

**State of West Virginia
Department of Administration
Purchasing Division**

NOTICE

Due to the size of some drawings contained in this bid, they could not be scanned for on line viewing.

If you would like to review the bid in its entirety, please contact the buyer. Thank you.



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
 DNR209040

PAGE
 1

ADDRESS CORRESPONDENCE TO ATTENTION OF
 FRANK WHITTAKER
 304-558-2316

RFQ COPY

TYPE NAME/ADDRESS HERE
 VA PLAYGROUND SERVICES AND
 LITTLETIKES COMMERCIAL FACTORY
 14276 RIVERSIDE DRIVE
 ASHLAND, VA. 23005

DIVISION OF NATURAL RESOURCES
 MONCOVE LAKE STATE PARK
 ATTN: PARK SUPERINTENDENT
 POST OFFICE BOX 224
 GAP MILLS, WV
 24941 304-772-3450

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
09/24/2008				

BID OPENING DATE: 10/09/2008 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
0001	1	LS		650-38		
<p>*****ADDENDUM NO. 1 *****</p> <p>THIS ADDENDUM IS ISSUED TO REMOVE THE CONSTRUCTION LANGUAGE FROM THE ORIGINAL RFQ THE PLAYGROUND EQUIPMENT WILL BE INSTALLED BY PARK PERSONNEL.</p> <p>THE WALK THROUGH HAS BEEN CHANGED TO SEPTEMBER 30, 2008 AT 10:00 AM</p> <p>THE BID OPENING DATE REMAINS 10/09/2008</p> <p>PLAYGROUND EQUIPMENT</p> <p>REQUEST FOR QUOTATION</p> <p>THE WEST VIRGINIA STATE PURCHASING DIVISION, FOR THE AGENCY, THE WEST VIRGINIA DIVISION OF NATURAL RESOURCES, IS SOLICITING BIDS TO PROVIDE THE AGENCY WITH LABOR AND MATERIALS TO PROVIDE PLAYGROUND EQUIPMENT FOR MONCOVE LAKE STATE PARK PER THE ATTACHED SPECIFICATIONS</p> <p>A WALK THROUGH OF THE SITE WILL BE HELD ON MONDAY, SEPTEMBER 30, 2008 AT 10:00 PM. VENDORS ARE RESPONSIBLE FOR BEING FAMILIAR WITH THE SITE AND NECESSARY REQUIREMENTS OF THIS PROJECT.</p> <p>TECHNICAL QUESTIONS CONCERNING THIS PROJECT MUST BE SUBMITTED IN WRITING TO FRANK WHITTAKER IN THE WEST</p>						

RECEIVED

2008 OCT -9 P 12: 57

PURCHASING DIVISION
 STATE OF WV

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE: *[Signature]* TELEPHONE: 772-249258 DATE: 10-08-08

TITLE: AGENT - VA PLAYGROUND SERVICES

ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

1. Awards will be made in the best interest of the State of West Virginia.
2. The State may accept or reject in part, or in whole, any bid.
3. All quotations are governed by the *West Virginia Code* and the *Legislative Rules* of the Purchasing Division.
4. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
5. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods, this Purchase Order/Contract becomes void and of no effect after June 30.
6. Payment may only be made after the delivery and acceptance of goods or services.
7. Interest may be paid for late payment in accordance with the *West Virginia Code*.
8. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*.
9. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
10. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.
11. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern all rights and duties under the Contract, including without limitation the validity of this Purchase Order/Contract.
12. Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.
13. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, this Contract may be deemed null and void, and terminated without further order.
14. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, and available online at the Purchasing Division's web site (<http://www.state.wv.us/admin/purchase/vrc/hipaa.htm>) is hereby made part of the agreement. Provided that, the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.
15. **WEST VIRGINIA ALCOHOL & DRUG-FREE WORKPLACE ACT:** If this Contract constitutes a public improvement construction contract as set forth in Article 1D, Chapter 21 of the West Virginia Code ("The West Virginia Alcohol and Drug-Free Workplace Act"), then the following language shall hereby become part of this Contract: "The contractor and its subcontractors shall implement and maintain a written drug-free workplace policy in compliance with the West Virginia Alcohol and Drug-Free Workplace Act, as set forth in Article 1D, Chapter 21 of the West Virginia Code. The contractor and its subcontractors shall provide a sworn statement in writing, under the penalties of perjury, that they maintain a valid drug-free work place policy in compliance with the West Virginia and Drug-Free Workplace Act. It is understood and agreed that this Contract shall be cancelled by the awarding authority if the Contractor: 1) Fails to implement its drug-free workplace policy; 2) Fails to provide information regarding implementation of the contractor's drug-free workplace policy at the request of the public authority; or 3) Provides to the public authority false information regarding the contractor's drug-free workplace policy."

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division.
2. **SPECIFICATIONS:** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.
3. Complete all sections of the quotation form.
4. Unit prices shall prevail in case of discrepancy.
5. All quotations are considered FOB destination unless alternate shipping terms are clearly identified in the quotation.
6. **BID SUBMISSION:** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P O Box 50130, Charleston, WV 25305-0130.



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
 DNR209040

PAGE
 2

ADDRESS CORRESPONDENCE TO ATTENTION OF
 FRANK WHITTAKER
 304-558-2316

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

DIVISION OF NATURAL RESOURCES
 MONCOVE LAKE STATE PARK
 ATTN: PARK SUPERINTENDENT
 POST OFFICE BOX 224
 GAP MILLS, WV
 24941 304-772-3450

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
09/24/2008				

BID OPENING DATE: 10/09/2008 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
<p>VIRGINIA PURCHASING DIVISION VIA FAX AT 304-558-4115 OR VIA EMAIL AT FRANK.M.WHITTAKER@WV.GOV DEADLINE FOR ALL TECHNICAL QUESTIONS IS OCTOBER 3, 2008 AT THE CLOSE OF BUSINESS ALL TECHNICAL QUESTIONS IF ANY, WILL BE ADDRESSED BY ADDENDUM AFTER THE DEADLINE</p> <p>QUESTIONS CONCERNING THE ACTUAL PROCESS BY WHICH A VENDOR MAY SUBMIT A BID TO THE STATE OF WEST VIRGINIA ARE NOT CONSIDERED TO BE TECHNICAL QUESTIONS AND MAY BE SUBMITTED AT ANY TIME PRIOR TO THE BID OPENING AND IN ANY FORMAT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THIS CONTRACT IS AUTOMATICALLY NULL AND VOID, AND IS TERMINATED WITHOUT FURTHER ORDER.</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="margin-left: 40px;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p>						

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
 DNR209040

PAGE
 3

ADDRESS CORRESPONDENCE TO ATTENTION OF
 FRANK WHITTAKER
 304-558-2316

RFQ COPY

TYPE NAME/ADDRESS HERE

SHIP TO

DIVISION OF NATURAL RESOURCES
 MONCOVE LAKE STATE PARK
 ATTN: PARK SUPERINTENDENT
 POST OFFICE BOX 224
 GAP MILLS, WV
 24941 304-772-3450

DATE PRINTED	TERMS OF SALE	SHIP VIA	FOB	FREIGHT TERMS
09/24/2008				

BID OPENING DATE: 10/09/2008 BID OPENING TIME 01:30PM

LINE	QUANTITY	UOP	CAT NO	ITEM NUMBER	UNIT PRICE	AMOUNT
SEALED BID BUYER: FRANK WHITTAKER-FILE 44 REQ NO.: DNR209040 BID OPENING DATE: OCTOBER 9, 2008 BID OPENING TIME: 1:30 PM PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: <i>424 2963289</i> PLEASE PRINT OR TYPE NAME OF PERSON TO CONTACT CONCERNING THIS QUOTE: <i>M JAMES BENEDICT, AGENT</i>						
***** THIS IS THE END OF RFQ DNR209040 ***** TOTAL:						<i>\$ 36,496.00</i>

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE	TELEPHONE	DATE
TITLE	FEIN	ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

MONCOVE LAKE STATE PARK PLAYGROUND SPECIFICATIONS – CONTD.

All playground equipment and engineered wood fiber must meet the following requirements:

** See cover letter*

- yes* • Compliance with U S Consumer Product Safety Commission, Handbook for Public Playground Safety.
- yes* • Compliance with ASTM Standard F 1487.
- yes* • Compliance with Architectural and Transportation Barriers Compliance Board, Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Play Areas

Vendors must submit the following attachments:

ATTACHED

- ✓ • Complete manufacturer's parts specifications and warranties
- ✓ • Layout drawing to scale of the proposed play structure or equipment
- ✓ • ASTM and CPSC Statement of Compliance

Additionally, all playground equipment must meet the following requirements:

- ✓ • Decks must be one piece steel and powder coated.
- Connectors must be direct-bolt and bolt locations should be pre-drilled
- Color scheme for all equipment must be green plastic, brown uprights, beige metal and brown decks

Warranties:

- ✓ • All equipment and engineered wood fiber must be guaranteed to be free of defects in workmanship and material for a minimum of one year from date of acceptance. However, if manufacturer warranty periods are longer than the required minimum one year warranty, those warranties shall apply.

The award may be split if it is in the best interest of the West Virginia Division of Natural Resources



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DNR209037 <i>AD</i>

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ADDRESS CORRESPONDENCE TO ATTENTION OF:
FRANK WHITTAKER 304-558-2316

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

SHIP TO

MONTCOVE LAKE STATE PARK

DATE PRINTED	TERMS OF SALE	SHIP VIA	F.O.B.	FREIGHT TERMS
09/10/2008				
BID OPENING DATE: 10/09/2008		BID OPENING TIME		01:30PM

LINE	QUANTITY	UOP	CAT NO.	ITEM NUMBER	UNIT PRICE	AMOUNT
BID OPENING TIME: 1:30 PM PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID: <i>434 296 3289</i> ----- PLEASE PRINT OR TYPE NAME OF PERSON TO CONTACT CONCERNING THIS QUOTE: <i>M. JAMES BENEDICT</i> <i>MOBILE # 434 249 2158</i> ----- ***** THIS IS THE END OF RFQ DNR209037 ***** TOTAL: <i>\$ 36,496.00</i> <i>NOTE THIS IS "AS EQUAL" RESPONSE</i> <i>OUR PRODUCT IS LITTLE TIKES COMMERCIAL</i> <i>AND ALL ITEMS IN RFP ARE QUOTED</i> <i>AS AS EQUAL USING LTC EQUIPMENT</i>						

SIGNATURE: <i>M. James Benedict</i>	SEE REVERSE SIDE FOR TERMS AND CONDITIONS	TELEPHONE: <i>434 249 2158</i>	DATE: <i>10-08-08</i>
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TITLE: <i>AGENT - VA PLAYGROUND</i>	ADDRESS CHANGES TO BE NOTED ABOVE
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WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

NOTE NO ADDENDUMS

NOTE NO INSTALLATION THIS QUOTE
THEREFORE NO PAGE FOR
CONTRACTORS LICENSE

NOTE THIS RESPONSE IS
"AS EQUAL" QUOTATION

WE ARE SUBSTITUTING EQUIPMENT
BY LITTLE TIKES COMMERCIAL (LTC)
FOR EACH EQUIPMENT PLAY EVENT
OTHER CURBS - WOOD FIBER - AND
GEOTEXT BY OUR SUPPLIER

CONTACT → M. JAMES BENEDICT
M. James Benedict, asst
1008-08

FAX 434 296 3289

CELL 434 249 2158

Item No.	Quantity	Description	Unit Price	Amount
		To supply playground equipment to offer play activities for children ages five (5) to twelve (12) at Moncove Lake State Park, Gap Mills, West Virginia. There will be a total of two separate playground areas for which playground equipment is to be supplied. Park personnel will install all playground equipment.		
1	1	<p>PICNIC AREA PLAYGROUND Game Time Prime Time <i>LTC PLAYBUILDER STRUCTURE</i> Model #1817 (modified Straight Arrow), or equal. Uprights must be constructed of powder-coated aluminum with a minimum OD of 3 1/2". Equipment must have a ASTM Minimum Use Zone of 49'9" x 31'3". The equipment must include the following components:</p> <p>Game Time <i>LTC</i> Game Time Prime Time transfer point with accessible attachment or equal.</p> <p>Game Time <i>LTC</i> Game Time Prime Time curved molded slide Slide must be approximately 3' in length</p> <p>Game Time <i>LTC</i> Game Time Prime Time spiral molded slide with hood or equal Slide must be approximately 6' in length</p> <p>Game Time <i>LTC</i> Game Time Prime Time double molded slide, or equal Slide must be approximately 5' in length.</p> <p>Game Time <i>LTC</i> Game Time Prime Time vertical climbing wall or equal Wall must be approximately 6' in height.</p> <p>Game Time <i>LTC</i> Game Time Prime Time rock wall climber with molded in handholds or equal. Wall must be approximately 5' in height</p> <p>Game Time <i>LTC</i> <i>LOOP</i> Game Time Prime Time vertical climber. Climber must be steel construction and must be approximately 6' in height.</p>		\$ 16,949 ⁰⁰

Item No.	Quantity	Description	Unit Price	Amount
		<i>LTC</i> Game Time rung ladder or equal. Ladder must be steel construction and must be approximately 5' in height.		
		<i>LTC</i> Game Time funnel bridge or equal		
		<i>LTC</i> Game Time single seat or equal.		
		<i>LTC STYK</i> Game Time cosmix climber or similar sideways climber or equal. Climber must be approximately 5' in height.		
		<i>LTC</i> Game Time straight horizontal loop ladder with D-ring style or equal.		
		<i>LTC</i> Game Time therapeutic rings or equal.		
		<i>LTC</i> Game Time turning bar or equal		
		<i>LTC</i> Game Time crunch bar or equal.		
		<i>LTC SQUARE</i> Game Time shingle style molded roof for one 36" deck or equal.		
2	1	<i>LTC MAXPLAY</i> Game Time Primitiv arch swing frame, Model #12598, or equal. Swing must have a minimum 3 1/2" OD.	1482	1,482 ⁰⁰
3	1	<i>LTC MAXPLAY ADD ON</i> Game Time , Primitiv arch swing add-a-bay, Model #12584, or equal. Bay must have a minimum 3 1/2" OD and an ASTM minimum use zone of 37'2" x 32'1" Equipment must include the following components: Minimum of two belt seat swings with stainless steel chain and attachments; Minimum of two enclosed toddler seats with stainless steel chain and attachments; and Minimum of 3-1/2" OD galvanized steel uprights and top rail.	1350	1,350 ⁰⁰

Item No.	Quantity	Description	Unit Price	Amount
4	1	F O B. Destination. Freight and/or delivery charges are to be included in the price of the goods Delivery must be made within ninety (90) days of purchase order award.	1	1
		SHELTER #1 PLAYGROUND AREA		\$
5	1	<i>LTC CHUTE SLIDE</i> GameTime, wave zip slide F/S, Model #18395, or equal. Slide must be approximately 6' in length and have a minimum ASTM use zone of 27'2" x 15'4"	2962	2,962 ⁰⁰
6	1	<i>LTC MAY POLE</i> GameTime, sky runner (F/S), Model #6200, or equal. Runner must have a minimum ASTM zone of 18'2" diameter.	1790	1,790 ⁰⁰
7	1	<i>LTC MAX PLAY</i> GameTime, Primetime swing frame, Model #12583, or equal. Frame must have a minimum of 3 1/2" OD.	1382	1,382 ⁰⁰
8	1	<i>LTC MAX PLAY</i> GameTime, Primetime Swing Add-A-Bay, Model #12584, or equal. Bay must have a minimum 3 1/2" OD and an ASTM minimum use zone of 37'2" x 32'1". Equipment must include the following components: Minimum of four belt seat swings with stainless steel chain and attachments; and Minimum 3-1/2" OD galvanized steel uprights and top rail.	1350	1,350 ⁰⁰
9	107	<i>LTC CHILD FORMS</i> GameTime playcurb, Model #4850, or equal. PlayCurb must be a minimum of 8" and must be black in color.	3424	3,424 ⁰⁰
10	2	<i>LTC CHILD FORMS ADARAM</i> GameTime, accessible playcurb, Model #4854, or equal. Playcurb must be black.	725	1,450 ⁰⁰
11	4,900 Sq Ft	<i>FEABAR BRAND</i> Engineered wood fiber Or equal. Fiber must be compacted at 8" in depth.	3,655	3,655 ⁰⁰
12	1 Roll	Geo-Textile fabric 1,125 Sq Ft Roll or equal.	250	250 ⁰⁰
13	1 Roll	Geo-Textile fabric 2,250 Sq Ft Roll or equal.	450	450 ⁰⁰

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Item No.	Quantity	Description	Unit Price	Amount
14	1	F O B Destination Freight and/or delivery charges are to be included in the price of the goods Delivery must be made within ninety (90) days of purchase order award.	1	1
			TOTAL	36496

C → \$ 36,496⁰⁰

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

VENDOR OWING A DEBT TO THE STATE:

West Virginia Code §5A-3-10a provides that: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

PUBLIC IMPROVEMENT CONTRACTS & DRUG-FREE WORKPLACE ACT:

West Virginia Code §21-1D-5 provides that: Any solicitation for a public improvement construction contract shall require each vendor that submits a bid for the work to submit at the same time an affidavit that the vendor has a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code. A public improvement construction contract may not be awarded to a vendor who does not have a written plan for a drug-free workplace policy in compliance with Article 1D, Chapter 21 of the West Virginia Code and who has not submitted that plan to the appropriate contracting authority in timely fashion. For a vendor who is a subcontractor, compliance with Section 5, Article 1D, Chapter 21 of the West Virginia Code may take place before their work on the public improvement is begun.

ANTITRUST:

In submitting a bid to any agency for the state of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the state of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the state of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the state of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership or person or entity submitting a bid for the same materials, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

LICENSING:

Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agencies or political subdivision. Furthermore, the vendor must provide all necessary releases to obtain information to enable the Director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

CONFIDENTIALITY:

The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures and rules. Vendors should visit www.state.wv.us/admin/purchase/privacy for the Notice of Agency Confidentiality Policies.

Under penalty of law for false swearing (West Virginia Code §61-5-3), it is hereby certified that the vendor acknowledges the information in this said affidavit and is in compliance with the requirements as stated.

Vendor's Name: VAFIA/GROUND SERVICES - VENDOR APPLICATION ^{IN PROCESS} _{CONSIDERATION}

Authorized Signature: James Benedict, agent Date: 10-08-08

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A310

Bid Bond

Bond No. N/A

KNOW ALL MEN BY THESE PRESENTS, that we

PlayPower LT Farmington, Inc. formerly known as Little Tikes Commercial Play Systems One Iron Mountain Drive, Farmington, MO 63640 as Principal, hereinafter called the Principal, and

(Here insert full name and address or legal title of Contractor)

Travelers Casualty and Surety Company of America One Tower Square, Hartford, CT 06183-6014

(Here insert full name and address or legal title of Surety)

a corporation duly organized under the laws of the State of Connecticut as Surety, hereinafter called the Surety, are held and firmly bound unto

State of West Virginia Division of Natural Resources, Box 224, Gap Mill, WV 24941

(Here insert full name and address or legal title of Owner)

as Obligee, hereinafter called the Obligee, in the sum of Five Percent of Amount Bid

\$ 1,825.00

for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents

Dollars (\$ 5% of Amount Bid)

WHEREAS, the Principal has submitted a bid for

Project No. DNR 209040; Furnish and Install Playground Equipment, Safety Surface, and Borders at Moncove State Park

(Here insert full name address and description of project)

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid then this obligation shall be null and void otherwise to remain in full force and effect

Signed and sealed this 9th

day of October, 2008

Valma Callaway (Witness)

PlayPower LT Farmington, Inc. formerly known as Little Tikes Commercial Play Systems VP, DIRECTOR OF FINANCE (Title)

Sandra L. Ham (Witness)

Travelers Casualty and Surety Company of America Cynthia L. Hanak, Attorney-In-Fact (Title)

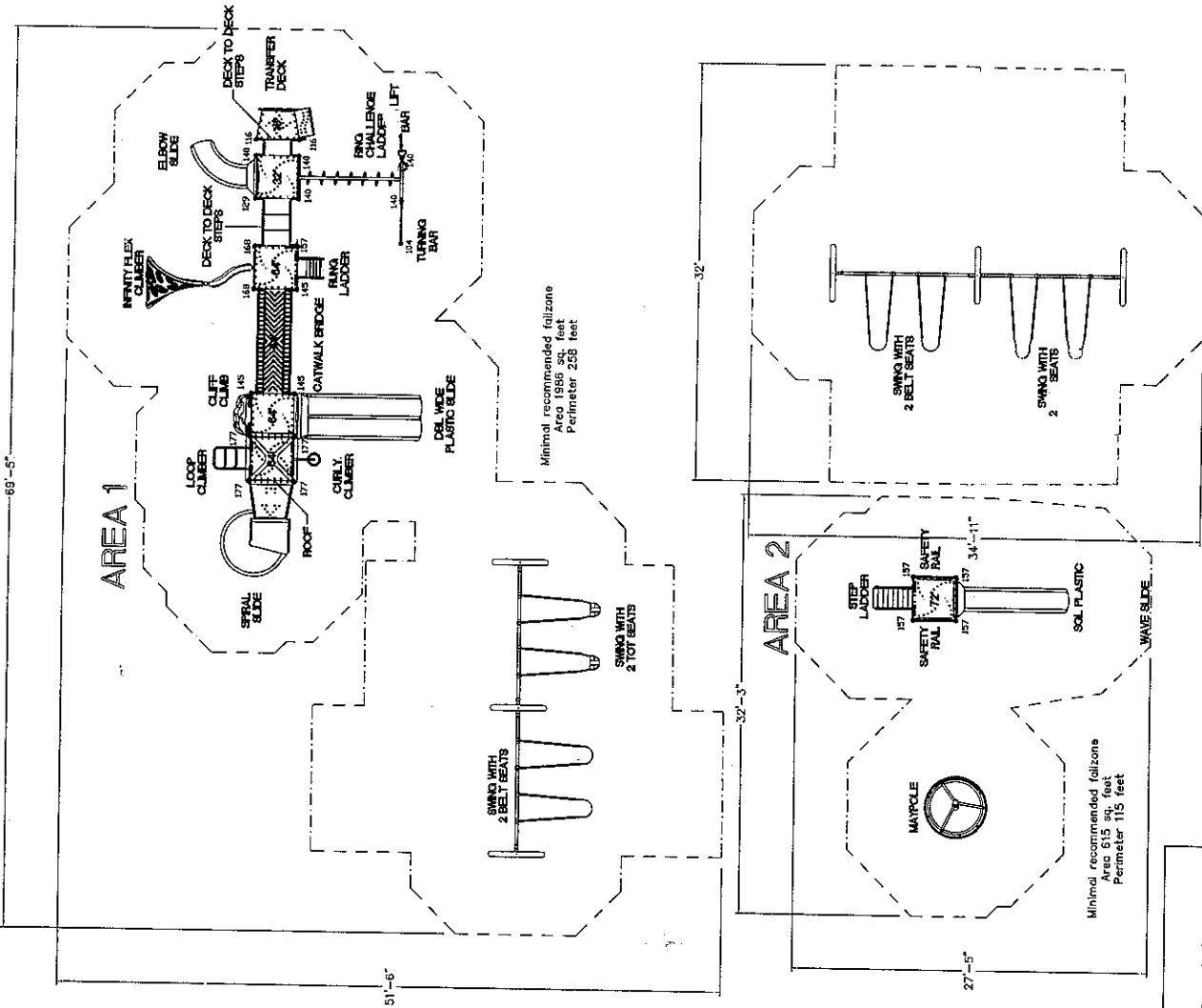
Project: Moncove State Park
LTCPS rep:
Bob Charles
Virginia Playground Services

Kid Builders:
Post Material:
Post Color: Forest Green
Accent Color: None
Panel Color: None
Slide Color: None
Roof Color: None
Hex Wedge: None
Hex Rib: None
Mounting: Buried

Play Builders:
Post Color: Forest Green
Accent Color: Brown
Panel Color: Forest Green
Slide Color: Tan
Roof Color: Fort Brown
Mounting: Buried

Drawn by: Bill Weber
Date: 10/1/2008
DWG Name: Q0044665
Scale: 1/10"=1'
Approved by:

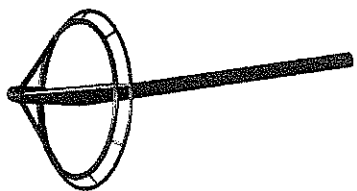
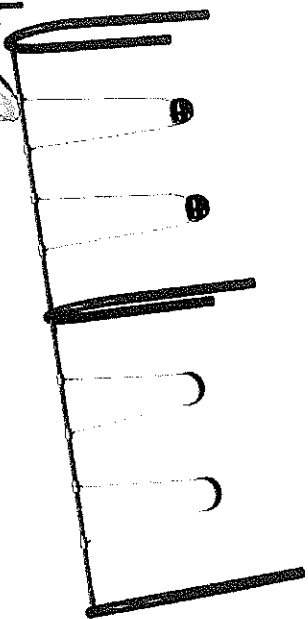
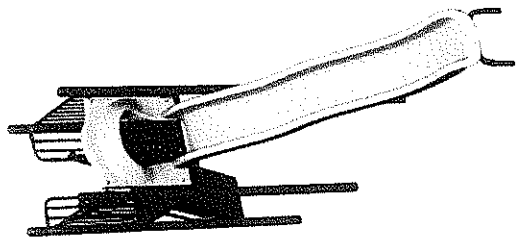
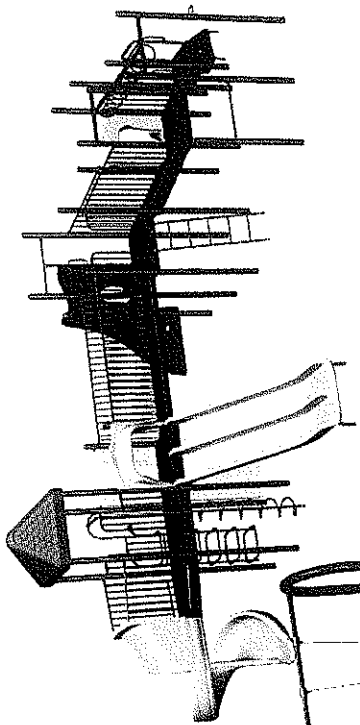
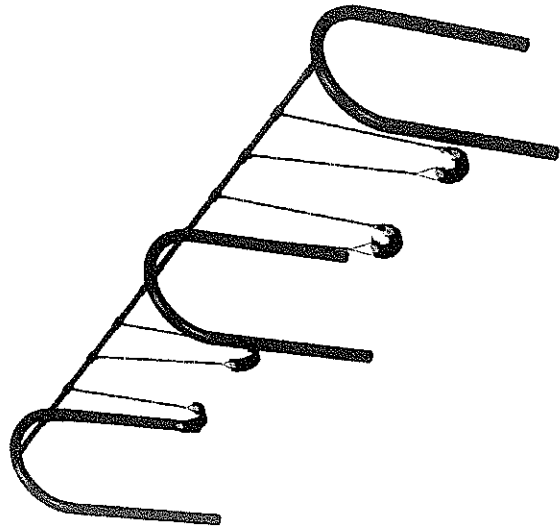
LTCPS - Farmington
One Iron Mountain Drive
Farmington, Missouri 63640
Voice: 1-800-325-8828
Fax: 573-756-0319



- GENERAL NOTES**
1. The American with Disabilities Act (ADA) may require that you raise your post and/or playground structure when viewed from the wheelchair to meet the ADA requirements. Consult with the ADA representative for detailed information.
 2. For playground equipment to be considered accessible, the equipment must be designed and constructed to meet the requirements of the ADA. The manufacturer of the equipment should be consulted for detailed information.
 3. Although a particular playground design may meet the requirements of the ADA, it may not be suitable for the intended use of the equipment. The manufacturer of the equipment should be consulted for detailed information.
 4. All post heights are measured from top of ground cover.
 5. All post lengths are measured from top of ground cover.
 6. The minimum recommended fall zone around the entire structure is 18" above the highest useable surface, except for climbing or catwalk hardware (i.e. rungs, rock, board, etc.).
 7. This document (LTCPS) makes the performance and safety requirements of ASTM for children 5-12 years old, MAX, as applicable to the equipment. The manufacturer of the equipment may be appropriate for all children. Operation and maintenance instructions should be followed.
 8. All post lengths are identified by feet showing the post length. The manufacturer of the equipment should be consulted for detailed information.
 9. The requirement for a Play Builder installation is that the post length can not be set prior to installing the structure.
 10. All post lengths are identified by feet showing the post length. The manufacturer of the equipment should be consulted for detailed information.

Playground Layout Compliance:

- ✓ This playground design meets the final Access Board Regulations.
- ✓ CPSC Handbook for Public Playground Safety
- ✓ ASTM F1487 - Playground Equipment for Public Use.



LTC. Little Tikes Commercial.Product Warranty Statement.

Full One-Year Warranty

PlayPower LT Farmington, Inc., (PPLT) warrants that if any product components fail due to defects in materials or workmanship, within one year from date of delivery, PPLT will repair or replace such defective components by providing free of charge replacement part(s) to the site. PPLT will not be responsible for the cost of labor for the removal of nor the cost of labor for the installation of repaired or replacement part(s). In addition, the following limited warranties apply from date of delivery for the following PPLT products and components:

Limited 100-Year Warranty

On all KidBuilders^a aluminum posts and steel clamps, under normal use and proper maintenance, against structural failure due to corrosion or deterioration from exposure to weather caused by defects in materials and workmanship.

Limited 100-Year Warranty

On KidBuilders^a, SkyBuilders^a, PlayBuilders^a and MaxPlay^a steel posts and stainless steel hardware, under normal use and proper maintenance, against structural failure due to corrosion or deterioration from exposure to weather caused by defects in materials and workmanship.

Limited 50-Year Warranty

On the performance of Landsoff^a Rubber Mulch safety surfacing.

Limited 15-Year Warranty

On KidBuilders^a, SkyBuilders^a, PlayBuilders^a and MaxPlay^a main structures under normal use and proper maintenance against structural failure due to corrosion or deterioration from exposure to weather caused by defects in materials and workmanship. This warranty includes only the vinyl clad decks, rails, loops and rungs that comprise the main structure.

Limited 15-Year Warranty

On all KidBuilders^a, SkyBuilders^a, PlayBuilders^a and MaxPlay^a polyethylene slides, enclosures, and plastic components under normal use and proper maintenance against structural failure caused by defects in materials and workmanship.

Limited 10-Year Warranty

On all ShadeBuilders^a steel frames under normal use and proper maintenance against failure due to corrosion, deterioration or faulty workmanship.

Limited 10-Year Warranty

On Landsoff^a Rubber Mulch color steadfastness.

Limited 8-Year Warranty

On the performance and appearance of Landsoff^a Synthetic Turf safety surfacing. Please contact your local representative for more information

Limited 5-Year Warranty

On all ShadeBuilders^a fabric due to rot, UV deterioration (shades of red are limited to 3 years) or defective workmanship.

Limited 3-Year Warranty

On all Playground Sculptures and PlayCenter polyethylene slides, enclosures, main structure, decks, and plastic components against failure caused by defects in materials and workmanship.

Limited 3-Year Warranty

On KidTiles^a, KidTimbers^a, Border Panels, RockTimbers^a and all KidRiders^a products (excluding spring assemblies) against structural failure due to defects in materials and workmanship.

PLEASE NOTE. The above mentioned warranties do not include any cosmetic issues, e.g., scratches, dents, marring, fading of colors and discoloration of wood due to weathering, and are valid only if the products are installed in conformity with the layout plan and/or installation instructions furnished by PPLT; have been maintained and inspected in accordance with PPLT's instructions; have not been subjected to misuse, negligence or accident; have not been subjected to addition or substitution of parts; and have not been modified, altered or repaired by persons other than PPLT or PPLT's designees. Labor and damage resulting from vandalism, abnormal use, incorrect installation, or lack of maintenance are not covered by this warranty. Except as specifically stated herein, all warranties, express or implied, including but not limited to any implied warranty of MERCHANTABILITY or fitness for a particular purpose are hereby EXCLUDED. This warranty excludes any liability other than expressly stated including but not limited to any incidental or consequential damages.

Additional PPLT Policies

For information on warranty claim procedures, contact the nearest PPLT location (see back cover) or write to: Play Power LT Farmington, Inc., P.O. Box 897, Farmington, Missouri 63640.

Pricing

Prices are subject to change without notice. All orders are subject to approval by Play Power LT Farmington, Inc.'s, general office. Prices are F.O.B. Farmington, Missouri, (excluding Canada - F.O.B. Kitchener, Ontario) and do not include freight.

Specifications

Product specifications in this catalog were correct at the time of publication. However, Play Power LT Farmington, Inc., has a history and policy of continuous product development and improvement and therefore reserves the right to improve, alter or discontinue specifications without notice.

Loss or Damage on Transit

A signed bill of lading is our receipt from a carrier that our shipment to you was complete and in good condition. Before you sign, please check this bill of lading carefully when the shipment reaches you to make sure there are no damages or shortages. Once the shipment leaves our plant, we are no longer responsible for any damage, loss or shortage.

Cancellations and Returns

Cancellations will be accepted upon written notification at our offices. Returns will be accepted only when freight charges are prepaid and we have expressly authorized the return. Parts not included are custom parts, as well as used or damaged parts. There will be a restocking fee for all returned orders and on cancelled orders.

Replacement Parts

For park and playground replacement parts, contact the nearest PPLT location (See current catalogue and see back cover).

INDEPENDENT SLIDES SPECIFICATIONS

All Independent Slide Structures shall have pre-galvanized steel posts shall be 127 mm (5") O.D., 11 gauge pre-galvanized round tubing. Minimum tensile strength shall be 310MPa (55,000psi). Minimum yield point shall be 230MPa (50,000psi). This pipe shall comply to ASTM standards A-500 or A-513. The steel pipe components shall be pre-galvanized. The components are freed of excess weld spatter and shall be cleaned in a multiple bath system which shall include a rust-inhibitive iron phosphate wash prior to painting. The bottom portion of all upright posts shall be crimped slightly to enhance retention in concrete footings. Plastic caps shall fit into the uncrimped end of the 127 mm (5") tube and shall have nylon 6/6 rivets factory installed to resist vandalism. After fabrication, all posts shall have a baked-on electrostatically applied polyester dry powder coating. Vinyl Clad Decks be a one-piece construction and be designed to maintain a full 1.2 m (48") on center post spacing. Metal decks shall be fabricated from 13 gauge hot rolled steel which shall be punched formed and reinforced with welded in place 32 x 76 mm (1.25" x 3") channel iron. Decks shall have a pattern of equally spaced holes on each edge to provide flush mounting of play events that attach to the deck. This assembly shall be dipped in a textured poly-vinyl-chloride coating which will provide added traction when wet. Step Ladders shall be a one piece all welded assembly coated with a textured poly-vinyl-chloride coating. The step assembly shall be fabricated from punched 13 gauge hot rolled sheet steel. The step assembly shall attach to the deck edge with stainless steel hardware and shall be supported by 33 mm (1.315") O.D. x 13 gauge pre-galvanized posts at the bottom riser. Handrails and deck enclosure frame shall be fabricated from 33 mm (1.315") x 11 gauge pre-galvanized steel tubing. Vertical rungs within handrails and deck enclosures shall be fabricated from a minimum of 25 mm (1") O.D. x 14 gauge pre-galvanized steel tubing. Handrails and enclosures shall have a baked-on electrostatically applied polyester dry powder coating. Safety panels shall have the manufacturer's trademark molded in to identify the source of the product. The panel shall be rotationally molded from polyethylene with ultraviolet (UV) light stabilizers and color molded in. This material shall comply with ASTM-D-790 (Flex Modulus), ASTM-D-638 (Tensile Strength), ASTM-D-648 (Heat Distortion Temperature) and ARM-STD (Low Temperature Impact). The panel shall be supported by two 33 mm (1.315") O.D. pre-galvanized steel rails and shall have a baked-on electrostatically applied polyester dry powder coating.

Independent Wave Slide shall consist of pre-galvanized steel posts, a vinyl clad metal deck, a step ladder, a safety panel and a single wide wave slide. Single wide wave slide shall be rotationally molded from polyethylene with ultraviolet (UV) light stabilizers and color molded in. This material shall comply with ASTM-D-790 (Flex Modulus), ASTM-D-638 (Tensile Strength), ASTM-D-648 (Heat Distortion Temperature) and ARM-STD (Low Temperature Impact). Plastic slide side rails shall be a minimum of 203 mm (8") high from the slide surface and slide bedway shall be designed with a 406 mm (16") minimum width. Plastic slides shall have the manufacturer's trademark applied to identify the source of the product. Slide bed shall be one-piece and have no seams or joints. Slide end support shall be fabricated from 38 mm (1.5") square tubing and shall have a baked-on electrostatically applied polyester dry powder coating. Mid support shall be fabricated from 42.2 mm (1.66") O.D. post and shall have a baked-on electrostatically applied polyester dry powder coating. Slide transition decks shall be fabricated from punched sheet steel and shall be dipped in textured poly-vinyl-chloride and oven cured. Slide enclosures shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing and shall have a baked-on electrostatically applied polyester dry powder coating. Slide enclosures shall have no gaps greater than 76 mm (3") and less than 254 mm (10"), especially between vertical rungs and posts.

Independent 360° Spiral Slide (U.S. Patent #D335,517) with Hood shall consist of pre-galvanized steel posts, a vinyl clad metal deck, a step ladder, a safety panel and a 360° Spiral Slide withhood. 360° Spiral Slide with hood shall be two-piece with a seamless bedway, rotationally molded from polyethylene with ultraviolet (UV) light stabilizers and color molded in This material shall comply with ASTM-D-790 (Flex Modulus), ASTM-D-638 (Tensile Strength), ASTM-D-648 (Heat Distortion Temperature) and ARM-STD (Low Temperature Impact). Slide side rails shall be a minimum of 406 mm (16") high from the slide surface. Center post shall be 89 mm (3.5") pre-galvanized tubing. Slide bed and enclosure shall conform to CPSC guidelines for spiral slides. Spiral Slide shall provide a full 360° of rotation. Slide transition decks shall be fabricated from punched sheet steel and shall be dipped in textured poly-vinyl-chloride and oven cured. Slide enclosures shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing and shall have a baked-on electrostatically applied polyester dry powder coating. Slide enclosures shall have no gaps greater than 76 mm (3") and less than 254 mm (10"), especially between vertical rungs and posts.

Independent Duraglide™ Spiral Slide shall have an injection molded sectional bedway with a 519 mm (20.4") high side wall. Slide entry area shall be enclosed by 1016 mm (40") panels. Slide transition decks shall be fabricated from punched sheet steel and shall be dipped in textured poly-vinyl-chloride and oven cured. Slide enclosures shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing and shall have a baked-on electrostatically applied polyester dry powder coating. Slide enclosures shall have no gaps greater than 76 mm (3") and less than 254 mm (10"), especially between vertical rungs and posts.

Hardware: Bolts, Nuts, Screws, Threaded Spacers, Washers and Other Hardware used in the assembly of components shall be Stainless Steel and be tamper resistant. All necessary hardware shall be provided.

INDEPENDENT SWING SPECIFICATIONS

Kid Builders™ 8' (2.4 m) Arch Swings beam shall be fabricated from 60 mm 5 gauge pre-galvanized steel tube bent into an arch. Uprights shall be 3.5 inch O.D. The beam and uprights shall have a baked-on electrostatically applied polyester dry powder coating. Anti Wrap-over swing bearings (U.S. Patent 6,123,480) shall be fabricated from sand cast bronze with injection molded nylon plastic. Swing chains shall be 4/0 straight link galvanized steel. OR Stainless steel when specified. The components are freed of excess weld spatter and shall be cleaned in a multiple bath system, which shall include a rust-inhibitive iron phosphate wash prior to painting. All other connecting hardware shall be stainless steel.

Standard Belt Swing Seats shall be rubber with a tempered steel insert molded inside, rendering them slashproof. Swing chains shall be 4/0 straight link galvanized steel OR stainless steel when specified.

Tot Swing Seats shall be heavy duty construction, fabricated from black rubber with a tempered steel insert molded inside, rendering them slashproof. Tot seat shall be fully enclosed to prevent slipping out and provide lower back support. Two sizes of leg cutouts make this seat versatile enough to accommodate larger children with special needs also. Swing chains shall be 4/0 straight link galvanized steel. OR stainless steel when specified,

Hardware: Bolts, Nuts, Screws, Threaded Spacers, Washers and Other Hardware used in the assembly of components shall be Stainless Steel and be tamper resistant. All necessary hardware shall be provided.

KID RIDERS™ SPECIFICATIONS

Kid Riders™ Whale assembly shall be comprised of two halves and one seat rotationally molded polyethylene plastic with UV stabilizers, color and eye graphic molded in. Handrail and footrail are fabricated 25 mm (1") O D. pre-galvanized tubing. All steel shall comply with ASTM standards: A-500, or A-513. All steel components coated with electrostatically applied polyester powder paint which is cured at temperatures between 400 (204°C) and 500 (260° C) degrees Fahrenheit. Polyester paint shall comply with ASTM standards: D-522 (Flexibility Mandrel Test) D-2794 (Impact Resistance Test) B-117 (Salt Spray Resistance Test) D-2247 (Humidity Resistance Test) D-822 (Weatherability Test) D-3363 (Pencil Hardness Test) and D-2454 (Overbake Resistance Test) and D-3359B (Adhesion Crosshatching Test). All hardware is vandal resistant. The spring sub-assembly has vandal resistant hardware and consists of a galvanized base plate and top, with a wound wire spring.

Kid Riders™ Horse body assembly shall be comprised of one saddle and one horse rotationally molded polyethylene plastic with UV stabilizers, color and graphics molded in. Hand and foot rails shall be fabricated from 25 mm (1") O D. pre-galvanized steel tubing. All steel components shall comply with ASTM standards: A-500 or A-513. All steel components are coated with electrostatically applied polyester powder paint which is cured at temperatures between 400 (204° C) and 500 (260°C) degrees Fahrenheit. Polyester paint shall comply with ASTM standards: D-522 (Flexibility Mandrel Test) D-2794 (Impact Resistance Test) B-117 (Salt Spray Resistance Test) D-2247 (Humidity Resistance Test) D-822 (Weatherability Test) D-3363 (Pencil Hardness Test) D-2954 (Overbake Resistance Test) and D-3359B (Adhesion Crosshatching Test.) All hardware is vandal resistant. The spring sub-assembly has vandal resistant hardware and consists of a galvanized base plate and top, with a wound wire spring

Chinning Bars will be designed to clamp to three posts fabricated from 127 mm (5") O.D. pre-galvanized steel tube. One of which shall be 4.04 m (13'3") and shared by the jump bar. The remaining two bars shall be 3.35 m (11'). Chinning bars shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tube. All steel tube components shall comply with ASTM standards: A-500, or A-513. The components are freed of excess weld spatter and shall be cleaned in a multiple bath system which shall include a rust-inhibitive iron phosphate wash prior to painting. After fabrication, all these components shall have a baked-on electrostatically applied polyester dry powder coating.

MAYPOLE.as equal to Skyrunner. shall have loops welded to a center support beam fabricated from 3.5 inch or 5 inch O.D. pre-galvanized steel tubing. Loops shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. Two (2) spinning wheels shall be attached with 32 mm (1.25") diameter stainless steel hex bolts, each positioned between two bearings. The wheels are fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing and 42 mm (1.625") O.D. steel tubing. After fabrication all parts shall have an electrostatically applied polyester dry powder coating.

BLACKTIMBERS LOOSE FILL BORDER PANELS

Black Timbers Loose Fill Border Panels Both 12 inch high and 8 inch high, all shall have the factory mark applied to identify the source of the product. Black borders shall be rotationally molded from 100 percent pre-consumer recycled polyethylene with ultraviolet (UV) light stabilizers and color molded in. Borders shall have three through holes for anchor stakes molded into the part. The holes for the anchor stakes shall have a recess 16 mm (.614") deep to allow for the head of the stake to be below the top surface. Overall size of the loose fill border panel shall be 127 mm (5") wide x 1963 mm (77.30") long x 304 mm (12") high and 127 mm (5") wide x 741 mm (29.2") long x 304 mm (12") high. Borders shall have a 13 mm (.5") radius on all outer edges and shall assemble in 1.8 m (6') and 610 mm (2') increments. Anchor stakes shall be 19 mm (.75") in diameter x 762 mm (30") long and shall have a ring shank to aid in keeping the stake from backing out. Anchor stakes shall have a rounded head and a semi-core point and shall be hot dip galvanized after fabrication. Borders shall be black in color and may have a certain amount of color variation due to the blending of the pre-consumer recycled resin

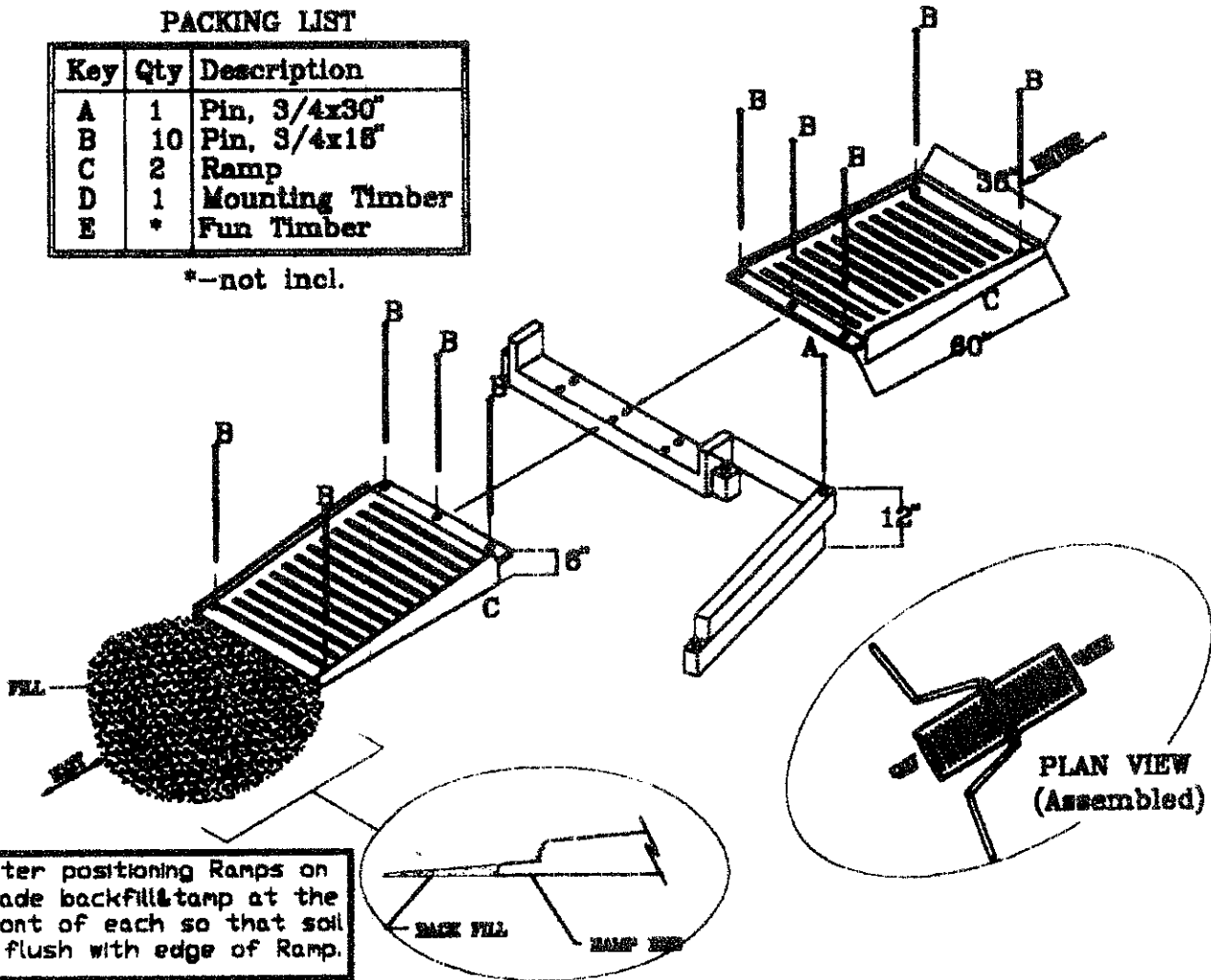
ADA Ramp for Black Timbers Loose Fill Border Panels shall have the factory trademark applied to identify the source of the product. ADA Ramp for Kid Timbers shall be rotationally molded from linear low density polyethylene. Steel run-out is fabricated from 11 gauge hot-rolled sheet steel, and shall be dipped in a textured poly-vinyl-chloride coating then oven cured to a durable finish. Assembly hardware is stainless steel. Size may be 12 inch high or 8 inch high

INSTALLATION SPECIFICATIONS for RAMPS

PACKING LIST

Key	Qty	Description
A	1	Pin, 3/4x30"
B	10	Pin, 3/4x15"
C	2	Ramp
D	1	Mounting Timber
E	*	Fun Timber

*-not incl.



WARNING!!

Do not install any playground equipment over paved surfaces such as concrete or asphalt. The complete area, including the space under and around all playground equipment, must be covered with an impact-absorbing material.

childforms

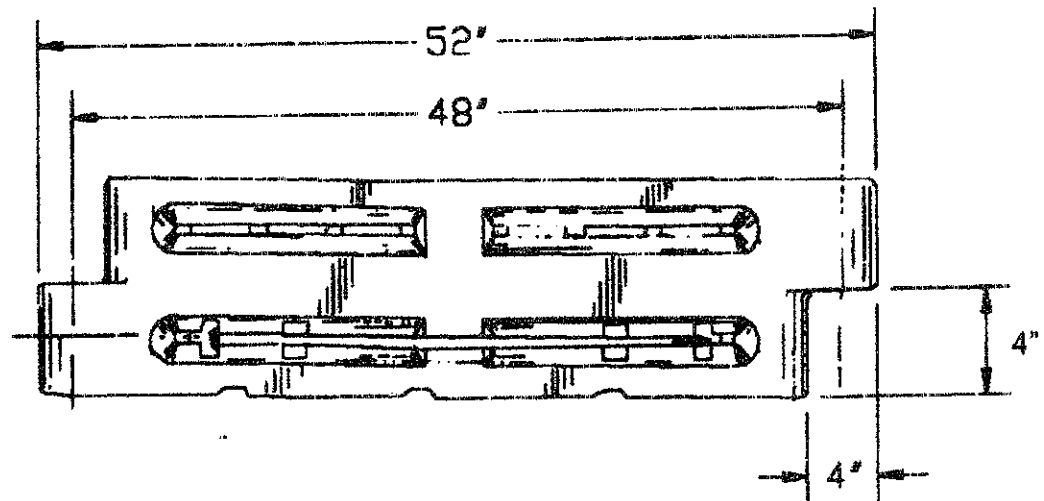
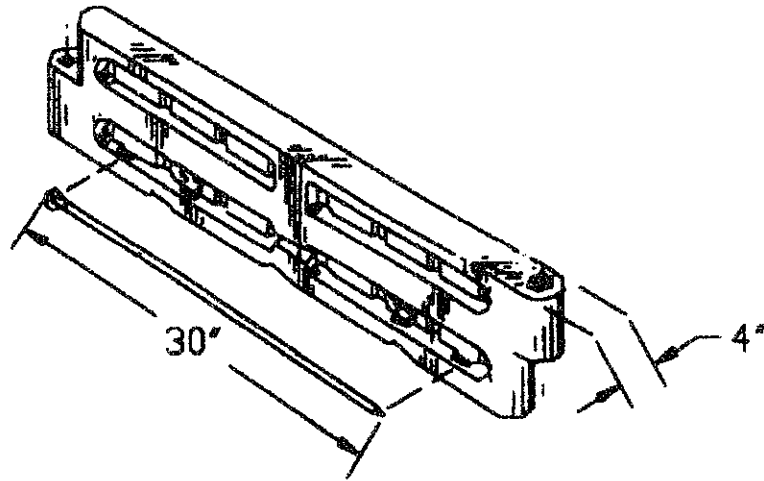
110 Charleston Dr.
Suite 106
Mooresville, NC 28117

Tel: 800-447-3349

Fax: 704-664-1409

Email: info@childforms.com

Website: www.childforms.com



WARNING:

Do not install any playground equipment over paved surfaces such as concrete or asphalt. The complete area, including the space under and around all playground equipment, must be covered with an impact-absorbing material.

childforms

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Suite 106
Mooresville, NC 28117

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Fax: 704-664-1409

Email: info@childforms.com

Website: www.childforms.com

A. **Product Data:** Submit manufacturer's product data, including warranty, maintenance and installation instructions, ASTM F1292, F1951, and F2075 test results, IPEMA certificates of compliance, and samples.

B. **Manufacturer Qualifications:**

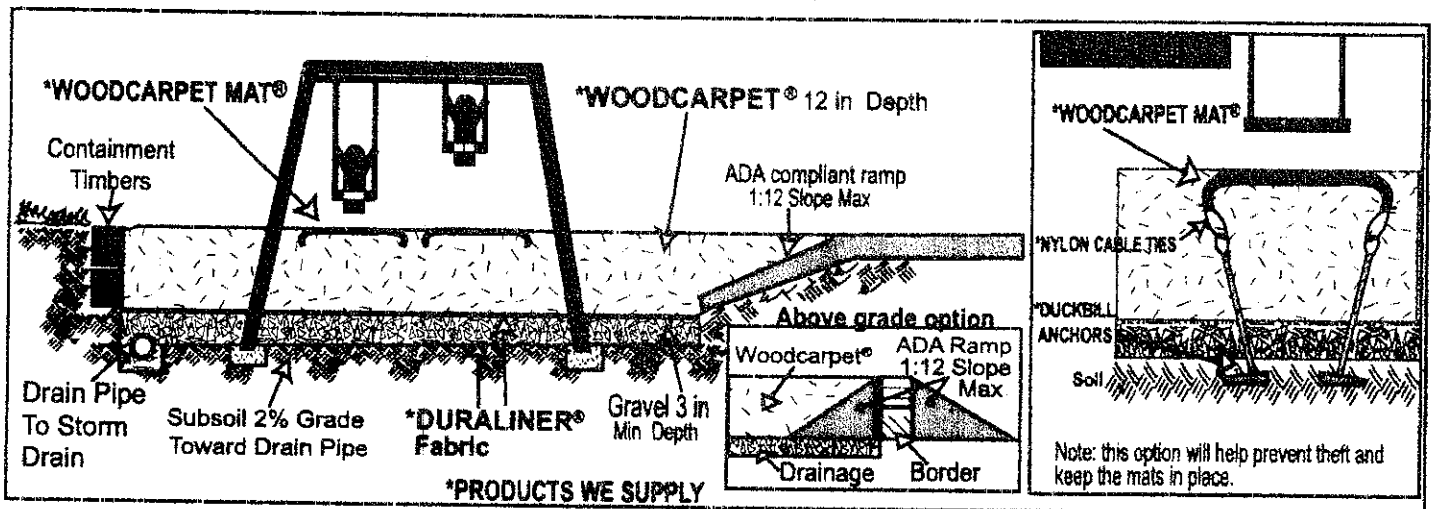
1. Member of International Play Equipment Manufacturer's Association (IPEMA)
2. Total Liability Insurance Coverage: \$11,000,000
3. Sales Representatives certified by National Playground Safety Institute (NPSI).

C. **Warranty Covers Playground Surfacing for Following Periods:**

1. Engineered Wood Fiber Playground Surfacing: 15 years
2. Playground Surfacing Wear Mat: 5 years

D. **Manufacturer:**

1. Zeager Bros., Inc., 4000 East Harrisburg Pike, Middletown, Pennsylvania 17057 Toll Free (800) 346-8524.
2. Zeager Hardwood Co., 340 Steele Road, Franklin, KY 42134. Toll Free (800) 296-9227.



E. **Application:** outdoor playground surface using drainage gravel.

F. **Critical Height:** 12"/ 12 feet fall protection. 8" / 8 feet fall protection.

G. **Installation Procedure:**

1. Review project plans and verify that playground equipment use zones, clearances, and reach ranges will comply with ASTM F1487 sections 8, 9, and 10, and with CAN/CSA-Z614 sections 14 and 15.
2. Prepare the site in accordance with the project engineer's directions and project specifications. Ensure that drainage is routed away from or around the playground area to prevent sand, soil, silt, or other foreign material from contaminating the WOODCARPET®. Grade subsoil to a 2% grade toward the drain pipe. Max 7-8% with stable sub-surface.
3. Install playground equipment.
4. Place a layer of DURALINER® on top of the subsoil. Overlap seams 10 in. (25cm), or 5 in. (63cm) if a double bead of exterior grade construction adhesive is applied to the overlap. Place seams parallel to direction of slides and travel of swings when ever possible.
5. Excavate a minimum 8 in. w x 8 in. d. (20cm x 20cm) trench along the low end of the area to a storm drain. Install drain pipe
6. Spread drainage gravel (1 in. - 2 in. [3cm-6cm] clean gravel) to a minimum depth of 3 in. (8cm). Fill drainage trench
7. Install timbers or an alternate containment system above or below grade. Provide for an access ramp up to play surface if above ground (max 7-8%) or down to if play surface is below grade that complies with ASTM F1487 Section 10.
8. As described in Step 4, place an additional layer of DURALINER® on top of the drainage gravel.
9. Spread WOODCARPET® to a minimum depth of 8 in. after compaction for play equipment under 4 ft. high and to a minimum depth of 12 in. after compaction for play equipment over 4 ft. high. Natural compaction (approx. 1/3) will occur in 2 - 6 weeks. WOODCARPET® must be compacted to be accessible. Mechanically compacting WOOD-CARPET® requires approximately 15% more WOODCARPET® than natural compaction. Exercise caution to prevent damaging the DURALINER® and drain materials. Do not operate equipment directly on the DURALINER®.
- *10. Install a WOODCARPET® Mat (PVC or Foam) in each kick-out area. When installing a wear mat on top of WOODCARPET®, dig a channel around the mat edge down to the base of the WOODCARPET® and slope mat edges down into the channel. If anchoring the mat, install anchors and nylon cable ties to attach the mat to the anchors. Refill the channel with WOODCARPET®. Foam mats must use anchor system with system 1. Anchoring is optional for PVC mats.
11. Inspect the playground and verify that playground equipment use zones, clearances, and reach ranges comply with ASTM F1487 sections 8, 9, and 10, and with CAN/CSA-Z614 sections 14 and 15.
12. Rake WOODCARPET® level a second time two weeks after installation is finished and as needed thereafter.

*Installation of wear mats under all swings and other high-use areas is required in the state of California.

H. Notes:

- 1 Inadequate drainage voids the WOODCARPET® conditional limited warranty and hastens decomposition
- 2 For immediate accessibility, install WOODCARPET® in 6 in maximum layers. Rake level, wet, and mechanically compact each layer twice with a flat surface compactor. Change direction 90 degrees on second compaction.
- 3 Periodic maintenance should include removing debris, raking and topping off by performing steps 9 and 11. See also WOODCARPET® maintenance recommendations

I. Products

- 1 Engineered Wood Fiber Playground Surfacing: WOODCARPET®
 - a Composition:

- (1) Premium Woodcarpet contains 100% pre-consumer recovered wood
- (2) Recycled Woodcarpet may contain up to 100% post-consumer recovered wood
- b Dimensions: Randomly sized wood fibers
- c Sieve Analysis, ASTM F2075-04: Meets criteria
- d Hazardous metal, ASTM F2075-04: Meets criteria
- e Tramp metal, ASTM F2075-04: Meets criteria
- f Impact, ASTM F1292-04: 8 inches meets criteria up to 8 ft fall height and 12 inches meets criteria up to 12 ft fall height
- g Accessibility, ASTM F1951: Meets criteria
- h Resistance to Flammability, 16 FR Part 1630 Standard for Surface Flammability of Carpets and Rugs (FFI-70), Modified Procedure: Not Oven Dried: Meets Criteria
- i Flammability, 16 CFR 1500.44, Federal Hazardous Substances Act Title 16, Chapter II, Subchapter C for Rigid and Pliable Solids: Did not ignite
- j IPEMA Certification: 8"/8ft, 12"/12ft Fall protection F1292-04 Tramp metals, Sieve analysis, Heavy Metals F2075-04

- 2 Fabric: DURALINER®

- a Composition: Non-woven, needle-punched, UV-treated, polypropylene or polyester fabric
- b Recycled content: 0%
- c Size: 5 to 6 feet wide x 250 feet long
- d Weight, ASTM D3776: Min. 3.69 ounces per square yard
- e Thickness, ASTM D5199: min 55 mils
- f Grab Tensile Strength, ASTM D4632: min 90 pounds
- g Mullen Burst Strength, ASTM D3786: min 132 pounds
- h Puncture Resistance, ASTM D4833: min 60 pounds
- i Trapezoid Tearing Strength, ASTM D4533: min 40 pounds
- j Permittivity, ASTM D4491: min 1.9 sec-l
- k Flow Rate, ASTM D4491: min 145 gallons per minute per sq ft
- l Permeability, ASTM D4491: min 0.24 centimeters per second

I. Products-cont.

- 3 Playground Surfacing Wear Mat: WOODCARPET® PVC MAT
 - a Composition: Polyvinylchloride (PVC)
 - b Recycled Content: 60 % Preconsumer recovered pvc
 - c Drain Holes: 3/8 inch diameter holes, one per 10 square inches
 - d Size: 42 in x 42 in [slide exit], 42 in x 78 in [swing], 78 in x 78 in [tire swing, vertical spinner], 78 in x 90 in [swing bay], 156 in OD x 73.5 in ID [merry go round, supernova], 67.5 in OD [supernova]
 - e Weight: 3.0 pounds per square foot
 - f Thickness: 3/4 inches
 - g Impact, ASTM F1292: Over 11.25 inches of Woodcarpet, meets criteria up to 12 feet
 - h IPEMA Certification: Over 11.25 inches of Woodcarpet, rated to 12 feet
- 4 Playground Surfacing Wear Mat: WOODCARPET® FOAM MAT
 - a Composition: Closed-cell, cross-linked, polyethylene foam
 - b Recycled content: 100% pre-consumer recovered foam
 - c Top surface: Covered with layer of heavy duty vinyl
 - d Drain holes: 3/8 diameter holes, one per square foot
 - e Size: 44 in x 44 in [slide exit], 44 in x 74 in [swing]
 - f Finished size: 32in x 32in [slide exit], 32in x 62in [swing]
 - g Weight: 1" thick= 1.5 pounds per square foot
 - h Thickness: 1 & 2 inches. (2" to be discontinued)
 - i Impact, ASTM F1292: 1 in. thick mat meets criteria up to 4 feet
 - j IPEMA Certification: 1" thick mat over 11" of Woodcarpet rated to 12ft fall protection

LTC.PLAY BUILDERS™ SPECIFICATIONS for Little Tikes. Va Playgrounds Services

Plastic Caps shall fit snugly into 89 mm (3.5"), 33 mm (1.315"), and 25 mm (1") diameter pipe ends. Plastic caps for 89 mm (3.5") shall be blow molded low density polyethylene. Plastic caps for 33 mm (1.315") and 25 mm (1") shall be injection molded low density polyethylene. This plastic shall be stabilized against ultraviolet (U V) degradation and shall have color molded in. All caps shall be pre-installed at the factory.

Brackets shall be fabricated from punched and formed 4.5 mm pre-galvanized sheet steel.

Gaskets shall be rubber injection molded from ultraviolet (U V) protected synthetic rubber. Rubber gaskets shall provide an aesthetic seal around the wonder fastener and bracket.

Polyester Dry Powder Coating shall be electrostatically applied and cured at temperatures between 400° Fahrenheit (204° Celsius) and 500° Fahrenheit (260° Celsius). The polyester powder shall comply with ASTM standards: D-522 (Flexibility Mandrel Test), D-2794 (Impact Resistance Test), B-117 (Salt Spray Resistance Test), D-2247 (Humidity Resistance Test), D-822 (Weatherability Test), D-3363 (Pencil Hardness Test), D-2454 (Overbake Resistance Test) and D-3359B (Adhesion Crosshatching Test). Epoxy or Hybrid paints are not acceptable due to poor weatherability characteristics. The components shall be cleaned in a six bath system which shall include a rust-inhibitive iron phosphate wash prior to painting.

Rotationally Molded Plastic Parts shall be molded from linear low density polyethylene with ultraviolet (UV) light stabilizers, anti-static guard and color molded in. This material shall comply with ASTM-D-790 (Flex Modulus), ASTM -D-638 (Tensile Strength), ASTM-D-648 (Heat Distortion Temperature) and ARM-STD (Low Temperature Impact).

Hardware: Bolts, Nuts, Screws, Threaded Spacers, Washers and Other Hardware used in the assembly of components shall be Stainless Steel and be tamper resistant. All necessary hardware shall be provided.

Textured Poly-Vinyl-Chloride coating shall be an average of 3 mm (.125") thick. Poly-vinyl-chloride coating shall be oven cured and textured for added traction when wet or dry.

Steel Posts shall be 89 mm (3.5") O.D. or (5") O.D., 11 gauge pre-galvanized round tubing, or aluminum round tubing when specified. Minimum tensile strength shall be 380MPa (55,000 psi). Minimum yield point shall be 345MPa (50,000 psi). Plastic caps shall be positioned in the top of each post. Posts shall have a baked-on electrostatically applied polyester dry powder coating. Post uprights may be aluminum round tubing when specified.

Square Vinyl Clad Metal Decks shall cover a minimum of 1.03 square meters (1,596 square inches) of top surface area. Metal decks shall be fabricated from punched and formed 11 gauge hot rolled sheet steel. This assembly shall be dipped in a textured poly-vinyl-chloride coating.

Vinyl Clad Half Deck shall cover a minimum of .52 square meters (798 square inches) of top surface area. Metal decks shall be fabricated from punched and formed 11 gauge hot rolled sheet steel. This assembly shall be dipped in a textured poly-vinyl-chloride coating.

Vinyl Clad Triangle Deck shall cover a minimum of .45 square meters (680 square inches) of top surface area. Metal decks shall be fabricated from punched and formed 11 gauge hot rolled sheet steel. This assembly shall be dipped in a textured poly-vinyl-chloride coating.

1.2m (48") and 915 mm (36") Transfer Station shall consist of two triangular decks, a three step assembly for the 1.2 m (48") and two step assembly for the 915 mm (36") and handrails. Each triangular deck shall be fabricated from 11 gauge sheet steel, covering .37 square meters (575 square inches) and have three 25 x 152 mm (1" x 6") hand slots incorporated into the deck surface for aid in user transition. The step assemblies provide access from the transfer decks to a 1.2 m (48") deck height or 915 mm (36") deck height. Each step shall have a tread depth of 406 mm (16") and a tread width of 953 mm (37.5"), with each rise 203 mm (8") or less. Each step assembly shall have an all welded construction from 11 gauge sheet steel. Each step assembly and Transfer Deck shall be dipped in a textured poly-vinyl-chloride coating. Transfer Station handrails shall be fabricated from 33 mm (1.315") O.D., pre-galvanized, 14 gauge tubing. Transfer Station loops shall be fabricated from 42.2 mm (1.66") O.D., pre-galvanized, 11 gauge tubing. All welded handrail assemblies shall have a baked-on electrostatically applied polyester dry powder coating.

Colored Kick Plates and Deck to Deck Activity Plates shall be fabricated from 13 gauge (2.3 mm) pre-galvanized sheet steel. After fabrication, deck to deck plates shall have a baked-on electrostatically applied polyester dry powder coating. 8", 12" and 16" plates shall have fun faces laser cut into them. 24", 28" and 32" plates shall have grooves cut into them with optional slider "Parachute/shapes" fabricated from CNC Routed high density polyethylene sheet.

3.7m (12') Vinyl Clad Metal Ramps shall be a minimum of 915 mm (36") wide. Metal ramps shall be fabricated from punched sheet steel with 76 mm (3") formed sides. Ramp assembly shall be dipped in textured poly-vinyl-chloride.

Ramp Double Rails shall be fabricated from 42.2 mm (1.66") O.D. pre-galvanized steel tubing. Rails shall have a baked-on electrostatically applied polyester dry powder coating.

Ramp Safety Rails shall be fabricated from 33 mm (1.315") pre-galvanized steel tubing. Safety rails shall provide an enclosure and shall have no gaps greater than 76 mm (3") and less than 254 mm (10"), especially between vertical rungs and posts. The vertical rungs of safety rails shall be flattened prior to welding to the horizontal top and bottom bar and shall be welded continuously around the entire perimeter. Safety rails shall have a baked-on electrostatically applied polyester dry powder coating.

Ramp Guard Rails shall be fabricated from 33 mm (1.315") pre-galvanized steel tubing. Guard rails shall have a baked-on electrostatically applied polyester dry powder coating.

1.2 m (4') and 2.4m (8') Arch Bridge shall be a minimum of 915 mm (36") wide. Arch Bridge shall be fabricated from precision punched 13 gauge steel with 76 mm (3") formed sides. Bridge assemblies shall be dipped in a textured poly-vinyl-chloride coating.

Arch Bridge Safety Rails vertical rungs shall be fabricated from 25 mm (1") pre-galvanized steel tubing. The horizontal rails shall be fabricated from 33 mm (1.315") pre-galvanized steel tubing. Safety rails shall provide an enclosure, and shall have no gaps greater than 80 mm (3.15") and less than 254 mm (10"), especially between vertical rungs and posts. Safety rails shall have a baked-on electrostatically applied polyester dry powder coating.

Arch Bridge Guard Rails shall be fabricated from 33 mm (1.315") pre-galvanized steel tubing. Guard rails shall have a baked-on electrostatically applied polyester dry powder coating.

Cat Walk shall be fabricated from 3 mm (11 gauge sheet steel with 3 mm (11 gauge) steel sides and end supports. Cat Walk shall be dipped in a textured poly-vinyl-chloride and oven cured to a durable finish. Cat Walk shall have a dual rail side enclosure. Top and bottom rails shall be fabricated from 33.4 mm (1.315") O.D. pre-galvanized steel tubing with vertical rails welded to the top and bottom rail. Vertical rails shall be fabricated from 25 mm (1") O.D. pre-galvanized steel tubing. After assembly side enclosures and end sections shall have a baked-on electrostatically applied polyester dry powder coating.

2.4 m (8') and 3.7 m (12') Vinyl Clad Clatter (Suspension) Bridge (U.S. Patent #5,118,099) planks shall be pre-assembled at factory for ease of installation. Clatter bridge planks shall be fabricated from one piece of 11 gauge punched and formed hot rolled sheet steel. The clatter bridge plank shall be dipped in textured poly-vinyl-chloride and oven-cured. Assembly of planks shall be such that no open gaps occur between planks. Plank to plank joints shall be pinch proof to the user. No cables or chains shall be used in the assembly of the planks. Clatter bridges shall have a dual rail side enclosure fabricated from 33 mm (1.315") pre-galvanized steel tubing, curved to match the curve of the bridge, to provide user stability at a consistent height along the bridge and shall have a baked-on electrostatically applied polyester dry powder coating.

Burmese Bridge shall be designed to work between posts on 3.7 m (12') centers. The chains shall be pre-galvanized and the vertical chains shall be PVC coated and oven cured to a durable finish. Handrails shall be fabricated from 42.2 mm (1.66") pre-galvanized steel tubing and shall have a baked-on electrostatically applied polyester dry powder coating.

Vinyl Clad Stairs and Step Ladders shall be a one piece all welded assembly coated with a textured poly-vinyl-chloride coating. The stair/step assembly shall be fabricated from punched 13 gauge hot rolled sheet steel. The stair/step assembly shall attach to the deck edge with stainless steel hardware and shall be supported by 33 mm (1.315") O.D. x 13 gauge pre-galvanized posts at the bottom riser. Handrails and deck enclosure frame shall be fabricated from 33 mm (1.315") x 11 gauge pre-galvanized steel tubing. Vertical rungs within handrails and deck enclosures shall be fabricated from a minimum of 25 mm (1") O.D. x 14 gauge pre-galvanized steel tubing. Handrails and enclosures shall have a baked-on electrostatically applied polyester dry powder coating.

Rung Ladder shall be designed to incorporate a one-piece, welded construction to aid installation. Rung ladder side rails shall consist of 33 mm (1.315") O.D. pre-galvanized steel tubing. Rungs shall be fabricated from 25 mm (1") O.D. pre-galvanized steel tubing. Brackets shall be fabricated from 7 gauge pre-galvanized steel. Rung ladder shall have a baked-on electrostatically applied polyester dry powder coating. Available with hand loops or safety loops.

Ladder Panel shall be fabricated from 11 gauge sheet steel. Foot openings shall be 76 mm (3") high x 429 mm (16.875") wide and evenly spaced. Treads shall be 32 mm (1.25") deep. The complete ladder assembly shall be dipped in a textured poly-vinyl-chloride coating. Available with hand hold loops or safety loops.

Cliff Climb shall be rotationally molded from linear low density polyethylene. The Cliff Climb shall have the appearance of a rock face with foot and hand holds molded in for scaling. The rear of the Cliff Climb shall house a mirror fabricated from Type 430, 16 gauge, No 2 bright annealed stainless steel.

Pommel Climber shall be fabricated from 33 mm (1.315") x 14 gauge pre-galvanized steel tubing. Brackets shall be fabricated from 4.554 mm (.179") mild steel. Pommels shall be fabricated from E.P.D.M. 50 duro black rubber with a steel insert molded inside, rendering them slash proof. After fabrication all galvanized steel parts shall have a baked-on electrostatically applied polyester dry powder coating.

Arched Chain Climbers shall be designed to incorporate a one-piece, all welded frame. The side rails shall be arched and have a center to center spacing of 722 mm (28.437"). The side rails shall be fabricated from 42.2 mm (1.66") O.D. pre-galvanized steel tubing. Chain shall be 4/0 steel with a textured poly-vinyl-chloride coating, oven cured to a durable finish.

After fabrication all parts except for the chain shall have a baked-on electrostatically applied polyester dry powder coating Available with hand hold loops or safety loops

Chain Net Climber chain shall be 4/0 steel with a textured poly-vinyl-chloride coating Available with hand loops or safety loops

Inverted Arch Climber shall be designed to incorporate a one-piece, all welded construction with rungs welded to siderails The siderails shall be fabricated from 42.2 mm (1.66") O.D. pre-galvanized steel tubing, be arched and have a center to center spacing of 722 mm (28.437"). The rungs shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing and shall have a "U" shape design. After fabrication all parts shall have a baked-on electrostatically applied polyester dry powder coating. Available with hand hold loops or safety loops

Arch Climber shall be designed to incorporate a one-piece, all-welded construction with rungs evenly spaced, center to center and welded to siderails. The siderails shall have a center spacing of 711 mm (28"). The siderails shall be fabricated from 42.2 mm (1.66") O.D. pre-galvanized steel tubing. The rungs shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. After fabrication all parts shall have a baked-on electrostatically applied polyester dry powder coating Available with hand hold loops or safety loops.

Curly Climbers shall be of a design which will not allow children to climb into the interior of the coil. Curly Climber coils shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The center support post shall be fabricated out of 42.2 mm (1.66") O.D. pre-galvanized steel tubing Enclosure shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. Curly Climbers shall be an all welded construction and shall have a baked-on electrostatically applied polyester dry powder coating.

Snake Pole shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The center support post shall be fabricated out of 42.2 mm (1.66") O.D. pre-galvanized steel tubing The snake pole shall be an all welded construction Enclosure shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing After fabrication all parts shall have a baked-on electrostatically applied polyester dry powder coating

Loop Climber shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The center support posts shall be fabricated out of 42.2 mm (1.66") O.D. pre-galvanized steel tubing. The loop climber shall be an all welded construction. Enclosure shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing After fabrication all parts shall have a baked-on electrostatically applied polyester dry powder coating

Side Step Climber shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing The Side Step Climber shall be an all welded construction. Enclosures shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing After fabrication all parts shall have a baked-on electrostatically applied polyester dry powder coating.

Climbing Net shall be fabricated from rope consisting of six urethane coated nylon wrapped steel cables twisted around a nylon core. Each perpendicular joint shall be rigidly secured. Climbing Net shall be secured with a stainless steel eyenut to the deck edge and a stainless steel cleavis at the bottom Available with hand hold loops or safety loops.

Circle Overhead shall have teardrop shaped hand rungs welded to a single circular monorail. The Circle Overhead shall be designed with a 270 degree arc to return to the take off platform. The center beam and support legs shall be fabricated from 48.3 mm (1.9") O.D. pre-galvanized steel tubing. The teardrop shaped rungs shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The Circular Overhead shall have a baked-on electrostatically applied polyester dry powder coating

"S" Overheads Right and Left shall have teardrop shaped hand rungs welded to a single arc monorail. The "S" Overhead Right shall be designed with a right arc from the take off platform, midway the arc turns left. The "S" Overhead Left shall be designed with a left arc from the take off platform, midway the arc turn right The center beam and support legs shall be fabricated from 48.3 mm (1.9") O.D. pre-galvanized steel tubing. The teardrop shaped rungs shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The "S" Overheads shall have a baked-on electrostatically applied polyester dry powder coating

"Z" Overheads Right and Left shall have teardrop shaped hand rungs welded to a single arc monorail. The "Z" Overhead Right shall be designed with a 90° right turn from the take off platform, midway the arc turns 90° left to a second platform. The "Z" Overhead Left shall be designed with a 90° left turn from the take off platform, midway the arc turns 90° right to a second platform. The center beam and support legs shall be fabricated from 48.3 mm (1.9") O.D. pre-galvanized steel tubing. The teardrop shaped rungs shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The "Z" Overheads shall have a baked-on electrostatically applied polyester dry powder coating.

"C" Overhead shall have teardrop shaped hand rungs welded to a single arc monorail. The "C" Overhead shall be designed with a 90° turn from the take off platform, midway the arc turns an additional 90° to a second platform. The center beam and support legs shall be fabricated from 48.3 mm (1.9") O.D. pre-galvanized steel tubing. The teardrop shaped rungs shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The "C" Overheads shall have a baked-on electrostatically applied polyester dry powder coating.

360 Degree Overhead shall consist of a continuous hand grasping component fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing suspended from a second circular support component fabricated from 48.3 mm (1.9") O.D. pre-galvanized steel tubing. The system shall consist of a center support and perimeter support legs, which shall be fabricated from 48.3 mm (1.9") O.D. pre-galvanized steel tubing. 360 Degree Overheads shall have a baked-on electrostatically applied polyester dry powder coating. Advanced 360 Degree Overhead systems can be used in conjunction with Circle, "S", "C" and "Z" overhead components.

Challenge Ladder shall be designed to incorporate a one-piece, welded construction to ease installation. The challenge ladder shall be designed to work between posts on 3.7 m (12') and 2.44 m (8') centers for the length. The challenge ladder rungs shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The side rails shall be fabricated from 60 mm (2.375") O.D. pre-galvanized steel tubing. After fabrication all parts shall have a baked-on electrostatically applied polyester dry powder coating.

Wavy Challenge Ladder shall have rungs welded to siderails. The wavy challenge ladder shall be designed to work between posts on 2.44 m (8') centers for the length. The side rails shall be fabricated from 60 mm (2.375") O.D. pre-galvanized steel tubing. The rungs shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The wavy challenge ladder shall have a baked-on electrostatically applied polyester dry powder coating.

Bowed Challenge Ladder shall have rungs welded to siderails. The bowed challenge ladder shall be designed to work between posts on 2.44 m (8') and 3.7 m (12') centers for the length. The side rails shall be fabricated from 60 mm (2.375") O.D. pre-galvanized steel tubing. The rungs shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. The bowed challenge ladder shall have a baked-on electrostatically applied polyester dry powder coating.

Trapeze Challenge Ladder rungs shall be fabricated from 25 mm (1") O.D. pre-galvanized steel tube and shall be mounted to the main side rails via stainless steel spherical bearings. The side rails shall be fabricated from 60 mm (2.375") O.D. pre-galvanized steel tubing. The trapeze challenge ladder shall be designed to work between posts on 3.7 m (12') centers for the length. The trapeze challenge ladder shall have a baked-on electrostatically applied polyester dry powder coating.

Ring Challenge shall consist of a 60 mm (2.375") O.D. pre-galvanized steel beam and shall have ring coils fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. Ring challenge shall be an all welded construction and shall have a baked-on electrostatically applied polyester dry powder coating.

Floating Stones shall have a main support beam fabricated from 73 mm (2.875") O.D. 6 gauge pre-galvanized steel tubing. Hanging Supports for the floating stones shall be 33 mm (1.315") O.D. pre-galvanized steel tubing and shall be tethered to a steel footing rail with 4/0 galvanized chain. Floating stones shall be rotationally molded linear low density polyethylene.

Stepping Stones shall be rotationally molded linear low density polyethylene mounted on 60mm (2.375") O.D. pre-galvanized support posts.

Track Ride shall be designed to incorporate a one-piece aluminum (6061-T6 alloy) extruded beam to ease installation and reduce maintenance. The beam shall be designed to work between 3.7 m (12') post centers. Rubber stops shall be provided at each end of the track. Track ride cross beams shall be fabricated from 60 mm (2.375") O.D. pre-galvanized steel tubing. The roller assembly shall consist of four load supporting wheels with sealed ball bearings and two lateral supporting wheels to insure that the roller assembly does not rub the sides of the beam. Track ride handle shall be fabricated from 25 mm (1") O.D. pre-galvanized steel tubing. After fabrication, the steel components shall have a baked-on electrostatically applied polyester dry powder coating.

Ring Trek shall consist of a 60 mm (2.375") O.D. pre-galvanized steel beam and shall have steel ring hangers welded in place to ease installation and reduce maintenance. Oil impregnated bronze bushings shall be **Caps** shall fit snugly into 33 mm (1.315") diameter, and 25 mm (1") square pipe ends and shall be injection molded high density polyethylene. This plastic shall be stabilized against pressed into ring hangers, after they have a baked-on electrostatically applied polyester dry powder coating. Ring trek handles shall be cast in Tenzaloy, a high strength, self-aging aluminum alloy of the aluminum-zinc-magnesium type. This alloy shall comply to ASTM standards B179-73, B26-72, B108-73, and Federal Specifications: QQ-A-371f, QQ-A-601d, and QQ-A-596e.

Parallel Bars do not need additional posts for installation. Parallel bars shall be fabricated from 60 mm (2.375") O.D. pre-galvanized steel tubing and have a finished length of 3.0 m (10'). After fabrication all parts shall have a baked-on electrostatically applied polyester dry powder coating.

Stainless Steel Double Wide Slide shall be 755 mm (29.7") wide single piece 16 gauge 304 stainless steel. 11 gauge steel brackets shall reinforce the entrance and exit of the slide. Side rails shall be 32 mm (1.25") wide x 105 mm (4.125") high "D" style aluminum, closed by cast aluminum end caps permanently riveted in place. Single rail shall be fabricated from 33 mm (1.315") O.D. galvanized tubing. Slide end support shall be fabricated from 38 mm (1.5") square tubing. All steel tubing shall have a baked-on electrostatically applied polyester dry powder coating.

Wave Slides with Hood enclosure shall be rotationally molded from linear low density polyethylene. Top of the slide hood shall be at least 925 mm (38") above the deck surface. The connection between the slide and the slide hood shall prohibit string entanglement. Plastic slide side rails shall be a minimum of 203 mm (8") high from the slide surface and slide bedway shall be designed with a 406 mm (16") minimum width. Plastic slides shall have the manufacturer's trademark applied to identify the source of the product. Slide bed shall be one-piece with no seams or joints. Slide end support shall be fabricated from 38 mm (1.5") square tubing and shall have a baked-on electrostatically applied polyester dry powder coating. Mid support shall be fabricated from 42.2 mm (1.66") O.D. tubing and shall have a baked-on electrostatically applied polyester dry powder coating.

610 mm (24") Wave Slides with Hood enclosure shall be rotationally molded from linear low density polyethylene. Top of the slide hood shall be at least 925 mm (38") above the deck surface. The connection between the slide and the slide hood are shipped pre-assembled and shall prohibit string entanglement. Plastic slide rails shall be a minimum of 203 mm (8") high from the slide surface. Slide bedway shall be designed with a 406 mm (16") minimum width. Slide bed shall be one-piece with no seams or joints.

Double Wide Slides shall be rotationally molded from linear low density polyethylene. Plastic double wide slide sides shall be 203 mm (8") high from the slide surface and slide bedway shall be designed with a 406 mm (16") minimum width. Double wide slide shall be a one-piece design with a center divider having no seams, joints or gaps. Plastic slides shall have the manufacturer's trademark applied to identify the source of the product. Slide end support shall be fabricated from 38 mm (1.5") square tubing and shall have a baked-on electrostatically applied polyester dry powder coating. Mid support shall be fabricated from 42.2 mm (1.66") O.D. tubing and shall have a baked-on electrostatically applied polyester dry powder coating. A single rail sit down bar shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing. All steel tubing shall have a baked-on electrostatically applied polyester dry powder coating.

360° Spiral Slide (U.S. Patent #D335,517) with Hood shall be two piece with a seamless bedway, rotationally molded from linear low density polyethylene. Slide side rails shall be a minimum of 355 mm (14") high from the slide surface. Center post shall be 89 mm (3.5") pre-galvanized tubing. Slide bed and enclosure shall conform to United States CPSC guidelines for spiral slides. Spiral slide shall provide a full 360° of rotation. Slide transition decks shall be fabricated from punched sheet steel and shall cover a minimum of 0.7 square meters (1,080 square inches) of top surface. This assembly shall be dipped in textured poly-vinyl-chloride. Slide enclosures shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel tubing and shall have a baked-on electrostatically applied polyester dry powder coating. Slide enclosures shall have no gaps greater than 76 mm (3") and less than 254 mm (10"), especially between vertical rungs and posts.

Elbow Slides shall be one-piece, rotationally molded from linear low density polyethylene. Slide side rails shall be a minimum of 229 mm (9") high from the slide surface. Slide enclosure shall be fabricated from 33 mm (1.315") O.D. tubing. Slide end support shall be fabricated from 38 mm (1.5") square tubing. All steel tubing shall have a baked-on electrostatically applied polyester dry powder coating.

Half Pipe Sectional Slides with Hoods shall be comprised of section, rotationally molded from linear low density polyethylene. The slide enclosures shall also be rotationally molded from linear low density polyethylene. The end support and mid supports shall be fabricated from 48.3 mm (1.9") O.D. pre-galvanized tubing, 2.3 mm (13 gauge) and 3 mm (11 gauge) pre-galvanized sheet steel. The supports shall have a baked-on electrostatically applied polyester dry powder coating.

Tunnel Slides shall be configured to approximately a 762 mm (30") internal diameter cross section. Tunnel panels shall have the manufacturer's trademark applied to identify the source of the product. Tunnel slides shall be assembled using an overlap joint on section connection and shall not have any internal hardware. Tunnels, elbows and panels shall be rotationally molded from linear low density polyethylene. Tunnel slide end supports shall be fabricated from 38 mm (1.5") square, pre-galvanized steel tubing and mid supports shall be fabricated from 42.2 mm (1.66") O.D. pre-galvanized steel tubing. Both supports shall have a baked-on electrostatically applied polyester dry powder coating.

Bannister Rails shall be fabricated from 60 mm (2.375") O.D. pre-galvanized steel tube. All components shall have a baked-on electrostatically applied polyester dry powder coating.

Sliding Poles shall be fabricated from 42.2 mm (1.66") O.D. pre-galvanized steel pipe. After fabrication all components shall have a baked-on electrostatically applied polyester dry powder coating. The top support brace shall be fabricated from 33 mm (1.315") O.D. pre-galvanized steel pipe.

Straight Crawl Tunnels shall have an approximate internal diameter area of 762 mm (30") and three 76 mm (3") holes to allow for visibility. Crawl tunnel mounting panel shall have the manufacturer's trademark applied to identify the source of the product. Tunnel and panel shall be rotationally molded from linear low density polyethylene.

90° Elbow, Extended 90° Elbow and "S" Crawl Tunnel shall have an approximate internal diameter area of 762 mm (30") Crawl tunnel mounting panel shall have the manufacturer's trademark applied to identify the source of the product Elbow, extension and panel shall be rotationally molded from linear low density polyethylene

Aluminum Steering Wheel shall be cast in Tenzaloy, a high strength, self-aging aluminum alloy of the aluminum-zinc-magnesium type. This alloy shall comply to ASTM standards: B179-73, B26-72, B108-73, and Federal Specifications: QQ-A-371f, QQ-A-601d, and QQ-A-596e. Steering wheels shall mount to a 33 mm (1 3/16") O.D. pre-galvanized tube. After fabrication, all components shall have a baked-on electrostatically applied polyester dry powder coating.

Plastic Steering Wheel shall be rotationally molded from linear low density polyethylene. Steering wheels shall mount to a 25 mm (1") O.D. pre-galvanized steel tube.

Kid Village™ Panels, Seat (U.S. Patent D-370959), Counter, Doorway, Window, Activity and Fence (U.S. Patent D-370,268), shall be rotationally molded from linear low density polyethylene. The village panels shall be 1231 mm (48 5/8") high. The Kid Village™ doorway opening shall be 457 mm (18") wide. The molded in graphics shall not be raised above the surface of the panel. Panel mounting brackets shall be fabricated from 11 gauge sheet steel and dichromate washed. After fabrication, all steel components shall have a baked-on electrostatically applied polyester dry powder coating.

Kid Village™ Table shall be rotationally molded from linear low density polyethylene.

Animal Crawl Tunnel (U.S. Patent D-381056), Counter (U.S. Patent D-391615) and Door Panel shall be rotationally molded from linear low density polyethylene. The molded in graphics shall not be raised above the surface of the panel.

Steel Store Front shall be fabricated from pre-galvanized, punched 11 gauge sheet steel welded to pre-galvanized 33 mm (1 3/16") steel tubing. Steel Store Front shall consist of two components: a counter and top section, which can be used together to simulate a store or used independently. After fabrication the components shall have a baked on electrostatically applied polyester dry powder coating.

Dinosaur Counting Panel, Alphabet Panel and Finger Maze Panel shall be fabricated from tri color compression molded polyethylene with incised graphics to trace shapes. Panels shall be mounted in a rotationally molded linear low density polyethylene.

Graphics Panels shall provide enclosure and be non-climbable. The plastic panel shall have the manufacturer's trademark applied to identify the source of the product. Graphics panels shall be rotationally molded from linear low density polyethylene. The molded in graphics shall not be raised above the surface of the panel.

Bubble Mirror Panel shall consist of two 3 mm (.125") metalized bubbles with a non-removable filler of bubble wrap packaging material inside to prevent compression of bubbles. The mirror shall be attached to a rotationally molded linear low density polyethylene panel to provide enclosure. The panel shall have the manufacturer's trademark applied to identify the source of the product.

Mirror Panel mirrors shall be fabricated from Type 430, 16 gauge, No. 2 bright annealed stainless steel. The mirror shall be attached to a plastic panel to provide an enclosure. The plastic panel shall have the manufacturer's trademark applied to identify the source of the product. The panel shall be rotationally molded from linear low density polyethylene. Panel mounting brackets shall be fabricated from 7 gauge, pre-galvanized sheet steel and dichromate washed. After fabrication, all steel components shall have a baked-on electrostatically applied polyester dry powder coating.

Bubble Panels shall be fabricated from 6 mm (.25") thick, an extremely tough, impact resistant polycarbonate material and shall be optically clear. The bubble shall be attached to a plastic panel to provide an enclosure. The plastic panel shall have the manufacturer's trademark applied to identify the source of the product. The panel shall be rotationally molded from linear low density polyethylene. Panel mounting brackets shall be fabricated from 7 gauge, pre-galvanized sheet steel, and dichromate washed. After fabrication, all steel components shall have a baked-on electrostatically applied polyester dry powder coating.

Window Panels shall be fabricated from 6 mm (.25") thick, an extremely tough, impact resistant polycarbonate material and shall be optically clear. The window shall be attached to a plastic panel to provide an enclosure. The plastic panel shall have the manufacturer's trademark applied to identify the source of the product. The panel shall be rotationally molded from linear low density polyethylene. Panel mounting brackets shall be fabricated from 7 gauge, pre-galvanized sheet steel, and dichromate washed. After fabrication, all steel components shall have a baked-on electrostatically applied polyester dry powder coating.

Gear Panel shall be rotationally molded from linear low density polyethylene. Two Lexan sheets contain a set of gears and a crank that shall be rotationally molded from linear low density polyethylene. The plastic panel shall have the manufacturer's trademark applied to identify the source of the product.

Seven Station Play Factory shall be rotationally molded from linear low density polyethylene. Textured patterns, hand matching game and finger tracing maze shall be molded in. Two windows contain a set of gears that shall be rotationally molded from linear low density polyethylene. The periscope has polished stainless steel mirrors. Talk tube mouth pieces are stainless steel.

Activity Panels, Tic-Tac-Toe, Spelling, Math and Animal, shall consist of a cylinder assembly and enclosure panel. Cylinders shall have vertical support bars which shall be fabricated from 25 mm (1") O.D., pre-galvanized steel tubing. Panel and cylinders shall be rotationally molded from linear low density polyethylene. The molded-in graphics shall not be raised above the surface of the plastic. Panel mounting brackets shall be fabricated from 7 gauge, pre-galvanized sheet steel, and dichromate washed. After fabrication, all steel components shall have a baked-on electrostatically applied polyester dry powder coating.

Abacus Panel shall be rotationally molded from linear low density polyethylene. Spheres shall be fabricated from polyethylene with ultraviolet (UV) light stabilizers and color pigment molded in. Each of the polyethylene spheres shall be 70 mm (2.75") in diameter and be molded in red and yellow. Horizontal rails shall be fabricated from 25 mm (1") x 13 gauge pre-galvanized steel tubing.

Double Sided Routed Play Panels shall be fabricated from high density polyethylene with graphics routed in. Panels shall be mounted in a rotationally molded linear low density polyethylene panel.

Fire Safety Panel shall be fabricated from tri color compression molded polyethylene with incised graphics to trace shapes. Panels shall be mounted in a rotationally molded linear low density polyethylene panel.

Accessible Sand Box/Water Table shall be rotationally molded from linear low density polyethylene. Sand capacity shall be approximately 150 pounds of play sand. The Sand Box/Water Table shall be fitted in the factory with a water drainage valve. A one piece lid shall be rotationally molded from linear low density polyethylene.

Friendship Globe shall be rotationally molded from linear low density polyethylene with ultraviolet (UV) stabilizers, raised continents and graphics molded in. Globe shall be mounted on 16 gauge 60 mm (2.375") pre-galvanized steel tubing and shall have a baked-on electrostatically applied polyester dry powder coating.

Sign Panels shall provide a non-climbable enclosure. The plastic panel shall have the manufacturer's trademark applied to identify the source of the product. The panel shall be rotationally molded from linear low density polyethylene. Panel mounting brackets shall be fabricated from 7 gauge, pre-galvanized sheet steel, and dichromate washed. After fabrication, all steel components shall have a baked-on electrostatically applied polyester dry powder coating.

Safety Panels shall provide a non-climbable enclosure. The plastic panel shall have the manufacturer's trademark applied to identify the source of the product. The panel shall be rotationally molded from linear low density polyethylene. Panel mounting brackets shall be fabricated from 7 gauge, pre-galvanized sheet steel, and dichromate washed. After fabrication, all steel components shall have a baked-on electrostatically applied polyester dry powder coating.

Safety Rails shall be fabricated from 33 mm (1.315") O.D. pre-galvanized tubing with 7 gauge pre-galvanized steel brackets welded on both ends for attachment to the posts and deck. The Safety Rails provide a non-climbable enclosure and shall have no gaps greater than 76 mm (3") and less than 254 mm (10"), especially between vertical rungs and posts. The vertical rungs of safety rails shall be flattened prior to welding to the horizontal top and bottom bar, and shall be welded continuously around the entire perimeter. After fabrication, all steel components shall have a baked-on electrostatically applied polyester dry powder coating.

Talk Tubes shall be fabricated from 48 x 3.4 mm (1.90" x .135") wall steel tubing. The "phone funnel" shall be fabricated from sheet steel capped with tubing and have a perforated steel insert inside. Talk Tubes shall have a baked-on electrostatically applied polyester dry powder coating.

Chinning and Turning Bars and Single Rails will be designed to be mounted to the post for the ease of installation and shall be fabricated from 33 mm (1.315") O.D., pre-galvanized steel tubing and shall have a baked-on electrostatically applied polyester dry powder coating.

Sand Border Panels shall be rotationally molded from linear low density polyethylene. All panels shall have a molded in seat and overlap standard posts with a minimum height of 317 mm (12.5"). Post spacing shall be the standard 1003 mm (39.5") on centers.

Quad Roof shall have over 18.6 square meters (61 square feet) of shaded play area and have the manufacturer's trademark molded in to identify the source of the product. The quad roof shall be 940 mm (37") high and rotationally molded from linear low density polyethylene. The Quad Roof is a multi section roof (nine sections) and requires eight posts for mounting, but can accommodate a ninth, or center post.

Square Roofs shall be 762 mm (30") high and shall have the manufacturer's trademark molded in to identify the source of the product. The roof shall be a double wall construction and rotationally molded from linear low density polyethylene

Arch Roof and Double Arch Roof shall consist of two parts. The arches shall be rotationally molded from linear low density polyethylene. The roof section shall be fabricated from 16 gauge galvanized sheet steel with 6 x 76 mm (25" x 3") slots punched over the entire surface. The roof section shall be mechanically attached to the arches with screws to form the assembly. The roof section shall have a baked-on electrostatically applied polyester dry powder coating

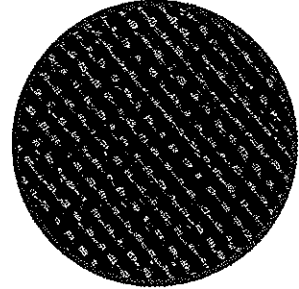
Arches shall be rotationally molded from linear low density polyethylene

Loops shall be fabricated from 33 mm (1 3/8") O.D., pre-galvanized steel tubing, with vertical rungs fabricated from 25 mm (1") O.D. pre-galvanized steel tubing. After fabrication all loop components shall have a baked-on electrostatically applied polyester dry powder coating and be designed to bolt directly to the post and deck

There shall exist **NO GAPS** greater than 76 mm (3") and less than 254 mm (10") in any component design, unless otherwise stated

WOVEN SLIT FILM GEOTEXTILES

Featuring high tensile strengths and low elongations, our Geotex® woven geotextiles have a remarkable capacity for filtering soils, distributing loads, reducing rutting and extending the life of paved and unpaved roadways. Made from individual yarns woven together to provide dimensionally stable geotextiles, they are resistant to ultraviolet (UV) degradation and to biological and chemical environments normally found in soils. All of our woven geotextiles are backed by decades of in-field performance in everything from separation and filtration to erosion control and waste containment applications.



- 1007741 GEOTEX 135ST/2000 (12.5X432) 600SY/RL
- 1008421 GEOTEX 135ST/2000 (17.5X360) 700SY/RL
- 1007738 GEOTEX 200ST/2002 (12.5X432) 600SY/RL
- 1007742 GEOTEX 200ST/2002 (17.5X309) 600SY/RL
- 1008445 GEOTEX 250ST/2004 (12.5X360) 500SY/RL
- 1008446 GEOTEX 250ST/2004 (17.5X258) 501.67SY/RL
- 1007997 GEOTEX 315ST/2006 (12.5X360) 500SY/RL
- 1008066 GEOTEX 315ST/2006 (17.5X258) 501.67SY/RL

NONWOVEN GEOTEXTILES

Made from the highest quality polypropylene fibers, our Geotex® nonwoven geotextiles are needlepunched to form a strong fabric that retains its dimensional stability, adding years to the life of any roadway, railroad, landfill or civil/environmental engineering project. Used in subsurface drainage, separation, stabilization, erosion control and cushioning applications, our geotextiles are resistant to ultraviolet (UV) degradation and to biological and chemical environments normally found in soils.

GEOTEX® NONWOVEN

Geotex® Lightweight Nonwovens

The ability of lightweight Geotex® nonwoven needle punched geotextiles to restrict soil particles but allow water to easily pass through makes them perfect for filtration and/or separation applications.

- 1009743 GEOTEX 311/4535 (12.5X360) 500SY/RL
- 1004840 GEOTEX 311/4535 (15X360) 600SY/RL
- 1009744 GEOTEX 351/4545 (12.5X360) 500SY/RL
- 1004779 GEOTEX 351/4545 (15X360) 600SY/RL
- 1008179 GEOTEX 451/4547 (12.5X360) 500SY/RL
- 1008178 GEOTEX 451/4547 (15X360) 600SY/RL

GEOTEX® NONWOVEN GEOTEXTILES

APPLICATION RECOMMENDATIONS FOR GEOTEX® NONWOVEN GEOTEXTILES

	APPLICATION	ORGANIZATION / REFERENCE #	CATEGORY	GEOTEX® STYLE
CIVIL	PERMANENT EROSION CONTROL	AASHTO M288-05/FHWA FP-03	CLASS 1/TYPE IV (A-C) CLASS 2/TYPE IV (D-F)	GEOTEX® 801 GEOTEX 601
	DRAINAGE	AASHTO M288-05/FHWA FP-03	CLASS 2/TYPE I (A-C) CLASS 3/TYPE I (D-F)	GEOTEX 601 GEOTEX 401
	ROADWAY SEPARATION	AASHTO M288-05/FHWA FP-03	CLASS 1/TYPE II (A) CLASS 2/TYPE II (B) CLASS 3/TYPE II (C)	GEOTEX 801 GEOTEX 601 GEOTEX 401
	ROADWAY STABILIZATION	AASHTO M288-05/FHWA FP-03	CLASS 1/TYPE III (A) CLASS 2/TYPE III (B)	GEOTEX 801 GEOTEX 601
	RAILROAD STABILIZATION	AREMA/CH 1, PART 10	REGULAR HEAVY EXTRA HEAVY	GEOTEX 1201 GEOTEX 1601 GEOTEX 1701
ENVIRONMENTAL	GEOMEMBRANE LINER PROTECTION	-	-	GEOTEX 861-1701
	GAS VENTING	-	-	GEOTEX 861-1701
	LANDFILL LEACHATE COLLECTION	EPA/GRI REPORT NO. 15	-	GEOTEX 651 GEOTEX 861
	LANDFILL DRAINAGE SYSTEMS	-	-	GEOTEX 651

NOTES: AASHTO: American Association of State Highway Transportation Officials
GRI: Geosynthetics Research Institute
AREMA: American Railway Engineering and Maintenance Association
EPA: Environmental Protection Agency

GEOTEX® NONWOVEN CIVIL GEOTEXTILES PROPERTY TABLE¹ ENGLISH & METRIC UNITS

PROPERTY	TEST METHOD	VALUE ²	UNIT	311	351	401	451	501	601	701	801	1001	1071	1201	1601								
MECHANICAL	GRAB TENSILE STRENGTH	ASTM D-4632	MARV	lb N	80 356	95 423	115 512	120 534	140 623	160 712	180 801	205 912	250 1112	270 1202	300 1335	380 1691							
	GRAB ELONGATION	ASTM D-4632	MARV	%	50	50	50	50	50	50	50	50	50	50	50	50							
	PUNCTURE STRENGTH	ASTM D-4833	MARV	lb N	50 222	55 245	65 289	65 289	85 378	85 378	100 445	110 490	150 668	160 712	175 779	240 1068							
	CBR PUNCTURE	ASTM D-6241	MARV	lb N	210 934	260 1157	310 1379	335 1490	360 1601	410 1824	460 2046	525 2335	625 2780	725 3225	825 3670	1025 4559							
	MULLEN BURST	ASTM D-3786	MARV	psi kPa	150 1034	185 1275	210 1448	230 1586	280 1930	280 1930	330 2275	350 2413	460 3171	520 3585	580 3999	750 5170							
TRAPEZOIDAL TEAR	ASTM D-4533	MARV	lb N	30 134	40 178	50 222	50 222	60 267	60 267	75 334	85 378	100 445	105 467	115 512	150 668								
HYDRAULIC	APPARENT OPENING SIZE (AOS)	ASTM D-4751	MaxARV	US Sieve mm	50 0 300	50 0 300	70 0 212	70 0 212	70 0 212	70 0 212	70 0 212	80 0 180	100 0 150	100 0 150	100 0 150	100 0 150							
	PERMITTIVITY	ASTM D-4491	MARV	sec ⁻¹	2.0	2.0	2.0	1.5	1.4	1.3	1.5	1.5	1.2	1.2	1.0	0.7							
	WATER FLOW RATE	ASTM D-4491	MARV	gpm/ft ² l/min/m ²	150 6112	150 6112	140 5704	120 4889	115 4686	110 4480	110 4480	110 4480	85 3463	85 3463	75 3056	50 2037							
ENDURANCE	UV RESISTANCE	ASTM D-4355	MARV	% Retained @ 500 hours	70	70	70	70	70	70	70	70	70	70	70								
PACKAGING	ROLL WIDTH	MEASURED	TYPICAL	ft m	12.5 3.81	15 4.57	12.5 3.81	15 4.57	12.5 3.81	15 4.57	12.5 3.81	15 4.57	12.5 3.81	15 4.57	15 4.57	15 4.57							
	ROLL LENGTH	MEASURED	TYPICAL	ft m	360 109.8	360 109.8	360 109.8	360 109.8	360 109.8	360 109.8	360 109.8	360 109.8	360 109.8	360 109.8	360 109.8	360 109.8							
	ROLL WEIGHT	CALCULATED	TYPICAL	lb kg	110 50	130 59	130 59	148 67	145 66	170 77	158 72	187 85	220 100	202 92	202 92	203 92	248 112	205 93	245 111	308 140	360 163	400 181	560 254
	ROLL AREA	MEASURED	TYPICAL	yd ² m ²	500 418	600 502	500 418	600 502	500 418	600 502	600 502	500 418	500 418	500 418	500 418	500 418	500 418	500 418	500 418	500 418	500 418	500 418	

NOTES: 1. The property values listed are effective 08/2006 and are subject to change without notice. 2. Values reported in weaker principal-direction. 3. All values listed are Minimum Average Roll Values (MARV) unless otherwise noted, calculated as the typical minus two standard deviations. Statistically, it yields a 97.7% degree of confidence that any sample taken during quality assurance testing will exceed the value reported. Maximum Average Roll Values (MaxARV) represents typical plus two standard deviations. 4. Undefined styles meet and/or exceed the American Association of State Highway Transportation Officials (AASHTO) M288-05 specifications.