SPECIFICATIONS FOR CONSTRUCTION

1 GENERAL NOTES

1.1 THESE DESIGN DOCUMENTS WERE PREPARED BY 'VORTEX AQUATIC STRUCTURES INTERNATIONAL' FOR THE USE OF THEIR CLIENT ONLY. THE MATERIAL USED AND IDENTIFIED IN THEM REFLECTS VORTEX AQUATIC STRUCTURES INTERNATIONAL'S BEST JUDGMENT IN LIGHT OF THE INFORMATION AVAILABLE AT THE TIME OF PREPARATION. FOR THE PURPOSE OFTHESE DESIGN DOCUMENTS, 'VORTEX AQUATIC STRUCTURES INTERNATIONAL' IS SYNONYMOUS WITH 'VORTEX'.

1.2 VORTEX ACCEPTS NO RESPONSIBILITY FOR DAMAGES, IF ANY, SUFFERED BY ANY THIRD PARTY AS A RESULT OF DECISIONS MADE OR ACTIONS BASED ON THESE DESIGN DOCUMENTS WITHOUT THE PREVIOUS CONSULTATION TO VORTEX.

1.3 ALL WORK, MATERIALS AND THEIR ASSEMBLIES SHALL CONFORM TO THE STANDARDS, REGULATIONS AND CODES CURRENTLY IN FORCE FOR ALL TRADES, AISC, ACNOR, EN, OR IBC.

1.4 THESE DESIGN DOCUMENTS DO NOT INDICATE THE METHOD OR MEANS OF CONSTRUCTION. WHEN APPLICABLE, THE CONTRACTORS SHALL SUPERVISE AND DIRECT ALL THE WORKAND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES AND SEQUENCES AS PER STANDARD BEST PRACTICES.

1.5 DO NOT SCALE DRAWINGS.

1.6 USE ONLY THOSE MARKED "ISSUED FOR CONSTRUCTION".

1.7 THE CONTRACTOR SHALL REVIEW THESE DESIGN DOCUMENTS AND REPORT ANY CONFLICTS OR OMISSIONS TO THE VORTEX IMMEDIATELY.

1.8 TEMPORARY SUPPORTS, WHICH WILL BE REQUIRED DURING CONSTRUCTION, SUCH AS FORMWORK, BRACING, SHORING, ETC. ARE NOT SHOWN ON THESE DRAWINGS AND ARE THERESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL SAFE CONSTRUCTION PROCEDURES ARE FOLLOWED.

1.9 THE FOLLOWING SPECIFICATIONS ARE VORTEX'S MINIMUM RECOMMENDATIONS TO OBTAIN A QUALITY PRODUCT. THE CONTRACTOR SHALL FOLLOW THE LOCAL CODES IF MORE RESTRICTIVE.

1.10 ALL SEEFLOW COMPONENTS TO BE SNUG-TIGHT ONLY. USING POWER TOOLS OR TIGHTEN HARDWARE FULLY-TENSIONED CAN PRODUCE CRACKING ON THE PLASTIC.

2 EXCAVATION

2.1 ANY SHORING OR TEMPORARY SHORING NOT SHOWN ON DRAWINGS WILL BE EXECUTED, IN A SAFE MANNER, BY THE GENERAL CONTRACTOR.

2.2 IT IS THE RESPONSIBILITY OF OTHERS TO VERIFY THE EXISTENCE OF ANY UNDERGROUND SERVICES ETC.

2.3 IF AVAILABLE, REFER TO SOIL REPORT FOR BACKFILL REQUIREMENTS. ALL BACKFILL (FOR SLAB ON GRADE, ETC.) MUST BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS OF AQUALIFIED PROFESSIONAL. USE ONLY FREE DRAINING, GRANULAR, MINERAL, INERT AND NON- REACTIVE FILL.

3 FOUNDATIONS

3.1 REFER TO SOIL REPORT FOR RECOMMENDATIONS.

3.2 ALL FOOTINGS SHALL REST ON A HOMOGENEOUS LAYER OF UNDISTURBED SOIL OR ENGINEERED BACKFILL WITH A MINIMUM ALLOWABLE BEARING CAPACITY OF 100KPA (2000 PSF) AND MAXIMUM DIFFERENTIAL SETTLEMENT OF 0.75" (19mm). ALL ORGANIC MATERIAL SHALL BE REMOVED.

3.3 IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE SOIL AT ALL FOOTING LOCATIONS BE VERIFIED BY A QUALIFIED SOILS EXPERT BEFORE POURING FOOTINGS TO ENSUREFOOTINGS REST ON APPROPRIATE STRATA.

3.4 WHEN APPLICABLE, FOLLOW GEOTECHNICAL EXPERT RECOMMENDATIONS FOR ALL EXTERIOR FOOTINGS TO ENSURE FROST PROTECTION.

4 CONCRETE

4.1 ALL CONCRETE MATERIALS, PROCEDURES, TOLERANCES & WORKMANSHIP SHALL CONFORM TO THE LATEST ISSUES OF ACI-318 AND ACI 317 OR ACNOR CAN3-A23.1 & A23.2, DEPENDING ON PROJECT LOCATION.

4.2 CONCRETE THAT HAS BEEN IN THE TRUCKS LONGER THAN 2 HOURS SHALL BE REJECTED. DO NOT ADD WATER TO THE CONCRETE IN THE TRUCKS OR ON THE SITE UNDER ANY CIRCUMSTANCES.

4.3 USE MAXIMUM 76mm (3") SLUMP, 19 MM (3/4") AGGREGATE, UNLESS OTHERWISE-NOTED. USE 5-7% AIR ENTRAINMENT FOR CONCRETE EXPOSED TO WEATHER ONLY.

4.4 ALL GROUT SHALL BE NON-SHRINK TYPE WITH A MINIMUM 28 DAYS STRENGTH OF 5000 PSI (35.0 MPa). USE 1" (25mm) GROUT UNDER ALL STEEL COLUMN BASE PLATES.

4.5 CONCRETE STRENGTH @ 28 DAYS TO BE:

4.5.1 FOUNDATIONS (FOOTINGS): 25.0 MPa (3500 PSI), UNLESS OTHERWISENOTED.

4.5.2 INTERIOR SLAB ON GRADE: 25.0 MPa (3500 PSI), UNLESS OTHERWISE NOTED.

4.5.3 EXTERIOR SLAB ON GRADE: 32.0 MPa (4500 PSI), UNLESS OTHERWISE NOTED.

4.6 MINIMAL RE-BAR COVER:

4.6.1 CONCRETE POURED ON-GRADE = 76mm (3") COVER

4.6.2 CONCRETE POURED INTO FORMWORK BUT EXPOSED TO SOIL AND WEATHER FOR REBAR 15M (#4) AND UNDER = 50mm (2") COVER

5 REINFORCING STEEL

5.1 DEPENDING ON PROJECT LOCATION, ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 (BARS 15m (#4) TO BE GRADE 60 WITH SUPPLEMENTARY REQUIREMENTS ON S1. BARS SMALLER THAN 15M (#4), TO BE GRADE 40); OR TO ACNOR GRADE G30.12 [FY = 400MPA (60,000 PSI), UNLESS OTHERWISE NOTED].

5.2 USE CONCRETE, PLASTIC OR STEEL SUPPORT BARS, AS PER ACI (MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES). THE RE-BAR PLACER MUST REMAIN ON-SITE DURING POURS TO VERIFY CORRECT POSITIONING OF RE-BARS. SLANT UPPER REINFORCING STEEL IN LINE WITH THE SLOPE OF THE SLAB, IF APPLICABLE.

5.3 BARS SHALL BE SECURELY WIRED PER LATEST EDITION OF CRSI (RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS).

5.4 ALL REINFORCING STEEL IS TO BE KEPT CLEAN AND FREE OF MUD, SNOW, ICE, AND ANY CONTAMINANTS.

5.5 VERTICAL AND CONTINUOUS REBAR SHALL BE LAPPED TO DEVELOP FULL TENSILE CAPACITY OF THE BAR. FOR 15m (#4) BARS MINIMUM LAP OF 610mm (24").

6 EXTERIOR / INTERIOR SLAB ON GRADE

6.1 FOLLOW THE GEOTECHNICAL EXPERT RECOMMENDATIONS FOR PREPARATION OF SOIL BEFORE POURING THE CONCRETE. ALL GRANULAR MATERIAL SHALL BE MOISTENED IMMEDIATELY BEFORE POURING THE CONCRETE. WATER AS NEEDED. DO NOT USE A VAPOR BARRIER.

6.2 NO TRUCKS ARE PERMITTED ON THE CONSTRUCTION SITE (OF THE SLAB) AFTER THE FINAL COMPACTION, EITHER BEFORE OR DURING, THE POUR.

6.3 SLAB TO BE MINIMUM 6 INCHES THICK, REINFORCED WITH 10m (#3) @ 300mm (12") C/C REBAR PLACED IN BOTH DIRECTIONS AT MID-HEIGHT OF THE SLAB, UNLESS OTHERWISE NOTED ON PLANS.

6.4 REFER TO CONCRETE SECTION FOR MINIMUM COMPRESSIVE STRENGTH AND AIR-ENTRAINMENT REQUIREMENTS.

6.5 FINISHING WILL BE MEDIUM BROOM.

6.6 CONTROL JOINTS (SAW-CUTS) TO BE LOCATED IN EACH DIRECTION, AT REGULAR INTERVALS, WITH A MAXIMUM DISTANCE OF 3m (10'). SHALL BE MINIMUM 3mm (1/8") WIDE AND SHALL PENETRATE THE SLAB TO A MINIMUM DEPTH OF 1/3 OF THE THICKNESS OF THE SLAB. CONTROL JOINTS SHOULD BE DONE AS SOON AS POSSIBLE WITHOUT DAMAGING THE CONCRETE,BUT NO LATER THAN 18 HOURS AFTER POURING.

6.7 WHEN POSSIBLE AND TO AVOID SHRINKAGE CRACKING, HUMIDITY SHALL BE MAINTAINED FOR 7 DAYS DURING THE CURING PERIOD OF THE SLAB. WATER AND USE POLYETHYLENE CLOTH OR BAG. THE CONCRETE MUST DRY UNIFORMLY.

7 CONCRETE WORK IN COLD OR HOT WEATHER (MINIMUM REQUIREMENTS)

7.1 COLD WEATHER REQUIREMENTS APPLY WHEN THE MEAN AIR IS LESS THAN 5 DEGREES CELSIUS (40 DEGREES FAHRENHEIT).

7.2 GENERAL REQUIREMENTS FOR COLD WEATHER CONCRETE WORK SHALL BE AS PER ACI 306R-88; OR AS PER THE NBC'S LATEST REQUIREMENTS INCLUDING THE LATEST ISSUE OF CSA STANDARD CAN3-A23.1.

7.3 ALL SNOW AND ICE SHALL BE REMOVED FROM FORMS AND REBAR WITH STEAM AND COMPRESSED AIR BEFORE POURING. DO NOT USE DE-ICING SALT (CALCIUM CHLORIDE) OR ANY OTHER SALTS UNDER ANY CIRCUMSTANCES.

7.4 CONCRETE SHALL HAVE A MINIMUM TEMPERATURE OF 20 DEGREES CELSIUS AND A MAXIMUM TEMPERATURE OF 25 DEGREES CELSIUS WHILE POURING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THESE REQUIREMENTS ARE SATISFIED. ANY CONCRETE THAT DOES NOT CONFORM MUST BE REJECTED.

7.5 THE SURFACE OF POURED CONCRETE SHALL BE PROTECTED BY MEANS OF SUITABLE COVERINGS AND INSULATION (TO BE DETERMINED BY TEMPERATURE) DURING THE CURING PROCESS.

7.6 GENERAL REQUIREMENTS FOR HOT WEATHER CONCRETE WORK SHALL BE AS PER ACI 305R-99; OR AS PER LOCAL CODE REQUIREMENTS.

8 PIPING

8.1 WDS CONFIGURATION ARE SCHEMATIC AND MAY BE MOVED OR ADJUSTED ON SITE BY VORTEX CERTIFIED INSTALLER TO ADJUST FOR SITE CONDITIONS

8.2 ANY REQUIRED WATER METER ON THE CITY WATER MAIN SHALL BE PROVIDED BY INSTALLER. BACKFLOW PREVENTER AND PRESSURE REGULATOR WILL BE PROVIDED BY VORTEX.

8.3 ALL PIPE LINES TO FEATURES TO HAVE A 1% MINIMUM RECOMMENDED SLOPE FOR PROPER WINTERIZATION.

8.4 ALL LINE SIZING (FEATURE CONNECTION TABLE) ASSUMES A MAXIMUM DISTANCE OF 125 FEET BETWEEN THE WATER DISTRIBUTION MANIFOLD AND THE FURTHEST PLAY PRODUCT. DISTANCES ABOVE 125 FEET MAY REQUIRE AN INCREASE IN LINE SIZING. PLEASE CONTACT VORTEX.

8.5 THE LINE DIAMETER FROM DRAIN SHALL BE 8" BASED ON THE MAXIMUM APPROXIMATE FLOW AT 1% SLOPE. FINAL LOCATION OF DRAIN AND LINE ROUTING ARE TO BE DETERMINED BY OTHERS.

8.6 PRESSURE LINES ARE RECOMMENDED TO BE SCHEDULE 80 PVC OR PEX, AND NON-PRESSURE LINES TO BE SCHEDULE 40, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

8.7 DRAINAGE LINES ARE RECOMMENDED TO BE SDR 35, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

8.8 PIPING SHOULD BE INSPECTED AFTER TRANSPORTATION FOR CUTS, SCRATCHES, GOUGES OR SPLITS; DAMAGED SECTIONS MUST BE DISCARDED OR CUT OUT.

8.9 PIPE SHALL BE INSTALLED BELOW THE FROST LEVEL NOT LESS THAN 12" (ASTM F-645) UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

8.10 PIPE INSTALLATION MINIMUM COVER SHOULD BE EVALUATED ACCORDING TO ASTM D-2774, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

8.11 SPECIAL CONSIDERATIONS SHOULD BE TAKEN FOR THERMAL CONDITIONS, EXPANSION AND CONTRACTIONS DUE TO TEMPERATURE SHOULD BE EVALUATED BEFORE THE INSTALLATION BY THE CONTRACTOR.

8.12 VALVE NUMBER 1 IS LOCATED TO THE LEFT OF THE MANIFOLD FACING THE SOLENOID.

8.13 MINIMUM 50 PSI REQUIRED AT THE INLET OF THE BACKFLOW PREVENTER AND PRESSURE REGULATING DEVICE.

8.14 MAXIMUM FLOW CAPACITY OF MANIFOLD IS 144 GPM

8.15 TOTAL FLOW OF THE FEATURE IS 149.5 GPM.

8.16 FACTORY MAXIMUM SEQUENCING FLOW IS 115 GPM, ACTUAL FLOW MAY VARY DUE TO SITE CONDITIONS.

2 ELECTRICAL

9.1 WIRING FROM THE CONTROLLER TO EACH ACTIVATOR SHALL BE #22 AWG. A TOTAL OF FIVE (5) CONDUCTORS PER ACTIVATOR.CABLE LENGTH UP TO 164' (50m), PROVIDED BY VORTEX.

9.2 ALL CONNECTIONS TO THE CONTROLLER AND OTHER VORTEX ELECTRICAL PANEL SHALL BE PERFORMED USING AN APPROVED NEMA 4X CONNECTOR.

9.3 WIRE FROM MAIN POWER TO VORTEX PANEL TO BE DETERMINED BY OTHERS RESPECTING THE LOCAL CODE.

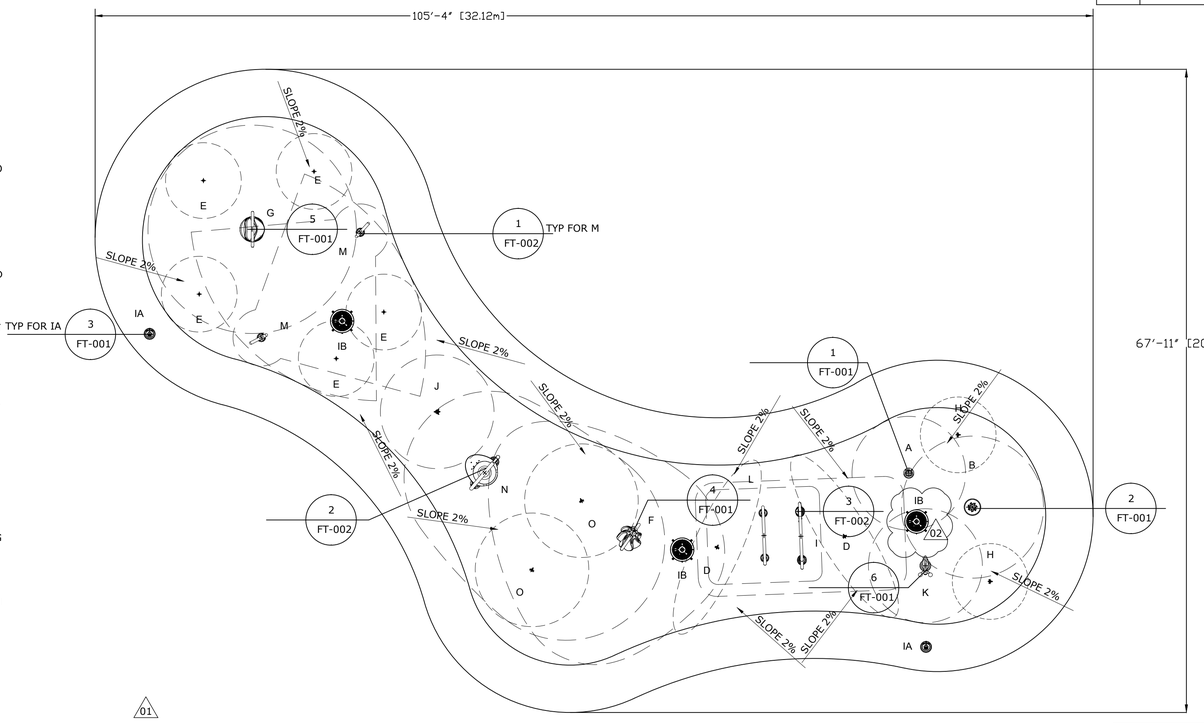
9.4 MAINTAIN A MINIMUM CLEARANCE ZONE OF 36" IN FRONT OF ELECTRICAL PANEL, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

9.5 USE #8 BARE COPPER BONDING WIRE BETWEEN FEATURES TO A GROUNDING ROD IN THE SOIL, TIED INTO REBAR GRID, OR AS PER LOCAL CODE.

9.6 AS PER ELECTRICAL CONSTRUCTION AND SAFETY CODES: CONTROLLER AND ANY OTHER ELECTRICAL EQUIPMENT BOX MUST BE HARD-WIRED TO A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) FROM THE INPUT POWER SOURCE.

9.7 ALL ELECTRICAL WORK SHOULD BE PERFORMED BY A LICENCE ELECTRICIAN IN ACCORDANCE TO LOCAL ELECTRICAL CONSTRUCTION AND SAFETY CODES.

Abbreviations	
A	Architectural
C	Civil Work
P	Plumbing Layout
PD	Plumbing Details
E	Electrical Layout
ED	Electrical Details
FT	Feature Installation Drawing



1 A-001 SPRAY ZONE & FEATURE PLAN

1. 5'[1.5M] SPRAY FREE AREA ALL AROUND THE SPLASHPAD
2. RECOMMENDED SLOPE: 2% TOWARDS DRAIN.
3. COORDINATE THESE DRAWINGS WITH ARCHITECTURAL , CIVIL, PLUMBING & ELECTRICAL SECTIONS.

SPLASHPAD DIMENSION

TOTAL AREA : 3363 ft² 312 m²

SPRAY AREA : 2020 ft² 187 m²

TOTAL FLOW : 149.5 Gpm

PRODUCT LEGEND

REF	PRODUCT	QTY
A	Aqua Dome N°1 VOR 0555	1
B	Bobble N°1 VOR 7232	1
IA	Bollard Activator N°3 VOR 0611	2
D	Directional Jet N°2 VOR 0321	2
E	Geyser VOR 0301	5
F	Helio N°5 VOR 7240	1
G	Helio N°6 VOR 7241	1
H	Jet Stream N°1 VOR 7512	2
I	Luna N°1 VOR 7230	1
J	Side Winder VOR 7518	1
K	Snail N°4 VOR 7217	1
L	Spray Loop VOR 0519	1
M	Tube N°1 * VOR 0220	2
N	Twinsplash VOR 7242	1
O	Water Bloom N°2 VOR 0329	2
IB	Playsafe Drain No. 1 VOr-1001.4000	3
	TOTAL	QTY
		27

Drawing #	Drawing Name	Rev#
A-001	Spray Zone Layout	02
A-002	Anchor Plan	02
C-001	Embed Details	00
C-002	Embed Details	00
PE-001	Plumbing & Electrical Layout	03
PD-001	Plumbing Details	00
E-001	Bonding Layout	02
ED-001	Electrical Details	00
FT-001	Features Installation Drawing	00
FT-002	Features Installation Drawing	00

VORTEX USA Inc.
1420 Valwood Parkway Suite 205
Carrollton, Texas
United States 75006
Toll Free: +1 (877) 586-7839
Phone: +1 (972) 410-3619

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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

Order Number

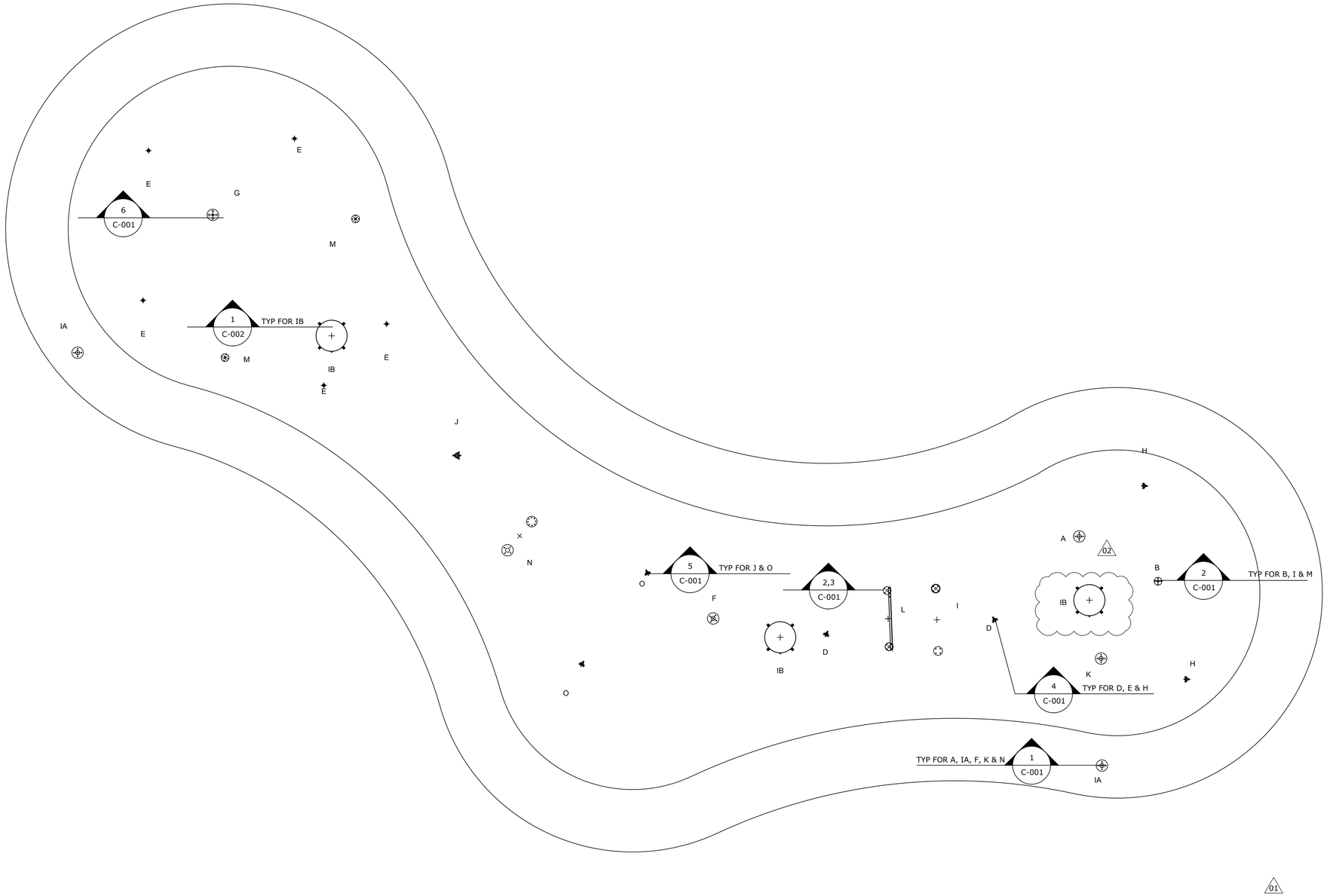
Date	Revision Description	No.	By/Par
18/Feb/2020	Re-issued for Bid	02	MM
30/Jan/2020	Re-issued for Bid	01	MM
20/Jan/2020	Issued for Bid	00	SR

Drawing Title
Spray Zone Layout

Drawn by	Verified by
MM	MAB
Scale: 5/32":1'	Date: 18/Feb/2020

Sheet #
A-001

REF	PRODUCT	QTY
A	Aqua Dome N°1 VOR 0555	1
B	Bobble N°1 VOR 7232	1
IA	Bollard Activator N°3 VOR 0611	2
D	Directional Jet N°2 VOR 0321	2
E	Geyser VOR 0301	5
F	Helio N°5 VOR 7240	1
G	Helio N°6 VOR 7241	1
H	Jet Stream N°1 VOR 7512	2
I	Luna N°1 VOR 7230	1
J	Side Winder VOR 7518	1
K	Snail N°4 VOR 7217	1
L	Spray Loop VOR 0519	1
M	Tube N°1 * VOR 0220	2
N	Twinsplash VOR 7242	1
O	Water Bloom N°2 VOR 0329	2
IB	Playsafe Drain No. 1 VOr-1001.4000	3
	TOTAL	QTY
		27



1 / A-002 ANCHOR PLAN

1. REFER TO SPECIFICATIONS ON A-001
2. COORDINATE THESE DRAWINGS WITH ARCHITECTURAL, CIVIL, PLUMBING & ELECTRICAL SECTIONS.

VORTEX

VORTEX USA Inc.
1420 Valwood Parkway Suite 205
Carrollton, Texas
United States 75006
Toll Free: +1 (877) 586-7839
Phone: +1 (972) 410-3619

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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

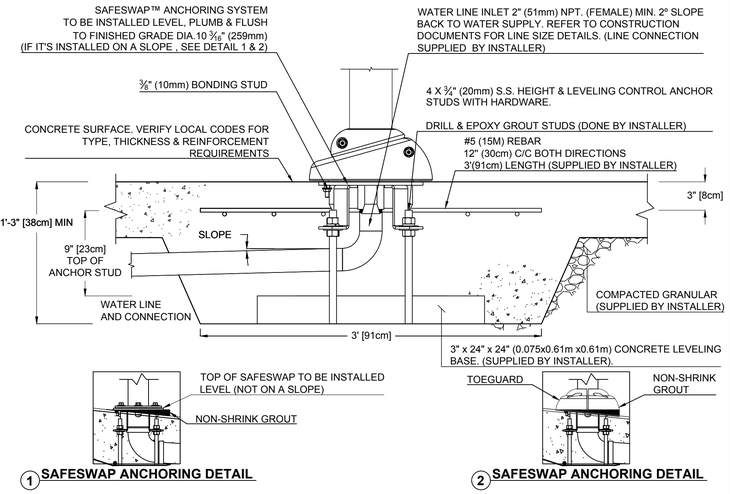
Order Number

Date	Revision Description	No.	By/Par
18/Feb/2020	Re-issued for Bid	02	MM
30/Jan/2020	Re-issued for Bid	01	MM
20/Jan/2010	Issued for Bid	00	SR

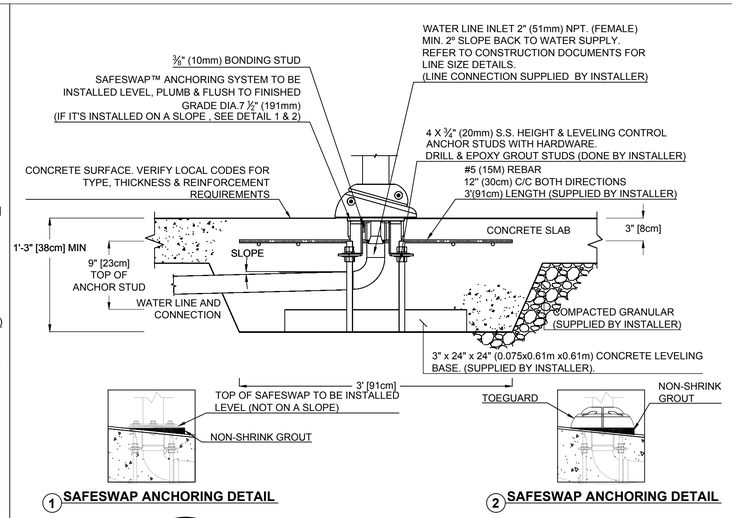
Drawing Title
Anchor Plan

Drawn by	Verified by
MM	MAB
Scale: 7/32'':1'	Date: 18/Feb/2020

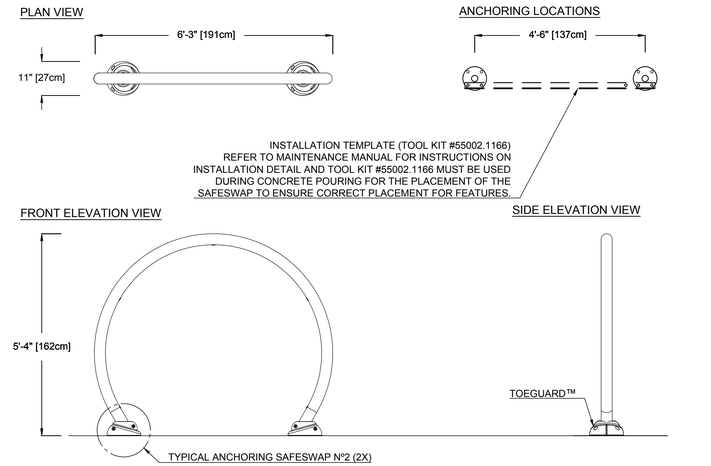
Sheet #
A-002



1 / C-001 — Safeswap No1 Anchor TYP.
VOR-55000.0430

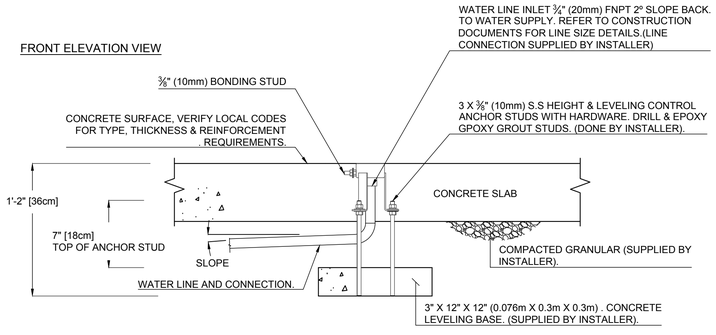


2 / C-001 — Safeswap No2 Anchor TYP.
VOR-55000.0570

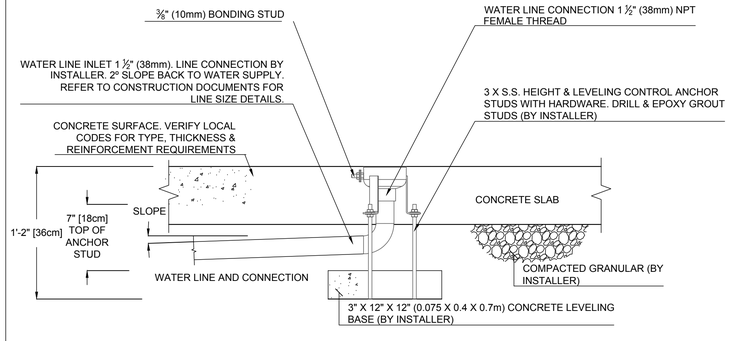


3 / C-001 — Spray Loop
VOR-0519.2XXX

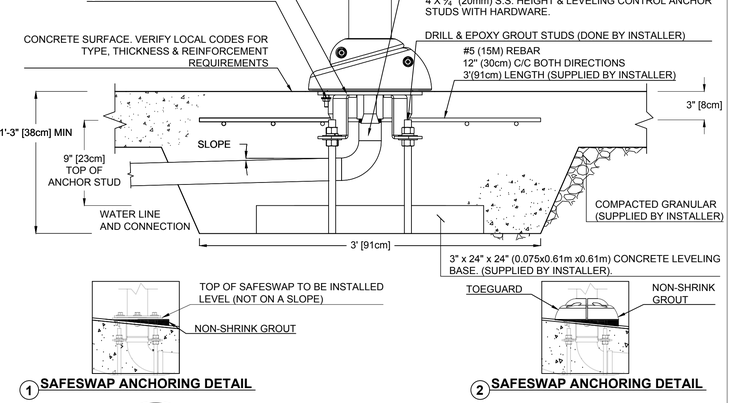
NOTE:
"BY INSTALLER/BY CONTRACTOR "MAY REFER TO SERVICE PROVIDERS OTHER THAN THE EQUIPMENT MANUFACTURER. PLEASE REFER TO PROJECT SPECIFICATION FOR DETAILS OF RESPONSIBILITY.



4 / C-001 — Ground Feature Anchor (3/4" Inlet)



5 / C-001 — Ground Feature Anchor TYP (Inlet 1 1/2")



6 / C-001 — Installation Kit Safeswap No1 Anchor
VOR-55000.0433

VORTEX USA Inc.
1420 Valwood Parkway Suite 205
Carrollton, Texas
United States 75006
Toll Free: +1 (877) 586-7839
Phone: +1 (972) 410-3619

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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

Order Number

Date	Revision Description	No.	By/Par
20/Jan/2020	Issued for Bid	00	SR

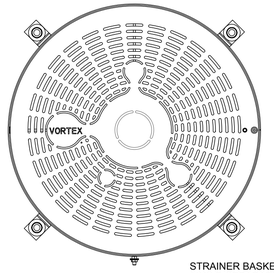
Drawing Title
Embed Details

Drawn by	Verified by
MM	MAB

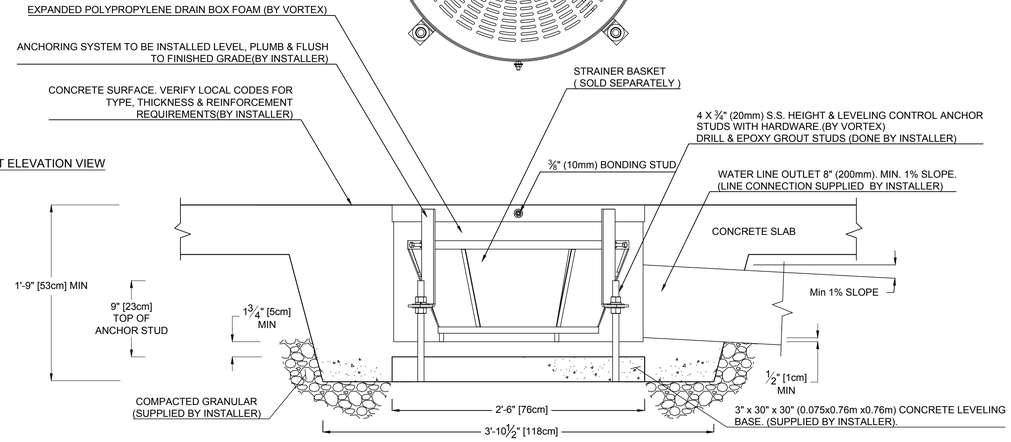
Scale	Date
---	18/Feb/2020

Sheet #
C-001

PLAN VIEW



FRONT ELEVATION VIEW



1 / C-002 Playsafe Drain No1

VOR-1001.4000

VORTEX

VORTEX USA Inc.
1420 Valwood Parkway Suite 205
Carrollton, Texas
United States 75006
Toll Free: +1 (877) 586-7839
Phone: +1 (972) 410-3619

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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

Order Number

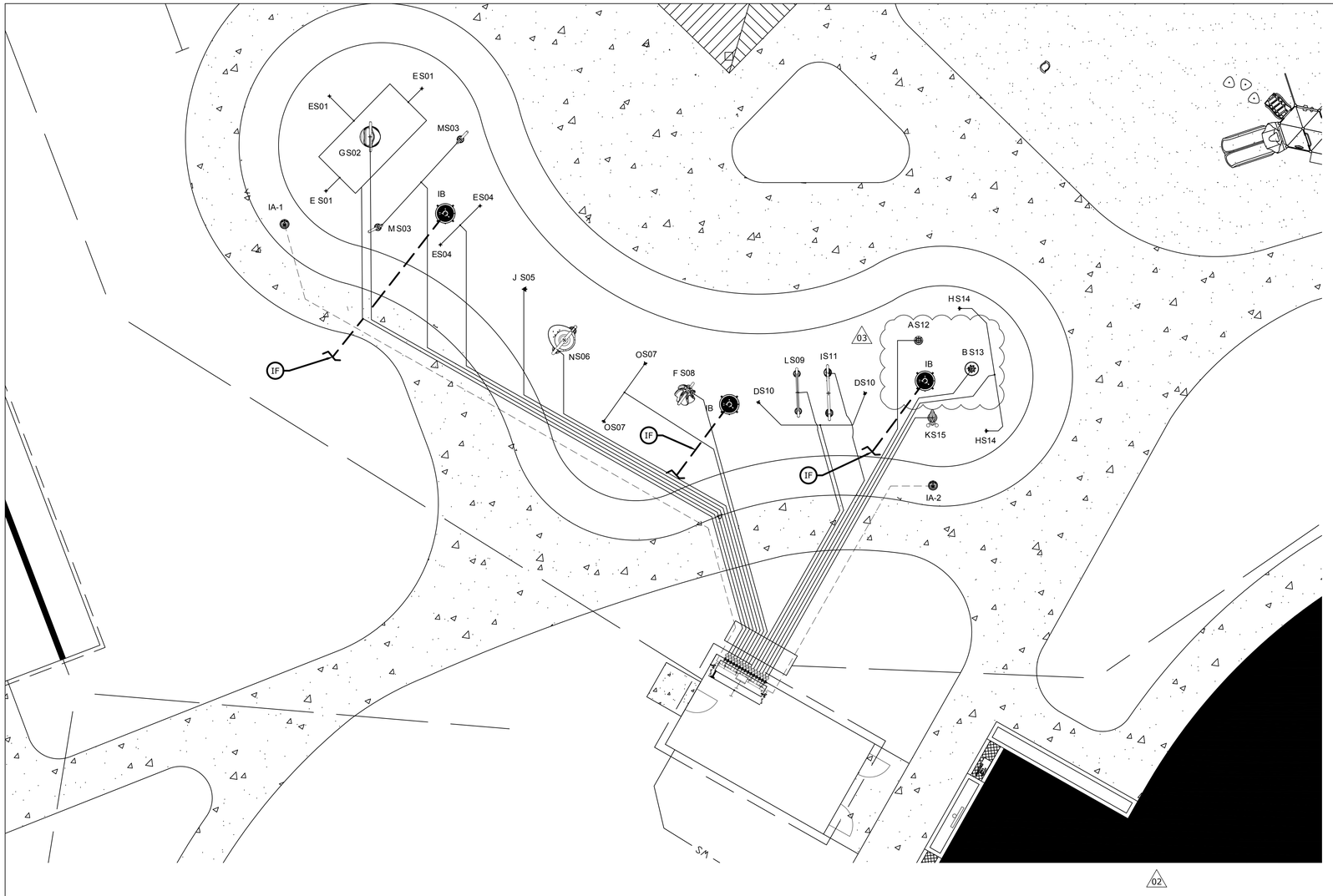
Date	Revision Description	No.	By/Par
20/Jan/2020	Issued for Bid	00	SR

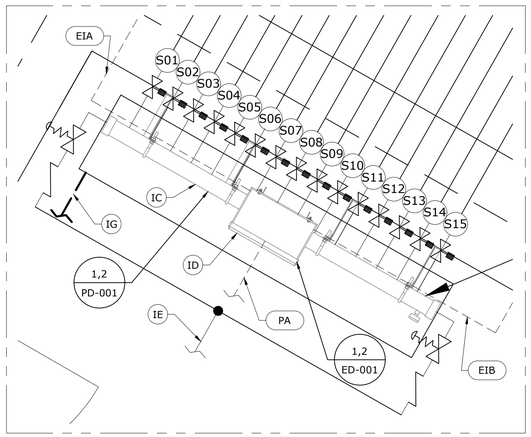
Drawing Title
Embed Details

Drawn by	Verified by
MM	MAB

Scale	Date
---	18/Feb/2020

Sheet #
C-002





1 PE-001 PLUMBING & ELECTRICAL LAYOUT

SCALE: 1/8"=1'-0"

1. RECOMMENDED SLOPE: 2% TOWARDS DRAIN.
2. COORDINATE THESE DRAWINGS WITH ARCHITECTURAL , CIVIL, PLUMBING & ELECTRICAL SECTIONS.

WATER LINE
DRAIN LINE
ELECTRICAL LINE

2 PE-001 PLUMBING & ELECTRICAL LAYOUT

SCALE: 3/4"=1'-0"

Feature Connection Table

Manifold Output Ref.	Solenoid Valve	Feature Ref.	Feature	Qty	Line Size	Gpm	Output (ID)
S01	1 1/2" Std	E	Geyser VOR 0301	3	1 1/2"	13.5	1
S02	1 1/2" Std	G	Helio N°6 VOR 7241	1	1 1/2"	13	2
S03	1 1/2" Std	M	Tube N°1 VOR 0220	2	1 1/2"	8	3
S04	1 1/2" Std	E	Geyser VOR 0301	2	1 1/2"	9	4
S05	1 1/2" Std	J	Side Winder VOR 7518	1	1 1/2"	6.5	5
S06	1 1/2" Std	N	Twinsplash VOR 7242	1	1 1/2"	12	6
S07	1 1/2" Std	O	Water Bloom N°2 VOR 0329	2	1 1/2"	18	7
S08	1 1/2" Std	F	Helio N°5 VOR 7240	1	1 1/2"	14	8
S09	1 1/2" Std	L	Spray Loop VOR 0519	1	1 1/2"	7.5	9
S10	1 1/2" Std	D	Directional Jet N°2 VOR 0321	2	1 1/2"	3	10
S11	1 1/2" Std	I	Luna N°1 VOR 7230	1	1 1/2"	13.5	11
S12	1 1/2" Std	A	Aqua Dome N°1 VOR 0555	1	1 1/2"	14	12
S13	1 1/2" Std	B	Bobble N°1 VOR 7232	1	1 1/2"	6	13
S14	1 1/2" Std	H	Jet Stream N°1 VOR 7512	2	1 1/2"	5	14
S15	1 1/2" Std	K	Snail N°4 VOR 7217	1	1 1/2"	6.5	15

Electrical Line Connections Power

Procuct Code	From	To	# Conductors	Gauge/ Type	Note
PA	Main Power Line (by Owner)	ID-120VAC	3	N/A	120V, 1 Phase, 60Hz, 10Amps Breaker Recommended ± 10% Voltage Drop is Acceptable (by Installer)

Electrical Line Connections Controller Outputs

Procuct Code	From	To	# Conductors	Gauge/ Type	Note
EIA	ID-Input 1	IA-1	5	22	Bollard Activator No. 1 24VAC, Max 250 mA, 164' Long Cable (by Vortex)
EIB	ID-Input 2	IA-2	5	22	Bollard Activator No. 1 24VAC, Max 250 mA, 164' Long Cable (by Vortex)

Product Legend

Product Ref.	Product	Qty
IA	Bollard Activator No3 VOR-611	2
IB	Playsafe Drain No1 VOR-1001.4000	3
IC	Water Distribution System; Wall Mounted Manifold 24812D2001R00	1
ID	Maestro Controller 16 out/ 8 in	1
IE	3" City Water Line @ 50PSI (by Installer)	1
IF	8" Line to Municipal Drain (by other)	3
IG	4" TYP Drain Line With Strainer Connected to Drainage System. Ensure P-Trap is Below Frost Line to Prevent Freezing. (by Installer)	1
	Pressure Regulator (by Vortex)	2
	Backflow Preventer (by Vortex)	2
	Solenoid Valve 1 ½"	15

03

VORTEX USA Inc.
1420 Valwood Parkway Suite 205
Carrollton, Texas
United States 75006
Toll Free: +1 (877) 586-7839
Phone: +1 (972) 410-3619

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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

Order Number

Date	Revision Description	No.	By/Par
18/Feb/2020	Re-issued for Bid	03	MM
30/Jan/2020	Re-issued for Bid	02	MM
20/Jan/2020	Issued for Bid	01	SR
17/Jan/2020	Issued for Approval	00	SR

Drawing Title
Plumbing & Electrical Layout

Drawn by	Verified by
MM	MAB
Scale	Date
---	18/Feb/2020

Sheet #
PE-001

THIS SHEET COVERS ALL THE MANIFOLD RANGE
WITH INTERVAL OF 5 VALVES

NOTE:

1. SEE PIPING AND ELECTRICAL SCHEMATIC DETAIL.
2. REFER TO SPECIFICATION FOR ADDITIONAL INFORMATION.
3. IF CONTROLLER IS REMOTE LOCATED, CONDUCTORS # 18 AWG AT 10' LONG PROVIDED FOR THE CONTROLLER BY VORTEX. FOR QUANTITY SEE PIPING AND ELECTRICAL SCHEMATIC DETAIL.
4. WATER OUTLETS ARE FEMALE NPT CONNECTIONS.
5. BY INSTALLER/BY CONTRACTOR MAY REFER TO SERVICE PROVIDERS OTHER THAN THE EQUIPMENT MANUFACTURER.PLEASE REFER TO PROJECT SPECIFICATION FOR DETAILS OF RESPONSIBILITY.

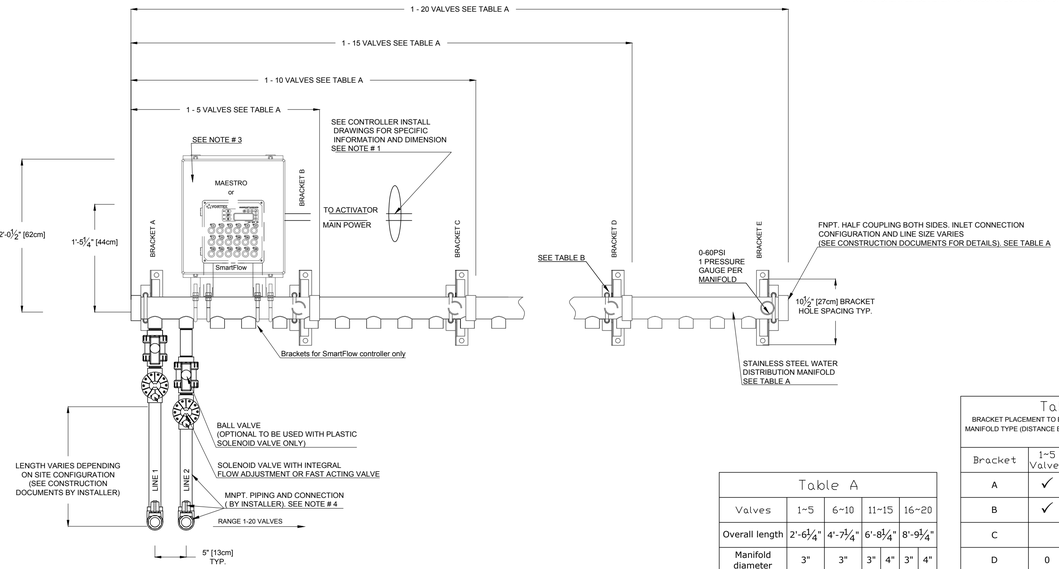


Table A

Valves	1-5	6-10	11-15	16-20
Overall length	2'-6¼"	4'-7¾"	6'-8¼"	8'-9¼"
Manifold diameter	3"	3"	3"	4"	3"	4"
Inlet diameter	2"	3"	2"	3"	2"	3"	4"	2"	3"	4"

Table B

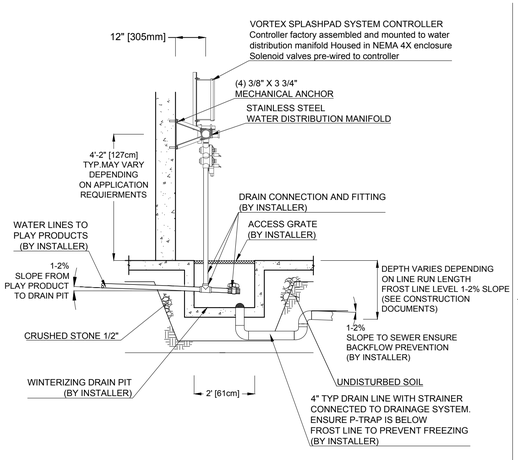
BRACKET PLACEMENT TO BE SELECTED WITH RESPECT TO MANIFOLD TYPE (DISTANCE BETWEEN BRACKETS : 2'-1" (640mm) TYP.)

Bracket	1-5 Valves	6-10 Valves	11-15 Valves	16-20 Valves
A	✓	✓	✓	✓
B	✓			
C		✓	✓	✓
D	0	0	✓	0
E	0	0	0	✓

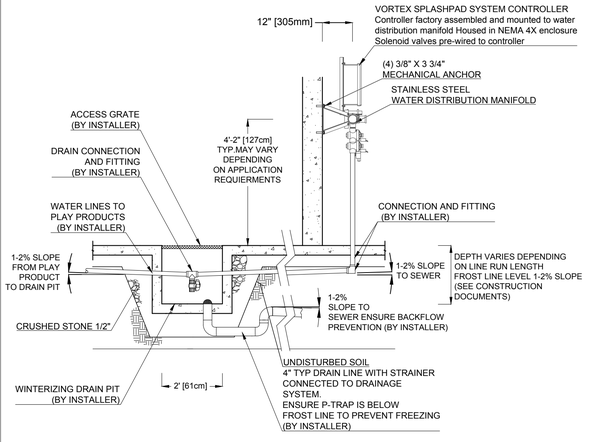
1 PD-001

WALL MOUNTED COMMAND CENTER WITH INTERVAL OF 5 VALVES POSITIONS , MAESTRO CONTROLLER

D800.0000R01



TYPICAL WINTERIZING DRAINAGE CONFIGURATION LAYOUT



ALTERNATE WINTERIZING DRAINAGE CONFIGURATION LAYOUT

2 PD-001

WALL MOUNTED COMMAND CENTER WITH INTERVAL OF 5 VALVES POSITIONS , MAESTRO CONTROLLER

D800.0000R01

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VORTEX USA Inc.
1420 Valwood Parkway Suite 205
Carrollton, Texas
United States 75006
Toll Free: +1 (877) 586-7839
Phone: +1 (972) 410-3619

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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

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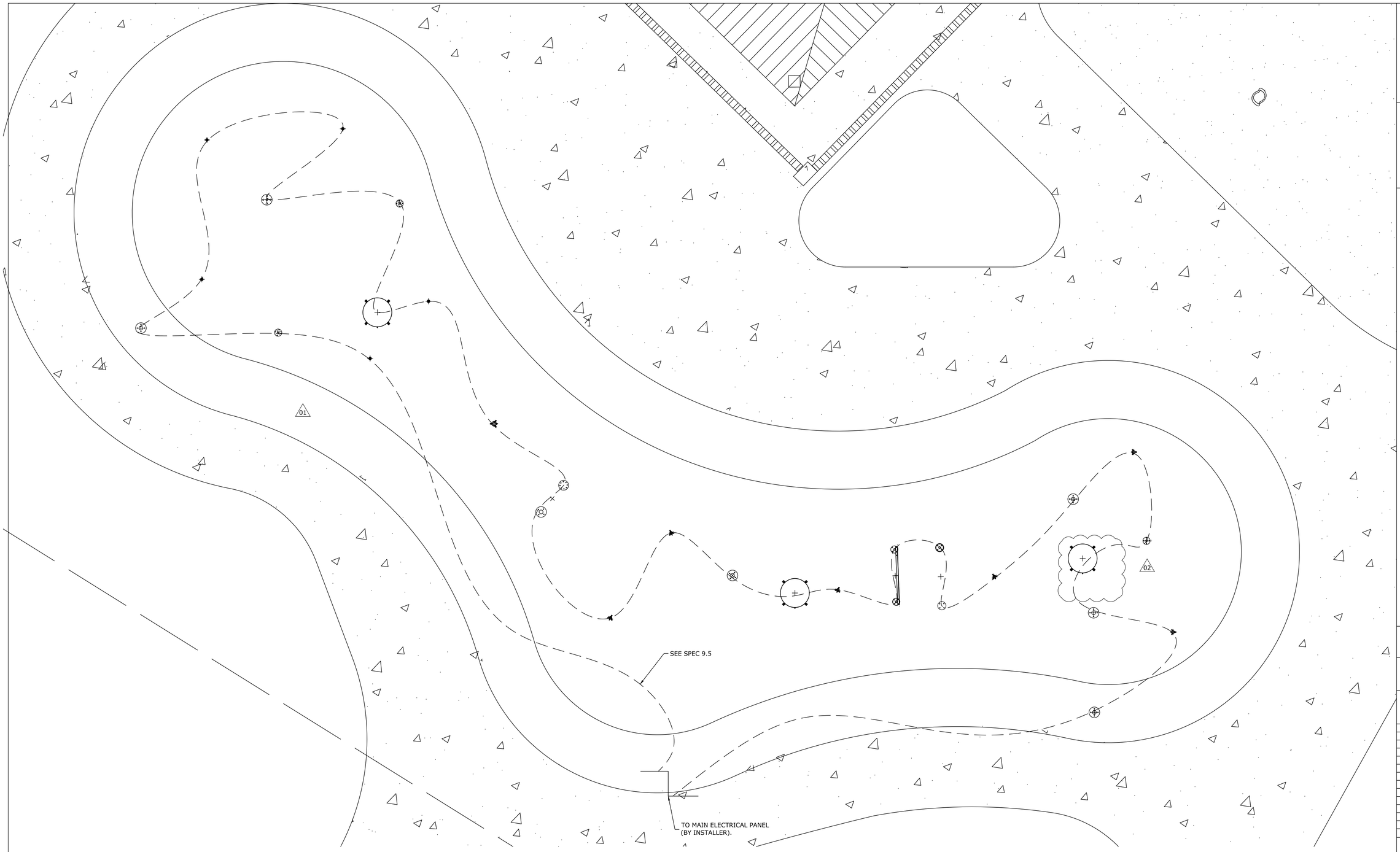
Date	Revision Description	No.	By/Par
20/Jan/2020	Issued for Bid	00	SR

Drawing Title
Plumbing Details

Drawn by	Verified by
MM	MAB
Scale	Date
---	18/Feb/2020

Sheet #
PD-001



1 / E-001 BONDING LAYOUT

1. REFER TO SPECS ON A-001
2. COORDINATE THIS DRAWING WITH ARCHITECTURAL, CIVIL, PLUMBING & ELECTRICAL.

Bonding wire – – – – – – – – – – – – – – –

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1420 Valwood Parkway Suite 205
Carrollton, Texas
United States 75006
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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

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18/Feb/2020	Re-issued for Bid	02	MM
30/Jan/2020	Re-issued for Bid	01	MM
20/Jan/2020	Issued for Bid	00	SR

Drawing Title
Bonding Layout

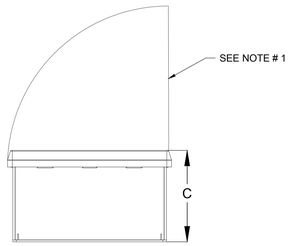
Drawn by	Verified by
MM	MAB
Scale: 1/4'':1'	Date: 18/Feb/2020

Sheet #
E-001

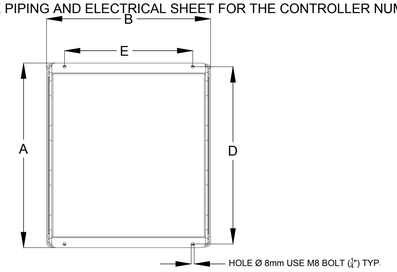
DIMENSIONS

NOTE:

1 - ENSURE ENOUGH CLEARANCE FOR THE DOOR OPENING



REFER TO THE PIPING AND ELECTRICAL SHEET FOR THE CONTROLLER NUMBER



MAESTRO ENCLOSURE DIMENSIONS

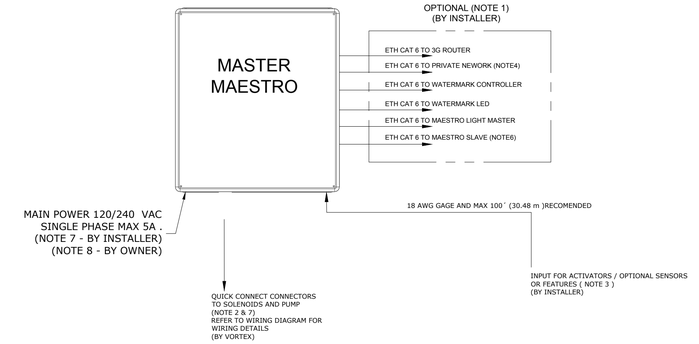
	# CTRL	A" (mm)	B" (mm)	C" (mm)	D" (mm)	E" (mm)
Main MAESTRO	Water reuse					
	33907.0000	17.5 (445)	15.3 (389)	8 (208)	16.8 (425.5)	12 (305)
	33907.0001	17.5 (445)	15.3 (389)	8 (208)	16.8 (425.5)	12 (305)
	33907.0060	17.5 (445)	15.3 (389)	8 (208)	16.8 (425.5)	12 (305)
	33907.0061	17.5 (445)	15.3 (389)	8 (208)	16.8 (425.5)	12 (305)
	33907.0070	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.0071	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.0080	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.0081	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	Water recirculation / WQMS					
	33907.1060	17.5 (445)	15.3 (389)	8 (208)	16.8 (425.5)	12 (305)
	33907.1061	17.5 (445)	15.3 (389)	8 (208)	16.8 (425.5)	12 (305)
	33907.1070	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.1071	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.1080	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.1081	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.10A0	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.10A1	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	Fast acting valves					
	33907.1150	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.1151	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
Expansion MAESTRO	Standard					
	33907.2010	17.5 (445)	15.3 (389)	8 (208)	16.8 (425.5)	12 (305)
	33907.2011	17.5 (445)	15.3 (389)	8 (208)	16.8 (425.5)	12 (305)
	Fast acting valves					
	33907.2110	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.2111	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.2120	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.2121	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.2130	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)
	33907.2131	19.5 (495)	17.3 (440)	9.6 (243)	18.7 (475)	12 (305)

1 / ED-001 Maestro Controller
16 out / 8in

33907.0XXX & 33907.1XXX CONNECTIONS

NOTE:

1 - A MAXIMUM OF 4 ETHERNET CAT6 CONNECTIONS ARE AVAILABLE PER MAESTRO.
IF MORE CONNECTIONS ARE NEEDED, THEN IT REQUIRES A ETH EXPANSION MODULE (SOLD SEPARATELY).
2 - QUANTITY OF CONNECTORs MAY VARY BASED ON MAESTRO SIZE OUTPUT CONTROL: 24 VAC MAX 1A SUPPLIED BY MAESTRO.
3 - FOR ANY INPUT, 24 VAC 250mA MAX SUPPLIED BY MAESTRO. REFER TO THE CORRESPONDING SCHEMATIC DRAWING MANUAL FOR WIRING DETAILS.
4 - MAESTRO EQUIPMENTS ON 99.99.99.X SUBNET. 99.99.99.5 MUST BE USED FOR THE ROUTER LOCATED BETWEEN VORTEX LAN NETWORK AND THE WAN NETWORK PROVIDING INTERNET. REFER TO MAESTRO USER GUIDE MANUAL FOR MORE INFORMATION.
5 - FOR POWER REQUIREMENTS, REFER TO SCHEMATIC DRAWING OF CORRESPONDING MAESTRO.
6- IF MULTIPLE MAESTRO SLAVES REQUIRED, EACH UNIT REQUIRES AN INDIVIDUAL ETHERNET CABLE CONNECTION TO THE MASTER MAESTRO
7- WATER TIGHT CONNECTIONS WITH MAESTRO DONE BY INSTALLER.
8- AS PER ELECTRICAL CONSTRUCTION AND SAFETY CODES:CONTROLLER AND/OR LED POWER PANELS AND/OR ANY OTHER ELECTRICAL EQUIPMENT MUST BE HARD-WIRED TO A GROUND FAULT CIRCUIT INTERRUPTER(GFCI)FROM THE INPUT POWER SOURCE.ALL ELECTRICAL WORK SHOULD BE PERFORMED BY A LICENCE ELECTRICIAN IN ACCORDANCE TO LOCAL ELECTRICAL CONSTRUCTION AND SAFETY CODES.



2 / ED-001 Maestro Controller
16 out / 8in

VORTEX USA Inc.
1420 Valwood Parkway Suite 205
Carrollton, Texas
United States 75006
Toll Free: +1 (877) 586-7839
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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

Order Number

Date	Revision Description	No.	By/Par
20/Jan/2020	Issued for Bid	00	SR

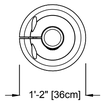
Drawing Title
Electrical Details

Drawn by	Verified by
MM	MAB

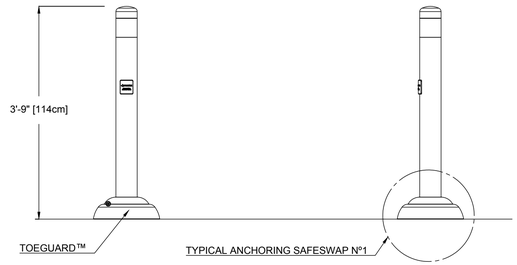
Scale	Date
---	18/Feb/2020

Sheet #
ED-001

PLAN VIEW



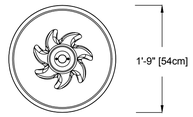
FRONT ELEVATION VIEW



SIDE ELEVATION VIEW

1 / FT-001 — Aqua Dome No1
VOR-0555.2XXX

PLAN VIEW



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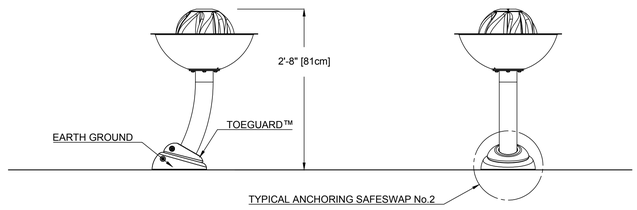
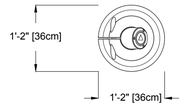


SIDE ELEVATION VIEW

2 / FT-001 — Bobble No1
VOR-7232.2XXX

PLAN VIEW



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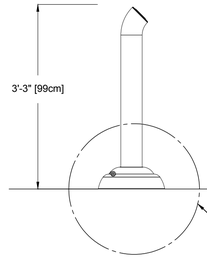
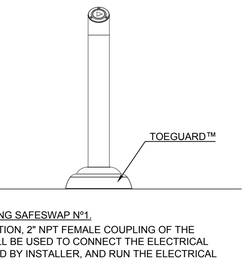


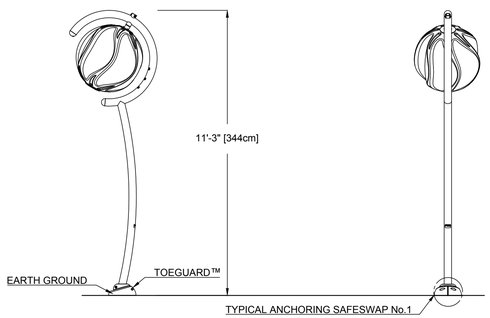
SIDE ELEVATION VIEW



3 / FT-001 — Bollard Activator No3
VOR-611.2008

PLAN VIEW

FRONT ELEVATION VIEW

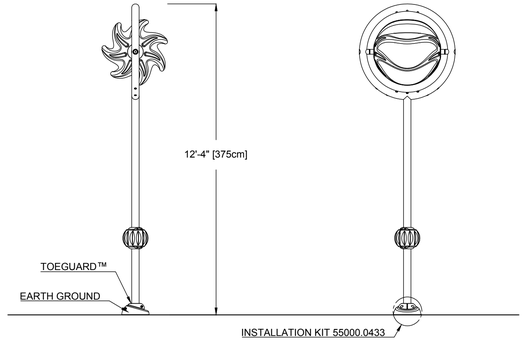


SIDE ELEVATION VIEW

4 / FT-001 — Helio No.5
VOR-7240.2XXX

PLAN VIEW

FRONT ELEVATION VIEW

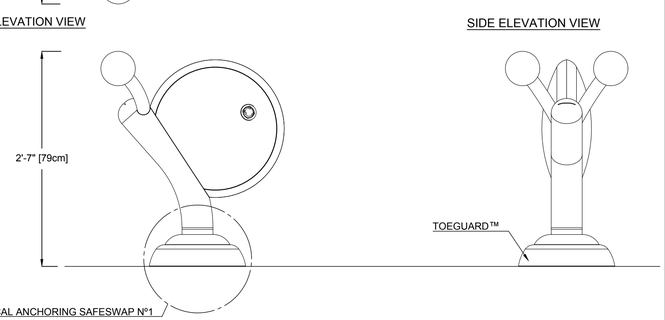


SIDE ELEVATION VIEW

5 / FT-001 — Helio No.6
VOR-7241.2XXX

PLAN VIEW

FRONT ELEVATION VIEW



SIDE ELEVATION VIEW

6 / FT-001 — Snail No4
VOR-7217.2XXX

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1420 Valwood Parkway Suite 205
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United States 75006
Toll Free: +1 (877) 586-7839
Phone: +1 (972) 410-3619

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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

Order Number

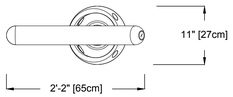
Date	Revision Description	No.	By/Par
20/Jan/2020	Issued for Bid	00	SR

Drawing Title
Feature Installation Drawing

Drawn by	Verified by
MM	MAB
Scale	Date
---	18/Feb/2020

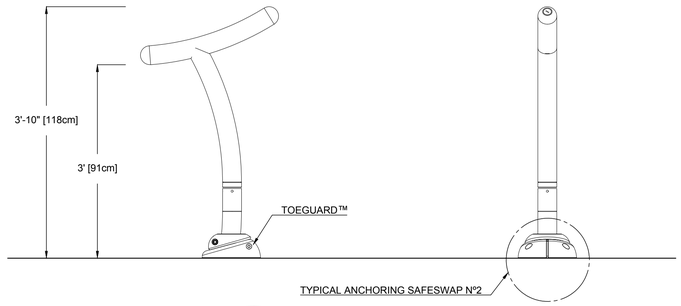
Sheet #
FT-001

PLAN VIEW



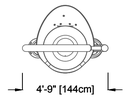
FRONT ELEVATION VIEW

SIDE ELEVATION VIEW



1 FT-002 **Tube No1**
VOR-0220.2XXX

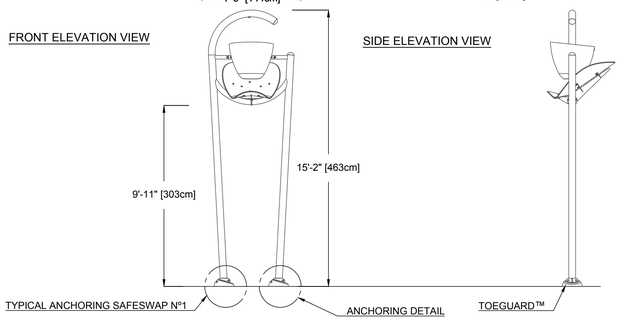
PLAN VIEW



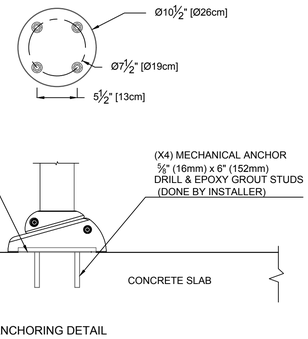
ANCHORING LOCATION

FRONT ELEVATION VIEW

SIDE ELEVATION VIEW

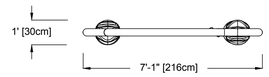


2 FT-002 **Twinsplash**
VOR-7242.2XXX

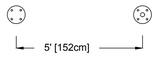


ANCHORING DETAIL

PLAN VIEW

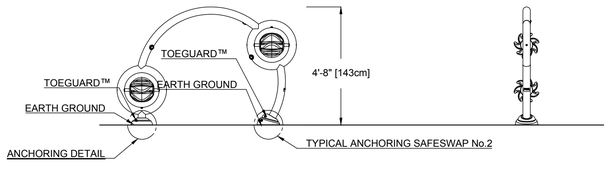


ANCHORING LOCATIONS

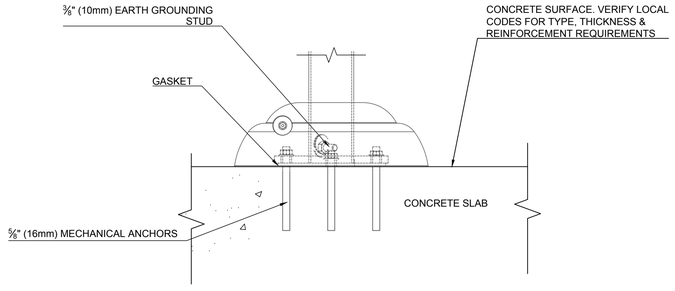


FRONT ELEVATION VIEW

SIDE ELEVATION VIEW



3 FT-002 **Lune No1**
VOR-7230.2XXX



VORTEX

VORTEX USA Inc.
1420 Valwood Parkway Suite 205
Carrollton, Texas
United States 75006
Toll Free: +1 (877) 586-7839
Phone: +1 (972) 410-3619

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South Ridge Splashpad

Project Location
Hoffman Estates, IL

Project Number
24812

Order Number

Date	Revision Description	No.	By/Par
20/Jan/2020	Issued for Bid	00	SR

Drawing Title
Feature Installation Drawing

Drawn by	Verified by
MM	MAB

Scale	Date
---	18/Feb/2020

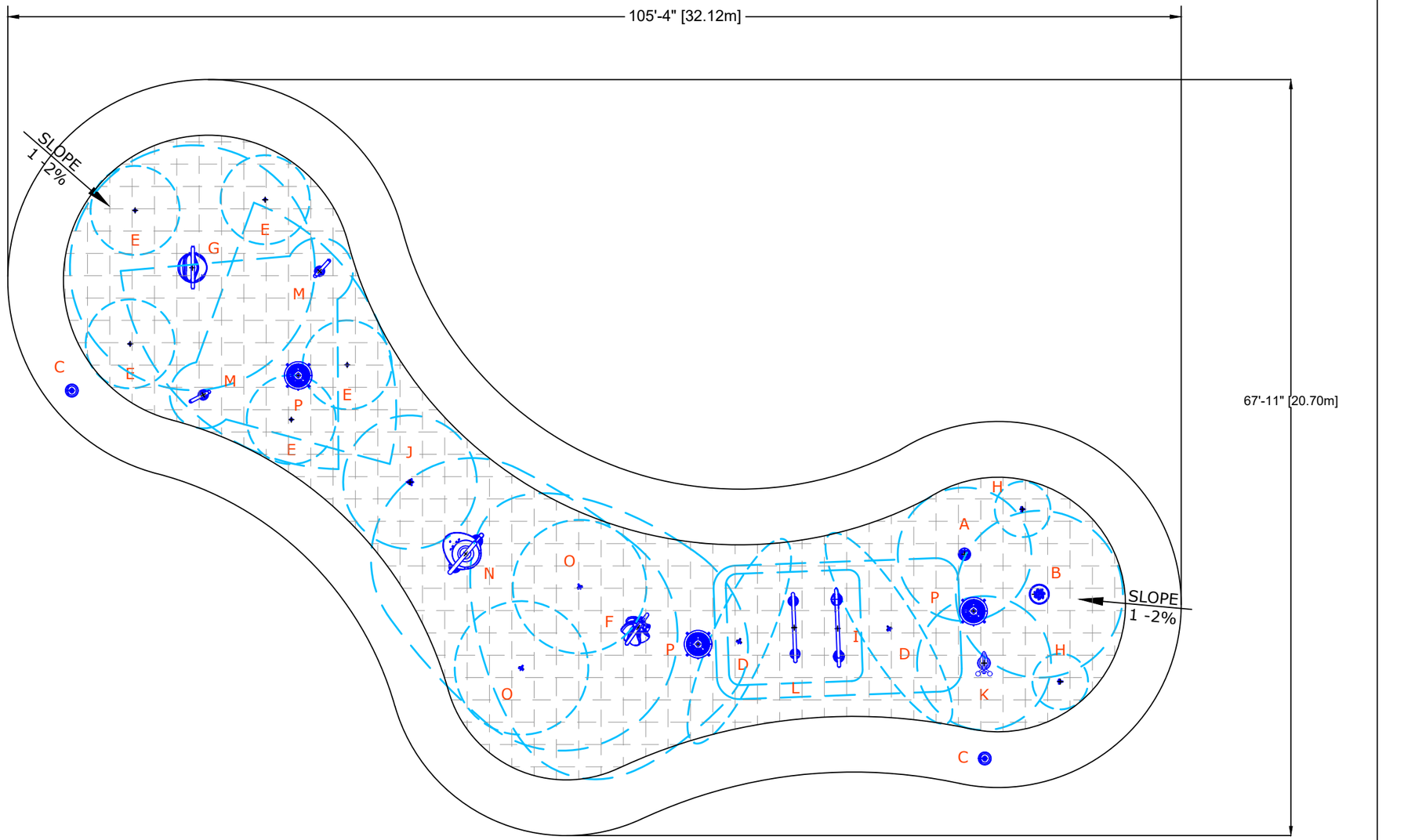
Sheet #
FT-002

SPLASHPAD DIMENSION

TOTAL AREA :	3363 ft²	312 m²
SPRAY AREA :	2020 ft²	187 m²
GRID SIZE :	2 x 2 ft	0.6 x 0.6 m

PRODUCT LEGEND

REF	PRODUCT	QTY	GPM	LPM
A	Aqua Dome N°1 VOR 0555	1	14	53
B	Bobble N°1 VOR 7232	1	6	22.7
C	Bollard Activator N°3 VOR 0611	2	0	0
D	Directional Jet N°2 * VOR 0321	2	3	11.4
E	Geyser * VOR 0301	5	22.5	85.2
F	Helio N°5 VOR 7240	1	14	53
G	Helio N°6 VOR 7241	1	13	49.2
H	Jet Stream N°1 VOR 7512	2	5	18.9
I	Luna N°1 VOR 7230	1	13.5	51.1
J	Side Winder VOR 7518	1	6.5	24.6
K	Snail N°4 VOR 7217	1	6.5	24.6
L	Spray Loop VOR 0519	1	7.5	28.4
M	Tube N°1 * VOR 0220	2	8	30.3
N	Twinsplash VOR 7242	1	12	45.4
O	Water Bloom N°2 VOR 0329	2	18	68.1
P	Playsafe Drain N°1 VOR 1001.4000	3	0	0
	TOTAL	QTY	GPM	LPM
		27	149.5	565.9



VORTEX RECOMMENDS 5'[1.5m] SPRAY FREE CONCRETE AREA ALL AROUND THE SPLASHPAD

South Ridge Splashpad, IL

24812 Version-B (*Low Flow) February 17, 2020

SPLASHPAD LAYOUT DRAWING

SCALE :3/32":1'

11" X 17" sheet size

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