

## Part 1 GENERAL

### 1.1 RELATED WORK

- .1 Section 03 30 00, Cast-In-Place Concrete
- .2 Section 05 50 00, Metal Fabrications
- .3 Section 09 30 13, Ceramic Tile
- .4 Electrical Division

### 1.2 REGULATORY REQUIREMENTS

- .1 All items supplied to be CSA approved.

### 1.3 SUBMITTALS

- .1 All submittals shall comply with Section 01 33 00.
- .2 Submit manufacturer's product data, and shop drawings to indicate performance criteria, sizes, layouts, materials, finishes, electrical requirements, wiring diagrams, installation details, mounting bolt locations, floor templates, and user operation.
- .3 Submit all operation & maintenance data, and warranties for Project Manual binders, as per Section 01 78 00.

### 1.4 QUALITY ASSURANCE

- .1 The manufacturer shall have experience in the manufacture of pedestrian control equipment for a minimum of ten (10) years.
- .2 The installer must be authorized by the manufacturer as a representative, and be trained and approved to install the units specified in the Work.

### 1.5 WARRANTY

- .1 Provide a written minimum one (1) year manufacturer's warranty against any defects in materials and workmanship from the Date of Substantial Performance.
- .2 Provide a written one (1) year warranty against any defects in labour, installation, and workmanship, from the Date of Substantial Performance.

## Part 2 PRODUCTS

### 2.1 DESCRIPTION

- .1 Pedestrian control equipment shall be ADA rated for barrier-free access, with no loss of function or security, in accordance with all applicable Building and Safety Codes.
- .2 Cabinet or pillar to be of 14-gauge, Type #304, No. 4, satin finish stainless steel with anti-corrosion treatment. Where applicable, solid surface top in standard colour to selected from full range by Consultant. Control head to be self-centering, adjustable hydraulic shock suppression, accessible hardened tool steel locking bars, cam and roller assemblies, permanently lubricated bearings, and Type 304 stainless steel, No 4 satin finish. Electronic lock modules to include heavy-duty 24 VDC pull type industrial solenoids, wired to push button at Reception desk, for controlled traffic flow in entry direction, uncontrolled exit direction, and fail-safe (open on power failure) mode. Command module power supply to be 120 VAC (6 amps). Barrier gate shall be either 33 (1 5/16") dia. stainless steel pipe (closed loop shape) or a 10mm (3/8") thick clear tempered glass panel with self-adhesive vinyl identity labels one side. Complete system shall be UL recognized and CSA certified.

## 2.2 DEVICE OPERATION

- .1 Entry procedure: User to present card to Attendant, who will activate each gate panel by an impulse from an access control system (push button at Reception desk), which will swing the gate open for a programmed time duration in the direction of travel, and then return to the closed position. (Card reader interface option and computerized attendance system by Owner in future).
- .2 Emergency exit: the gate shall be able to be pushed open at any time, in the direction of exit, to leave the building. The PPV323 swing gate system shall include one freestanding stainless steel post, wired to a "Push to Exit" button on each side of this post (to open swing gate on each side in direction of exit). This post shall be located in-line with the center pillar and approx. 1000mm south.
- .3 In event of power failure, barriers must push open with minimal force to permit free egress from the building.
- .4 Bi-directional passage to be controlled manually by key to lock or unlock, and may be used to override electronic controls.

## 2.3 WAIST HIGH ELECTRONIC TURNSTILES

- .1 Acceptable products: "The Executive series Waist-High EX100-R-ADA" as dist. by (Turnstile Factory or Controlled Access Turnstiles, tel: 1.800.942.0829), "PPV323 Swing Gate' by Automatic Systems Group (contact: Cliff Holder, tel: 204.228.9328), or approved equal. Quantity: 2 x 914mm (36") wide total; refer to drawings for location and layout.

## Part 3 EXECUTION

### 3.1 INSPECTION

- .1 Verify that wall and/or floor reinforcement are ready to receive the Work and the opening dimensions are as instructed by the manufacturer.
- .2 Beginning of installation means acceptance of substrate conditions.

### 3.2 INSTALLATION

- .1 Install in strict accordance with manufacturer's written instructions and reviewed shop drawings.

**END OF SECTION**

## Part 1 GENERAL

### 1.1 WORK OF THIS SECTION

- .1 Design, engineer, manufacture, supply, deliver, and install all aquatic play structures and associated items as specified herein, and as indicated on the reference drawings SP-1, SP-2, SP-3, & SP-4. The scope of these documents describe a performance-based complete system, to be provided by one Subcontractor. This Subcontractor shall include all aquatic play structures, equipment, tanks, piping, valves, and all associated accessories necessary to meet the performance outlined on these documents, including compatibility with other general Mechanical and Electrical building systems indicated in the documents.
- .2 All equipment specified shall be from one supplier typically.

### 1.2 REGULATORY REQUIREMENTS

- .1 American Society for Testing and Materials (ASTM), latest edition.
  - .1 ASTM F2461, Standard Practice for Manufacture, Construction, Operation, and Maintenance of Aquatic Play Equipment
  - .2 ASTM F2376, Standard Practice for Classification, Design, Manufacture, Construction, and Operation of Water Slide Systems
- .2 Manitoba Health, "Construction and Design Guidelines for Swimming Pools and Other Recreational Water Facilities, Section 1.1.1. Waterslides and Receiving Basins" (current Draft)
- .3 Canadian Playground Safety Institute (CPSI)
- .4 CAN/CSA Z614, Children's Playspaces and Equipment, latest edition.

### 1.3 QUALITY ASSURANCE

- .1 Manufacturer shall have designed, manufactured, supplied, and installed aquatic play structures and items of similar nature and scope to that specified, successfully for a minimum of 5 years and at a minimum of 10 installations. Upon request, the manufacturer shall provide a listing of these installations and a Certificate of Insurance AA rated for both products and general liability.
- .2 Installer shall be certified by the Manufacturer for training and experience in installing aquatic play structures of similar scope, for a minimum of 5 years.
- .3 The manufacturer shall designate a certified playground safety representative to supervise the installation and adjustment of play structures, to meet all applicable requirements, Codes, and standards.

### 1.4 SUBMITTALS

- .1 All submittals shall comply with Section 01 33 00.
- .2 For each item, submit manufacturer's product data, installation instructions, safety data sheets, safety performance standards, and operation and maintenance data.
- .3 For each item, submit shop drawings showing components, connection details, layouts, dimensions, heights and fall protection zones, finishes, colours, and compliance with the above ASTM standards.
- .4 **Submit engineered shop drawings to include systems and calculations, sealed by a Professional Engineer who is registered in Manitoba.**
- .5 Submit structural integrity tests, vertical tests, and maximum number of users rated for each play structure. Submit certificates of compliance that materials meet all requirements and the tests to which the material has been subjected to.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- .1 Submit a delivery schedule of play structures and items, at least 14 calendar days prior to delivery.
- .2 Deliver and handle all items in accordance with manufacturer's written instructions, and store in a dry, covered area. Keep items in original packaging until ready for installation.

## 1.6 WARRANTY

- .1 Provide a written manufacturer's warranty against any defects in materials, manufacture, assembly, and workmanship, AND provide a written installer's warranty against any defects in labour and installation, for one (1) year from the Date of Substantial Performance.

## Part 2 PRODUCTS

### 2.1 MATERIALS

- .1 Provide materials which are standard products of the manufacturer, and which are regularly engaged in the manufacture of aquatic play structures. Submit the tests and certificates listed under Quality Control.
- .2 All metal components shall have factory-drilled holes, be corrosion resistant typically, and be free of excess weld and spatter. Components with extra holes not filled by hardware or covered by components shall be rejected.
- .3 Any steel components shall comply with ASTM A135/A135M, A500/A500M, and A513/A513M, and shall be stainless steel. Min. tensile strength shall be 310 MPa with min. yield of 225 MPa. Remove tailings and sharp protrusions and burnish all edges.
- .4 Any aluminum components shall be type 6061-T6, 6062-T6, or 6063-T6, and shall conform to ASTM B221M/B221. Min. tensile strength shall be 270 MPa and min. yield shall be 250 MPa. Cast aluminum alloy shall conform to ASTM B179, B26/26M, and B108/B108M.
- .5 All fasteners, hardware, and anchors shall be countersunk, corrosion resistant, and rated for a pool environment. When secured, hardware shall be tamperproof, and require special tools for loosening and removal.
- .6 Any plastic components shall be UV resistant, colour-stabilized polyethylene or nylon to ASTM F1487, and non-toxic with no discernible contaminants such as paper, foil, or wood, with a max. 3% air voids. Material shall be free of splinters, chips, peels, buckling, and cracks, and be resistant to solar heat gain, fading, cracking, or fogging. Components with extra holes not filled by hardware or covered by components shall be rejected.
- .7 All items specified and supplied shall be CSA approved.

### 2.2 FINISHES

- .1 Powder coated surfaces shall receive an electrostatic zinc factory coating prior to painting. Factory powder coating shall be electrostatically applied and oven-cured, in accordance with: ASTM D3359, D173/D173M, D3363, D2794, D2454, B117, and D822.
- .2 Factory prime PVC coating with a clear acrylic thermosetting solution. Primed parts shall be preheated prior to dipping. Liquid polyvinyl chloride shall be UV stabilized and mold-resistant. Cure coated parts and achieve a min. 2mm thickness, within 0.5mm tolerance. Coating shall have an 85 durometer hardness to ASTM D3363, and shall be slip-resistant.
- .3 All paint shall be factory applied to a minimum of 2 coats, and shall resist weather, cracking, peeling, and fading.
- .4 Only sealants approved by the manufacturer are permitted.

### 2.3 CONFIGURATION

- .1 Refer to Spray Pad/Wading Pool drawings for aquatic play structures layout and locations. Confirm play structure configurations, platform heights, fall height, and maximum equipment

height, in the scale shop drawing submission, and indicate any configurations revisions, equipment layout with use zone perimeters, designated play surface spot elevations, maximum equipment height spot elevations, platform spot elevations, and protective barriers and guardrails.

2.4 SPLASH PAD FLOOR SURFACING

- .1 Coordinate with and refer to Section 32 79 00, Rubber Safety Surfacing.

2.5 AQUATIC PLAY STRUCTURES

- .1 Aquatic Play Structures List (from Dwg. SP-3), custom designed structures by Proslide Technology Inc. or Waterplay Solutions Corp:

SLIDES (from Dwg. SP-3)			
	Ride Length	Ride Drop	Flow (usgpm)
KIDZ MiniRiver Slide	26.2' (8m)	3.5' (1.07m)	200
KIDZ TWISTER	61.3' (18.7m)	8.9' (2.7m)	250

STRUCTURE SPRAYS (from Dwg. SP-3)		
Quantity	Description	Flow (usgpm)
1	MiniRiver slide Handrail Sprayer	72
1	Sliding Bucket	10
1	Spin Bucket	10
1	Push/Pull Bucket	10
1	Paddle Wheel Single	10
1	Bucket Soaker Single	10
4	Deck Jets	6
2	Trigger Water Shooter	15
2	Open Flow	30
1	Bar Jet Dual	36
2	Hose Guard (guard rail)	36
1	Rainbow Bar Jet (guard rail)	36
		380 Total Toys Flow

- .2 Refer to attached Dwg. SP-3 for technical specifications on materials, coatings, and Slide components and Dwg. SP-1 for proposed layout.
- .3 Refer to attached Dwgs. SP-1 through SP-4 for all related equipment, tanks, pumps, piping, and valves, etc.

2.6 OTHER SYSTEMS (Refer to Dwgs. SP-1 through SP-4)

- .1 Supply and install all pumps, filters, controllers, chlorine tanks, acid tanks, water reservoirs, valves, fittings, etc., as indicated on the equipment list and as shown for both the Spray Pad and Wading Pool, and to achieve a complete operational system. Include all related piping systems to the drains for the pool drainage system around the Wading Pool perimeter edge. Refer to Mechanical drawings and specifications for the drains specified.

**Part 3 EXECUTION**

3.1 PREPARATION

- .1 Coordinate finished floor elevations, slopes, and drains are correct and as intended on the drawings and as required by all applicable regulations.
- .2 Coordinate that thicknesses of the rubber safety surfacing are where they are required for proper fall protection to meet all applicable regulations.

### 3.2 LAYOUT

- .1 Before start of installation, temporarily mark out the entire play structure on floor surfacing with painters tape, to ensure proper clearances at all edges, proper access and egress, zone perimeters, and general circulation.
- .2 Ensure that 'use zones' (fall zones) are clear of hard surfaces, objects, or obstacles, and fall clearly within the rubber safety surfacing area. Recheck that fall heights are addressed.

### 3.3 INSTALLATION

- .1 Install all components in accordance with manufacturer's written installation instructions, and to comply with all applicable regulations.
- .2 Recheck for: tight hardware and connectors, filled component holes, sharp points, edges, protrusions, pinch, crush, or shear points, suspended and other hazards, and address as necessary. Designated certified safety inspector to provide a written report describing the results of this evaluation.
- .3 Replace any products and/or hardware that does not comply. Any damage as a result of a failed installation, shall be at the expense of the Contractor.

### 3.4 SIGNAGE

- .1 Supply and install any signage or warning/identification labels as required by applicable regulations, which might identify safety precautions, maximum number of users, etc.

### 3.5 CLEAN UP AND PROTECTION

- .1 Remove all packing materials from the Site and recycle when possible.
- .2 Clean all surfaces of dirt, stains, filings, and other blemishes from shipment and installation. Follow cleaning methods and agents recommended by the manufacturer.
- .3 Protect work area with temporary barricades and signage, until Substantial Performance is achieved.

**END OF SECTION**