

ADDENDUM

ADDENDUM NO: 01

BID PACKAGE NO: N/A

PROJECT: MSD Warren Township ECC Playground Upgrades

PROJECT NO: 2023049

DATE: 04/01/2023

BY: Emery H. M. Hunt

This Addendum is issued in accordance with the provisions of "The General Conditions of the Contract for Construction," Article 1, "Contract Documents" and becomes a part of the Contract Documents as provided therein. This Addendum includes:

ATTACHMENTS

CSO Addendum No.1 Cover Page, pages 1 through 2
Prebid Meeting Agenda
Prebid Meeting Sign-in sheet
Section 11 68 00

PART 1 - GENERAL INFORMATION

- 1.1 Prebid Meeting Agenda
 - A. See attached.
- 1.2 Prebid Meeting Sign-in Sheet
 - A. See attached.

PART 2 - BIDDING REQUIREMENTS

- 2.1 NOT USED

PART 3 - SPECIFICATIONS

- 3.1 11 68 00 PLAYGROUND EQUIPMENT
 - A. Additional products have been Approved as Equal under section 2.1.A Products.

PART 4 - DRAWINGS

- 4.1 N/A

PART 5 - QUESTIONS AND ANSWERS

- 5.1 Q1: Is the equipment shown final or is the project accepting requests for equals?

A1: The shown equipment is for Basis-of-Design intent and is typical of the size and play experience we are expecting. Interested vendors are welcome to submit alternate products to be approved as equals for the project.

5.2 Q2: Is the expectation for a general contractor to lead the project?

A2: the project is a single bid contract. Interested parties may construct teams as they feel will best deliver the project. There is no expectation for and against a general contractor on the project.

END ADDENDUM

RE: Pre-Bid Conference

Meeting Date: March 27, 2024

Project: **Warren Early Childhood Center Playground Upgrades**

INTRODUCTIONS

Owner: MSD of Warren Township
Matthew Parkinson – Chief Financial Officer
Annemarie Fessler – Director Warren Early Childhood Center
Jerry Crites – Director of Facilities

Architect: Emery Hunt – CSO Architects

Landscape Architect: Cameron Hull – Context Design

BID DATE / LOCATION

Bid Date: Wednesday, April 10, 2024, at 2:00pm (local time)
Deliver to: Warren Township Schools Administration Building
975 North Post Road
Indianapolis, Indiana 46219

Bids will be publicly opened at this time and taken under advisement for review and recommendation by the Owner. Bids received after this date and time will be returned unopened.

BIDDING REQUIREMENTS

1. Bid is a Single Prime Contract.

DESCRIPTION OF PROJECT

Project includes removal and replacement of existing play structures, playground surfacing, under drains installed under playground areas, fencing and gates, and concrete surfacing. Further description of the work can be found within the project drawings and specifications.

Unless noted otherwise, a complete bid will include all labor, material and equipment to complete the work.

ALTERNATES:

- A. Alternate No. 1: Music Wall
 - 1. Base Bid: No Scope.
 - 2. Alternate Bid: Provide all costs associated with Music Wall Play Equipment.
- B. Alternate No. 2: Dig Pit
 - 1. Base Bid: No Scope.
 - 2. Alternate Bid: Provide all costs associated with the Dig Pit Play Equipment.

Refer to the Alternate Section 01 23 00 for additional information

Addendum 1 to be released by, Monday, April 1, 2024.

SUBMIT WITH BID (Refer to Instructions to Bidders AIA Document A701 and Supplemental Bid Form)

- 1. Project Name and Description on the outside of your Bid Envelope
- 2. Supplementary Bid Form fully completed
 - a. Complete the Alternate portion of the Supplemental Bid Form (as applicable)
- 3. Fully completed Form No. 96 (pages 1-8)
- 4. AIA Form A305, Contractors Qualification Statement
- 5. Most Recent Financial Statement
- 6. Non-Collusion Affidavit (part of Form No. 96)
- 7. Certified Check or Bid Bond (1%) of the Contract Price (Certified Check will be made to the Owner)
- 8. Submit Copy of your current IDOA Certification
- 9. Written Drug Testing Plan per IND Code 36-1-12
- 10. Completed Non-Discrimination Affidavit (Section 00 43 39)

PROJECT INFORMATION

- 1. For consideration, a Bid Form must be submitted, sealed in an envelope, and delivered to the location above by the designated time. The clock in the room will be used as the "official" clock for determining when receipt of bids will be closed.
- 2. Bids shall be guaranteed for 60 calendar days
- 3. Review Divisions 00 & 01 in detail
- 4. Tax Exempt Project
- 5. Successful Bidder to submit 100% Labor Performance & Material Payment Bonds.
- 6. Awarded Contractor is also required to conduct and maintain criminal history reports of its works (inclusive all of subcontractors and suppliers of any tier) that are available to the Owner upon their request.
- 7. If any materials testing is required, will be by Owner.

WORK RESTRICTIONS

1. Refer to Section 01 14 00 Work Restrictions and Hours
 - a. Active school during construction, May and August.

PROJECT SCHEDULE

1. April 10, 2024 – Receipt of Bids
2. April 17, 2024 – School Board Meeting for Approval.
3. May 25, 2024 – First day of Summer Recess
4. July 24, 2024 – Last day of Summer Recess.
5. August 30, 2024 – Project Completion

SPECIAL NOTES

1. MSD of Warren Township encourages the greatest opportunity possible for Minority Business Enterprises / Women Business Enterprises in this project.
2. All MSD of Warren Township facilities and properties are Tobacco, Vapping, Alcohol, Weapon and Drug Free Sites. The use of, or possession of any of these products on the school property is prohibited and violators will be removed from the premise.
3. Contractors wishing to make a follow-up site visit to the building site must contact Emery Hunt to set up a time to avoid disruption to school activities. **Do not attempt** to visit the site or building without first requesting a follow up visit, allow for up to 72 hours from time of request to site visit.

QUESTIONS

SITE VISIT

MEETING SIGN-IN SHEET



DATE: March 27, 2024

PROJECT: Warren Early Childhood Center Playground Upgrades

MEETING LOCATION: 1401 N Mitthoefer Rd,

Indianapolis, IN 46229

PROJECT NUMBER: 2023049

Participants Sign-In: (Please Print)

Name: <u>Andrew Myers</u>	Company: <u>Recreation In Sites</u>
Phone: <u>317-617-1740</u> Cell: <u>Same</u>	Email: <u>andrewm@recreationinsites.com</u>
Name: <u>Nick Wolf</u>	Company: <u>Commercial Recreation Group</u>
Phone: <u>812-230-8578</u> Cell: <u>Same</u>	Email: <u>Nick@CRGPlay.com</u>
Name: <u>GREGG STARK</u>	Company: <u>BOYLE CONSTRUCTION MANAGEMENT</u>
Phone: <u>317-249-0543</u> Cell: <u>317-450-7159</u>	Email: <u>GREGG.STARK@BCM1.US</u>
Name: <u>CATHERINE HULL</u>	Company: <u>CONTEXT</u>
Phone: <u>317.435.6900</u> Cell: _____	Email: <u>chull@context-design.com</u>
Name: <u>EMERY HUNT</u>	Company: <u>CSO</u>
Phone: <u>317 846-1800</u> Cell: _____	Email: <u>ehunt@csoinc.net</u>
Name: _____	Company: _____
Phone: _____ Cell: _____	Email: _____
Name: _____	Company: _____
Phone: _____ Cell: _____	Email: _____
Name: _____	Company: _____
Phone: _____ Cell: _____	Email: _____
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Phone: _____ Cell: _____	Email: _____
Name: _____	Company: _____
Phone: _____ Cell: _____	Email: _____
Name: _____	Company: _____
Phone: _____ Cell: _____	Email: _____

SECTION 11 68 00 – PLAYGROUND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes playground equipment consisting of the following type of play structures:
 - 1. 2 Bay Arch Swing
 - 2. Small Climber
 - 3. Crawl Tube
 - 4. Balance Beam
 - 5. Climber Ball - Half
 - 6. Drum Set
 - 7. Chime Panel
 - 8. Composite Structure
 - 9. Sensory Wave
 - 10. Play Panel
 - 11. Revirock Bouncer
 - 12. Roller Table
 - 13. Music Wall
 - 14. Pod Steppers
 - 15. Storefront Panel
 - 16. Play Panel, Type 1
 - 17. Play Panel, Type 2
 - 18. Track Stencil
 - 19. Bubble Stencil
 - 20. Shape Stencil
 - 21. Hop Stencil
 - 22. Path Stencil
 - 23. Jump Stencil
 - 24. Frame Stencil
 - 25. Shade Structure
- B. Related Sections include the following:
 - 1. Division 31 Section "Earth Moving" for excavation and grading work.
 - 2. Division 3 Section "Cast-in-Place Concrete" for concrete footings.
 - 3. Division 32 Section "Playground Protective Surfacing" for playground surface.

1.3 DEFINITIONS

- A. Composite Play Structures: According to ASTM F 1487, this means "two or more play structures, attached or functionally linked," creating one integral unit with more than one play activity.

- B. Critical Height: Standard measure of shock attenuation. According to CPSC No. 325, this means "the fall height below which a life-threatening head injury would not be expected to occur."
- C. Fall Height: According to ASTM F 1487, this means "the vertical distance between a designated play surface and the protective surfacing beneath it." The fall height of playground equipment should not exceed the Critical Height of the protective surfacing beneath it.
- D. HDPE: High-density polyethylene.
- E. IPEMA: International Play Equipment Manufacturers Association.
- F. MDPE: Medium-density polyethylene.
- G. Play Structure: According to ASTM F 1487, this is "a free-standing structure with one or more components and their supporting members."
- H. Protective Surfacing: According to ASTM F 1487, this means impact-attenuating "materials to be used within the use zone of any playground equipment" for playground surface systems.
- I. PVC: Polyvinyl chloride.
- J. Transfer Point: According to ASTM F 1487, this is "a platform or deck along an accessible route of travel or an accessible platform provided to allow a child in a wheelchair to transfer from the chair onto the equipment."
- K. Use Zone: According to ASTM F 1487, this is "the area beneath and immediately adjacent to a play structure that is designated for unrestricted circulation around the equipment and on whose surface it is predicted that a user would land when falling from or exiting the equipment."

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For each type of playground equipment, include materials, plans, elevations, sections, details, method of field assembly, connections, and installation details. Indicate capacity and number of play activities.
- C. Coordination Drawings: Layout plans and elevations drawn to scale and coordinating playground equipment with playground surface systems. Show playground equipment locations, use zones, fall heights, extent of protective surfacing, and Critical Heights.
- D. Samples for Initial Selection: Manufacturer's color charts or 6-inch (150-mm) lengths of actual units showing the full range of colors and textures available for components with factory-applied color finishes.
- E. Samples for Verification: For the following products, for each type of exposed finish required, prepared on Samples of size indicated below and of same thickness and material indicated for the Work. If finishes involve normal color and texture variations, include sample sets showing the full range of variations expected. Landscape Architect reserves the right to require additional Samples that show fabrication techniques, workmanship, and design of playground equipment.

1. Steel Pipe: Not less than 6 inches (150 mm) long.
 2. Metal Roofing: Not less than 6 inches (150 mm) square.
 3. Molded Plastic: Not less than 3 inches (75 mm) square.
 4. Stainless Steel: Not less than 3 inches (75 mm) square.
 5. Steel Cable: Not less than 6 inches (150 mm) long
- F. Product Certificates: Signed by manufacturers of playground equipment and resilient surfacing certifying that products furnished comply with requirements.
- G. Installer Certificates: Signed by manufacturer certifying that installers comply with requirements.
- H. Manufacturer Certificates: Signed by manufacturers certifying that they comply with requirements.
- I. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements:
1. Paints and similar finishes.
 2. Recycled plastic.
- J. Product Test Reports: From a qualified testing agency indicating playground equipment complies with requirements, based on comprehensive testing of current products.
- K. Field Quality-Control Report: Indicate compliance of playground and installed playground equipment and components with requirements.
- L. Maintenance Data: For playground equipment and finishes to include in maintenance manuals specified in Division 1.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has specialized in installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer of playground equipment.
- B. Manufacturer Qualifications: A firm whose playground equipment components meet or exceed the latest requirements as published in ASTM F 1487-95 Standard Consumer Safety Product Performance for Playground Equipment for Public Use.
- C. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 548.
- D. Standards and Guidelines: Provide playground equipment and resilient surfacing complying with or exceeding requirements in the following:
1. ASTM F 1487.
 2. CPSC No. 325, "Handbook for Public Playground Safety."
 3. Label play structures with warning label and manufacturer's identification per ASTM F 1487.
 4. ASTM F 1292-13 and F 1951.

1.6 COORDINATION

- A. Coordinate construction of equipment use zones and fall heights during installation of playground equipment with installation of protective surfacing specified herein. Sequence work so protective surfacing can be installed immediately after concrete footings have set.

PART 2 - PRODUCTS

2.1 PRODUCTS

- A. Products: Subject to compliance with requirements, provide and install complete play features as indicated in the Drawings.

1. 2-Bay Arch Swing:

- a. Basis of Design - Swings: 5" Arch Swing w/ 6 belts, Model No. #221292 / 221293 as manufactured by Landscape Structures Inc., Delano, MN 55328, 1-866-959-7866, or approved equal prior to bidding.
- 1) Pre-approved Equal: PC-2120 5" Swings as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.
 - 2) Pre-approved Equal: 5" Arch Swing, as manufactured by Playworld Systems Inc., Lewisburg, PA 1-800-233-8404.
 - 3) Pre-approved Equal: 5" OD Arch Swing and Add-On Model Nos. #550-0135 and #550-0136 as manufactured by BCI Burke Company, Fond du Lac, WI 54937, 1-800-266-1250.
 - 4) PowerScape Swing Frame Models #10847 and #81599 as manufactured by Gametime, Fort Payne, AL, 1-800-444-4954.
 - 5) **Approved Equal: 4 Seat, 8' H Swing Frame Model No. #KSW924 as manufactured by Kompan, Austin, TX, 1-800-426-9788.**

2. Swing Seats and Chains:

- a. Basis of Design - Swing Seats: Slash-Proof Belt Seat Model No. #174018 and Molded Bucket Seat with Seat Strap Model No. #177350 and #111416, as manufactured by Landscape Structures Inc., Delano, MN 55328, 1-866-959-7866, or approved equal prior to bidding.
- 1) Welds shall be smooth and continuous with no gaps or pin holes. Final product shall be free of weld spatters and burrs. Each chain shall swing freely from a UHMW bushing for maximum wear resistance without requiring periodic maintenance.
 - 2) Swing mounting brackets shall be finished black.
 - 3) Swing chain and assembly hardware shall be galvanized.
 - 4) Chains to be a minimum of 80" long. Chains to be cut in field at a final height to be coordinated with the Owner.
 - 5) Pre-approved Equal: Belt Seat and Adaptive Swing Seat as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.
 - 6) Pre-approved Equal: Belt Seat Model No. #550-0112 as manufactured by BCI Burke Company, Fond du Lac, WI 54937, 1-800-266-1250.
 - 7) Belt Swing Seat Models #1481 and Zero-G Swing Chair #8556 as manufactured by Gametime, Fort Payne, AL, 1-800-444-4954.
 - 8) **Approved Equal: Swing Seat Model No. #SW990011 and Inclusive Set Model No. #SW990205 as manufactured by Kompan, Austin, TX, 1-800-426-9788.**

3. Small Climber:

- a. Basis of Design: Islands Climbing Squares Model #QB-1601 as manufactured by Playworld Systems Inc., Lewisburg, PA 1-800-233-8404. or approved equal prior to bidding.
 - 1) **Approved Equal: Play Shell Climber Model No. #CRP201101 as manufactured by Kompan, Austin, TX, 1-800-426-9788.**
 - 2) **Approved Equal: Boulder Stack Model No #PC-2272 and Rock Step Model No. # PC-2452 as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.**
4. Crawl Tube:
 - a. Basis of Design: Tot's 4-Way Crawl Tube Model # 39003 as manufactured by Gametime, Fort Payne, AL, 1-800-444-4954 or approved equal prior to bidding.
 - 1) **Approved Equal: Peekaboo Tunnel Model No. #PCM002921 as manufactured by Kompan, Austin, TX, 1-800-426-9788.**
 - 2) **Approved Equal: Crawl Tube Model No. #PC2300-R35 as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.**
5. Balance Beam:
 - a. Basis of Design: Curved Balance Beam # 564 as manufactured by Gametime, Fort Payne, AL, 1-800-444-4954 or approved equal prior to bidding.
 - 1) **Approved Equal: Balance Beam Model No. #PCM80721 as manufactured by Kompan, Austin, TX, 1-800-426-9788.**
 - 2) **Approved Equal: Snake Balance Beam Model No #PC2410 as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.**
6. Climber Ball - Half:
 - a. Basis of Design: Flex Half Balls – Large Model # A2-2323-28H as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519 or approved equal prior to bidding.
Approved Equal: EuroFlex Half Balls as manufactured by KRAIBURG Relastec GmbH.
7. Drum Set:
 - a. Basis of Design: Tuned Drums Model # TD-IG0N as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519 or approved equal prior to bidding.
 - 1) **Approved Equal: Tuned Drums as manufactured by Freenotes Harmony, Chattanooga, TN 37402.**
8. Chime Panel:
 - a. Basis of Design: Flower Chimes as manufactured by Freenotes Harmony Park, Chattanooga, TN 37402 or approved equal prior to bidding.
9. Composite Structure:
 - a. Basis of Design: Cane Creek Model #PT24000 as manufactured by Gametime, Fort Payne, AL, 1-800-444-4954 or approved equal prior to bidding.
 - b. **Approved Equal: Submitted Structure #R505766DA as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.**
10. Sensory Wave:
 - a. Basis of Design: Sensory Wave Climber Ground Level S Model #3209 as manufactured by Gametime, Fort Payne, AL, 1-800-444-4954 or approved equal prior to bidding.
11. Revirock Bouncer:
 - a. Basis of Design: ReviRock Bouncer Model #295696 as manufactured by Landscape Structures Inc., Delano, MN 55328, 1-866-959-7866, or approved equal prior to bidding.
 - 1) **Approved Equal: Blazer Model No. #ELE400021 as manufactured by Kompan, Austin, TX, 1-800-426-9788.**
12. Roller Table:
 - a. Basis of Design: Roller Table Model #91242 as manufactured by Gametime, Fort Payne, AL, 1-800-444-4954, or approved equal prior to bidding.

- 1) Pre-approved Equal: Roller Table Model #176457 as manufactured by Landscape Structures Inc., Delano, MN 55328, 1-866-959-7866.
 - 2) Pre-approved Equal: PC 2487 Roller Table as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.
13. Music Wall:
- a. Basis of Design: Merry Musical Model #6223 as manufactured by Gametime, Fort Payne, AL, 1-800-444-4954 or approved equal prior to bidding.
 - 1) **Approved Equal: Play Panel 2 – Music, Classic Model No. #PCM003121 as manufactured by Kompan, Austin, TX, 1-800-426-9788.**
 - 2) **Approved Equal: Submitted Music Structure Model No #R50BF935A as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.**
14. Pod Steppers:
- a. Basis of Design: Stationary Buttons Model # ZZUN7140 as manufactured by Playworld Systems Inc., Lewisburg, PA 1-800-233-8404 or approved equal prior to bidding.
 - 1) Pre-approved Equal: Lily Step Model #S-1414 as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.
 - 2) **Approved Equal: Stepping Pod, Ground Level Model No. #M87401 as manufactured by Kompan, Austin, TX, 1-800-426-9788.**
15. Storefront Panel:
- a. Basis of Design: Storefront Panel Model #ZZPM4646 as manufactured by Playworld Systems Inc., Lewisburg, PA 1-800-233-8404 or approved equal prior to bidding.
 - 1) Pre-approved Equal: Store Panel R35 Model #S-1615-R35G as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.
16. Play Panel, Type 1:
- a. Basis of Design: Slide-n-Learn Panel Model #ZZCH4446 as manufactured by Playworld Systems Inc., Lewisburg, PA 1-800-233-8404 or approved equal prior to bidding.
 - 1) **Approved Equal: Play Panel 1 - Creative Model No. #PCM000621 as manufactured by Kompan, Austin, TX, 1-800-426-9788.**
 - 2) **Approved Equal: Gear Panel Model No #R50EA03CA as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.**
17. Play Panel, Type2:
- a. Basis of Design: Bell Panel Model #ZZPM4417 as manufactured by Playworld Systems Inc., Lewisburg, PA 1-800-233-8404 or approved equal prior to bidding.
 - 1) **Approved Equal: Chime Panel Model No #R50B5ABDA as manufactured by Playcraft, Grants Pass, OR, 1-800-333-8519.**
18. Track Stencil:
- a. Basis of Design: Playground Bicycle Road Path & Sign Kit as manufactured by Fastline Striping Systems, Kingston ON, 1-800565-1564 or approved equal prior to bidding.
19. Bubble Stencil:
- a. Basis of Design: Bubbles, Bubbles Everywhere Model #ST5005 as manufactured by Fit and Fun Playscapes, LLC, Poughkeeps, NY, 1-800-681-0864 or approved equal prior to bidding.
20. Shape Stencil:
- a. Basis of Design: Shapes That Shape You Up Model #ST5004 as manufactured by Fit and Fun Playscapes, LLC, Poughkeeps, NY, 1-800-681-0864 or approved equal prior to bidding.
21. Hop Stencil:
- a. Basis of Design: Hop Letters and Shapes Model #ST5022 as manufactured by Fit and Fun Playscapes, LLC, Poughkeeps, NY, 1-800-681-0864 or approved equal prior to bidding.
22. Path Stencil:

- a. Painted Bee Alphabet Model #3575-008 as manufactured by 1-800-Stencil RAE Products Alsip, IL 1-800-783-6245 or approved equal prior to bidding.
 23. Jump Stencil:
 - a. Basis of Design: Jump Logs Model #ST5103 as manufactured by Fit and Fun Playscapes, LLC, Poughkeeps, NY, 1-800-681-0864 or approved equal prior to bidding.
 24. Frame Stencil:
 - a. Playground Picture Frame as manufactured by Playocracy, Ancaster ON, 1-905-741-3378 or approved equal prior to bidding.
 25. Shade Structure:

Design Intent: Landscape Structures: SkyWays® Cantilever Single Post Pyramid (16'x16') Shade with quick release removable shade fabric as manufactured by Landscape Structures Inc., Delano, MN 55328, 1-866-959-7866, or approved equal prior to bidding.

 - 1) **Approved Equal: Modern Shade Cantilever Shade Structure as submitted by Recreation InSites, Fishers, IN.**
- B. Manufacturers: Subject to compliance with requirements, approved equals are encouraged as part of the bidding process. Bidders shall request approval of alternative products in writing during the bidding process.
- C. Required Coordination: The successful Contractor shall be fully responsible for coordination with respective playground manufacturers when attaching new product to existing structures. The Owner shall not bear any change orders or additional costs related to a lack of due diligence by the Contractor to ensure products included in their Bid are fully compliant with specifications, properly attach to existing structures, and maintain all warranties in force.
- D. Colors: As selected by Landscape Architect from manufacturer's full range of standard colors during Shop Drawing process.

2.2 MATERIALS

- A. Aluminum: Alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated and to comply with performance requirements for structural aluminum; mill finish or decorative baked-enamel powder-coat finish.
1. Extruded Bars, Profiles, and Tubes: ASTM B 221 (ASTM B 221M).
 - a. Tubing: Minimum yield strength of 35,000 lbf/sq. in. (241 MPa) and minimum tensile strength of 38,000 lbf/sq. in. (262 MPa).
 2. Cast Aluminum: ASTM B 179.
- B. Steel: Comply with the following:
1. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M, hot-dip galvanized.
 2. Steel Pipe: Standard-weight steel pipe complying with ASTM A 53 or electric-resistance-welded pipe complying with ASTM A 135, with a minimum yield strength of 30,000 lbf/sq. in. (205 MPa); hot-dip galvanized internally and externally.
 3. Steel Mechanical Tubing: Cold-rolled, electric-resistance-welded carbon or alloy steel tubing complying with ASTM A 513 or steel tubing fabricated from steel complying with ASTM A 569/A 569M and complying with the dimensional tolerances in ASTM A 500;

- with a minimum yield strength of 40,000 lbf/sq. in. (276 MPa) and a minimum tensile strength of 45,000 lbf/sq. in. (310 MPa); zinc coated internally and externally.
 - 4. Steel Sheet: Commercial steel sheet complying with ASTM A 569/A 569M.
 - 5. Galvanized Steel Sheet: Commercial steel sheet, hot-dip galvanized, complying with ASTM A 653/A 653M for not less than G60 (Z180) coating designation; mill phosphatized.
 - 6. Perforated Metal: From steel sheet not less than 0.0897-inch (2.3-mm) nominal thickness; manufacturer's standard perforation pattern.
- C. Opaque Plastic: Color impregnated, UV stabilized, and mold resistant.
- 1. Polyethylene: Fabricated from virgin plastic resin; rotationally molded MDPE with not less than 1/4-inch (6-mm) wall thickness or molded HDPE.
- D. Transparent Plastic: Clear, colorless abrasion-resistant, UV-stabilized monolithic polycarbonate sheet, not less than 3/16 inch (5 mm) thick.
- E. Post Caps: Cast aluminum.
- F. Platform Clamps and Hangers: Cast aluminum or not less than 0.105-inch- (2.7-mm-) nominal thickness, zinc-plated steel.
- G. Hardware: Manufacturer's standard, commercial-quality, corrosion-resistant, hot-dip galvanized steel, stainless steel, or aluminum; secure, vandal-resistant design.
- H. Fasteners: Manufacturer's standard, corrosion-resistant, hot-dip galvanized or plated steel, or stainless steel; permanently capped; theft resistant.
- I. Drainage Fill: Washed coarse-aggregate mixture of crushed stone, or crushed or uncrushed gravel.
- J. Galvanizing: Where indicated for steel components, provide the following protective zinc coating applied to components after fabrication:
- 1. Zinc-Coated Tubing: External, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq. ft. (0.27 kg/sq. m) of zinc after welding, a chromate conversion coating, and a clear, polymer film. Internal, same as external or consisting of 81 percent, not less than 0.3-mil- (0.0076-mm-) thick, zinc pigmented coating.
 - 2. Hot-Dip Galvanizing: According to ASTM A 123/A 123M, ASTM A 153/A 153M, or ASTM A 924/A 924M.
- K. Paint and PVC-Coat Finish: Comply with 16 CFR 1303 for limiting lead in paint.

2.3 FABRICATION

- A. General: Provide sizes, strengths, thicknesses, wall thickness, and weights of components as indicated but not less than required to comply with structural performance and other requirements in ASTM F 1487. Factory drill components for field assembly. Unnecessary holes in components, not required for field assembly, are not permitted. Provide complete play structure, including supporting members and connections, means of access and egress, designated play surfaces, barriers, guardrails, handrails, handholds, and other components indicated or required to comply with referenced standards for equipment indicated.

- B. Rung Ladders, Stepladders, Stairways, Ramps, Step Platforms, and Transfer Points: Provide complete means of access and egress, with evenly spaced treads and rungs, easily grasped handholds, and slip-resistant foot surfaces; fabricated from manufacturer's standard materials complying with requirements indicated and compatible with frame and play surfaces. Provide closed risers and protective barriers if indicated or required by referenced standards.
- C. Play Surfaces: Provide elevated decks, platforms, landings, walkways, ramps, and similar transitional play surfaces, designed and framed to withstand loads and allowing for drainage. Fabricate units in manufacturer's standard modular sizes and shapes, to form assembled play surfaces of dimensions indicated on Drawings.
 - 1. Elevated Play Surfaces: Provide protective devices, completely surrounding play surface except for access openings, if play-surface heights above protective surfacing exceed the following for use by age group indicated:
 - a. Unless otherwise indicated, provide guardrails or protective barriers if play-surface heights above protective surfacing exceed 30 inches (760 mm) and provide protective barriers if play-surface heights above protective surfacing exceed 48 inches (1200 mm).
 - 2. Stepped Play Surfaces: Provide protective infill between stepped platforms according to referenced standards.
- D. Protective Barriers: Fabricated from welded metal pipe or tubing with vertical bars and fabricated with any openings within the barrier and between the barrier and the play surface precluding passage of the torso probe according to the most stringent requirements in ASTM F 1487 and CPSC No. 325. Provide barriers designed to minimize the possibility of climbing, free of hand- and footholds, and configured to completely surround the protected area except for access openings. Extend barriers to the following height above the protected elevated surface for use by age group indicated:
 - 1. Top surface not less than 38 inches (970 mm) high.
- E. Guardrails: Fabricated from metal pipe or tubing, and wood. Provide guardrails configured to completely surround the protected area except for access openings. Extend guardrails over the following expanse above the protected elevated surface for use by age group indicated:
 - 1. Top surface at not less than 38 inches (970 mm) and lower edge at not more than 28 inches (710 mm).
- F. Handrails: Welded metal pipe or tubing, OD 0.125 inch (3.2 mm). Provide handrails at height between the following dimensions for use by age group indicated:
 - 1. 22 to 38 inches (560 to 970 mm).
- G. Structural Plastic Slide Chutes: Opaque plastic, unless transparent plastic is indicated.
- H. Roofs: Fabricated from metal and wood designed to be positioned overhead and to discourage and minimize climbing by users.
- I. Climbing Ropes, Cables, and Chains: Designed to be secured at both ends so length cannot be looped back on itself creating a loop with an inside perimeter greater than 5 inches (127 mm). Ropes, cables, and chains with length 7 inches (178 mm) or less may be attached at one end only.

- J. Flexible Climbers: Designed to securely connect flexible-climber components used as access to other components at both ends. For components with one end connected to ground level, provide flexible climbers designed with the anchoring connection to ground placed beneath the base of protective surfacing.
- K. Steel Components: Galvanized, galvanized and color coated, or color coated. Bare metal steel components are not permitted.
 - 1. Color-Coated Pipe and Tubing for Component Frames: PVC-coat or baked-enamel powder coat applied to steel or galvanized steel.

2.4 CAST-IN-PLACE CONCRETE

- A. Top of concrete footings shall be held 12" below finished grade within all protective play surfacing conditions. Account for any related impacts on overall footing depth to achieve Manufacturer's recommendations.
- B. Concrete Materials and Properties: Dry-packaged concrete mix complying with ASTM C 387 and mixed at the site with potable water, according to manufacturer's written instructions, to produce normal-weight concrete with a minimum 28-day compressive strength of 3,000 psi (20.7 MPa), 3-inch (75-mm) slump, and 1-inch- (25-mm-) maximum size aggregate.

2.5 METAL FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating metal finishes.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.6 STEEL, ALUMINUM, AND GALVANIZED STEEL FINISHES

- A. Baked-Enamel Powder-Coat Finish: Manufacturer's standard, baked, polyester-TGIC, powder-coat finish complying with finish manufacturer's written instructions for surface preparation, including pretreatment, application, baking, and minimum dry film thickness of 3 to 5 mils (0.075 to 0.127 mm).
- B. PVC Finish: Manufacturer's standard, UV-stabilized, mold-resistant, slip-resistant,-matte-textured, dipped or sprayed-on, PVC-plastisol finish, with flame retardant added, complying with coating manufacturer's written instructions for pretreatment, application, and minimum dry film thickness of 80 mils (2 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, site surface and subgrade drainage, and other conditions affecting performance.

- 1. Do not begin installation before final grading required for placing protective surfacing is completed, unless otherwise permitted by Landscape Architect.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Verify locations of playground perimeter and pathways. Verify that playground layout and equipment locations comply with requirements for each type and component of equipment.

3.3 INSTALLATION, GENERAL

- A. General: Comply with manufacturer's written installation instructions, unless more stringent requirements are indicated. Anchor playground equipment securely, positioned at locations and elevations indicated on Shop Drawings.

- 1. Maximum Equipment Height: Coordinate installed heights of equipment and components with installation of protective surfacing. Set equipment so fall heights and elevation requirements for age group use and accessibility are within required limits. Verify that playground equipment elevations comply with requirements for each type and component of equipment.

- B. Post and Footing Excavation: Hand-excavate holes for posts and footings to dimensions, profile, spacings, and in locations indicated on Drawings, in firm, undisturbed or compacted subgrade soil. Level bearing surfaces with drainage fill to required elevation.

- C. Post Setting: Set main-frame equipment posts in concrete footing. Protect portion of posts above footing from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Verify that posts are set plumb or at the correct angle and are aligned and at the correct height and spacing. Hold posts in position during placement and finishing operations until concrete is sufficiently cured.

- D. Resilient Surface Installation: Excavate area to dimensions and depth as indicated in the Drawings. Confirm use zone for each play structure with manufacturer's coordination drawings. Place separation fabric in excavated area, allowing for overlap as indicated. Place and compact crushed stone base to depth indicated in the Drawings.

- E. ADA Swing Alignment: The Contractor shall align newly installed ADA swings into the center of existing bays. Provide all labor and materials to properly fasten the system.

- F. Carefully coordinate surfacing depths with the General Contractor. Ensure that a uniform, evenly finished surface is achieved.

3.4 FIELD QUALITY CONTROL

- A. Arrange for playground equipment manufacturer's technical personnel to inspect playground and playground equipment and components during installation and at final completion and to certify compliance with the following:
 - 1. ASTM F 1487.
 - 2. CPSC No. 325.
- B. Notify Landscape Architect and Owner 48 hours in advance of date and time of final inspection.

3.5 CLEANING

- A. After completing playground equipment installation, inspect components. Remove spots, dirt, and debris. Repair damaged finishes to match original finish or replace component.

END OF SECTION