



Serenade Park

Design# 1159648-01-02 1/12/2022



Design Details

*Surface finishes and/or site furnishings shown are conceptual and provided by others.

Proposed Color Palette

Paint Colors

Acrylic Colors

Step Pad Color



Project Details

Dimensions

51' 4" x 41' 2"

Total System Flow Rate

105 GPM

Color Approval

Customer Signature

Date

Colors shown are for representation purposes.
Consult with your Representative for actual color swatches for final color selection.

Product Warranty

Products and components manufactured by Aquatix are designed and built according to the highest standards. However, in the event of any warranty requirements, Aquatix, will work attentively to resolve the request.

Warranties

- 1 Year** All mechanical system components against defects in workmanship and materials.
- 2 Years** All moving parts, finishes, hardware, polyurethane collars, acrylic and plastic panel attachments. HydroLogix System components against defects in workmanship and materials.
- 5 Years** All brass and stainless steel components, including, spray nozzles, spray caps, and spray heads.
- 25 Years** All stainless steel and fiberglass structures against defects in workmanship and materials: fiberglass structures also include a lifetime warranty against rust and corrosion.

The warranty period starts from date of shipment. Warranties stated above are valid only if products have been installed in conformance with Aquatix installation and assembly instructions and maintained according to the maintenance procedures furnished by Aquatix; have not been subjected to abnormal use other than the purpose for which the products were designed; have not been subjected to misuse, negligence, vandalism, lightning or accident, flood, operator error, Acts of God, failure to comply with codes of the jurisdiction having authority, have not been subjected to additional or substitution of parts; and have not been modified, altered, or repaired by persons other than seller or seller's designees in any respect which, in the judgment of the seller, affects the condition of operation of the structures and/or components.

The liability of Aquatix under this warranty is limited to the replacement of defective material within the warranty period. Aquatix will not be responsible for costs associated with shipment, removal or re-installation of defective material.

This warranty is exclusive and in lieu of all other warranties, whether expressed or implied, including but not limited to any warranty of merchantability or of fitness for a particular purpose.

Any surety bonds issued pursuant to any contract or seller's invoice shall not include coverage for this guarantee or warranty beyond one year.

If you would like to make a claim, please contact your representative or send your written statement of claim, along with the original project number and/or project name to:

Aquatix by Landscape Structures
1101 McKinley Parkway
Delano 55328

To contact Aquatix with any questions or comments:
Call Toll-free: **877. 632. 0503**
Phone: **952.445.5135**
Email: **aquatix@playsi.com**



General Installation Guidelines

- Safety First! Always use personal protective equipment such as, but not limited to, eye protection, respirator, protective clothing, sturdy footwear and fall protection when installing this equipment.
- Please thoroughly read and understand the installation instructions before beginning installation. Please call Aquatix toll free at 877-632-0503 if you have any questions or concerns about installing this equipment.
- Always use caution when handling and uncrating structure to avoid personal injury or damage to product.
- Protect all finished surfaces from damage during assembly and erection.
- Use caution and wear appropriate personal protective equipment when drilling holes in concrete for anchoring stud installation. Follow all manufacturer instructions when using epoxy kit included with structure.
- Use caution and wear proper personal protective equipment when working on ladders or scaffolding during installation to avoid personal injury or damage to equipment.
- To prevent equipment damage or personal injury, removal of the nozzle assembly of all above ground structures and ground spray effects is required during both the start-up and winterization procedure.

Failure to observe the above precautions could result in serious bodily injury and/or damage to property and equipment



OPERATION & MAINTENANCE OF PLAY FEATURES

1.0 Description of Operation

The correct operation of your aquatic play feature requires adequate water flow as shown on the attached “Standard Layout” drawing(s) for the equipment supplied on this project.

In the event that water flow appears to be sporadic or nonexistent check the following items.

- A. To prevent equipment damage or personal injury, make certain that any residual pressure is relieved in the system piping before troubleshooting.
- B. Check the equipment for visible pipe blockage (i.e., debris, foreign objects, etc.) at the water discharge point on your play feature.
- C. Check the flow control valve position(s) to ensure that flow to the feature has not been disabled.
- D. Check the pump that supplies water to the play feature to ensure that it is operating properly and that the hair/lint strainer is not plugged.

Operating personnel are responsible for periodically sampling water discharge of the play feature and testing for safe operating levels. Determination of safe operating levels should be based on local building and health codes that are applicable within the geographic region where the equipment is installed.

2.0 Periodic maintenance and Cleaning

In addition to local regulations regarding water sample requirements additional mechanical inspections are required to ensure the safe operation of this equipment.

Inspection:

Each aquatic play feature must be rigorously inspected to ensure safe operating conditions. The recommended normal inspection schedule must include the following items:



IMPORTANT: VISUALLY INSPECT THE EQUIPMENT ON A DAILY BASIS FOR:

1. Signs of vandalism/wear/damage/loose or missing components that would make the equipment unsafe.
2. Loose or missing fasteners (nuts, bolts, clamps, cables, screws, etc.).
3. Equipment damage (improperly secured, worn, missing, or damaged structures, support arms, brackets, protective covers, base skirts, handles, nozzles, etc.).
4. Equipment malfunction (loose, missing, worn, damaged equipment components).
5. If component replacement is required, replace with new component of same type/design. DO NOT REUSE COMPONENT.
6. It is not recommended to re-use flange mounting gaskets.
7. To prevent damage or personal injury, removal of the nozzle assembly of all above ground structures and ground spray effects is required during start-up and winterization procedures.

Cleaning:

Periodically clean exterior surfaces of equipment to remove scale or salt build-up using a non-abrasive cleaner suitable for fiberglass products. (The cleaning supplies are normally available at most home care centers and hardware stores.)

A. Washing the Equipment

1. Hose off heavy dirt or grime from equipment.
2. Mix washing solution and water per manufacturer's instructions.
3. Apply to equipment with clean wash mitt, sponge, or 100% cotton cloth.
4. Rinse off with clean water.
5. Dry with a 100% cotton cloth.

B. Waxing the Equipment (*Equipment finish should be clean, dry, and cool.*)

1. Use a soft, damp terry cloth towel or suitable applicator to apply.
2. With a damp applicator, massage product into finish. Use sparingly.
3. Allow to dry thoroughly to a powdery haze.
4. Remove haze with a soft, dry terry cloth or microfiber towel.
5. Turn towel frequently for best buffing action.

Local operating conditions will dictate the frequency of scheduled equipment cleaning.

Failure to observe the above precautions could result in serious bodily injury and/or damage to property and equipment



3.0 Start-up and Winterization

To prevent equipment damage or personal injury, removal of the nozzle assembly of all above ground structures and ground spray effects is required during start-up and winterization procedures.

If product and associated mechanical system (supply line, drain line, header, pumps, filters, etc) requires winterization, it is to be performed by either a qualified contractor or qualified maintenance personnel trained in proper winterization procedures.

Maintenance

Maintenance for splash pads is very important. Depending on the type of system you have the maintenance is different. Product maintenance is also very important. Each aquatic play feature must be rigorously inspected to ensure safe operating conditions.

Product Maintenance



Important: Visually inspect the equipment on a daily basis for:

1. Signs of vandalism/wear/damage/loose or missing components that would make the equipment unsafe.
2. Loose or missing fasteners (nuts, bolts, clamps, cables, screws, etc.).
3. Equipment damage (improperly secured, worn, missing, or damaged structures, support arms, brackets, protective covers, base skirts, handles, nozzles, etc.).
4. Equipment malfunction (loose, missing, worn, damaged equipment components).
5. If component replacement is required, replace with new component of same type/design. **DO NOT REUSE COMPONENT.**
6. It is not recommended to re-use flange mounting gaskets.
7. To prevent damage or personal injury, removal of the nozzle assembly of all above ground structures and ground spray effects is required during start-up and winterization procedures.

Cleaning

Periodically clean exterior surfaces of equipment to remove scale or salt build-up using a non-abrasive cleaner suitable for fiberglass products. (The cleaning supplies are normally available at most home care centers and hardware stores.)

A. Washing the Equipment

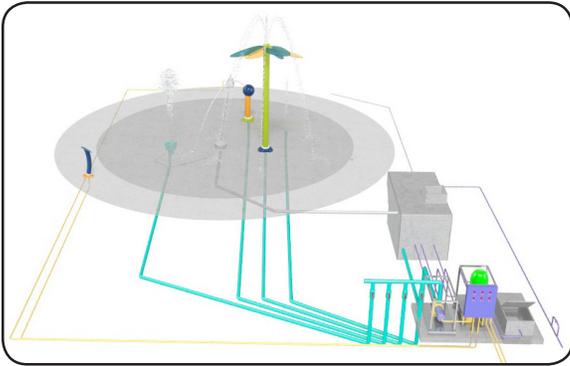
1. Hose off heavy dirt or grime from equipment.
2. Mix washing solution and water per manufacturer's instructions.
3. Apply to equipment with clean wash mitt, sponge, or 100% cotton cloth.
4. Rinse off with clean water.
5. Dry with a 100% cotton cloth.

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5. Turn towel frequently for best buffing action.

Local operating conditions will dictate the frequency of scheduled equipment cleaning.

Recirculation System Maintenance



Spring Start Up:

- Turn on water service for splash pad.
- Remove winterization covers / plugs.
- Clean structures and spray down pad.
- Pump out and clean underground water tank.
- Fill water tank with water to operating level.
- Prepare all recirculation equipment for seasonal use.
- Test equipment and controls for seasonal use.
- Fill chemical feeders.
- Turn on filtration skid system and chemically treat.
- Turn on Feature pump and adjust spray flows.

Labor= 2 x 8hrs= 16 man/hrs @ \$35hr= \$560 seasonal

Daily Maintenance:

- Check chemical levels and adjust as needed.
- Check / clean strainers if needed.
- Check / clean / backwash filters if needed.
- Check / clean water tank of debris if needed.
- Check / clean splash pad area if needed.
- Clear any nozzles of debris if needed.

Labor= 2hrs per/day= 60hrs per/mnth @ \$35hr= \$2,100 month

Chemicals Costs: \$120 month

Electrical Costs= 50kWh x 30days @ .12 per/kWh= \$180 month

Water Usage= 300 gal / day x 30 @ .005= \$45 month

Total: \$2,445 month

Winterization:

- Drain water tank, all plumbing and equipment.
- Pour non-toxic anti-freeze into all plumbing.
- Install winterization covers / plugs.
- Turn off water service.
- Winterize equipment systems.

Labor= 2 x 8hrs= 16 man/hrs @ \$35hr= \$560 seasonal

Anti-freeze Costs= 20 gal @ \$8 per/gal= \$160 seasonal

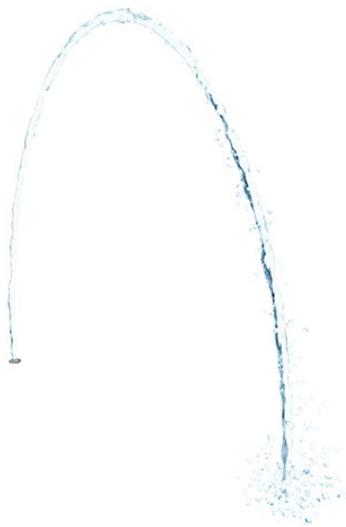
Total: \$720 seasonal



Ground Sprays Arch Jet

Product Overview

The Arch Jet is a ground spray element that emits a single stream of water arching outward. The feature flow rates can be adjusted to increase or decrease the spray height and projection. The Arch jet is designed for wet deck applications with no standing water.



Product Specs

Material Options

PVC, Stainless Steel

Dimensions

5' 0" x 3' 6"
(1,52 m x 1,10 m)

Splash Zone

5' 0" x 8' 0"
(1,52 m x 2,44 m)

Standard Flow Rate

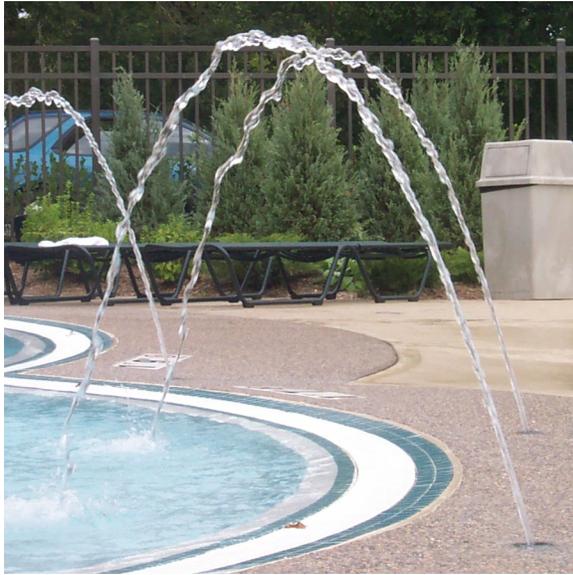
1 to 10 GPM
3.78 to 37.85 LPM

PSI

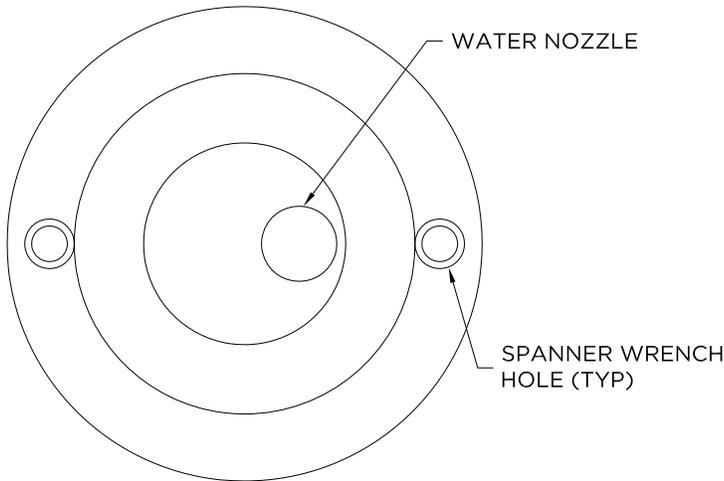
3

NOTES

1. Product may require a strainer on the water feed line. Consult with manufacturer.
2. Do not exceed 20 feet per second velocity.
3. Product specifications are subject to change.

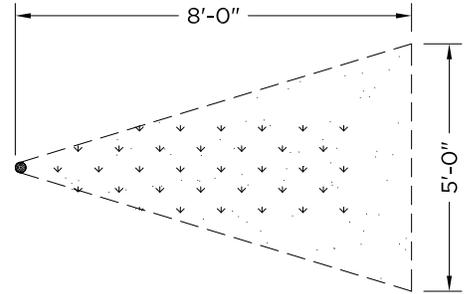


TOP VIEW



SEE MOUNTING OPTIONS

SPLASH ZONE

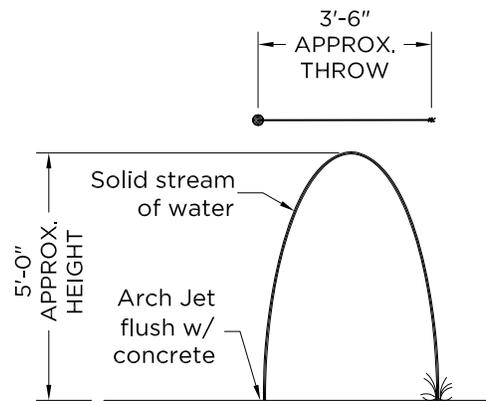


Splash Zone-Not to Scale

Splash Zone Notes:

Splash zones are approximate, actual splash may vary based on various environmental conditions, flow rates, slope of splash pad, submergence depth and wind.

WATER EFFECT



PRODUCT OPTIONS

Structure:

Stainless Steel
(see specification for details)

DATA

Flow: 1 GPM ULTRA-LOW FLOW
5 GPM LOW FLOW
10 GPM HIGH FLOW
Pressure: 3 PSI

Not for Construction



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STAINLESS STEEL
ARCH JET NOZZLE

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NTS
SCALE

1/10/19
DATE

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NOTES

PRODUCT OPTIONS

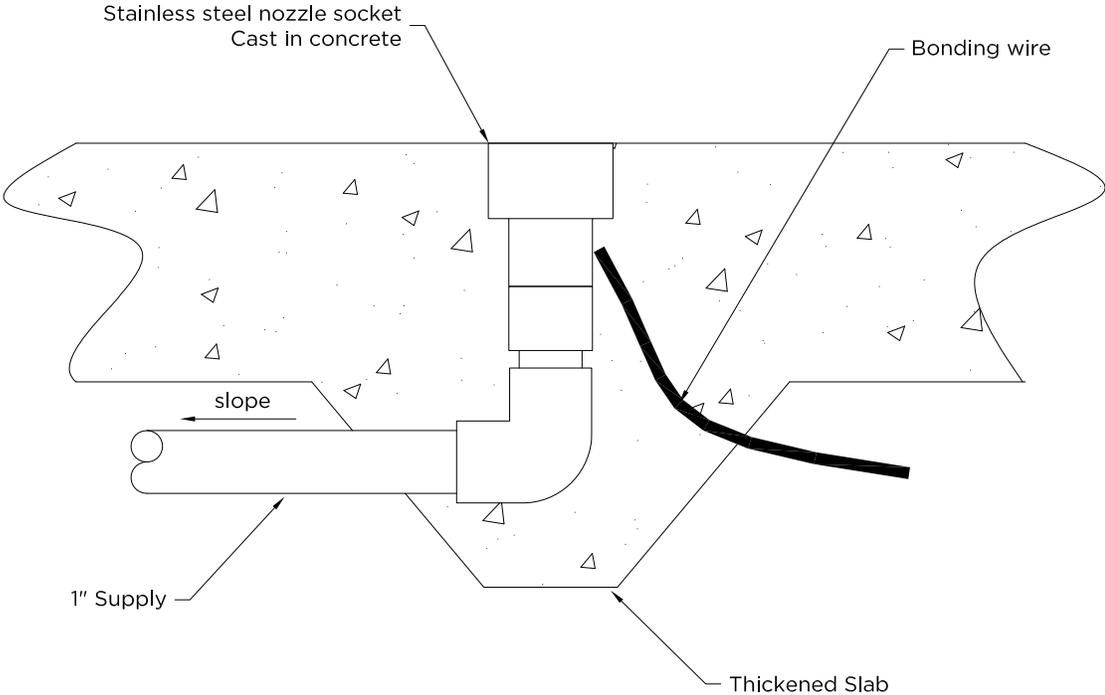
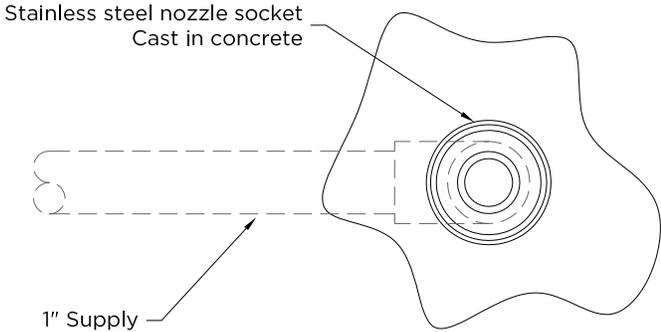
Structure Pod:

Stainless Steel Fabrication
(see specification for details)

DATA

Installation: Cast In Concrete
Supply Line: 1" Pipe

1. Valve must be installed on supply line to regulate flow.
2. Ground spray is designed to be encapsulated in concrete pad.
3. Supply line is based on the designated flow rates for structure.
4. Underground plumbing to be designed for winterization.
5. Consult local electrical inspector for grounding.
6. Product may require a strainer on the water feed line. Consult with manufacturer.
7. Do not exceed 20 feet per second velocity.
8. Product specifications are subject to change.



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CAST IN SS
NOZZLE SOCKET

CTS
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NTS
SCALE

1/11/19
DATE

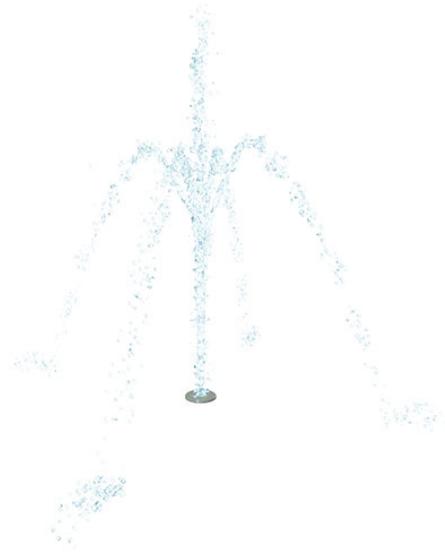
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Ground Sprays Sea Crawler

Product Overview

The Sea Crawler is a ground spray element that emits a single stream of water upward and four arching streams of water. The Sea Crawler is designed for wet deck applications with no standing water.



Product Specs

Material Options

PVC , Stainless Steel

Dimensions

2' 6" x 2' 0"
(0,76 m x 0,61 m)

Splash Zone

4' 6" Dia.
(1,40 m Dia.)

Standard Flow Rate

5 GPM
18.93 LPM

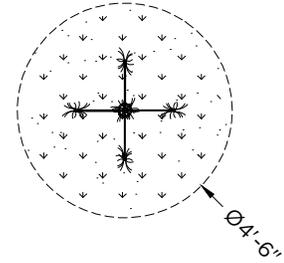
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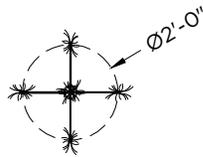
NOTES

1. Valve must be installed on supply line to regulate flow.
2. Shut off valve must be installed on drain line.
3. Ground spray is designed to be encapsulated in concrete pad.
4. Supply line is based on the designated flow rates for structure.
5. Underground plumbing to be designed for winterization.
6. Consult local electrical inspector for grounding.
7. Product may require a strainer on the water feed line.
Consult with manufacturer.
8. Do not exceed 20 feet per second velocity.
9. Product specifications are subject to change.

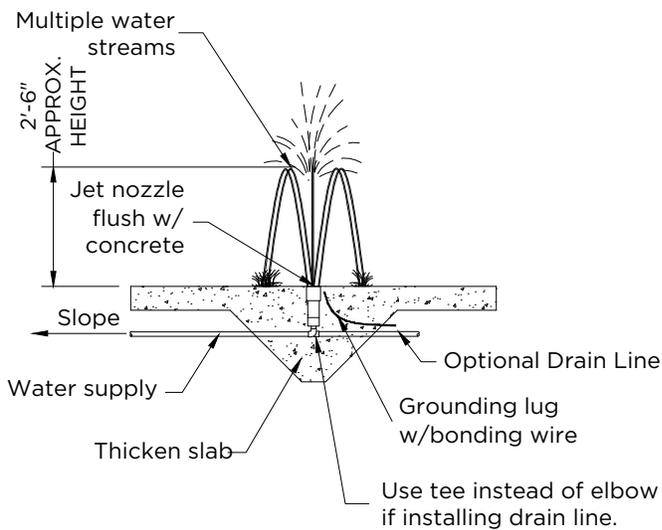
SPLASH ZONE



TOP VIEW



SIDE VIEW



Splash Zone-Not to Scale

Splash Zone Notes:

Splash zones are approximate, actual splash may vary based on various environmental conditions, flow rates, slope of splash pad, submergence depth and wind.

PRODUCT OPTIONS

Structure Pod:

Structural Plastics Fabrication
(see specification for details)

DATA

Flow: 5 GPM
 Pressure: 3 PSI
 Supply Line: 1" Pipe
 Installation: Cast in Concrete

Not for Construction



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SEA CRAWLER

JLS
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1/4"=1'-0"
 SCALE

9/21/16
 DATE

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Ground Sprays Stream Jet Triangle

Product Overview

The Stream Jet Triangle is a ground spray element that emits three (3) single streams of water upward. The feature flow rates can be adjusted to increase or decrease the spray height. The Stream Jet Triangle is designed for wet deck applications with no standing water.



Product Specs

Material Options

PVC

Dimensions

5' 0" x 3' 0"
(1,52 m x 0,91 m)

Splash Zone

12' 0" Dia.
(3,66 m Dia.)

Standard Flow Rate

3 to 30 GPM
11.36 to 113.56 LPM

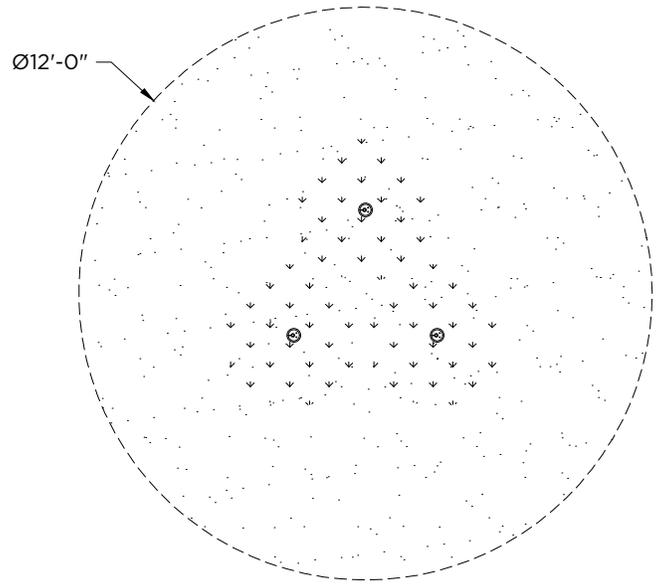
PSI

4

NOTES

1. Valve must be installed on supply line to regulate flow.
2. Shut off valve must be installed on drain line.
3. Ground spray is designed to be encapsulated in concrete pad.
4. Supply line is based on the designated flow rates for structure.
5. Underground plumbing to be designed for winterization.
6. Consult local electrical inspector for grounding.
7. Product may require a strainer on the water feed line.
Consult with manufacturer.
8. Do not exceed 20 feet per second velocity.
9. Product specifications are subject to change.

SPLASH ZONE

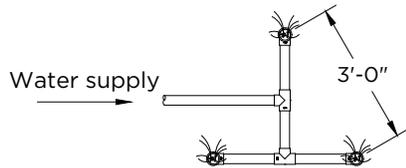


Splash Zone-Not to Scale

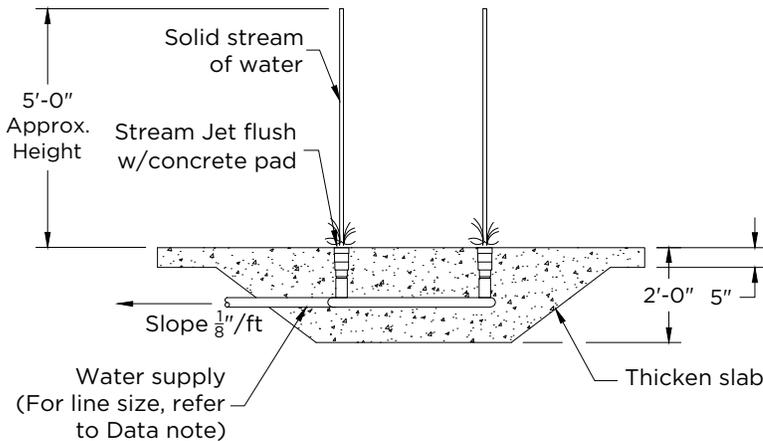
Splash Zone Notes:

Splash zones are approximate, actual splash may vary based on various environmental conditions, flow rates, slope of splash pad, submergence depth and wind.

TOP VIEW



SIDE VIEW



PRODUCT OPTIONS

Structure:

Structural Plastic Fabrication
(see specification for details)

DATA

High Flow: 30 GPM
 Low Flow: 15 GPM
 Ultra Low Flow: 3 GPM
 Pressure: 3 PSI
 Supply Line: 1", 1 1/2" Pipe
 Installation: Cast in Concrete

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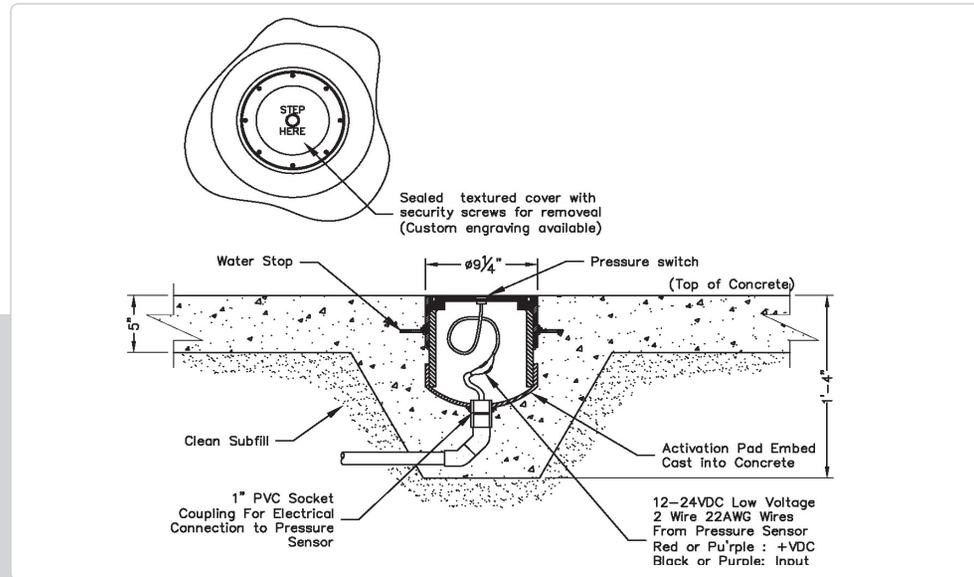
STREAM JET
 TRIANGLE

DRE
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1/4"=1'-0"
 SCALE

9/21/16
 DATE

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Step Pad Activator

Step pad activator is a below grade splash pad activator that has a pressure switch sensor under the textured, colored cover. When patrons press the button a signal will go to the control panel to activate water flow. Activation pads are used to activate an entire splash pad features or designed zoned areas.

May consist of:

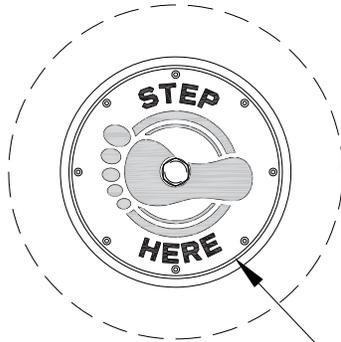
- Stainless steel or gas welded schedule 80 PVC
- Pressure Switch
- Removable 9 1/4 cover with security screws
- Custom graphic cover

PVC Step Pad Activator:

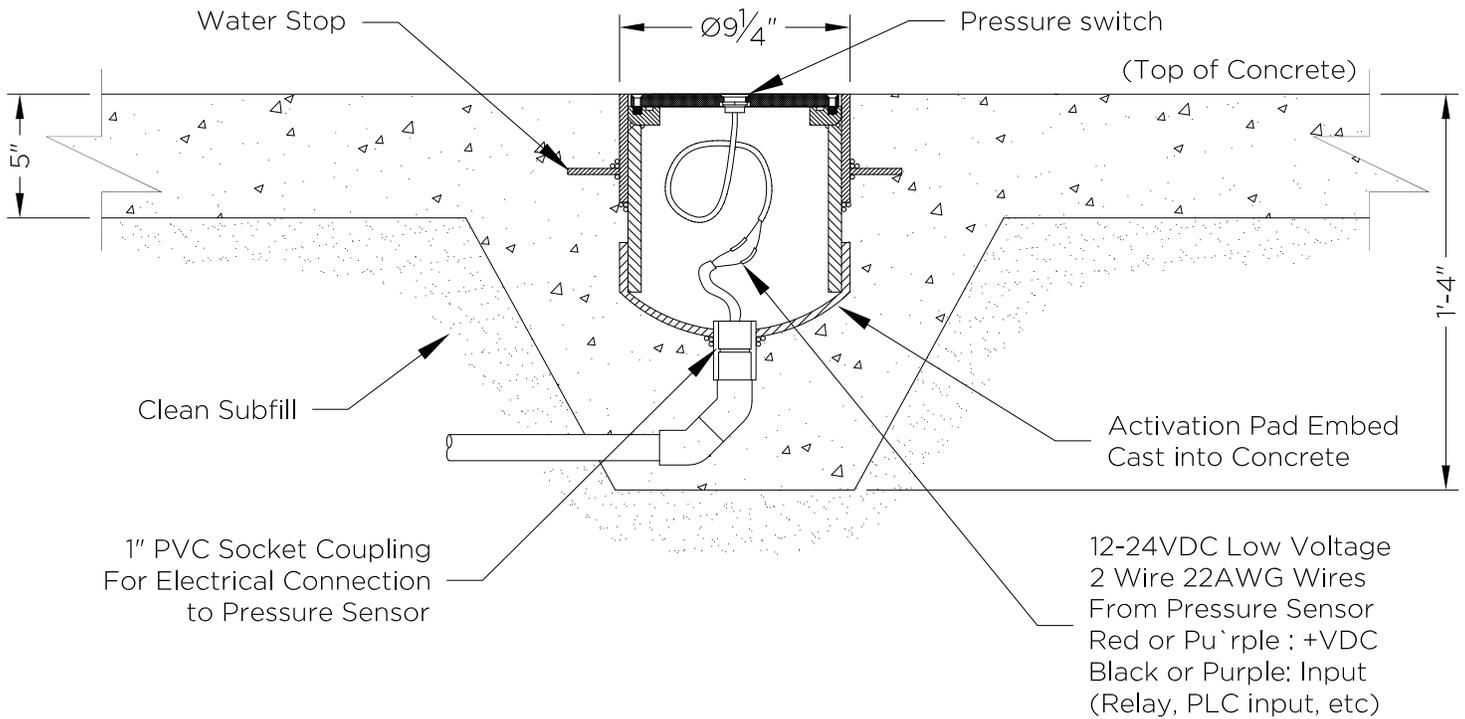
Desired Duration Of Time:
(For water activities once sensor is activated)

Adjustable

Recommended Distance From Step Pad Activator(s) to
Control Panel 50' Max



Sealed textured cover with
security screws for removal
(Custom engraving available)



Step Pad Activator:

Model No.	Description
ACT-FM	Activation Pad



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PVC STEP PAD ACTIVATOR

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

2/3/21
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Mechanical & Accessories
**Flush-Mount Step
Activator**

Product Overview

Get your aqua play started with the Flush-Mount Step Activator. Children activate water flow by touching the sensor with their feet.



Product Specs

Dimensions

0' 8.75" Diameter
(0,22 m Diameter)

Splash Zone

N/A

Standard Flow Rate

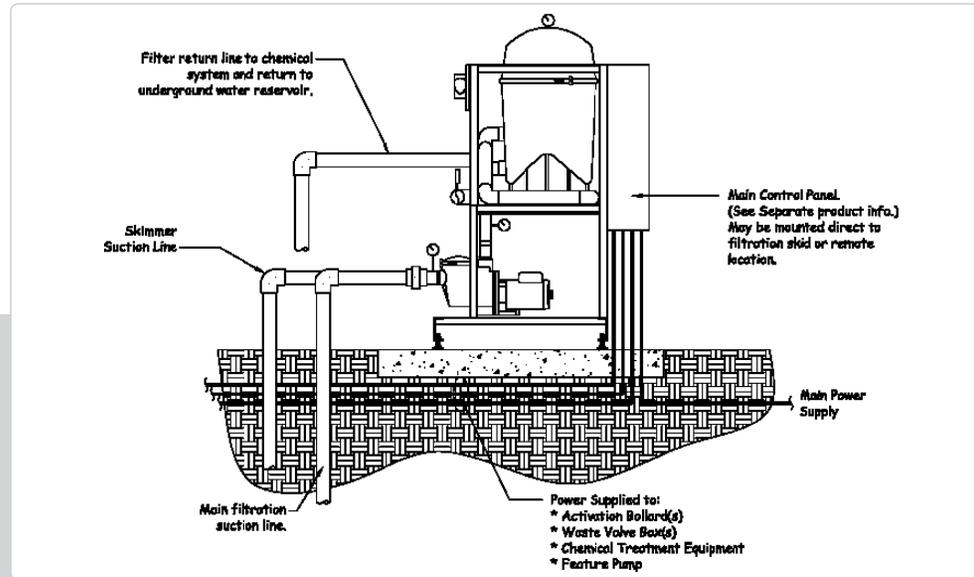
N/A

PSI

N/A



Filtration Skid to be UL listed system capable of filtration rates from 50 gpm to 300 gpm. Filtration Systems flow rate should be based on a minimum of 30 minute turnover rate. System equipment to be pre-plumbed using all schedule 80 PVC pipe & fittings, pre-wired and mounted on an epoxy painted steel skid with adjustable leveling legs. Skid system to have main motor control panel that will operate filtration pump, feature pump, water fill system, chemical treatment system, and collector box drain to waste valve. System to be tested prior to shipment.



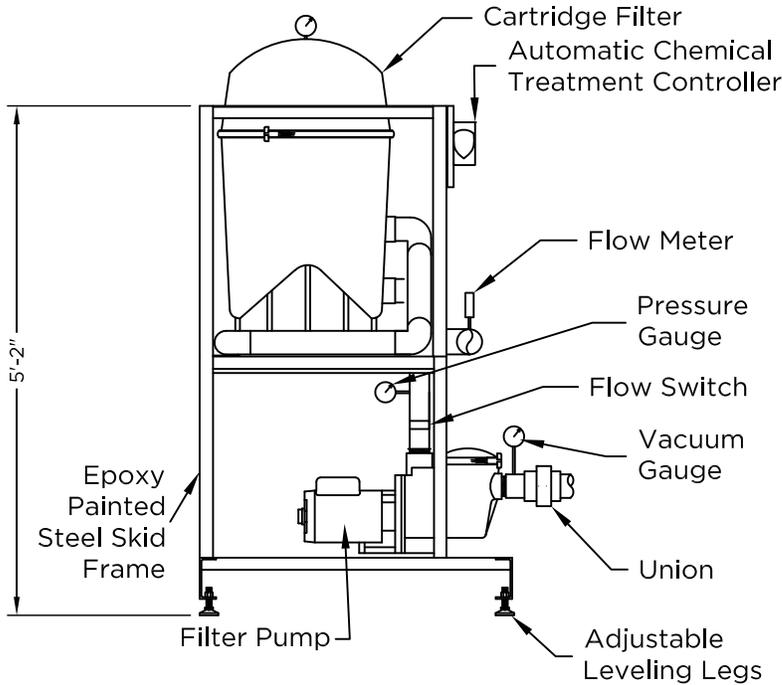
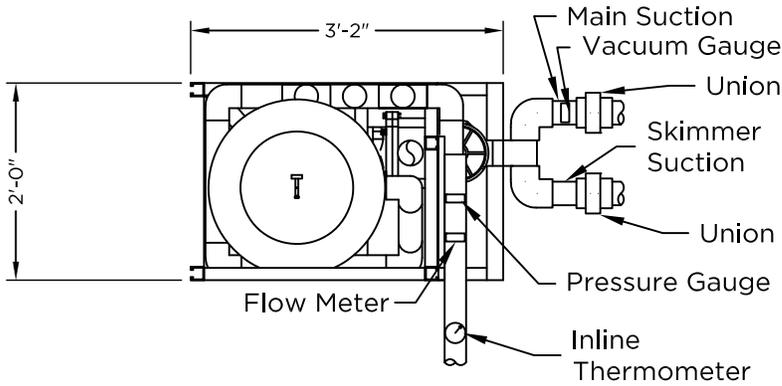
Filtration Skid

System may consist of the following components:

- Epoxy painted steel skid with adjustable leveling legs.
- Self priming filtration pump with integral hair and lint strainer.
- Sand or Cartridge filter with pressure gauge and pressures/air relief valve.
- Main system panel with GFCI breakers, time clocks, and needed relays.
- Automatic chemical controller for monitoring and adjustment of Chlorine & pH.
- Inline Pilot type flow meter.
- Pump vacuum Gauge
- Pump pressure Gauge
- Flow Switch

*Specific project splash pad filtration rates should be designed based on site conditions, source water quality, anticipated patron usage, environmental conditions, and hours of operation. Systems are designed for continuous operation, (24-hour, 7-days a week). All system designs should be based on local and State Health Department Regulations.

Feature/Filtration Skid Cartridge:



Filtration Flow Rate: 95 gpm
 (Minimum divide water capacity by a factor of 30) 105 gpm
 137 gpm

Turnover: 30 mins.
 (Minimum 30-minutes)

Main Power Supply:
 **See Control Panel Product Information.

Filter Suction Line Sizes: 2" skimmer
 3" main suct.

Filter Return Line Size: 4" inch

Note:
 -Above information is preliminary.
 Exact system requirements will need to be verified.

NOTE:
 -ALL DIMENSIONS ARE APPROXIMATE AND WILL NEED TO BE VERIFIED.
 -CONTROL PANEL CAN BE ATTACHED TO SKID OR AT A REMOTE LOCATION.

Filtration Skid Sizing Chart:

Filter Flow Rate:	Max. Feature Flow Rate:	Max. Water Reservoir Volume
95 gpm	500 gpm	2700 gallon
105 gpm	600 gpm	3000 gallon
137 gpm	800 gpm	4000 gallon

(Above information are minimum guidelines. Specific project splash pad filtration rates should be designed based on site conditions, source water quality, anticipated patron usage, environmental conditions, and hours of operation. Systems are designed for continuous operation, (24-hour, 7-days a week). All system designs should be based on local and state health department regulations.)



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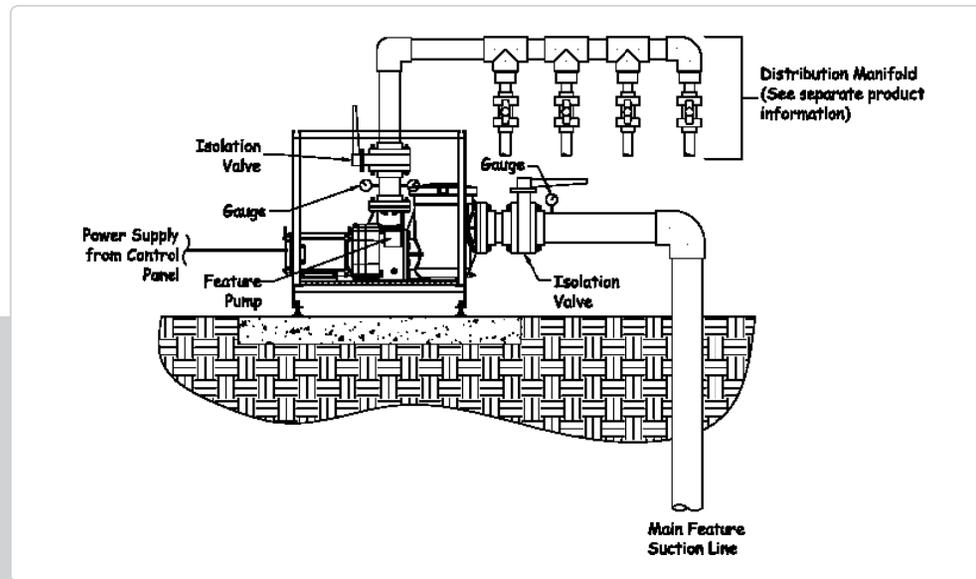
FILTRATION SKID CARTRIDGE

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

9/21/16
 DATE

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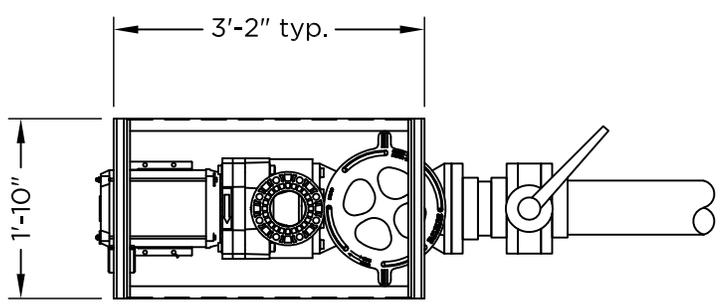
Feature Skid

Feature Skid to be UL listed system capable of flow rates from 250 gpm to 3000 gpm. System equipment to be pre plumbed using all schedule 80 PVC pipe & fittings and mounted on a epoxy painted steel skid with adjustable leveling legs. System to be tested prior to shipment.

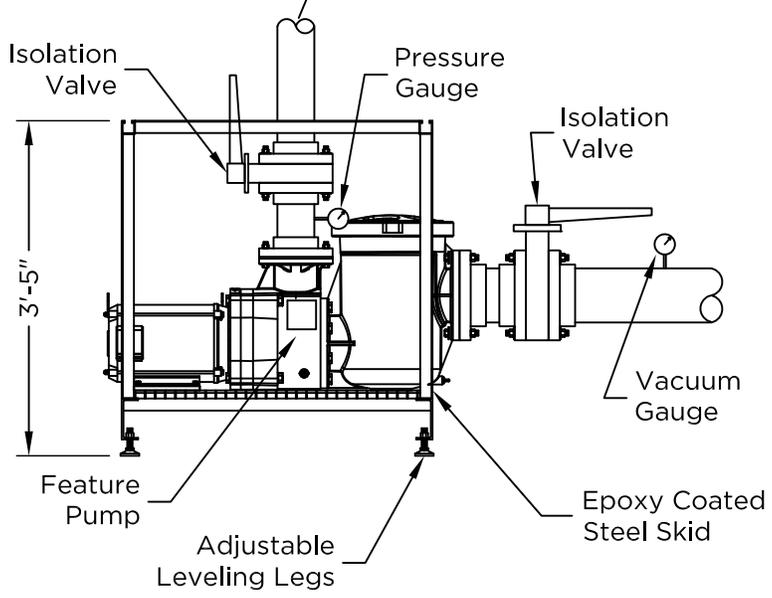
May consist of:

- Self-Priming feature pump with hair and lint strainer.
- Pump suction check valve and isolation valve.
- Pump discharge isolation valve.
- Pump vacuum gauge
- Pump pressure gauge

NOTE:
-ALL DIMENSIONS ARE APPROXIMATE AND WILL
NEED TO BE VERIFIED.



To Distribution Manifold
(See Seperate Product
Information)



Feature Skid Sizing Chart: (Self-Priming Pump)	
Flow Rate:	Horse Power
335 gpm	5 hp
465 gpm	7.5 hp
545 gpm	10 hp
765 gpm	15 hp

*All Flows Aat 40' TDH



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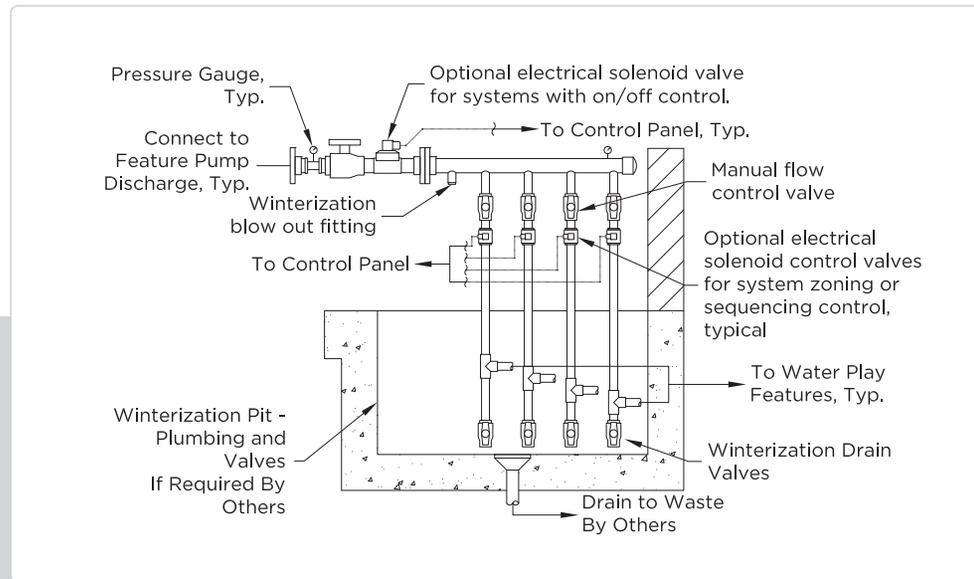
SELF-PRIMING FEATURE PUMP SKID

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1/2"=1'-0"
SCALE

11/10/16
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Recirculation Distribution Manifold

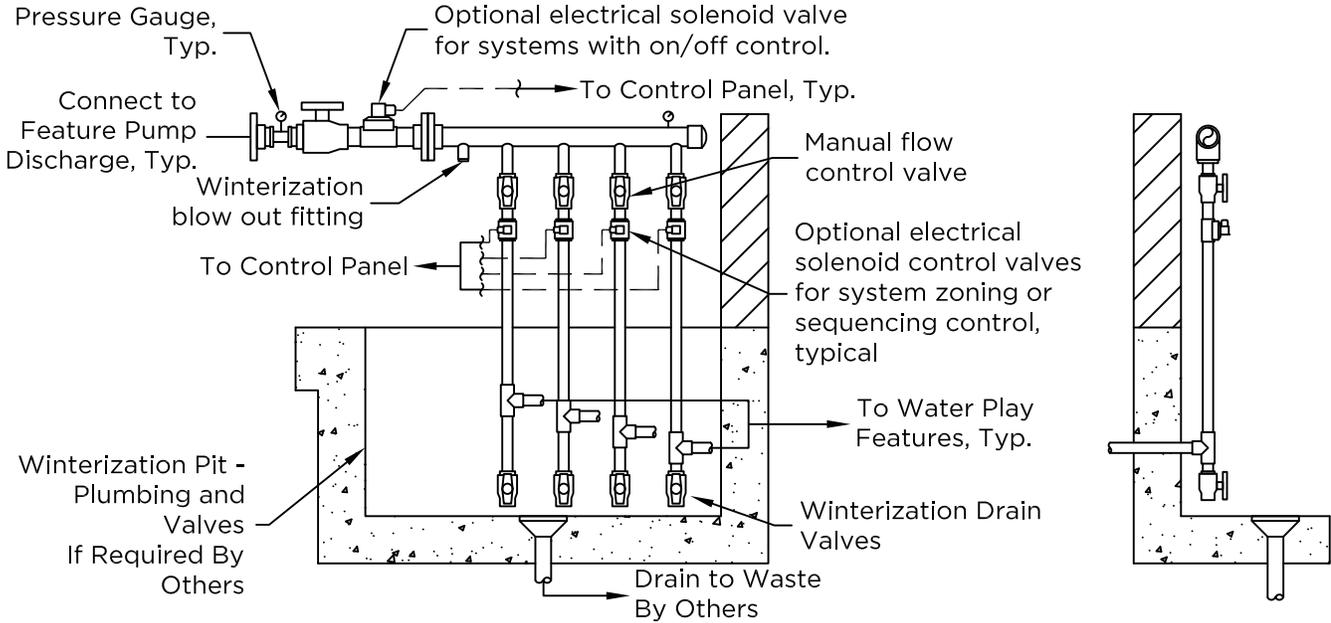
Distribution Manifolds are pre-plumbed water delivery systems from feature pumping system to water play features. Standard distribution manifolds consist of manual flow control valves that regulate water flow levels to each water element for on/off control systems. When creating water play zones or sequencing water play activities, standard distribution manifolds can be upgraded with electric valves or solenoid valves.

May Consist of:

- Available in Stainless Steel or Schedule 80 Gas Welded PVC prefabricated manifold
- Manual flow control valves
- Electrical solenoid valves
- Winterization blow out
- Pressure gauge

Recirc Distribution Manifold Data:

Total Feature Flow Rate:	Project Specific
Optional Zoning Electrical Control Valves:	Yes / No
Optional Sequencing Electrical Control Valves:	Yes / No
Number of Manifold Discharge Lines:	_____



Note:

- Configuration of manifold to be project specific.
- All discharge lines are supplied with manual ball valves to regulate flow.
- If system is designed for zone or sequencing, electrical activation valves will be added and controlled by PLC in control panel.
- All plumbing lines and valving shall be installed per local codes and regulations.



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RECIRC DISTRIBUTION MANIFOLD

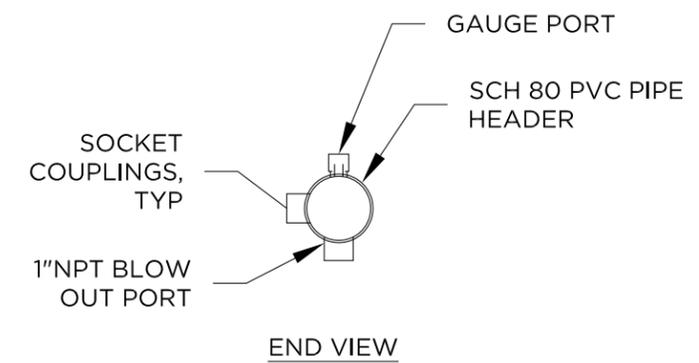
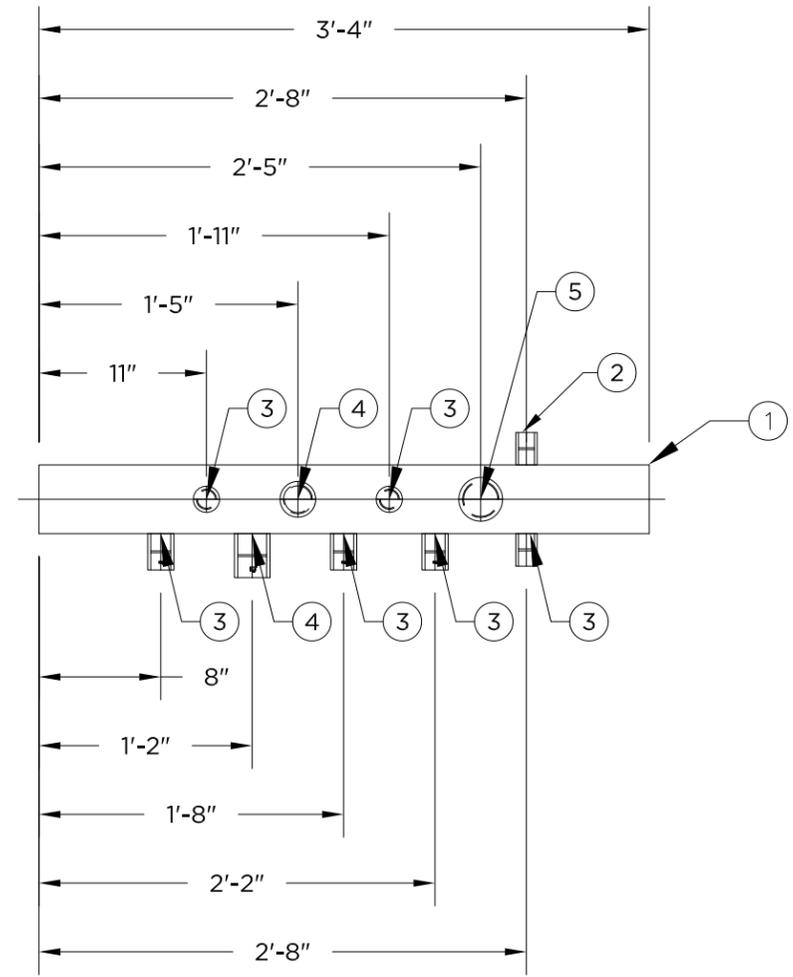
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9/21/16
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ITEM	DESCRIPTION	PART #	QTY.
1	4" SCH80 PVC PIPE	G80-040	1
2	3/4" SCH80 PVC SOC X REINFORCED FPT CPLG	AQ300148	1
3	1" SCH80 PVC SOC CPLG	AQ300014	6
4	1 1/2" SCH80 PVC SOC CPLG	252654	2
5	2" SCH80 PVC SOC CPLG	AQ300118	1



WARNING:
 NOT INTENDED FOR USE WITH COMPRESSED AIR OR GAS. THIS PRODUCT IS ONLY TO BE USED FOR ITS INTENDED PURPOSE

NOTE:
 1. MANUALLY OPERATED BALL VALVES FOR FEATURE SUPPLY LINES SHIPPED LOOSE FOR INSTALLATION IN THE FIELD.
 2. ALL PIPE AND FITTINGS TO BE SCH 80 PVC.

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SCALE: SEE VIEWS
 DRAWN: CTS
 CHECKED: CTS
 DWG. FILE: 159648-01-02-HDR
 DATE: 12/7/21

SHEET TITLE: SERENADE PARK FABRICATION

JOB NO.: 1159648-01-02

1 OF 1

Project: Serenade

Updated: 4/14/2022

Distribution Header

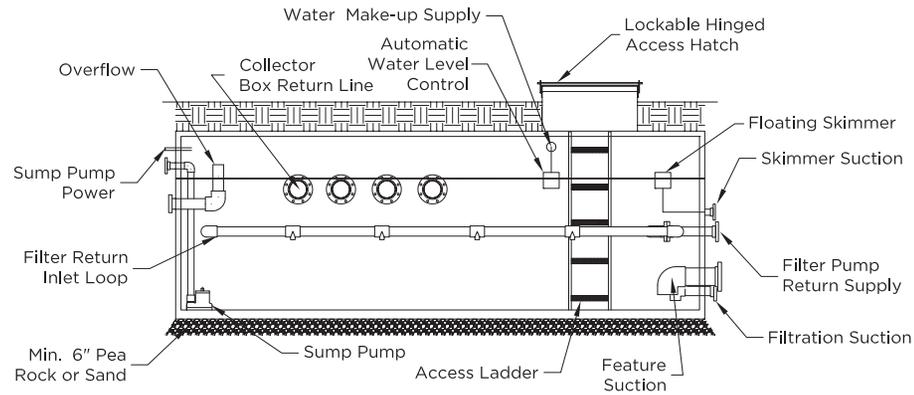
<u>Position</u>	<u>Part #</u>	<u>Description</u>	<u>Qty.</u>	<u>Vendor</u>	<u>V. Part number</u>
		Header body			
	AQ300002	3" sch 80 pvc pipe		Indelco	80-030
	AQ300075	3" sch 80 pvc cap		Indelco	847-030
	AQ300540	3" sch 80 pvc flange		Indelco	854-030
	AQ300391	3" flange gasket(neoprene)		Indelco	FG-030E
	282824	3" SS bolt pack		Indelco	BP-0030S/S
	AQ300080	4" sch 80 pvc pipe	1	Indelco	80-040
	AQ300132	4" sch 80 pvc cap	1	Indelco	847-040
	AQ300503	4" sch 80 pvc flange	2	Indelco	854-040
	282739	4" flange gasket(neoprene)	1	Indelco	FG-040E
	283862	4" SS bolt pack	1	Indelco	BP-0040S/S
	282679	4" x 2" reducer bushing	1	Indelco	837-420
	AQ300146	2" x 1 1/2" reducer bushing		indelco	837-251
	AQ300110	6" sch 80 pvc pipe		Indelco	80-060
	AQ300168	6" sch 80 pvc cap		Indelco	847-060
	AQ300539	6" sch 80 pvc flange		Indelco	854-060
	AQ300293	6" flange gasket(neoprene)		Indelco	FG-060E
	282728	6" SS bolt pack		Indelco	BP-0060S/S
	282681	6" x 3" reducer bushing		Indelco	837-530
	AQ300502	8" sch 80 pvc pipe		Indelco	80-080
	AQ300169	8" sch 80 pvc cap		Indelco	847-080
	282699	8" sch 80 pvc flange		Indelco	854-080
	282740	8" flange gasket(neoprene)		Indelco	FG-080E
	283863	8" SS bolt pack		Indelco	BP-0080S/S
		Gauge and blow out port			
	AQ300148	3/4" sch 80 pvc soc x reinforced fpt cplg	1	Indelco	835-007SR
	282663	1" sch 80 pvc soc x reinforced fpt cplg	1	Indelco	835-010SR
	282695	1" sch 80 pvc mpt plug	1	Indelco	850-010
	AQ300527	3/4" mpt x 1/4" fpt sch 80 pvc red bushing	1	Indelco	839-098
	AQ300126	1" compact ball valve	1	Indelco	2622-010
	AQ300014	1" sch 80 pvc soc cplg	1	Indelco	829-010
		Couplings			

	AQ300014	1" sch 80 pvc coupling	5	Indelco	829-010
	282654	1 1/2" sch 80 pvc coupling	2	Indelco	829-015
	AQ300013	2" sch 80 pvc coupling	1	Indelco	829-020
	282656	2 1/2" sch 80 pvc coupling		Indelco	829-025
	AQ300118	3" sch 80 pvc coupling		Indelco	829-030
	AQ300356	4" sch 80 pvc coupling		Indelco	829-040
		Control valves			
	AQ300011	1" ball valve	5	Indelco	1601-010
	282572	1 1/2" ball valve	2	Indelco	1601-015
	AQ300012	2" ball valve	1	Indelco	1601-020
	283852	2 1/2" ball valve		Indelco	1601-025
	283853	3" ball valve		Indelco	1602-030
	283854	4" ball valve		Indelco	1602-040
		Strainers/misc			
	283855	1" strainer		Indelco	1257010
	282568	1 1/2" strainer		Indelco	1257015
	282569	2" strainer		Indelco	1257020
	283856	3" strainer		Indelco	1257030
	283857	4" strainer		Indelco	1257040
		CAP			
	AQ300133	2" SCH80 PVC CAP		Indelco	847-020
		Union			
	AQ300545	2" SCH80 PVC TRUE UNION		Indelco	897-020
		Sequencing (drain away or city water = IPV / Recirc = Granzow)			
		note: two male adaptors required per solenoid valve			
	AQ300020	1" sch 80 pvc male adaptor		Indelco	836-010
	AQ300242	1 1/2" sch 80 pvc male adaptor		Indelco	836-015
	AQ300021	2" sch 80 pvc male adaptor		Indelco	836-020
	AQ300076	3" sch 80 pvc male adaptor		Indelco	836-030
		Solenoid assemblies			
	AQ200790	1" Ball valve and solenoid assembly		Assembly	
	AQ200791	1.5" Ball valve and solenoid assembly		Assembly	
	AQ200792	2" Ball valve and solenoid assembly		Assembly	
	AQ200793	3" Ball valve and solenoid assembly		Assembly	

		note: all solenoid valves to have Nitrile seals and Series 811 24VDC solenoid coils			
	283858	1" Solenoid Valve 24DC		IPV	214B
	283859	1 1/2" Solenoid Valve 24DC		IPV	216B
	283860	2" Solenoid Valve 24DC		IPV	217B
	283861	3" Solenoid Valve 24DC		IPV	100P
		note: all solenoid valves to have Nitrile seals and Series 811 24VDC solenoid coils			
		Low pressure valves for recirc sequencing systems			
	205TFBX-I24D	1" Solenoid Valve 24DC		IPV	
	216BBX-I24D	1 1/2" Solenoid Valve 24DC		IPV	
	217BBX-I24D	2" Solenoid Valve 24DC		IPV	
		note: all solenoid valves to have Nitrile seals and Series 811 24VDC solenoid coils			
	283864	1" Solenoid Valve 24DC		Granzow	21WN6KE250
	AQ300312	1 1/2" Solenoid Valve 24DC		Granzow	21WN8KE400
	283865	2" Solenoid Valve 24DC		Granzow	21WN9KE500
		Bulkhead Fittings			
	282725	3/4" Bulkhead Fittings		Indelco	BFAS1007CES
	282726	1" Bulkhead Fittings		Indelco	BFAS1010CES
	282727	1 1/2" Bulkhead Fittings		Indelco	BFAS1015CES
		Drain to waste valve			
	282718	2" actuated valve	1	Indelco	94-3730020 w/ mechanical break
	282576	Mechanical Brake, Series 92 Actuator - ASAHI	1	Indelco	2136001
	282698	2" sch 80 pvc flange (2 per valve)	2	Indelco	854-020
		Drain to waste valve			
	282717	3" actuated valve		Indelco	94-37300030 w/ mechanical break
	282576	Mechanical Brake, Series 92 Actuator - ASAHI			2136001
	AQ300540	3" sch 80 pvc flange (2 per valve)		Indelco	854-030
		Gauges			
	283916	2in 6-60 PSI 1/4" BTM Pressure Gauge (SPG-06-1001)		Superior pool	81060BU
		Labels			
		Warning label			
		Distribution manifold port labels			
		Specal			
	50-01BPVKCKX	4" pressure relief valve		Northwestern power	

Mechanical Enclosure system pull list			<u>Serenade</u>
<u>Qty. Req.</u>	<u>Qty. Pulled</u>	<u>Description</u>	<u>Part number</u>
1		Distribution manifold	<u>1159648-01-02-hdr</u>
		3" header	
		3" sch 80 pvc cap	847-030
		3" sch 80 pvc flange	854-030
		3" flange gasket(neoprene)	FG-030E
		3" SS bolt pack	BP-0030S/S
		Incomming water line reducer	
		3" x 1" reducer bushing	837-335
		3" x 1 1/2" reducer bushing	837-337
		3" x 2" reducer bushing	837-332
		4" header	
1		4" sch 80 pvc cap	847-040
2		4" sch 80 pvc flange	854-040
1		4" flange gasket(neoprene)	FG-040E
1		4" SS bolt pack	BP-0040S/S
		Incomming water line reducer	
		2" x 1 1/2" reducer bushing	837-251
1		4" x 2" reducer bushing	837-420
		4" x 2 1/2" reducer bushing	837-421
		4" x 3" reducer bushing	837-422
		6" header	
		6" sch 80 pvc cap	847-060
		6" sch 80 pvc flange	854-060
		6" flange gasket(neoprene)	FG-060E
		6" SS bolt pack	BP-0060S/S
		Incomming water line reducer	
		2" x 1 1/2" reducer bushing	837-251
		6" x 2" reducer bushing	837-528
		6" x 3" reducer bushing	837-530
		6" x 4" reducer bushing	837-532
		8" header	
		8" sch 80 pvc cap	847-080
		8" sch 80 pvc flange	854-080
		8" flange gasket(neoprene)	FG-080E
		8" SS bolt pack	BP-0080S/S
		Incomming water line reducer	
		8" x 2" reducer bushing	837-578
		8" x 3" reducer bushing	837-850
		8" x 4" reducer bushing	837-582
		8" x 6" reducer bushing	837-585
		Incomming water line valve	
		1" ball valve	1601-010

		1 1/2" ball valve	1601-015
		2" ball valve	1601-020
		2 1/2" ball valve	1601-025
		3" ball valve	1602-030
		manual valves (non-sequencing)	
5		1" ball valve	1601-010
2		1 1/2" ball valve	1601-015
1		2" ball valve	1601-020
		2 1/2" ball valve	1601-025
		3" ball valve	1602-030
		4" ball valve	1602-040
		Sequencing valve assemblies	
		1" sequencing valve assembly	AQxxxxx
		1 1/2" sequencing valve assembly	AQxxxxx
		2" sequencing valve assembly	AQxxxxx
		3" sequencing valve assembly	AQxxxxx
		Blow out port materials	
1		1" compact ball valve	2622-010
1		1" sch 80 pvc soc x reinforced fpt cplg	835-010SR
1		1" sch 80 pvc mpt plug	850-010
		Gauges	
1		Pressure gauge	
		Labels	
1		Warning label	
lot		Distribution manifold port labels	
		Mechanical enclosure	
		Enclosure	XXXXX
		Manifold support frame anchors (1 set per frame)	
		pipe clamps	
		Enclosure anchors	
		Misc	

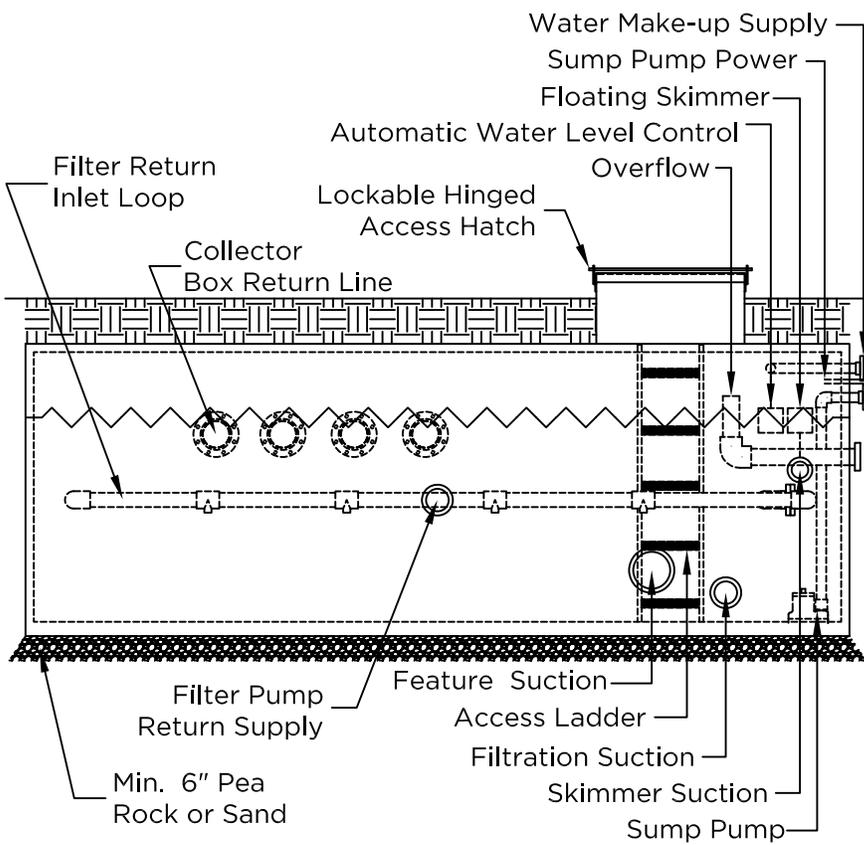


Pre-Fabricated Water Reservoir

Pre-Fabricated Water Reservoir tank is a pre-cast Concrete vessel with lockable access hatch, service ladder and required plumbing connection. Tanks manufactured of 5000 PSI concrete to meet ASTM C-913 & C-1227 standards. Tank size to be per project requirements based on splash pad feature flow rate, size of pad, and environmental surroundings.

May consist of:

- Pre-plumbed with interior suction and outlet fittings
- Perimeter filtration return loop
- Floating skimmer
- Submersible pump for pumping out vault
- Overflow line
- Automatic water fill valve
- All watertight mechanical and electrical penetration
- White powder coated, plated access hatch



Water Reservoir Tank Data:

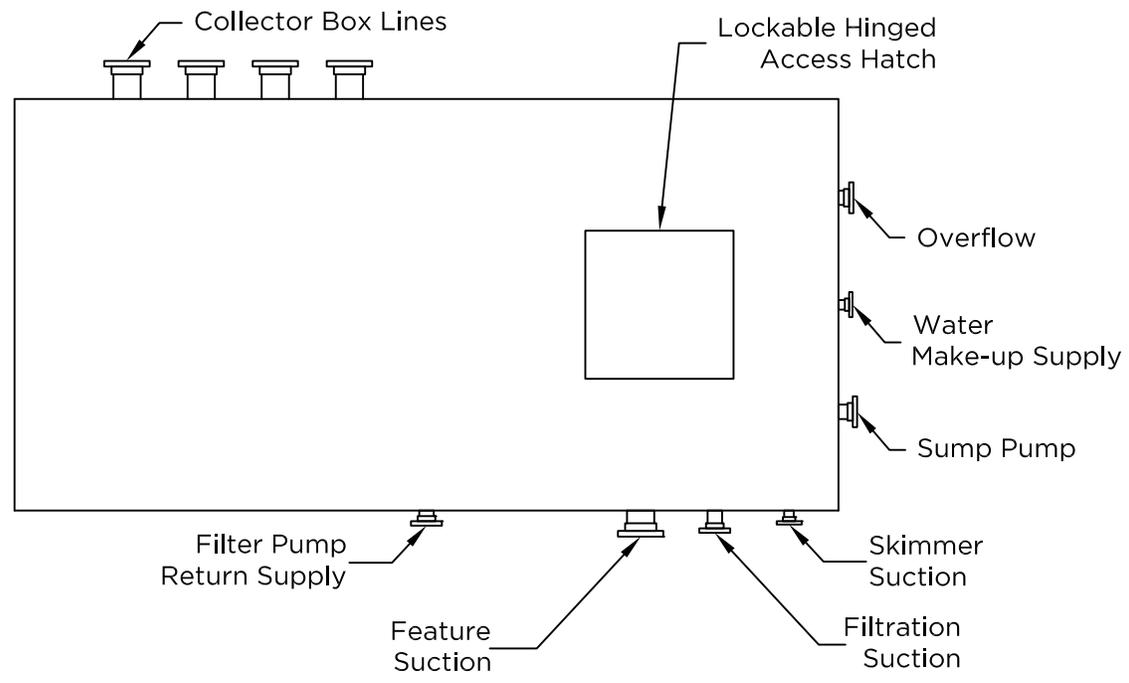
Number of 6" Collector Box Lines: _____

Standard Water Make-up Supply Line Size: _____ 1" _____

Standard Overflow / Waste Line Size: _____ 3" _____

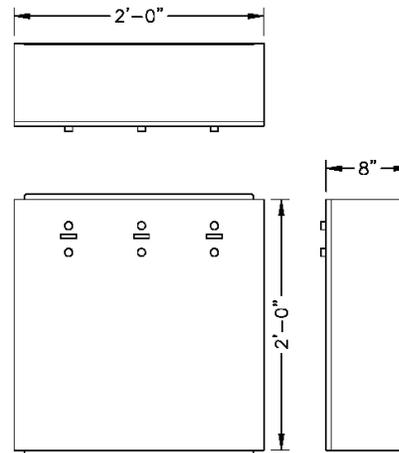
Note: Above information is preliminary. Exact system requirements will need to be verified...

Note: -Drawings are not to scale.



Water Reservoir Tank Sizing Chart:

<u>Working Capacity</u>	<u>Max. Feature Flow Rate: (per tank)</u>	<u>Weight of Lid/Tank:</u>
2700 gal.	600 gpm	Lid: 6,000 & Tank: 13,000 - 19,000 lbs Total
4000 gal.	800 gpm	Lid: 14,000 & Tank: 18,000 - 32,000 lbs Total
5000 gal.	800 gpm	Two Halves: 19,000 ea - 38,000 lbs Total



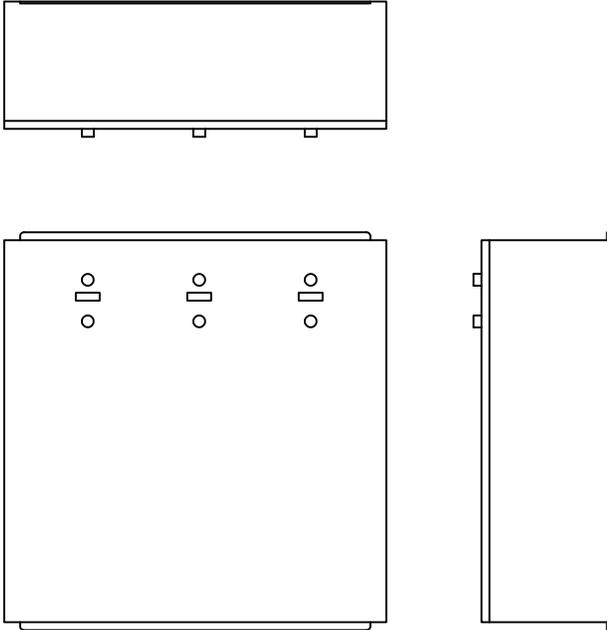
Control Panel

Control Panel to be UL listed and used to control simple on/off operations of water play activities or incorporate operation interface Programmable Logic Controller, (PLC), to create splash pad zoning or sequencing activities.

To be UL listed and may consist of:

- Pump(s) motor starters
 - Time clock controls to set hours of operation and set duration time of activated devices
 - VFD pump controls
 - Flow switch controls
 - Pressure transducer controls
 - Power feeds to manifold distribution solenoid valves
 - Activation Bollard relay switches
 - Chemical treatment system power feed
 - Vault internal electrical distribution
 - Waste valve box relay & power feed
 - Water heater relay
 - All NEMA rated components
 - NEMA 4 enclosure
- *All control panels are designed for specific projects

Recirc Control Panel (on/off):



Filter Pump(s) Size: Project Specific
 Feature Pump(s) Size: Project Specific
 VFD Pump Controls: Yes / No
 Activation Relay: _____ (# of Activators)
 Main Power Supply #1: (Pump(s) power needs)

Project Specific

(*Power Supply to be GFI protected.)

Main Power Supply #2 (if required):

Project Specific

(*Power Supply to be GFI protected.)

NOTE:
 -ALL DIMENSIONS ARE APPROXIMATE AND WILL NEED TO BE VERIFIED.
 -PANEL CAN BE ATTACHED TO SKID OR AT A REMOTE LOCATION.

Recirc Control Panel:	
Model No.	Description
CP-100	Standard on/off controls

SERENADE PARK FEATURE OPERATION

Recirculation – ON/OFF Control System

Troy, IL

Read and understand all operation instructions provided in the operation manual before attempting to service or operate this equipment. Failure to do so could result in damage to equipment or personal injury.

POWER REQUIRMENT: 1 Feed @ 230V/1PH/60Hz/40amp w/ neutral
1 Feed @ 120V/1PH/60Hz/20amp w/ neutral

1. MAIN DISCONNECT (on control panel exterior door; not service entrance rated)

This disconnect will shut off all power to the splash pad control panel. The disconnect switch operating handle is interlocked with the enclosure door, preventing the door from being opened while power is on.

2. FILTRATION PUMP HAND/OFF/AUTOMATIC (H/O/A) CONTROL SWITCH (on control panel exterior door) 3hp, 1phase, 230volts, 16.0amps)

This three-position switch controls the filtration pump.

-If this switch is in HAND position, the filtration pump will run continuously and all safety interlocks are bypassed.

-If this switch is in AUTO position, the filtration pump will be enabled and all safety interlocks are activated.

-If this switch is in the OFF position, the filtration pump will not run.

3. SPLASH PAD FEATURE PUMP HAND/OFF/AUTOMATIC (H/O/A) CONTROL SWITCH (on control panel exterior door) 3hp, 1phase, 230volts, 16.0amps)

This three-position switch controls the splash pad feature pump.

-If this switch is in HAND position, the splash pad feature pump will run continuously and safety interlocks are bypassed.

-If this switch is in Auto position, the splash pad feature pump will be controlled automatically and all safety interlocks are activated. In order for the feature pump to operate in AUTO mode, the following must occur:

- The 24-hour time clock (see Item 4 below) must be activated.
- The Activation Bollard PNP switch (see Item 11 below) must be activated.
- The filtration pump must be in the Auto mode and running.
- The filtration pump flow switch must sense water flow (see Item 9 below).

-If this switch is in the OFF position, the feature pump will not run.

4. 24HR TIME CLOCK (on control panel)

The 24hr time clock acts as an enable for the splash pad PNP proximity switch. This time clock designates the hours of operation for the splash pad and is field adjustable. This time clock to be a 7day/24hour with a battery back up. All H/O/A (Hand/Off/Automatic) switches must be in the AUTO mode for time clock control.

5. AUTOMATED CHEMICAL CONTROLLER (ORP/pH) (110vac/5 Amps.)

The automated chemical controller operates if the filtration pump is running in the AUTO mode. The automated chemical controller powers and controls the ORP chlorine feeder solenoid valve and the peristaltic acid pump that adjust the pH. There is a terminal strip located in the control panel for providing power for the automated chemical controller. The automated chemical controller includes an integral flow cell that allows the controller to dispense chemicals only if the chemical flow switch sensor is satisfied.

6. CHLORINE CHEMICAL SOLENOID VALVE (oRP) (110vac/2amp)

The (oRP) controller will control the operation of this valve to inject chemical as required.

7. ACID CHEMICAL INJECTION PUMP (pH) (110vac/2amp)

The (pH) controller will control the operation of this pump to inject chemical as required.

8. LIGHTED ALARM PUSHBUTTONS (Flow Switch Alarm)

There is one lighted alarm pushbutton located on the front of the control panel. The lighted pushbutton is connected to the flow switch. Please see "Flow Switch" Item 9 below for operation of this alarm. When the Flow Switch Alarm condition is reached, the pushbutton will light and stay on. To return the control system to normal operation place all pump H/O/A switches into the "Off" position, correct the alarm condition and depress the pushbutton to reset the alarm. Reset pump H/O/A's to the "Auto" for normal operation.

9. FLOW SWITCH (N.O.) (located on the discharge pipe of the filtration pump) (120V/5AMP)

There is a flow switch on the discharge line of the filtration pump. For the filtration pump to remain running (in auto mode) the flow switch must sense water flow from the pump. If the flow switch does not sense water flow, the filtration and feature pumps and related equipment will shut down and the Flow Switch Alarm pushbutton (Item 8 above) will light. The pumps and related equipment will not restart until the alarm pushbutton is reset. There is an adjustable time delay on this switch. There is a terminal strip inside the control panel for connection to the flow switch.

10. AUTO DRAIN VALVE (110VAC/.5amps, normally closed)

When the activation bollard has not been activated for approximately 50 minutes the auto drain valve will open, allowing water to drain from the splash pad to waste. When the activation bollard is activated, the auto drain valve will close, not allowing water to drain from the splash pad to waste. The auto drain valve requires two separate 115v power supplies; one to open the valve and one to close the valve. The open power supply lands on the terminal strip #2 and is the white wire connection within the valve. The closed power supply lands on the terminal strip #3 and is the blue wire connection within the valve. The common lands on the terminal strip #1 and is the black wire connection within the valve.

11. ACTIVATION BOLLARD PNP 24 VDC PROXIMITY SWITCH

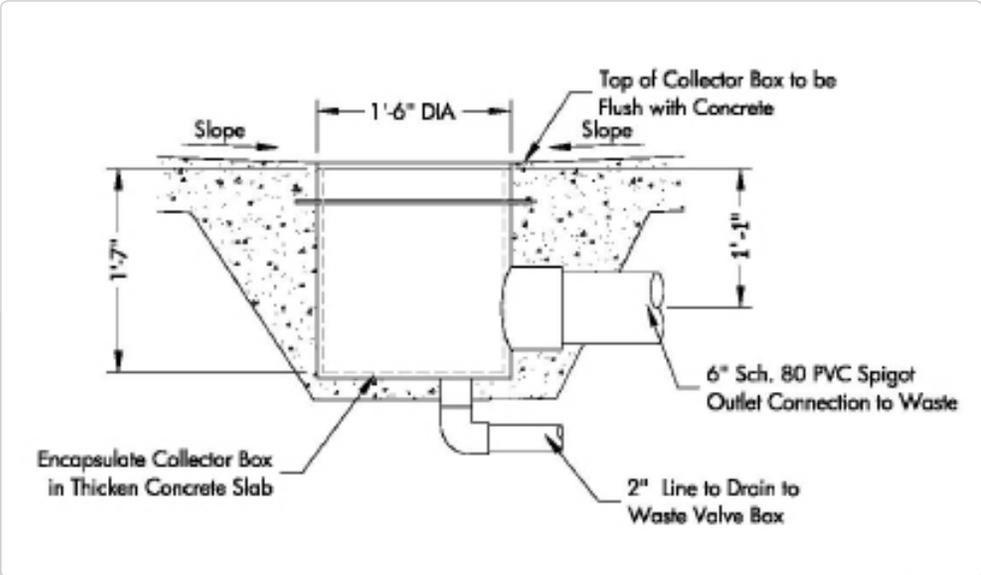
This system has one activation bollard with a PNP (24 VDC) proximity switch. When a person touches the activation bollard during the time designated for operation, the feature pump/splash pad pump will energize for 0-60 minutes allowing water to flow into the supply piping. The pump run time is adjustable by a dial on the timer. The splash pad feature operation pump 24-hour time (Item 4 above) clock must be satisfied for the splash pad feature pump to operate via the activation bollard. There is a terminal strip inside the control panel for connection to the activation bollard PNP (24 VDC) proximity switch.

Notes:

1. System override switches for manual operation are not included in the above design (other than the described H/O/A switches).
2. Activation Bollard is located approximately 50 feet from the Control Panel.
3. Panel to be UL Listed.
4. Control panel is rated NEMA 4.

Running the system in hand mode requires a qualified operator familiar with the operation of the system. It is not recommended that the system be left unattended during operation in the hand mode due to the fact that all safety interlocks are bypassed. Damage could occur to the equipment while operating in the hand mode. Read and understand all operation instructions provided in the operation manual before attempting to service or operate this equipment. Failure to do so could result in damage to equipment or personal injury.

(Date)-KML



Collector Box

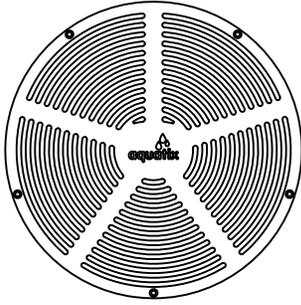
Collector Box to consist of 18 inch diameter PVC sump for collection of splash pad recirculation water. Each collector box is capable of 250 gpm gravity drainage using a 6 inch drain pipe sloped at 1/8 inch per foot slope to water reservoir tank.

May consist of:

- Structural plastic grating.

Collector box to have an auto drain feature that will evacuate all water to waste when system is not in operation. This feature minimizes the potential for contamination of the underground reservoir tank.

DECORATIVE
GRATE COVER

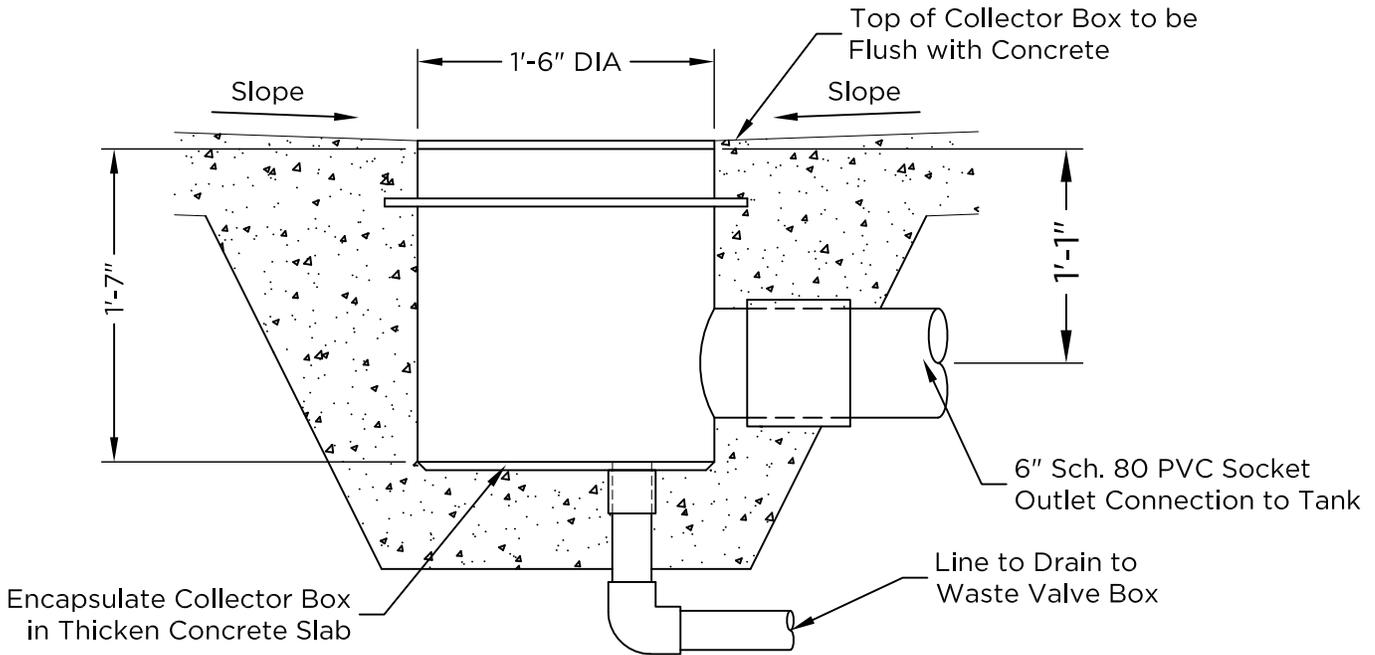


Collector Box Data:

Max 250 GPM Gravity Flow Per Unit

Note:

-Above information is preliminary. Exact number of collector boxes needed for splash pad design based on total feature flow rate, size of splash pad, drainage needs for splash pad layout, and elevation/distance of collector box(s) to underground water reservoir tank.



Collector Box:

Model No.	Max. Gravity Flow Rate: (Per Box)	Collector Box Lines:
CB-250-6	250 gpm	6" Lines

Note:

-250gpm MAXIMUM drainage is based on a 1/4" per foot slope from 6" collector box drainage line to underground water reservoir tank connection.



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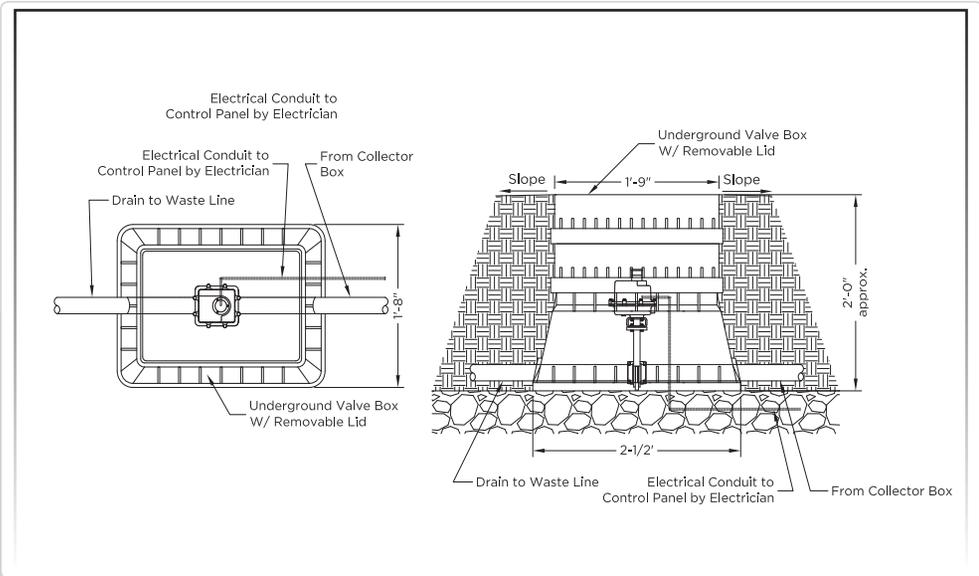
18" COLLECTOR BOX ROUND DUAL PORT

P.J.
DRAWN BY

3/4"=1'-0"
SCALE

9/21/16
DATE

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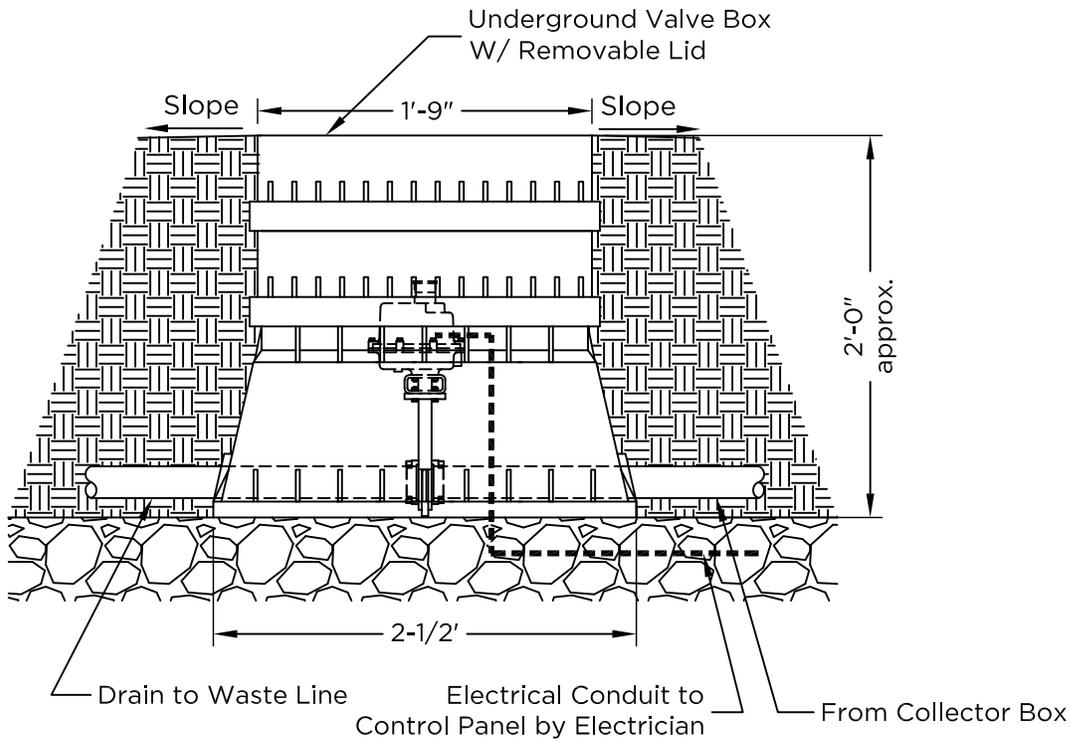
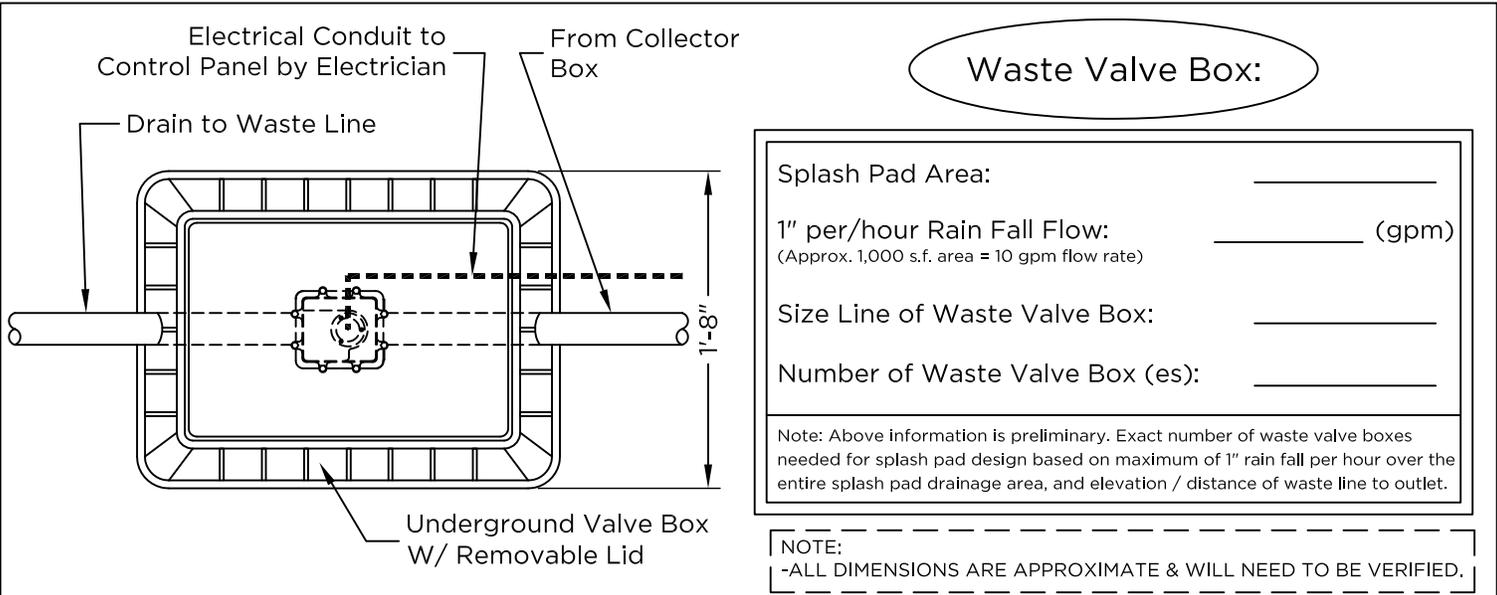
Rain Diverting Waste Valve Box

The **Rain Diverting Waste Valve Box** is an electrical solenoid valve housed in a 100% recycled HDPE burial box that allows the collector box(s) to drain all water to waste when system is not in operation. Water to be evacuated through underground waste line from collector box through waste valve box to either site drainage area or waste. Waste valve box minimizes the potential for contamination of underground reservoir. Waste valve box size & quantity to be based on evacuating 1 inch rain fall per hour over entire splash pad drainage area.

May consist of:

- Structural foam HDPE resin that is resistant to UV light, weather, moisture and chemical action of soils
- Burial box with removable lid
- Motorized rain diverting valve
- (2) Drain line connection ports



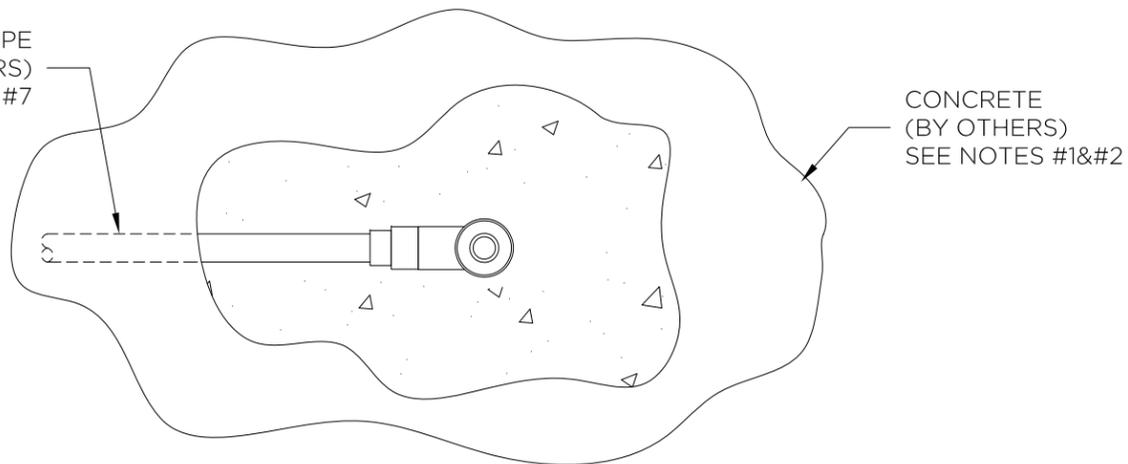


Waste Valve Box Sizing Chart:

Selection	Qty.	Model No.	Max. Gravity Flow Rate: (per box)	Line Size:
<input type="checkbox"/>	()	WVB-200	35 gpm	() 2" Lines
<input type="checkbox"/>	()	WVB-300	65 gpm	() 3" Lines

Note: Maximum drainage is based on a 1/4" per foot slope from collector box connection to waste valve drainage line outlet.

1" SUPPLY PIPE
(BY OTHERS)
SEE NOTE #7



PLAN VIEW

1 1/2" = 1'-0"

IMPORTANT: VISUALLY INSPECT THE EQUIPMENT ON A DAILY BASIS FOR:

1. SIGNS OF VANDALISM/WEAR/DAMAGE/LOOSE OR MISSING COMPONENTS THAT WOULD MAKE THE EQUIPMENT UNSAFE.
2. LOOSE OR MISSING FASTENERS (NUTS, BOLTS, CLAMPS, CABLES, SCREWS, ETC).
3. EQUIPMENT DAMAGE (IMPROPERLY SECURED, WORN, MISSING, OR DAMAGED STRUCTURES, SUPPORT ARMS, BRACKETS, PROTECTIVE COVERS, BASE SKIRTS, HANDLES, NOZZLES ETC).
4. EQUIPMENT MALFUNCTION (LOOSE, MISSING, WORN, DAMAGED EQUIPMENT COMPONENTS).
5. IF COMPONENT REPLACEMENT IS REQUIRED, REPLACE WITH NEW COMPONENT OF SAME TYPE/DESIGN. **DO NOT REUSE COMPONENT.**
6. IT IS NOT RECOMMENDED TO RE-USE FLANGE MOUNTING GASKETS.
7. PROPERLY BALANCED AND SANITIZED WATER SUPPLY.

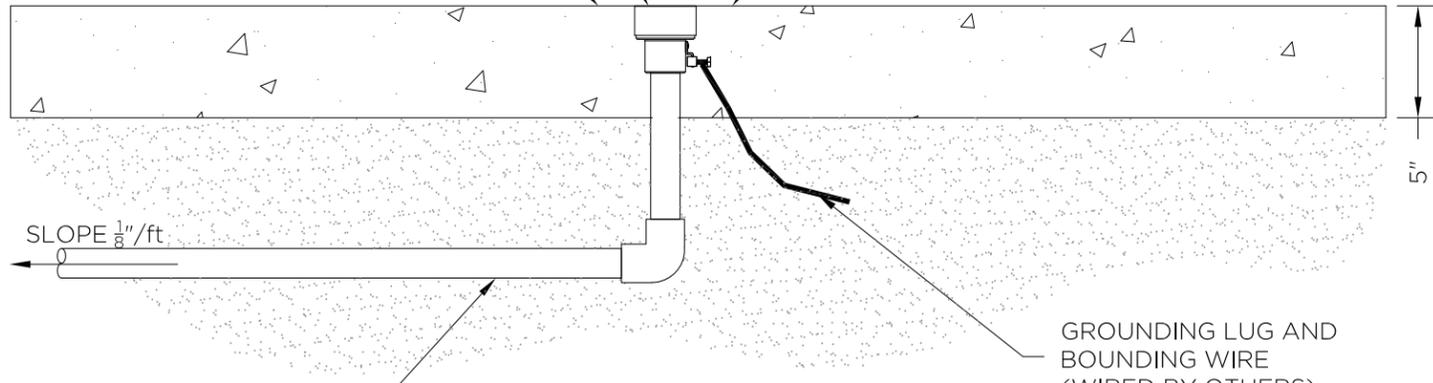
NOTES:

1. THICKEN CONCRETE SLAB UNDER AND AROUND STRUCTURE.
2. VERIFY LOCAL CODES FOR TYPE, THICKNESS, & REINFORCEMENT REQUIREMENTS FOR CONCRETE SLAB. CONCRETE TO BE RATED FOR 4000 PSI MINIMUM.
3. REPLACE CAP PLUGS WITH NOZZLE INSERTS AFTER CONCRETE HAS CURED.
4. CLEAN AND LUBRICATE THREADS ON NOZZLE W/ PURE TEFLON PASTE PRIOR TO INSTALLING.
5. MUST TRIM LENGTH OF 2-1/2" Ø SCH 80 X 4-1/2" PIPE TO LEVEL AND FLUSH THE ADAPTER TO THE DRAINAGE SLOPED CONCRETE SURFACE.
6. A SHUT OFF VALVE MUST BE INSTALLED ON THE DRAIN LINE.
7. A VALVE MUST BE INSTALLED ON THE SUPPLY LINE TO REGULATE FLOW.
8. WINTERIZATION TO BE PERFORMED BY A TRAINED TECHNICIAN FAMILIAR WITH PROPER WINTERIZATION PROCEDURES.
9. TO PREVENT DAMAGE OR PERSONAL INJURY, REMOVAL OF THE NOZZLE ASSEMBLIES OF ALL ABOVE GROUND STRUCTURES AND GROUND SPRAY EFFECTS IS REQUIRED DURING STARTUP AND WINTERIZATION PROCEDURES.

STAINLESS STEEL
NOZZLE FLUSH WITH
CONCRETE

THIS SURFACE
MUST BE LEVEL
AND FLUSH

WINTERIZATION COVER
JET INSERT, SEE BELOW FOR
AVAILABLE JET EFFECTS
INSERT CAP PLUG BEFORE POURING
CONCRETE (TYP), SEE NOTE #3
CONCRETE (BY OTHERS)



ELEVATION

1 1/2" = 1'-0"

1" WATER SUPPLY LINE,

GROUNDING LUG AND
BOUNDING WIRE
(WIRED BY OTHERS)

- AVAILABLE JET EFFECTS
- SEA CRAWLER
 - JR WATER JEWEL
 - MINI PILLAR
 - CROWN JET
 - BUBBLER
 - TRIPLE MIST

SPRAY EFFECT MAY VARY BASED ON
VARIOUS ENVIRONMENTAL CONDITIONS,
FLOW RATES, SLOPE OF SPLASH PAD,
SUBMERGENCE DEPTH, AND WIND.

NO.	REVISION	DATE
A	REVISED CONCRETE CALL OUT	5/1/2020
B	ADDED AVAILABLE WATER EFFECTS	10/28/21

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DATE	DWG. FILE	CHECKED	DRAWN
4/10/19	AQ100805	CTS	CTS

1 1/2" = 1'-0"

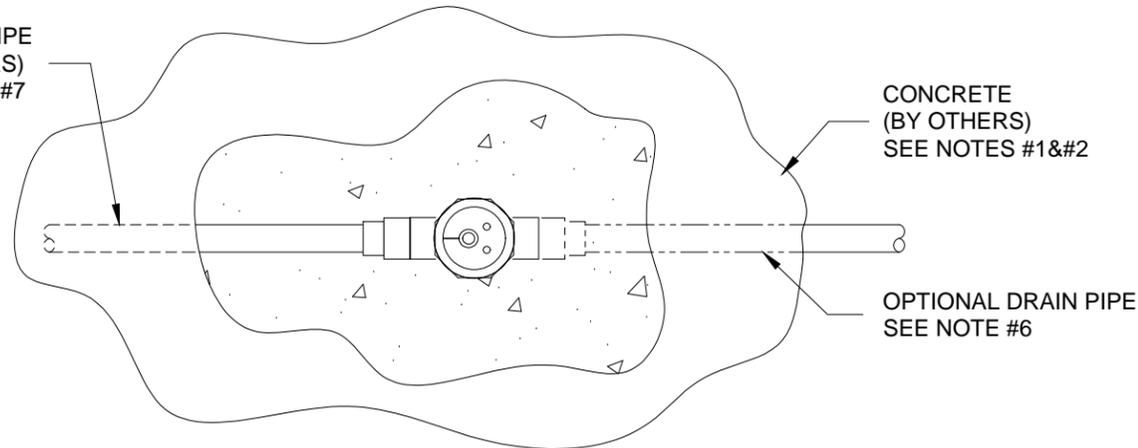
STAINLESS STEEL GROUND SPRAY POD CAST IN
INSTALLATION DRAWING

JOB NO.
AQ100805

1
OF 1

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1" SUPPLY PIPE
(BY OTHERS)
SEE NOTE #7



PLAN VIEW

1 1/2" = 1'-0"

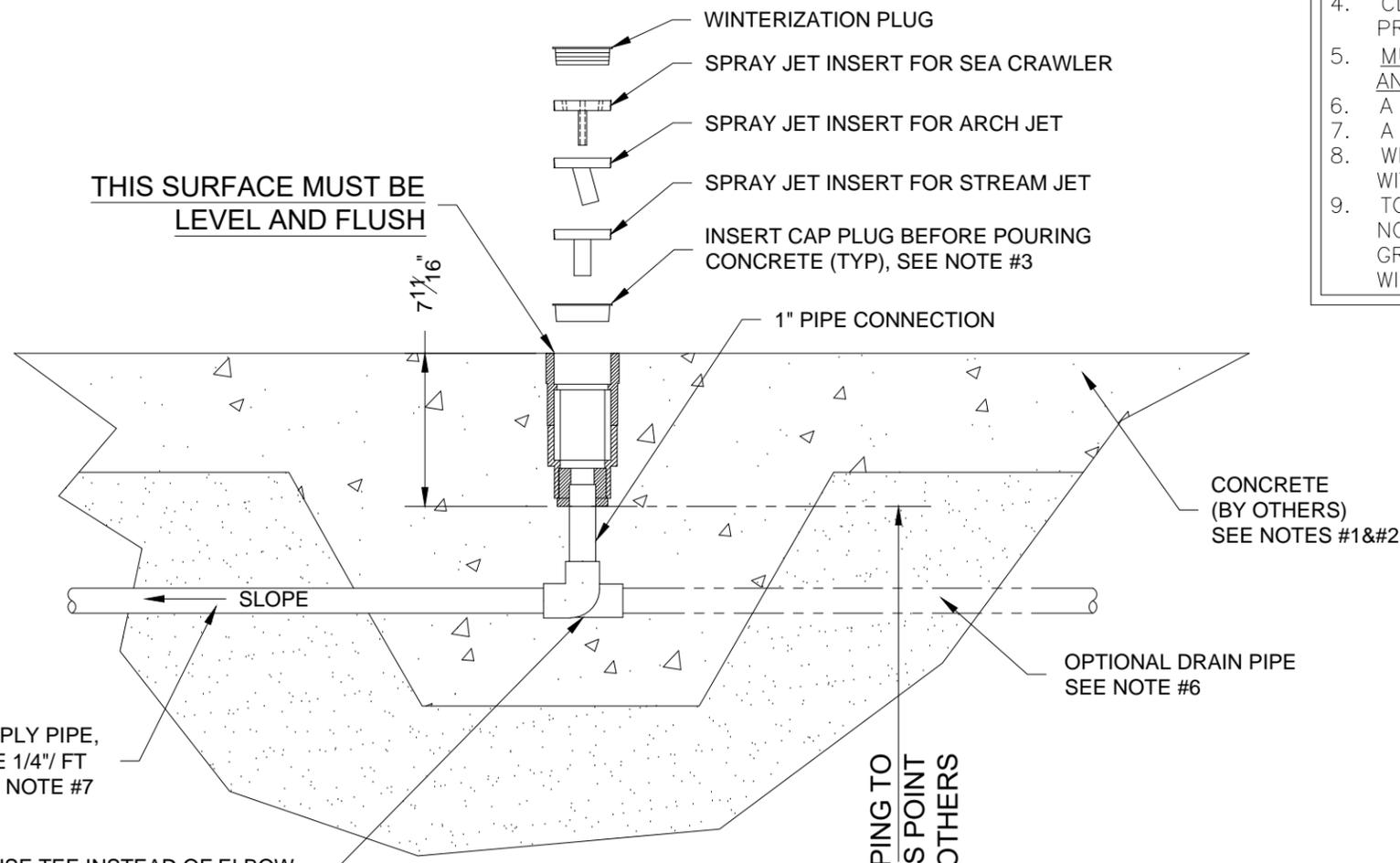
IMPORTANT: VISUALLY INSPECT THE EQUIPMENT ON A DAILY BASIS FOR:

1. SIGNS OF VANDALISM/WEAR/DAMAGE/LOOSE OR MISSING COMPONENTS THAT WOULD MAKE THE EQUIPMENT UNSAFE.
2. LOOSE OR MISSING FASTENERS (NUTS, BOLTS, CLAMPS, CABLES, SCREWS, ETC).
3. EQUIPMENT DAMAGE (IMPROPERLY SECURED, WORN, MISSING, OR DAMAGED STRUCTURES, SUPPORT ARMS, BRACKETS, PROTECTIVE COVERS, BASE SKIRTS, HANDLES, NOZZLES ETC).
4. EQUIPMENT MALFUNCTION (LOOSE, MISSING, WORN, DAMAGED EQUIPMENT COMPONENTS).
5. IF COMPONENT REPLACEMENT IS REQUIRED, REPLACE WITH NEW COMPONENT OF SAME TYPE/DESIGN. DO NOT REUSE COMPONENT.
6. IT IS NOT RECOMMENDED TO RE-USE FLANGE MOUNTING GASKETS.
7. PROPERLY BALANCED AND SANITIZED WATER SUPPLY.

NOTES:

1. THICKEN CONCRETE SLAB UNDER AND AROUND STRUCTURE.
2. VERIFY LOCAL CODES FOR TYPE, THICKNESS, & REINFORCEMENT REQUIREMENTS FOR CONCRETE SLAB. CONCRETE TO BE RATED FOR 4000 PSI MINIMUM.
3. REPLACE CAP PLUGS WITH NOZZLE INSERTS AFTER CONCRETE HAS CURED.
4. CLEAN AND LUBRICATE THREADS ON NOZZLE W/ PURE TEFLON PASTE PRIOR TO INSTALLING.
5. MUST TRIM LENGTH OF 2-1/2" Ø SCH 80 X 4-1/2" PIPE TO LEVEL AND FLUSH THE ADAPTER TO THE DRAINAGE SLOPED CONCRETE SURFACE.
6. A SHUT OFF VALVE MUST BE INSTALLED ON THE DRAIN LINE.
7. A VALVE MUST BE INSTALLED ON THE SUPPLY LINE TO REGULATE FLOW.
8. WINTERIZATION TO BE PERFORMED BY A TRAINED TECHNICIAN FAMILIAR WITH PROPER WINTERIZATION PROCEDURES.
9. TO PREVENT DAMAGE OR PERSONAL INJURY, REMOVAL OF THE NOZZLE ASSEMBLIES OF ALL ABOVE GROUND STRUCTURES AND GROUND SPRAY EFFECTS IS REQUIRED DURING STARTUP AND WINTERIZATION PROCEDURES.

**THIS SURFACE MUST BE
LEVEL AND FLUSH**



ELEVATION

1 1/2" = 1'-0"

SPRAY EFFECT MAY VARY BASED ON VARIOUS ENVIRONMENTAL CONDITIONS, FLOW RATES, SLOPE OF SPLASH PAD, SUBMERGENCE DEPTH, AND WIND.

NO.	REVISION	DATE
A	UPDATED DRAWING TO STANDARDS	6/14/07
B	UPDATED FOR SHORTER FEI BODY - CE	10/06/08
C	UPDATED DRAWING PER STANDARDS	2/9/10
D	UPDATED FOR SEA CRAWLER	3/5/18

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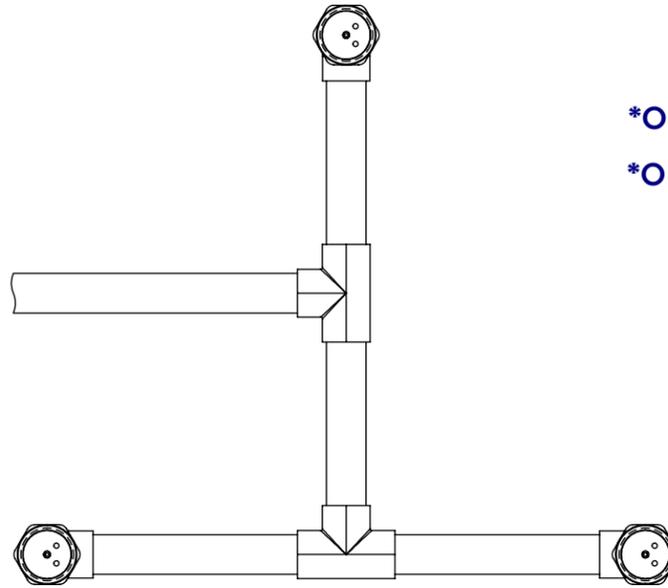
DATE	DWG. FILE	CHECKED	DRAWN	SHEET/TITLE
6/07/06	100081		B/JN	ARCH JET/STREAM JET/SEA CRAWLER INSTALLATION DRAWING

JOB NO.
100081

REVISION HISTORY			
REV	REV DESC	DATE	BY
A	RELEASED	6/1/21	EPS

NOTES:

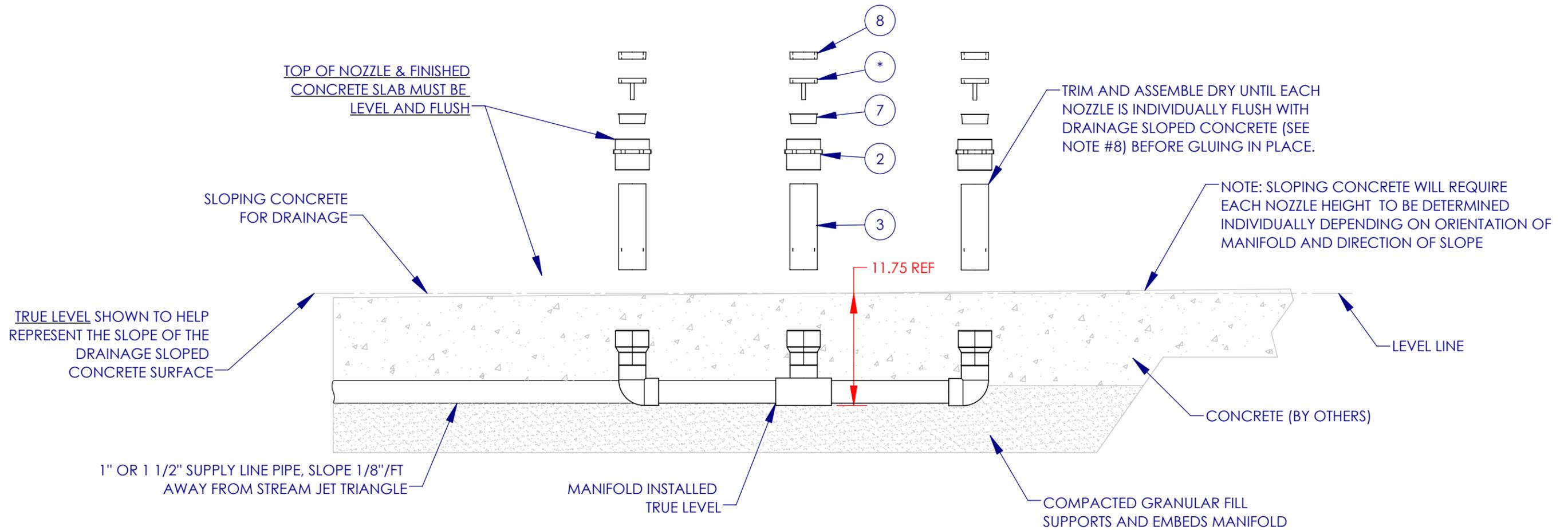
1. THICKEN CONCRETE SLAB UNDER AND AROUND MANIFOLD
2. VERIFY LOCAL CODES FOR TYPE, THICKNESS, AND REINFORCEMENT REQUIREMENTS FOR CONCRETE SLAB, CONCRETE TO BE RATED FOR 4000 PSI MINIMUM
3. REPLACE CONCRETE PLUGS WITH NOZZLE INSERTS AFTER CONCRETE HAS CURED
4. A VALVE MUST BE INSTALLED ON THE SUPPLY LINE TO REGULATE FLOW
5. WINTERIZATION TO BE PERFORMED BY A TRAINED TECHNICIAN FAMILIAR WITH PROPER WINTERIZATION PROCEDURES
6. TO PREVENT DAMAGE OR PERSONAL INJURY, REMOVAL OF THE NOZZLE ASSEMBLIES IS REQUIRED DURING STARTUP AND WINTERIZATION PROCEDURES
7. CLEAN AND LUBRICATE THREADS ON NOZZLE W/ PURE TEFLON PASTE PRIOR TO INSTALLING.
8. MUST TRIM LENGTH OF 2-1/2" Ø SCH 80 X 9" PIPE TO LEVEL AND FLUSH THE ADAPTER TO THE DRAINAGE SLOPED CONCRETE SURFACE.



*OR
*OR

ITEM NO.	QTY.	Number	Description	LENGTH
1	1	AQ200003	STREAM JET TRIANGLE PVC MANIFOLD FABRICATION	
2	3	AQ300383	2.5in SCH80 PVC ADAPTER SOC X FPT	
3	3	AQ300384	PIPE ROUND 2.5 SCH80 PVC	9
4	3	AQ100044-UL	STREAM JET ULTRA LOW FLOW NOZZLE	
5	3	AQ100044-L	STREAM JET LOW FLOW NOZZLE	
6	3	AQ100044-H	STREAM JET HIGH FLOW NOZZLE	
7	3	AQ300386	2.5in CAP PLUG	
8	3	AQ300385	2.5in PVC FLUSH MOUNT PLUG	

***NOZZLE SELECTED BASED ON FLOW RATE**



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FRACTIONS ± 1/32"
 DECIMALS ± .015
 WHOLE ANGLES ± 5°
 DECIMAL ANGLES ± .25°

DATE: 06/01/2021
 DWG FILE: AQ100457
 CHECKED: CHK BY: SHEET TITLE: PVC STREAM JET TRIANGLE
 DRAWN: ES
 SCALE: AS NOTED
 PART NO: AQ100457-A
 1 OF 1



SERENADE PARK Splash Pad

TROY, IL

INTRODUCTION:

SPLASH PAD TO CONSIST OF A 51'-4" X 41'-2" FREEFORM CONCRETE PAD WITH THE FOLLOWING PLAY FEATURES:

NO	PRODUCT	QTY
1	ARCH JET	4
2	SEA CRAWLER	1
3	STREAM JET TRIANGLE	1
4	SUPPLY FITTING	1

DRAINAGE SYSTEM TO CONSIST OF (1) COLLECTOR BOX W/ COVERING GRATE.

MECHANICAL SYSTEM TO BE LOCATED IN A NEARBY MECHANICAL ROOM. RECIRCULATION SYSTEM TO INCLUDE:

- 1 - CONTROL PANEL ON/OFF
- 1 - FEATURE PUMP SKID
- 1 - FILTRATION SKID
 - 1 - FILTRATION PUMP
 - 1 - CARTRIDGE FILTER
 - 1 - CHEMICAL CONTROL SYSTEM
- 1 - CHLORINE TANK AND PUMP
- 1 - ACID TANK AND PUMP
- 1 - DISTRIBUTION HEADER
- 1 - UNDERGROUND WATER RESERVOIR

REQUIRED UTILITIES:

1. **DOMESTIC WATER MAKE-UP:**
1" DOMESTIC WATER SUPPLY WITH AN APPROVED BACKFLOW PREVENTER AND PRESSURE REGULATOR REGULATED TO 25-30PSI AND AN AIR GAP IN ACCORDANCE WITH LOCAL AND STATE CODES
IT IS RECOMMENDED THAT A HOSE BIBB AND A VACUUM BREAKER TO BE PROVIDED FOR WASHING DOWN THE ENTIRE DECK AREA.
2. **UNDERGROUND STORAGE TANK OVERFLOW:**
3" SCH 80 PVC TO WASTE. AIR GAP REQUIRED.
3. **DRAIN:**
3a) 2" SCH 80 PVC TO WASTE (FROM UNDERGROUND STORAGE TANK SUMP PUMP). AIR GAP REQUIRED.
3b) 3" SCH 80 PVC OVERFLOW TO WASTE (FROM UNDERGROUND STORAGE TANK). AIR GAP REQUIRED.
3c) 2" SCH 80 PVC DRAIN TO WASTE W/ BUTTERFLY ACTUATED VALVE (FROM COLLECTOR BOXES). AIR GAP REQUIRED.
3d) 2" SCH 80 PVC DRAIN TO WASTE (FROM WINTERIZATION PIT) AIR GAP REQUIRED.
4. **ELECTRICAL SERVICE:**
(1) FEED @ 230V, 1Ø, 60hz, 40amps W/ NEUTRAL (SPLASH PAD MECH)
(1) FEED @ 120V, 1Ø, 60hz, 20 amps (SPLASH PAD CONTROLS)
(1) FEED @ 120V, 1Ø, 60hz, 15amps W/ NEUTRAL (TANK SUMP PUMP)



1101 McKinley Parkway Delano, MN 55328
Contact: Chuck Schmitz
952-345-6443 (Direct) - 952-345-6444 (Fax)
chuckschmitz@playlsi.com (Email)

SPLASH PAD DRAWING LIST:

- C: COVER SHEET
- 1: GENERAL INFORMATION
- 2: SITE PLAN
- 3: SPLASH PAD LAYOUT
- 4: CONCRETE PLAN
- 5: CONCRETE FORM
- 6: CONCRETE SECTION AND DETAILS
- 7: SUPPLY PIPING PLAN
- 8: DRAIN PIPING PLAN
- 9: ELECTRICAL PLAN
- 10: ELECTRICAL LAYOUT
- 11: MECHANICAL PLAN
- 12: STORAGE TANK DETAILS

NO.	REVISION	DATE	
A	RELEASE FOR APPROVAL	3/17/22	
1101 MCKINLEY PARKWAY DELANO, MN 55328 P 952-345-6443 F 952-345-6444 aquatix.com			
 aquatix® by landscape structures		JOB TITLE SERENADE PARK SPLASH PAD	
LOCATION TROY, IL		DWG. FILE 1159648-01-02-C	
SCALE	DRAWN	CHECKED	DATE
SEE VIEWS	CTS	SHEET TITLE	3/17/22
COVER SHEET			
JOB NO. 1159648-01-02			

GENERAL SPLASH PAD DATA			
NOMINAL TOTAL SURFACE AREA: 842 sq.ft.			
NOMINAL SPLASH PAD AREA: 326 sq.ft.			
NOMINAL APRON AREA: 516 sq.ft.			
NOMINAL FILTER TURNOVER RATE: ½ hour			
NOMINAL FILTER FLOW RATE: 90 GPM MIN.			
TANK WORKING VOLUME: 2,700 GALLONS			
NOMINAL TOTAL FEATURE FLOW: 105 GPM			
NOMINAL FEATURE FLOW RATE:			
NO	PRODUCT	QTY	GPM
1	ARCH JET	4	10 EA
2	SEA CRAWLER	1	5
3	STREAM JET TRIANGLE	1	30
4	SUPPLY FITTING	1	30

WATER QUALITY GUIDELINES

FOR PROPER SPLASH PAD OPERATION MAINTAIN, THE FOLLOWING WATER CHEMISTRY:

1. pH BALANCE: 7.2–7.8
2. FREE CHLORINE RESIDUAL: 3.0–5.0 ppm
3. TOTAL DISSOLVED SOLIDS: LESS THEN 1000ppm
4. CALCIUM HARDNESS: 200–400 1500ppm
5. TOTAL ALKALINITY: 80–180ppm AS CALCIUM CARBONATE
6. FILTRATION TURNOVER RATE: 30 MINS
HOLDING TANK WATER SHALL BE FREE OF COLIFORM BACTERIA CONTAMINATION.

START-UP CHECK LIST

1. ALL ELECTRICAL CONNECTIONS MUST BE TESTED AFTER COMPLETION.
2. TEST PUMP MOTORS AND VERIFY PROPER ROTATION AND RUNNING AMPERE AT THE CONTROL PANEL. PUMPS MUST NOT BE RUN DRY.
3. INSPECT ALL PIPING AND PIPING ACCESSORIES FOR LEAKS ONCE PIPES ARE FILLED WITH WATER.
4. PRIOR TO OPERATION, FLUSH ALL LINES OF ACCUMULATED DEBRIS.
5. TEST ALL HYDRAULIC LINES AND FITTINGS FOR LEAKS. REPAIR IF NECESSARY AND FLUSH CLEAN.
6. ALL CUSTOM WATER DEVICES, ETC. MUST BE PROPERLY INSTALLED AND ADJUSTED FOR PROPER PERFORMANCE.
7. VERIFY PROPER INCOMING WATER PRESSURE BEFORE START–UP.

SOIL EXCAVATIONS:

REMOVE ALL EXISTING FILL SOILS AND ANY SILTY SANDS (INCLUDING NATURALLY DEPOSITED SOILS). SOILS EXPOSED IN THE EXCAVATION BOTTOM SHOULD CONSIST OF NATURAL COARSE ALLUVIAL SANDS (SP OR SP–SM). SOILS EXPOSED IN THE EXCAVATION BOTTOM SHOULD BE THOROUGHLY SURFACE COMPACTED. FILL PLACED IN THE EXCAVATION SHOULD CONSIST OF NON–FROST SUSCEPTIBLE SANDS HAVING 5% OR LESS PARTICLES (BY WEIGHT) FINER THAN THE #200 SIEVE AND 40% OR LESS PARTICLES FINER THAN THE #40 SIEVE. FILL SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM: D698). REMOVE ALL BACKFILL THAT DOES NOT CONFORM TO MATERIAL SPECIFICATION (SP OR SP–SM CLASSIFICATION) OR MEET COMPACTION REQUIREMENTS. CONSULT SOILS REPORT OR TESTING LABORATORY AS NECESSARY.

BILL OF MATERIALS:

1. (7) WATERPLAY FEATURES (SEE GENERAL SPLASH PAD DATA)
2. FILTRATION SYSTEM SKID COMPONENTS:
 - 2a) (1) FILTER PUMP – PENTAIR INTELLIFLO, MODEL# VSF 3 HP, 230V, 1ø 16.0AMP–118 GPM@70'TDH
 - 2b) CARTRIDGE FILTER – PENTAIR CCP–520 CARTRIDGE FILTER, 520 SQ/FT. 150GPM MAX FLOW PENTAIR POOL PRODUCTS
 - 2c) (1) AUTOMATIC CHEMICAL CONTROLLER – CAT CONTROLS 110V, 5AMP INCLUDES LIQUID ACID PUMP
 - 2d) (1) FLOW METER – H2FLOW CONTROLS – 3" PIPE, MODEL # FV–3
 - 2e) (1) ELECTRICAL PANEL – UL LISTED, PRE–TESTED
 - 2f) (2) CHEMICAL STORAGE – CHEMICAL STORAGE CROCK, STENNER 15GAL. MODEL #SV015
 - 2g) (2) PERISTALTIC PUMP – STENNER: MODEL #45M5
3. FEATURE SKID SYSTEM COMPONENTS:
 - 3a) (1) FEATURE PUMP -- PENTAIR INTELLIFLO, MODEL# VSF 3 HP, 230V, 1ø 16.0AMP–150 GPM@50'TDH
 - 3b) (1) HEADER – 4" DIA PREFABRICATED DISTRIBUTION MANIFOLD, EACH SUPPLY LINE TO HAVE INDIVIDUAL MANUAL CONTROL VALVES.
4. TANK AND TANK COMPONENTS:
 - 4a) (1) UNDERGROUND RESERVOIR – PRECAST CONCRETE TANK LOCKABLE HATCH AND LADDER (2,700 GALLON WORKING CAPACITY– 3,000 TOTAL CAPACITY) SEE SHEET 1/12 AND 12/12. ***TANK TO BE PREPLUMBED AND OUTFITTED***
 - 4b) (1) SUMP PUMP – FLOTEC SUMP PUMP, 115V, 15AMPS, W/ J–BOX FOR ELECTRICAL CONDUIT, LOCATED WITHIN TANK. MODEL #FPSE3200A
 - 4c) (1) SKIMMER – AQUATIC RECREATION COMPANY. LLC FLOATING SKIMMER W/INTAKE HOSE.
 - 4d) (1) WATER LEVEL CONTROL VALVE – MECHANICAL HUDSON FLOAT VALVE (1" LINE) MCMASTER CARR – 46585K14
 - 4e) (1) FILTRATION RETURN PLUMBING LOOP – 3" PVC PIPE W/ (10) ¾" DISCHARGE PORTS FACING DOWN INTO TANK (SEE DRAWING 12 FOR DETAILS)
5. MISCELLANEOUS COMPONENTS:
 - 5a) (1) ACTIVATION BOLLARD – PVC STRUCTURE W/ A TOUCH SENSOR (3 WIRE PROXIMITY SWITCH, 22AWG, 10–36VDC LOW VOLTAGE) TO ACTIVATE THE FEATURE PUMP FOR A SET DURATION OF TIME.
 - 5b) (1) COLLECTOR BOX – 18" PVC SUMP W/FRP GRATE TOP, NOMINAL CAPACITY OF 250 GPM.
 - 5c) (1) 2" WASTE VALVE BOX – FIBERGLASS BURIAL HOUSING TO CONTAIN A 2" ACTUATED BUTTERFLY VALVE (115V, 0.50 amps) THAT WILL ACTIVATE WHEN THE SYSTEM IS NOT OPERATING TO ALLOW WATER (SUCH AS RAIN) THAT ACCUMULATES IN THE COLLECTOR BOX TO DRAIN TO WASTE. **REFER TO MANUFACTURER INSTRUCTIONS ON WIRING REQUIREMENTS.**

*** ALL MECHANICAL SKID SYSTEMS TO BE PROVIDED BY SPLASH PAD MANUFACTURE TO BE PRE–PLUMBED, PRE–WIRED AND FULLY TESTED. ***

GENERAL SPLASH PAD NOTES:

1. INSTALLER SHALL FIELD VERIFY ALL DIMENSIONS AND ELEVATIONS. ANY CHANGES OR REVISIONS TO THE DRAWINGS AFTER THE DRAWINGS HAVE BEEN APPROVED IS THE RESPONSIBILITY OF THE INSTALLING PARTY.
 2. IT IS THE INSTALLERS RESPONSIBILITY TO LOCATE ALL UTILITIES AND ALL OTHER FACILITIES ABOVE AND BELOW GRADE PRIOR TO PERFORMING ANY WORK.
 3. DURING THE COURSE OF CONSTRUCTION, THE INSTALLER SHALL MAINTAIN AN ACCURATE RECORD OF ALL ELEVATIONS AND CHANGES OF THE APPROVED WORK AND DOCUMENT THE ACTUAL INSTALLATION ON A SET OF REPRODUCIBLE DRAWINGS.
 4. IT IS RECOMMENDED THAT A LIGHTENING DETECTION DEVICE BE INSTALLED INTO THE SPLASH PAD SYSTEM.
 5. IT IS RECOMMENDED THAT A VALIDATED UV SYSTEM BE INSTALLED INTO THE SPLASH PAD SYSTEM.
 6. THE BACKFLOW PREVENTER ON THE WATER MAKE–UP LINE SHALL INCLUDE A PRESSURE REDUCING VALVE AND PRESSURE GAUGE. THE INSTALLER MUST SET THE INCOMING COLD WATER LINE PRESSURE BELOW 30 PSI BEFORE INITIAL SPLASH PAD START–UP.
 7. ALL COMPONENTS OF THE FILTRATION AND RECIRCULATION SYSTEM MUST BE NSF APPROVED.
 8. ELEVATIONS AND CENTER LINES ARE FOR REFERENCE PURPOSES ONLY. IT IS THE INSTALLERS RESPONSIBILITY TO DETERMINE AND VERIFY ACTUAL CENTER LINES, LOCATIONS, AND ELEVATIONS.
 9. ALL MECHANICAL INSTALLATION WORK SHALL BE COMPLETED IN A WORKMAN LIKE MANNER ACCORDING TO STANDARD INDUSTRY PRACTICE AND WARRANTED.
 10. EQUIPMENT SUPPLIER SHALL WARRANTY ALL PRODUCTS AGAINST DEFECTS IN WORKMANSHIP FOR A PERIOD OF TWELVE (12) MONTHS FROM DATE OF INSTALLATION.
 11. IF PRODUCT AND ASSOCIATED MECHANICAL SYSTEM (SUPPLY LINE, DRAIN LINE, HEADER, PUMP, FILTER, ETC.) REQUIRES WINTERIZATION, IT IS TO BE PERFORMED BY EITHER A QUALIFIED CONTRACTOR OR QUALIFIED MAINTENANCE PERSONNEL TRAINED IN PROPER WINTERIZATION PROCEDURES.
 12. THERE MUST BE NO DIRECT PHYSICAL CONNECTION BETWEEN THE SEWER SYSTEM AND ANY DRAIN FROM THE SPLASH PAD OR RECIRCULATION SYSTEM.
 13. SIGNAGE MUST BE PROVIDED IN ACCORDANCE WITH LOCAL AND STATE USER SANITATION AND SAFETY CODES.
 14. THE OWNER IS RESPONSIBLE FOR DESIGNATING A PERSON TO OPERATE AND MAINTAIN THE SPLASH PAD AND ALL RELATED FACILITIES AND EQUIPMENT IN ACCORDANCE WITH LOCAL AND STATE OPERATION AND MAINTENANCE CODES.
 15. A RECORD OF THE SPLASH PAD'S OPERATION AND ROUTINE MAINTENANCE MUST BE KEPT BY THE DESIGNATED OPERATOR IN ACCORDANCE WITH LOCAL AND STATE CODES.
 16. TOILETS, SHOWERS, DRINKING FOUNTAINS, AND DRESSING ROOMS MUST BE CONVENIENTLY AVAILABLE TO POOL PATRONS IN ACCORDANCE WITH LOCAL AND STATE CODES.
- ### PLUMBING NOTES:
1. PIPING IS DRAWN FOR CLARITY AND DOES NOT NECESSARILY INDICATE EXACT ROUTING. CONTRACTOR SHALL INSTALL PIPING WITH AS FEW CHANGES IN DIRECTION AND ELEVATION AS JOB SITE CONDITIONS WILL ALLOW.
 2. ALL PIPE AND FITTINGS MUST BE SCH 80 PVC. INSTALLER RESPONSIBLE FOR ALL PIPE, PIPE FITTINGS, FLANGES, GASKETS, ELBOWS, AND HARDWARE TO CONNECT ALL EQUIPMENT TO OPERATE PROPERLY.
 3. MINIMIZE THE USE OF 90°ELBOWS ON PUMP SUCTION LINES. MAINTAIN 10 TIMES PIPE DIAMETER OF STRAIGHT PIPE ON PUMP SUCTION LINE BEFORE PUMP.
 4. ALL NON–DRAIN PIPING MUST BE PRESSURE TESTED PRIOR TO BACKFILLING. WATER TESTING LINES AT 30 PSI FOR (1) HOUR WITH NO PRESSURE DROP IS THE PREFERRED METHOD OF TESTING. ISOLATE ALL PIPING APPURTENANCES FROM THE PRESSURE OF THIS TEST, AS THEY ARE NOT DESIGNED FOR HIGH PRESSURE OPERATION AND DAMAGE MAY OCCUR. ALL TEST FAILURES SHALL BE CORRECTED.
 5. ALL DISCHARGE, SUCTION, AND DRAIN LINES MUST HAVE A MEANS FOR DRAINAGE SUPPLIED BY THE GENERAL CONTRACTOR FOR WINTERIZATION.
 6. SUCTION LINE VELOCITY NOT TO EXCEED 6 FT/SEC.
 7. SUPPLY LINE VELOCITY NOT TO EXCEED 8 FT/SEC.
 8. GRAVITY DRAIN LINE VELOCITY NOT TO EXCEED 3.0 FT/SEC.
 9. DRAINAGE GRATING VELOCITY NOT TO EXCEED 1.5 FT/SEC.
 10. PROVIDE ALL PIPE AND EQUIPMENT IN ACCORDANCE WITH MANUFACTURE RECOMMENDATIONS AND APPLICABLE CODES AND REGULATIONS.
 11. SUPPORT ALL PIPE LINES INDIVIDUALLY, EACH BRANCH HAVING AT LEAST ONE HANGER. IF NOT SPECIFICALLY NOTED, PROVIDE VERTICAL AND LATERAL SUPPORT FOR ALL PIPING AND EQUIPMENT.
 12. PIPE SHALL BE INDEPENDENTLY SUPPORTED OF ALL PUMPS AND EQUIPMENT.
 13. PROTECT PLASTIC PIPE IN STEEL SUPPORT BRACKETS.
 14. SIZE HANGERS PROPERLY TO FIT AROUND PIPES AND SIZE HANGER RODS, SCREWS, BOLTS, NUTS, ETC. ACCORDING TO MANUFACTURES SIZING CHARTS.
 15. SPACE HANGERS FOR HORIZONTAL PIPES AT MAXIMUM 4FT FOR 1" PIPE AND UNDER, 5FT FOR 2" UNDER, 7FT FOR 4" UNDER, 9FT FOR 6" UNDER, 10FT FOR 8" UNDER, 11FT FOR 10" UNDER AND 12FT FOR 12" OR LARGER.
 16. DO NOT USE WIRE OR OTHER MAKESHIFT DEVICES FOR HANGERS OR SUPPORT.

ELECTRICAL NOTES:

1. CONTROL PANELS
 - 1a) A CLASS "A" GROUND FAULT CIRCUIT INTERRUPTER MUST BE INSTALLED IN ALL BRANCH CIRCUITS SUPPLYING EQUIPMENT IN THE EQUIPMENT ROOM.
 - 1b) THE NATIONAL ELECTRICAL CODE REQUIRES CLEAR SPACE AROUND INSTALLED ELECTRICAL PANELS FOR SAFETY AND MAINTENANCE. THE INSTALLER SHALL VERIFY THAT EACH PANEL INSTALLATION IS COMPLIANT WITH THE N.E.C. AND LOCAL ELECTRICAL CODES.
 2. BONDING
 - 2a) ALL METALLIC PIPING AND CONDUIT SYSTEMS ASSOCIATED WITH THE SPLASH PAD MUST BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR OF THE BRANCH CIRCUIT SUPPLYING ELECTRICAL POWER TO THE SPLASH PAD.
 - 2b) ALL STAINLESS STEEL STRUCTURES REQUIRE BONDING PER NEC AND LOCAL CODES.
 - 2c) ALL REQUIRED BONDING TO BE APPROVED BY LOCAL JURISDICTION INSPECTOR PRIOR TO PLACING CONCRETE.
 3. GROUNDING
 - 3a) THE FOLLOWING EQUIPMENT MUST BE GROUNDED:
 - ALL ELECTRICAL EQUIPMENT IN THE SPLASH PAD.
 - ALL ELECTRICAL RECIRCULATING SYSTEM EQUIPMENT.
 - ALL PANELBOARDS THAT SUPPLY ANY ELECTRICAL EQUIPMENT ASSOCIATED WITH THE SPLASH PAD.
 4. CONDUITS
 - 4a) THE CONDUIT SYSTEM MUST BE WATERTIGHT FROM THE CONTROL PANEL TO THE WATER FEATURE/POOLS. PRESSURE TEST CONDUIT WITH 5 PSI (MIN.) TO 15 PSI (MAX.), VERIFY WITH APPLICABLE CODES, FOR 30 MINUTES WITHOUT ANY PRESSURE DROP. IF REQUIRED REPAIR ANY LEAKS AND RE–TEST.
 - 4b) ALL CONDUITS EXPOSED TO MOISTURE MUST BE OF A CORROSION RESISTANT MATERIAL SUCH AS RED BRASS.
 5. ALL ELECTRICAL WORK SHALL COMPLY WITH THE NFPA 70, NATIONAL ELECTRICAL CODE 2008 EDITION THAT IS INCORPORATED BY REFERENCE.
- ### STORAGE TANK INSTALL INSTRUCTIONS:
1. SITE CONDITIONS: THE SITE MUST BE ACCESSIBLE TO LARGE, HEAVY TRUCKS. FREE OF ITEMS LIKE TREES, OVERHEAD WIRES, AND BUILDINGS. THAT COULD INTERFERE WITH DELIVERY OR INSTALLATION AND ALLOWS TRUCKS TO WITHIN 3 TO 8 FEET OF PLACEMENT EXCAVATION.
 2. EXCAVATION: EXCAVATION SHOULD BE APPROXIMATELY 18" MINIMUM LARGER THAN TANK SIZE TO ALLOW FOR ADEQUATE BACK FILL. THIS MAY VARY WITH SOIL CONDITIONS. EXCAVATION BELOW THE TANK CENTER TO BE 2" LOWER TO PREVENT UNDUE PRESSURE AT CENTER OF TANK.
 3. BEDDING: PROPER USE OF BEDDING MATERIAL IS IMPORTANT TO ENSURE SERVICE LIFE OF TANK STRUCTURE. BEDDING MUST BE CAPABLE OF BEARING THE WEIGHT OF THE TANK AND CONTENTS. BEDDING MATERIAL SHALL HAVE THE ABILITY OF 100% TO BE ABLE TO PASS THROUGH A ½" SCREEN MADE UP OF SAND OR GRAVEL (CLEAN PEA STONE PREFERRED). BEDDING THICKNESS SHALL BE A 4" MINIMUM COMPACTED (THICKNESS MAY VARY WITH EXISTING SOIL CONDITIONS). THE CENTER BEDDING UNDER THE TANK SHOULD BE 1" LOWER THEN THE PERIMETER BEDDING.
 4. WATER TABLE: TANKS BEING PLACED WHERE WATER LEVELS CAN POTENTIALLY BE HIGHER THAN THE ELEVATION OF THE TANK COVER, MUST BE BROUGHT TO THE ATTENTION OF AQUATIC RECREATION COMPANY LLC. ADDITIONAL INSTALLATION INSTRUCTIONS SUCH AS BALLAST AND COATING MAY BE REQUIRED.
 5. BACKFILL: SIDEWALLS REQUIRE BACKFILL WHICH 100% SHALL PASS A 2" SCREEN MATERIAL MADE UP OF DRY SOIL, SAND, OR GRAVEL. MINIMUM 12" ALL SIDES OF THE TANK–FROM BASE TO TOP. NO PARALLEL BACKFILLING OR COMPACTION ALONG THE LENGTH OF SIDEWALLS IS PERMITTED. NO WHEEL OR TACK LOADING SIDEWALLS. MATERIAL ON TOP OF TANK TO PASS 4" SCREEN & DRY.
 6. COVER MATERIAL: COVER MATERIAL SHALL BE DRY SOIL, SAND, OR GRAVEL MATERIAL THAT HAS THE ABILITY OF 100% TO BE ABLE TO PASS THROUGH A 4" SCREEN. COVER MATERIALS SHALL BE MOUNDED OVER TANK AND AROUND RISERS TO DIRECT RUN–OFF AWAY FROM STORAGE TANK.
 7. WATER EVACUATE: FILTRATION PUMP MAY BE USED TO EVACUATE WATER FROM STORAGE TANK TO APPROVED WASTE CONNECTION IN EVENT OF WATER CONTAMINATION. TANK SHALL BE THOROUGHLY CLEANED AND SANITIZED PRIOR TO RE–FILLING. CONFIRM INSPECTION WITH YOUR LOCAL HEALTH DEPARTMENT RE–FILLING STORAGE TANK & RE–STARTING THE SYSTEM.
 8. TANK STANDARD: TANK TO BE MANUFACTURED TO ASTM C–913 AND C–1227 STANDARDS. ALL SEAMS AND PIPE PENETRATIONS TO BE WATER TIGHT.

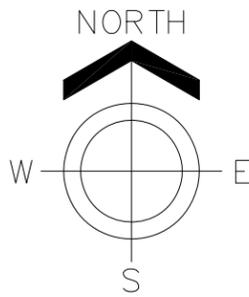
CONCRETE NOTES:

- #### CAST IN PLACE CONCRETE NOTES:
1. DESIGN CODE: ACI 318 LATEST EDITION.
 2. VERIFY LOCAL/STATE CODES FOR TYPE, THICKNESS, & REINFORCEMENT REQUIREMENTS FOR CONCRETE SLAB.
 3. MINIMUM COMPRESSIVE STRENGTH IN 28 DAYS:

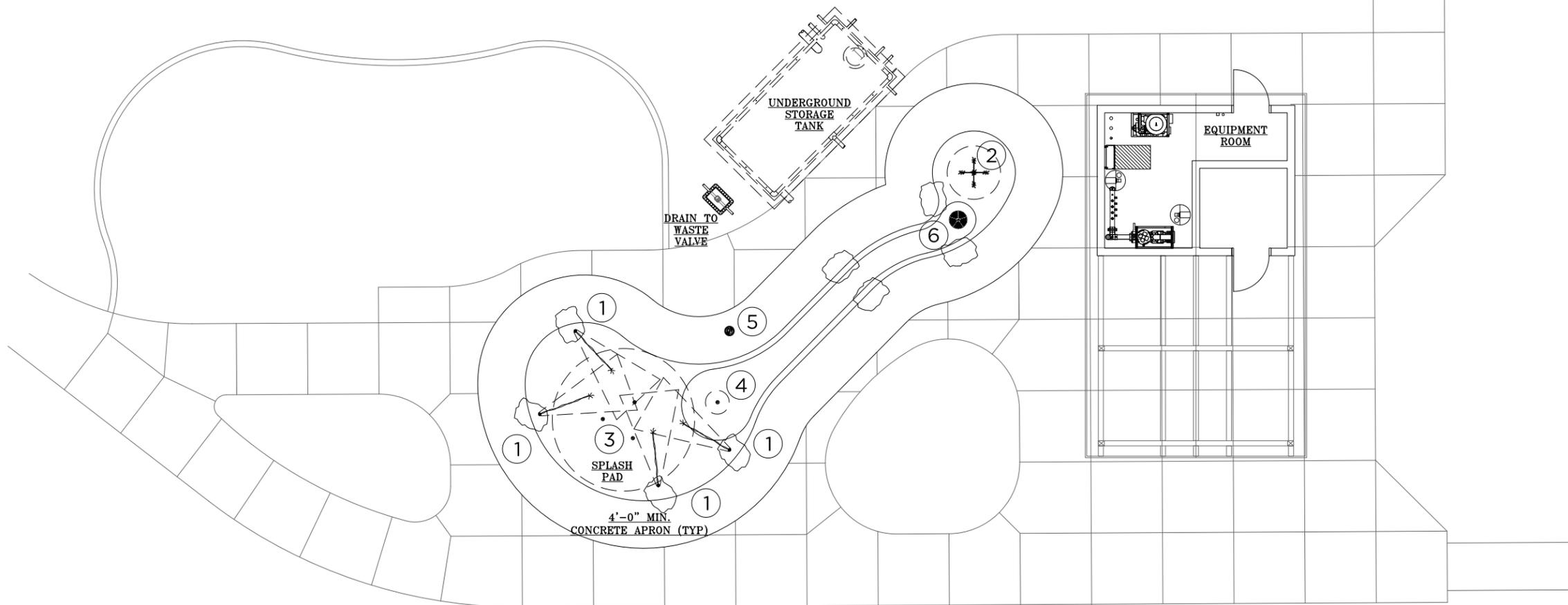
TYPE	STRENGTH	LOCATION
A	Fc'=3,000PSI	FOOTINGS
B	Fc'=4,000PSI	POOL SLABS,

 WALL, AND EXTERIOR CONCRETE EXPOSED TO FREEZING TEMPS W/5% TO 7% AIR ENTRAINMENT.
 4. REINFORCING STEEL:
 - 4a) DEFORMED BARS–ASTM A615 GRADE 60KSI.
 5. PLACE ALL ITEMS PER APPROVED SHOP DWGS. AND APPROVED CONCRETE MIX DESIGNS.
 6. PROVIDE CONCRETE COVER PER ACI 318.
 7. ALL CONCRETE SURFACES TO HAVE A MEDIUM BROOM FINISH.
- #### GENERAL FOUNDATION AND CAST IN PLACE CONCRETE NOTES:
1. DESIGN CODES ACI 318 AND "ACI DETAILING MANUAL". LATEST EDITION.
 2. ALL FOOTINGS ARE CENTERED UNDER WALLS ABOVE, U.N.O.
 3. ALL FOOTING ELEVATIONS SHOWN ARE TO TOP OF FOOTING.
 4. PROVIDE ALL ACCESSORIES AND SUPPORTS NECESSARY TO SECURE REINFORCING STEEL PER "ACI DETAILING MANUAL" NO OTHER METHODS OR MATERIALS WILL BE ACCEPTABLE.
 5. PROVIDE PLASTIC CHAIRS AND BAR SUPPORTS IN ALL AREAS OF EXPOSED CONCRETE.
 6. PROVIDE CONCRETE PROTECTION FOR ALL REINFORCEMENT AS PER ACI 318, SECTION 7.7 REQUIREMENTS FOR CAST IN PLACE CONCRETE:
 - 6a) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
 - 6b) CONCRETE EXPOSED TO EARTH OR WEATHER:
 - #5 BARS AND SMALLER: 1½"
 - #6 BARS AND LARGER: 2"
 - 6c) CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND: SLABS, WALLS, AND JOISTS (#3 TO #11 BARS): ¾" BEAMS, GIRDERS AND COLUMNS, PRIMARY REINFORCEMENT, TIES, STIRRUPS OR SPIRALS: 1½"
 7. CROSS REFERENCE ARCH. AND STRUCTURAL DWGS. TO ENSURE CORRECT LOCATIONS AND PLACEMENT OF ALL ANCHOR BOLTS, INSERTS, ETC.
 8. CAST DOWELS IN FTG. FOR CONCRETE WALLS ABOVE. DOWELS TO BE SAME QTY. SIZE AND SPA. AS THE VERT. WALL REINFORCEMENT. DOWELS ARE TO PROJECT FROM FTGS. TO PROVIDE THE LAP SPLICES INDICATED BELOW. U.N.O. PROVIDE 90° STANDARD HOOK IN FREE STANDING WALL FTG. DOWELS. WALL FTG. DOWELS ARE STRAIGHT, U.N.O.
 9. ALL HORIZONTAL REINFORCING BARS AT OUTSIDE FACE OF WALLS SHALL BE BENT AT WALL CORNERS OR AT INTERSECTING WALLS AND SHALL LAP TO INTERSECTING REINFORCING AS INDICATED BELOW. SEPARATE BENT BAR DOWELS OF THE SAME SIZE AND SPA. AS THE HORIZONTAL WALL REINFORCING AND LAPPED AS INDICATED BELOW MAY BE USED INSTEAD.
 10. LAP SPLICES AT ALL REINFORCING IN ALL CAST IN PLACE CONCRETE SHALL BE AS FOLLOW, U.N.O.
 - #4 BAR=24" #7 BAR=42"
 - #5 BAR=30" #8 BAR=48"
 - #6 BAR=36" #9 BAR=54"
 11. UNLESS NOTED OTHERWISE ON DWGS. PROVIDE ADDITIONAL REINFORCING ALL AROUND CONCRETE WALL AND SLAB OPENINGS EQUAL TO THE INTERRUPTED REINFORCING IN EACH DIRECTION AND EACH FACE MIN. ONE (1) BAR ALL AROUND FOR EACH LAYER OF REINFORCING). EXTEND BARS BEYOND EDGE OF OPENINGS EQUAL TO LAP LENGTH INDICATED ABOVE. ADD ONE (1) #4x4'–0" DIAG. BAR CENTERED ON EACH CORNER (ONE (1) PER EACH LAYER OF REINFORCEMENT).
 12. EXPANSION JOINT TO BE EVERY 20' x 20'.
 13. SAW CUT JOINT TO BE EVERY 10' x 10'.
 14. ALL CONCRETE SURFACES TO HAVE A MEDIUM BROOM FINISH.

DATE	3/21/22
REVISION	RELEASE FOR APPROVAL
NO.	A
JOB TITLE	SERENADE PARK SPLASH PAD
LOCATION	TROY, IL
CHECKED	DWG. FILE
DRAWN	CHECKED
SCALE	SEE VIEWS
DWG. NO.	1159648-01-02-1
DATE	3/17/22
SHEET TITLE	GENERAL INFORMATION
JOB NO.	1159648-01-02
 by landscape structures	
	



NOTE:
INSTALLERS RESPONSIBILITY TO
LOCATE STORAGE TANK AS CLOSE
AS POSSIBLE TO SPLASH PAD.



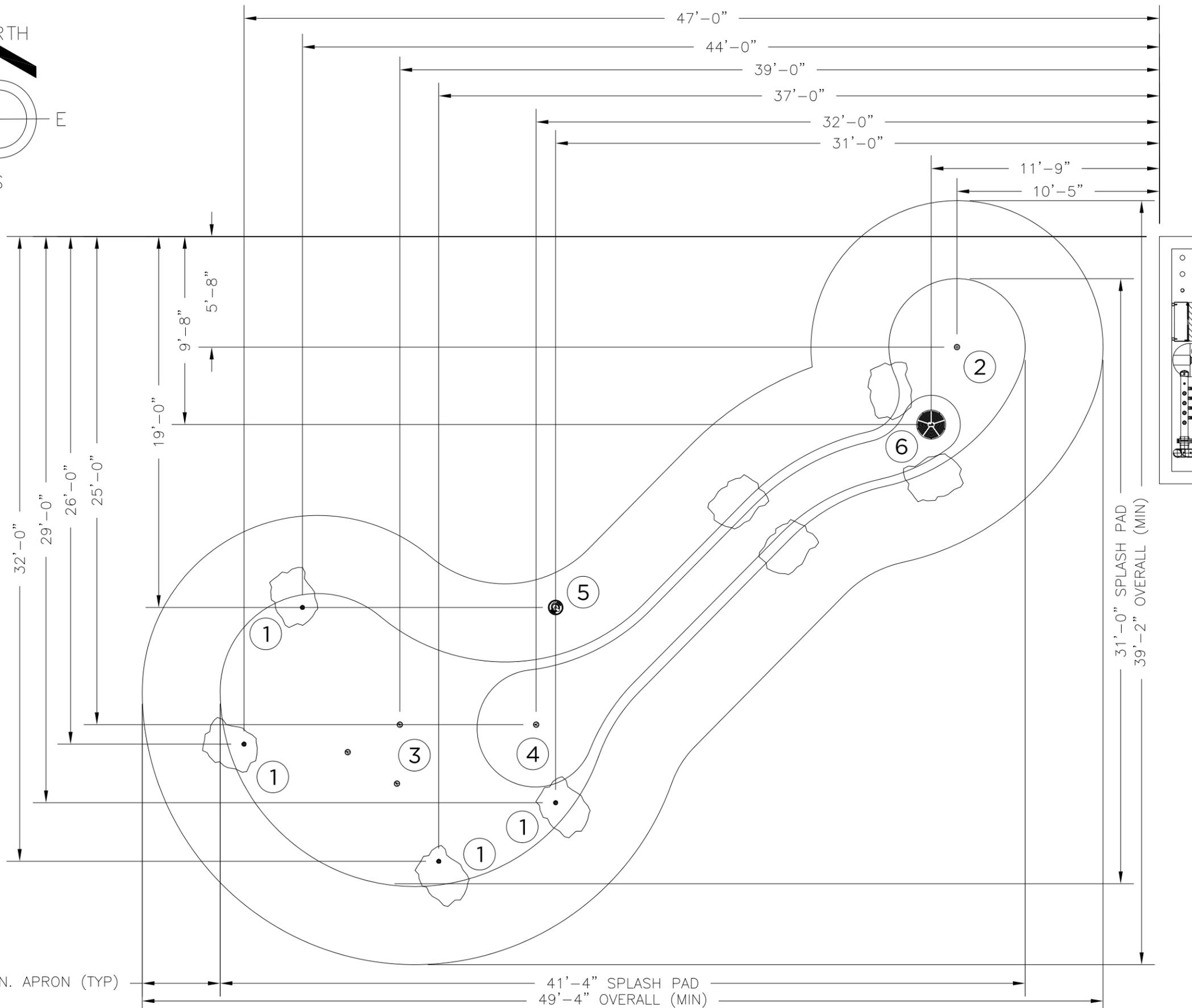
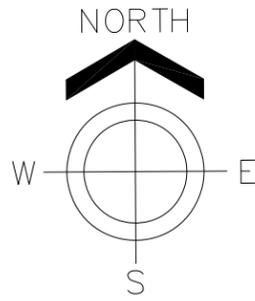
NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	4	10 EA	1" EA
2	SEA CRAWLER	1	5	1"
3	STREAM JET TRIANGLE	1	30	1½"
4	SUPPLY FITTING	1	30	1½"
5	STEP PAD ACTIVATOR	1	--	--
6	COLLECTOR BOX	1	--	--

- NOTE:**
- ALL CONCRETE SLOPES TO BE 1/8"/FT MIN. AND 1/4"/FT MAX.
 - SITE ELEVATIONS OF SPLASH PAD AND CONCRETE APRON TO BE VERIFIED BY OTHERS. ARC ELEVATION REFERENCE IS 0'-0" FOR TOP OF DRAINAGE BOX. ALL OTHER NOTED ELEVATIONS ARE REFERENCED FROM THAT POINT.
 - SURFACE MOUNTED STRUCTURES MAY REQUIRE A FLAT/LEVEL SURFACE FOR PROPER INSTALLATION. SEE INDIVIDUAL STRUCTURE MOUNTING INSTALLATION INSTRUCTIONS.
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 - EXPANSION JOINT TO BE EVERY 20'x20'.
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 - SEE SHEET 3 OF 10 FOR SPLASH PAD LAYOUT.
 - SEE SHEET 4 OF 10 FOR CONCRETE LAYOUT.
 - DRAWINGS ARE FOR DESIGN/LAYOUT PURPOSES ONLY. PLEASE SEE AQUATIC RECREATION COMPANY PROPOSAL FOR INCLUDED STRUCTURES, EQUIPMENT, SERVICES, AND EXCLUSIONS.
 - INDICATES SPLASH ZONE.
 - SPLASH ZONES ARE APPROXIMATE. ACTUAL SPLASH ZONE MAY VARY BASED ON VARIOUS ENVIRONMENTAL CONDITIONS, FLOW RATES, SLOPE OF THE SPLASH PAD, SUBMERGENCE DEPTH AND WIND.

1 SITE PLAN LAYOUT
2 3/32" = 1'-0"

SITE LAYOUT ASSUMES NO STRONG PREVAILING WINDS FROM ANY SPECIFIC DIRECTION. PLEASE ADVISE ARC AS SOON AS POSSIBLE IF WIND CONDITIONS MAY EFFECT PRODUCT SPRAY ZONES.

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	3/21/22
101 MCINLEY PARKWAY DELAND, FL 32528 TEL: 905-345-8335 FAX: 905-345-6444 aquatix@atd.com		
aquatix by landscape structures		JOB TITLE SERENADE PARK SPLASH PAD
LOCATION TROY, IL		DATE 3/17/22
CHECKED SHEET TITLE SITE PLAN	DWS FILE 1159648-01-02-2	JOB NO. 1159648-01-02
DRAWN CTS	SCALE SEE VIEWS	2 OF 12



NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	4	10 EA	1" EA
2	SEA CRAWLER	1	5	1"
3	STREAM JET TRIANGLE	1	30	1½"
4	SUPPLY FITTING	1	30	1½"
5	STEP PAD ACTIVATOR	1	--	--
6	COLLECTOR BOX	1	--	--

- NOTE:
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 - INDICATES SPLASH ZONE.
 - SPLASH ZONES ARE APPROXIMATE. ACTUAL SPLASH ZONE MAY VARY BASED ON VARIOUS ENVIRONMENTAL CONDITIONS, FLOW RATES, SLOPE OF THE SPLASH PAD, SUBMERGENCE DEPTH AND WIND.

4'-0" MIN. APRON (TYP)

1 SPLASH PAD LAYOUT
3 3/16" = 1'-0"

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	3/17/22

101 MCINLEY PARKWAY
DELANO, MN 55328
TEL: 952-345-8335
FAX: 952-345-6444
aquatic@ajfd.com

aquatix
by landscape structures

JOB TITLE: SERENADE PARK
SPLASH PAD
LOCATION: TROY, IL

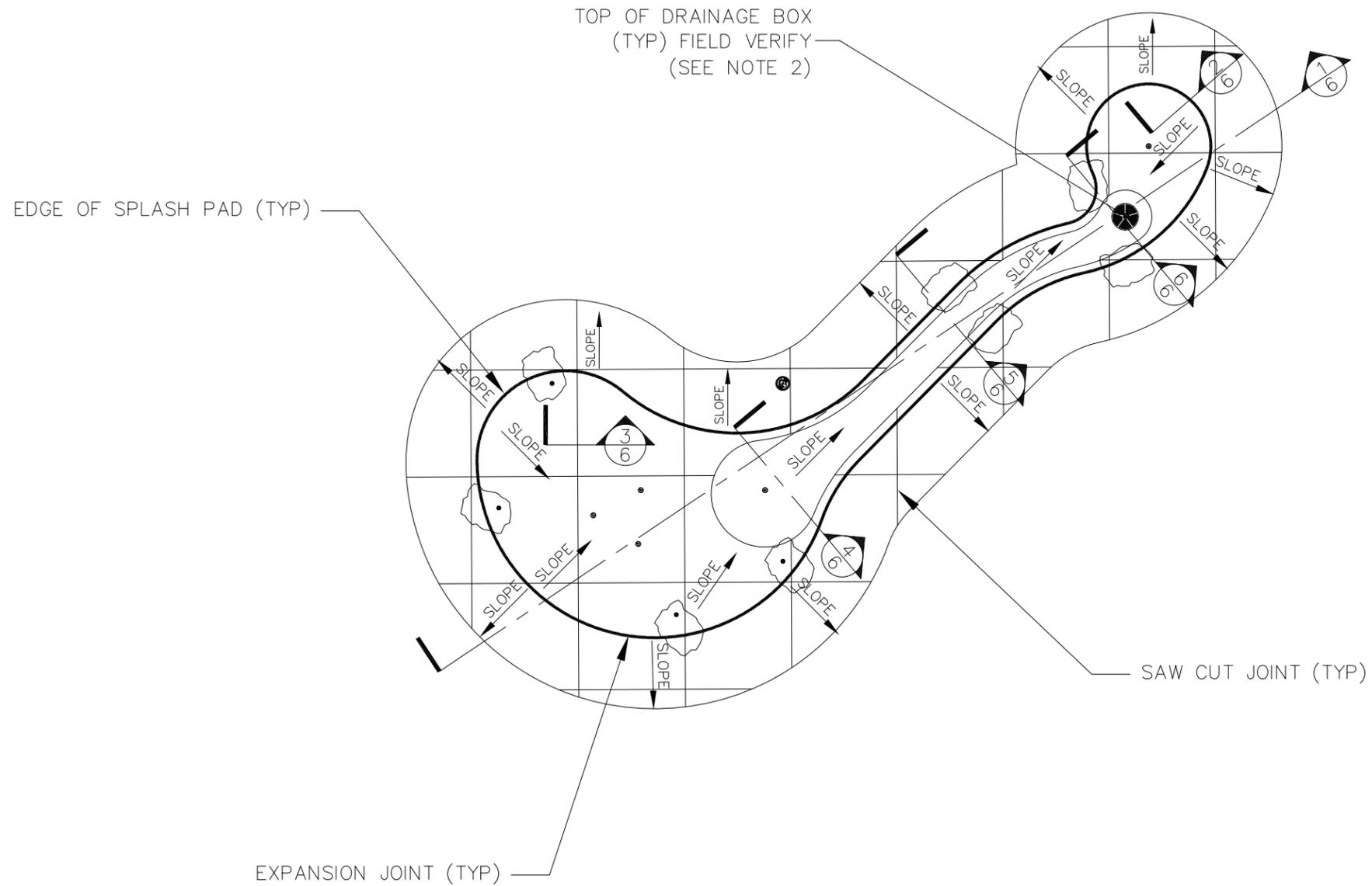
CHECKED: []
DRAWN: []
SCALE: SEE VIEWS

DWG. FILE: 1159648-01-02-3
SHEET TITLE: SPLASH PAD LAYOUT

DATE: 3/17/22

JOB NO.: 1159648-01-02

3 OF 12

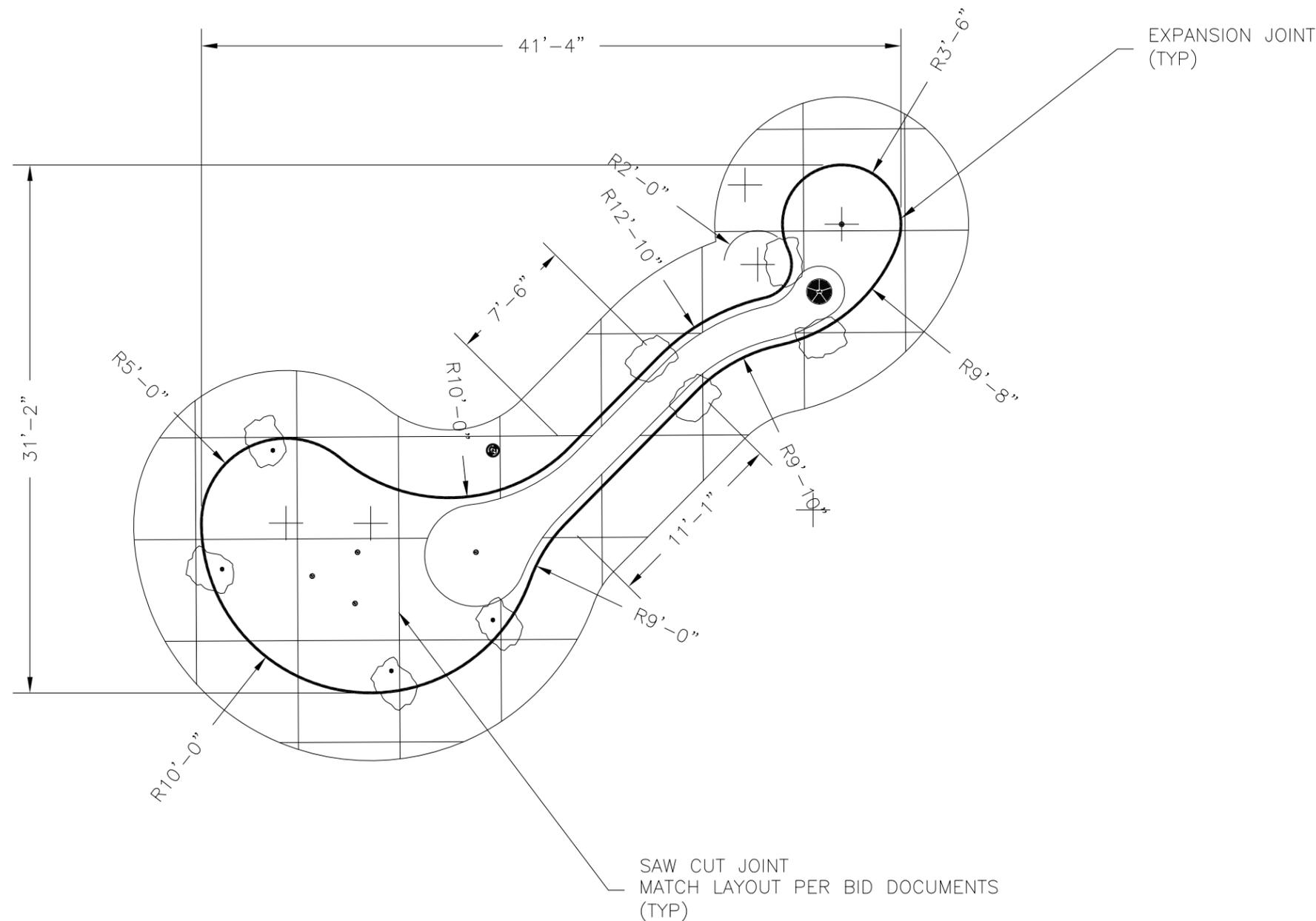


- NOTE:
1. ALL CONCRETE SLOPES TO BE 1/8"/FT MIN. AND 1/4"/FT MAX.
 2. SITE ELEVATIONS OF SPLASH PAD AND CONCRETE APRON TO BE VERIFIED BY OTHERS. ARC ELEVATION REFERENCE IS 0'-0" FOR TOP OF COLLECTOR BOX. ALL OTHER NOTED ELEVATIONS ARE REFERENCED FROM THAT POINT.
 3. SURFACE MOUNTED STRUCTURES MAY REQUIRE A FLAT/LEVEL SURFACE FOR PROPER INSTALLATION. SEE INDIVIDUAL STRUCTURE MOUNTING INSTALLATION INSTRUCTIONS.
 4. REFER TO SPEC SHEET AND INSTALLATION DRAWING FOR EACH PRODUCT.
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 9. ALL TREATED SPLASH PAD WATER IS INTENDED TO REMAIN WITHIN DESIGNATED SPLASH PAD DECK. UNDER NO CIRCUMSTANCES SHOULD SLOPE OF SPLASH PAD ALLOW WATER TO DRAIN OFF PAD
 10. UNDER NO CIRCUMSTANCES SHALL THE SURROUNDING HARDSCAPE AREA BE SLOPED TO ALLOW WATER TO BE DRAINED INTO THE SPLASH PAD DECK
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 14. COORDINATE EXPANSION JOINT AND SAW CUT LOCATIONS WITH PLAY EQUIPMENT LOCATIONS.

SEE PAGE 6 OF 10 FOR SECTION DETAILS

IMPORTANT: SEE NOTE #8 CONCERNING SPLASH PAD SLOPE

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	3/21/22
101 MONKEY PARKWAY DELAWARE, OH 43028 TEL: 614-885-8335 FAX: 614-885-8335 aquatix.com		
aquatix by landscape structures		
JOB TITLE	SERENADE PARK SPLASH PAD	LOCATION TROY, IL
SCALE	SEE VIEWS	
DRAWN	CTS	
CHECKED		
DWG. FILE	1159648-01-02-4	DATE 3/17/22
SHEET TITLE CONCRETE PLAN		
JOB NO. 1159648-01-02		
4 OF 12		



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 6. - - - - INDICATES SAW CUT JOINT
 7. ——— INDICATES EXPANSION JOINT
 8. THE INTENT OF A SPLASH PAD IS TO BE A DRY DECK WITH NO STANDING WATER. THE WATER IS TO BE CONTAINED WITHIN THE PERIMETER OF THE SPLASH PAD AND ALL WATER IS TO DRAIN INTO THE COLLECTOR BOX(S). THE CONCRETE IS TO BE FORMED AND SLOPED TO ACCOMMODATE THIS DRAIN PATTERN.
 9. ALL TREATED SPLASH PAD WATER IS INTENDED TO REMAIN WITHIN DESIGNATED SPLASH PAD DECK. UNDER NO CIRCUMSTANCES SHOULD SLOPE OF SPLASH PAD ALLOW WATER TO DRAIN OFF PAD
 10. UNDER NO CIRCUMSTANCES SHALL THE SURROUNDING HARDSCAPE AREA BE SLOPED TO ALLOW WATER TO BE DRAINED INTO THE SPLASH PAD DECK
 11. ALL CONCRETE SURFACES TO HAVE A MEDIUM BROOM FINISH.
 12. EXPANSION JOINT TO BE EVERY 20'x20'.
 13. SAW CUT JOINT TO BE EVERY 10'x10'.
 14. COORDINATE EXPANSION JOINT AND SAW CUT LOCATIONS WITH PLAY EQUIPMENT LOCATIONS.

SEE PAGE 6 OF 10
FOR SECTION DETAILS

IMPORTANT: SEE NOTE
#8 CONCERNING
SPLASH PAD SLOPE

DATE	3/7/22
NO.	A
REVISION	RELEASE FOR APPROVAL
101 MCINLEY PARKWAY DELAWARE, OH 43028 TEL: 614-885-8335 FAX: 614-885-8335 aquatixbylandscape.com	
aquatix by landscape structures	
JOB TITLE	SERENADE PARK SPLASH PAD
LOCATION	TROY, IL
SCALE	SEE VIEWS
DRAWN	CTS
CHECKED	
DWG. FILE	1159648-01-02-5
DATE	3/7/22
SHEET TITLE	CONCRETE FORM
JOB NO.	1159648-01-02
5 OF 12	

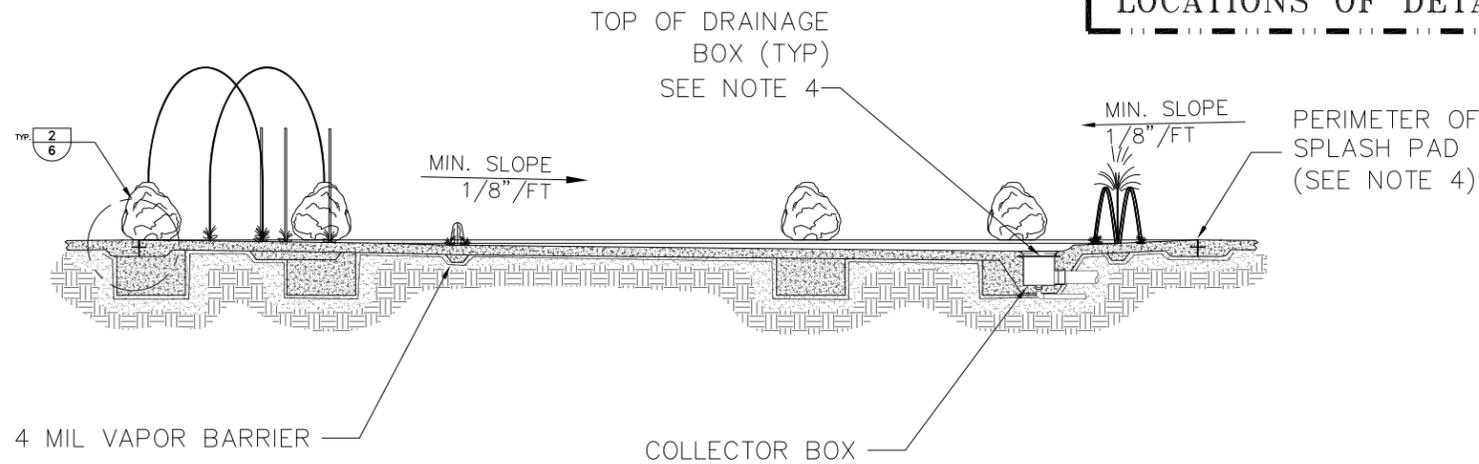
NOTE:

1. ALL SUB-BASE MATERIALS BY OTHERS, CONTRACTOR CAN ASSUME SITE TO BE LEVEL TO ROUGH GRADE WITH COMPACTED FILL, COMPACTION TEST BY OTHERS.
2. CONCRETE TO BE THICKENED AT ALL PRODUCT INSTALLATION LOCATIONS (BOTH EMBED AND ABOVE GROUND STRUCTURES). REFER TO INSTALLATION DRAWINGS FOR EACH PRODUCT.
3. ALL CONCRETE SLOPES TO BE 1/8"/FT MIN.
4. SITE ELEVATIONS OF SPLASH PAD AND CONCRETE APRON TO BE VERIFIED BY OTHERS. AQUATIX™ ELEVATION REFERENCE IS 0.00 FOR TOP OF COLLECTOR BOX AND TOP OF GRADE AT UNDERGROUND STORAGE TANK.
5. ACTUAL SIZE, SHAPE, AND LOCATION OF SPLASH PAD TO BE FIELD DETERMINED BY OTHERS. ALL DIMENSIONS OF SIZE AND SHAPE OF SPLASH PAD FOR REFERENCE ONLY.
6. THE INTENT OF A SPLASH PAD IS TO BE A DRY DECK WITH NO STANDING WATER, THE WATER IS TO BE CONTAINED WITHIN THE PERIMETER OF THE SPLASH PAD AND ALL WATER IS TO DRAIN INTO COLLECTOR BOX. THE CONCRETE IS TO BE FORMED AND SLOPED TO ACCOMMODATE THE DRAIN PATTERN.
7. ALL TREATED SPLASH PAD WATER IS INTENDED TO REMAIN WITHIN DESIGNATED SPLASH PAD DECK. UNDER NO CIRCUMSTANCES SHOULD SLOPE OF SPLASH PAD OR SLOPE OF SURROUNDING AREA ALLOW WATER TO DRAIN OFF PAD.

NOTE: (CONTINUED)

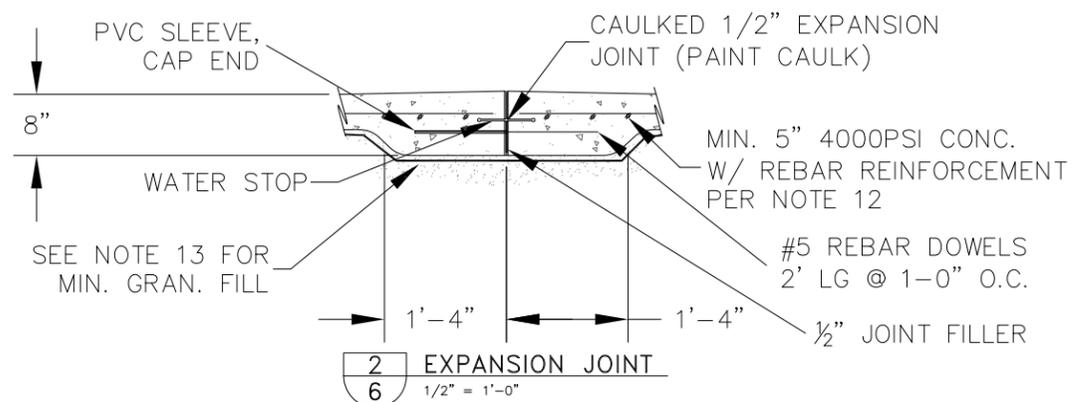
8. UNDER NO CIRCUMSTANCES SHALL THE SURROUNDING HARDSCAPE AREA BE SLOPED TO ALLOW WATER TO BE DRAINED INTO THE SPLASH PAD DECK
9. ALL CONCRETE SURFACES TO HAVE A MEDIUM BROOM FINISH.
10. COORDINATE EXACT LOCATION OF SAW CUTS AND EXPANSION JOINTS WITH PLAY EQUIPMENT LOCATIONS.
11. VERIFY LOCAL/STATE CODES FOR TYPE, THICKNESS, & REINFORCEMENT REQUIREMENTS FOR CONCRETE SLAB.
12. CONCRETE REINFORCEMENT TO BE #4 REBAR @ 12" O.C. EACH WAY OR EQUIVALENT WELDED WIRE MESH (W6 ON 4"X4" SPACING OR W10 ON 6"X6" SPACING)
13. 18" OF GRANULAR FILL RECOMMENDED, OR AS SOIL CONDITIONS AND/OR LOCAL CODE REQUIRES WITH A MINIMUM OF 2500 PSF SOIL BEARING CAPACITY
14. THERE IS TO BE A MINIMUM OF 6" OF GRANULAR FILL AROUND ALL PIPING

SEE PAGE 4 OF 12 FOR LOCATIONS OF DETAILS



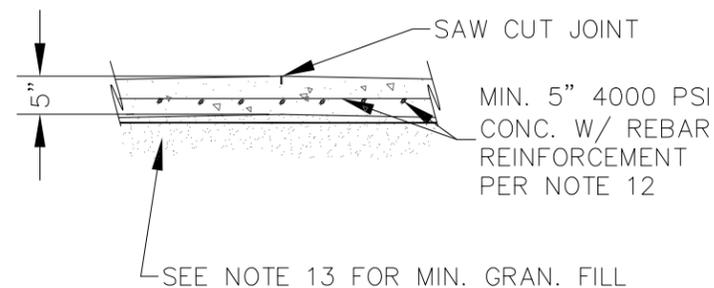
1 SPLASH PAD SECTION
6 3/16" = 1'-0"

NOTE:
-FIELD VERIFY LOCATION AND ELEVATIONS OF JOINTS.
CONTRACTOR MAY SUBMIT NEW LOCATIONS FOR APPROVAL
-DIAGRAMMATIC ONLY

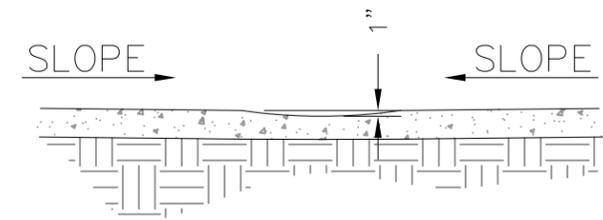


2 EXPANSION JOINT
6 1/2" = 1'-0"

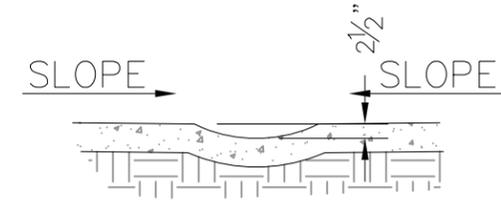
NOTE:
-FIELD VERIFY LOCATION AND ELEVATIONS OF JOINTS.
CONTRACTOR MAY SUBMIT NEW LOCATIONS FOR APPROVAL
-DIAGRAMMATIC ONLY



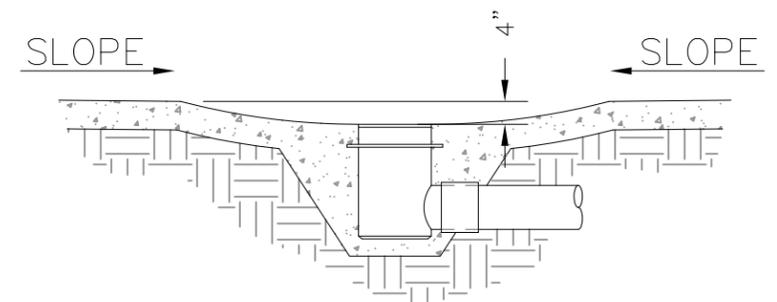
3 SAW CUT JOINT
6 1/2" = 1'-0"



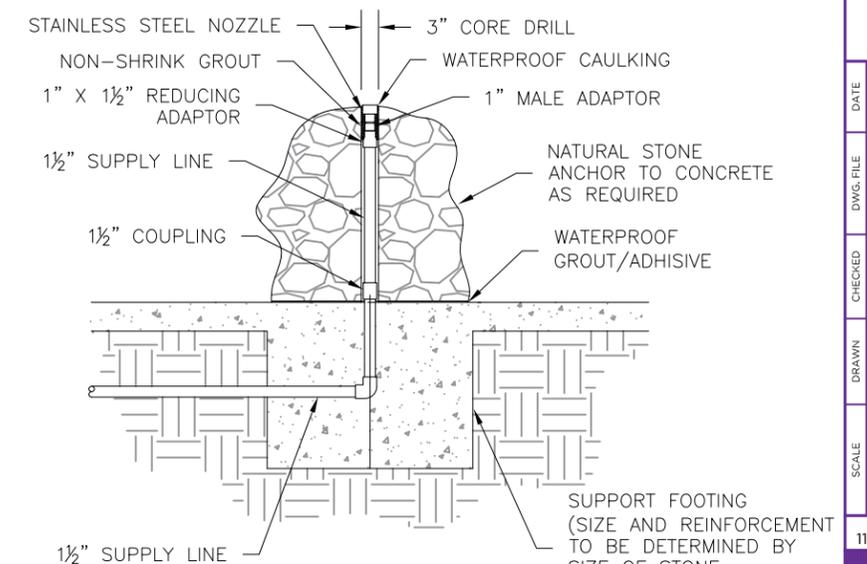
4 SWALE UPPER SECTION
6 3/8" = 1'-0"



5 SWALE MID SECTION
6 3/8" = 1'-0"



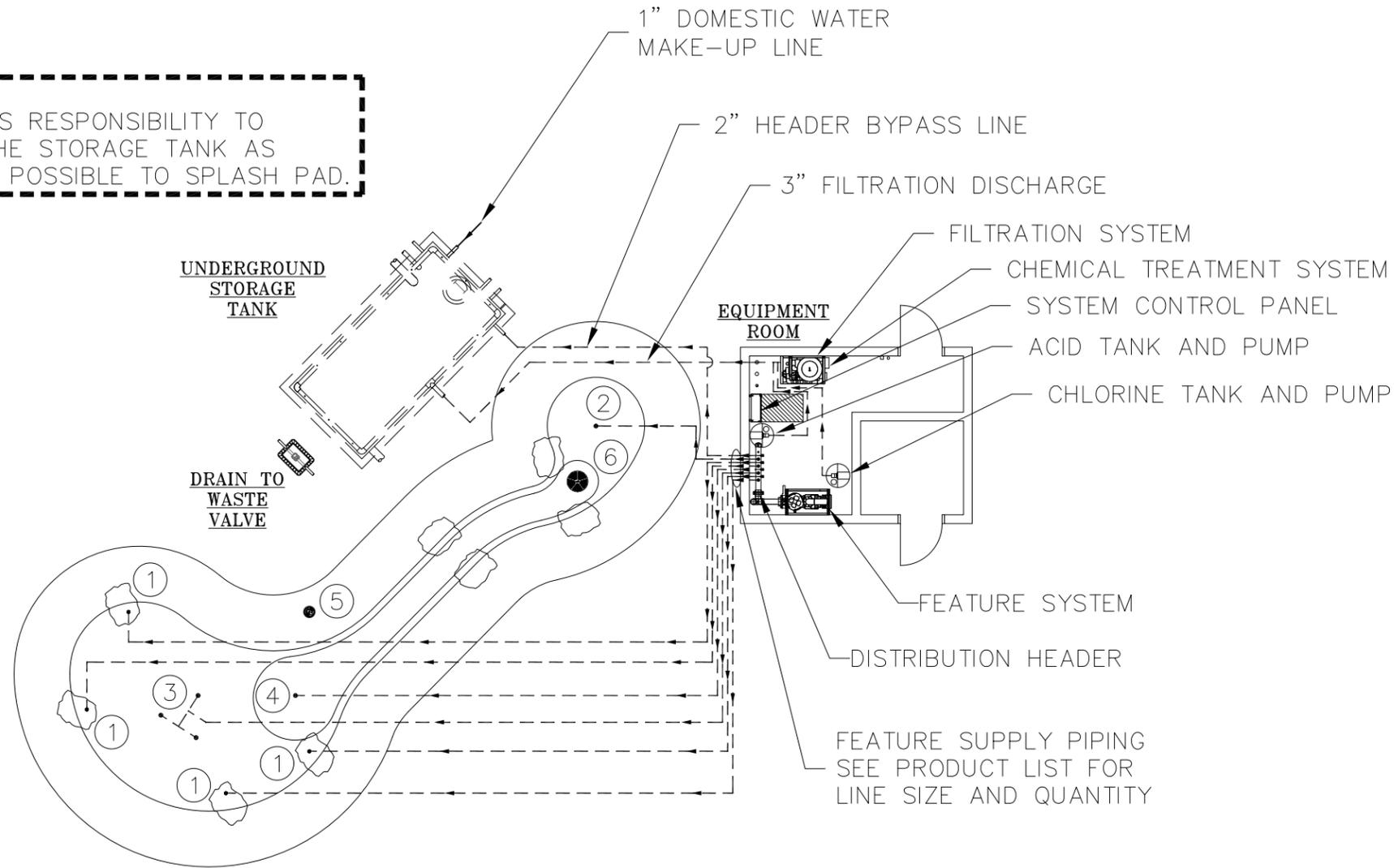
6 SWALE LOWER SECTION
6 3/8" = 1'-0"



7 STONE FEATURE DETAIL
6 3/8" = 1'-0"

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	3/27/22
101 MONKEY PARKWAY DELANO, MN 55328 PH: 952-345-8335 FX: 952-345-6444 aquatix@aquatix.com		
aquatix by landscape structures		JOB TITLE SERENADE PARK SPLASH PAD
LOCATION TROY, IL		DATE 3/17/22
CHECKED 1159648-01-02-6	DWS FILE 1159648-01-02-6	SHEET TITLE CONCRETE SECTIONS AND DETAILS
DRAWN CTS	SCALE SEE VIEWS	JOB NO. 1159648-01-02
6 OF 12		

NOTE:
INSTALLERS RESPONSIBILITY TO
LOCATE THE STORAGE TANK AS
CLOSE AS POSSIBLE TO SPLASH PAD.



NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	4	10 EA	1" EA
2	SEA CRAWLER	1	5	1"
3	STREAM JET TRIANGLE	1	30	1 1/2"
4	SUPPLY FITTING	1	30	1 1/2"
5	STEP PAD ACTIVATOR	1	--	--
6	COLLECTOR BOX	1	--	--

- NOTE:**
1. ALL SUPPLY AND DRAIN LINES TO SLOPE 1/8" / FT AWAY FROM SPLASH PAD.
 2. GRAVITY DRAIN LINE VELOCITY NOT TO EXCEED 3.0 FT/SEC.
 3. REFER TO SPEC SHEET AND INSTALLATION DRAWING FOR EACH PRODUCT.
 4. ALL PIPING SHOULD BE SCH 80 PVC.
 5. ALL LINES FROM PIPE MANIFOLDS TO FEATURES SHOULD NOT BE CROSSED.
 6. ANY REQUIRED BACKFLOW DEVICE OR WATER METER ON THE CITY WATER MAIN SHALL BE PROVIDED BY OWNER.
 7. EXACT ROUTING OF PIPING TO BE DETERMINED BY INSTALLING CONTRACTOR.
 8. INCOMING FRESH WATER SUPPLY TO BE PROVIDED WITH AN APPROVED REGULATOR SET TO 25-30PSI IN ACCORDANCE WITH LOCAL AND STATE CODES. (VERIFY LINE SIZE W/ MUNICIPALITY PRIOR TO CONSTRUCTION.)

LEGEND	
---	SUPPLY LINE
- · - · -	DRAIN LINE
- - -	SUCTION LINE
—	ELECTRICAL CONDUIT
⊗	MANUAL VALVE
▶	FLOW DIRECTION
⊕	ACTUATED VALVE

1 SUPPLY PIPING PLAN
7 3/32" = 1'-0"

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JOB TITLE: SERENADE PARK
SPLASH PAD
LOCATION: TROY, IL

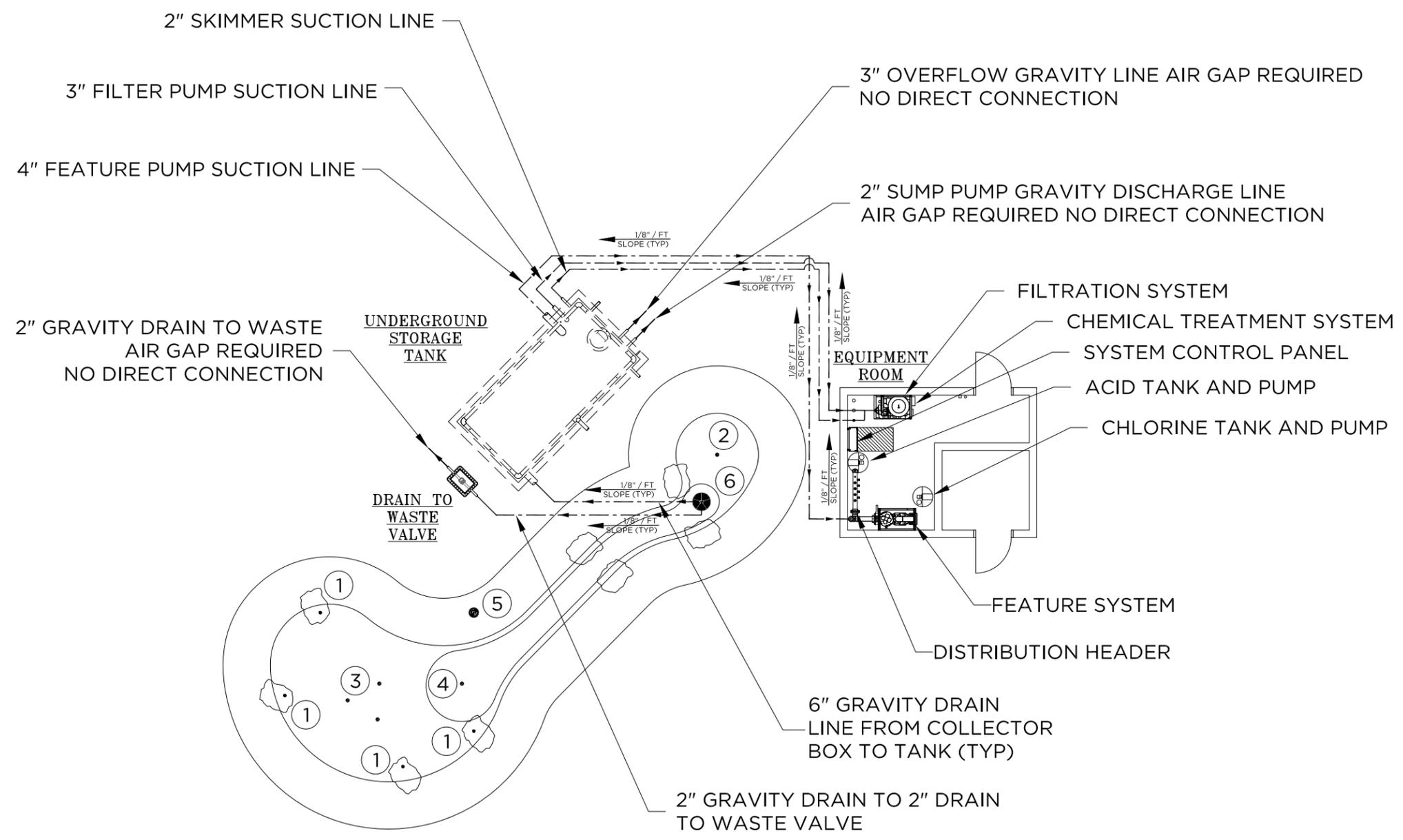
SCALE: SEE VIEWS
DRAWN: CTS
CHECKED: 1159648-01-02-7
DWS: FILE
DATE: 3/17/22
SHEET TITLE: SUPPLY PIPING PLAN

JOB NO. 1159648-01-02

NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	4	10 EA	1" EA
2	SEA CRAWLER	1	5	1"
3	STREAM JET TRIANGLE	1	30	1½"
4	SUPPLY FITTING	1	30	1½"
5	STEP PAD ACTIVATOR	1	--	--
6	COLLECTOR BOX	1	--	--

NOTE:

1. ALL GRAVITY DRAIN LINES TO SLOPE 1/8"/FT AWAY FROM SPLASH PAD.
2. GRAVITY DRAIN LINE VELOCITY NOT TO EXCEED 3.0 FT/SEC
3. REFER TO SPEC SHEET AND INSTALLATION DRAWING FOR EACH PRODUCT.
4. ALL PIPING SHOULD BE SCH 80 PVC.
5. ANY REQUIRED BACKFLOW DEVICE OR WATER METER ON THE CITY WATER MAIN SHALL BE PROVIDED BY OTHERS.
6. EXACT ROUTING OF PIPING TO BE DETERMINED BY CONTRACTOR.
7. MINIMIZE USE OF ELBOWS ON ALL DRAINAGE PIPING.
8. COORDINATE (1½") DRAIN LINES FROM POD EMBEDS TO DRAINAGE AREA.
9. NO DIRECT CONNECTION ALLOW ON THE DRAIN TO WASTE LINES. AIR GAP REQUIRED.



LEGEND

---	SUPPLY LINE
- - - -	DRAIN LINE
- · - · -	SUCTION LINE
—	ELECTRICAL CONDUIT
⊗	MANUAL VALVE
▶	FLOW DIRECTION
⊕	ACTUATED VALVE

NO.	REVISION	RELEASE FOR APPROVAL	DATE
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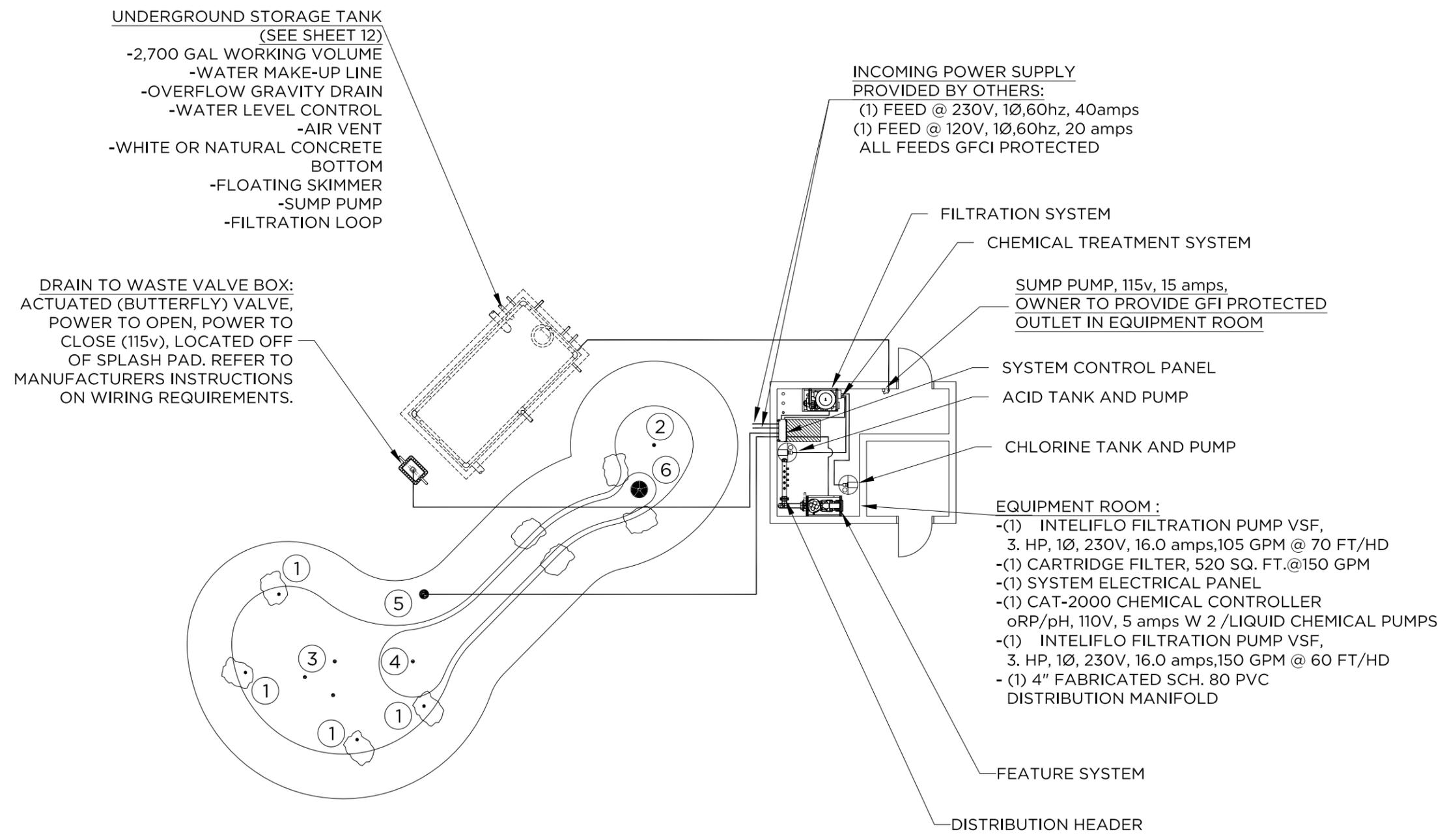
JOB TITLE: SERENADE PARK SPLASH PAD
LOCATION: TROY, IL

SCALE: SEE VIEWS
DWS. FILE: 1159648-01-02-8
SHEET TITLE: DRAIN PIPING PLAN
JOB NO.: 1159648-01-02

NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	4	10 EA	1" EA
2	SEA CRAWLER	1	5	1"
3	STREAM JET TRIANGLE	1	30	1½"
4	SUPPLY FITTING	1	30	1½"
5	STEP PAD ACTIVATOR	1	--	--
6	COLLECTOR BOX	1	--	--

NOTE:
1. EXACT ROUTING OF CONDUIT TO BE DETERMINED BY CONTRACTOR.
2. LOCATION AND SIZE OF UNDERGROUND STORAGE TANK NOT TO SCALE.
3. ALL ELECTRICAL WORK BETWEEN ACTIVATION BOLLARD, UNDERGROUND STORAGE TANK, DRAIN TO WASTE ACTUATED VALVE AND OPERATING SYSTEM SHALL COMPLY WITH THE NFPA 70, NATIONAL ELECTRIC CODE 2008 EDITION THAT IS INCORPORATED BY REFERENCE.
4. UNDERGROUND STORAGE TANK AND UTILITY BUILDING MUST BE SECURE TO PREVENT UNAUTHORIZED ACCESS.
5. SEE SHEET 10f12 FOR REFERENCE.

LEGEND	
-----	SUPPLY LINE
-----	DRAIN LINE
-----	SUCTION LINE
-----	ELECTRICAL CONDUIT
⊗	MANUAL VALVE
▶	FLOW DIRECTION
⊗	ACTUATED VALVE
-----	CHEMICAL LINE



NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	3/7/22

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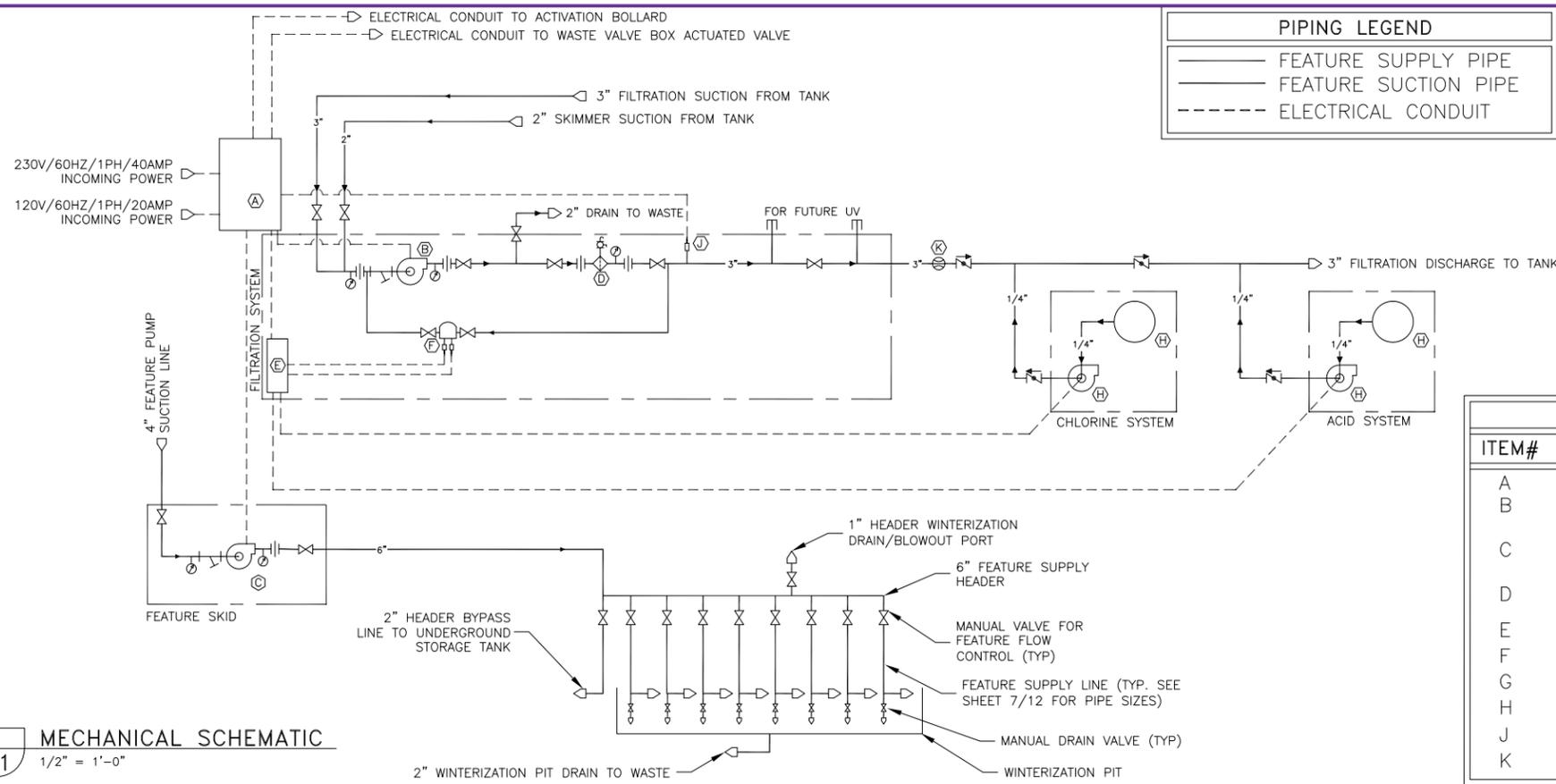
JOB TITLE: SERENADE PARK SPLASH PAD
LOCATION: TROY, IL

SCALE: SEE VIEWS
DWS. FILE: 1159648-01-02-10
CHECKED: SHEET TITLE: ELECTRICAL PLAN
DRAWN: CTS
DATE: 3/7/22

JOB NO. 1159648-01-02

10 OF 12

1 MECHANICAL SCHEMATIC
1/2" = 1'-0"



PIPING LEGEND

	FEATURE SUPPLY PIPE
	FEATURE SUCTION PIPE
	ELECTRICAL CONDUIT

SYMBOL LEGEND

	PUMP		GATE VALVE
	CHEM FEEDER		SOLENOID VALVE
	MANUAL AIR VENT		SHUT-OFF VALVE
	STRAINER		FILTER
	PSI/VACUUM GAUGE		CHECK VALVE
	UNION		INLET/OUTLET

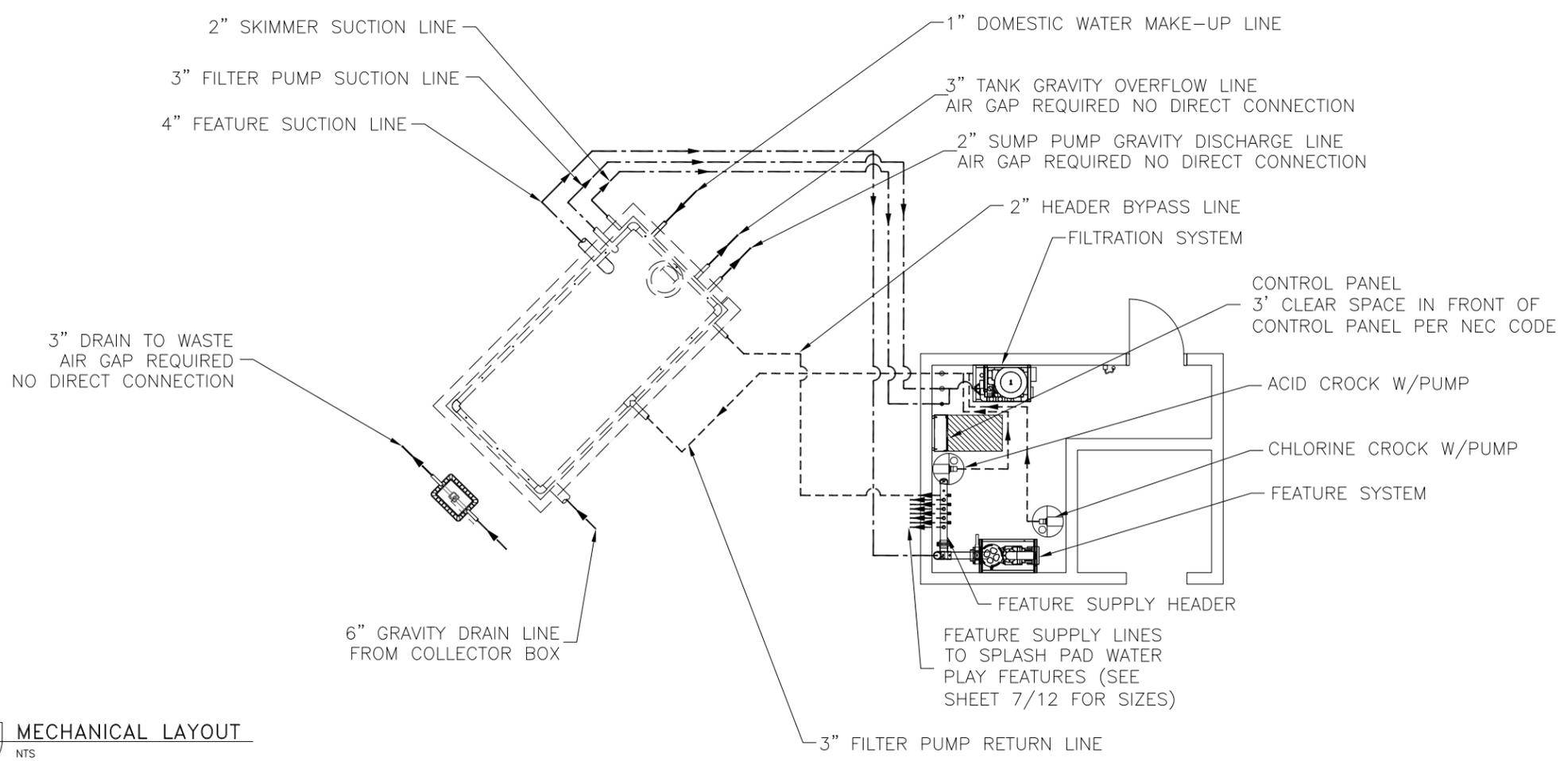
- NOTE:**
1. ALL GRAVITY DRAIN LINES TO SLOPE 1/8"/FT AWAY FROM SPLASH PAD.
 2. GRAVITY DRAIN LINE VELOCITY NOT TO EXCEED 3.0 FT/SEC.
 3. REFER TO SPEC SHEET AND INSTALLATION DRAWING FOR EACH PRODUCT.
 4. LOCATION AND SIZE OF UNDERGROUND STORAGE TANK NOT TO SCALE.
 5. ALL PIPING BETWEEN COLLECTOR BOXES, UNDERGROUND STORAGE TANK, AND OPERATING SYSTEM SHOULD BE SCH 80 PVC.
 6. ALL LINES FROM PIPE MANIFOLDS TO FEATURES SHOULD NOT BE CROSSED.
 7. ANY REQUIRED BACKFLOW DEVICE OR WATER METER ON THE CITY WATER MAIN SHALL BE PROVIDED BY OTHERS.
 8. EXACT ROUTING OF PIPING TO BE DETERMINED BY CONTRACTOR.
 9. UNDERGROUND STORAGE TANK AND ALL EQUIPMENT MUST BE SECURE TO PREVENT UNAUTHORIZED ACCESS.
 10. INDICATES FLOW DIRECTION.

- EQUIPMENT ROOM:**
- (1) INTELIFLO PUMP VSF, 3HP, 1ø, 230V, 16.0 amps, 118 GPM @ 70 FT/HD
 - (1) CLEAN AND CLEAR CARTRIDGE FILTER, 520 SQ. FT. @ 150 GPM
 - (1) SYSTEM ELECTRICAL PANEL
 - (1) CHEMICAL CONTROLLER oRP/pH, 230V, 10amps
 - (1) CHLORINE SYSTEM (CROCK AND PERSTALIC PUMP)
 - (1) PH ADJUSTING SYSTEM (CROCK AND PERSTALIC PUMP)
 - (1) INTELIFLO PUMP VSF, 3HP, 1ø, 230V, 16.0 amps, 150 GPM @ 50 FT/HD
 - (1) 4" FABRICATED SCH. 80 PVC DISTRIBUTION MANIFOLD

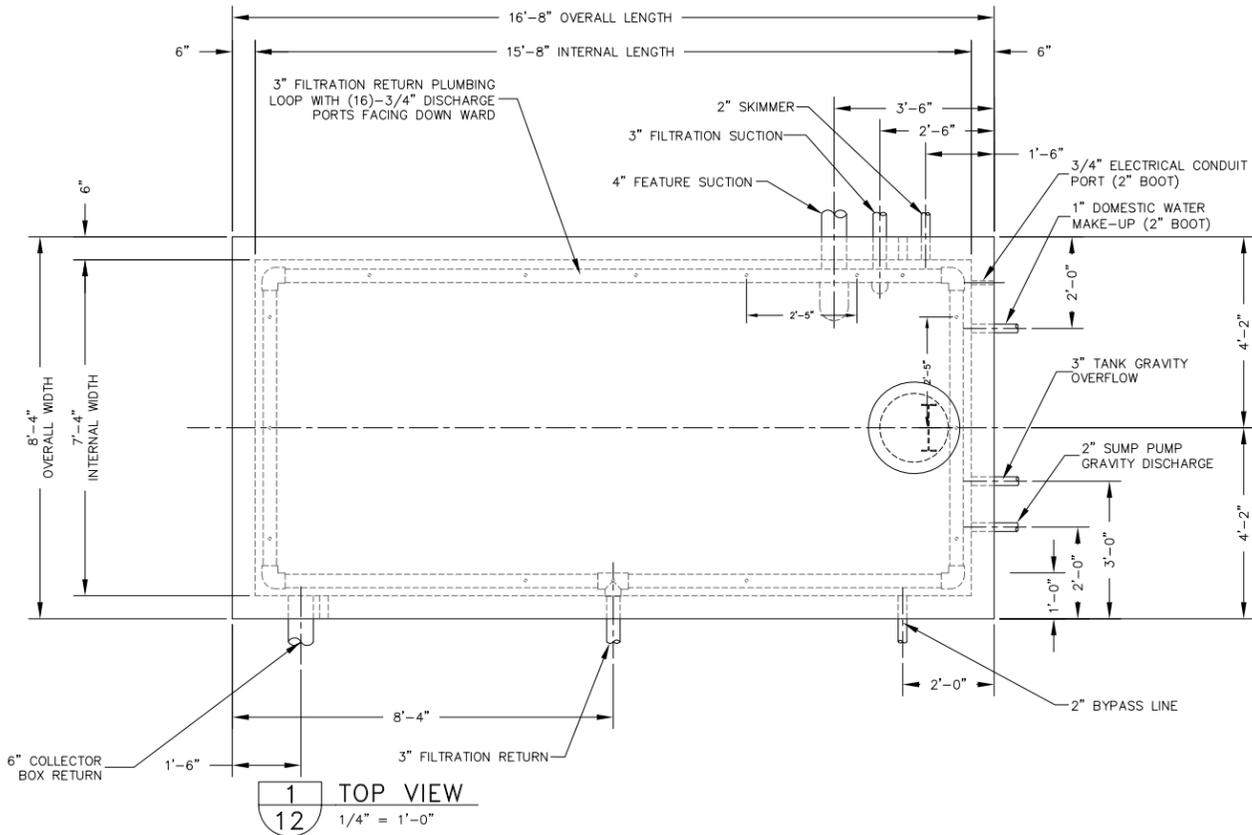
FEATURE EQUIPMENT

ITEM#	DESCRIPTION:	TOTAL QTY:
A	MAIN CONTROL PANEL	1
B	3HP 230/60/1PH FILTRATION PUMP W/ STRAINER	1
C	3HP 230/60/1PH FEATURE PUMP W/ STRAINER	1
D	CARTRIDGE FILTER	1
E	PH/ORP CONTROLLER	1
F	PH/ORP PROBES	1
G	CHLORINE PUMP/STORAGE CROCK	1
H	PH PUMP/STORAGE CROCK	1
J	FLOW SWITCH	1
K	FLOW METER	1

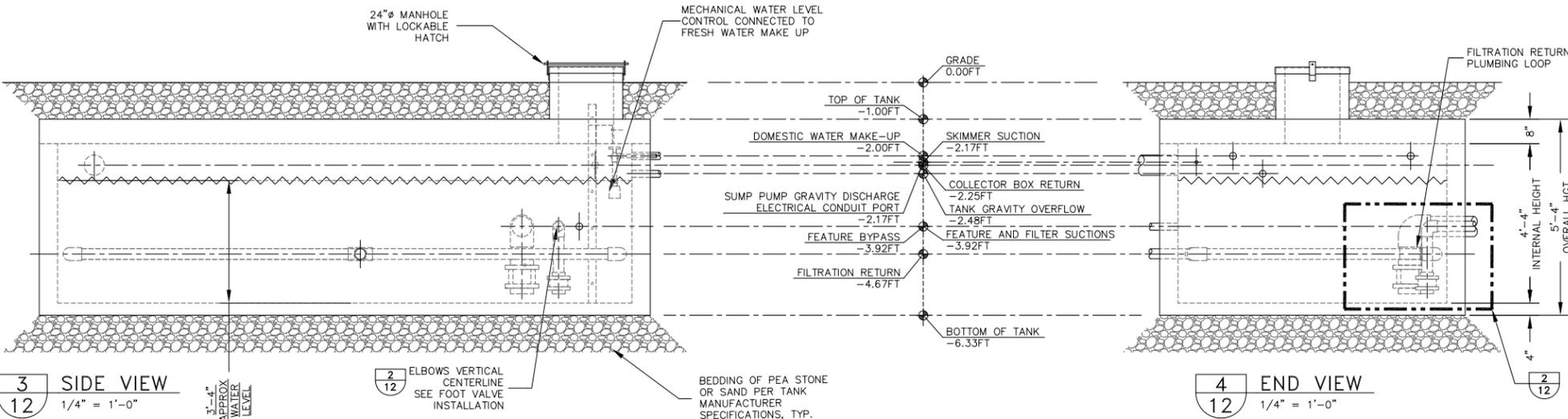
2 MECHANICAL LAYOUT
NTS



DATE	3/21/22
NO.	
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NO.	A
REVISION	
101 MCINLEY PARKWAY DELANO, PA 16828 Phone 812-245-9335 Fax 812-245-6444 aquatix@atd.com	
by landscape structures	
JOB TITLE	SERENADE PARK SPLASH PAD
LOCATION	TROY, IL
DATE	3/17/22
DWG. FILE	1159648-01-02-11
CHECKED	
DRAWN	CTS
SCALE	SEE VIEWS
SHEET TITLE	MECHANICAL PLAN
JOB NO.	1159648-01-02
	11 OF 12



1 TOP VIEW
1/4" = 1'-0"



3 SIDE VIEW
1/4" = 1'-0"

2 ELBOWS VERTICAL CENTERLINE
SEE FOOT VALVE INSTALLATION

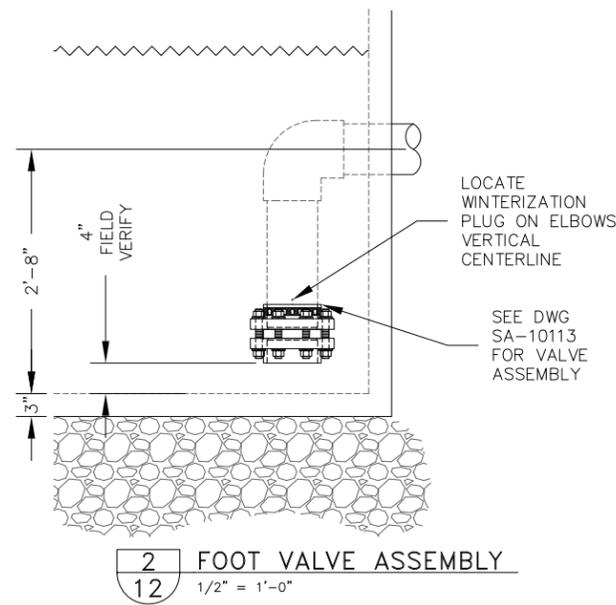
4 END VIEW
1/4" = 1'-0"

- NOTE:**
1. ALL ELEVATIONS MUST BE FIELD VERIFIED.
 2. TANK TO BE A 3,000 GALLON TANK.
 3. WORKING VOLUME OF TANK TO BE APPROXIMATELY 2,700 GALLONS (SEE APPROXIMATE WATER LEVEL DIMENSION IN SIDE VIEW)
 4. INTERIOR OF TANK TO BE PAINTED WHITE OR NATURAL CONCRETE FINISH.
 5. COORDINATE ALL PIPE CONNECTION ELEV.S TO PROVIDE PROPER SLOPE OF PIPING.
 6. COLLECTOR BOX RETURN FITTING ELEVATION TO BE DETERMINED BY OTHERS TO ACHIEVE APPROPRIATE SLOPE OF 1/8" /FT.

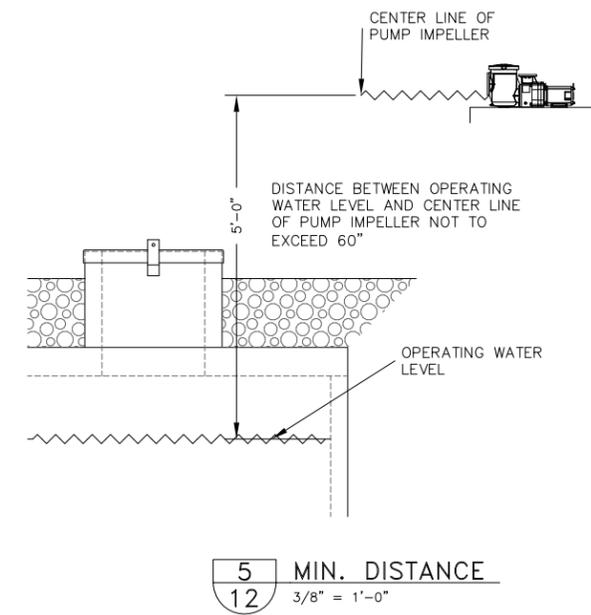
ATTENTION INSTALLER:
SEE SHEET 1/12 FOR INSTALLATION INSTRUCTIONS.

CRITICAL NOTE:
TANK NOZZLE LOCATIONS CAN BE MODIFIED DEPENDING ON ACTUAL SITE CONDITIONS. DO NOT "SHORT CIRCUIT" FILTRATION SUPPLY AND RETURN.

TANK PENETRATION ELEVATIONS BASED ON SITE PLAN AN SHEET 2/12



2 FOOT VALVE ASSEMBLY
1/2" = 1'-0"



5 MIN. DISTANCE
3/8" = 1'-0"

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	3/7/22
101 MCINLEY PARKWAY DELANO, MN 55228 P 952-345-8335 F 952-345-6444 aquatix@atd.com		
aquatix by landscape structures		JOB TITLE SERENADE PARK SPLASH PAD
LOCATION TROY, IL		DWG. FILE 1159648-01-02-12
SCALE	DRAWN	DATE
SEE VIEWS	CTS	3/7/22
CHECKED	DWG. FILE	DATE
	1159648-01-02-12	3/7/22
SHEET TITLE STORAGE TANK LAYOUT AND DETAILS		
JOB NO. 1159648-01-02		
12 OF 12		