

50-00136406 LABOR AND MATERIALS NECESSARY TO INSTALL A  
TOT LOT STRUCTURE AT THE GIRARD PLAYGROUND FOR THE  
DEPARTMENT OF PARKS & RECREATION  
Jefferson Parish Government



155 Robert Street #242  
Slidell, LA 70458

License Number LA 70317

DATE: 11/17/2021

Page: 6

BID NO.: 50-00136406

**BID FORM**  
Non Public Works

**All Public Work Projects are required to use the Louisiana Uniform Public Work Bid Form**

All prices must be held firm unless an escalation provision is requested in this bid. Jefferson Parish will allow one escalation during the term of the contract, which may not exceed the U.S. Bureau of Labor Statistics National Index for all Urban Consumers, unadjusted 12 month figure. The most recently published figure issued at the time an adjustment is requested will be used. A request must be made in writing by the vendor, and the escalation will only be applied to purchases made after the request is made.

Are you requesting an escalation provision?

YES \_\_\_\_\_ NO X \_\_\_\_\_

MAXIMUM ESCALATION PERCENTAGE REQUESTED N/A %

INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF N/A

For the purposes of comparison of bids when an escalation provision is requested, Jefferson Parish will apply the maximum escalation percentage quoted by the bidder to the period to which it is applied in the bid. The initial price and the escalation will be used to calculate the total bid price. It will be assumed, for comparison of prices only, that an equal amount of material or labor is purchased each month throughout the entire contract.

**DELIVERY: FOB JEFFERSON PARISH**

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES

June 1, 2022

**LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable)**

LA 70317

**THIS SECTION MUST BE COMPLETED BY BIDDER:**

FIRM NAME: Pelican Playgrounds, LLC

ADDRESS: 155 Robert St. #242

CITY, STATE: Slidell, LA ZIP: 70458

TELEPHONE: ( 504 ) 909-3290 FAX: ( N/A )

EMAIL ADDRESS: mbellows@pelicanplaygrounds.com

In the event that addenda are issued with this bid, bidders **MUST** acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form by placing the addendum number as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: Addendum 1  
NUMBER: Addendum 2  
NUMBER: \_\_\_\_\_  
NUMBER: \_\_\_\_\_

TOTAL PRICE OF ALL BID ITEMS: \$ \$110,825.00

AUTHORIZED SIGNATURE: 

TITLE: President

Lauren Knight  
Printed Name

SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

**NOTE:** All bids should be returned with the **BID NUMBER** and **BID OPENING DATE** indicated on the outside of the envelope submitted to the Purchasing Department.

## INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00136406

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	1.00	JOB	LABOR & MATERIALS NECESSRY TO INSTALL A TOT LOT STRUCTURE AT GIRARD PLAYGROUND FOR THE JEFFERSON PARISH DEPARTMENT OF RECREATION  0001 All labor, materials, equipment and necessary essentials to install a tot lot structure and safety surface at  Girard Playground, 5300 Irving St. Metairie 70003.  *** PLEASE SEE ATTACHED SPECIFICATIONS***	\$110,825.00	\$110,825.00

Non-Public Works Bid

AFFIDAVIT

STATE OF LA

PARISH/COUNTY OF Orleans

BEFORE ME, the undersigned authority, personally came and appeared: Lamm  
Knight, (Affiant) who after being by me duly sworn, deposed and said that  
he/she is the fully authorized President of Pelican Playgrounds (Entity),  
the party who submitted a bid in response to Bid Number 5000136400, to the Parish of  
Jefferson.

Affiant further said:

Campaign Contribution Disclosures

(Choose A or B, if option A is indicated please include the required  
attachment):

Choice A \_\_\_\_\_ Attached hereto is a list of all campaign contributions, including  
the date and amount of each contribution, made to current or  
former elected officials of the Parish of Jefferson by Entity,  
Affiant, and/or officers, directors and owners, including  
employees, owning 25% or more of the Entity during the two-year  
period immediately preceding the date of this affidavit or the  
current term of the elected official, whichever is greater. Further,  
Entity, Affiant, and/or Entity Owners have not made any  
contributions to or in support of current or former members of the  
Jefferson Parish Council or the Jefferson Parish President through  
or in the name of another person or legal entity, either directly or  
indirectly.

Choice B X there are NO campaign contributions made which would require  
disclosure under Choice A of this section.

Debt Disclosures

**(Choose A or B, if option A is indicated please include the required attachment):**

**Choice A** \_\_\_\_\_ Attached hereto is a list of all debts owed by the affiant to any elected or appointed official of the Parish of Jefferson, and any and all debts owed by any elected or appointed official of the Parish to the Affiant.

**Choice B** X \_\_\_\_\_ There are **NO** debts which would require disclosure under Choice A of this section.

Affiant further said:

That Affiant has employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

*[The remainder of this page is intentionally left blank.]*

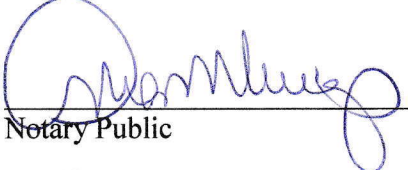
That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for Affiant.

  
Signature of Affiant

Laurin Knight  
Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME

ON THE 7 DAY OF December, 2021

  
Notary Public

Printed Name of Notary Anna M. Vieages  
Notary Public, #64900  
Orleans Parish, Louisiana  
Commission expires at death

Notary/Bar Roll Number \_\_\_\_\_

My commission expires \_\_\_\_\_.



## CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF

Pelican Playgrounds LLC  
INCORPORATED.

AT THE MEETING OF DIRECTORS OF Pelican Playgrounds LLC  
INCORPORATED, DULY NOTICED AND HELD ON 12.7.2021,  
A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT  
WAS:

RESOLVED THAT Lauren Knight, BE AND IS HEREBY  
APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-  
FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON  
BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS  
AND TRANSACTIONS WITH THE PARISH OF JEFFERSON OR ANY OF ITS AGENCIES,  
DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE  
EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES,  
CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES  
ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS  
CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING  
EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-  
FACT.

I HEREBY CERTIFY THE FOREGOING TO BE  
A TRUE AND CORRECT COPY OF AN  
EXCERPT OF THE MINUTES OF THE ABOVE  
DATED MEETING OF THE BOARD OF  
DIRECTORS OF SAID CORPORATION, AND  
THE SAME HAS NOT BEEN REVOKED OR  
RESCINDED.

[Signature]  
SECRETARY-TREASURER

12.7.2021  
DATE

Sworn to and subscribed before me this  
day of December, 2021

[Signature]  
ANNA M. VIEAGES, Notary Public #64900



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

12/10/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> InSight Insurance. 5215B Jackson St  Alexandria LA 71303	<b>CONTACT</b> NAME: Robbie Rhodes PHONE (A/C, No, Ext): 985-242-4300 E-MAIL: robbie@insighthelps.com ADDRESS:  <b>INSURER(S) AFFORDING COVERAGE</b> <b>INSURER A:</b> Markel <b>INSURER B:</b> Trisura Specialty Insurance Company <b>INSURER C:</b> LC & I <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>	<b>FAX (A/C, No):</b>	<b>NAIC #</b>
<b>INSURED</b> Pelican Playgrounds LLC 155 ROBERT ST  SLIDELL LA 70458			

**COVERAGES****CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			3AA460913	03/11/2021	03/11/2022	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
B	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			FMC-HNO1000268-00	11/05/2021	11/05/2022	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> EXCESS LIAB DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$
C	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/> Y <input checked="" type="checkbox"/> N	N/A	27727-20	01/03/2021	01/03/2022	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000

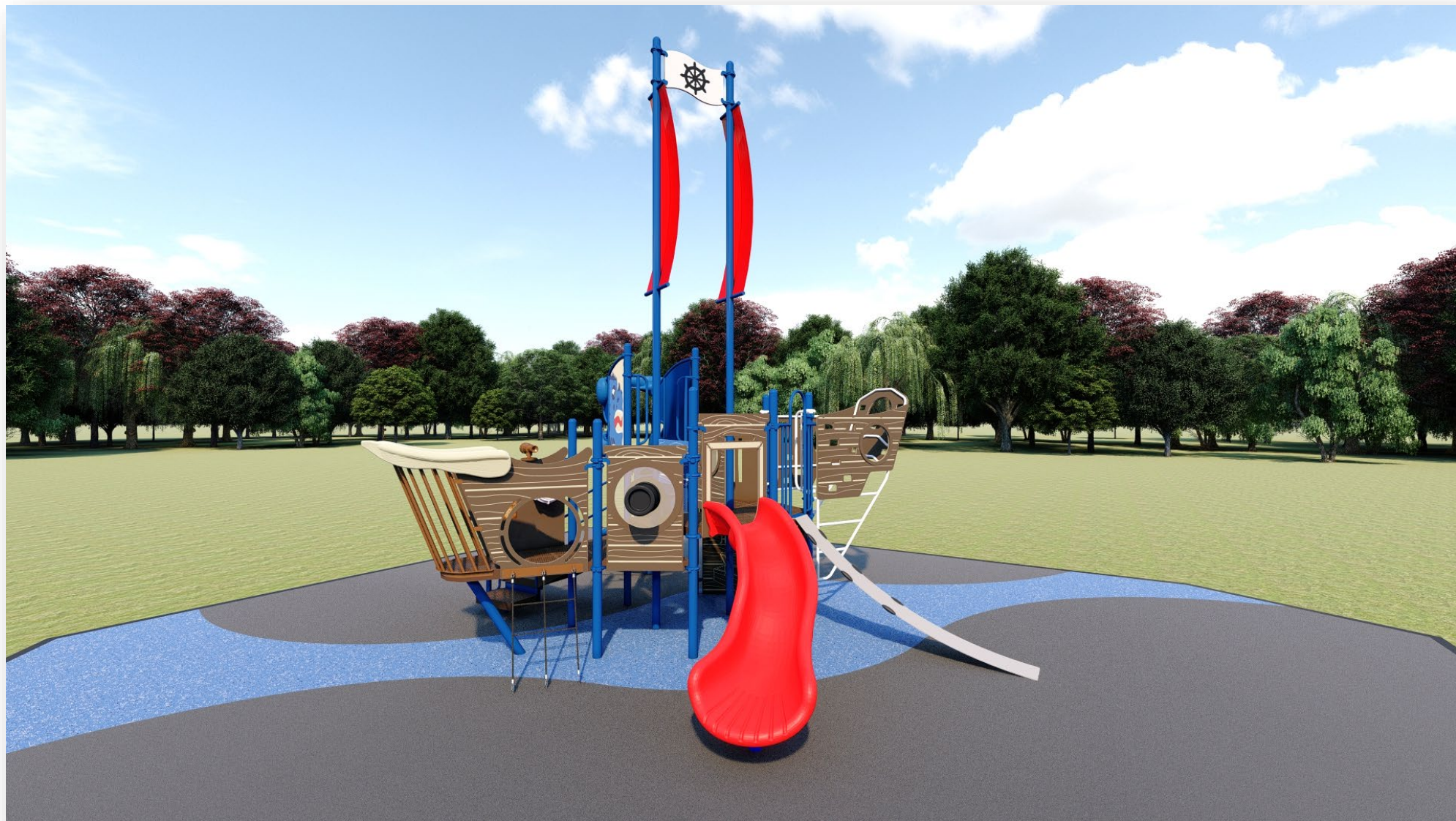
DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

**CERTIFICATE HOLDER****CANCELLATION**

Pelican Playgrounds LLC  155 Robert St Unit 242 Slidell LA 70458	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE Cory Chandler
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## Girard Playground Option 1



\*\*ITEMS INCLUDED, BUT NOT PICTURED: 2 BELT SWING SEATS, 1 ADA SWING SEAT AND 1 TOT SWING SEAT, CUSTOM SERPENT ATTACHMENT

Equipment Manufacturer  **PLAYWORLD**  
The world needs play.





## Girard Playground Option 1



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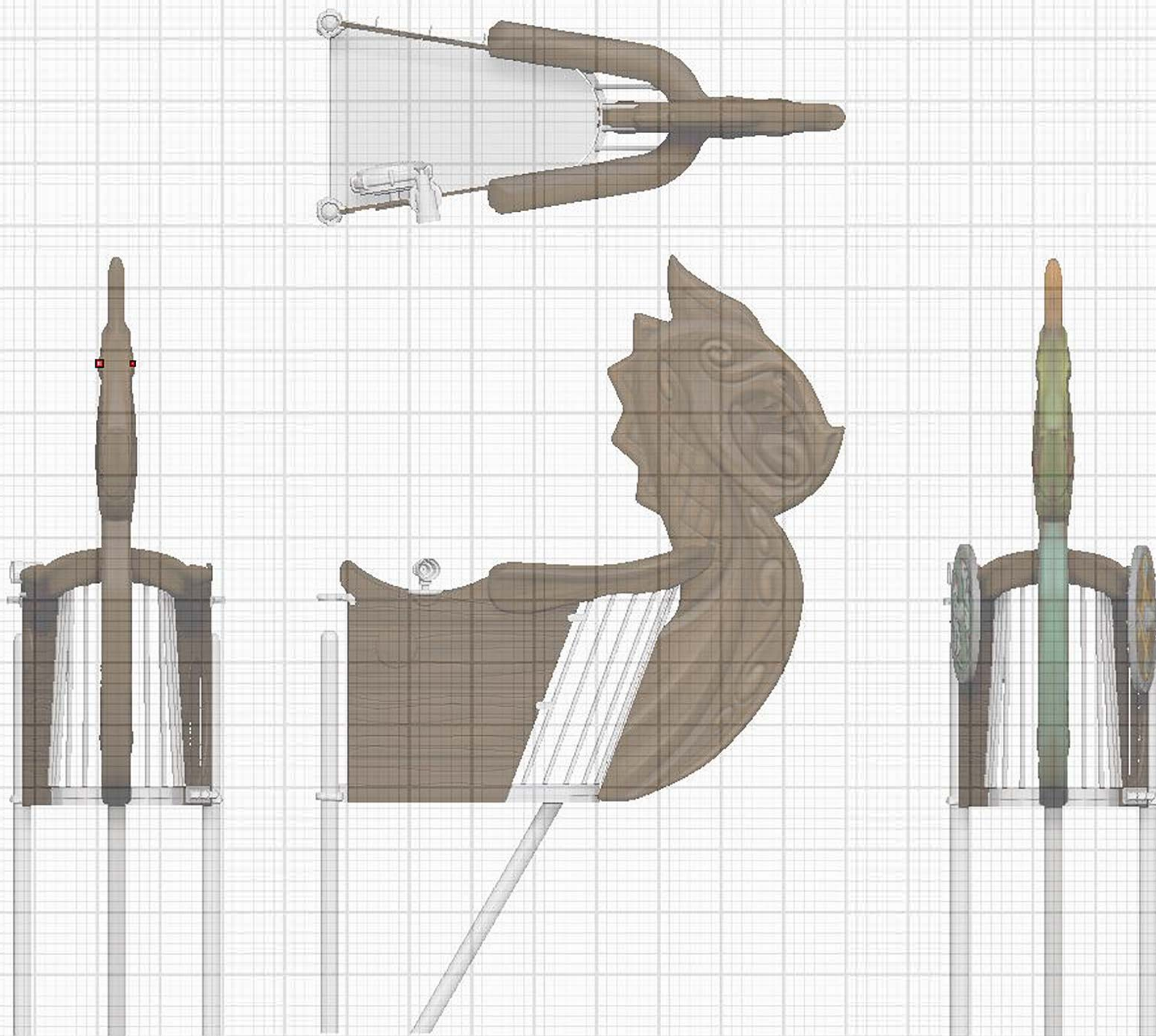
## Viking Ship Serpent Attachment



ARTIST RENDERING - FOR VISUALIZATION  
COLORS MAY VARY SLIGHTLY



## Viking Ship Serpent Attachment



# Girard Playground

Design Number: 51721-MAR - Bill Of Material

Ref. No.	Part No.	Description	Quantity
<b>Posts</b>			
1	ZZCH0048	3.5in OD x 160in STEEL POST W/ RIVETED CAP	2
<b>Decks &amp; Kick Plates</b>			
2	ZZCH0616	SQUARE COATED DECK ASSEMBLY	2
3	ZZCH0618	1/2 HEX COATED DECK ASSEMBLY	2
4	ZZUN2290	COATED DECK TO DECK CONNECTION KIT	1
<b>Slides</b>			
5	ZZUN3208	SLITHER SLIDE 2.0 (RIGHT SECTION)	2
<b>Activity Panels</b>			
6	ZZCH8550	PORTHOLE PANEL (NAUTICAL THEME)	1
7	ZZCH8556	BRIG PANEL (NAUTICAL THEME)	1
8	ZZCH8557	CANNON PANEL (NAUTICAL THEME) (DECK LEVEL)	1
9	ZZCH8560	SUNKEN TREASURE HUNT (GROUND LEVEL) (NAUTICAL THEME)	1
10	ZZCH8579	ACCESSIBLE NAUTICAL STEERING WHEEL PANEL	1
<b>Climbers</b>			
11	ZZCH6200	30 in DECK TO DECK CLIMBER	1
12	ZZCH8567	STERN CLIMBER	1
<b>Roofs &amp; Arches</b>			
13	ZZCH8577	NAUTICAL CAPTAIN'S WHEEL FLAG (SAIL CONNECTOR)	1
<b>Surf Mnt Posts</b>			
14	ZZCH0018S	3.5in OD x 88in STEEL W/CAP (SURFACE MOUNT)	2
15	ZZCH0028S	3.5in OD x 100in STEEL POST W/ CAP (SURFACE MOUNT)	4
16	ZZCH8566S	NAUTICAL SAIL (SURF MOUNT)	2
<b>Surf Mnt ADA Items</b>			
17	ZZCH2006S	TRANSFER STATION (36in DECK) (SURFACE MOUNT)	1
18	ZZUN2019S	APPROACH STEP FOR TRANSFER STATION (SURFACE MOUNT)	1
<b>Surf Mnt Slides</b>			
19	ZZCH3540S	SLIDE- NUVO 360 SPIRAL SLIDE - SERPENT	1
20	ZZCH8549S	SLITHER SLIDE ENTRY/EXIT (NAUTICAL THEME) SURF MOUNT	1
<b>Surf Mnt Climbers</b>			
21	ZZCH8266S	48in SINGLE FLEX TREAD (SM)	1
22	ZZCH8548S	NAUTICAL BOW (36in DK) SURF MOUNT	1

# Girard Playground

Design Number: 51721-MAR - Compliance and Technical Data

Reference Document: ASTM F1487

Ref. No.	Part No.	Qty.	Description	Unit ASTM Status	Total Weight (lbs)	Pre-Consumer Recycled Content (lbs)	Post-Consumer Content (lbs)	CO2e Footprint (kgs)	Users	Install Hours	Concrete (Yds3)	Active Play Events
1	ZZCH0048	2	3.5in OD x 160in STEEL POST W/ RIVETED CAP	Certified	100.42			136	0	2.00	0.25	0
2	ZZCH0616	2	SQUARE COATED DECK ASSEMBLY	Certified	109.72			348	6	2.00	0.00	0
3	ZZCH0618	2	1/2 HEX COATED DECK ASSEMBLY	Certified	156.64			504	8	3.00	0.00	0
4	ZZUN2290	1	COATED DECK TO DECK CONNECTION KIT	Certified	0.29			4	0	0.50	0.00	0
5	ZZUN3208	2	SLITHER SLIDE 2.0 (RIGHT SECTION)	Certified	39.18			267	0	0.50	0.00	0
6	ZZCH8550	1	PORTHOLE PANEL (NAUTICAL THEME)	Certified	40.27			425	0	0.50	0.00	0
7	ZZCH8556	1	BRIG PANEL (NAUTICAL THEME)	Certified	35.67			267	0	0.50	0.00	0
8	ZZCH8557	1	CANNON PANEL (NAUTICAL THEME) (DECK LEVEL)	Certified	43.51			462	2	0.50	0.00	1
9	ZZCH8560	1	SUNKEN TREASURE HUNT (GROUND LEVEL) (NAUTICAL THEME)	Certified	44.18			413	2	2.00	0.00	1
10	ZZCH8579	1	ACCESSIBLE NAUTICAL STEERING WHEEL PANEL	Certified	32.69			309	2	0.50	0.00	1
11	ZZCH6200	1	30 in DECK TO DECK CLIMBER	Certified	47.34			149	1	1.00	0.00	1
12	ZZCH8567	1	STERN CLIMBER	Certified	280.80			1,916	7	3.00	0.00	1
13	ZZCH8577	1	NAUTICAL CAPTAIN'S WHEEL FLAG (SAIL CONNECTOR)	Certified	17.29			209	0	0.25	0.00	0
14	ZZCH0018S	2	3.5in OD x 88in STEEL W/CAP (SURFACE MOUNT)	Certified	78.02			98	0	2.00	0.00	0
15	ZZCH0028S	4	3.5in OD x 100in STEEL POST W/ CAP (SURFACE MOUNT)	Certified	127.24			214	0	4.00	0.00	0
16	ZZCH8566S	2	NAUTICAL SAIL (SURF MOUNT)	Certified	313.06			408	0	2.00	0.00	0
17	ZZCH2006S	1	TRANSFER STATION (36in DECK) (SURFACE MOUNT)	Certified	141.90			296	2	1.00		0
18	ZZUN2019S	1	APPROACH STEP FOR TRANSFER STATION (SURFACE MOUNT)	Certified	41.73			68	0	0.50	0.00	0
19	ZZCH3540S	1	SLIDE- NUVO 360 SPIRAL SLIDE - SERPENT	Certified	439.52			2,136	2	5.00	0.00	1
20	ZZCH8549S	1	SLITHER SLIDE ENTRY/EXIT (NAUTICAL THEME) SURF MOUNT	Certified	80.84			582	0	1.00	0.00	0





# Girard Playground

Design Number: 51721-MAR - Compliance and Technical Data  
Reference Document: ASTM F1487

Ref. No.	Part No.	Qty.	Description	Unit	Total	Pre-	Post-	CO2e	Users	Install	Concrete	Active
				ASTM Status	Weight (lbs)	Consumer Recycled	Consumer Content	Footprint (kgs)				
21	ZZCH8266S	1	48in SINGLE FLEX TREAD (SM)	Certified	90.87			579	1	2.00	0.00	1
22	ZZCH8548S	1	NAUTICAL BOW (36in DK) SURF MOUNT	Certified	288.80			1,974	5	8.50	0.00	1
Totals:					2,549.98	407	649	11,762	38	42.25	0.25	8
					1,147.49 Kg	183 Kg	292 Kg	12 Metric Tons	0.19 m3			

# Girard Playground

Design Number: 51721-MAR - Compliance and Technical Data

Reference Document: ASTM F1487

Ref.	Unit	Total	Pre-	Post-	CO2e		Install	Concrete	Active
No. Part No.	ASTM	Weight	Consumer	Consumer	Footprint	Users	Hours	(Yds3)	Play
Qty. Description	Status	(lbs)	Recycled	Content	(kgs)				Events

## ASTM F1487

The lay-out for this custom playscape, design number 51721-MAR, has been configured to meet the requirements of the ASTM F1487 standard. In addition, each of the above components listed as "Certified" have been tested and are IPEMA certified. Components listed as "Not Applicable" do not fall within the scope of the ASTM F1487 standard and have not been tested. IPEMA certification can be verified on the IPEMA website, [www.ipema.org](http://www.ipema.org). In the interest of playground safety, IPEMA provides a Third Party Certification Service which validates compliance.

## 2010 ADA Standards for Accessible Design

The lay-out was also designed to meet the 2010 Standards published 15-Sep-2010, by the Department of Justice when installed over a properly maintained surfacing material that is in compliance with ASTM F1951 "Accessibility of Surface Systems Under and Around Playground Equipment" as well as ASTM F1292, "Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment", appropriate for the fall height of the structure.

## Installation Times

Installation times are based on one experienced installer. A crew of three experienced individuals can perform the installation within the given time, each member working 1/3 of the given hours. [Eg. Installation Time = 30 hours. For a crew of three, each member will work 10 hours on the installation for a total of 30 hours on the project.]

## Carbon Footprint

The CO2e (carbon footprint given in Kilograms and Metric Tons) listed above is a measure of the environmental impact this play structure represents from harvesting raw materials to the time it leaves our shipping dock. Playworld Systems nurtures a total corporate culture that is focused on eliminating carbon producing processes and products, reducing our use of precious raw materials, reusing materials whenever possible and recycling materials at every opportunity. Playworld Systems elected to adopt the Publicly Available Specification; PAS 2050 as published by the British Standards Institute and sponsored by Defra and the Carbon Trust. The PAS 2050 has gained international acceptance as a specification that measures the greenhouse gas emissions in services and goods throughout their entire life cycle.

## Pre-Consumer Recycle Content

A measurement, in pounds, that qualifies the amount of material that was captured as waste and diverted from landfill during an initial manufacturing process and is being redirected to a separate manufacturing process to become a different product. E.g. 100% of our Aluminum Tubing is made from captured waste material during the manufacturing process of extruded Aluminum products such as rods, flat bars and H-channels.

## Post-Consumer Recycle Content

A measurement, in pounds, that qualifies the amount of material that was once another product that has completed its lifecycle and has been diverted from a landfill as a solid waste through recycling and is now being used in a Playworld Systems' product. E.g. \*\*20% to 40% of the steel in our steel tubing and sheet steel have been diverted from landfills. Automobiles are scrapped and recyclable steel is purchased by the steel mill that produces our raw product.

\*\* The amount of Post-Consumer recycled steel fluctuates daily based on the availability of the recycled steel.



# Color

## Component & Post Colors



## Rotomolded Colors



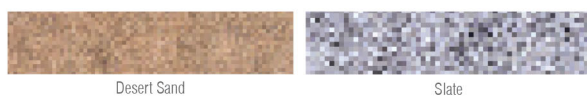
## 2-Color Sheet Plastic



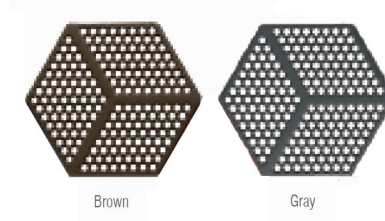
## Rope Colors



## Boulders Colors



## Eco-Armor® Colors



Colors are subject to change without notice. These color swatches above are for reference only, and are an approximation that do not reflect the properties of physical materials, and can vary when printed. For more information on color samples and the most up-to-date specifications consult your local representative. Playworld uses high quality materials and state of the art manufacturing processes. Commercial playgrounds and products are subjected to years of environmental and solar exposure. Such extreme exposure takes its toll on paints and pigments, and all colors will fade over time. Playworld does not warrant against color fading or discoloration. It is important to properly maintain your playground to ensure its longevity. Depending on environmental conditions at your location, the installation of fabric shade structures may help to delay fading and discoloration. Playworld is a division on PlayPower, Inc.

# Limited Warranty

Playworld Systems, Inc. warrants its products against structural failure due to defects in materials and workmanship for the warranty periods and material categories prescribed below.

**1. LIMITED WARRANTY FOR AS LONG AS YOU OWN THE PRODUCT:** Steel and aluminum deck support posts, stainless steel hardware, clamps, deck hangers, post caps, and cast aluminum parts, except as otherwise specified below.

**2. LIMITED TWENTY-FIVE (25) YEAR WARRANTY:** Spring Mates® aluminum castings.

**3. LIMITED FIFTEEN (15) YEAR WARRANTY:** Perforated steel decks and stairs, steel rails, stationary weldments, rotationally-molded and sheet plastic components, recycled plastic lumber, roof panels, and stainless steel slides, except as otherwise specified below by product family type.

**4. LIMITED TEN (10) YEAR WARRANTY:** Fiberglass signage, accessible swing seats, Fun Centers™, FirstPlay™ play structures, pre-cast PolyFiberCrete® or reinforced concrete products, Timber Stacks™ Robinia timbers and galvanized hardware, Hat Shade fabric and components, Shade Canopy fabric and components, Hypar Shade fabric and components, and Shadesure and Colourshade FR fabrics. (Note Exception: Limited Five (5) Year Warranty on fabrics in colors Red, Yellow, Electric Purple, Zesty Lime, Cinnamon, and Olive.)

**5. LIMITED FIVE (5) YEAR WARRANTY:** Steel reinforced cable net and rope fittings and connections (Note Exception: Warranty does not cover normal wear and tear such as fraying or fading of cable coating), PlaySimple® play structures, DropZone Tower™, LiveWire Zip Line™, AeroGlider™, Border Timbers™, flex treads, wood and polycarbonate panels, Eco-Armor coating and PVC coating (against cracking and peeling), site amenities (i.e. benches, tables, litter receptacles, and bike racks), GFRP (Glass Fiber Reinforced Polymer) products, and motion/moving play components and parts.

**6. LIMITED THREE (3) YEAR WARRANTY:** Steel coil and C springs, flat webbing nets (excluding normal wear and tear), electronic panel speakers, sound chips, and circuit boards.

**7. LIMITED ONE (1) YEAR WARRANTY:** NEOS®, electronic based play products, swing chain, swing clevises, swing galvanized attachment hardware, molded rubber bumpers, handholds, swing seats, and any other materials or custom products not covered above. (\*For NEOS only, an extended 3-year warranty is available for purchase, providing 4 years of cumulative coverage.)

**BUYER'S REMEDY:** If any products prove defective or non-conforming under normal use and within the above-prescribed warranty periods and material categories, Buyer must promptly notify Playworld Systems, Inc. in writing at 1000 Buffalo Road, Lewisburg, PA 17837 USA. Playworld may elect to inspect the alleged defect at Buyer's site or at Playworld's facility. Buyer shall not return products to Playworld unless authorized by Playworld to do so. Authorized returns must be properly packaged and shipped prepaid and insured, at Buyer's expense. Upon verification of warranty coverage, Playworld may elect, in its sole discretion, to repair defective or non-conforming products, or replace them by delivering products or parts free of charge to the site. Playworld's limited warranties do not cover the cost of labor to remove defective or non-conforming parts or to install repaired or replacement parts. By use of these limited

warranties, Buyer accepts their terms and limitations, and waives any rights it would otherwise have to claim or assert that such warranties fail of their essential purpose. Buyer agrees that venue for any court action to enforce these limited warranties shall be in Union County in the State of Pennsylvania.

**LIMITATIONS:** All warranty periods begin on the date of Playworld's invoice. Repaired and/or replacement parts are warranted only for the balance of the original limited warranty period. Warranties extend only to the original Buyer/end user for products purchased from Playworld or a Playworld authorized reseller, and are not transferable.

Warranties apply only to Playworld products that are erected and installed in conformance with Playworld installation instructions, and that are maintained and inspected in conformance with Playworld maintenance and operational instructions.

Warranties specifically do not cover Playworld products:

- for cosmetic damage or flaws occurring under normal use, such as surface scratches, minor chips, hairline cracks, dents, marring, efflorescence, color fade, discoloration, corrosion/rust, fraying, or warping of recycled plastic lumber;
- that have been modified, altered, or repaired by unauthorized third parties;
- that have not been used as designed or intended, or misused;
- to which non-Playworld parts have been added or substituted;
- that have been removed from their original location and re-installed elsewhere;
- for changes in appearance of natural materials over time or cosmetic defects such as checks or splits in timber components;
- or that have been damaged due to excessive wear and tear, vandalism, abnormal use, abuse, negligence, environmental factors (such as wind-blown sand, salt spray, or airborne emissions from industrial sources), extreme weather (such as hail, flooding, lightning, tornados, sandstorms, earthquakes, or wind storms), and acts of God.

Playworld does not warrant that any particular color will be available for any specific period of time, and reserves the right, in its sole discretion, to discontinue any color for any reason.

**THE FOREGOING LIMITED WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY FOR SELLER'S PRODUCTS, AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, IN LAW OR IN FACT. SELLER SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE, AND ANY IMPLIED WARRANTIES ARISING OUT OF COURSE OF DEALING OR PERFORMANCE OR TRADE USAGE. SELLER SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, SPECIAL, OR PUNITIVE DAMAGES, OR ANY LOSS OF REVENUE, PROFIT, OR USE ARISING OUT OF A BREACH OF THIS WARRANTY OR IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE, USE, OPERATION, OR REPAIR OF ANY PRODUCT. IN NO EVENT WILL SELLER BE LIABLE FOR ANY AMOUNT GREATER THAN THE PURCHASE PRICE OF A DEFECTIVE PRODUCT.**

Playworld Systems, Inc. continually improves play equipment to better serve our customers and therefore reserves the right to change the design specifications without notice.

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# General Specifications

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## Material:

All materials shall have a demonstrated record of durability in the playground or similar outdoor setting. All metals shall be painted, galvanized, or otherwise treated to inhibit rust. Black steel is not acceptable.

## Hardware:

All required hardware for assembly of the structure shall be included. All fasteners shall be 18-8 grade stainless steel (300 series) unless otherwise indicated. Capped lock nuts which cover bolt ends shall be included. Tamper resistant hardware is utilized on principle clamping mechanisms. Special tools shall be provided for assembly and maintenance. Physical locking devices are used on all exposed and accessible connection points, such as lock nuts. A nylon threadlocking patch is applied to certain hardware. Liquid thread-lock is also used to hinder fastener removal.

## Eco-Armor® Coating:

A coated application shall be from 45 to 55 mils on the wear surfaces of all coated parts and 30 mils on other surfaces. Environmentally Sensitive - PVC and phthalate free - Coating is made of an ultraviolet stabilized polyethylene material. Coating meets California, State of Washington and other state and federal requirements for phthalates and heavy metal content. No dioxins produced if burned. Discarded product and waste production material can be recycled into other products (recycling symbol 2). Shall contain no volatile organic compounds (VOC's).

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Taber abrasion tests (ASTM D4060) show that the PE coating abrasion resistance is over 1.7 times the abrasion resistance of PVC. Durable - Extreme cold (to -20 degrees F) cycle testing indicates no cracking or loss of adhesion to the metal substrate. Slip Resistant - Textured finish for enhanced traction. Coating has 0.74 coefficient of friction per ASTM1679. ADA considers a 0.5 coefficient of friction or higher to be slip resistant.

- Flexibility (conical mandrel): ASTM D 522-1/8", no cracks (greater than 32%)
- Adhesion: ASTM D 4541 - 800 psi  
Impact Resistance - ASTM D 2794 - greater than 320 in-lbs
- Gloss - ASTM D 523-12
- Taber Abrasion: ASTM D 4060-26 (mg loss, CS 17 wheel)
- Tensile Strength - ASTM D 638-3482 psi
- % Elongation: ASTM D 638 - 13%
- Humidity Resistance - ASTM D 2247 - No blistering or loss of gloss after 1000 hours
- Salt Spray: ASTM B 117 - 2000 hrs, no significant change in color or gloss QUV - ASTM G 53 - 2000hrs, no significant change in color or gloss.

## Installation/Maintenance Documentation:

Explicit installation instructions shall be provided which will include a detailed top view and footing drawings plus written instructions to assure proper installation of



# General Specifications *continued*

the equipment. Maintenance guidelines and inspection checklists shall also be provided. The provided installation instructions and maintenance instructions shall be “project” specific containing component information that is part of the playground design.

## Packing List:

All shipments shall include a packing list for each skid/container, specifying the part numbers and quantities on each skid or within each container.

## Packaging:

Support posts shall be individually packaged in sturdy, mar-resistant cardboard boxes. Components shall be individually wrapped or bulk wrapped to provide protection during shipment. Small parts and hardware packages will be placed in crates for shipment. Installation instructions shall be packaged within the hardware packages.

## Maintenance Kit:

An order-specific maintenance kit shall be provided for each structure order. The kit will include a CD as well as packet with a second set of installation documents and order-specific maintenance documentation with recommendations on how often to inspect, what to look for and what to do to keep the equipment in like-new condition. The kit also includes primer, appropriate color touch-up paint, sandpaper, graffiti remover and additional installation tools and hardware.

## PlayPod™/Tag Labels:

Equipment mounted technology containing information relative to that particular product purchase order for equipment manufactured by Playworld Systems, Inc. Information should be instantaneously available utilizing current Smart Phone technology through QR Code reader application. Information will be available for any Smart Phone user including children and caregivers, playground owners and maintenance workers. Technical information will include but be not limited to: date of manufacture, installation instruction(s), component specific details for parts reorder and maintenance schedules. Also included will be the manufacturer's sales order number, drawing number, bill of materials, part numbers and local distributor information. The user will have access to email any of these documents and can email Playworld Systems, Inc. or call Playworld Systems immediately using this technology.

## SMARTE® System:

Shall be a composite surface system, comprised of geotextile bags, volume filled with minus ½ inch shredded recycled rubber, capped with 1.2 lb. per square foot thermal plastic extruded mat over the specified base. The surface shall be stable and slip resistant to comply with all requirements set forth in the Americans with Disabilities Act and ASTM F1292. SMARTE System shall have a HIC value of 391 measured from an 8' critical fall height.

## Shade:

The fabric is woven of high density polyethylene monofilament 500 denier yarn that is annealed at 176° F. The weight per square yard is 11 ounces. Break Strength (ASTM D5034) is: Warp 309 lbs, and Weft 352 lbs. Burst Strength (ASTM D3787) is 490 lbs. Elongation compensation (ASTM D1682) is Warp @ 4% Weft @ 6%. Tear strength (ASTM D2261) is Warp 57 lbs Weft 82 lbs. Hydraulic burst (ASTM 3786) is 564 pounds per square inch. Includes Ultra Violet Stabilizers Tinuvin 783 & Irganox B215. Ultra Violet Stability is 10 years. Shade Effect (AS 4174): Angle of Incidence 92% to 94%. Ultraviolet block Angle of Incidence 90% to 92%

## Origins™ Boulders and Climbers:

**Concrete:** Boulder shall be manufactured with a minimum of 2000 psi polyfibercrete. It shall have 90lbs/cubic feet average density. The use surface is sandblasted to achieve desired texture. The texture and shape will mimic natural rock formations. Different features and variations in the surface will provide the climbing routes.

## Urethane Molded Bumper:

These parts shall be manufactured from TD 172-01B polyurethane. TD 172-01B polyurethane is a tough, abrasion resistant elastomer formulated for hand-batch processing. Excellent physical properties can be obtained with a room temperature cure without the utilization of mercury, MOCA or TDI. TO 172-01B meets the specification for UL 94V2 flame resistance. Cured properties shall be: Hardness (shore A) ASTM D-2240 65 ±5, Tensile Strength (psi) ASTM D-638 1365, Elongation at break ASTM D-638 335%, Tear strength (pli) ASTM D-695 125, Linear Shrink (in./in.) ASTM D-2566 0.002, Specific Gravity (g/cc) 1.06.

## General Specifications *continued*

### Coil Spring:

Shall be manufactured from stainless steel 20 mm diameter wire. Shall have an outside diameter of 180 mm Coil direction shall be right-handed. Complies to ASTM A-227/A-227M-90 standard specifications for steel wire, cold drawn for mechanical springs.

### Rotational Molded Polyethylene:

Shall be rotationally molded from color-compounded, first quality, linear low density, polyethylene. Dry-blended resins are not acceptable. Color-compounded polyethylene is stronger than dry blended resins providing better bonded strength with greater surface contact. Compounded color provides superior colorfastness, UV resistance, and impact resistance with solid color molecules. Polyethylene shall be ultraviolet (UV) stabilized to UV-8 and have anti-static additives. Cross-sectional design shall be .25 in. (6 mm) nominal thickness, double wall construction.

- ASTM Specifications: Melt Index; D-1238: 5.0 – 6.89/10 min<sup>3</sup>
- Material Density; D-1505: .932 – .936 g/cm<sup>3</sup>
- Tensile Strength; D-638: @ yield 2 in. min., 2,200, 2,500 psi.
- Flexural Modulus; D-790: @ 1% secant, 73,000 – 87,200 psi.
- Meets UL94HB Horizontal Burn Test.
- Arm Test for impact strength (@ minus 40°C) (.25 in. thickness). 100 ft./lb.
- UV Exposure (SAE 1960-89) QUV 500 hrs. Delta E less than 2.

### Compression Molded Polyethylene:

These parts shall be manufactured from 3/4 high-density polyethylene that has been specially formulated for optimum UV stability and color retention. Products shall meet or exceed density of 960 G/cc per ASTM D1505, tensile strength of 2400 PSI per ASTM D638. Some parts are available in a two-color product with (2) .100" thick exterior layers over a .550" interior core of a contrasting color.

### Fiberglass Sign/Panel:

Sign is a solid one-piece panel with all copy and graphics embedded in the panel. Panel is manufactured out of fiberglass-reinforced plastic or equivalent with a non-yellowing, R-70 clear resin (or UV stabilized, acrylic-modified polyester resin) reinforced with high solubility, chopped strand fiberglass mat so that the index of refraction ensures total clarity of color, copy and graphics. Glass fibers will not be readily discernible on face. Material will have a glass content of no less than 28% of the total weight. Material will have an ambient temperature range of -65 to 350 degrees F. Material will have a min. barcol hardness of 50, tensile strength of 12,000 PSI, compressive strength of 20,000 PSI, and a flexural strength of 18,000 PSI. Minimum impact of the material is 6 ft. LBS. / in. Notch with a fire resistance of 500 degrees F. Material will not be permanently defaced by steam, acids, aromatics, scratching, inks, or paints and will be readily wiped clean with paint remover and solvents without affecting the appearance or legibility of the sign finish or graphics. Material will be opaque or translucent with a semi-gloss or matte finish. Panel edges will not be crazed or cracked, and the edge finish will be smooth, clean, and neat. Panel will be absolutely flat. Material will be warranted for a period of 10 years against chipping, delaminating, and fading.

### Rubber Platform and Belting:

Shall be made from styrene butadiene rubber. With 2 piles of polyester reinforcement. A thickness of 0.38 inch. A maximum tension of 220 pounds per inch width or higher. Cover on both side of reinforcement.

### Overhead Cables:

1/4" diameter; type 302 stainless steel; 19 x 7 strand core; performed and lubricated formation; breaking strength of 5700 lbs.: MIL spec: MIL DTL-83140.

### Adventure Rope:

Comprised of six-stranded and tempered cable with a polypropylene core. The galvanized steel wire cores of the six strands are inductively fused to polyamide coating.



# General Specifications *continued*

## Super Durable Polyester Powder Coat:

Powder coating is electrostatically applied at a thickness of 2 to 5 mils (.002 - .005). Prior to finishing, components shall be cleaned with a three-stage alkaline bath and followed by a sealer for adhesion and rust inhibitor during the preparation process. Components are thoroughly dried before applying an epoxy/polyester primer. The primer is cured before applying Superdurable TGIC polyester powder. Finish quality conforms to ASTM Specifications:

- Salt Spray Resistance Test; B-117: 4,000 hrs.
- Impact Resistance Test; D-2794: min. 80 inch/lb.
- UV Exposure (G154, 340): 3,000 hr. Delta E of 2, 90% gloss retention
- Pencil Hardness Test; D-3363: 2H
- Crosshatch Adhesion Test; D-3359-B: 100% pass
- Conical Mandrel; D-522: 1/8 inch, no cracks
- Gloss - 60°; D-523:

Super Durable Polyester Powder Coatings typically retain 90% of their original gloss after 1 year, and 50% of their original gloss after five years of Florida outdoor exposure. Expect Superdurable colors to retain 80% of their gloss after 2 years of outdoor exposure. These coatings are also shaded with high grade, light stable pigments and will shift less than 2dE in color after 2 years.

## Steel Tubing:

Tubing shall be cold rolled, electric resistance welded tubing. Tubing shall be triple coated for maximum exterior protection: a hot-dipped Flo-Coat® uniform zinc galvanized coating, a chromate conversion coating and a clear polymer coating. Galvanized exterior coating weight shall be within the range of .4 oz./sq. ft. and .6 oz./sq. ft. Tubing shall have corrosion resistant, zinc-rich paint interior coating. ASTM Specifications: A-315, A-500, A-513, E-8.

- tensile strength 55,000 psi, yield strength 50,000 psi 3"x3" sq x 12 gA
- tensile strength 55,000 psi, yield strength 50,000 psi 1.0219" OD x 14 gA
- tensile strength 75,000 psi, yield strength 60,000 psi 1.315" OD x 14 gA
- tensile strength 75,000 psi, yield strength 60,000 psi 2.375" OD x 12 gA

## Aluminum Tubing (Support Post and Sleeve):

Shall be extruded 6061-T6 extruded seamless aluminum alloy tubing. ASTM Specifications: A-315, A-500, A-513, B-221, QQ-A-200/8, E-8.

## Aluminum Tubing (Arch):

Shall be an all welded assembly fabricated of 6063-T4 extruded seamless aluminum alloy tubing.

## Decks / Platforms:

All shall be of modular design and have precision holes on the standing surface to prevent debris and water collection. There shall be slots in each face to accommodate face mounting of components. Decks shall be manufactured from a single piece of low carbon 12 GA (.105) sheet steel conforming to ASTM specification A-569. The sheet shall be perforated with a return flange on the perimeter to provide the reinforcement necessary to ensure structural integrity. There shall be no unsupported area. The unit shall then be EcoArmor coated.

## Die Cast Clamps

Clamps / Castings shall be die cast of high strength 413 aluminum alloy. Tenzalloy (40-E, 315.0) is not acceptable as a load bearing clamp material. Ultimate tensile strength shall be 43 ksi. Clamps shall be provided as hinged assemblies to facilitate structure assembly. Unique S-lap design eliminates all string entanglement points at connection. Single bolt fastening system with built-in threads. Clamp connection disassembly and slippage is eliminated by using drive rivets. Double banded design provides the highest uniform clamping pressure around the entire clamp. Clamp shall be finished with a shot blast, primed with a cathodic epoxy coating conforming to MIL-P-53084 and coated with Super Durable Polyester Powder Coating. ASTM Specification B-85 aluminum alloy die casting.

## Cast Aluminum Clamps/ Castings:

Shall be cast of high strength Almag 35 (535.0-F) aluminum alloy or A319 aluminum alloy. The ultimate tensile strength shall range between 18 - 35 ksi. Yield strength shall range between 13 - 23 ksi. ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

# General Specifications *continued*

## Laminated Bamboo Panel

### Exterior Grade Laminated Bamboo Panel

#### Compression:

- Parallel To Grain: 13,488 PSI (ASTM 3501-86 A)
- Perpendicular To Grain: 3043 PSI (ASTM 3501-86)
- Tensile Strength:
- Parallel To Grain: 21,465 – 55,694 PSI (ASTM 3500-90)
- Perpendicular To Grain: 543 PSI (ASTM 3500-90)

#### Flexural Strength:

- 12,800 PSI (ASTM D3043)

#### Shear Strength:

- 2,901 PSI (ASTM D3048)

#### Modulus Of Elasticity:

- 2.9 E PSI (ASTM D 1037)

#### Thermal Properties:

- Thermal Conductivity:  $K = (W/M \cdot K (BTU \cdot IN / H \cdot FT^2 \cdot ^\circ F)) = 0.14(0.94)$
- Thermal Resistivity:  $(R) \text{ Value} = (K \cdot M / W (H \cdot FT^2 \cdot ^\circ F / BTU \cdot IN)) = 7.9(1.1)$
- Specific Gravity: 0.60
- Density: 42 LBS. / FT<sup>3</sup>

#### Dimensional Stability Coefficient:

- Volumetric Stability Factor: 0.00144
- Solid Dimensional Stability At 20% RH – Linear Expansion:
- Parallel -0.04 Percent Average (ASTM D 1037)
- Perpendicular -0.10 Percent Average (ASTM D 1037)
- Thickness Swell: -0.13 Percent Average (ASTM D 1037)

#### Moisture Content:

- Solid laminated bamboo: 5-9 percent (ASTM D 4442)

#### Flammability:

- “Class B” (ASTM E 84 Surface Burning)
- 65 – Flame Spread Index Developed
- 68 – Smoke Index Developed

#### Pest Resistance:

- Termite mortality when tested was 100%.
- Durability against wood destroying fungi is very high.
- Panels are indigestible to insects and micro-organisms and are more durable against decay than any wood product.

## Polycarbonate Panel

- Panel shall be made from polycarbonate sheet plastic 0.50 inch (12.7 mm) thick with a minimum allowable tolerance of 0.451 inch (11.45 mm) and a maximum allowable tolerance of 0.585 inch (14.86 mm).
- Panels shall not have distortion in the form of a wrinkle, twist or scallop along the perimeter of the sheet.
- Panel shall have a durable stucco finish with a pebbled texture.
- Panels incorporate ultraviolet stabilization technologies that are proven to maintain aesthetics and performance.

#### Compression Strength:

- 12,500 PSI (ASTM D695)

#### Tensile Stress:

- Yield: 9,000 PSI (ASTM D638)
- Break: 9,500 PSI (ASTM D638)

#### Flexural Strength:

- 13,500 PSI (ASTM D790)

#### Shear Strength:

- Ultimate: 10,000 PSI (ASTM D732)
- Yield: 6,000 PSI (ASTM D732)

## 8 in. Metal Tubing - 10 ga.

- Shall be fabricated of 8 in. outside diameter, 10 gauge black steel tubing.
- Tensile strength shall be 71,900 psi.
- Yield strength shall be 54,500 psi.
- Finished with a baked on polyester powder coating.

# General Specifications *continued*

## Activo®

### Arches and Posts:

Arches & Posts shall be fabricated of 5 in. outside diameter, 11 gauge galvanized steel tubing. Tubing shall be cold rolled, electric resistance welded tubing. Tubing shall be triple coated for maximum exterior protection: a hot-dipped Flo-Coat® uniform zinc galvanized coating, a chromate conversion coating and a clear polymer coating. Galvanized exterior coating weight shall be within the range of .4 oz./sq. ft. and .6 oz./sq. ft. Tubing shall have a corrosion resistant, zinc-rich paint interior coating. ASTM Specifications: A- 315, A-500, A-513, E-8. All support posts shall have a finished grade marker. Tubing shall have the following properties:

- Tensile strength shall be 55,000 psi.
- Yield strength shall be 50,000 psi.
- % Elongation in 2 inches: 25
- Modulus of Elasticity: 25 x 106 psi
- Coated with Super Durable Polyester Powder Coating.

## Activo® Bambino™

### Arches and Posts:

Arches & Post shall be fabricated of 3-1/2 in. outside diameter, 13 gauge galvanized steel tubing. Tubing shall be cold rolled, electric resistance welded tubing. Tubing shall be triple coated for maximum exterior protection: a hot-dipped Flo-Coat® uniform zinc galvanized coating, a chromate conversion coating and a clear polymer coating. Galvanized exterior coating weight shall be within the range of .4 oz./sq. ft. and .6 oz./sq. ft. Tubing shall have a corrosion resistant, zinc-rich paint interior coating. ASTM Specifications: A- 315, A-500, A-513, E-8. All support posts shall have a finished grade marker. Tubing shall have the following properties:

- Tensile strength shall be 55,000 psi.
- Yield strength shall be 50,000 psi.
- % Elongation in 2 inches: 25
- Modulus of Elasticity: 25 x 106 psi
- Coated with Super Durable Polyester Powder Coating.

## Playmakers®

### 5" Steel Tubing:

Tubing shall be cold rolled, electric resistance welded tubing. Tubing shall be triple coated for maximum exterior

protection: a hot-dipped Flo-Coat® uniform zinc galvanized coating, a chromate conversion coating and a clear polymer coating. Galvanized exterior coating weight shall be within the range of .4 oz./sq. ft. and .6 oz./sq. ft. Tubing shall have a corrosion resistant, zinc-rich paint interior coating. ASTM Specifications: A- 315, A-500, A-513, E-8. All support posts shall have a finished grade marker. Tubing shall have the following properties:

- Tensile strength shall be 55,000 psi.
- Yield strength shall be 50,000 psi.
- % Elongation in 2 inches: 25
- Modulus of Elasticity: 25 x 106 psi
- Coated with Super Durable Polyester Powder Coating.

### Aluminum Tubing:

5" Aluminum Playmaker posts are manufactured from 6005-T5 extruded tubing conforming to ASTM B-221. Tubing shall have a .125 wall thickness and the following properties: - Tensile strength shall be 38,000 psi.

- Yield strength shall be 35,000 psi.
- % Elongation in 2 inches: 10
- Modulus of Elasticity: 10 x 106 psi
- Coated with Super Durable Polyester Powder Coating.

## Challengers®

### 3-1/2" Steel Tubing:

Post shall be fabricated of 3-1/2 in. outside diameter, 13 gauge galvanized steel tubing. Tubing shall be cold rolled, electric resistance welded tubing. Tubing shall be triple coated for maximum exterior protection: a hot-dipped Flo-Coat® uniform zinc galvanized coating, a chromate conversion coating and a clear polymer coating. Galvanized exterior coating weight shall be within the range of .4 oz./sq. ft. and .6 oz./sq. ft. Tubing shall have a corrosion resistant, zinc-rich paint interior coating. ASTM Specifications: A-315, A-500, A-513, E-8. All support posts shall have a finished grade marker. Tubing shall have the following properties:

- Tensile strength shall be 55,000 psi.
- Yield strength shall be 50,000 psi.
- % Elongation in 2 inches: 25
- Modulus of Elasticity: 25 x 106 psi
- Coated with Super Durable Polyester Powder Coating.

### **3.5in OD x 160in STEEL POST W/ RIVETED CAP**

#### ***3.5 in. Support Post - 13 ga.***

Shall be fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

#### ***Crown/Post/End Cap***

Shall be cast of high strength Almag 35 (535.0-F) aluminum alloy. Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi. Each crown and post cap shall be fastened to the end of the tubing with drive rivets. Plastic post end caps and plastic rivets are unacceptable. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

#### ***Drive Rivet***

The rivet shall be fabricated of 2117 aluminum alloy. The pin shall be fabricated of 7075 aluminum alloy.

#### ***Steel Tubing - 3.5 in. OD, 13 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

### **NAUTICAL SAIL**

#### ***Frame - Sail***

An all-welded assembly fabricated of 14 gauge and 11 gauge hot rolled flat steel plate. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

#### ***Post - Sail***

Shall be an all welded assembly fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing; 1.66 in. outside diameter, 13 gauge galvanized steel tubing; 8 gauge galvanized hot rolled flat steel; and 11 gauge galvanized hot rolled flat steel. (See Tubing) Finished with a baked on superdurable polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

#### ***Crown/Post/End Cap***

Shall be cast of high strength Almag 35 (535.0-F) aluminum alloy. Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi. Each crown and post cap shall be fastened to the end of the tubing with drive rivets. Plastic post end caps and plastic rivets are unacceptable. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

#### ***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

#### ***Steel Tubing - 1.66 in. OD, 13 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

#### ***Steel Tubing - 3.5 in. OD, 13 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

### **SQUARE COATED DECK ASSEMBLY**

#### ***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps)

Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish)  
Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***Coated Deck / Platform - 12 ga***

Shall be an all welded assembly fabricated of 12 gauge hot rolled, pickled and oiled flat steel. Deck surface and sides shall be die formed from a single sheet of 12 gauge hot rolled, pickled and oiled flat steel. Deck surface shall have .50 in x 1.00 in. slots. Entire weldment shall have a protective coating. (See Coated Finish)

## **1/2 HEX COATED DECK ASSEMBLY**

***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps)  
Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish)  
Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***Coated Deck / Platform - 12 ga***

Shall be an all welded assembly fabricated of 12 gauge hot rolled, pickled and oiled flat steel. Deck surface and sides shall be die formed from a single sheet of 12 gauge hot rolled, pickled and oiled flat steel. Deck surface shall have .50 in x 1.00 in. slots. Entire weldment shall have a protective coating. (See Coated Finish)

## **COATED DECK TO DECK CONNECTION KIT**

***Hardware Reference***

See General Hardware Spec .

## **TRANSFER STATION (36IN DECK)**

***Transfer Deck Support Post***

Shall be fabricated of 2.375 in. outside diameter, 12 gauge galvanized steel tubing; and .188 in. hot rolled flat steel. (See Tubing.) Finished with a baked on polyester powder coating. (See Superdurable Powder Coat Finish)

***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps)  
Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish)  
Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***Accessible Stair Guardrail***

Shall be an all welded assembly fabricated of 1.029 in. outside diameter, 14 gauge galvanized steel tubing and 1.315 in. outside diameter, 14 gauge galvanized steel tubing. (See Tubing.) Finished with a baked on polyester powder coating or PrismCoat. (See PrismCoat / Polyester Powder Coat Finish) All

tube to tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially flattened tubing weld connections are not acceptable.

***Grabbit***

Shall be an all welded assembly fabricated of 2.375 in. outside diameter, 12 gauge galvanized steel tubing; 1.029 in. outside diameter, 14 gauge galvanized steel tubing; and .188 in. zinc plated, hot rolled, pickled and oiled flat steel. (See Tubing) Finished with a baked on polyester powder coating or PrismCoat. (See PrismCoat / Polyester Powder Coat Finish)

***Coated Transfer Deck***

Shall be an all welded assembly die formed from a single sheet of 12 gauge hot rolled, pickled and oiled flat steel. Entire deck weldment shall have a protective coating. (See Coated Finish)

***Coated Transfer Stair***

Shall be an all welded assembly fabricated of 14 gauge hot rolled, pickled and oiled flat steel for the step treads, and 11 gauge hot rolled, pickled and oiled flat steel for the stringers. Entire stair weldment shall have a protective coating. (See Coated Finish)

***Steel Tubing - 1.029 in. OD, 14 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

***Steel Tubing - 1.315 in. OD, 14 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

***Steel Tubing - 2.375 in. OD, 12 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

**APPROACH STEP FOR TRANSFER STATION**

***Kickplate / Nose Bracket***

Shall be fabricated from a single sheet of 14 gauge galvanized sheet steel. Shall have a minimum G60 galvanizing and regular spangle commercial quality. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***2.375 in. Support Post with Plate***

Shall be fabricated of 2.375 in. outside diameter, 12 gauge galvanized steel tubing; and .125 in. zinc plated, hot rolled flat steel. (See Tubing) Finished with a baked on polyester powder coating or PrismCoat. (See PrismCoat / Polyester Powder Coat Finish)

***Approach Step***

Approach step shall be an all-welded assembly fabricated of 11 gauge and 14 gauge hot rolled, pickled and oiled flat steel. Approach step surface and sides shall be die-formed from a single sheet of 12 gauge hot rolled, pickled and oiled flat steel. . Entire deck weldment shall have a protective coating. (See Coated Finish)

***Steel Tubing - 2.375 in. OD, 12 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

**SLIDE- NUVO 360 SPIRAL SLIDE - SERPENT**

***Spiral Slide Barrier (13 ga)***

Shall be an all welded assembly fabricated of 1.66 in. outside diameter, 13 gauge galvanized steel tubing, 1.029 in. outside diameter, 14 gauge galvanized steel tubing, and 14 gauge zinc plated steel . (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Fiberglass - Sign***

Sign is a solid one-piece panel with all copy and graphics embedded in the panel. Panel is manufactured out of fiberglass-reinforced plastic or equivalent with a non-yellowing, R-70 clear resin (or UV stabilized, acrylic-modified polyester resin) reinforced with high solubility, chopped strand fiberglass mat so that the index of refraction ensures total clarity of color, copy and graphics. Glass fibers will not be readily discernible on face. Material will have a glass content of no less than 28% of the total weight. Material will have an ambient temperature range of -65 to 350 degrees F. Material will have a min. barcol hardness of 50, tensile strength of 12,000 PSI, compressive strength of 20,000 PSI, and a flexural strength of 18,000 PSI. Minimum impact of the material is 6 ft. LBS. / in. Notch with a fire resistance of 500 degrees F. Material will not be permanently defaced by steam, acids, aromatics, scratching, inks, or paints and will be readily wiped clean with paint remover and solvents without affecting the appearance or legibility of the sign finish or graphics. Material will be opaque or translucent with a semi-gloss or matte finish. Panel edges will not be crazed or cracked, and the edge finish will be smooth, clean, and neat. Panel will be absolutely flat. Material will be warranted for a period of 10 years against chipping, delaminating, and fading.

***Spiral Slide Exit Support Post (2-3/8")***

Shall be an all welded assembly fabricated of 2.38 in. outside diameter, 12 gauge galvanized steel tubing, and 11 gauge black sheet steel (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Coated Deck / Platform (Black Steel) - PVC***

Shall be an all welded assembly fabricated of 12 gauge black sheet steel and 14 gauge black sheet steel. Deck surface and sides shall be die formed from a single sheet of 12 gauge black sheet steel. Deck surface shall have .33 in. (9mm) diameter x 1 in. (26 mm) long perforated slots. Entire weldment shall have a protective coating. (See Coated Finish)

***Spiral Slide Exit Support Leg***

Shall be an all welded assembly fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing, and 11 gauge zinc plated steel. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Steel Tubing - 1.029 in. OD, 14 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

***Steel Tubing - 1.66 in. OD, 13 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

**SLITHER SLIDE ENTRY/EXIT (NAUTICAL THEME)*****3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish)

Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***Connector / Adapter - 535 Almag***

Shall be cast of high strength Almag 35 (535.0-F) aluminum alloy. (See Cast Almag Clamps) Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)



***Exit Support Post - 3.5 in. or 2.38 in.***

Shall be an all welded assembly fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing OR 2.38 in. outside diameter x 12 gauge galvanized steel tubing, and 11 gauge zinc plated hot rolled flat steel. (See Tubing) Finished with a baked on polyester powder coating. (See SuperDurable Polyester Powder Coat Finish) ASTM Specifications: A-36,

***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

***Rotomolded Slide Section***

Shall be rotationally molded from linear low density polyethylene and 1.315 inch outside diameter x 14 gauge galvanized steel tubing inserted. (See Steel Tubing) (See Rotationally Molded Plastic Parts) Dry-blended or molded-in color resins are not acceptable.

***Steel Tubing - 1.315 in. OD, 14 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

***Steel Tubing - 3.5 in. OD, 13 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

**SLITHER SLIDE 2.0 (RIGHT SECTION)**

***Rotomolded Slide Section***

Shall be rotationally molded from linear low density polyethylene and 1.315 inch outside diameter x 14 gauge galvanized steel tubing inserted. (See Steel Tubing) (See Rotationally Molded Plastic Parts) Dry-blended or molded-in color resins are not acceptable.

***Steel Tubing - 1.315 in. OD, 14 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

**PORTHOLE PANEL (NAUTICAL THEME)**

***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***Connector - reg 319 aluminum***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

***Clear Polycarbonate / Lexan -.188"***

Shall be machined from a sheet of .188 in. clear polycarbonate with UV resistant properties. Ultimate tensile strength is 9,900 p.s.i. Yield tensile strength is 9,000 p.s.i.

***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

## **BRIG PANEL (NAUTICAL THEME)**

### ***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

### ***Connector - reg 319 aluminum***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

### ***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

## **CANNON PANEL (NAUTICAL THEME) (DECK LEVEL)**

### ***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

### ***Connector - reg 319 aluminum***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

### ***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

### ***Clear Polycarbonate / Lexan -.188"***

Shall be machined from a sheet of .188 in. clear polycarbonate with UV resistant properties. Ultimate tensile strength is 9,900 p.s.i. Yield tensile strength is 9,000 p.s.i.

***Rotomolded Component***

Shall be rotationally molded from linear low density polyethylene. (See Rotationally Molded Plastic Parts) Dry-blended or molded-in color resins are not acceptable. Threaded inserts may be molded into the plastic to provide attachment points.

**SUNKEN TREASURE HUNT (GROUND LEVEL) (NAUTICAL THEME)*****3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***Connector - reg 319 aluminum***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

***Casting - 319 Alum.***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

***Fiberglass - Sign***

Sign is a solid one-piece panel with all copy and graphics embedded in the panel. Panel is manufactured out of fiberglass-reinforced plastic or equivalent with a non-yellowing, R-70 clear resin (or UV stabilized, acrylic-modified polyester resin) reinforced with high solubility, chopped strand fiberglass mat so that the index of refraction ensures total clarity of color, copy and graphics. Glass fibers will not be readily discernible on face. Material will have a glass content of no less than 28% of the total weight. Material will have an ambient temperature range of -65 to 350 degrees F. Material will have a min. barcol hardness of 50, tensile strength of 12,000 PSI, compressive strength of 20,000 PSI, and a flexural strength of 18,000 PSI. Minimum impact of the material is 6 ft. LBS. / in. Notch with a fire resistance of 500 degrees F. Material will not be permanently defaced by steam, acids, aromatics, scratching, inks, or paints and will be readily wiped clean with paint remover and solvents without affecting the appearance or legibility of the sign finish or graphics. Material will be opaque or translucent with a semi-gloss or matte finish. Panel edges will not be crazed or cracked, and the edge finish will be smooth, clean, and neat. Panel will be absolutely flat. Material will be warrantied for a period of 10 years against chipping, delaminating, and fading.

***Plastic Panel - .5 in.***

Shall be fabricated of .50 in. (12 mm) high density sheet polyethylene. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact), D-746 (Brittleness), D-1525 (Vicat Softening Point).

***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

## **ACCESSIBLE NAUTICAL STEERING WHEEL PANEL**

### ***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

### ***Connector - reg 319 aluminum***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

### ***Shaft - .25" HRPO - 303 SS***

Shall be an all welded assembly fabricated of 303 stainless steel (Tensile Strength: 90,000 p.s.i. and a Yield Strength: 40,000 p.s.i.); and .25" hot rolled pickled and oiled flat steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

### ***Shaft - 7 Ga. HRPO - 1018 CRS***

Shall be an all welded assembly fabricated of 1018 cold rolled steel (Tensile Strength: 58,000 - 64,000 p.s.i. and a Yield Strength: 32,000 - 54,000 p.s.i.); and 7 gauge hot rolled pickled and oiled flat steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

### ***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

### ***Rotomolded Component***

Shall be rotationally molded from linear low density polyethylene. (See Rotationally Molded Plastic Parts) Dry-blended or molded-in color resins are not acceptable. Threaded inserts may be molded into the plastic to provide attachment points.

## **30 IN DECK TO DECK CLIMBER**

### ***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

### ***Coated Climber Panel (small holes)***

Climber panel shall be an all welded assembly fabricated from 11 gauge hot rolled, pickled and oiled flat steel and 14 gauge hot rolled, pickled and oiled flat steel. Panel surface shall be die-formed from a single sheet of 11 gauge hot rolled, pickled and oiled flat steel. Climber panel surface shall have .34 in. (9 mm) diameter perforated holes. Entire Climber panel weldment shall have a protective coating. (See Coated Finish)

***Barrier Gate - Round Tube -Upper (7 Gauge Tab)***

Shall be fabricated of 1.315 in. outside diameter, 14 gauge galvanized steel tubing and 7 gauge hot rolled, pickled and oiled flat steel. (See Tubing) All tube to tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially flattened tube weld connections are not acceptable. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Steel Tubing - 1.315 in. OD, 14 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

**48in SINGLE FLEX TREAD*****3.5 in. Die Cast Alloy Clamp (413)***

Shall be die cast of high strength 413 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***Handhold***

Shall be made of DynaFlex G7960, Durometer 60A.

***Bracket - 12 Ga. Galvanized Steel***

Shall be fabricated of 12 gauge galvanized flat steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Barrier - 1.315 in. O.D.***

Shall be an all welded assembly fabricated of 1.315 in. outside diameter, 14 gauge galvanized steel tubing. All tube to tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially flattened tube weld connections are not acceptable. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Mat - Rubber***

Shall be made from styrene butadiene rubber. With 2 piles of polyester reinforcement. A thickness of 0.38 inch. A maximum tension of 220 pounds per inch width or higher. Cover on both side of reinforcement.

***Plate - 7 Gauge (Zinc Plated Black Steel)***

Shall be fabricated from 7 gauge zinc plated black sheet steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Bumper***

Shall be fabricated of DynaFlex G7960, Durometer 60A.

***Bracket - 7 Gauge Black Sheet Steel***

Shall be fabricated from 7 gauge black sheet steel. Finished with a baked on polyester powder coating (See Superdurable Polyester Powder Coat Finish).

***Plate - 8 Gauge (Black Steel)***

Shall be fabricated from 8 gauge zinc plated black sheet steel. Finished with a baked on polyester powder coating (See Superdurable Polyester Powder Coat Finish).

***Anchor Frame***

Shall be an all-welded assembly fabricated of 1.90 in. outside diameter, 11 gauge galvanized steel tubing (See Tubing). Finished with a baked on polyester powder coating (See Superdurable Polyester Powder Coat Finish).

## **NAUTICAL BOW (36in DK)**

### ***Casting - 319 Alum.***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

### ***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish)

Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

### ***Connector - reg 319 aluminum***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

### ***Bracket - 12 ga.***

Shall be fabricated of 12 gauge hot rolled flat steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

### ***Bracket - 1/2", 3/8" hrpo***

Shall be an all welded assembly fabricated of 0.25 in. hot rolled pickled and oiled flat steel; and .375 in. hot rolled pickled and oiled flat steel. (See Tubing) Finished with a baked on polyester powder coat. (See Superdurable Polyester Powder Coat Finish)

### ***Barrier - 1.029" x 14 gauge - 7 & 14 gauge HRPO***

Shall be an all welded assembly fabricated of 1.029 in. outside diameter, 14 gauge galvanized steel tubing, 7 gauge and 14 gauge. hot rolled pickled and oiled flat steel. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

### ***Anchor Post with Plate***

Shall be an all welded assembly fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing; and .25 in. hot rolled flat steel plate. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

### ***Anchor - Climber***

Shall be an all welded assembly fabricated of 1.315 in. outside diameter, 14 gauge galvanized steel tubing; and .5 in. hot rolled, pickled, and oiled flat steel. (See Tubing) Finished with a baked on polyester powder coating or PrismCoat. (See PrismCoat / Polyester Powder Coat Finish)

### ***Bushing - Polyethylene***

Material shall be U.H.M.W. polyethylene. Color shall be natural.

### ***Fiberglass - Sign***

Sign is a solid one-piece panel with all copy and graphics embedded in the panel. Panel is manufactured out of fiberglass-reinforced plastic or equivalent with a non-yellowing, R-70 clear resin (or UV stabilized,

acrylic-modified polyester resin) reinforced with high solubility, chopped strand fiberglass mat so that the index of refraction ensures total clarity of color, copy and graphics. Glass fibers will not be readily discernible on face. Material will have a glass content of no less than 28% of the total weight. Material will have an ambient temperature range of -65 to 350 degrees F. Material will have a min. barcol hardness of 50, tensile strength of 12,000 PSI, compressive strength of 20,000 PSI, and a flexural strength of 18,000 PSI. Minimum impact of the material is 6 ft. LBS. / in. Notch with a fire resistance of 500 degrees F. Material will not be permanently defaced by steam, acids, aromatics, scratching, inks, or paints and will be readily wiped clean with paint remover and solvents without affecting the appearance or legibility of the sign finish or graphics. Material will be opaque or translucent with a semi-gloss or matte finish. Panel edges will not be crazed or cracked, and the edge finish will be smooth, clean, and neat. Panel will be absolutely flat. Material will be warranted for a period of 10 years against chipping, delaminating, and fading.

***16 mm Net / Rope w/ crimp connectors***

Shall be made of polyester-coated (polyamid yarns) steel cables. The polyester is abrasion-resistant and color-fast to UV light. The internal steel wires are drawn galvanized. The breaking load of the net is 8.84 ksi (39.34 kN). The rope to rope connecting castings are die-cast from EN-AC-44100 aluminum alloy with a tensile strength of 22 ksi. The ferrules are manufactured of 5051A aluminum alloy with a tensile strength of 26 ksi. The net is completely assembled in a configuration ready for attachment to the frame.

***Support Post - 3.5" OD x 13 Ga. w/ .25" HRPO plate***

Shall be an all welded assembly fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing; and zinc plated .25" hot rolled pickled and oiled flat steel. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Shaft - .25" HRPO - 303 SS***

Shall be an all welded assembly fabricated of 303 stainless steel (Tensile Strength: 90,000 p.s.i. and a Yield Strength: 40,000 p.s.i.); and .25" hot rolled pickled and oiled flat steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Shaft - 7 Ga. HRPO - 1018 CRS***

Shall be an all welded assembly fabricated of 1018 cold rolled steel (Tensile Strength: 58,000 - 64,000 p.s.i. and a Yield Strength: 32,000 - 54,000 p.s.i.); and 7 gauge hot rolled pickled and oiled flat steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

***Rotomolded Component***

Shall be rotationally molded from linear low density polyethylene. (See Rotationally Molded Plastic Parts) Dry-blended or molded-in color resins are not acceptable. Threaded inserts may be molded into the plastic to provide attachment points.

***Coated Platform - .34" Holes***

Shall be an all welded assembly fabricated of 12 gauge hot rolled, pickled and oiled flat steel. Deck surface and sides shall be die formed from a single sheet of 12 gauge hot rolled, pickled and oiled flat steel. Deck surface shall have .34 in. (8.5 mm) diameter perforated holes. Entire weldment shall have a protective coating. (See Coated Finish)

***Steel Tubing - 1.029 in. OD, 14 ga.***



Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

***Steel Tubing - 1.315 in. OD, 14 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

***Steel Tubing - 3.5 in. OD, 13 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

**NAUTICAL BOW (36in DK)**

***Casting - 319 Alum.***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***Connector - reg 319 aluminum***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

***Bracket - 12 ga.***

Shall be fabricated of 12 gauge hot rolled flat steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Bracket - 1/2", 3/8" hrpo***

Shall be an all welded assembly fabricated of 0.25 in. hot rolled pickled and oiled flat steel; and .375 in. hot rolled pickled and oiled flat steel. (See Tubing) Finished with a baked on polyester powder coat. (See Superdurable Polyester Powder Coat Finish)

***Barrier - 1.029" x 14 gauge - 7 & 14 gauge HRPO***

Shall be an all welded assembly fabricated of 1.029 in. outside diameter, 14 gauge galvanized steel tubing, 7 gauge and 14 gauge. hot rolled pickled and oiled flat steel. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Anchor Post with Plate***

Shall be an all welded assembly fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing; and .25 in. hot rolled flat steel plate. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Anchor - Climber***

Shall be an all welded assembly fabricated of 1.315 in. outside diameter, 14 gauge galvanized steel tubing; and .5 in. hot rolled, pickled, and oiled flat steel. (See Tubing) Finished with a baked on polyester powder coating or PrismCoat. (See PrismCoat / Polyester Powder Coat Finish)

***Bushing - Polyethylene***

Material shall be U.H.M.W. polyethylene. Color shall be natural.

***Fiberglass - Sign***

Sign is a solid one-piece panel with all copy and graphics embedded in the panel. Panel is manufactured out of fiberglass-reinforced plastic or equivalent with a non-yellowing, R-70 clear resin (or UV stabilized, acrylic-modified polyester resin) reinforced with high solubility, chopped strand fiberglass mat so that the index of refraction ensures total clarity of color, copy and graphics. Glass fibers will not be readily discernible on face. Material will have a glass content of no less than 28% of the total weight. Material will have an ambient temperature range of -65 to 350 degrees F. Material will have a min. barcol hardness of 50, tensile strength of 12,000 PSI, compressive strength of 20,000 PSI, and a flexural strength of 18,000 PSI. Minimum impact of the material is 6 ft. LBS. / in. Notch with a fire resistance of 500 degrees F. Material will not be permanently defaced by steam, acids, aromatics, scratching, inks, or paints and will be readily wiped clean with paint remover and solvents without affecting the appearance or legibility of the sign finish or graphics. Material will be opaque or translucent with a semi-gloss or matte finish. Panel edges will not be crazed or cracked, and the edge finish will be smooth, clean, and neat. Panel will be absolutely flat. Material will be warranted for a period of 10 years against chipping, delaminating, and fading.

***16 mm Net / Rope w/ crimp connectors***

Shall be made of polyester-coated (polyamid yarns) steel cables. The polyester is abrasion-resistant and color-fast to UV light. The internal steel wires are drawn galvanized. The breaking load of the net is 8.84 ksi (39.34 kN). The rope to rope connecting castings are die-cast from EN-AC-44100 aluminum alloy with a tensile strength of 22 ksi. The ferrules are manufactured of 5051A aluminum alloy with a tensile strength of 26 ksi. The net is completely assembled in a configuration ready for attachment to the frame.

***Support Post - 3.5" OD x 13 Ga. w/ .25" HRPO plate***

Shall be an all welded assembly fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing; and zinc plated .25" hot rolled pickled and oiled flat steel. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Shaft - .25" HRPO - 303 SS***

Shall be an all welded assembly fabricated of 303 stainless steel (Tensile Strength: 90,000 p.s.i. and a Yield Strength: 40,000 p.s.i.); and .25" hot rolled pickled and oiled flat steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Shaft - 7 Ga. HRPO - 1018 CRS***

Shall be an all welded assembly fabricated of 1018 cold rolled steel (Tensile Strength: 58,000 - 64,000 p.s.i. and a Yield Strength: 32,000 - 54,000 p.s.i.); and 7 gauge hot rolled pickled and oiled flat steel. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

***Rotomolded Component***

Shall be rotationally molded from linear low density polyethylene. (See Rotationally Molded Plastic Parts) Dry-blended or molded-in color resins are not acceptable. Threaded inserts may be molded into the plastic to provide attachment points.

***Coated Platform - .34" Holes***

Shall be an all welded assembly fabricated of 12 gauge hot rolled, pickled and oiled flat steel. Deck surface and sides shall be die formed from a single sheet of 12 gauge hot rolled, pickled and oiled flat

steel. Deck surface shall have .34 in. (8.5 mm) diameter perforated holes. Entire weldment shall have a protective coating. (See Coated Finish)

***Steel Tubing - 1.029 in. OD, 14 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

***Steel Tubing - 1.315 in. OD, 14 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

***Steel Tubing - 3.5 in. OD, 13 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

## **STERN CLIMBER**

***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***3.5 in. Narrow Clamp Band***

Shall be cast of high strength Almag 35 (535.0-F) aluminum alloy. (See Cast Almag Clamps) Finished with a 420 micro finish and a baked on polyester powder coating or PrismCoat. (See PrismCoat / Polyester Powder Coat Finish)

***Connector - reg 319 aluminum***

Cast of regular 319 (319.0-F) aluminum. Ultimate tensile strength shall be 27 ksi. Yield strength shall be 18 ksi. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

***Barrier Gate w/o plate***

Shall be fabricated of 1.315 in. outside diameter, 14 gauge galvanized steel tubing; 1.029 in. outside diameter, 14 gauge galvanized steel tubing; and .25 in. hot rolled, pickled and oiled flat steel. (See Tubing) All tube to tube weld connections shall be coped before welding to provide a clean look and the strongest joint possible. Flattened or partially flattened tube weld connections are not acceptable. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Frame - 1.315 OD x 14 ga.***

Shall be fabricated from 1.315 in. Outside diameter, 14 gauge galvanized steel tubing. (See Steel Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Frame - 1.315 x 14 ga, 1/4 in hrpo***

Shall be an all-welded assembly fabricated from 1.315 in. Outside diameter, 14 gauge galvanized steel tubing, and 1/4 in. hot rolled pickled and oiled flat steel. All steel tubing manufactured per ASTM: A-135 and A-500 and tested in accordance with ASTM E-8. Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Plastic Panel - .75 in.***

Shall be fabricated from colored marine grade, .75 in. high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural

Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

***Steel Tubing - 1.029 in. OD, 14 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

***Steel Tubing - 1.315 in. OD, 14 ga.***

Tensile strength shall be 75,000 psi. Yield strength shall be 60,000 psi.

**NAUTICAL CAPTAIN'S WHEEL FLAG (SAIL CONNECTOR)**

***Casting / Almag 35***

Shall be cast of high strength Almag 35 (535.0-F) aluminum alloy. Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi. Finished with a 420 micro finish and a baked on polyester powder coating or PrismCoat. (See PrismCoat / Polyester Powder Coat Finish)

***3.5 in. Die Cast Alloy Clamp***

Shall be die cast of high strength 380 aluminum alloy. Clamps shall be provided as hinged assemblies to facilitate structure assembly and an S-lap design to eliminate string entanglement. (See Die Cast Clamps) Finished with a shot blast and a powder coating. (See Superdurable Polyester Powder Coat Finish) Because a hinged clamp design provides the easiest and most flexible installation, clamps which incorporate a slip-through design or clamping devices that use a "bolt through" design are not acceptable. The use of two (2) piece steel half clamps are not acceptable due to poor weatherability and inherent rust problem.

***Plastic Activity Parts - .75 inch***

Shall be fabricated from colored marine grade, .75 in. (19 mm) high density polyethylene and machined. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact) D-746 (Brittleness), D-1525 (Softening Point).

**3.5in OD x 88in STEEL W/CAP (SURFACE MOUNT)**

***3.5 in. Support Post - surface mount***

Shall be fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing with a .38 in. flat steel surface mount plate. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Crown/Post/End Cap***

Shall be cast of high strength Almag 35 (535.0-F) aluminum alloy. Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi. Each crown and post cap shall be fastened to the end of the tubing with drive rivets. Plastic post end caps and plastic rivets are unacceptable. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

***Drive Rivet***

The rivet shall be fabricated of 2117 aluminum alloy. The pin shall be fabricated of 7075 aluminum alloy.

***Steel Tubing - 3.5 in. OD, 13 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

**3.5in OD x 100in STEEL POST W/ CAP (SURFACE MOUNT)**

***3.5 in. Support Post - surface mount***

Shall be fabricated of 3.5 in. outside diameter, 13 gauge galvanized steel tubing with a .38 in. flat steel surface mount plate. (See Tubing) Finished with a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish)

***Crown/Post/End Cap***

Shall be cast of high strength Almag 35 (535.0-F) aluminum alloy. Ultimate tensile strength shall be 40 ksi. Yield strength shall be 21 ksi. Each crown and post cap shall be fastened to the end of the tubing with drive rivets. Plastic post end caps and plastic rivets are unacceptable. Finished with a 420 micro finish and a baked on polyester powder coating. (See Superdurable Polyester Powder Coat Finish) ASTM Specifications: B-26. Federal Specifications: QQ-A-601.

***Drive Rivet***

The rivet shall be fabricated of 2117 aluminum alloy. The pin shall be fabricated of 7075 aluminum alloy.

***Steel Tubing - 3.5 in. OD, 13 ga.***

Tensile strength shall be 55,000 psi. Yield strength shall be 50,000 psi.

**ACCESSIBLE SWING SEAT w/SILVER SHIELD CHAIN TO 8ft TOP RAIL**

***Chain - 4/0 - galvanized - Silver shield***

Shall be 4/0 silver shield coated galvanized welded link chain. The chain links are low carbon 1008 steel. The working load limit for this chain is 670 lbs.

***Swing Seat - Accessible (Rubber Latch)***

Seat shall be rotationally molded from linear low density polyethylene. (See Rotationally Molded Plastic Parts) Dry-blended or molded-in color resins are not acceptable. Threaded inserts may be molded into the plastic to provide attachment points. Shall have a factory installed latching mechanism consisting of .38 in. styrene butadiene rubber, with 2 piles of polyester reinforcement and a max tension of 220 lbs per inch width or higher. Shall be ultraviolet (UV) stabilized. Meets FDA requirements. ASTM Specifications: D-1238 (Melt Index), D-1505 (Material Density), D-638 (Tensile Strength), D-648 (Heat Distortion Temperature) D-790 (Flexural Modulus), D-1693 and D-2561 (Environmental Stress Crack Resistance), D-2240 (Hardness), D-1822 (Tensile Impact), D-746 (Brittleness), D-1525 (Vicat Softening Point).. Shall contain a 3/8" stainless steel rod.

**BELT SEAT W/SILVER SHIELD CHAIN FOR 8ft TOP RAIL**

***Chain 4/0***

MEETS ASTM SPECIFICATION B633 FOR ELECTRODEPOSITED ZINC PLATING. SERVICE CONDITION CLASSIFICATION #1 (MILD). TYPE VI – AS PLATED WITHOUT SUPPLEMENTARY TREATMENTS. MINIMUM THICKNESS: 5 MICROMETERS (SC1). BRIGHT, SEMI BRIGHT, OR DULL LUSTER IS ACCEPTABLE.

***Swing Seat - belt***

Shall be fabricated from .5 in. (13 mm) thick ethylene propylene diene monomer with a T-301 full hard .020 in. (.51 mm) carbon steel insert. A triangular galvanized steel bracket and plate shall be secured to seat with galvanized rivets for chain attachments. Seat shall be slash-proof.

**INFANT SEAT W/SILVER SHIELD FOR 8ft TOP RAIL**

***Chain 4/0***

MEETS ASTM SPECIFICATION B633 FOR ELECTRODEPOSITED ZINC PLATING. SERVICE CONDITION CLASSIFICATION #1 (MILD). TYPE VI – AS PLATED WITHOUT SUPPLEMENTARY TREATMENTS. MINIMUM THICKNESS: 5 MICROMETERS (SC1). BRIGHT, SEMI BRIGHT, OR DULL LUSTER IS ACCEPTABLE.

***Swing Seat - Extra Tough Tot***

Shall be fabricated from .5 in. (13 mm) thick ethylene propylene diene monomer with a T-301 full hard .020 in. (.51 mm) carbon steel insert. A triangular galvanized steel bracket and plate shall be secured to seat with galvanized rivets for chain attachments. Seat shall be slash-proof.



## State Licensing Board for Contractors

This is to Certify that:

Pelican Playgrounds, LLC  
155 Robert Street  
Slidell, LA 70458

is duly licensed and entitled to practice the following classifications

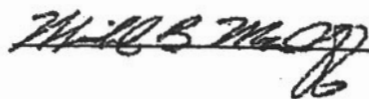
SPECIALTY: RECREATION & SPORTING FACILITIES & GOLF COURSES

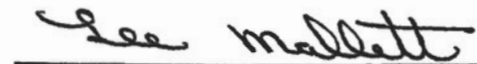


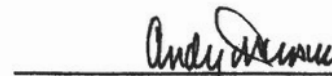
Witness our hand and seal of the Board dated,  
Baton Rouge, LA 4th day of August 2020

Expiration Date: August 4, 2021

License No: 70317

 Director

 Chairman

 Treasurer

This License Is Not Transferrable



# National Recreation and Park Association

Let it be known that

**MARIE BELLOWS**

has met the requirements of the standards set forth by the  
National Certification Board  
and is hereby granted certification as a



**Certified  
Playground  
Safety Inspector**

CHAIRPERSON

NRPA PRESIDENT AND CEO

December 14, 2020

DATE CERTIFIED

50215-124

CERTIFICATION NUMBER

January 01, 2024

EXPIRATION DATE

# NO FAULT **Safety Surface**



1-866-NFSPORT  
[www.nofault.com](http://www.nofault.com)

## Features & Characteristics

- Recycled / Environmentally Friendly
- Seamless & Accessible
- Porous & Slip Resistant
- Freeze / Thaw Resistant
- Customizable Designs
- Clean / Non-Toxic



## *No Fault Safety Surface for Playgrounds*

No Fault Safety Surface (NFSS) is comprised of the highest quality EPDM or TPV rubber granules blended with a polyurethane binder. NFSS is poured-in-place and professionally installed on site as a 2-layer system for playgrounds. The bottom impact absorbing layer is made of clean, recycled rubber buffing. The top decorative wear layer consists of high-quality EPDM or TPV rubber granules. The wear layer is available in a wide variety of color blends and provides the option to create fun theme shaped designs.

Utilizing our exclusive hand troweling and screed rod method, No Fault Safety Surface Playground System is engineered on site by our certified installation crew.

The complete No Fault Safety Surface System is designed to provide a resilient, porous, and seamless playground safety surface. It is the absolute best playground safety surface available for fall protection and ADA accessibility.

No Fault Sport Group provides coast-to-coast installation service to ensure consistent quality and premium customer service for all of our poured-in-place surfaces!

Fall Height Chart	
Depth	Fall Height
1.75"	4'
2.25"	5'
2.5"	6'
3"	7'
3.5"	8'
4.5"	9'
5"	10'
6.5"	12'

## Added Values

- Superior Customer Service
- Proven Durability
- IPEMA Certified
- ASTM, CPSC & LEED Compliant
- ADA Accessible
- Experienced Craftsmanship
- Factory Warranty
- Reduced Maintenance Cost
- Enhanced Safety

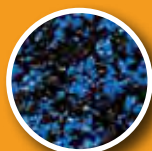
## Standard Color Blends



50% Tan  
50% Black



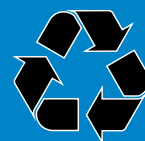
50% Terra Cotta  
50% Black



50% Blue  
50% Black



50% Green  
50% Black



To verify product certification  
visit [www.ipema.org](http://www.ipema.org)

# No Fault Safety Surface for Playgrounds

## Product Specification

All information contained within subject to change without notice

by No Fault, LLC  
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### POURED-IN-PLACE RUBBER (EPDM OR TPV) SURFACING FOR PLAYGROUNDS

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#### PART 1 – GENERAL

##### 1.01 WORK INCLUDED

This work includes furnishing and installing the No Fault Safety Surface. The surfacing Manufacturer/installer shall be responsible for all labor, materials, tools, and equipment to perform all work and services for the installation of the surface.

##### 1.02 DESCRIPTION OF SYSTEM & GENERAL CONDITIONS

No Fault Safety Surface shall be poured-in-place and trowelled to provide for a resilient, seamless rubber surface installed over the specified rigid base. No Fault Safety Surface is comprised of an SBR base mat and EPDM or TPV colored cap, with both layers being mixed with a non-flammable, non-shrinking, one part moisture cured polyurethane adhesive as recommended by the Manufacturer and capable of bonding to concrete, asphalt or compacted stone. No Fault Safety Surface shall be stable and slip resistant to comply with, meet or exceed all requirements set forth in the Americans with Disabilities Act (ADA), the American Society for Testing Materials (ASTM International) and the Consumer Product Safety Commission (CPSC) for manufactured Safety Surfaces as detailed below.

##### 1.03 QUALITY ASSURANCE

###### A. Test Results

1. Impact Attenuation - ASTM F1292-18: Surface system that is within the use zone of the surrounded playground equipment shall be tested in accordance with ASTM Specification F1292-18 and shall meet or exceed the performance requirements of ASTM F1292-18, CPSC and/or CSA Z614. Thus, surface system shall exhibit a head injury criterion (HIC) not exceeding 1000 and a value of acceleration recorded during an impact (g-max) not exceeding 200 from a height at or greater than the fall height of the installed play structure as shown on drawings.
2. Coefficient of Friction & Permeability - ASTM D2047
3. Surface Frictional Properties & Skid Resistance – ASTM E303
4. Flammability of Finished Floor Cover - ASTM D2859
5. Accessibility of Surface Systems – ASTM F1951
6. Tear Strength – ASTM D624 Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic
7. Tensile Strength – ASTM D412 Standard Test Methods for Vulcanized Rubber Elastomers and Thermoplastic Elastomers
8. Solar Reflective Index (SRI) – ASTM E1980 and ASTM E903
9. IPEMA Certification Required: International Play Equipment Manufacturers Association (IPEMA) provides a Third-Party Certification Service whereby a designated independent laboratory validates a surfacing manufacturer's certification of conformance to ASTM F1292-18, Standard Specification for Impact Attenuation Under and Around Playground Equipment. A list of Manufacturer's current validated products, their thickness and critical height may be viewed at [www.ipema.org](http://www.ipema.org).

###### B. Installer Qualifications

1. All materials under this section shall be installed by the Manufacturer or its Certified Installers. The playground surfacing installation shall not be performed by anyone other than the product Manufacturer or its Certified Installers.
2. The installation crew will include at least one member that has completed the OSHA 10 Hour Training course and received certification

###### C. Contractor Pre-Qualifications

1. All bidders must have a current Louisiana Contractor's License at or before the time of bid opening date.

# No Fault Safety Surface for Playgrounds

## Product Specification

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2. A list of twenty-five (25) surfacing projects completed with a similar product. List shall include names of project representatives and respective telephone numbers. At least five (5) of these projects must be at least five (5) years old. This list shall also contain projects which require the same level of difficulty, size of project, type of project, e.g. color transitions and special graphics.
3. All bidders must also submit Material Safety Data sheets (MSDS) and Product Data Sheets on all materials.
4. Insurance Requirements - All bidders must carry minimum insurance of:
  - a) \$1,000,000 General Liability Per Occurrence
  - b) \$2,000,000 General Aggregate
  - c) \$2,000,000 Products Completed Operations
  - d) \$5,000,000 Excess Liability
  - e) \$1,000,000 Workers Comp. & Employers Liability
  - f) \$1,000,000 Automobile Liability (any Auto)

### 1.04 SUBMITTALS

- A. One (1) original hard copy of the submittal package will be supplied with one (1) digital copy provided upon request.
- B. Manufacturer's descriptive data and installation instructions.
- C. Manufacturer's details showing depths of wear surface and sub-base materials, anchoring systems, and edge details.
- D. A list of all materials and components to be installed, including Manufacturer's name, storage requirements, and precautions, and shall include chemical composition and test results to which material has been subjected in compliance with these specifications.
- E. Test results to substantiate that the product meets or exceeds all ASTM & ADA requirements for each standard listed in Section 1.03 Quality Assurance. Test must be performed and certified by an independent laboratory.
- F. Copy of IPEMA Certification.
- G. Documentation of Contractor Pre-Qualification as stated in Section 1.03 Quality Assurance.
- H. Documentation of Insurance Requirements as stated in Section 1.03 Quality Assurance.
- I. Statement signed by the Manufacturer of the synthetic safety surfacing attesting that all materials under this section shall be installed by the Manufacturer or its Certified Installers.
- J. A listing of at least twenty-five (25) installations where products like those proposed for use have been installed and have been in successful service for a minimum period of three (3) years. This list shall include Owner or purchaser, address of installation, date of installation, contact person, and phone number.
- K. Upon request, a sample specimen of safety surface proposed for this project.
- L. Upon request, a list of all organizations and affiliations of the company offering the product(s).

### 1.05 DELIVERY, STORAGE and HANDLING:

Materials and equipment shall be delivered and/or stored in accordance with the Manufacturer's recommendations.

### 1.06 PROJECT SITE CONDITIONS:

- A. Synthetic safety surfacing shall be installed on a dry subsurface, with no prospect of rain within the initial drying period, at temperatures recommended by the Manufacturer.
- B. Installation in weather condition of extreme heat, temperatures less than 40 degrees (F), and/or high humidity may impact cure time, and/or the structural integrity of the final product. Immediate surroundings of the site shall be free of dust conditions and poor particulate air quality will impact the final surface look.
- C. The Manufacturer's installation manager shall reserve the right to control the project schedule installation based on such factor without penalty to No Fault, LLC.
- D. Safety surfacing shall be installed after the playground equipment is installed unless otherwise noted.
- E. The project manager or designated individual of playground equipment and sub-base installation shall coordinate Surface installation, with No Fault's local production manager and in accordance with No Fault's sub-base requirements.



# No Fault Safety Surface for Playgrounds

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### 1.07 WARRANTY:

Surfacing shall be guaranteed against defects in workmanship and material for a period of no less than five (5) years or as specified and agreed upon per contract.

## PART 2 – PRODUCTS

Product shall be **No Fault Safety Surface** as manufactured and sold by No Fault, LLC. No Fault Safety Surface shall consist of synthetic poured-in-place safety surfacing meeting the requirements of this specification and comprised of SBR, EPDM or TPV, and polyurethane binder. It shall be manufactured and installed by No Fault, LLC (866-637-7678 [www.nofault.com](http://www.nofault.com)) and its certified installation crews.

**NOTE** – Other products will be allowed only if prior approved as per Section 2.02 Product Substitutions & Approved Equals

### 2.01 MATERIALS

#### A. Polyurethane Binder

1. Polyurethane Binder for safety surfacing shall be specifically designed for use with rubber granule material for outdoor installations.
2. No toluene diphenyl isocyanate (TDI) shall be used.
3. No filler materials shall be used in urethane such as plasticizers and the catalyzing agent shall contain no heavy metals.
4. Weight of polyurethane shall be no less than 8.5 lbs/gal (1.02 Kg/1) and no more than 9.5 lbs/gal (1.14 Kg/1)
5. COLOR TINTED BINDER WILL NOT BE ALLOWED.
6. Aromatic or Aliphatic Polyurethane Binder may be used.

#### B. SBR (Impact Layer)

1. Only 100% shredded styrene butadiene rubber may be used
2. Strands of SBR may vary from 0.5 mm – 2.0 mm in thickness by 3.0 mm – 20 mm in length.

#### C. EPDM (Wear Surface)

1. EPDM particles shall meet requirements of ASTM D-412 and CSA Z614-98 for tensile strength and elongation; and ASTM D 2240 (Shore A) hardness of 55-65, not less than 26 percent rubber hydrocarbons.
2. EPDM shall be peroxide cured with an EPDM content of 26% and shall include a processing aid to prevent hardness with 26% poly content to maintain dynamic testing characteristics, weatherization, and UV stability.
3. Size of rubber particles shall be not less than 1.0 mm, or greater than 3.0 mm across with a minimum EPDM content of 25% by weight and certified letter from Manufacturer stating this content. All rubber shall remain consistent in gradation and size.
4. STRAND, SHAVED, CHIPPED OR SHREDDED RUBBER IS NOT ACCEPTABLE IN THE POURED CAP.

#### D. TPV (Wear Surface)

1. TPV material shall be angular granules with a Shore A Hardness of 65A  $\pm$ , a Tensile Strength equal to or greater than 3.0 Mpa, and an Elongation at Break greater than 400%.
2. Size of TPV particles shall be not less than 1.00 mm, or greater than 4.0 mm across.
3. STRAND, SHAVED, CHIPPED OR SHREDDED MATERIAL OF ANY TYPE IS NOT ACCEPTABLE.

### 2.02 PRODUCT SUBSTITUTIONS & APPROVED EQUALS

- A. All product substitutions must be submitted for preapproval at least fourteen (14) days prior to bid opening date. A complete submittal package, as outlined in Section 1.04 Submittals, must be provided before a substitute product will be considered for preapproval. If the product submitted for preapproval cannot meet all requirements of the submittal package, it will not be considered.
- B. Once all products submitted for substitution have been reviewed, a list of the approved substitutes will be circulated and made available to bidders.

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### PART 3 – EXECUTION

#### 3.01 SUB-BASE REQUIREMENTS

- A. Owner or Owner's representative shall provide sub-surface in accordance with Manufacturer's recommendation for the project location and application.
- B. The base shall be concrete, asphalt, or compacted stone installed in accordance with Manufacturer's written specifications.
- C. The base shall have the specific minimum slope (2%) and shall vary no more than 1/8" when measured in any direction with a 10'-foot straight edge. Verify that sub-surfacing drainage, if required, has been installed to provide positive drainage.
- D. Tolerance of concrete or bituminous subsurface shall be within 1/8 inch (3.0 mm) in 10 feet (3050 mm). Tolerance of aggregate subsurface shall be within 3/8 inch (10mm) in 10 ft (3050 mm).
- E. Verify that aggregate subsurface has been fully compacted to 95 percent or greater.
- F. Asphalt base shall be allowed to cure a minimum of fourteen (14) days and new concrete shall be allowed to cure a minimum of seven (7) days prior to commencement of surfacing.
- G. All sub-bases shall be approved by Owner or Owner's Representative and Manufacturer prior to installation of the safety surface.
- H. Alternate sub-base material must have prior approval from Manufacturer.

#### 3.02 PREPARATION

- A. Scheduling – No Fault Safety Surface shall be installed after other sub-contractors are complete, the area is free from pedestrian traffic, and under the conditions as outlined in Section 1.06 Project Site Conditions.
- B. Cleaning - The entire subsurface shall be clean, dry, and free from any foreign and loose material.

#### 3.03 INSTALLATION

- A. SBR Cushion Layer
  - 1. Polyurethane binder and SBR will be mixed on site in a rotating tumbler to ensure components are thoroughly mixed and are in accordance with manufactures recommendations.
  - 2. Binder shall be not less than 14 percent (14%), nor more than 22 percent (22%), of the total weight of rubber, and shall provide 100 percent (100%) coating of the particles.
  - 3. The SBR and binder mixture will then be poured-in-place by means of screeding, and hand-trowelled to maintain a seamless application.
  - 4. Installation method shall use a measured screed rod 1/16" thicker than the required depth.
  - 5. Whenever practical, SBR cushion layer shall be installed in one continuous pour on the same day. When a second pour is required, fully coat the edge of the previous work with polyurethane binder to ensure 100 percent bond with new work. Apply adhesive in small quantities so that new SBR mixture can be placed before the adhesive dries.
  - 6. Total depth of the safety surface system throughout the playground equipment use zone shall be as required to meet the applicable critical fall height requirements of the equipment or as specified by Owner or Architect. Therefore, thickness of the SBR cushion layer will be total depth less 3/8" or 1/2" (minimum required thickness of the EPDM or TPV wear course layer).
  - 7. Edges - Surface edges shall be flush with edge of adjacent area or tapered to provide safe transition. When connecting to a concrete curb or border the hardened edge shall be primed with adhesive.
  - 8. The SBR cushion layer surface shall be porous.
- B. EPDM or TPV Wear Course Layer
  - 1. Polyurethane binder and EPDM or TPV will be mixed on site in a rotating tumbler to ensure components are thoroughly mixed and are in accordance with manufactures recommendations.
  - 2. The polyurethane binder shall be not less than 20 percent (20%) of total weight of rubber used in the wear surface and shall provide 100 percent (100%) coating of the particles.
  - 3. The EPDM or TPV and binder mixture will then be poured-in-place by means of screeding, and hand-trowelled to maintain a seamless application.

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4. Installation method shall use a measured screed rod 1/16" thicker than the required depth.
5. The thickness of the wear layer will be no less than 3/8" or 1/2".
6. The wear layer will have a minimum weight of 2.2 pounds per square foot for 3/8" depth and 2.9 pounds per square foot for 1/2" depth.
7. The wear layer shall be porous.
8. If graphic designs and color transitions are used, they shall be full wear course depth. Color(s) to be determined by architect.
9. Edges - Surface edges shall be flush with edge of adjacent area or tapered to provide safe transition.
10. Large Areas - All areas more than 2,000 sq. ft. or that require adjacent color pours will have a cold joint or seam due to the nature of the installation process. Although seldom visible, large areas or adjacent colors require the No Fault Safety Surface material to be installed on separate days.
11. Color:
  - a. Standard Colors include: Terra Cotta Red, Blue, Green or Tan.
  - b. Standard color blend includes standard color mixed with 50% Black
  - c. Light Colors & Accent Colors include: Lt. Blue, Lt. Green, Teal, Eggshell, Tan, Gray, Purple, Yellow, Orange & Bright Red
  - d. Aliphatic binder is recommended for Light Colors and Accent Colors to prevent ambering
  - e. Color selection to be approved by the architect or owner during the submittal process, unless otherwise stated on plans.

### 3.04 PROTECTION

- A. The synthetic safety surface shall be allowed to fully cure in accordance with Manufacturer's instructions. The surface shall be protected by the Owner from all pedestrian traffic during the curing period of 48 to 72 hours after surface installation is complete, or as instructed by the Manufacturer.
- B. Surface installation crew shall be responsible for the protection of No Fault Safety Surface during the installation process. Owner or General Contractor shall be responsible for the protection of the surface during the crew's off hours and during the curing period upon completion of the installation.

### 3.05 CLEAN UP

- A. Manufacturer's installers shall not leave adhesive on adjacent surface or play equipment. Spills of excess adhesive shall be promptly cleaned.
- B. Manufacturer's installers shall properly dispose of all material and packing waste before leaving the job site.
- C. Owner or contractor shall be responsible for supplying a dumpster at job site for all waste associated with installation of the safety surface.

**FOR INDIVIDUAL PROJECT SPECIFICATIONS OR OTHER INFORMATION  
INCLUDING FALL HEIGHT REQUIREMENTS PLEASE CONTACT**

**NO FAULT, LLC**  
**866-637-7678 (toll free)**  
**[WWW.NOFAULT.COM](http://WWW.NOFAULT.COM)**