1. COORDINATION:

CONTRACTOR TO COORDINATE ALL PIPE AND CONDUIT LOCATIONS WITH MECHANICAL AND ELECTRICAL DRAWINGS PRIOR TO PLACING CONCRETE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR EQUIPMENT AND ANCHOR BOLT LOCATIONS.

STRUCTURAL DRAWINGS SHALL BE COORDINATED WITH MECHANICAL AND ELECTRICAL DRAWINGS TO PROPERLY LOCATE WALL PIPES, PIPE SLEEVES, ANCHOR BOLTS, BLOCKOUTS, ETC. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE COUNTY ENGINEER BEFORE PROCEEDING WITH THE WORK.

2. PRECAUTIONS:

CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT FLOTATION OF STRUCTURES UNTIL FULLY CONSTRUCTED AND BACKFILL IS IN PLACE AND COMPACTED.

3. DESIGN CRITERIA AND LOADS:

ACI 350	CONCRETE SANITARY ENGINEERING STRUCTURES
ACI 318	BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
ASTM C 478	STANDARD SPECIFICATION FOR CIRCULAR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS
ASTM C 433	STANDARD SPECIFICATION FOR JOINTS FOR CONCRETE PIPE AND MANHOLES, USING RUBBER GASKETS

DESIGN LIVE LOADS:

WET WELL TOP SLAB	AASHTO HS20-44.
SITE PAD - VEHICULAR AREA BEARING	AASHTO HS20-44.
SITE PAD - NON-VEHICULAR AREA BEARING	300 PSF.

NET ALLOWABLE SOIL BEARING CAPACITY: 1500 PSF. (MINIMUM)
DESIGN ENGINEER TO CONFIRM

4. CAST-IN-PLACE CONCRETE:

CAST-IN-PLACE CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:

SLABS ON GRADE	4,000 PSI
PIPE SUPPORTS, PUMPS PADS, ENCASEMENTS	4,000 PSI

5. PRECAST CONCRETE:

PRECAST WET WELL CONCRETE SHALL HAVE MINIMUM 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.

6. REINFORCING STEEL:

REINFORCING STEEL FOR ALL BARS SHALL CONFORM TO ASTM 615, GRADE 60 OF UNITED STATES MANUFACTURE.

WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

7. REINFORCEMENT CLEARANCE:

CLEARANCE OF REINFORCING STEEL FROM THE FACE OF CONCRETE TO THE OUTERMOST TIE OR BAR SHALL BE 2", UNLESS OTHERWISE NOTED ON THE DRAWINGS.

8. PIPE OPENINGS:

OPENINGS SHALL BE LOCATED BASED ON THE REQUIREMENTS SPECIFIED IN THE MECHANICAL DRAWINGS. MANUFACTURER RESPONSIBLE FOR COORDINATING SIZE AND LOCATION WITH ENGINEER.

9. ALUMINUM ACCESS HATCH:

ACCESS HATCH COVER SHALL BE ALUMINUM, MEET HILLSBOROUGH COUNTY SPECIFICATIONS AND BE SIZED AND DETAILED TO MEET THE REQUIREMENTS OF THE SELECTED PUMPS.

10. WATERSTOPS:

WATERSTOPS SHALL BE DUMBELL STYLE, MADE OF FLEXIBLE PVC AND MEASURING 6" x 3/8".

11. COATINGS:

THE WET WELL INTERIOR SHALL RECEIVE A FIELD APPLIED CORROSION RESISTANT COATING AS PER HILLSBOROUGH COUNTY SPECIFICATIONS.

12. SHOP DRAWINGS:

THE FOLLOWING SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW. FABRICATION SHALL NOT COMMENCE UNTIL ALL REVIEWS ARE COMPLETED.

- REINFORCING STEEL	- ANCHOR BOLTS FOR PUMPS
- PRECAST CONCRETE	- CONCRETE MIX DESIGNS
- GROUTS	- ACCESS HATCHS AND FRAMES
- WATERPROOF JOINTS	- EXPANSION JOINT MATERIAL
- LINKSEAL STYLE CONNECTION	- FLEXIBLE 'BOOT' CONNECTIONS
- GASKETS	- WATERSTOPS

13. FOUNDATIONS:

REMOVE ALL ORGANIC SOIL, CLAYS AND OTHER COMPRESSIBLE MATERIALS.

A MINIMUM OF 6 INCHES OF COMPACTED CRUSHED STONE (SEE HILLSBOROUGH COUNTY STANDARDS) SHALL BE PLACED UNDER THE WET WELL BASE SLAB AND DROP CONNECTION.

DEWATER EXCAVATION DURING WET WELL INSTALLATION. ALL WORK SHALL BE DONE IN THE "DRY".

14. DESIGN CONDITIONS VS SITE CONDITIONS:

THE WET WELL DESIGN WALL THICKNESS, BOTTOM SLAB THICKNESS AND DIMENSIONS, BOTTOM SLAB EXTENSION, AND FOUNDATION BASE COURSE ARE MINIMUM DIMENSIONS. THE STRUCTURAL DESIGN IS BASED ON THE LOADS AND CONDITIONS LISTED HERE. TO USE THESE PLANS AS-IS, THE ENGINEER SHALL VERIFY THAT THE SITE CONDITIONS MEET THE DESIGN CONDITIONS, INCLUDING THE GEOTECHNICAL CONDITIONS AND FLOTATION CALCULATIONS. IF THE SITE CONDITIONS VARY FROM THE DESIGN CONDITIONS, THE ENGINEER SHALL MODIFY THE DESIGN AS NEEDED AND PROVIDE SIGNED AND SEALED DRAWINGS TO THE COUNTY FOR APPROVAL.

15. WET WELL CONSTRUCTION NOTES:

A. GRAVITY PIPE, DISCHARGE PIPING, AUXILIARY SUCTION AND PROCESS PIPING SIZES TO BE DETERMINED BY THE ENGINEER. REFER TO MECHANICAL DRAWINGS.

B. OPENING REQUIREMENTS:

GRAVITY PIPE:	CAST-IN-PLACE OR CORED OPENING FOR FLEXIBLE 'BOOT' CONNECTION.
DISCHARGE PIPING:	LINK SEAL TYPE PIPE SEAL.
AUXILIARY PIPING:	LINK SEAL TYPE PIPE SEAL.
OTHER PIPING:	NON-SHRINK GROUT.

C. DROP CONNECTION SHALL BE USED WHEN THE ELEVATION DIFFERENCE BETWEEN THE INVERT OF THE INFLUENT PIPE AND THE PUMP LOW WATER LEVEL IS GREATER THAN 2 FEET.

D. WET WELL BARREL JOINTS SHALL BE SEALED WITH A SINGLE OFFSET OR O-RING STYLE GASKET PER ASTM C433.

E. TOP SLAB, BOTTOM SLAB AND WET WELL BARREL SHALL BE PRECAST.

USE OF DRAWINGS:

SUCCESSOR PROFESSIONAL ENGINEER UTILIZING THESE DRAWINGS MUST ABIDE BY THE RULES AND REGULATIONS CONTAINED IN 61G15-27.001 OF THE FLORIDA ADMINISTRATIVE CODE.

DAVID A. WILCOX
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PROJECT MANAGER

WILLIAM N. HAUSHEER
FLORIDA PE 31715
STRUCTURAL ENGINEER

SCALE	No.	DATE	REVISIONS	APPV'D.
AS SHOWN				

HILLSBOROUGH COUNTY
PUBLIC UTILITIES DEPARTMENT
925 E. TWIGGS STREET / TAMPA, FLORIDA 33602

PROJECT No.:	
FILE No.:	
DESIGNED BY:	RMA
DRAWN BY:	TRS
CHECKED BY:	DAW & WNH
DATE:	SEPTEMBER 2015
SCALE:	AS SHOWN

NOTES
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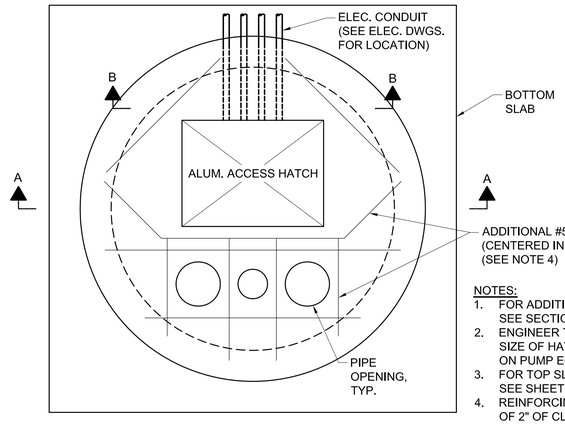
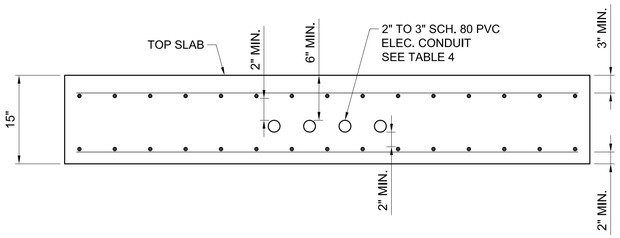
SHEET
S1



TYPICAL TOP SLAB REINFORCING PLAN

N.T.S.

NOTES:
1. FOR ADDITIONAL REINFORCING NOT SHOWN, SEE SECTION A-A.
2. ENGINEER TO DETERMINE LOCATION AND SIZE OF HATCH AND PIPE OPENINGS BASED ON PUMP EQUIPMENT SELECTED.
3. FOR TOP SLAB GENERAL ARRANGEMENTS, SEE SHEET S3.
4. REINFORCING STEEL SHALL HAVE A MINIMUM OF 2" OF CLEARANCE FROM PIPE OPENINGS.



SECTION B-B

N.T.S.

TABLE 1
WET WELL DIMENSIONS

A	B	C
6'	8"	12"
8'	9"	18"
10'	10"	18"

TABLE 2
WET WELL PIPE PENETRATION OPENING SIZES

GRAVITY INLET		PUMP DISCHARGE		AUX SUCTION	
DIA	OPENING	DIA	OPENING	DIA	OPENING
8"	12"	4"	10"	4"	6"
10"	14" OR 16"	6"	12"	6"	10"
12"	16"	8"	16"	N/A	N/A
16"	20" OR 22"	10"	18"	N/A	N/A

TABLE 3
BOTTOM SLAB DIMENSIONS

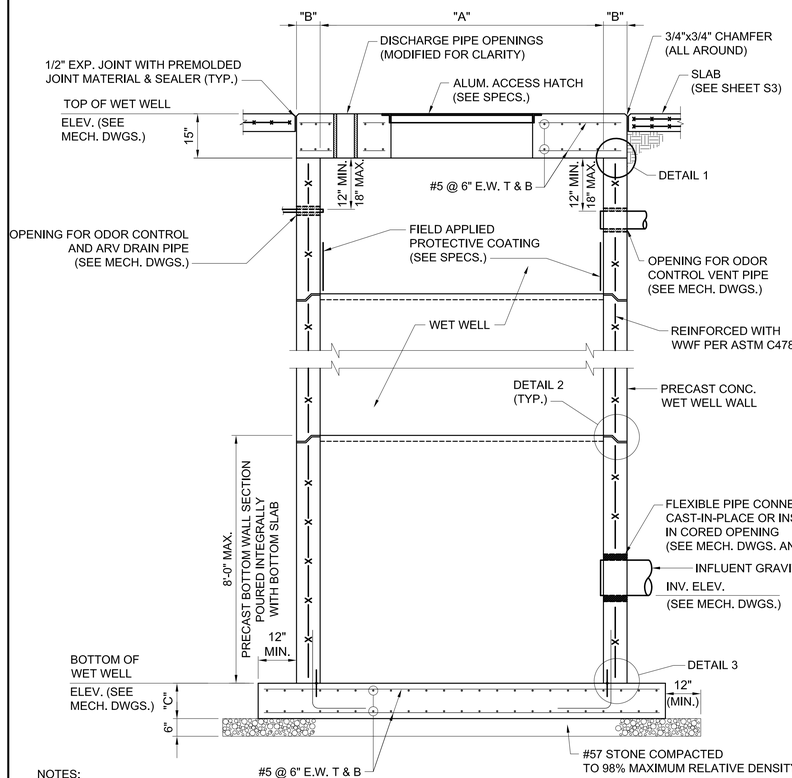
WET WELL	SLAB	REINFORCING
6'	9' - 4" SQ.	#5 @ 6" T & B EACH WAY
8'	11' - 6" SQ.	#5 @ 6" T & B EACH WAY
10'	13' - 8" SQ.	#5 @ 6" T & B EACH WAY

DIMENSIONS ARE MINIMUMS. ENGINEER TO DETERMINE BASED ON FLOTATION CALCULATIONS.

TABLE 4
CONDUIT SIZES

PUMP HP	CONDUIT *
3 - 20	2"
25 - 50	2 1/2"
> 50 - 100	3"

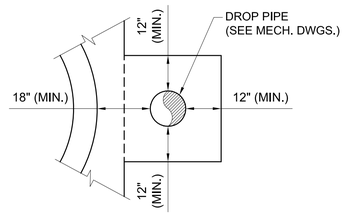
* 4 CONDUIT FOR DUPLEX PS.
5 CONDUIT FOR TRIPLEX PS.
CONFIRM CONDUIT SIZES WITH ELECTRICAL ENGINEER.



NOTES:
1. FOR DIMENSIONS AND PIPE PENETRATION OPENING SIZES REFER TO TABLES ON THIS SHEET.
2. SEE SHEET S1 FOR WET WELL CONSTRUCTION NOTES.

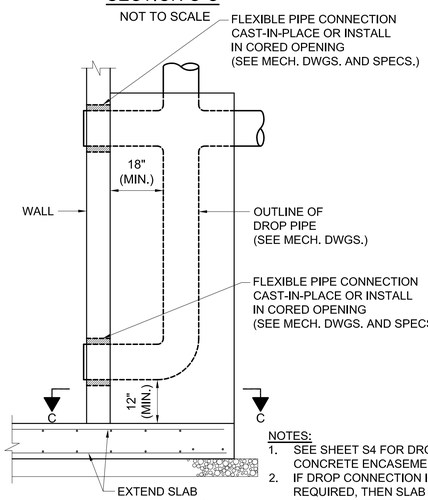
SECTION A-A

NOT TO SCALE



SECTION C-C

NOT TO SCALE

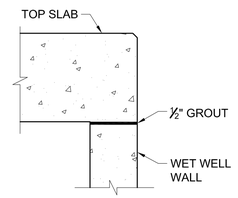


ELEVATION

NOTES:
1. SEE SHEET S4 FOR DROP PIPE CONCRETE ENCASEMENT.
2. IF DROP CONNECTION IS REQUIRED, THEN SLAB EXTENSION SHALL BE INTEGRAL TO PRECAST WET WELL BOTTOM SLAB.

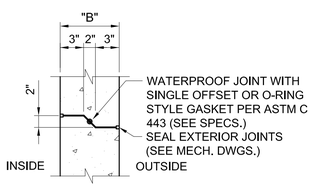
DROP CONNECTION
BOTTOM SLAB EXTENSION DETAIL

NOT TO SCALE



DETAIL 1

NOT TO SCALE



DETAIL 2

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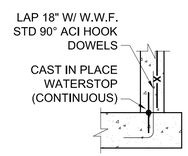

DETAIL 3

NOT TO SCALE

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SCALE	REVISIONS			
AS SHOWN	No.	DATE	DESCRIPTION	APPV'D.

HILLSBOROUGH COUNTY
PUBLIC UTILITIES DEPARTMENT
925 E. TWIGGS STREET / TAMPA, FLORIDA 33602

PROJECT No.:	
FILE No.:	
DESIGNED BY:	RMA
DRAWN BY:	TRS
CHECKED BY:	DAW & WNH
DATE:	SEPTEMBER 2015
SCALE:	AS SHOWN

WET WELL PLAN, SECTIONS, and DETAILS
STRUCTURAL

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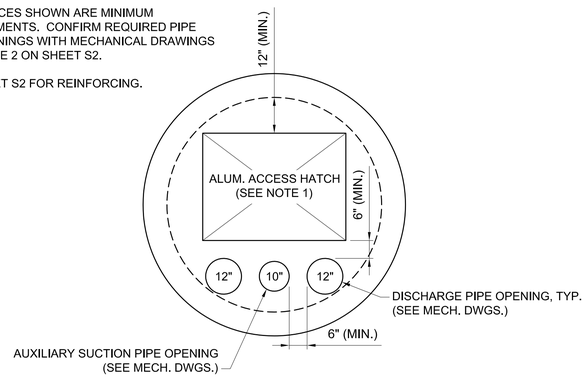
SHEET
S2

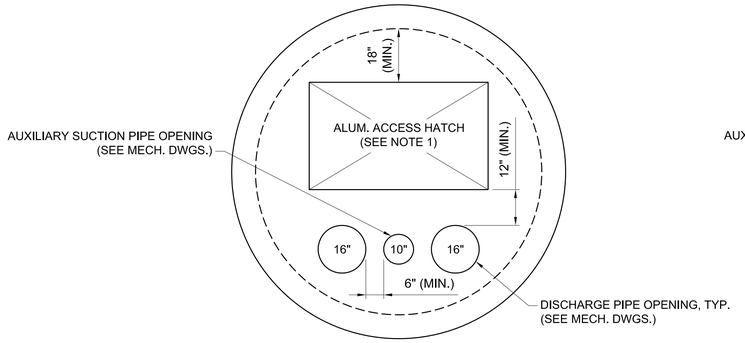
NOTES:

1. ACCESS HATCHES SHOWN ARE FOR GENERAL ARRANGEMENT REQUIREMENTS ONLY. ENGINEER TO SELECT ACCESS HATCH SIZE AND LOCATION. REFER TO SPECIFICATIONS FOR MINIMUM REQUIRED HATCH SIZES.
2. CLEARANCES SHOWN ARE MINIMUM REQUIREMENTS. CONFIRM REQUIRED PIPE SIZE OPENINGS WITH MECHANICAL DRAWINGS AND TABLE 2 ON SHEET S2.
3. SEE SHEET S2 FOR REINFORCING.



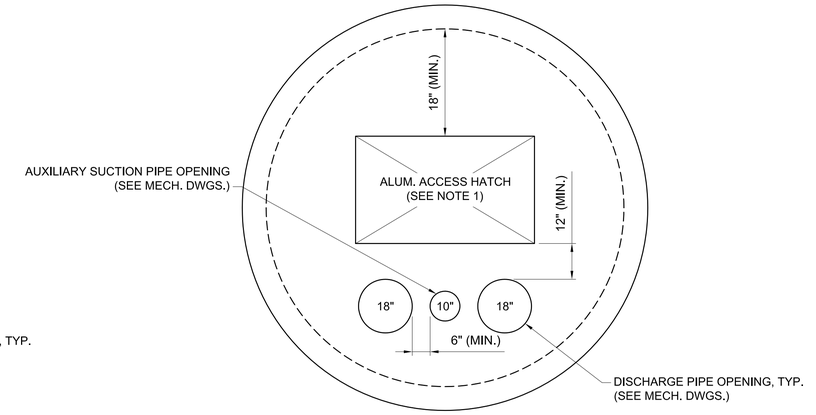
6' DUPLEX WET WELL TOP PLAN

SCALE: 1/2" = 1'-0"



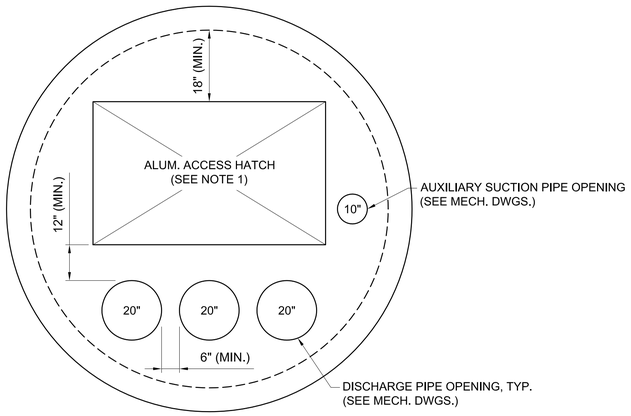
8' DUPLEX WET WELL TOP PLAN

SCALE: 1/2" = 1'-0"



10' DUPLEX WET WELL TOP PLAN

SCALE: 1/2" = 1'-0"

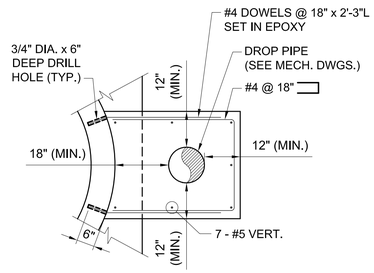


10' TRIPLEX WET WELL TOP PLAN

SCALE: 1/2" = 1'-0"

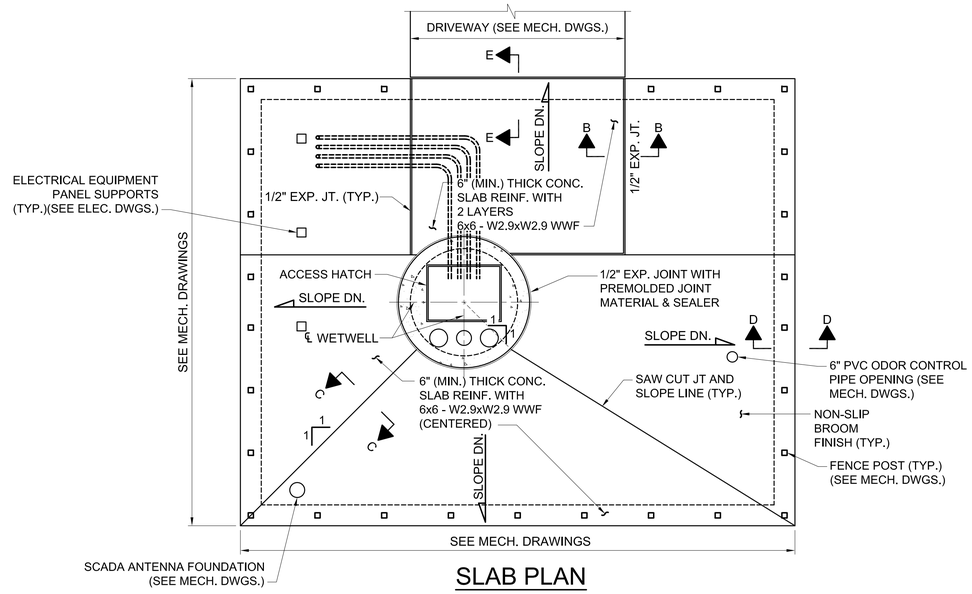
DAVID A. WILCOX
FLORIDA PE 34942
PROJECT MANAGER

SCALE			REVISIONS		HILLSBOROUGH COUNTY PUBLIC UTILITIES DEPARTMENT			WET WELL TOP SLAB GENERAL ARRANGEMENT	URS	SHEET
AS SHOWN					925 E. TWIGGS STREET / TAMPA, FLORIDA 33602	PROJECT No.:		STRUCTURAL	7650 West Courtney Campbell Causeway Suite 700 Tampa, Florida 33607 Ph: (813) 286-1711 Fax: (813) 286-6587 Florida Engineering Number: 000002	S3
						FILE No.:				3 OF 4
						DESIGNED BY:	RMA			
						DRAWN BY:	TRS			
						CHECKED BY:	DAW & WNH			
						DATE:	SEPTEMBER 2015			
	No.	DATE	DESCRIPTION	APPV'D.		SCALE:	AS SHOWN			



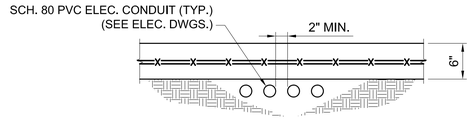
SECTION A-A

NOT TO SCALE



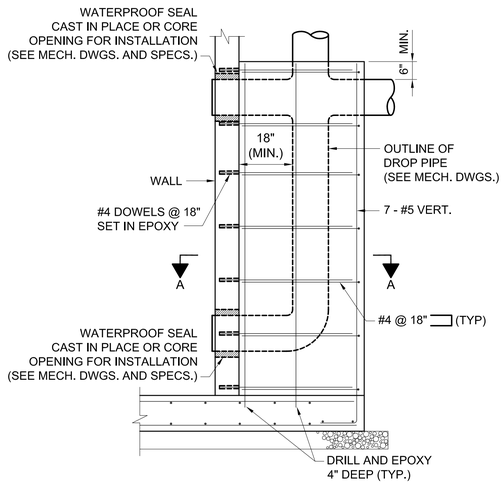
SLAB PLAN

NOTES:
1. SEE MECHANICAL DRAWINGS FOR LOCATION, SIZE AND ORIENTATION OF ALL PIPE OPENINGS AND SLAB DIMENSIONS.
2. DUPLEX PS IS SHOWN. SLAB IS THE SAME FOR TRIPLEX PS.



DRIVEWAY SLAB DETAIL WITH CONDUIT

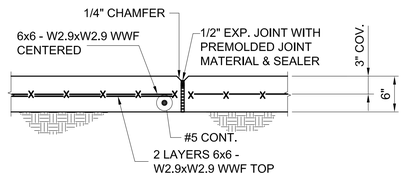
SCALE: 1" = 1'-0"



ELEVATION

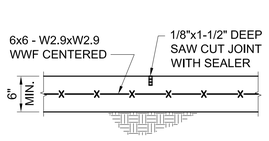
DROP CONNECTION ENCASEMENT DETAIL

NOT TO SCALE



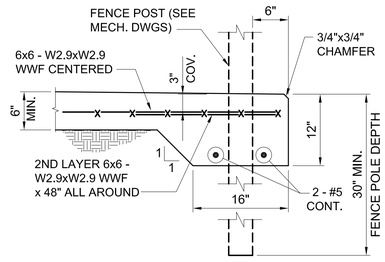
SECTION B-B

SCALE: 1" = 1'-0"



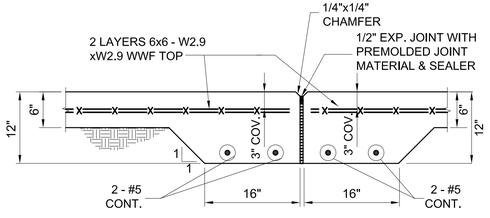
SECTION C-C

SCALE: 1" = 1'-0"



SECTION D-D

SCALE: 1" = 1'-0"



SECTION E-E

SCALE: 1" = 1'-0"

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SCALE	REVISIONS			
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HILLSBOROUGH COUNTY
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925 E. TWIGGS STREET / TAMPA, FLORIDA 33602

PROJECT No.:	
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DATE:	SEPTEMBER 2015
SCALE:	AS SHOWN

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Florida Engineering Number: 000002

SHEET
S4

WASTEWATER PUMPING STATION DESIGN PARAMETERS (FOR COUNTY-OWNED STATIONS)

WASTEWATER PUMPING STATION: ______________ (FACILITY NAME)

LOCATION: ______________ (NEAREST CROSS STREET) SECTION: ______ TOWNSHIP: ______ RANGE: ______

I. SERVICE AREA

- ☐ NORTHWEST
- ☐ CENTRAL
- ☐ SOUTH

NAME OF WWTP SERVING THIS DEVELOPMENT: ______________

II. DESIGN CAPACITY

A. AVERAGE DAILY FLOW (A.D.F.):

______	x 200 GPD/UNIT (single-family units)	=	______	G.P.D.
______	x 140 GPD/UNIT (multi-family units)	=	______	G.P.D.
______	x	=	______	G.P.D.
______	x	=	______	G.P.D.
	A.D.F TOTAL	=	______	G.P.D.

B. PEAK INFLUENT RATE (PEAK FACTOR = PER UTILITY TECHNICAL MANUAL, APPENDIX 5)

PEAK FACTOR = (PER UTILITY TECHNICAL MANUAL, APPENDIX 5)

$\frac{\text{ADF x PEAK FACTOR}}{1440} = \frac{(\quad)\times(\quad)}{1440}$ = ______ G.P.M.

C. DESIGN MINIMUM FLOW:

$\frac{\text{ADF x 0.20}}{1440} = \frac{(\quad)\times 0.20}{1440}$ = ______ G.P.M.

D. DESIGN PUMP CAPACITY (MINIMUM REQUIRED) = ______ G.P.M.

E. VELOCITY IN FORCE MAIN AT MAX. PUMPING RATE = ______ FEET/SECOND

III. WETWELL DESIGN (DUPLEX SYSTEM)

A. DESIGN CRITERIA:

1. MAXIMUM PUMP MOTOR CYCLE RATE = 6 STARTS PER HOUR
2. MAXIMUM DETENTION TIME AT MINIMUM FLOW = 30 MINUTES

B. PUMP CONTROL LEVEL SETTINGS:

1. PUMP CYCLING RATES ARE AT A MAXIMUM WHEN INFLOW EQUALS ONE-HALF THE DESIGN PUMPING RATE OF ______ (II.B.) G.P.M.
2. WETWELL VOLUME REQUIRED BETWEEN LEAD PUMP START AND PUMP SHUT OFF LEVEL =

$V = \frac{\text{CYCLE PERIOD x (1/2) PUMP RATE}}{2}$

$V = \frac{\text{10 MIN. x (1/2) (\quad) G.P.M.}}{2}$ = ______ GALLONS

3. WETWELL DIAMETER (D) = ______ FEET

WETWELL VOLUME $= \frac{\pi(D)^2 \times 7.48\ \text{GAL./C.F.}}{4} = \frac{7.48(\pi)(D)^2}{4} = \frac{7.48(\pi)(\quad)^2}{4}$ = ______ GALS./FT.DEPTH

4. WETWELL LEVEL CHANGE BETWEEN PUMP STOP AND LEAD PUMP START =

______ (III.B.2.-GAL.) / ______ (III.B.3. - GAL./FT.DEPTH) = ______ FEET DESIGN FOR: ______ INCHES

5. CONTROL ELEVATIONS:

TOP OF SLAB	ELEV.	______
INFLUENT INVERT	ELEV.	______
HIGH WATER ALARM	ELEV.	______
LAG PUMP ON	ELEV.	______
LEAD PUMP ON	ELEV.	______
ALL PUMPS OFF	ELEV.	______
BOTTOM	ELEV.	______

IV. SYSTEM CURVE CALCULATIONS

A. FRICTION LOSS:

1. PUMPING STATION PIPING

ITEM	SIZE (INCHES)	QUANTITY		FRICTION LOSS (ea.)		TOTAL
a. TEE	______	______	x	______	=	______
b. 90° ELBOW	______	______	x	______	=	______
c. CHECK VALVE	______	______	x	______	=	______
d. GATE VALVE	______	______	x	______	=	______
e. SIDE OUTLET CROSS	______	______	x	______	=	______
f. WYE	______	______	x	______	=	______
g. OTHER: ______	______	______	x	______	=	______
				TOTAL	=	______
	______ (SIZE) "	______ (TYPE)		PIPE LENGTH	=	______
				TOTAL EQUIVALENT LENGTH	=	______

2. FORCE MAIN PIPING:

ITEM	SIZE (INCHES)	QUANTITY		FRICTION LOSS (ea.)		TOTAL
a. TEE	______	______	x	______	=	______
b. 90° ELBOW	______	______	x	______	=	______
c. CHECK VALVE	______	______	x	______	=	______
d. GATE VALVE	______	______	x	______	=	______
e. SIDE OUTLET CROSS	______	______	x	______	=	______
f. WYE	______	______	x	______	=	______
g. OTHER: ______	______	______	x	______	=	______
				TOTAL	=	______
	______ (SIZE) "	______ (TYPE)		PIPE LENGTH	=	______
				TOTAL EQUIVALENT LENGTH	=	______

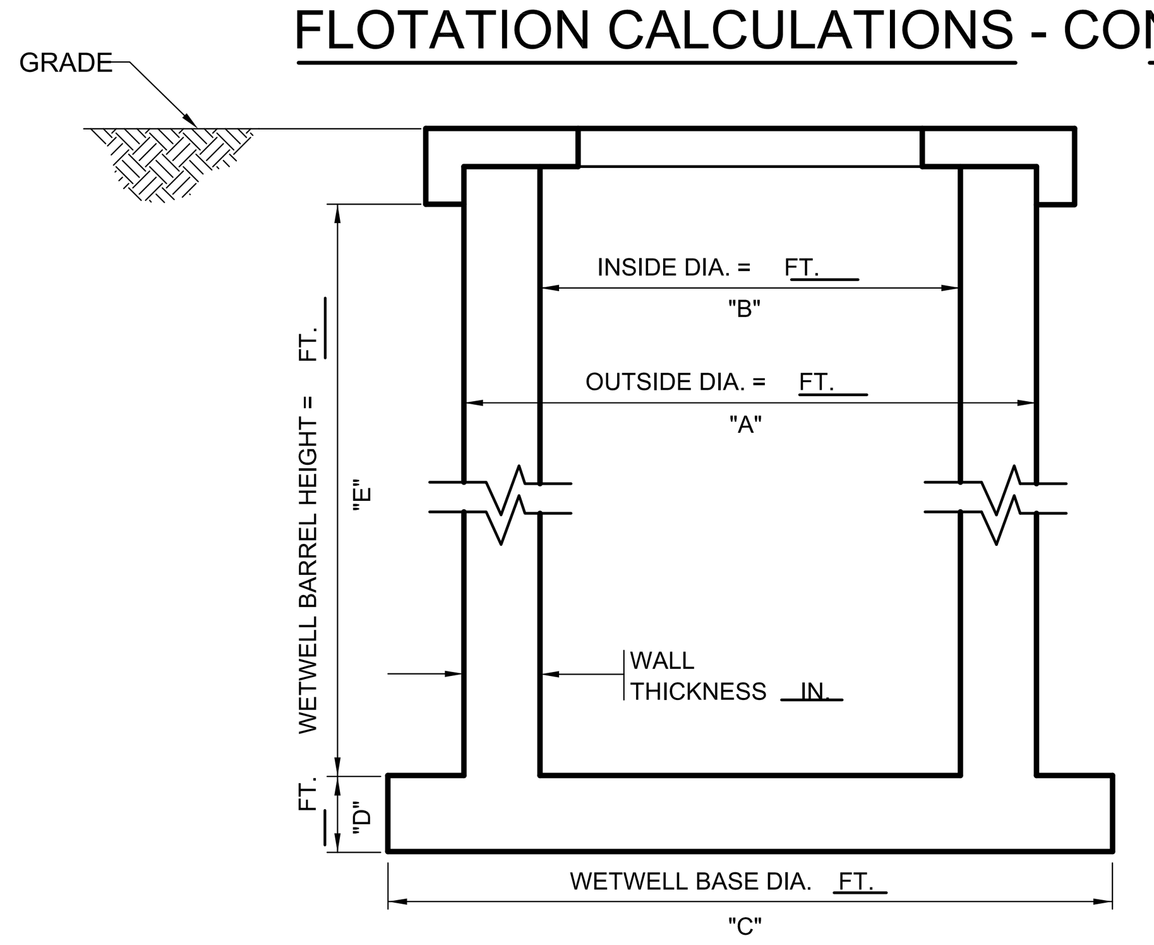
B. STATIC HEAD:

1. PIPE CENTER LINE AT DISCHARGE POINT = ELEV. ______ FT.
2. LOW WATER LEVEL (ALL PUMPS OFF) = ELEV. ______ FT.
3. TOTAL STATIC HEAD (B.1.- B.2.) = ______ FT.

C. PRESSURES AT POINT OF CONNECTION:

BEST & WORST CASE SYSTEM CURVES PROVIDED BY WATER RESOURCE SERVIES, INFRASTRUCTURE PLANNING

FLOTATION CALCULATIONS - CONCRETE WET WELL



ASSUMPTIONS:

1. CONCRETE (REINFORCED) = 150 lbs./ft.^{3}
2. SATURATED SOIL = 120 lbs./ft.^{3}
3. WATER = 62.4 lbs./ft.^{3}
4. DIMENSIONS IN FEET
5. NO WATER IN WET WELL
6. NEGLECT TOP SLAB WEIGHT
7. NEGLECT SOIL FRICTION
8. ROUND WETWELL BARREL
9. CIRCULAR WETWELL BASE
10. THE WATER TABLE IS AT GRADE

(1) BARREL WEIGHT $= (A^2 - B^2)(\pi/4)(E)(150) = [(\_\_\_)^2 - (\_\_\_)^2](\pi/4)(\_\_\_)(150) =$ ______ lb. ↓

(2) BOTTOM SLAB WEIGHT $= (C)^2(\pi/4)(D)(150) = (\_\_\_)^2(\pi/4)(\_\_\_)(150) =$ ______ lb. ↓

(3) SOIL WEIGHT $= (C^2 - A^2)(\pi/4)(E)(120-62.4) = [(\_\_\_)^2 - (\_\_\_)^2](\pi/4)(\_\_\_)(57.6) =$ ______ lb. ↓

(4) TOTAL WEIGHT = (Barrel Weight) + (Bottom Slab Weight) + (Soil Weight) = (_____) + (_____) + (_____) = ______ lb. ↓

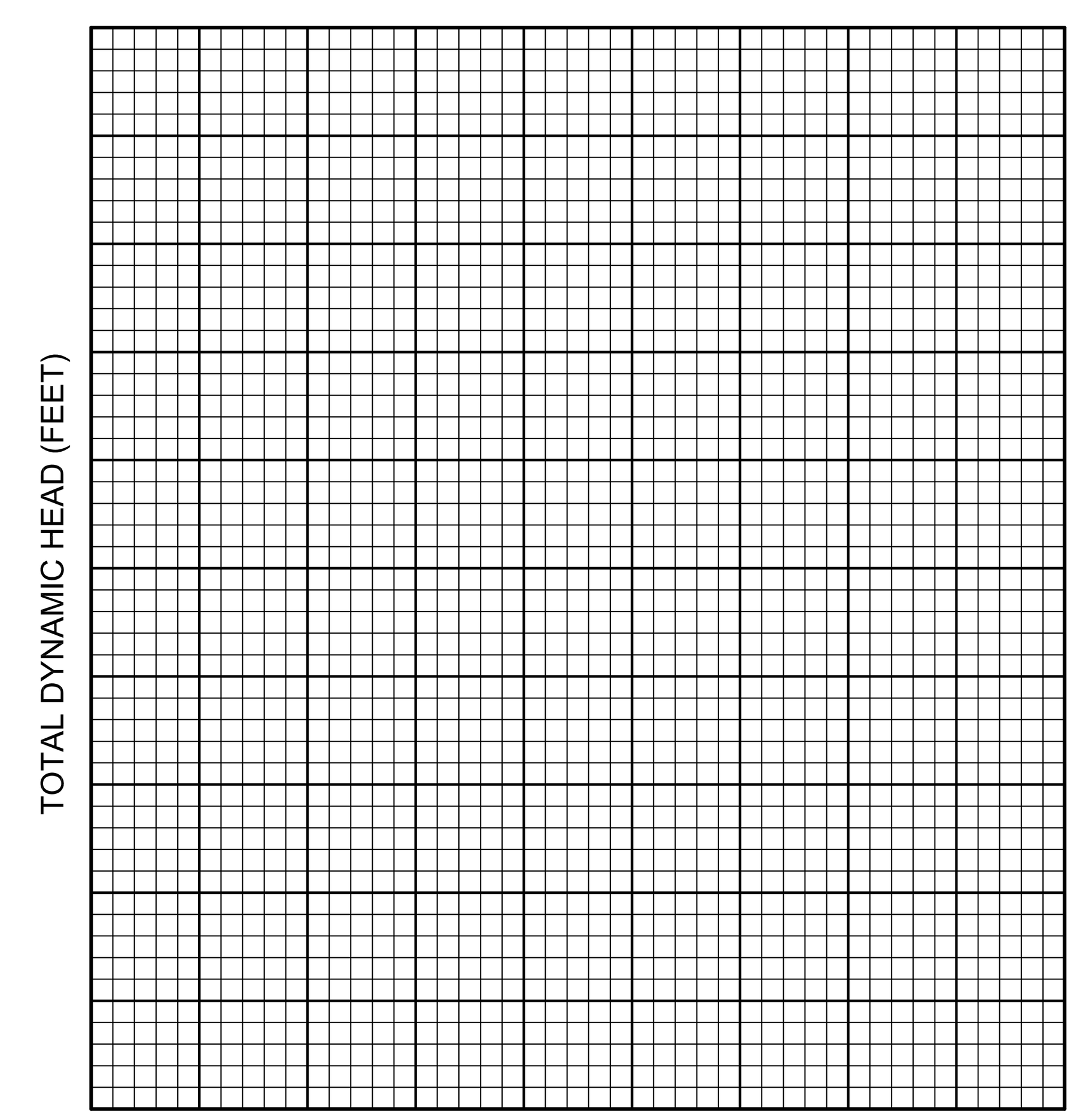
(5) WT. OF WATER DISPLACED $= [(A)^2(\pi/4)(E) + (C)^2(\pi/4)(D)](62.4)$

$= [(\_\_\_)^2(\pi/4)(\_\_\_) + (\_\_\_)^2(\pi/4)(\_\_\_)](62.4) =$ ______ lb. ↑

$\text{SAFETY FACTOR} = \frac{\text{TOTAL WEIGHT}}{\text{WT. OF WATER DISPLACED}} = \frac{(4)}{(5)} = \frac{(\quad)\ \text{lb.}\downarrow}{(\quad)\ \text{lb.}\uparrow} =$ ______

SYSTEM vs. PUMP PERFORMANCE CURVE

PUMP MANUFACTURER:		PUMP MODEL:		RPM:	HP:
GPM:	TDH:	IMPELLER DIA./NO.:	PHASE:	VOLTS:	AMPS:



SYSTEM HEAD COMPUTATION - TOTAL LOSSES IN FEET

FLOW RATE (G.P.M.)

ITEM	0	25	50	75	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450	475	500
A. FRICTION LOSS:																					
1. EQUIVALENT LENGTH PUMPING STATION PIPING: ______ L.F. OF ______ (SIZE) " ______ (TYPE) PIPE																					
2. EQUIVALENT LENGTH FORCE MAIN PIPING: ______ L.F. OF ______ (SIZE) " ______ (TYPE) PIPE																					
B. STATIC HEAD: ______ FEET																					
C. DESIGN PRESSURE AT POINT OF CONNECTION (BEST/WORST SYSTEM CURVES)																					
D. TOTAL LOSS (FEET): (BEST/WORST CASE)																					

PLANS FOR PRIVATELY-OWNED PUMPING STATIONS MUST PROVIDE THE FOLLOWING INFORMATION AS A MINIMUM REQUIREMENT

A) SITE PLAN SHOWING PUMPING STATION LOCATION AND POINT OF CONNECTION.

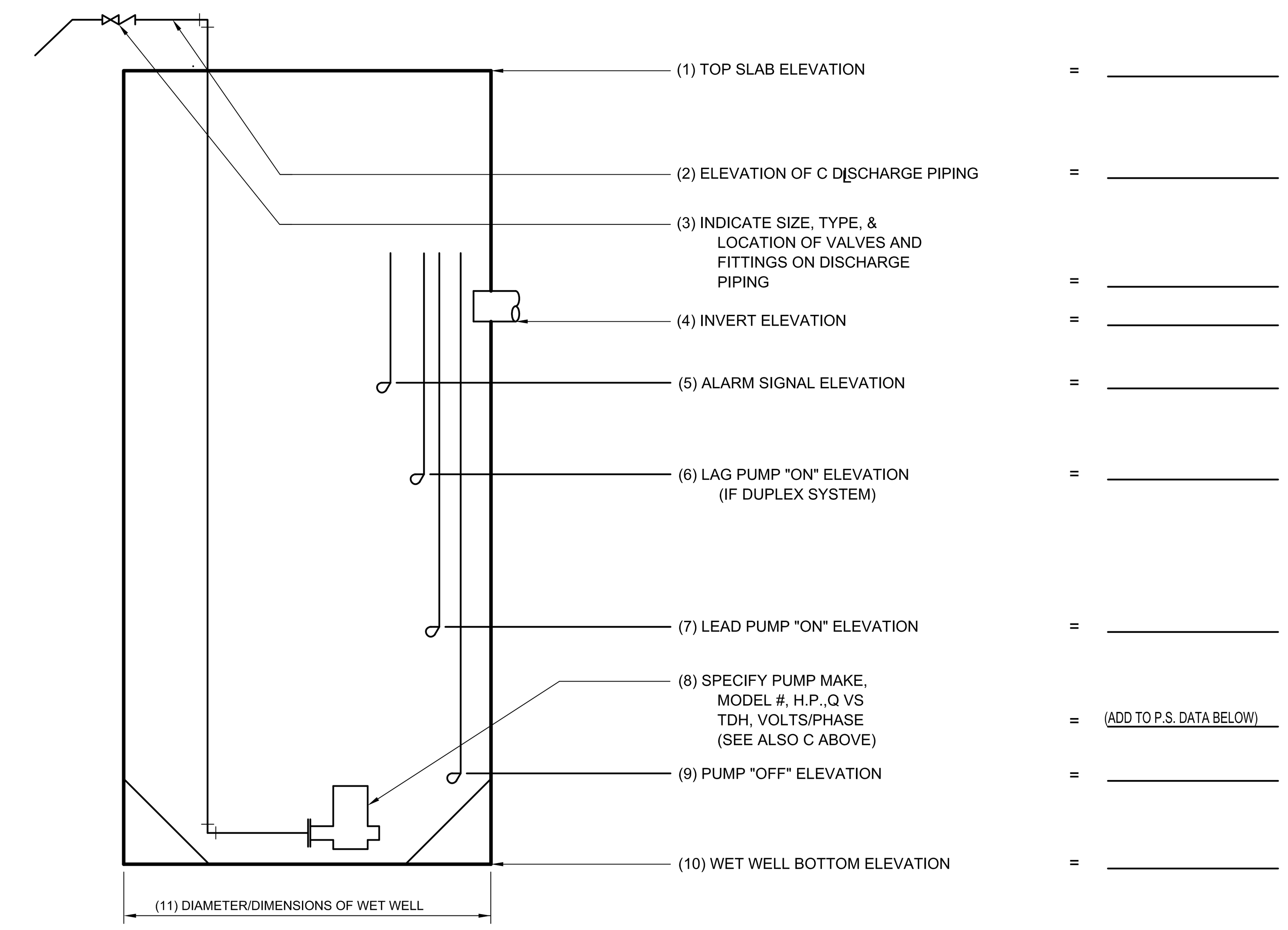
B) PLAN AND PROFILE OF PUMPING STATION.

C) SYSTEM vs. PUMP PERFORMANCE CURVE (PLOT ON GRAPH PROVIDED)

D) COPY OF MANUFACTURES PUMP PERFORMANCE CURVES.

E) PROVIDE DATA FOR ITEMS (1) THROUGH (11) AS SHOWN BELOW.

F) PUMP STATION DATA.



PUMP STATION DATA (FOR PRIVATELY-OWNED STATIONS)

DEVELOPMENT TO BE SERVED:			LOCATION (NEAREST CROSS STREET):	
SECTION:	TOWNSHIP:	RANGE:	POWER CO. POLE/PAD NO.:	
DESIGN PRESSURE AT POINT OF CONNECTION: P.S.I. x 2.31 = FEET			AVERAGE DAILY FLOW (GPD):	PEAK FLOW (GPM):
WETWELL DIAMETER (FEET):	WETWELL VOLUME (GALS./FT. DEPTH):		WETWELL DEPTH (FEET):	

NOTES:

SYSTEM HEAD VERSUS PUMP PERFORMANCE CURVES ARE TO BE SHOWN TO DETERMINE THE SYSTEM PERFORMANCE CAPABILITY AT THE FOLLOWING CONDITIONS:

A. CONVENTIONAL PUMPING STATION - FORCE MAIN (NON-MANIFOLD)

1. ONE PUMP RUNNING, IF DUPLEX STATION
2. ONE PUMP AND TWO PUMPS RUNNING, IF TRIPLEX STATION, ETC.
3. IF FORCE MAIN PROFILE RESULTS IN SIPHON, CURVES SHALL SHOW OPERATION AT START-UP (TO HIGH POINT OF PIPING) AS WELL AS FULL FLOW CONDITIONS

B. MANIFOLDED PUMPING STATIONS

ALL CONDITIONS OUTLINED UNDER (A) ABOVE, AND THE FOLLOWING ADDITIONAL CONDITIONS

1. SIMULTANEOUS OPERATION OF ALL PUMPING STATIONS ON SYSTEM (WORST CASE)
2. OPERATION WHILE ALL REMAINING STATIONS ARE OFF (BEST CASE)

C. VARIABLE SPEED PUMPING STATIONS

ALL APPLICABLE CONDITIONS UNDER (A) AND (B) ABOVE AND IN ADDITION:

1. OPERATING POINT, INCLUDING SPEED, AT PEAK, AVERAGE, AND MINIMUM FLOWS

ISSUED11/06 P. RIVERA, P.E., HILLSBOROUGH COUNTY WATER RESOURCE SERVICES

SCALE	REVISIONS			
NONE	No.	DATE	DESCRIPTION	APPV'D.

HILLSBOROUGH COUNTY WATER RESOURCE SERVICES
925 E. TWIGGS STREET / TAMPA, FLORIDA 33602

PROJECT No.:	
FILE No.:	
DESIGNED BY:	
DRAWN BY:	
CHECKED BY:	
DATE:	OCT. 2015
SCALE:	NONE

PUMP STATION DESIGN PARAMETERS

NOT VALID UNLESS EMBOSSED WITH ENGINEER'S SEAL

I hereby certify that the work contained herein was prepared under my direct supervision and complies with the requirements of Chapter 471, Florida Statutes and Chapter 61G15, F.A.C.

Signature: ______
Print Name: ______
Florida Professional Engineer's Registration Number: ______
Date ______

SHEET ___ OF ___