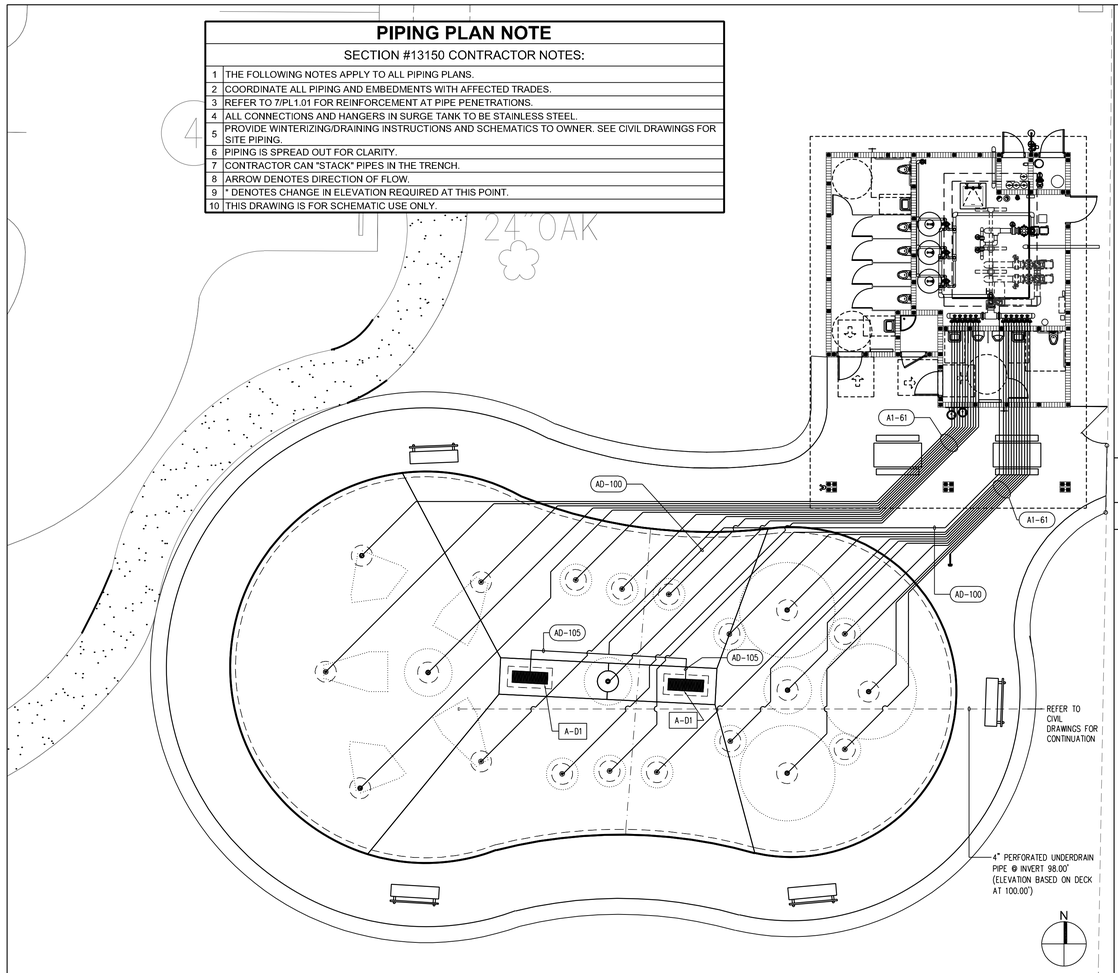
PIPING PLAN NOTE

SECTION #13150 CONTRACTOR NOTES:

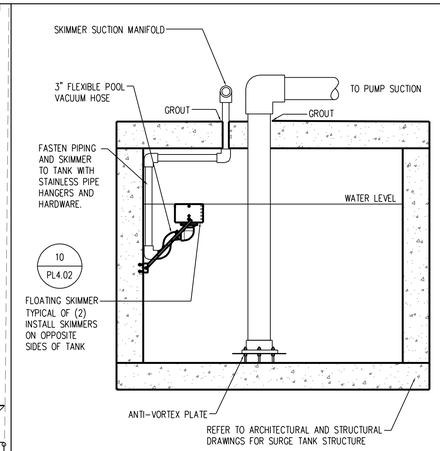
1	THE FOLLOWING NOTES APPLY TO ALL PIPING PLANS.
2	COORDINATE ALL PIPING AND EMBEDMENTS WITH AFFECTED TRADES.
3	REFER TO 7/PL1.01 FOR REINFORCEMENT AT PIPE PENETRATIONS.
4	ALL CONNECTIONS AND HANGERS IN SURGE TANK TO BE STAINLESS STEEL.
5	PROVIDE WINTERIZING/DRAINING INSTRUCTIONS AND SCHEMATICS TO OWNER. SEE CIVIL DRAWINGS FOR SITE PIPING.
6	PIPING IS SPREAD OUT FOR CLARITY.
7	CONTRACTOR CAN "STACK" PIPES IN THE TRENCH.
8	ARROW DENOTES DIRECTION OF FLOW.
9	* DENOTES CHANGE IN ELEVATION REQUIRED AT THIS POINT.
10	THIS DRAWING IS FOR SCHEMATIC USE ONLY.



PIPING PLAN

5

1/8" = 1'-0"



SURGE TANK SECTION

4

NONE

POOL A PIPE SCHEDULE					
PIPE ID	TYPE	NPS	FLOW	VELOCITY	DESCRIPTION
		(in)	(gpm)	(fps)	
A1-61	PVC SCH 80	2	92	10.0	ACTIVITY FEED
	-	-	-	-	-
AD-100	PVC SCH 80	14	1000	2.7	SPRAY PAD DRAIN
	-	-	-	-	-
AD-105	PVC SCH 80	10	500	2.3	SPRAY PAD DRAIN
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

PIPE SCHEDULE

1

NONE

					DESIGN GRATE				DESIGN POINT			SYSTEM MAX	
GRATE ID	DETAIL #	DESIGN GRATE	TOTAL DESIGN FLOW	QTY	WIDTH	LENGTH	OPEN AREA	TOTAL OPEN AREA	FLOW	VELOCITY	MAX ALLOWABLE FLOW PER GRATE	FLOW PER GRATE	VELOCITY
			(gpm)		(ft)	(ft)	(in2)	(in2)	(gpm)	(fps)	(gpm)	(gpm)	(fps)
A-D1	3/PL3.00	LAWSON AQUATICS: MLD-FG-1854	264	2	1.50	4.50	515	1030	132	0.08	2400	600	0.37
		-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-

DRAIN SCHEDULE

2

NONE

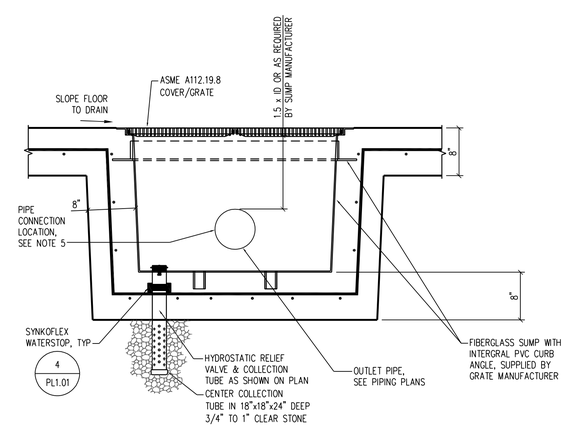
PIPING NOTES
(ALSO REFER TO SPECIFICATION SECTION 13150)

1. GENERAL PIPING:
   1.1. ALL PIPING SHALL BE IN ACCORDANCE WITH THE STATE OF FLORIDA PLUMBING REGULATIONS AND FLORIDA DEPARTMENT OF HEALTH, THE A.S.T.M. DESIGNATION NUMBER D-1785, AND THE NSF SEAL FOR POTABLE WATER.
   1.2. ALL PIPING HAS BEEN DESIGNED FOR A MAXIMUM OF 6'/SECOND SUCTION, AND 10'/SECOND PRESSURE. GRAVITY PIPING HAS BEEN DESIGNED FOR A VELOCITY OF 3'/SECOND.
   1.3. MAIN DRAIN PIPING HAS BEEN DESIGNED AND SHALL BE INSTALLED FOR CAPACITY OF 100% OF THE RECIRCULATION RATE AND ACTIVITY FLOW AT A VELOCITY NOT TO EXCEED 3'/SECOND
   1.4. DRAIN PIPING HAS BEEN DESIGNED AND SHALL BE INSTALLED FOR CAPACITY OF 100% OF THE RECIRCULATION RATE AT A VELOCITY NOT TO EXCEED 3'/SECOND
   1.5. ALL INLET SUPPLY PIPING MUST BE LAID ON A GRADE SO IT WILL DRAIN TO THE SURGE TANK COMPLETELY BY GRAVITY, MAIN DRAIN LINE PIPING MUST BE LAID ON A GRADE SO:
      1.5.1 TO ALLOW FOR DRAINING OF POOL PIPING.
   1.6. ALL ELEVATIONS TO BE FIELD VERIFIED TO ALLOW FOR PROPER PITCH AND DRAINAGE. THE POOL CONTRACTOR SHALL INSTALL PIPING AT A SLOPE OF 1" PER 10'-0".
   1.7. POOL CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE USE OF FITTINGS TO REDUCE THE TOTAL DYNAMIC HEAD OF THE RECIRCULATION SYSTEM.
   1.8. ALL DRAWINGS ARE INTENDED FOR SCHEMATIC USE ONLY!! FINAL LOCATIONS SHALL BE FIELD VERIFIED WITH ALL OTHER TRADES, BY CONTRACTOR.
   1.9. CONTRACTOR SHALL COORDINATE ALL WORK WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL AND STRUCTURAL DRAWINGS.
2. SUBMERGED OUTLET DRAINS:
   2.1. THE SUBMERGED OUTLET DRAIN FITTINGS SHALL CARRY 100% OF RECIRCULATION RATE AT A VELOCITY NOT TO EXCEED 1.5'/SECOND THROUGH THE CLEAR AREA OF THE GRATE.
   2.2. ALL SUBMERGED OUTLET DRAINS SHALL CONFORM TO THE MOST RECENT VERSION OF ASME A112.19.8.
   2.3. FILTER BACKWASH LINE, POOL DRAIN LINE, SURGE TANK DRAIN LINE, SURGE TANK OVERFLOW LINE & POOL UNDERDRAIN LINE TO DISCHARGE TO SEWER WITH MINIMUM 6" AIR GAP.
3. PRESSURE GAUGES:
   3.1. COMPOUND GAUGES SHALL BE INSTALLED ON ALL PUMP SUCTION LINES. POSITIVE PRESSURE GAUGES SHALL BE INSTALLED ON ALL PUMP DISCHARGE LINES.
4. VALVES:
   4.1. PROVIDE BACKWATER VALVES & GEAR OPERATED SUB-SURFACE BUTTERFLY VALVES WITH VALVE EXTENSIONS FOR ALL POOL & SURGE TANK DRAIN LINES.
   4.2. EACH VALVE SHALL HAVE A PERMANENT IDENTIFYING LABEL OR TAG ATTACHED TO IT. THE SEQUENCE OF OPERATION, BRIEFLY STATED, SHALL BE PROMINENTLY DISPLAYED.
5. FLOWMETERS:
   5.1. FLOWMETER SHALL BE PROVIDED IN THE FILTRATION PUMP DISCHARGE LINE. INDICATED ON THE DRAWINGS. THE SCALE RANGE ON THE FLOWMETER SHALL INCLUDE A MINIMUM OF 50% AND A MAXIMUM OF 150% OF THE DESIGN FLOW RATE. FLOWMETERS SHALL BE INSTALLED ON A STRAIGHT LENGTH OF PIPE WITHOUT ANY VALVE, ELBOW OR OTHER SOURCE OF TURBULENCE (UNINTERRUPTED FLOW). PROVIDE A MINIMUM OF 10 PIPE DIAMETERS UPSTREAM AND 5 PIPE DIAMETERS DOWNSTREAM FROM THE FLOWMETER OF UNINTERRUPTED FLOW OR INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
   5.2. THE MAIN FLOWMETER SHALL BE USED TO MONITOR BACKWASH RATE.
6. FILTERS:
   6.1. FILTER SHALL BE PROVIDED WITH THE FOLLOWING APPROPRIATELY LOCATED ACCESSORIES: PRESSURE GAUGES WITH A MINIMUM FACE SIZE OF 2" READING 0-60 PSI, AND AIR RELIEF. VALVE AT THE HIGH POINT OF THE FILTER, FILTER DRAIN PIPING AND VALVE ON THE LOW POINT OF THE FILTER.

PIPING NOTES

6

NONE



NOTES
1. SUMP AND GRATE COVER SHALL CONFORM WITH THE MOST RECENT VERSION OF ASME A112.19.8.
2. VERIFY GRATE DIMENSIONS & OUTLET REQUIREMENTS WITH GRATE/SUMP MANUFACTURER PRIOR TO SUBMITTING SHOP DRAWINGS.
3. CONCRETE OUTLET WALLS AND FLOOR SHALL BE 8" THICK WITH #4 BARS @ 8" OC.
4. THE FIBERGLASS SUMP SHALL BE FABRICATED USING 80Z. OF FIBERGLASS MAT, MARINE QUALITY RESIN AND COLORED GEL COAT. THE GEL COAT IS ONLY APPLIED TO THE INSIDE OF THE SUMP. THE WALL THICKNESS IS APPROXIMATELY .19" +/- .01". 2" FRP WATERSTOP GLASSED ONTO SUMP.

TYPICAL FLOOR OUTLET

3

NONE

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WTI WATER TECHNOLOGY INC

PIPING LAYOUT

MANATEE COUNTY – LINCOLN SPLASH PARK

REVISIONS:

PHASE: REVIEW
PROJECT NO: 2009-46
DATE: 08.16.2010
DRAWN BY: AMJ
CHK'D BY: SAL

BRIAN FREBER, P.E.
LIC. NO. 60424

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