MARYVALE PARK
Splash Pad

ROCKVILLE, MD

INTRODUCTION:

SPLASH PAD TO CONSIST OF A 40'-0" X 20'-0" CONCRETE PAD WITH THE FOLLOWING PLAY FEATURES:

NO	PRODUCT	QTY
1	ARCH JET	8
2	BUBBLER	13
3	CROWN JET	2
4	SEA CRAWLER	2
5	TRIPLE ARCH JET	1

DRAINAGE SYSTEM TO CONSIST OF (2) DRAIN BOXES 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 - SAND 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) 3" SCH 80 PVC DRAIN TO WASTE W/ BUTTERFLY ACTUATED VALVE (FROM COLLECTOR BOXES). AIR GAP REQUIRED.

4. ELECTRICAL SERVICE:
   (1) FEED @ 230V, 1Ø, 60hz, 50amps 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)

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SPLASH PAD DRAWING LIST:

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PROFESSIONAL ENGINEER
7/11/22

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	6/8/22
B	REVISED PER CLIENT REVIEW	6/21/22

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JOB TITLE
MARYVALE PARK
SPLASH PAD

LOCATION
ROCKVILLE, MD

DATE	DWG. FILE	CHECKED	DRAWN	SCALE
6/3/22	1154861-01-03-C		CTS	SEE VIEWS

SHEET TITLE
COVER SHEET

JOB NO.
1154861-01-03

C
OF 12

GENERAL SPLASH PAD DATA

NOMINAL SPLASH PAD AREA: 384sq.ft.
NOMINAL APRON AREA: 416sq.ft.
NOMINAL TOTAL SURFACE AREA: 800sq.ft.

NOMINAL FILTER TURNOVER RATE: ½ hour
MIN. FILTER FLOW RATE: 90 GPM
TANK WORKING VOLUME: 2,700 GALLONS

NOMINAL TOTAL FEATURE FLOW: 195 GPM
NOMINAL FEATURE FLOW RATE:

NO	PRODUCT	QTY	GPM
1	ARCH JET	8	5 EA
2	BUBBLER	13	10 EA
3	CROWN JET	2	5 EA
4	SEA CRAWLER	2	5 EA
5	TRIPLE ARCH JET	1	5

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. (26) 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–135 GPM@60'TDH
2b) (1) SAND FILTER – PENTAIR TRITON C, MODEL #TR–140–C, COMM. RATING: 141GPM EA
2c) (13) 50LBS. OF SAND – HIGH RATE SAND FILTER SAND, SUPERIOR POOLS, PART #AAA–200
2d) (6) 50LBS. OF GRAVLE – HIGH RATE SAND FILTER GRAVLE, SUPERIOR POOLS, PART #AAA–206
2e) (1) MULTIPORT VALVE – PENTAIR 2" MULTIPORT VALVE WITH SIGHT GLASS, MODEL #261055
2f) (1) AUTOMATIC CHEMICAL CONTROLLER – CAT CONTROLS 110V, 5AMP INCLUDES LIQUID ACID PUMP
2g) (1) FLOW METER – H2FLOW CONTROLS – 3" PIPE, MODEL # FV–3
2h) (1) ELECTRICAL PANEL – UL LISTED, PRE–TESTED
2i) (2) CHEMICAL STORAGE – CHEMICAL STORAGE CROCK, STENNER 15GAL. MODEL #SV015
2j) (2) PERISTALTIC PUMP – STENNER: MODEL #45M5

3. FEATURE SKID SYSTEM COMPONENTS:
3a) (1) FEATURE PUMP –PENTAIR XF SERIES, MODEL# XFE–20 5 HP, 230V, 1ø 18.8AMP–245GPM@50'TDH
3c) (1) HEADER – 6" 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) (3) COLLECTOR BOX – 18" PVC SUMP W/FRP GRATE TOP, NOMINAL CAPACITY OF 250 GPM.
5c) (1) 3" WASTE VALVE BOX – FIBERGLASS BURIAL HOUSING TO CONTAIN A 3" 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.

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

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.

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.

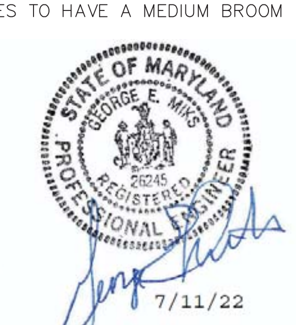
4. REINFORCING STEEL:
4a) DEFORMED BARS–ASTM A615 GRADE 60KSI.
5. PLACE ALL ITEMS PER APPROVED SHOP DWGS. AND APPROVED CONCRETE MIX DESIGNS.
6. PROVIDE CONCRETE COVER PER ACI 318.
7. ALL CONCRETE SURFACES TO HAVE A MEDIUM BROOM FINISH.

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.



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 PENTRATIONS TO BE WATER TIGHT.

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	6/8/22
B	REVISED PER CLIENT REVIEW	6/21/22

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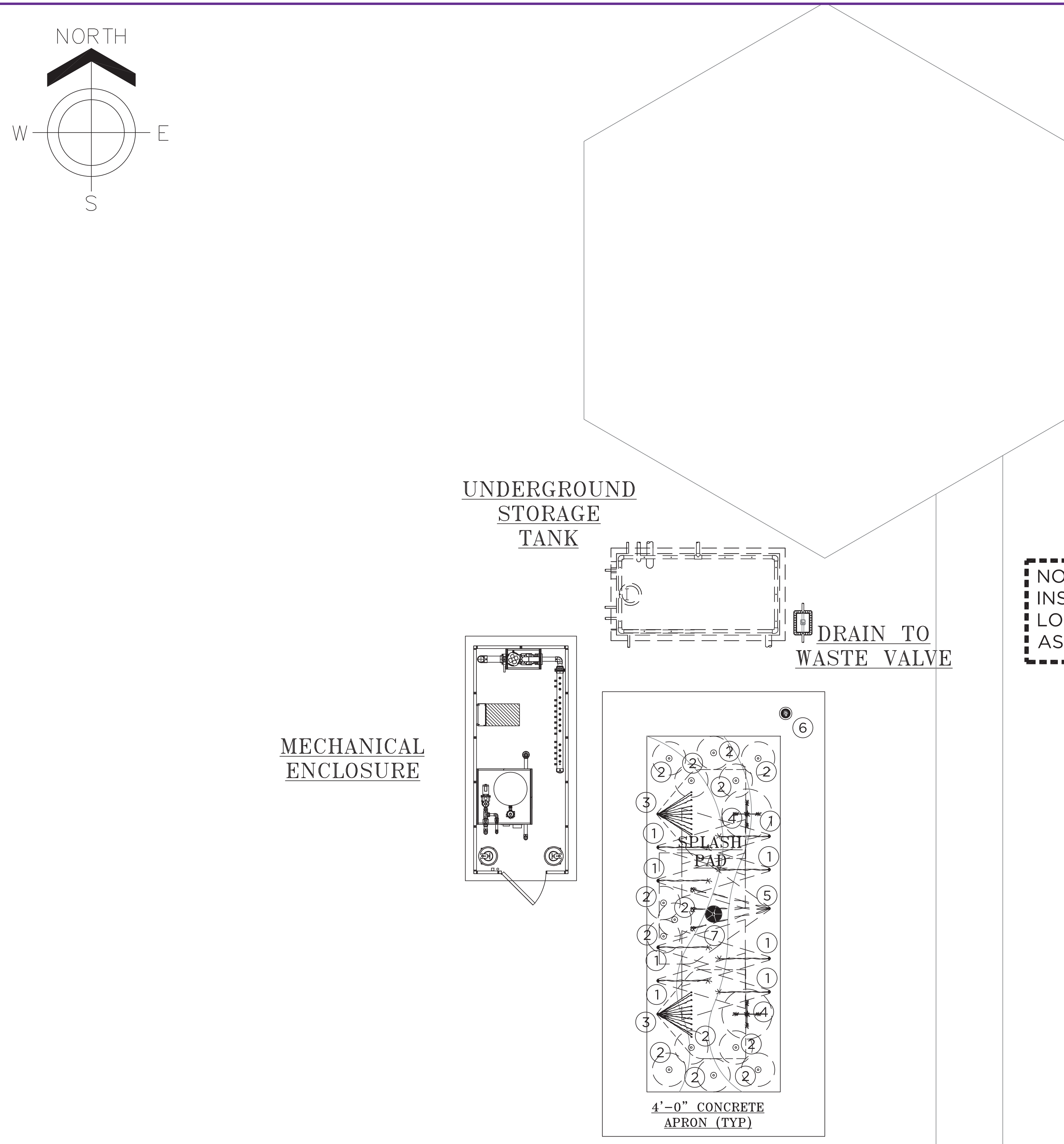
JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-1	6/3/22

SHEET TITLE: GENERAL INFORMAION

JOB NO.: 1154861-01-03



1/2 SITE PLAN LAYOUT
3/32" = 1'–0"

NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	8	5 EA	1" EA
2	BUBBLER	13	10 EA	1" EA
3	CROWN JET	2	5 EA	1" EA
4	SEA CRAWLER	2	5 EA	1" EA
5	TRIPLE ARCH JET	1	5	1"
6	STEP PAD	1	---	---
7	COLLECTOR BOX	1	---	---

NOTE:
1. ALL CONCRETE SLOPES TO BE ⅛"/FT MIN. AND ¼"/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 DRAINAGE 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. 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.
5. —— —— INDICATES SAW CUT JOINT
6. ━━━━ INDICATES EXPANSION JOINT
7. 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 DRAINAGE BOX. THE CONCRETE IS TO BE FORMED AND SLOPED TO ACCOMMODATE THIS DRAIN PATTERN.
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. EXPANSION JOINT TO BE APPROX. EVERY 20'x20'.
11. SAW CUT JOINT TO BE APPROX. EVERY 10'x10'.
12. COORDINATE EXPANSION JOINT AND SAW CUT LOCATIONS WITH PLAY EQUIPMENT LOCATIONS.
13. SEE SHEET 3 OF 12 FOR SPLASH PAD LAYOUT.
14. SEE SHEET 4 OF 12 FOR CONCRETE LAYOUT.
15. DRAWINGS ARE FOR DESIGN/LAYOUT PURPOSES ONLY. PLEASE SEE AQUATIC RECREATION COMPANY PROPOSAL FOR INCLUDED STRUCTURES, EQUIPMENT, SERVICES, AND EXCLUSIONS.
16. – – – – –INDICATES SPLASH ZONE.
17. 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.

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

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

STATE OF MARYLAND GEORGE E. MIKS 26245 REGISTERED PROFESSIONAL ENGINEER
7/11/22

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	6/8/22
B	REVISED PER CLIENT REVIEW	6/21/22

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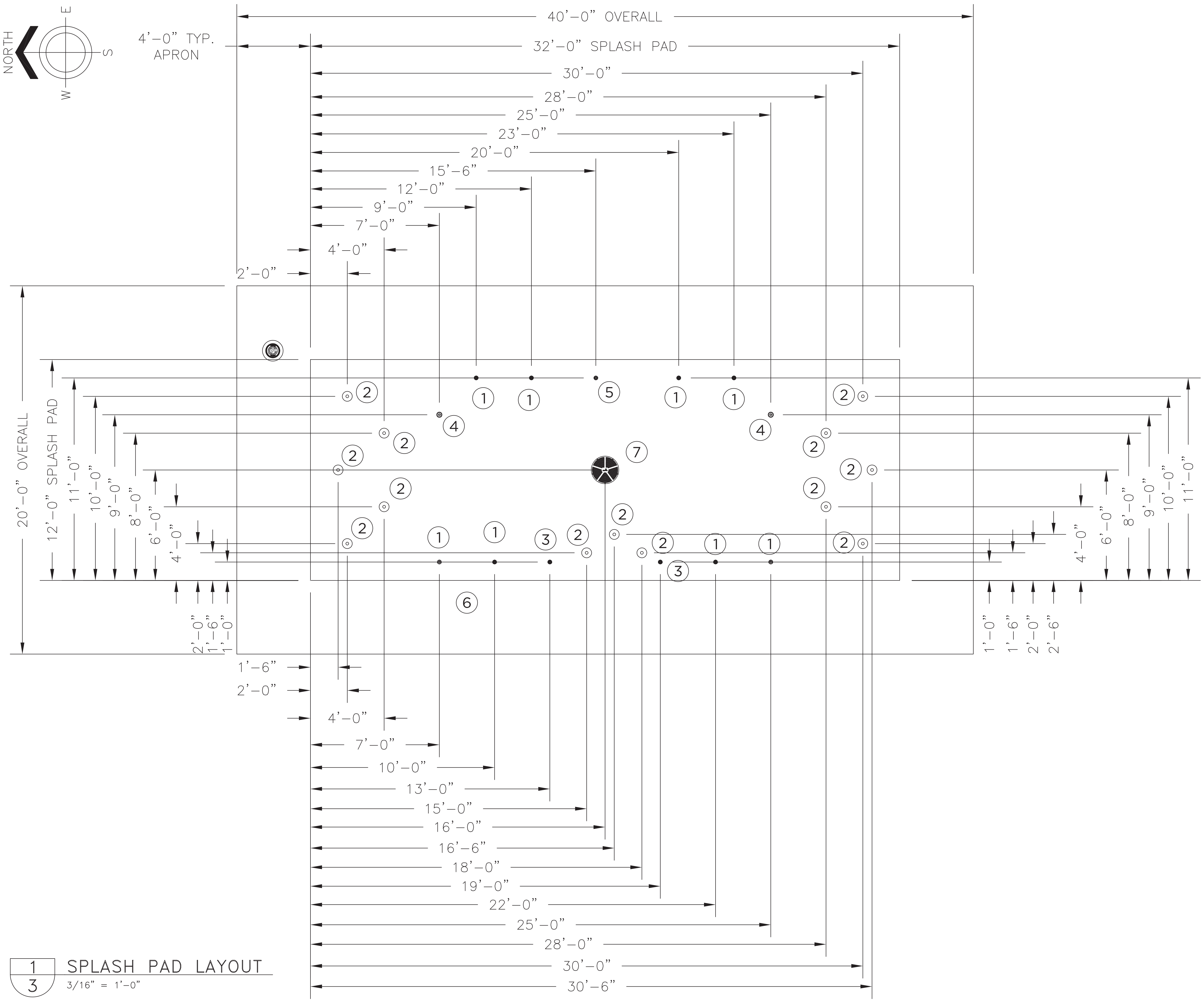
JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-2	6/3/22

SHEET TITLE: SITE PLAN

JOB NO. 1154861-01-03



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

NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	8	5 EA	1" EA
2	BUBBLER	13	10 EA	1" EA
3	CROWN JET	2	5 EA	1" EA
4	SEA CRAWLER	2	5 EA	1" EA
5	TRIPLE ARCH JET	1	5	1"
6	STEP PAD	1	---	---
7	COLLECTOR BOX	1	---	---

NOTE:

1. ALL CONCRETE SLOPES TO BE ⅛"/FT MIN. AND ¼"/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 DRAINAGE 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. 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.
5. – – – – INDICATES SAW CUT JOINT
6. ▬▬▬ INDICATES EXPANSION JOINT
7. 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 DRAINAGE BOX. THE CONCRETE IS TO BE FORMED AND SLOPED TO ACCOMMODATE THIS DRAIN PATTERN.
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. EXPANSION JOINT TO BE EVERY 20'x20'.
11. SAW CUT JOINT TO BE EVERY 10'x10'.
12. COORDINATE EXPANSION JOINT AND SAW CUT LOCATIONS WITH PLAY EQUIPMENT LOCATIONS.
13. SEE SHEET 3 OF 12 FOR SPLASH PAD LAYOUT.
14. SEE SHEET 4 OF 12 FOR CONCRETE LAYOUT.
15. DRAWINGS ARE FOR DESIGN/LAYOUT PURPOSES ONLY. PLEASE SEE AQUATIC RECREATION COMPANY PROPOSAL FOR INCLUDED STRUCTURES, EQUIPMENT, SERVICES, AND EXCLUSIONS.
16. – – – – –INDICATES SPLASH ZONE.
17. 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.

STATE OF MARYLAND GEORGE E. MIKS 26245 REGISTERED PROFESSIONAL ENGINEER
7/11/22

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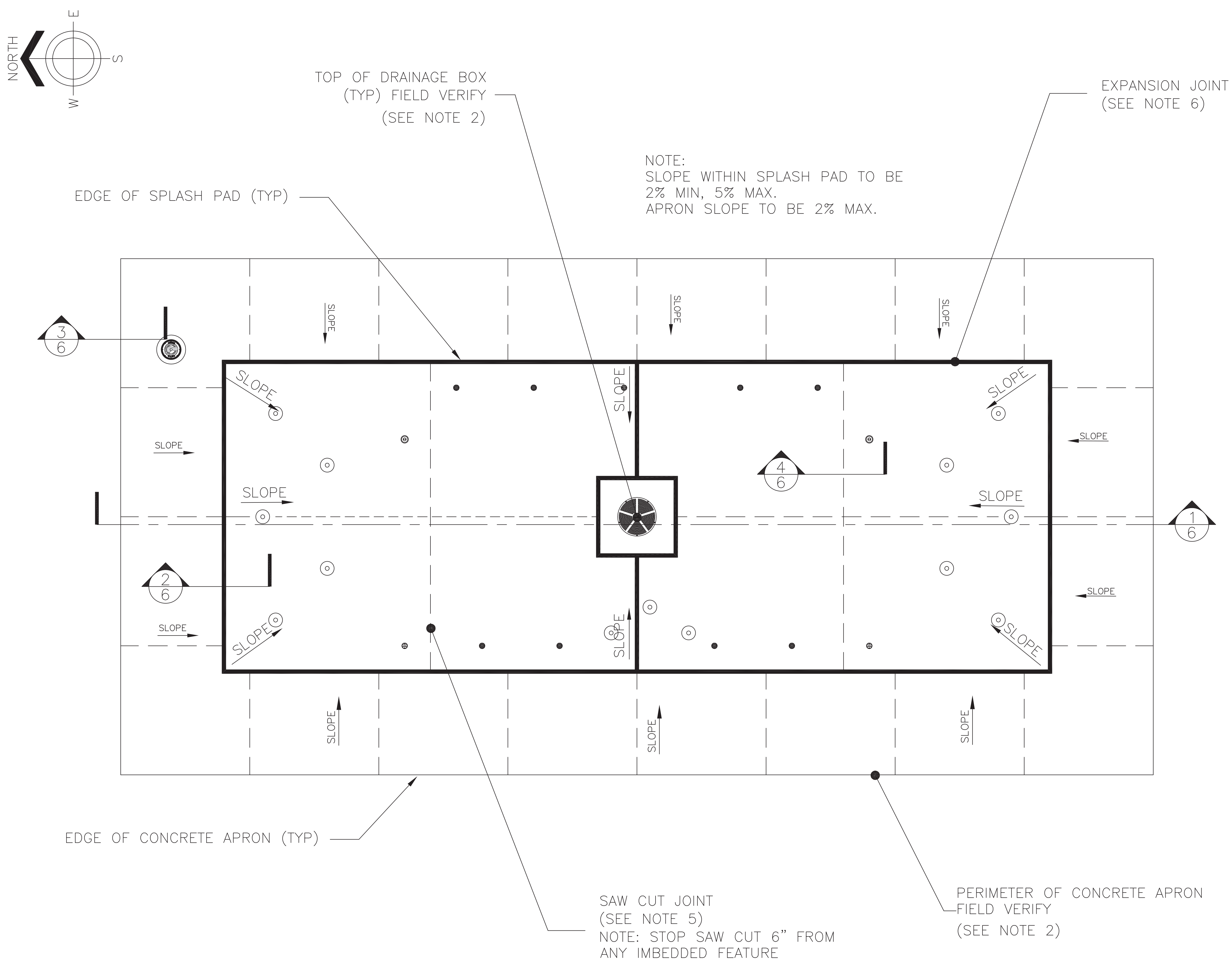
JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-3	6/3/22

SHEET TITLE: SPLASH PAD LAYOUT

JOB NO. 1154861-01-03



1 / 4 CONCRETE PLAN

1/4" = 1'-0"

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.
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. — — — 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 12 FOR SECTION DETAILS

IMPORTANT: SEE NOTE #8 CONCERNING SPLASH PAD SLOPE

STATE OF MARYLAND · GEORGE E. MIKS · 26245 · REGISTERED · PROFESSIONAL ENGINEER

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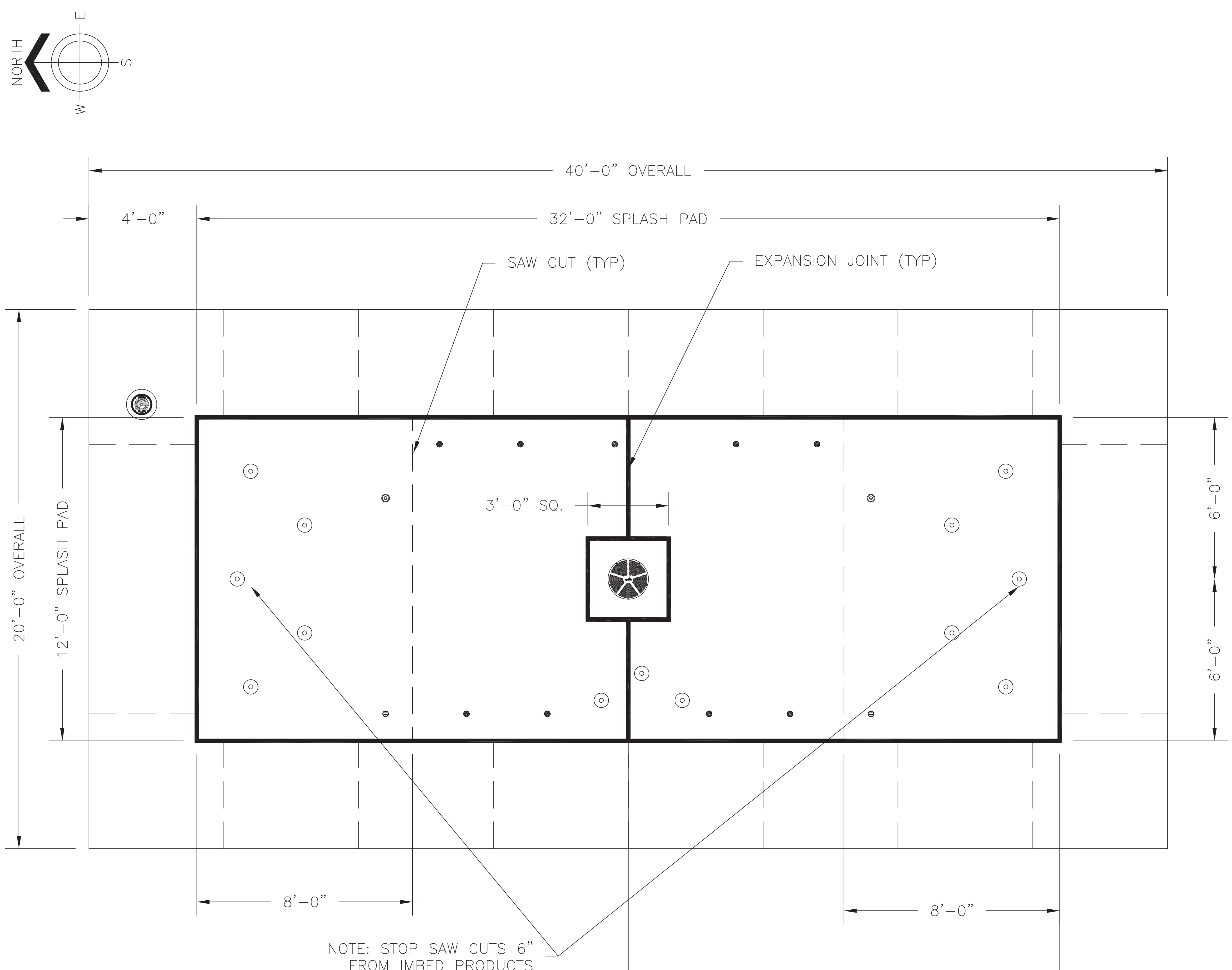
JOB TITLE: MARYVALE PARK SPLASH PAD

LOCATION: ROCKVILLE, MD

SHEET TITLE: CONCRETE PLAN

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-4	6/3/22

JOB NO. 1154861-01-03

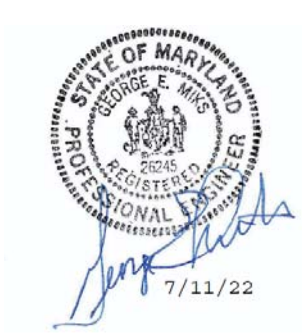


1 / 5 CONCRETE FORM
1/4" = 1'-0"

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.
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. – – – – 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 12 FOR SECTION DETAILS

IMPORTANT: SEE NOTE #8 CONCERNING SPLASH PAD SLOPE



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JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-5	6/3/22

SHEET TITLE: CONCRETE FORM

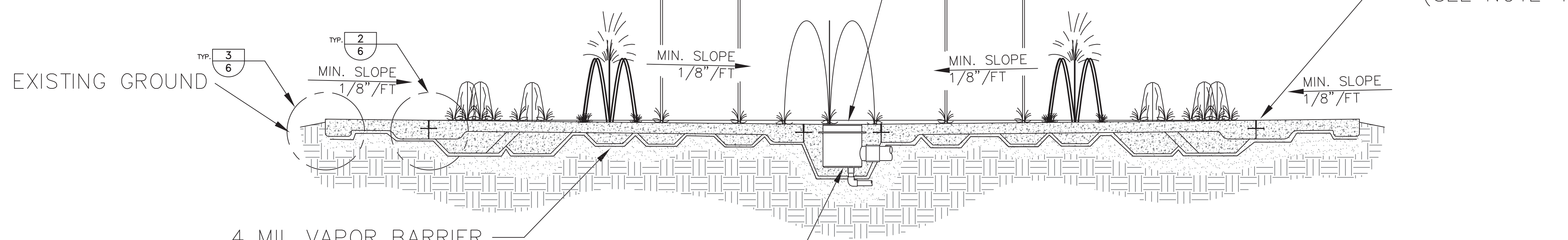
JOB NO. 1154861-01-03

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)

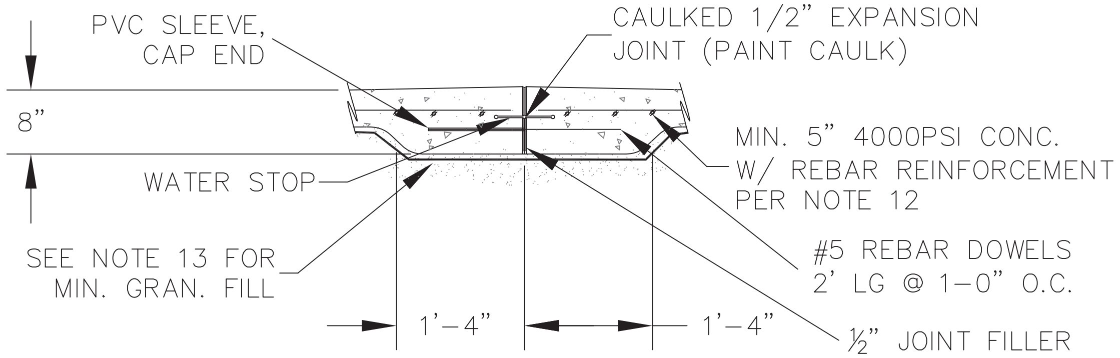
8. UNDER NO CIRCUMSTANCES SHALL THE SURROUNDING HARDSCAPE AREA BE SLOPED TO ALLOW WATER TO BE DRAINED INTO THE SPLASH PAD DECK
9. ALL CONCRETE SURFACES TO HAVE A MEDIUM BROOM FINISH.
10. COORDINATE EXACT LOCATION OF SAW CUTS AND EXPANSION JOINTS WITH PLAY EQUIPMENT LOCATIONS.
11. VERIFY LOCAL/STATE CODES 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

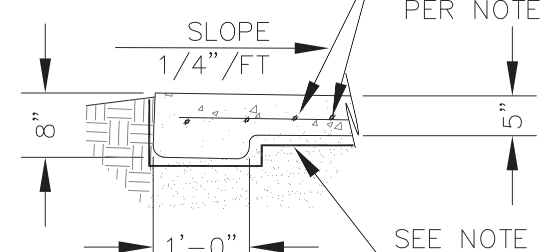


1/6 SPLASH PAD SECTION
3/16" = 1'-0"

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

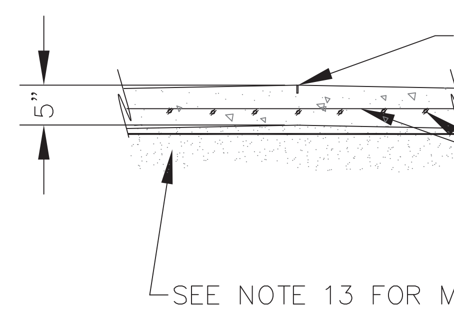


2/6 EXPANSION JOINT
1/2" = 1'-0"



3/6 EDGE DETAIL
1/2" = 1'-0"

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



4/6 SAW CUT JOINT
1/2" = 1'-0"

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	6/8/22
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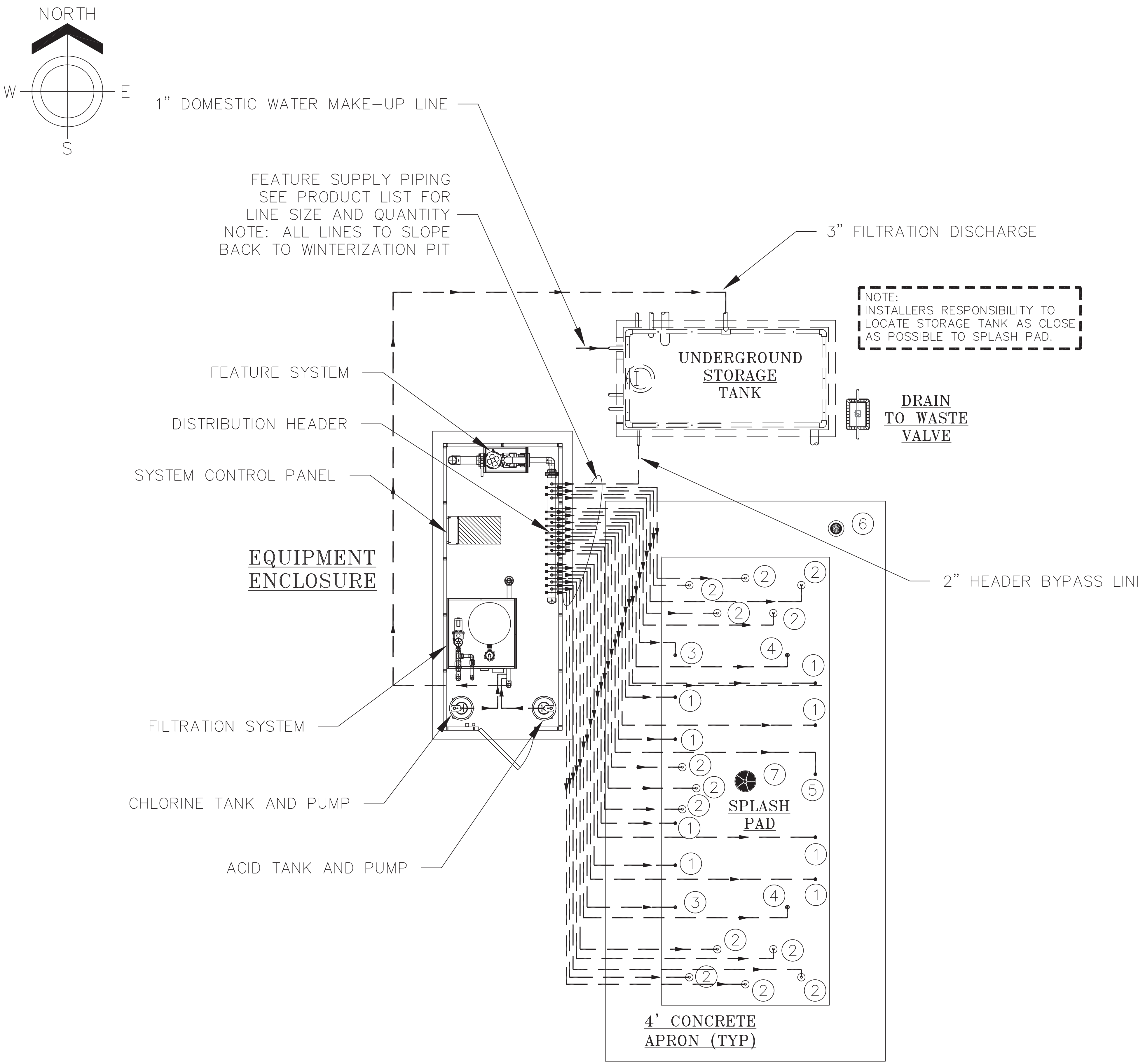
JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SHEET TITLE: CONCRETE SECTIONS AND DETAILS

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-6	6/3/22

JOB NO. 1154861-01-03



1/7 SUPPLY PIPING PLAN
1/8" = 1'-0"

NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	8	5 EA	1" EA
2	BUBBLER	13	10 EA	1" EA
3	CROWN JET	2	5 EA	1" EA
4	SEA CRAWLER	2	5 EA	1" EA
5	TRIPLE ARCH JET	1	5	1"
6	STEP PAD	1	---	---
7	COLLECTOR BOX	1	---	---

NOTE:
1. ALL SUPPLY AND DRAIN LINES TO SLOPE ⅛"/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

STATE OF MARYLAND GEORGE E. MIKS 26245 REGISTERED PROFESSIONAL ENGINEER
7/11/22

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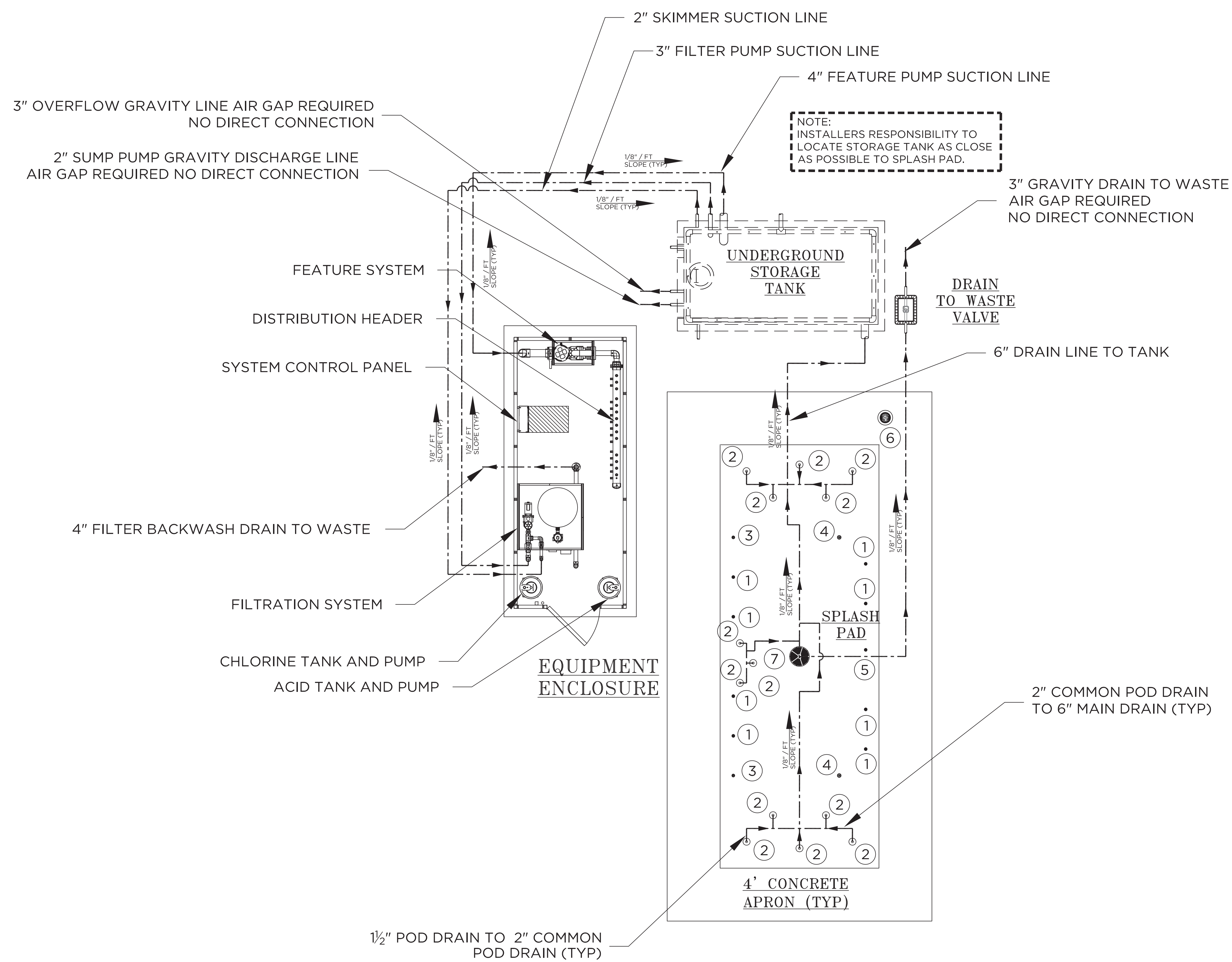
JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-7	6/3/22

SHEET TITLE: SUPPLY PIPING PLAN
JOB NO. 1154861-01-03



NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	8	5 EA	1" EA
2	BUBBLER	13	10 EA	1" EA
3	CROWN JET	2	5 EA	1" EA
4	SEA CRAWLER	2	5 EA	1" EA
5	TRIPLE ARCH JET	1	5	1"
6	STEP PAD	1	---	---
7	COLLECTOR BOX	1	---	---

NOTE:
1. ALL GRAVITY DRAIN LINES TO SLOPE ⅛"/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

STATE OF MARYLAND GEORGE E. MIKS 26245 REGISTERED PROFESSIONAL ENGINEER
7/11/22

1/8 DRAIN PIPING PLAN
1/8" = 1'-0"

NO.	REVISION	DATE
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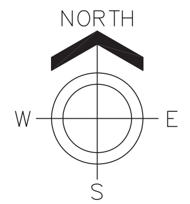
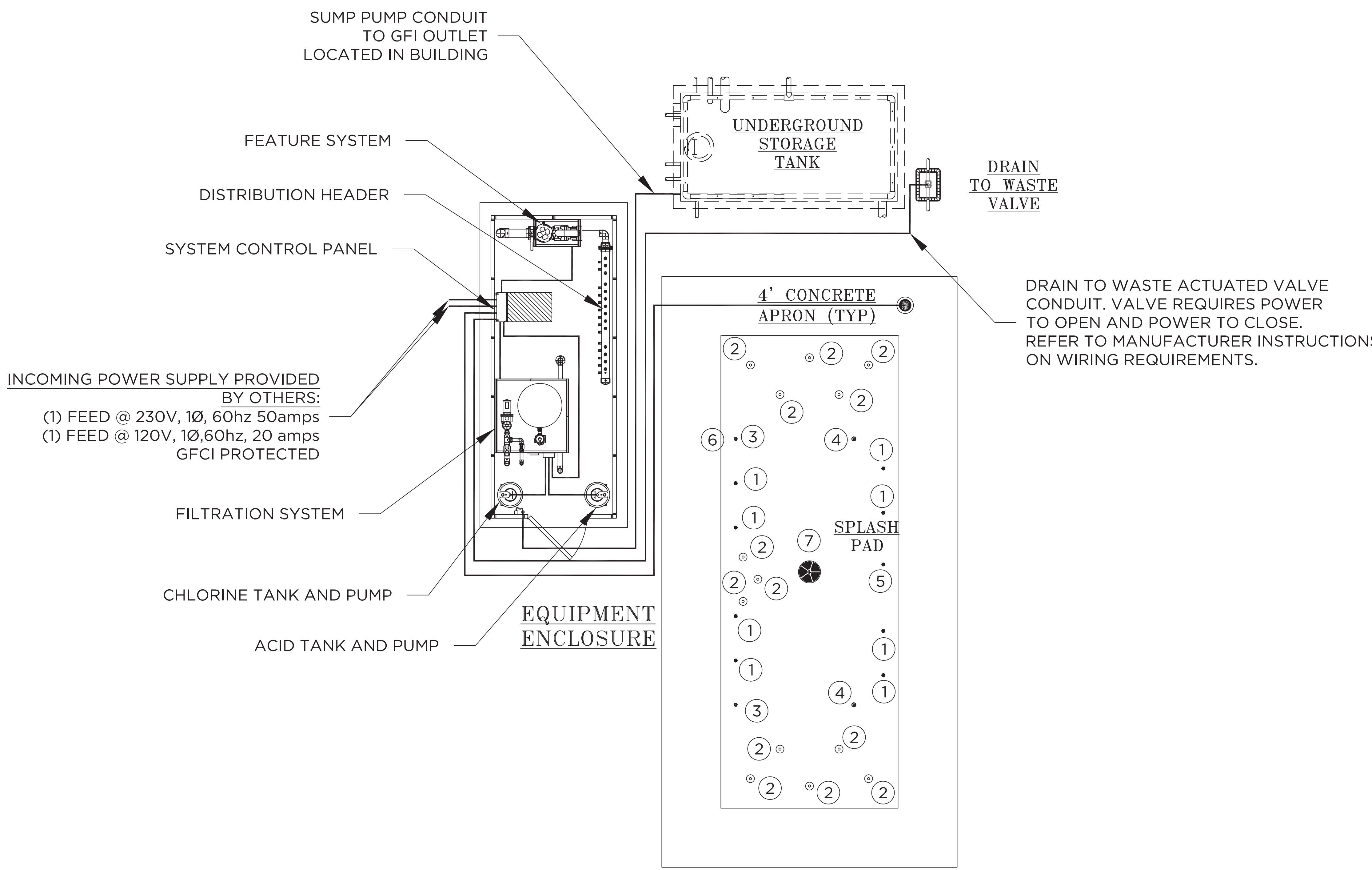
JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-8	6/3/22

SHEET TITLE: DRAIN PIPING PLAN

JOB NO. 1154861-01-03





NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	8	5 EA	1" EA
2	BUBBLER	13	10 EA	1" EA
3	CROWN JET	2	5 EA	1" EA
4	SEA CRAWLER	2	5 EA	1" EA
5	TRIPLE ARCH JET	1	5	1"
6	STEP PAD	1	---	---
7	COLLECTOR BOX	1	---	---

NOTE:
1. REFER TO SPEC SHEET AND INSTALLATION DRAWING FOR EACH PRODUCT.
2. WIRING FROM THE CONTROLLER TO THE ACTIVATION BOLLARD SHALL BE #14 AWG, (3) CONDUCTORS TOTAL.
3. ALL CONNECTIONS TO THE CONTROLLER SHALL BE PERFORMED USING AN APPROVED NEMA 4X CONNECTOR.
4. EXACT ROUTING OF WIRING TO BE DETERMINED BY CONTRACTOR.
5. PROVIDE BOND WIRES FOR REBAR PER LOCAL AND STATE CODES.
6. ALL STAINLESS STEEL STRUCTURES REQUIRE ONDING PER NEC AND LOCAL CODES

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

FOR STRUCTURAL AND MECHANICAL COMPONENTS ONLY.

STATE OF MARYLAND · GEORGE E. MIKS · 25245 · REGISTERED PROFESSIONAL ENGINEER

7/11/22

1/9 OVERALL ELECTRICAL PLAN
1/8" = 1'-0"

NO.	REVISION	DATE
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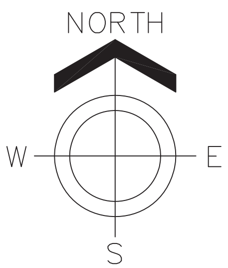
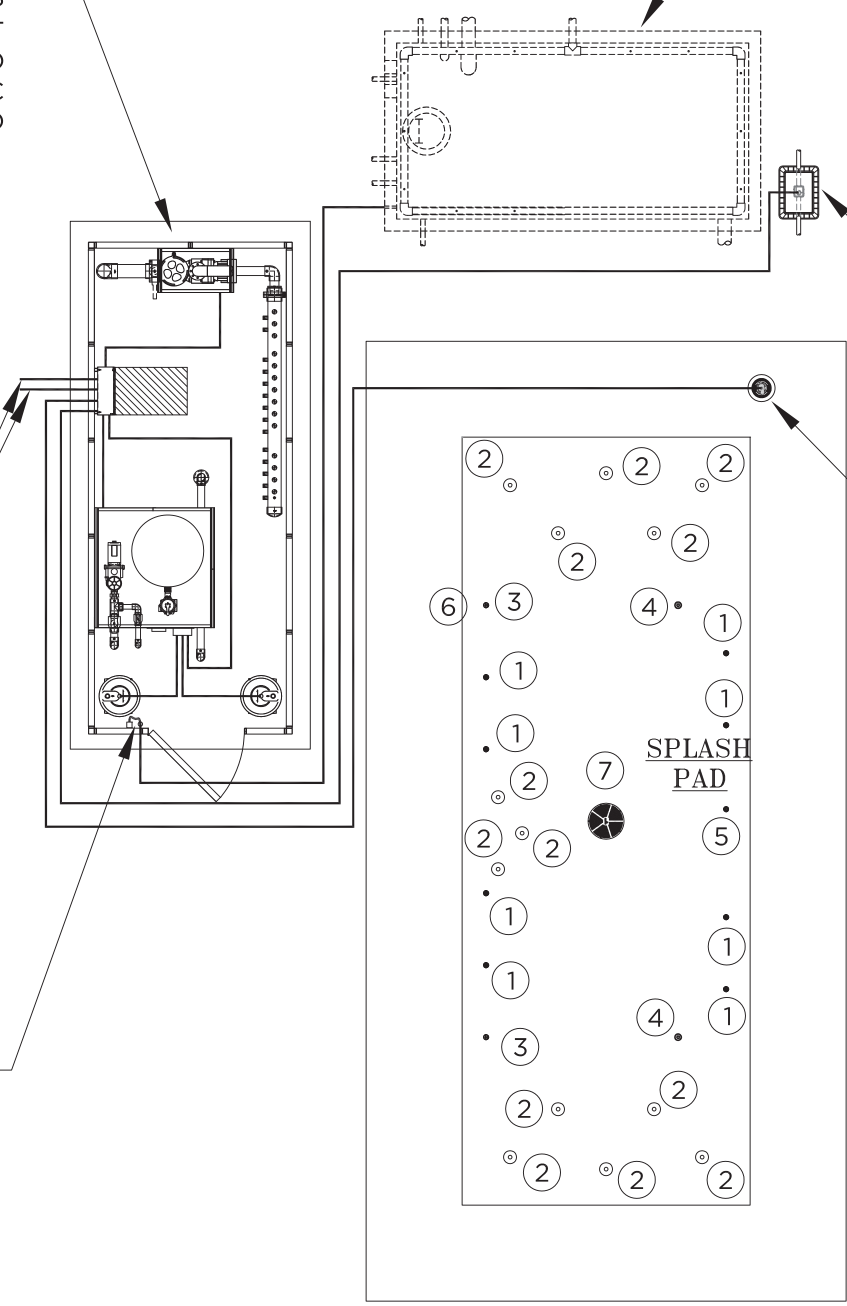
JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

DATE	DWG. FILE	CHECKED	DRAWN	SCALE
6/3/22	1154861-01-03-9		CTS	SEE VIEWS

SHEET TITLE: OVERALL ELECTRICAL PLAN
JOB NO. 1154861-01-03





NO	PRODUCT	QTY	GPM	LINE SIZE
1	ARCH JET	8	5 EA	1" EA
2	BUBBLER	13	10 EA	1" EA
3	CROWN JET	2	5 EA	1" EA
4	SEA CRAWLER	2	5 EA	1" EA
5	TRIPLE ARCH JET	1	5	1"
6	STEP PAD	1	---	---
7	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 1of12 FOR REFERENCE.

LEGEND

....	SUPPLY LINE
-·-·-·-·	DRAIN LINE
-··-··-··	SUCTION LINE
———	ELECTRICAL CONDUIT
⋈	MANUAL VALVE
◀	FLOW DIRECTION
actuated valve symbol	ACTUATED VALVE
....	CHEMICAL LINE

FOR STRUCTURAL AND MECHANICAL COMPONENTS ONLY.

STATE OF MARYLAND · GEORGE E. MIKS · 26245 · REGISTERED PROFESSIONAL ENGINEER

7/11/22

1 / 10 ELECTRICAL PLAN
1/8" = 1'-0"

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	6/8/22
B	REVISED PER CLIENT REVIEW	6/21/22

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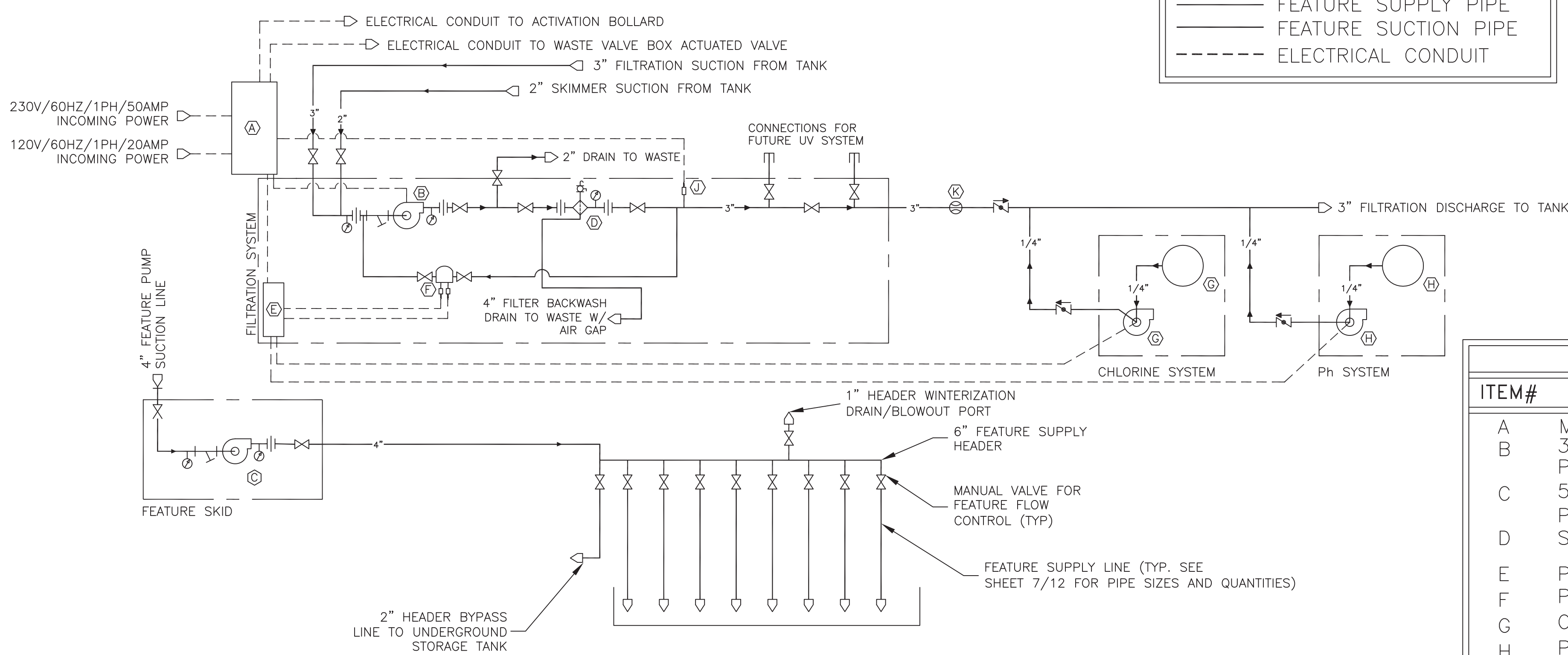
JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SHEET TITLE: ELECTRICAL PLAN

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-10	6/3/22

JOB NO. 1154861-01-03



1/11 MECHANICAL SCHEMATIC
1/2" = 1'-0"

PIPING LEGEND

- FEATURE SUPPLY PIPE
- FEATURE SUCTION PIPE
- ELECTRICAL CONDUIT

SYMBOL LEGEND

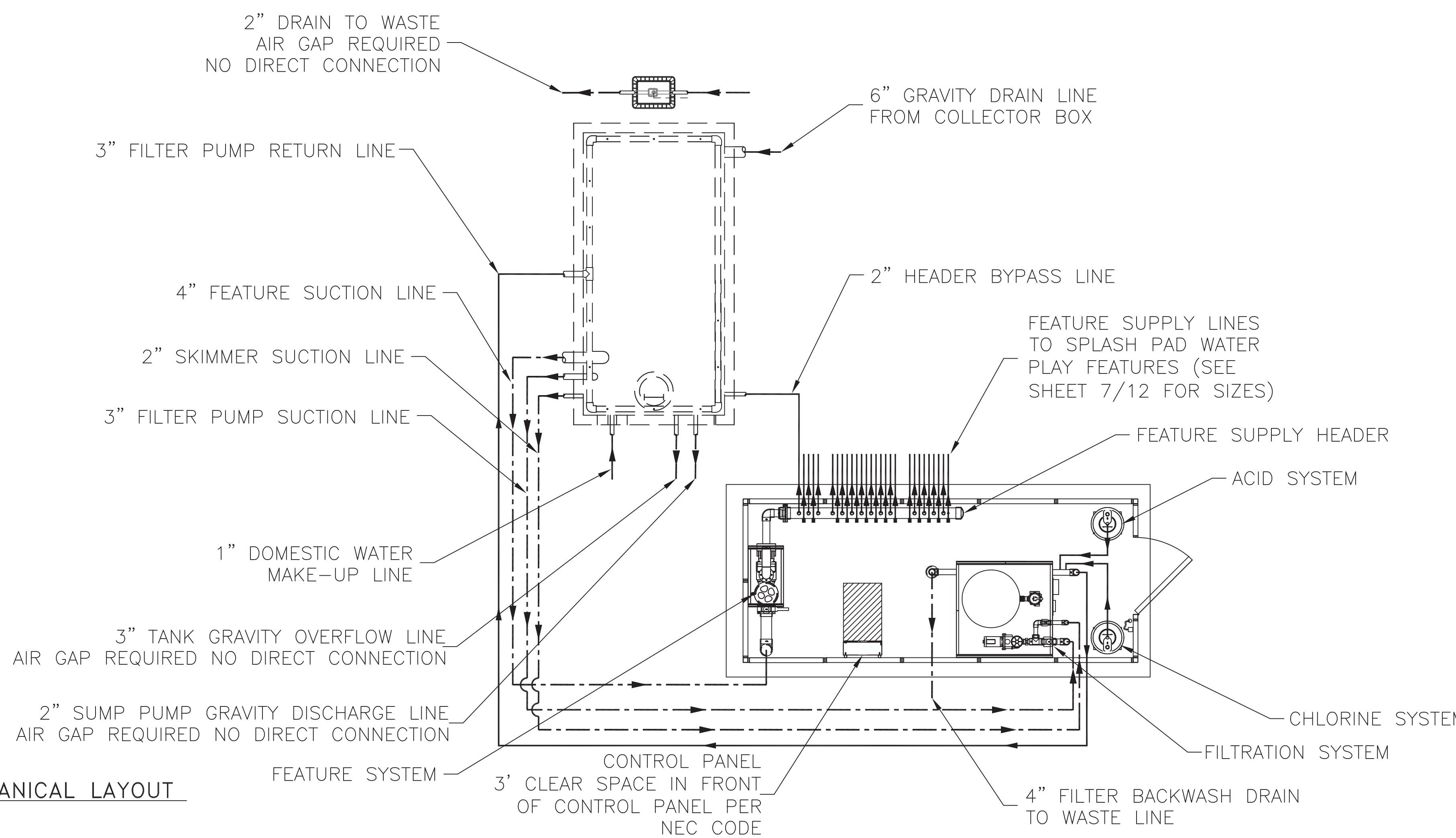
PUMP, SUCTION, DISCHARGE, GATE VALVE, SOLENOID VALVE, CHEM FEEDER, INLET, OUTLET, SHUT-OFF VALVE, MANUAL AIR VENT, PSI/VACUUM GAUGE, FILTER, STRAINER, UNION, CHECK VALVE, INLET, OUTLET

FEATURE EQUIPMENT

ITEM#	DESCRIPTION:	TOTAL QTY:
A	MAIN CONTROL PANEL	1
B	3HP 230/60/1PH FILTRATION PUMP W/ STRAINER	1
C	5HP 230/60/1PH FEATURE PUMP W/ STRAINER	1
D	SAND FILTER W/MULIT-PORT VALVE	1
E	PH/ORP CONTROLLER	1
F	PH/ORP PROBES	1
G	CHLORINE SYSTEM	1
H	Ph SYSTEM	1
J	FLOW SWITCH	1
K	FLOW METER	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. 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, 135 GPM @ 60 FT/HD
- (1) HIGH RATE STAND FILTER W/MULTI-PORT VALVE, 7.06 SQ. FT.@141GPM
- (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) XF SERIES , XFE-20 5HP, 1ø, 230V, 18.8 amps, 245 GPM @ 50 FT HD
- (1) 6" FABRICATED SCH. 80 PVC DISTRIBUTION MANIFOLD



2/11 MECHANICAL LAYOUT
NTS

NO.	REVISION	DATE
A	RELEASE FOR APPROVAL	6/8/22
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JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-11	6/3/22

SHEET TITLE: MECHANICAL PLAN

JOB NO. 1154861-01-03

STATE OF MARYLAND GEORGE E. MIKS REGISTERED 26245 PROFESSIONAL ENGINEER
7/11/22

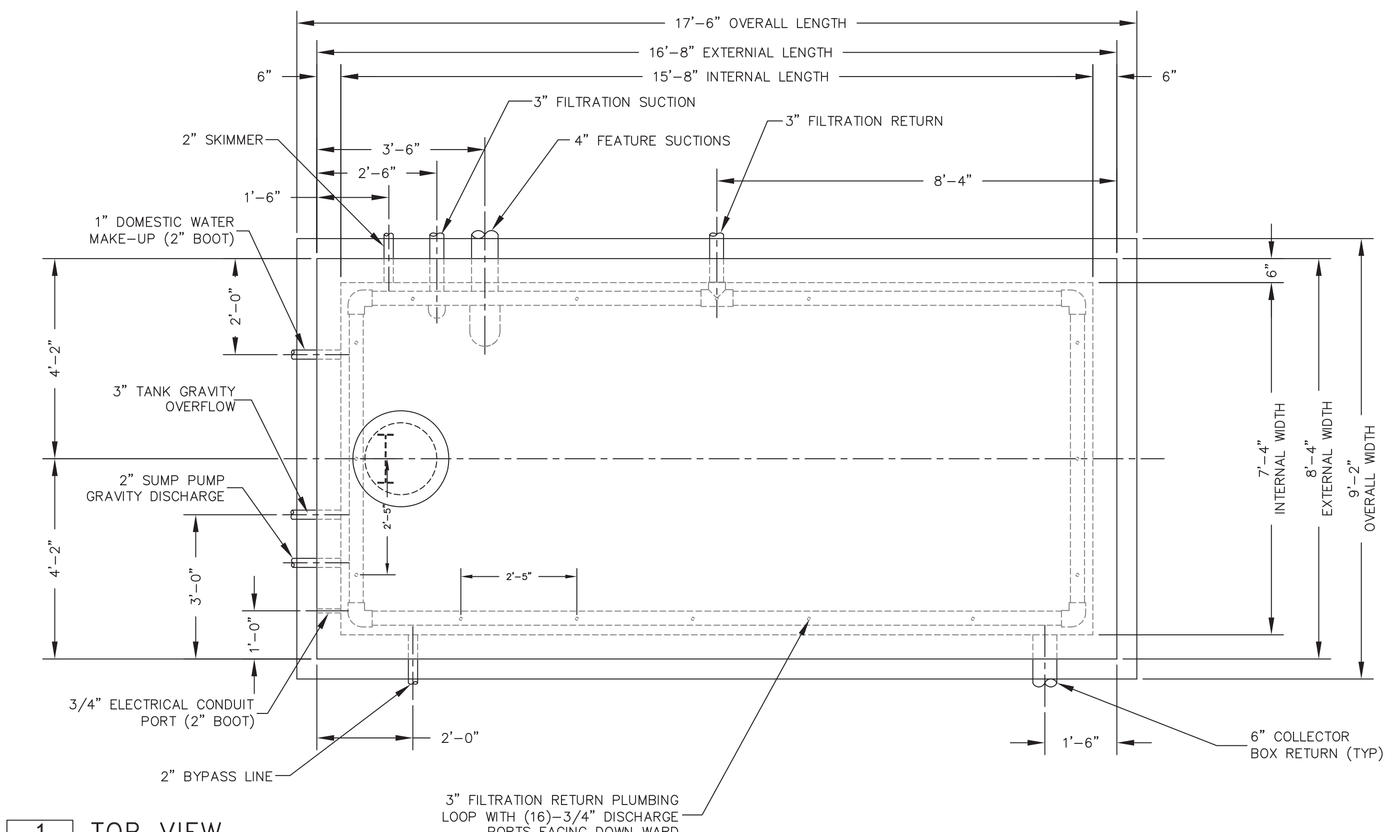
NOTE:

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.

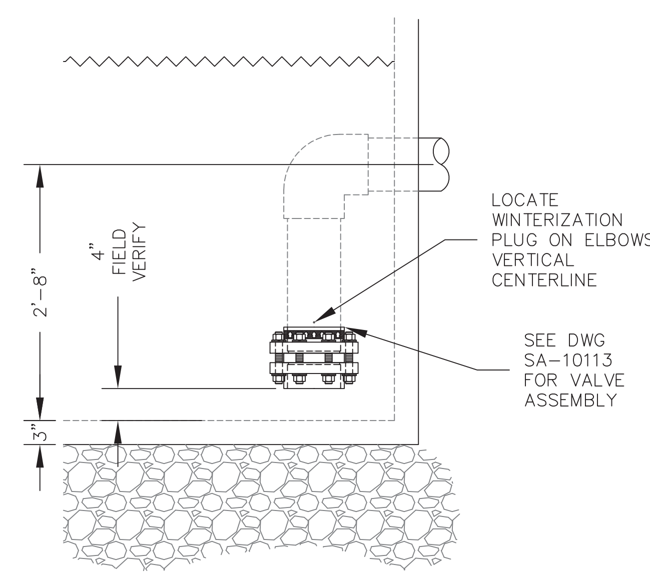
ATTENTION INSTALLER:
SEE SHEET 1/12 FOR INSTALLATION INSTRUCTIONS.

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

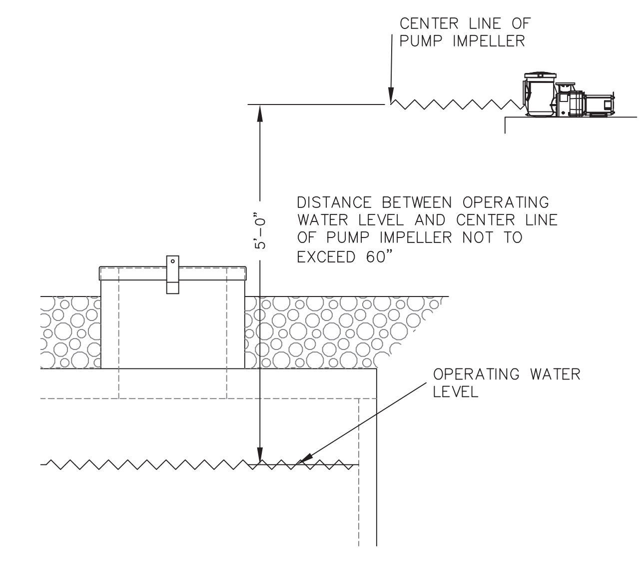
TANK PENETRATION ELEVATIONS BASED ON SITE PLAN AN SHEET 2/12



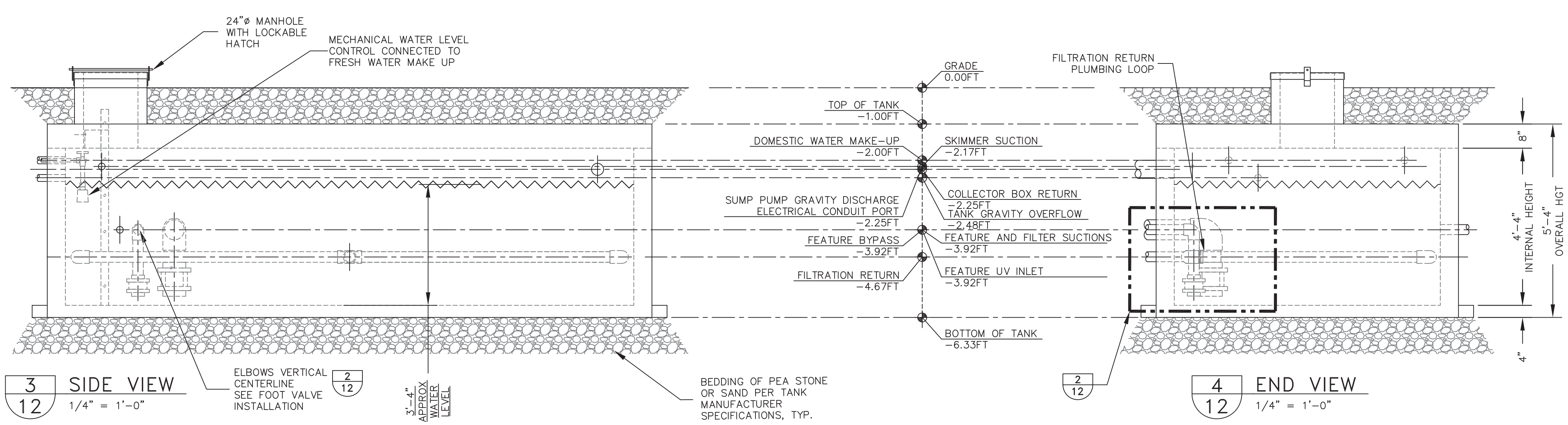
1 / 12 TOP VIEW
1/4" = 1'-0"



2 / 12 FOOT VALVE ASSEMBLY
1/2" = 1'-0"



5 / 12 MIN. DISTANCE
3/8" = 1'-0"



3 / 12 SIDE VIEW
1/4" = 1'-0"

4 / 12 END VIEW
1/4" = 1'-0"

STATE OF MARYLAND
GEORGE E. MIKS
26245
REGISTERED
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JOB TITLE: MARYVALE PARK SPLASH PAD
LOCATION: ROCKVILLE, MD

SHEET TITLE: STORAGE TANK LAYOUT AND DETAILS

SCALE	DRAWN	CHECKED	DWG. FILE	DATE
SEE VIEWS	CTS		1154861-01-03-12	6/3/22

JOB NO. 1154861-01-03