

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 HATCHES 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.

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WILLIAM N. HAUSHEER
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STRUCTURAL ENGINEER

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

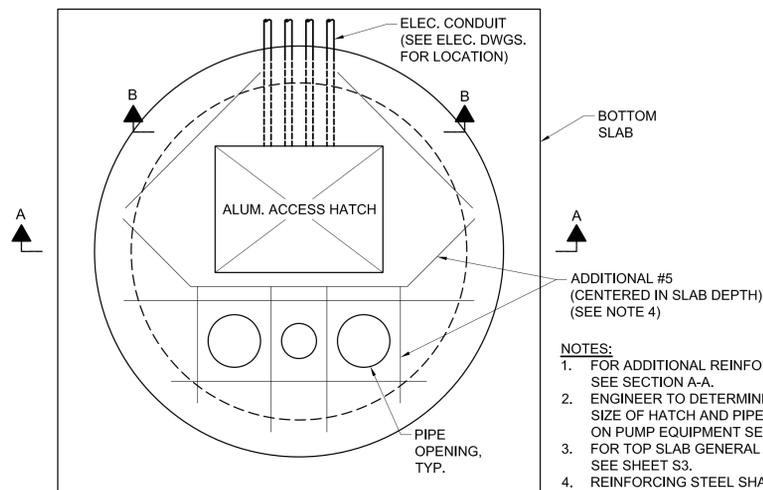


PROJECT No.:	
FILE No.:	
DESIGNED BY:	RMA
DRAWN BY:	TRS
CHECKED BY:	DAW & WNH
DATE:	SEPTEMBER 2015
SCALE:	AS SHOWN

NOTES
STRUCTURAL

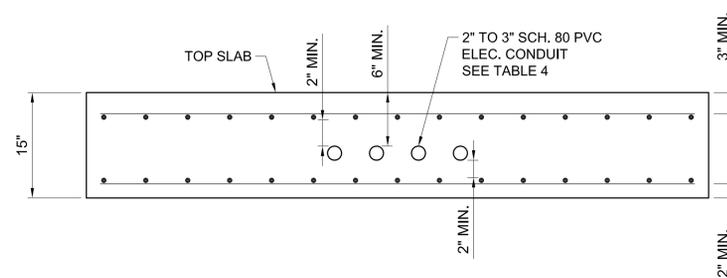


SHEET
S 1
1 OF 4



TYPICAL TOP SLAB REINFORCING PLAN

N.T.S.



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**

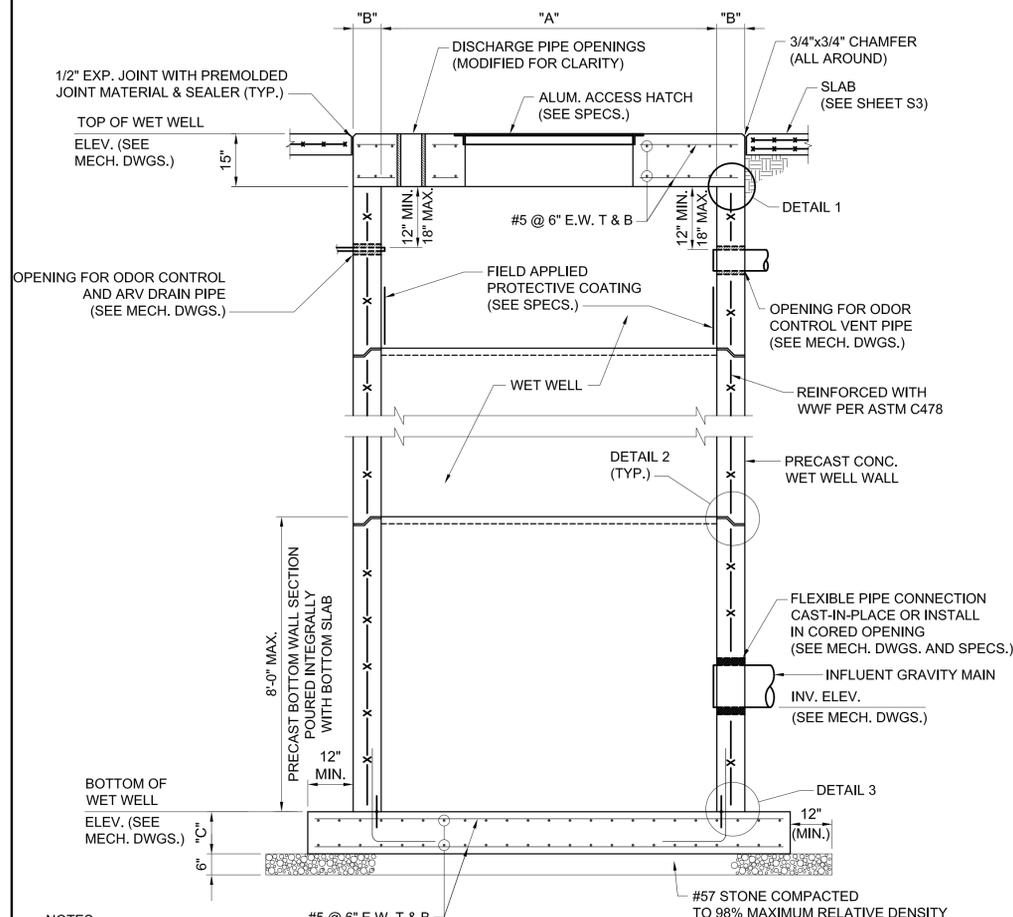
WET WELL	SLAB	REINFORCING
6"	9' - 4" SQ.	#5 @ 6" T & B EACH WAY
8"	11' - 6" SQ.	#5 @ 6" T & B EACH WAY
10"	13' - 8" SQ.	#5 @ 6" T & B EACH WAY

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

**TABLE 4
CONDUIT SIZES**

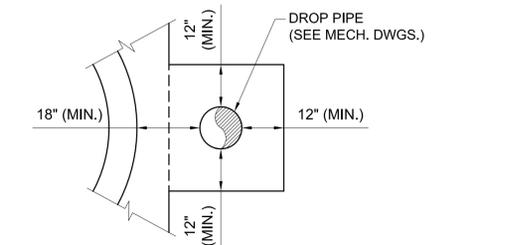
PUMP HP	CONDUIT *
3 - 20	2"
25 - 50	2 1/2"
> 50 - 100	3"

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



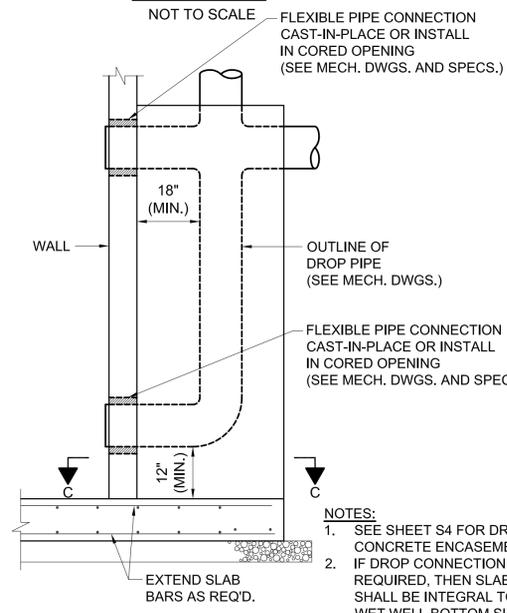
SECTION A-A

NOT TO SCALE



SECTION C-C

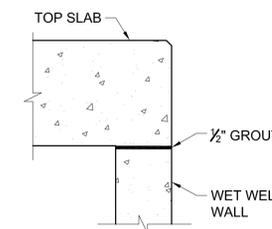
NOT TO SCALE



ELEVATION

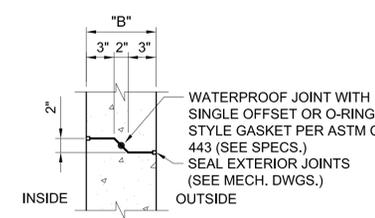
**DROP CONNECTION
BOTTOM SLAB EXTENSION DETAIL**

NOT TO SCALE



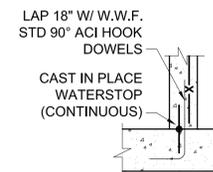
DETAIL 1

NOT TO SCALE



DETAIL 2

NOT TO SCALE



DETAIL 3

NOT TO SCALE

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

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

SCALE		REVISIONS	
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**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
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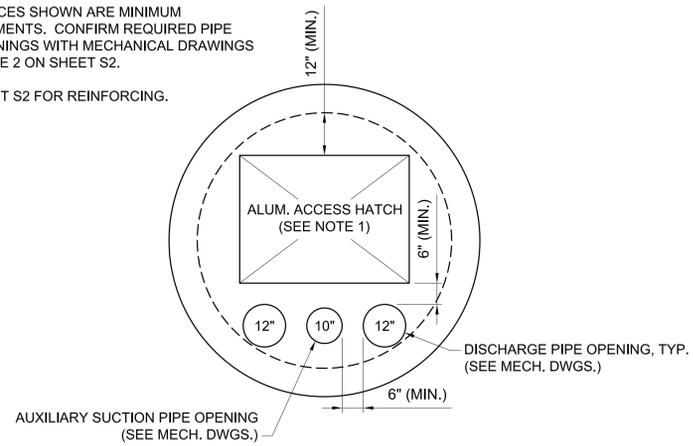
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SHEET

S2

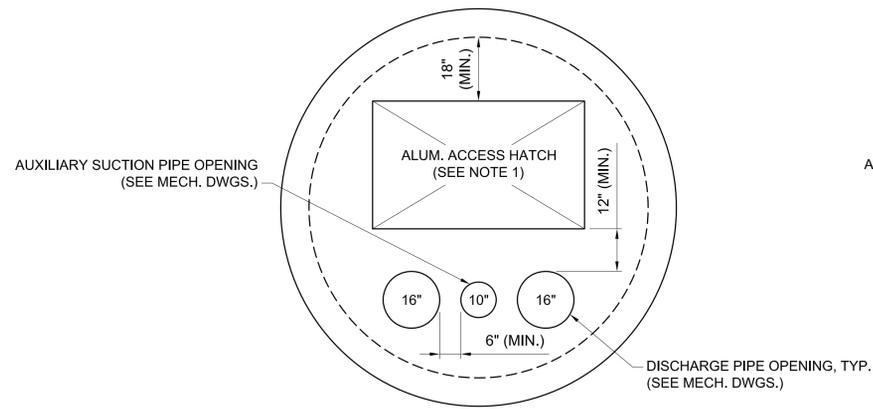
2 OF 4

- NOTES:**
- 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.
 - CLEARANCES SHOWN ARE MINIMUM REQUIREMENTS. CONFIRM REQUIRED PIPE SIZE OPENINGS WITH MECHANICAL DRAWINGS AND TABLE 2 ON SHEET S2.
 - SEE SHEET S2 FOR REINFORCING.



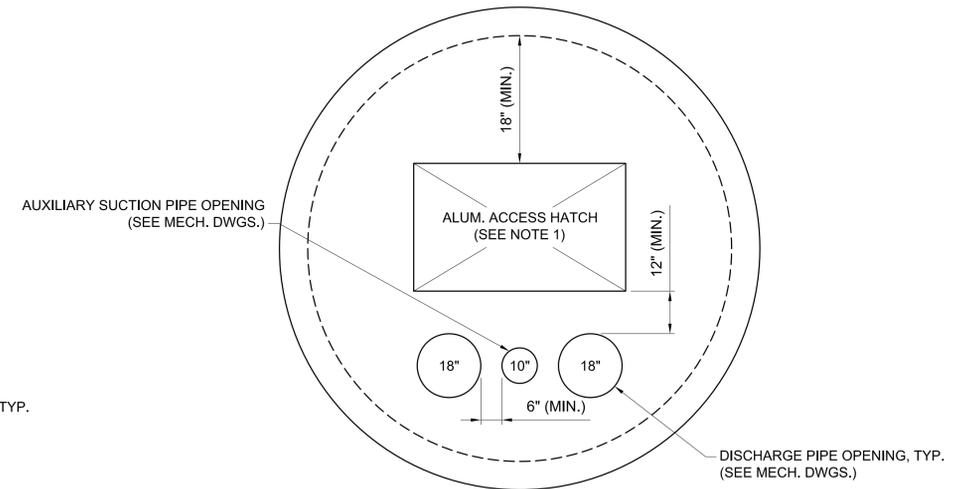
6' DUPLEX WET WELL TOP PLAN

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



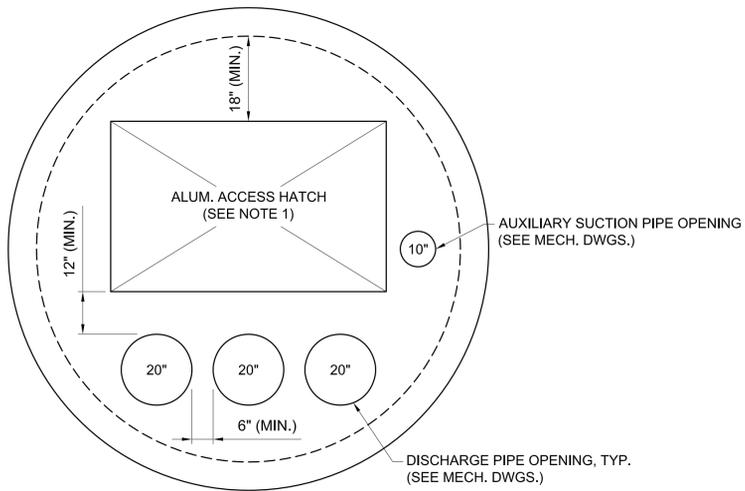
8' DUPLEX WET WELL TOP PLAN

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"

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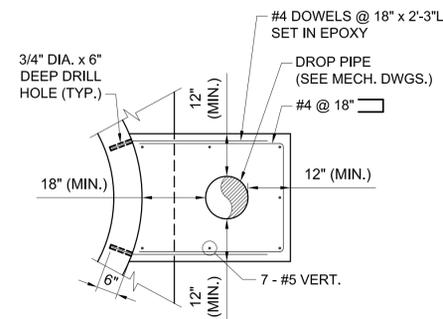
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**WET WELL TOP SLAB GENERAL ARRANGEMENT
STRUCTURAL**

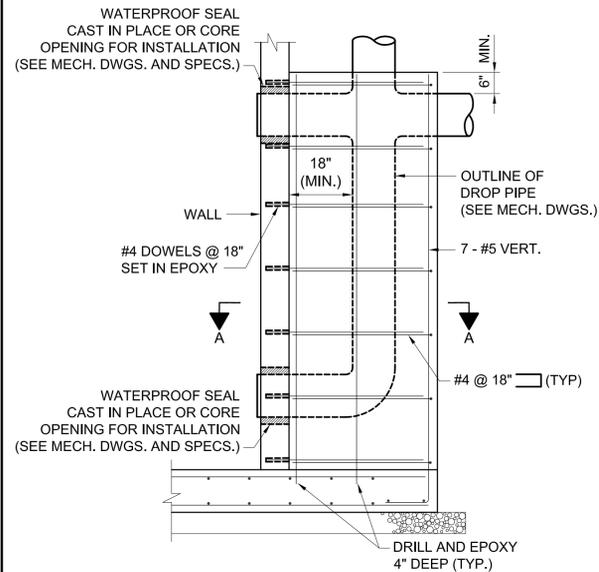


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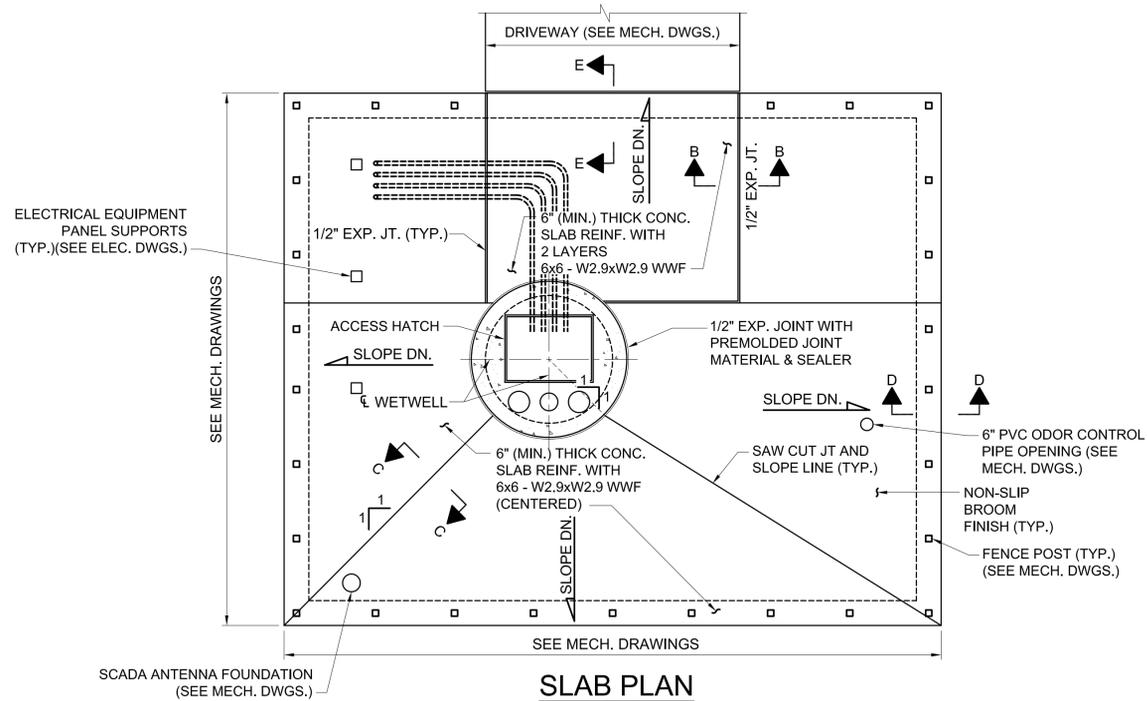
SHEET
S3
3 OF 4



SECTION A-A
NOT TO SCALE

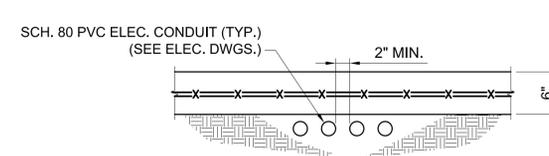


ELEVATION
DROP CONNECTION
ENCASMENT DETAIL
NOT TO SCALE



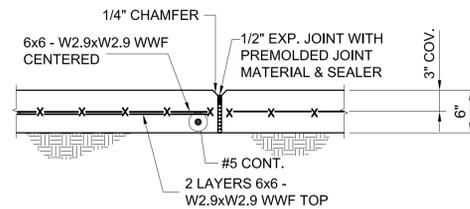
SLAB PLAN

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

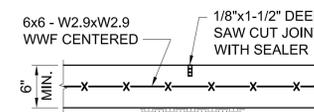


DRIVEWAY SLAB DETAIL WITH CONDUIT

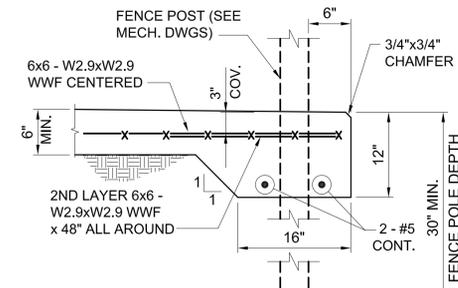
SCALE: 1" = 1'-0"



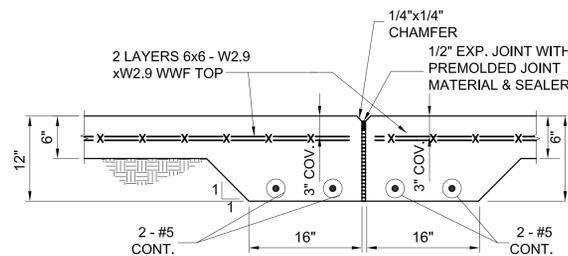
SECTION B-B
SCALE: 1" = 1'-0"



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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			APPV'D.



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SITE PLAN, SECTIONS AND DETAILS
STRUCTURAL



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SHEET
S4
4 OF 4

**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.
 _____ 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)
 ADF x PEAK FACTOR = () x () = _____ G.P.M.
 1440 1440

C. DESIGN MINIMUM FLOW:
 ADF x 0.20 = () x 0.20 = _____ G.P.M.
 1440 1440

D. DESIGN PUMP CAPACITY (MINIMUM REQUIRED) = _____ G.P.M.
 E. VELOCITY IN FORCE MAIN AT MAX. PUMPING RATE = _____ FEET/SECOND

III. WETWELL DESIGN (DUPLIX 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 _____ G.P.M.
 2. WETWELL VOLUME REQUIRED BETWEEN LEAD PUMP START AND PUMP SHUT OFF LEVEL =

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

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

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

4. WETWELL LEVEL CHANGE BETWEEN PUMP STOP AND LEAD PUMP START =
 $\frac{(\text{III.B.2. - GAL.})}{(\text{III.B.3. - GAL./FT. DEPTH})} = \text{_____ FEET}$ 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 = _____				
PIPE LENGTH = _____				
TOTAL EQUIVALENT LENGTH = _____				

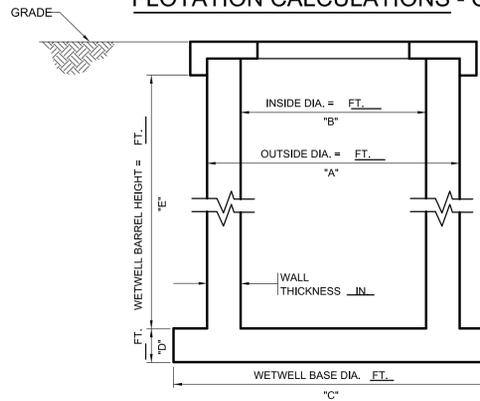
2. FORCE MAIN PIPING:

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 = _____				
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 SERVICES, INFRASTRUCTURE PLANNING

FLOTATION CALCULATIONS - CONCRETE WET WELL



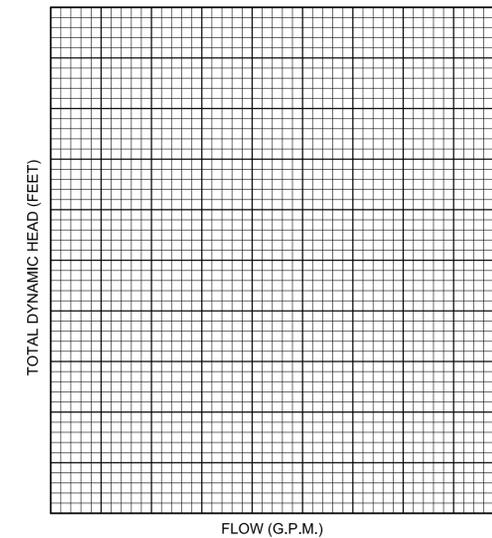
- ASSUMPTIONS:
 1. CONCRETE (REINFORCED) = 150 lbs./ft.³
 2. SATURATED SOIL = 120 lbs./ft.³
 3. WATER = 62.4 lbs./ft.³
 4. DIMENSIONS IN FEET
 5. NO WATER IN WET WELL
 6. NEGLECT TOP SLAB WEIGHT
 7. NEGLECT SOIL FRICTION
 8. ROUND WETWELL BARREL
 9. CIRCULAR WETWELL BASE
 10. THE WATER TABLE IS AT GRADE

(1) BARREL WEIGHT = (A² - B²) (π/4) (E) (150) = ()² - ()² (π/4) () (150) = _____ lb. ↓
 (2) BOTTOM SLAB WEIGHT = (C)² (π/4) (D) (150) = ()² (π/4) () (150) = _____ lb. ↓
 (3) SOIL WEIGHT = (C² - A²) (π/4) (E) (120-62.4) = ()² - ()² (π/4) () (57.6) = _____ lb. ↓
 (4) TOTAL WEIGHT = (Barrel Weight) + (Bottom Slab Weight) + (Soil Weight) = () + () + () = _____ lb. ↓
 (5) WT. OF WATER DISPLACED = ((A)² (π/4) (E) + (C)² (π/4) (D)) (62.4) = ()² (π/4) () + ()² (π/4) () (62.4) = _____ lb. ↓

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

SYSTEM vs. PUMP PERFORMANCE CURVE

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

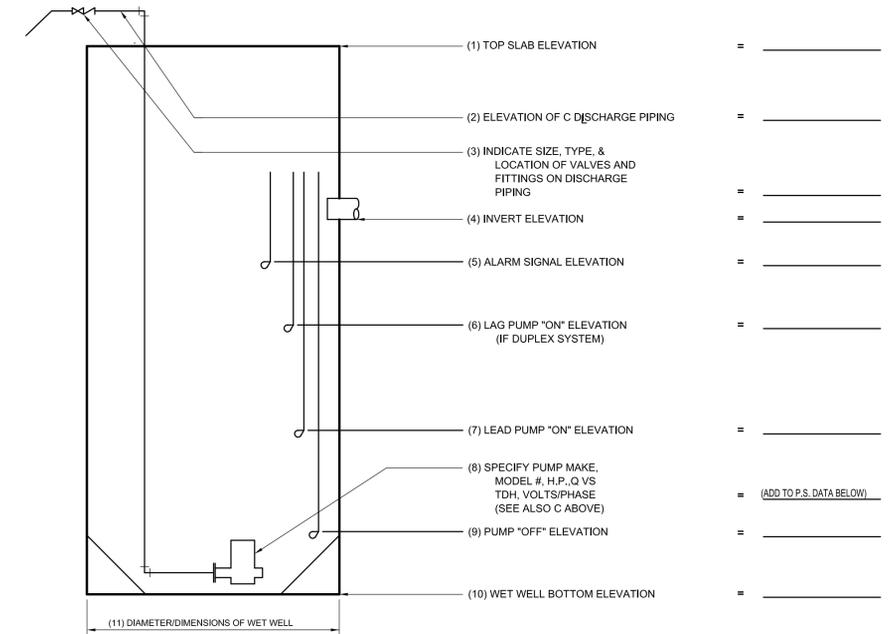


SYSTEM HEAD COMPUTATION - TOTAL LOSSES IN FEET

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 _____ PIPE																						
2. EQUIVALENT LENGTH FORCE MAIN PIPING:																						
L.F. OF _____ 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 MANUFACTURERS 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)

- ONE PUMP RUNNING, IF DUPLEX STATION
- ONE PUMP AND TWO PUMPS RUNNING, IF TRIPLEX STATION, ETC.
- 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

- SIMULTANEOUS OPERATION OF ALL PUMPING STATIONS ON SYSTEM (WORST CASE)
- 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:

- OPERATING POINT, INCLUDING SPEED, AT PEAK, AVERAGE, AND MINIMUM FLOWS

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