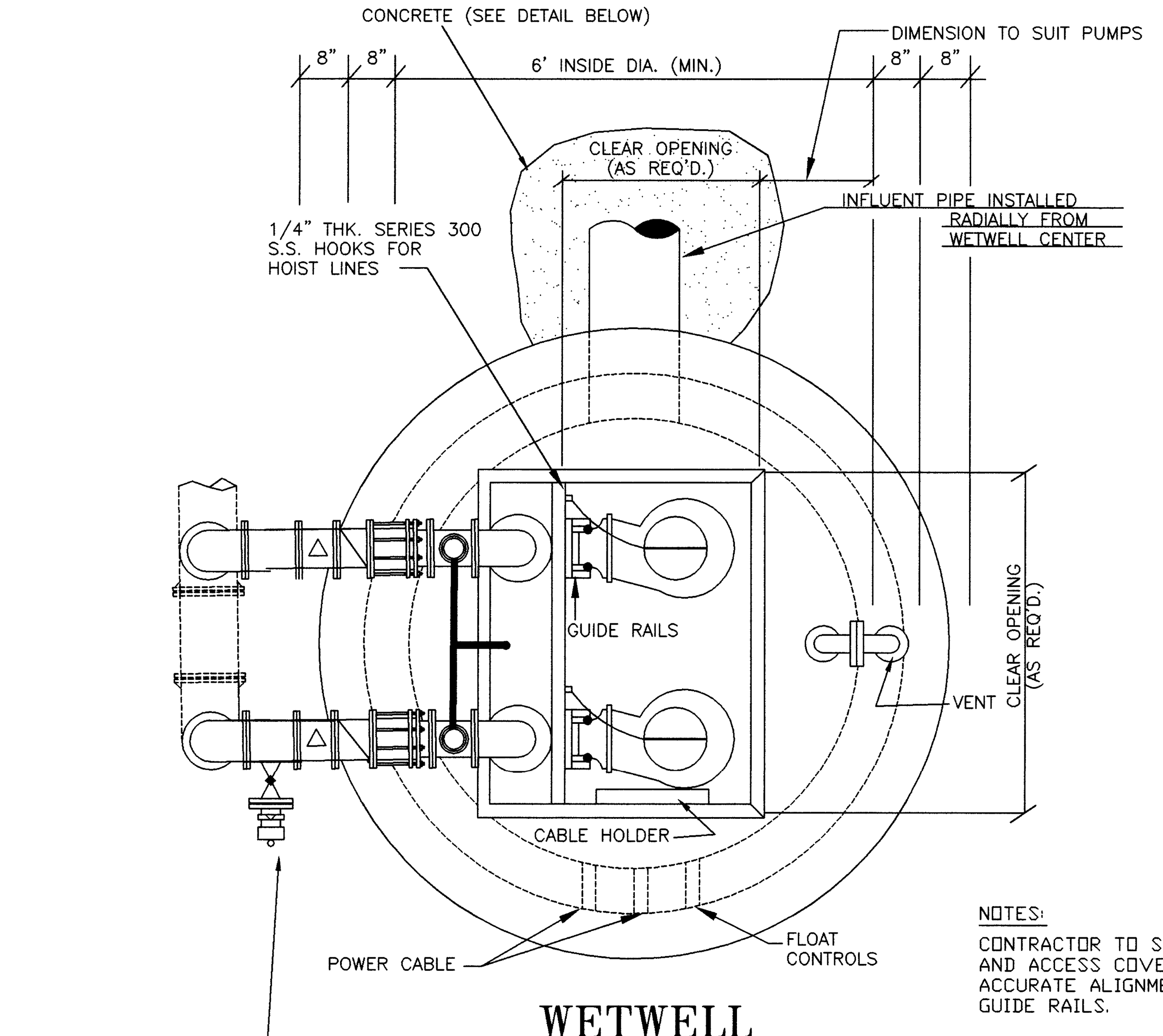
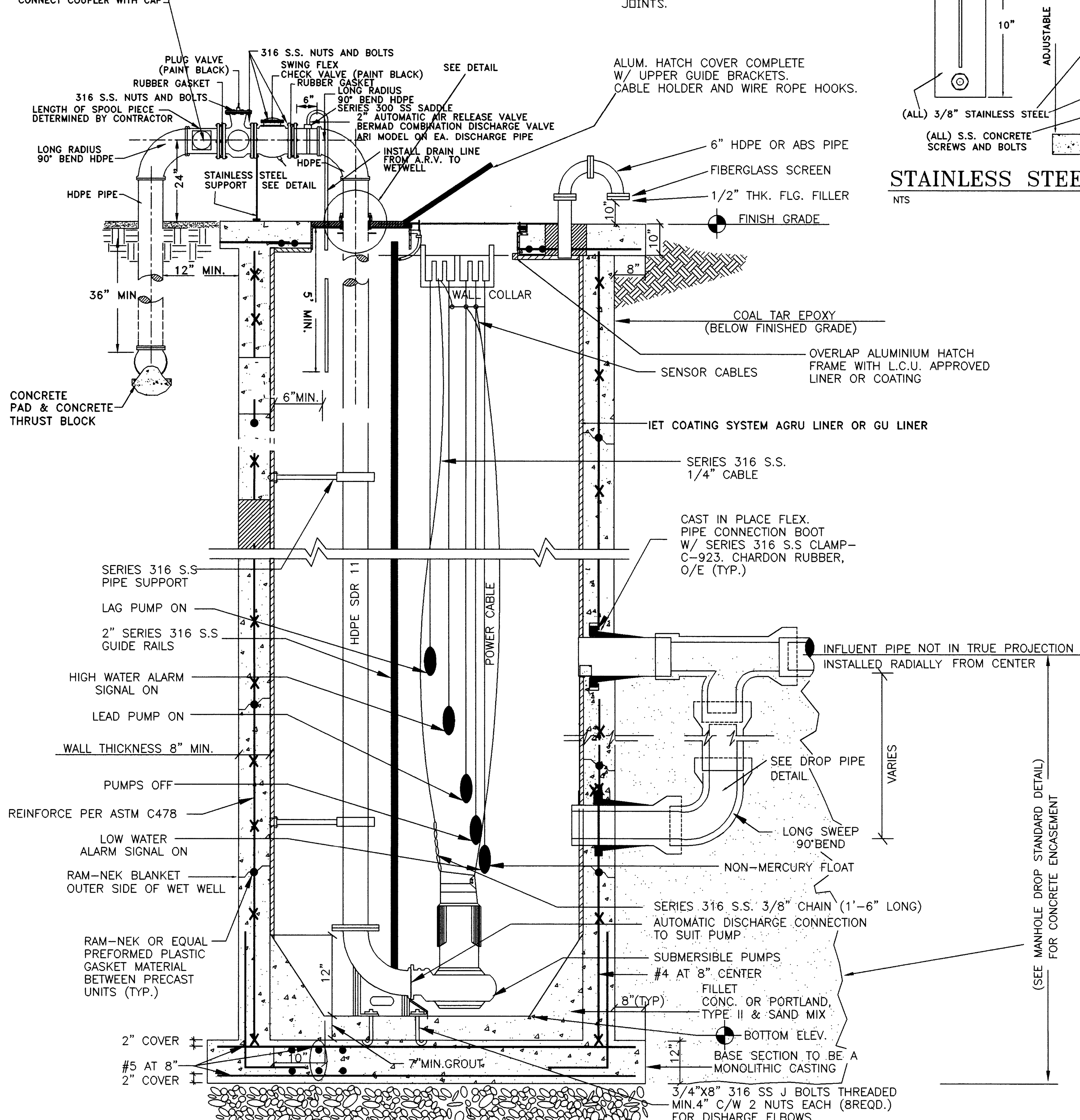


WETWELL PLAN
N.T.S.

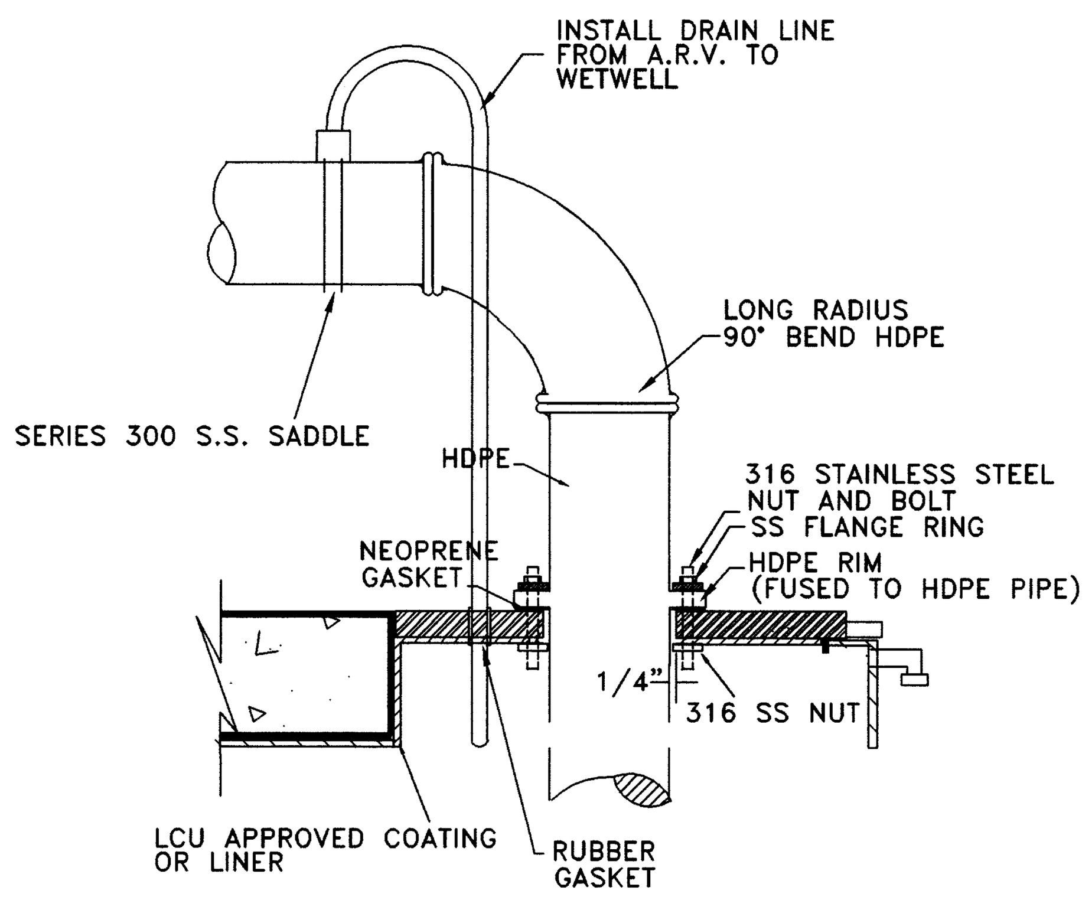
NOTES:
CONTRACTOR TO SET PUMPS AND ACCESS COVER TO ENSURE ACCURATE ALIGNMENT OF GUIDE RAILS.

CONDUIT FOR PUMP POWER CABLES & FLOAT SWITH CABLES, PLACEMENT IS TO BE DETERMINED BY LOCATION OF CONTROL PANEL.

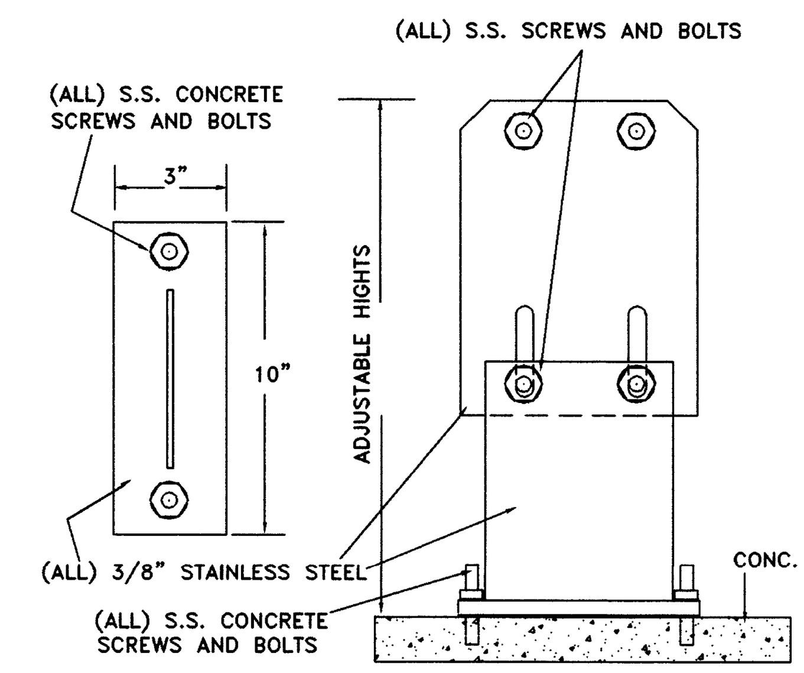
BELOW GROUND PIPING TO BE M.J. FITTINGS WITH RESTRAINED JOINTS.



SECTION
N.T.S.



DETAIL
NTS

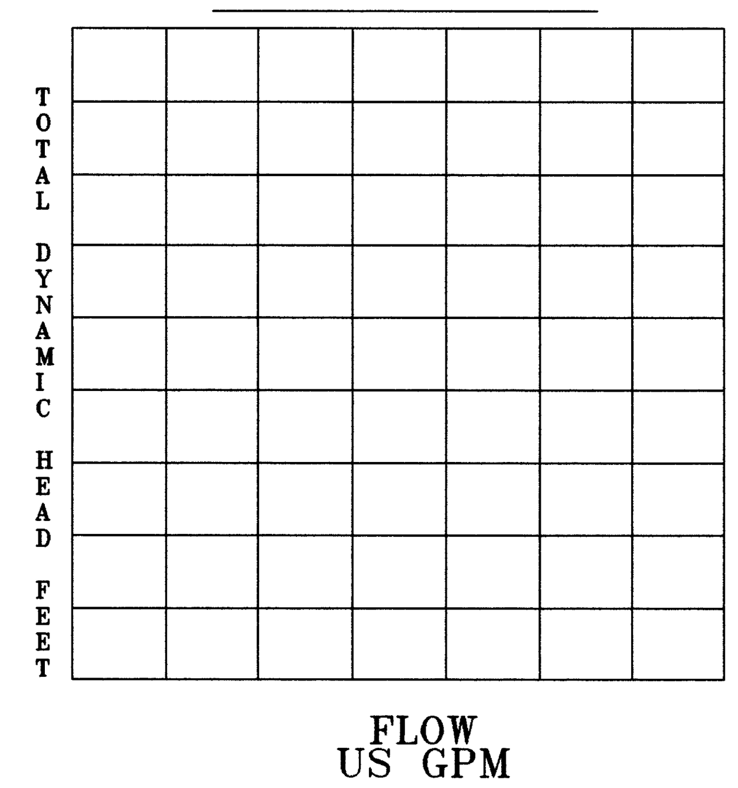


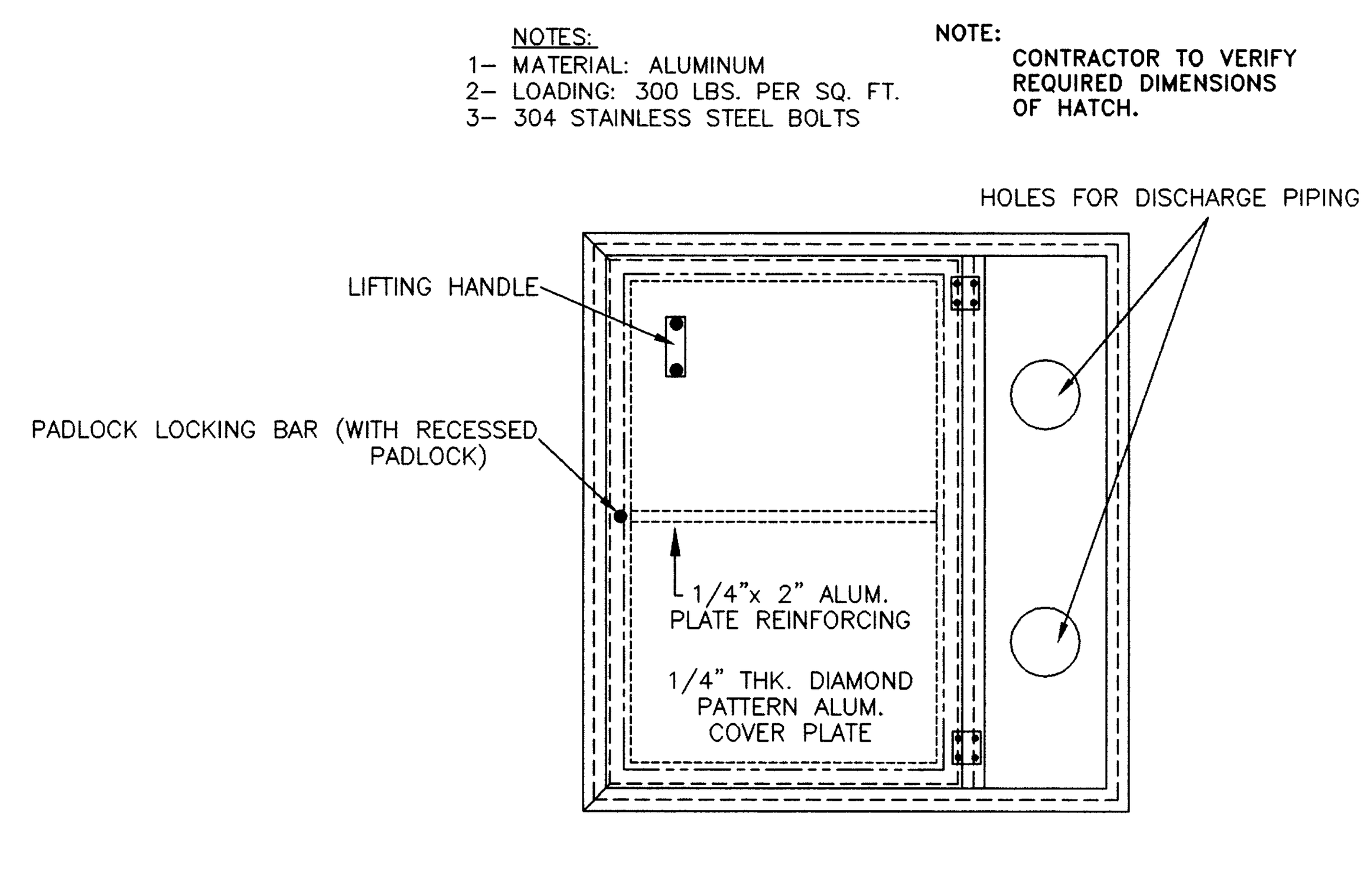
STAINLESS STEEL PIPE SUPPORT
NTS

NUMBER OF PUMPS	# 1	# 2	
PUMP MANUFACTURER			
PUMP MODEL NUMBER			
IMPELLER NUMBER			
TYPE OF PUMP			
DESIGN CAPACITY PER PUMP			(GPM)
TOTAL DYNAMIC HEAD			(FEET)
SHUT-OFF HEAD			(FEET)
DESIGN SPEED			(PRM)
MIN. HORSEPOWER PER PUMP			(HP)
VOLTS			(VOLTS)
PHASE POWER			(PH)
PUMP DISCHARGE SIZE			(INCHES)
DIAMETER RISER PIPE			(INCHES)
PUMP ON ELEVATION			(FEET)
HIGH WATER ALARM			(FEET)
PUMP OFF ELEVATION			(FEET)
DIAMETER PIPE AFTER RISER			(INCHES)
DIAMETER WETWELL (I.D.)			(FEET)
TOP OF WETWELL ELEVATION			(FEET)
BOTTOM OF WETWELL ELEVATION			(FEET)
INFLUENT GRAVITY PIPE ELEVATION			(FEET)

	BASIS OF DESIGN		
	ADF (gpm)	PHF (gpm)	EDU (1 EDU=250 gpd)
EXISTING			
INTERIM			
FUTURE			

PUMP CURVE





WETWELL ACCESS HATCH
N.T.S.

NOTES:

1. SERIES 316 STAINLESS STEEL SHALL BE USED IN THE WETWELL AND VALVE ASSEMBLY FOR FLANGE, BOLTS, BRACKETS, GUIDE RAILS AND OTHER HARDWARE. CONTROL PANEL STRUCTURE SHALL BE NEMA 4X 304 STAINLESS STEEL HARDWARE.
2. EXTERIOR COATING SHALL BE KOPPERS, O/E, 300 M COAL TAR EPOXY HAVE 34–35% EPOXY RESIN BY WEIGHT. THE FIRST COAT SHALL BE RED AND THINNED AND THE TOP COAT(S) SHALL BE BLACK. TOTAL DRY FILM THICKNESS SHALL BE 18 MILS MIN. CURE TIME: 12 TO 24 HOURS. APPLICATION BY SPRAY OR BRUSH (ROLLERS NOT ACCEPTED) TOUCH UP DISTURBED AREAS IN FIELD.
3. THE CONTRACTOR SHALL FURNISH MASTER SERIES 2001 PADLOCKS WITH TWO (2) KEYS FOR FENCE GATES, PUMP CONTROL PANEL, INTERFACE PANEL ACCESS HATCHES, AND DISCONNECT SWITCH.
4. ALL CONCRETE SHALL BE TYPE II CEMENT.
5. CONTRACTOR HAS THE OPTION OF USING A CAST IN–PLACE OR PRECAST STRUCTURE. PROVIDE SHOP DRAWINGS FOR ENGINEER REVIEW. STRUCTURES SHALL BE LIMITED TO 6'–0" MAX.SECTIONS OF 12' DIA. REINFORCED CONCRETE PIPE, IN ACCORDANCE WITH ASTM C–478, WALL THICKNESS, ASTM C–76, WALL 'B'. WHENEVER POSSIBLE, NO OPENING SHALL BE WITHIN 12" OF THE END OF ANY SECTION.
6. SEE PUMPING STATION DATA TABLES FOR DATA ON SPECIFIC ELEVATIONS AND DIAMETERS.
7. DISTANCE BETWEEN PUMPS SHALL BE SET BY MANUFACTURER'S RECOMMENDATIONS OR THE DISTANCE BETWEEN DISCHARGE PIPING, WHICHEVER IS GREATER.
8. DISCHARGE PIPE SHALL BE PARALLEL TO EACH OTHER.
9. ALARMS TO NON–LATCHING. ALARMS TO CLEAR AUTOMATICALLY AFTER ALARM CONDITION TERMINATED.
10. DURING INSTALLATION, THE CONTRACTOR SHALL MAINTAIN THE GROUND WATER ELEVATION BELOW THE BOTTOM OF THE WETWELL UNTIL FULLY BACKFILLED AND COMPACTED TO AVOID FLOATATION.
11. ALARM LIGHT TO BE 40 WATT INCAND. WITH RED GLOBE AND PROTECTIVE CAGE AROUND GLOBE.
12. SERVICE KEY SWITCH SHALL BE DPDT KEY SWITCH, OSLO MODEL KI–201–S1S1N1 WITH KEY 0004,OR APPROVED EQUAL.
13. INSTALLATION OF COVER, PUMP ANCHOR BOLTS, GUIDE RAILS, ETC. MUST BE COORDINATED WITH THE DETAILS AND SPECIFICATIONS AS RECOMMENDED BY THE MANUFACTURER.
14. THE ELECTRIC SERVICE WIRING TO THE PUMP STATION CONTROL PANEL SHALL BE SIZED BY THE ELECTRICAL CONTRACTOR TO PROVIDE A VOLTAGE DROP NOT GREATER THAN 5% OF THE LINE VOLTAGE FROM POWER COMPANY WHEN ALL PUMPS ARE AT MAXIMUM START UP LOAD.
15. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE FINAL LOCATIONS OF TRANSFORMER AND ELECTRICAL SERVICE CONDUIT.
16. PAINT ALL ABOVE GROUND PLUG VALVES, CHECK VALVES, KAMLOCK BY–PASS VALVES, BLACK
17. THE CONTRACTOR SHALL PROVIDE COMPLETE ELECTRICAL SERVICE, COST OF POWER SERVICE MUST BE INCLUDED IN THE CONSTRUCTION COST.
18. IF A BUBBLER OR ULTRASONIC PUMP LEVEL CONTROL SYSTEM IS REQUIRED, THE CONTRACTOR SHALL COORDINATE WITH THE LEVEL CONTROL SYSTEM SUPPLIER FOR THE REQUIREMENTS AND INSTALLATION NEEDS.
19. 3/4" x 8" 316 S.S. J BOLTS THREADED MIN. 4" C/W 2 NUTS EACH, FOR DISCHARGE ELBOWS. CAST BOLTS INTO BOTTOM GROUT.
20. CONTRACTOR SHALL ENSURE THAT, WETWELL IS LEAK FREE PRIOR TO APPLICATION OF THE LINER OR COATING SYSTEM. THE FOLLOWING LINER OR COATING SYSTEM ARE ACCEPTABLE.
    - IET COATING SYSTEM
    - GU LINER
    - AGRU LINER
21. IF THE "IET" COATING SYSTEM IS SELECTED, ALL INTERIOR SURFACES OF WETWELL SHALL BE LINED WITH AN "IET" GAS IMPERVIOUS SYSTEM FROM TOP TO BOTTOM. WORK SHALL BE PERFORMED BY A "IET" LICENSED APPLICATOR. WET WELL SHALL BE CLEANED AND COATED ACCORDING TO "IET" MANUFACTURER SPECIFICATIONS. WORK INCLUDES BUT IS NOT LIMITED TO:
    A. CLEAN AND REMOVE LOOSE MATERIAL WITH PRESSURE WASHING AT 5,000 PSI,
    B. VACUUM CLEAN BOTTOM OF STATION,
    C. ABRASIVE BLAST CONCRETE WITH BLACK BEAUTY STEEL SLAG TO REMOVE ANY LOOSE OR CORROSION BYPRODUCTS,
    D. CLEAN AND REMOVE DUST MATERIAL WITH PRESSURE WASHING FOR MAXIMUM ADHESION,
    E. BLOW DRY CONCRETE AT 250 CFM WITH 120 PSI,
    F. CHECK FOR WATER LEAKS, REPAIR LEAKS WITH AVANTI MULTI GROUT, AV–202 OR EQUAL.
    G. APPLY "IET" COATING AT THREE (3) DIFFERENT INTERVAL COATINGS.TOTAL THICKNESS SHALL BE 125 MLS,
    H. IET COATING SHALL BE APPLIED IN ENTIRE WETWELL, WALLS AND BOTTOM.
    I. OVERLAP "IET" COAT ONTO INSIDE OF ALUMINUM HATCH FRAME
    J. PROVIDE A FIVE (5) YEAR UNLIMITED WARRANTY ON ALL WORKMANSHIP AND "IET" PRODUCT FOR CORROSION PROTECTION OF THE STRUCTURE.
22. IF A LINER SYSTEM IS SELECTED, INSTALL PER MANUFACTURERS RECOMMENDATION, AND PROVIDE A FIVE (5) YEAR UNLIMITED WARRANTY ON ALL WORKMANSHIP, AND PRODUCT FOR CORROSION PROTECTION OF THE STRUCTURE.
23. THE TOP OF WET WELL SLAB ELEVATION SHALL MEET THE 100 YR FLOOD PLAIN ELEVATION IF AVAILABLE OR THE HIGHEST SITE ELEVATIONS PLUS 2 FEET, WHICHEVER IS HIGHER
24. WETWELL ACCESS HATCH INTRUSION SWITCH SHALL BE STERLING INDUSTRIAL CONTROLS PART NO. HTS–50 OR LATEST CORROSION RESISTANT PART UPGRADE.
25. PROVIDE APPROPRIATELY SIZED TRANSFORMER TO STEP DOWN VOLTAGE TO 120V TO PROVIDE A MINIMUM OF 20 AMP CIRCUIT IN THE RECEPTACLE
26. ALL PLUG VALVES MUST HAVE INTERNAL 2 PART EPOXY COATING TO A MIN. OF 20 MILS.
27. 4 FT. DIAMETER WETWELL IS ALLOWED FOR GRINDER PUMP STATION.

ABBREVIATIONS

ABS	ACRYLONITILE BUTADIENE STYRENE	PiCV	PINCH CHECK VALVE
BaCV	BALL CHECK VALVE	PV	PLUG VALVE
DI	DUCTILE IRON	PVC	POLYVINYL CHLORIDE
HFAC	HARNESSED FLANGED ADAPTOR COUPLING	SS	STAINLESS STEEL

DRAWN	REMARKS	DATE	DRAWN: V.M. / D.R.
			DATE: 02/22/00
			SCALE: NTS
FILE: S:\UTILS\ENGR\ACAD\DETAILS\SHEET44B.DWG			

LEE COUNTY
SOUTHWEST FLORIDA

ENVIRONMENTAL SERVICES
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STANDARD DETAIL NO. 9.44B
PUMP STATION DETAIL
USING ABOVE GROUND
DISCHARGE PIPING

SHEET: 1 OF 3