET: 40 OF 40

BID DRAWING