Dale V Mudrak

Digitally signed by Dale V Mudrak
Date: 2022.04.05 22:45:37 -04'00'

Playground with Square Fabric Off - Uplift

↑Wind Uplift = (Area in Vertical Direction)(Wind Pressure)

There are approximately 23 areas each 3.5' x 3.5' + one(1)
Circular area 6' in diameter
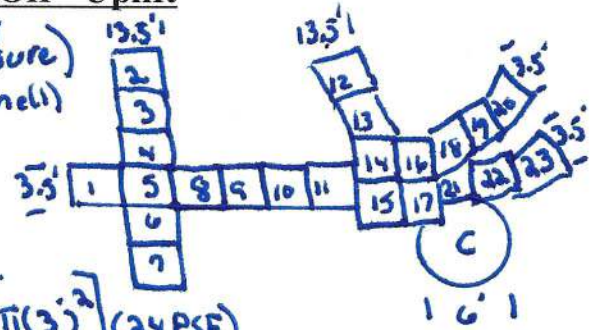
↑Total Wind Uplift = (23 areas)(3.5' x 3.5')(24 PSF) + (One circular area)$\left[\pi(3)^2\right]$(24 PSF)

↑Total Wind Uplift = 6,762 lb + 679 lb = 7,441 lb

↓Pullout Resistance = ↓wt footer + ↓Soil Resistance

↓wt footer (A Size) = Volume x Density = $\pi\left(\frac{9'}{12}\right)^2(1.5')(144\ lb/ft^3) = 382\ lb$

↓Soil Resistance (A Size footer) = $\frac{1}{2}PL^2\gamma K_u Tan\theta = \frac{1}{2}\left[\pi(1.5')\right](1.5')^2(110)(1)Tan\ 30° = 337\ lb$ $\boxed{\theta = 30°\ \gamma = 110 \\ K_u = 1\ SAND}$

↓Total Pullout Resistance (A Size footer) = ↓wt footer + ↓Soil Resistance = 382 lb + 337 lb = 719 lb

There are 13 A Size footers directly associated with the primary play structure

↓Total Pullout Resistance (A Size footers) = (13 footers)(719 lb/footer) = 9,347 lb

---

↓wt footer (B Size) = Volume x Density = $\pi\left(\frac{9'}{12}\right)^2(1.5')(144\ lb/ft^3) = 231\ lb$

↓Soil Resistance (B Size footer) = $\frac{1}{2}PL^2\gamma K_u Tan\theta = \frac{1}{2}\left[\pi\left(\frac{14'}{12}\right)\right](1.5')^2(110)(1)Tan\ 30° = 262\ lb$ $\boxed{\theta = 30°\ \gamma = 110 \\ K_u = 1\ SAND}$

↓Total Pullout Resistance (B Size footer) = ↓wt footer + ↓Soil Resistance = 231 lb + 262 lb = 493 lb

There are 18 B Size footers directly associated with the primary play structure

↓Total Pullout Resistance (B Size footers) = (18 footers)(493 lb/footer) = 8,874 lb

---

↓wt footer (E Size) = Volume x Density = $\pi\left(\frac{9'}{12}\right)^2(2')(144\ lb/ft^3) = 308\ lb$

↓Soil Resistance (E Size footer) = $\frac{1}{2}PL^2\gamma K_u Tan\theta = \frac{1}{2}\left[\pi\left(\frac{14'}{12}\right)\right](2')^2(110)(1)Tan\ 30° = 466\ lb$ $\boxed{\theta = 30°\ \gamma = 110 \\ K_u = 1\ SAND}$

↓Total Pullout Resistance (E Size footer) = ↓wt footer + ↓Soil Resistance = 308 lb + 466 lb = 774 lb

There are 2 E Size footers directly associated with the primary play structure

↓Total Pullout Resistance (E Size footer) = (2 footers)(774 lb/footer) = 1,548 lb

(Continued Next Page)

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Playground with Square Fabric Off – Uplift
(Continued From Previous Page)

$\downarrow$Pullout Resistance $= \downarrow$wt footer $+ \downarrow$ Soil Resistance

$\downarrow$wt footer $=$ Volume $\times$ Density $= \pi \left(\frac{18'}{12}\right)^2 (3')(144 \text{ lb/ft3}) = 3,054$ lb
(H Size)

$\downarrow$Soil Resistance $= \frac{1}{2} PL \gamma Ku \tan \theta = \frac{1}{2}\left[\pi(3')\right](3'^2)(110)(1) \tan 30° = 2,693$ lb

$\boxed{\theta = 30° \quad \gamma = 110 \\ Ku = 1 \text{ SAND}}$

(H Size footer)

$\downarrow$Total Pullout Resistance $= \downarrow$wt footer $+ \downarrow$ Soil Resistance $= 3,054$lb $+ 2,693$lb $= 5,747$ lb
(H Size footer)

There are 4 H Size footers directly associated with the primary play structure

$\downarrow$Total Pullout Resistance $= (4 \text{ footers})(5,747 \text{ lb/footer}) = 22,988$ lb
(H Size footer)

$\downarrow$Total Pullout Resistance $= 9,347$lb $+ 8,874$lb $+ 1,548$lb $+ 22,988$ lb $= 42,757$ lb
(A+B+E+H Size footer)

$$\text{Factor of Safety} = \frac{\downarrow\text{Total Pullout Resistance (A+B+E+H Size footer)}}{\uparrow\text{Total Wind Uplift}} = \frac{42,757}{7,441} = 5.75$$

$$Fs = \underline{5.75 \text{ ok}}$$

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Playground with Square Fabric Off - Overturning

The design method utilized to analysis the lateral wind loads was accomplished by the Sum of the moments around a specific point (see exhibit B).

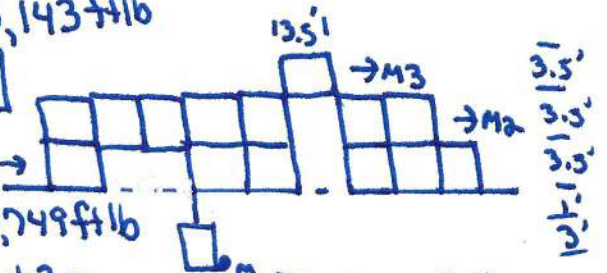$\mathcal{C}M_{Wind} = (Area)(Wind\ Pressure)(Distance)$

$\mathcal{C}M_1 Wind = (areas)(3.5' \times 3.5')(24 PSF)\left[3' + 1' + \frac{3.5'}{2}\right] = 10,143\ ftlb$

$\mathcal{C}M_2 Wind = (areas)(3.5' \times 3.5')(24 PSF)\left[3' + 1' + 3.5' + \frac{3.5'}{2}\right]$

$\mathcal{C}M_2 Wind = 19,037\ ftlb$

$\mathcal{C}M_3 Wind = (area)(3.5' \times 3.5')(24 PSF)\left[3' + 1' + 7' + \frac{3.5'}{2}\right] = 3,749\ ftlb$

$\mathcal{C}M_{Total\ Wind} = \sum M_{1-3} = 10,143\ ftlb + 19,037\ ftlb + 3,749\ ftlb = 32,929\ ftlb$

$\mathcal{G}M_{Foundation} = \downarrow Pullout\ Resistance \times Distance \times \#Footers$

$\downarrow Pullout\ Resistance\ for\ A\ Size\ footer = 719\ lb,\ B\ Size = 493\ lb,\ E\ Size = 774\ lb,\ H\ Size = 5,747\ lb$

(See Pages 7 & 8 for $\downarrow Pullout\ Resistance$ Calculations)

$\mathcal{G}M_1 Foundation = (719\ lb)\left[\frac{9'}{12}\right](1\ footer) = 539\ ftlb$

$\mathcal{G}M_2 Foundation = (719\ lb)\left[\frac{5'}{12} + 3.25'\right](1\ footer) = 2,876\ ftlb$

$\mathcal{G}M_3 Foundation = (719\ lb)\left[\frac{5'}{12} + 4.71'\right](3\ footers) + (5,747\ lb)\left[\frac{5'}{12} + 4.71'\right](2\ footer)$

$\mathcal{G}M_3 Foundation = 11,777\ ftlb + 62,757\ ftlb = 74,534\ ftlb$

$\mathcal{G}M_4 Foundation = (774\ lb)\left[\frac{5'}{12} + 5.33'\right](1\ footer) = 4,706\ ftlb$

$\mathcal{G}M_5 Foundation = (774\ lb)\left[\frac{5'}{12} + 6.92'\right](1\ footer) = 5,937\ ftlb$

$\mathcal{G}M_6 Foundation = (719\ lb)\left[\frac{5'}{12} + 7.67'\right](3\ footers) + (5,747\ lb)\left[\frac{9'}{12} + 7.67'\right](2\ footer)$

$\mathcal{G}M_6 Foundation = 18,162\ ftlb + 96,779\ ftlb = 114,941\ ftlb$

$\mathcal{G}M_7 Foundation = (719\ lb)\left[\frac{5'}{12} + 9.25'\right](1\ footer) = 7,190\ ftlb$

$\mathcal{G}M_8 Foundation = (719\ lb)\left[\frac{5'}{12} + 10.67'\right](2\ footers) = 16,422\ ftlb$

$\mathcal{G}M_9 Foundation = (719\ lb)\left[\frac{5'}{12} + 13.67'\right](2\ footers) = 20,736\ ftlb$

$\mathcal{G}M_{Total\ Foundation} = \sum M_{1-9} = 247,881\ ftlb$

$Factor\ of\ Safety = F_S = \dfrac{\mathcal{G}M_{Total\ Foundation}}{\mathcal{C}M_{Total\ Wind}} = \dfrac{247,881}{32,929} = 7.53$

$\underline{F_S = 7.53\ ok}$

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Playground with Square Fabric On - Uplift

↑Wind Uplift = (Area in Vertical Direction)(Wind Pressure)

There are approximately 9 areas each 3.5'×3.5', one(1)
Circular area 6' in diameter 4 one(1) Shade
Area 20'×20' in size
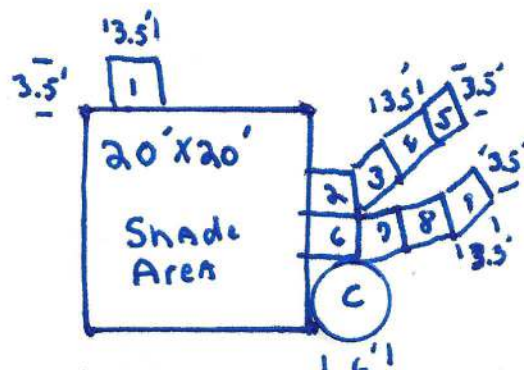
↑Total Wind Uplift = (9 areas)(3.5'×3.5')(14PSF) + (one circular area)[$\pi(3.5^2)$](14PSF) + (one Shade area)(20'×20')(14PSF)

↑Total Wind Uplift = 1,544 lb + 396 lb + 5,600 lb = 7,540 lb

↓Pullout Resistance = ↓wT footer + ↓Soil Resistance

↓Total Pullout Resistance = 42,757 lb
(A+B+E+H Size footer)

(See Pages 7 4 8 for ↓Total Pullout Resistance (Calculation)
(A+B+E+H Size footer)

$$\text{Factor of Safety} = F_S = \frac{\text{↓Total Pullout Resistance (A+B+E+H Size footer)}}{\text{↑Total Wind Uplift}} = \frac{42,757}{7,540} = 5.67$$

$$F_S = 5.67 \text{ ok}$$

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Playground with Square Fabric On - Overturning

The design method utilized to analysis the lateral wind loads was accomplished by the Sum of the moments around a specific point (see exhibit B).

$$\circlearrowright M\ wind = (Area)(wind\ Pressure)(Distance)$$

$$\circlearrowright M_1 wind = (6\ areas)(3.5' \times 3.5')(14PSF)\left[3' + 1' + \frac{3.5'}{2}\right]$$

$$\circlearrowright M_1 wind = 5,917\ ft\ lb$$

$$\circlearrowright M_2 wind = (2\ areas)(3.5' \times 3.5')(14PSF)\left[3' + 1' + 3.5' + \frac{3.5'}{2}\right]$$

$$\circlearrowright M_2 wind = 11,105\ ft\ lb$$

$$\circlearrowright M_3 wind = (1\ area)(3.5' \times 3.5')(14PSF)\left[3' + 1' + 7' + \frac{3.5'}{2}\right]$$

$$\circlearrowright M_3 wind = 2,187\ ft\ lb$$

$$\circlearrowright M_4 wind = (2\ areas)\left[\frac{1}{2}(10')(5')\right](14PSF)\left[3' + 1' + 19' + \frac{5'}{3}\right] = 17,267\ ft\ lb$$

$$\circlearrowright M\ Total\ Wind = \sum M_{1-4} = 5,917\ ft\ lb + 11,105\ ft\ lb + 2,187\ ft\ lb + 17,267\ ft\ lb = 36,476\ ft\ lb$$

$$\circlearrowleft M\ Foundation = \downarrow Pullout\ Resistence \times Distance \times \#Footers$$

$$\circlearrowleft M\ Total\ Foundation = 247,881\ ft\ lb$$

(See Page 9 for $\circlearrowleft M\ Total\ Foundation$ Calculation)

$$Factor\ of\ Safety = F_S = \frac{\circlearrowleft M\ Total\ Foundation}{\circlearrowright M\ Total\ Wind} = \frac{247,881}{36,476} = 6.8$$

$$F_S = \underline{6.8\ ok}$$

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Typical Footer Detail

Note utility lines less than 3 inches in diameter
may pass through foundation provided that they
are sleeved or are wrapped in filter fabric

1) All concrete to be minimum 3000 PSI
2) Based on Sandy soil conditions,
   if any organic materials are encountered, the Engineer
   shall be notified so that conditions may be reviewed.
3) Contractor shall locate all underground utilities
   prior to any excavation.
4) See Footer layout and page 5 Foundation Schedule
   for footer sizes.
5) Soil Bearing Pressure 1500 PSF
   General existing soil conditions include sand, silt and
   traces of rock. These soil conditions are adequate
   to support the design load of 1500 PSF

Varies
20 feet
Max.

Support Post

solid concrete
block spacer
(Min 3000 PSI)

12 inches of Engineered Wood Fiber

Concrete
Varies

Soil,
Sand

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Varies

Typical Playground Deck with Shade Footer Detail

Note utility lines less than 3 inches in diameter
may pass through foundation provided that they
are sleeved or are wrapped in filter fabric

1) All concrete to be minimum 3000 PSI
2) Based on Sandy soil conditions,
   if any organic materials are encountered, the Engineer
   shall be notified so that conditions may be reviewed.
3) Contractor shall locate all underground utilities
   prior to any excavation.
4) See Footer layout and page 6 Foundation Schedule
   for footer sizes.
5) Soil Bearing Pressure 1500 PSF
   General existing soil conditions include sand, silt and
   traces of rock. These soil conditions are adequate
   to support the design load of 1500 PSF

Varies
25 feet
Max.

Support Post

solid concrete
block spacer
(Min 3000 PSI)

12 inches of Engineered Wood Fiber

Soil,
Sand

Concrete
36 inch

36 inch

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Exhibit "A"

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Wind
uplift

12 inches of Engineered Wood Fiber

Soil Resistance   Soil,
Sand

Concrete

Varies

All Concrete shall be
3000 PSI

Weight of Concrete

Varies

Exhibit "B"

Wind Load

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$$M(soil) + M(concrete) > M(wind)$$

Varies

Support Post

12 inches of Engineered Wood Fiber

Concrete

Varies

Soil, Sand

Soil Resistance Pressure

Moment Center

Weight of Concrete

Varies

101'-6"

36'-6"

Phase 1

ADA Sidewalk
by customer

BELT SEAT
PACKAGE 3 1/2"
O.D. W/ STAINLESS
STEEL CHAIN (G)

PRIMETIME SWING
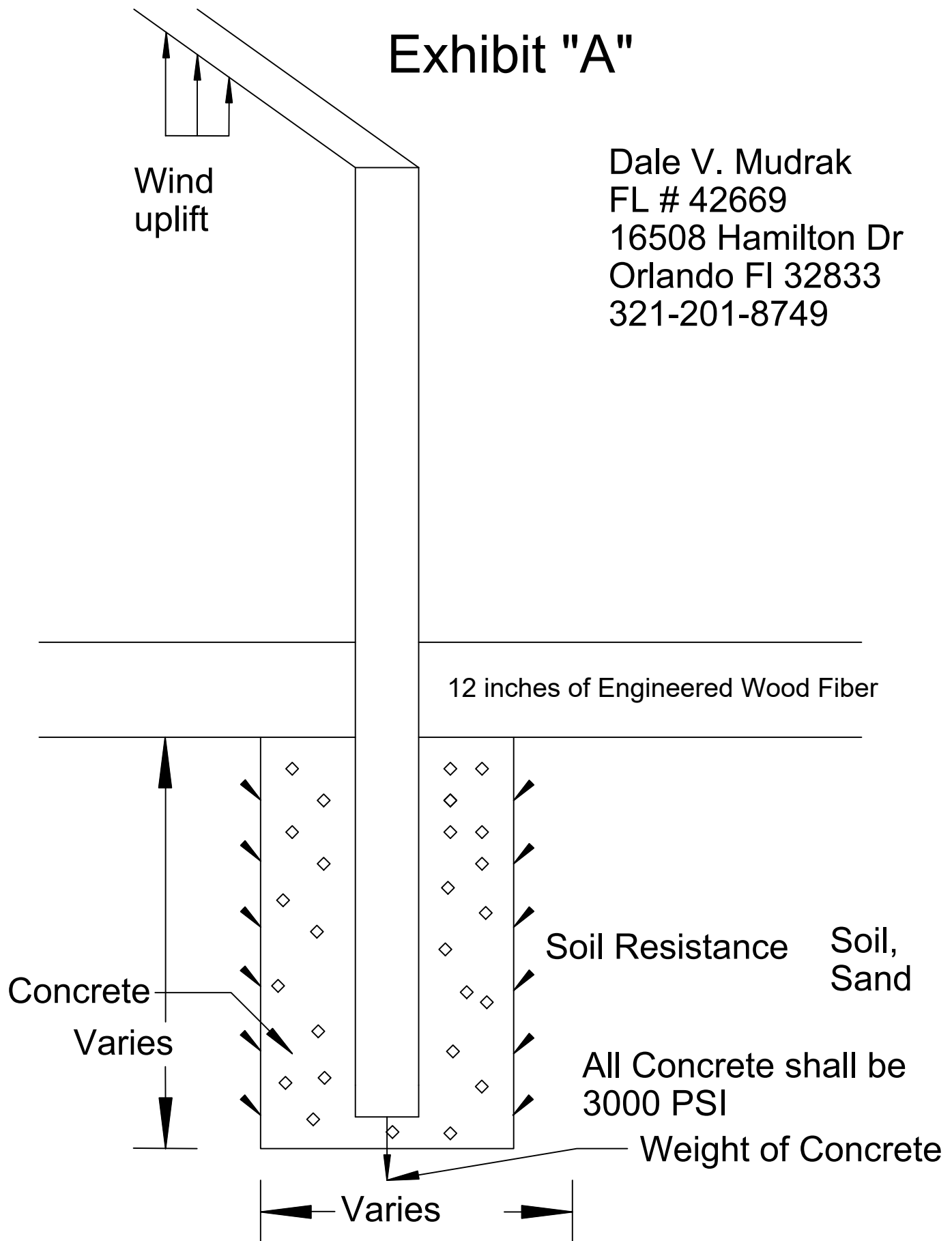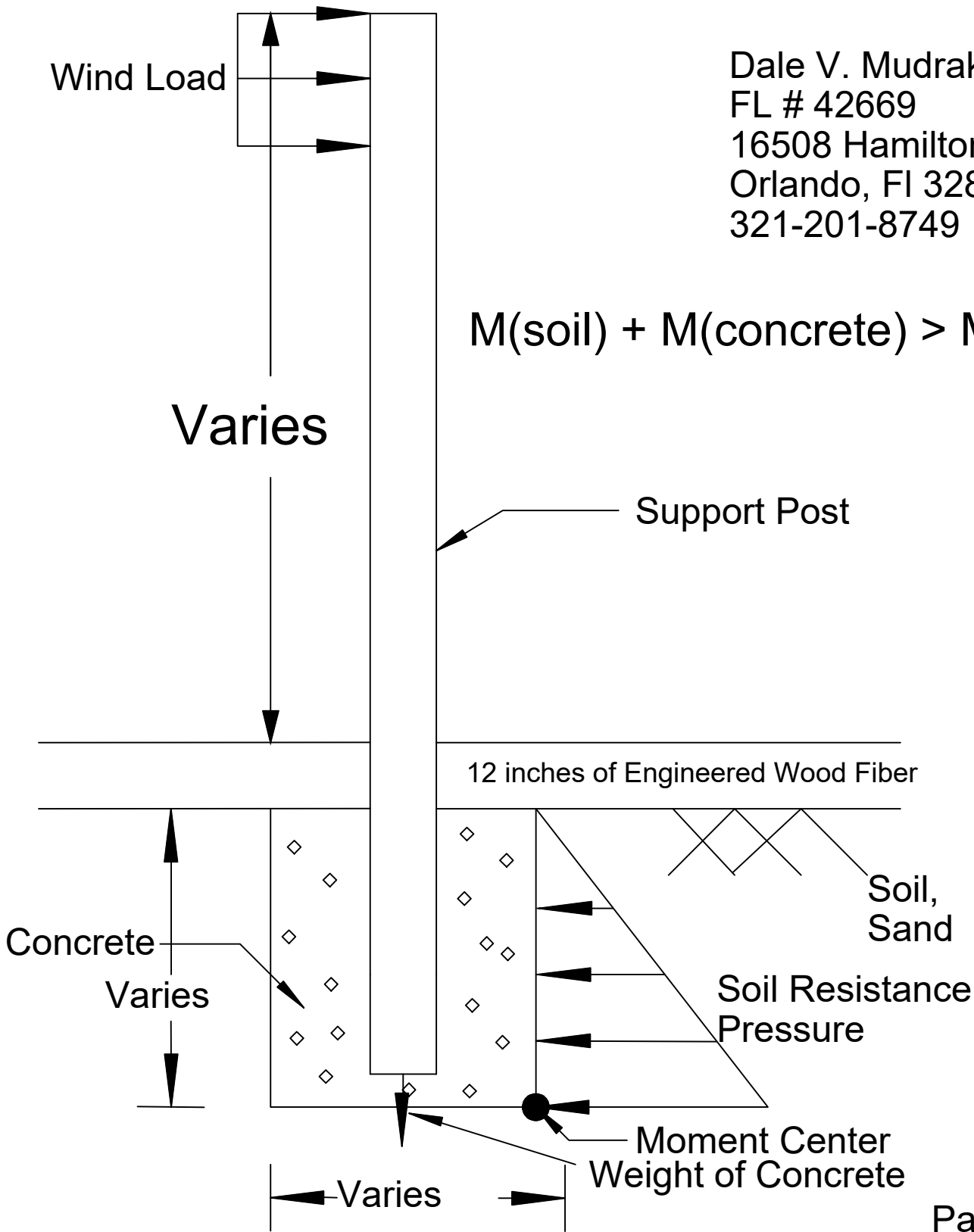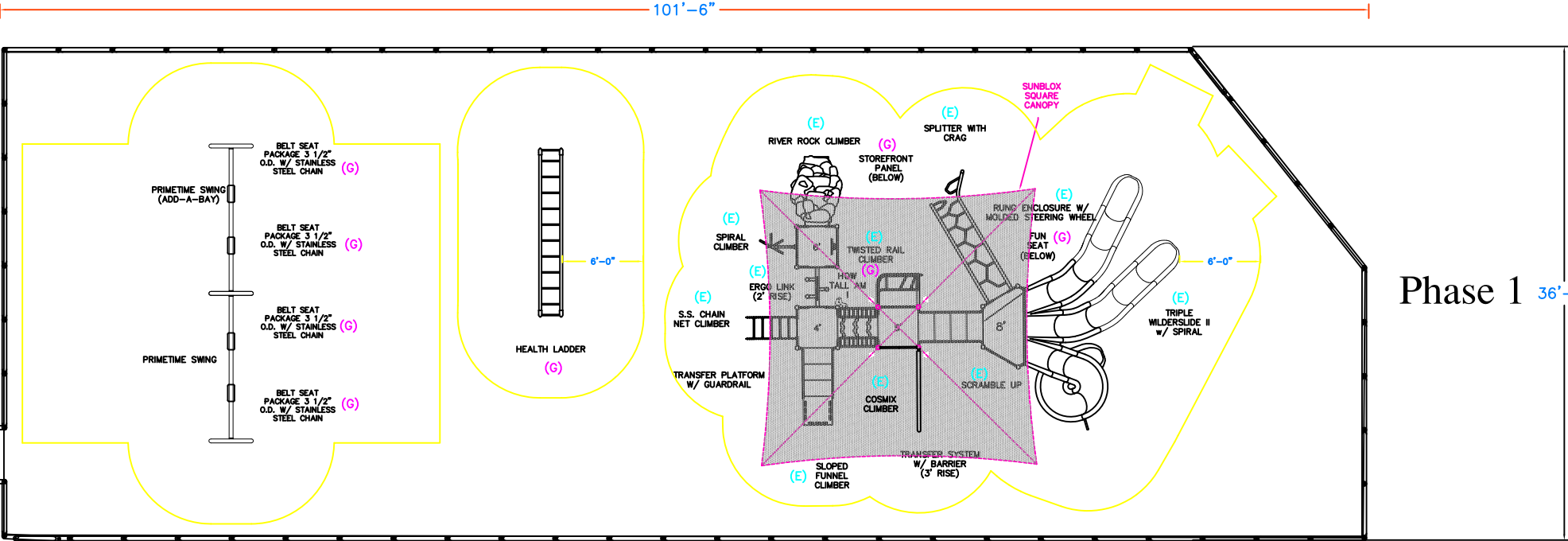(ADD-A-BAY)

BELT SEAT
PACKAGE 3 1/2"
O.D. W/ STAINLESS
STEEL CHAIN (G)

BELT SEAT
PACKAGE 3 1/2"
O.D. W/ STAINLESS
STEEL CHAIN (G)

PRIMETIME SWING

BELT SEAT
PACKAGE 3 1/2"
O.D. W/ STAINLESS
STEEL CHAIN (G)

HEALTH LADDER
(G)

6'-0"

(E)
RIVER ROCK CLIMBER

(E)
SPLITTER WITH
CRAG

(G)
STOREFRONT
PANEL
(BELOW)

SUNBLOX
SQUARE
CANOPY

(E)
RUNO ENCLOSURE W/
MOLDED STEERING WHEEL

(E)
SPIRAL
CLIMBER

(E)
TWISTED RAIL
CLIMBER

(E)
FUN
SEAT
(BELOW)

6'-0"

(E)
ERGO LINK
(2' RISE)

HOW
TALL AM

(E)
S.S. CHAIN
NET CLIMBER

(E)
TRIPLE
WILDERSLIDE II
w/ SPIRAL

(E)
SCRAMBLE UP

TRANSFER PLATFORM
W/ GUARDRAIL

COSMIX
CLIMBER

SLOPED
FUNNEL
CLIMBER

TRANSFER SYSTEM
W/ BARRIER
(3' RISE)

6'-0"
Playground
Equipment
Minimum Use
Zone

Playground Equipment Details -

Age Group : 5-12

Elevated Components (E) : 10
Accessible Elevated Components : 10
   (minimum required 4)

Ground Level Components (G) : 8
   (minimum required 3)
Types of Components : 4
   (minimum required 3)

This layout meets the requirements of the 2020 Florida Building Code, 7th Edition and the 2020 Florida Building Code, 7th Edition Accessibility Code.

Playground Layout is in Compliance with DOJ 2010 ADA Standards for Accessible Design. Including all surfacing material and accessible routes.

All Components are IPEMA Certified
All Components are ASTM & CPSC Compliant

This layout meets the requirements of the Florida Building Code and Accessibility Code 1008.

(E)   (E) = ELEVATED COMPONENTS
(G)   (G) = GROUND LEVEL COMPONENTS

Belmont Academy Charter School
Lake City, FL
Phase 1 Rev 2
Representative
DRP

This Unit includes play events and routes or travel specifically designed for special needs users. It is the opinion of the manufacturer that these play events and routes of travel conform to the accessibility requirements of the ADA (Americans with Disabilities Act)

Total Elevated Play Components	0		
Total Elevated Play Components Accessible By Ramp	0	Required	0
Total Elevated Components Accessible By Transfer	0	Required	0
Total Accessible Ground Level Components Shown	0	Required	0
Total Different Types Of Ground Level Components	0	Required	0

This play equipment is recommended for children ages
5 - 12

Minimum Area Required:

Scale: NTS
This drawing can be scaled only when in an 18" x 24" format

IMPORTANT: Soft resilient surfacing should be placed in the use zones of all equipment, as specified for each type of equipment, and at depths to meet the critical fall heights as specified by the U.S. consumer Product Safety Commission, ASTM standard F 1487 and Canadian Standard CAN/CSA-Z-614

Drawn By:
SC
Date:
03/31/2022
Drawing Name:
Belmont Academy (G-E)

FOOTER SCHEDULE

Footer Type	Footer Diameter (inches)	Footer Depth (inches)	Configuration
A	18	18	Round
B	14	18	Round
E	14	24	Round
H	36	36	Round

FOOTINGS ORDINATE TABLE			
HOLE	X	Y	DIAG
1	−13'−1 1/2"	7'−6"	15'−1 1/2"
2	−13'−1 1/2"	5'−11"	14'−4 1/2"
3	−10'−11 1/2"	12'−8 1/2"	16'−9 1/2"
4	−9'−1"	14'−2 1/2"	16'−10 1/2"
5	−9'−1"	11'−2 1/2"	14'−5"
6	−9'−0 1/2"	8'−2 1/2"	12'−2 1/2"
7	−9'−0 1/2"	5'−2 1/2"	10'−5"
8	−8'−7"	1'−9 1/2"	8'−9 1/2"
9	−8'−5 1/2"	19'−3 1/2"	21'−1"
10	−7'−6"	0'−7"	7'−6 1/2"
11	−6'−9 1/2"	19'−4"	20'−5 1/2"
12	−6'−5"	1'−9 1/2"	6'−8"
13	−6'−1"	14'−3"	15'−6"
14	−6'−1"	11'−3"	12'−9 1/2"
15	−6'−0 1/2"	8'−3"	10'−2 1/2"
16	−6'−0 1/2"	5'−3"	8'−0"
17	−3'−0 1/2"	8'−3"	8'−9 1/2"
18	−3'−0 1/2"	5'−3"	6'−1"
19	−0'−0 1/2"	8'−3 1/2"	8'−3 1/2"
20	−0'−0 1/2"	5'−3 1/2"	5'−3 1/2"
21	0'−0"	1'−6"	1'−6"
22	0'−0"	0'−0"	0'−0"
23	0'−10 1/2"	15'−11"	15'−11"
24	2'−7 1/2"	12'−10 1/2"	13'−1 1/2"
25	3'−2 1/2"	18'−4"	18'−7 1/2"
26	4'−8 1/2"	8'−3 1/2"	9'−6 1/2"
27	4'−9"	5'−3 1/2"	7'−1 1/2"
28	7'−4"	9'−10"	12'−3"
29	7'−4"	3'−10"	8'−3 1/2"
30	9'−4 1/2"	3'−4"	9'−11 1/2"
31	11'−4 1/2"	3'−11"	12'−0"
32	12'−8"	−1'−3"	12'−8 1/2"
33	12'−10 1/2"	11'−9 1/2"	17'−5 1/2"
34	13'−3"	1'−3"	13'−3 1/2"
35	14'−0"	8'−1 1/2"	16'−2 1/2"
36	14'−10"	15'−8 1/2"	21'−7"
37	17'−2"	11'−1 1/2"	20'−5 1/2"

NOTE:
ON NON−LETTERED HOLES, TO ENSURE
CONCRETE REQUIREMENTS PLEASE REFER TO
EACH COMPONENTS INSTALLATION SHEETS.
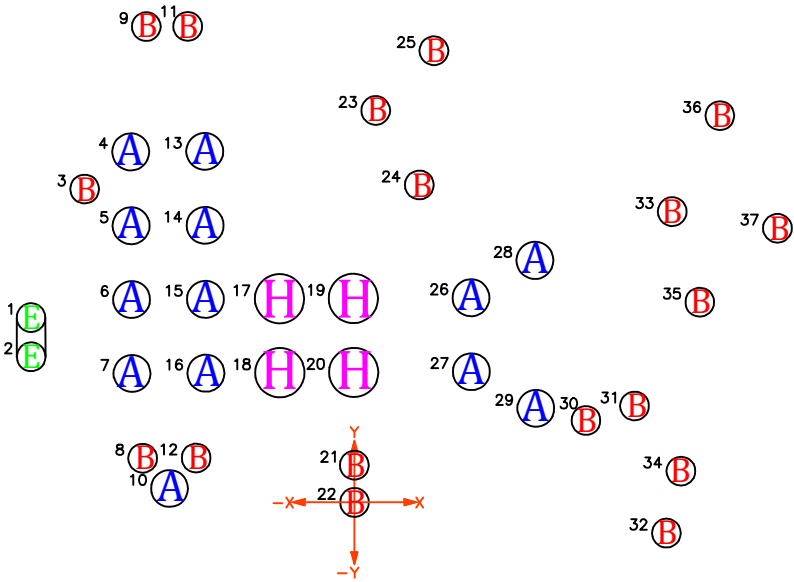
GameTime®
A PLAYCORE Company
ISO 9001 CERTIFIED
150 PlayCore Drive SE
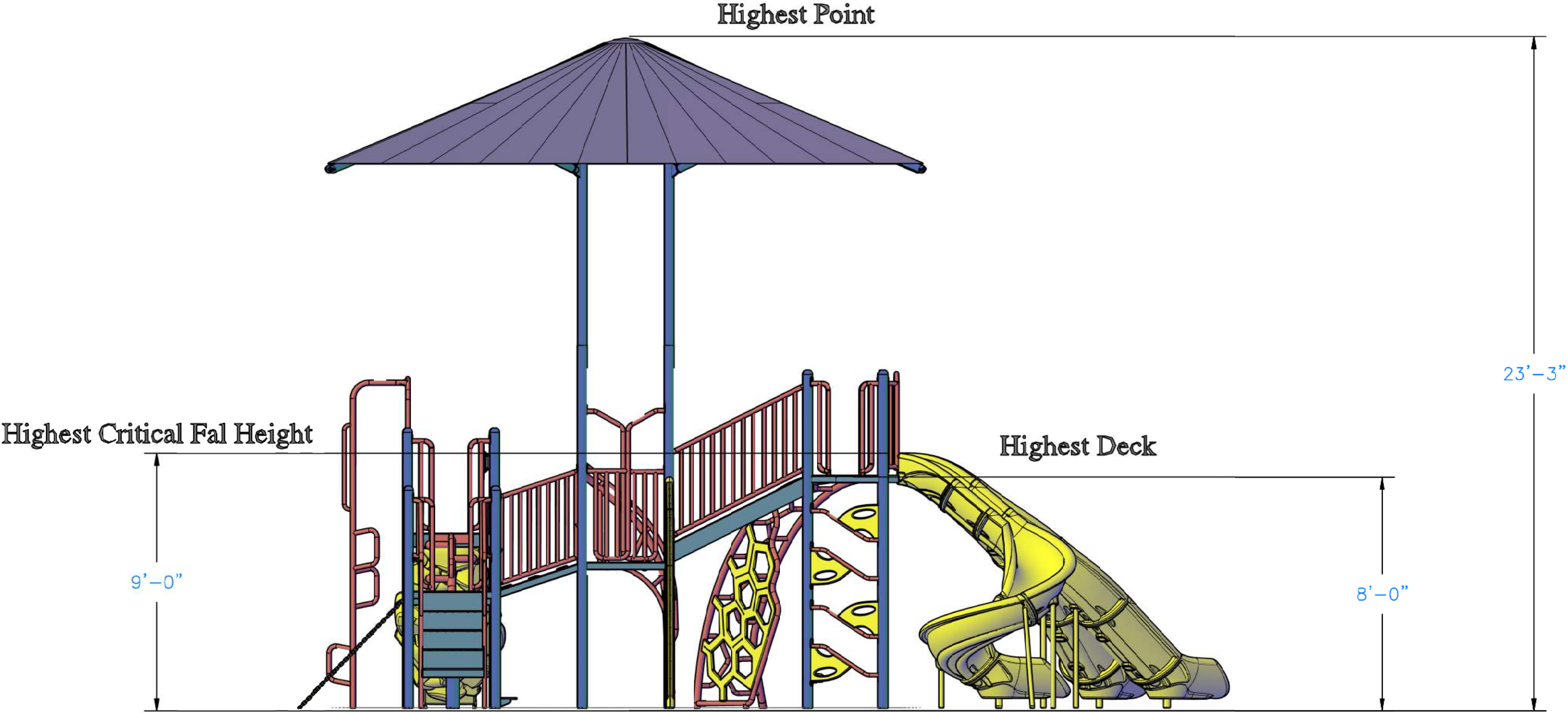Fort Payne, AL 35967
www.gametime.com
BELMONT ACADEMY CHARTER SCHOOL
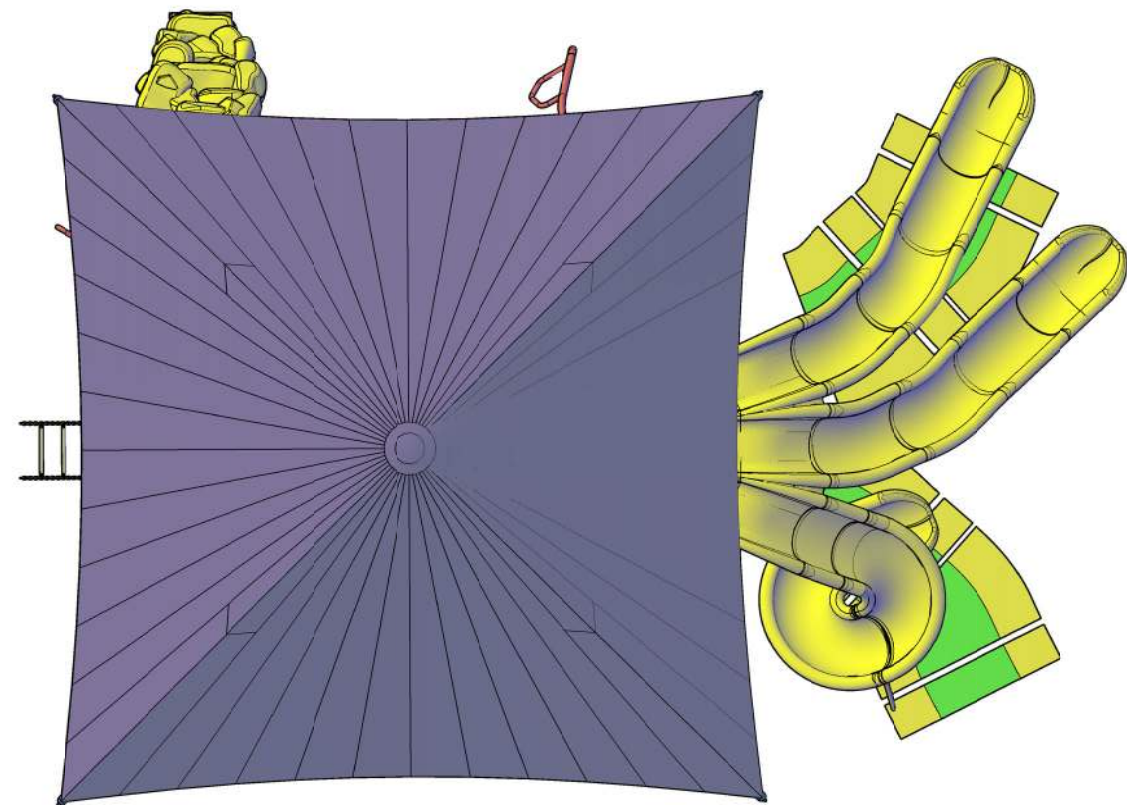LAKE CITY, FL
PHASE 1 REV 2
Representative
DRP
This play equipment is recommended for children ages 5 - 12
Minimum Area Required:
Scale: 1" = 5'-0"
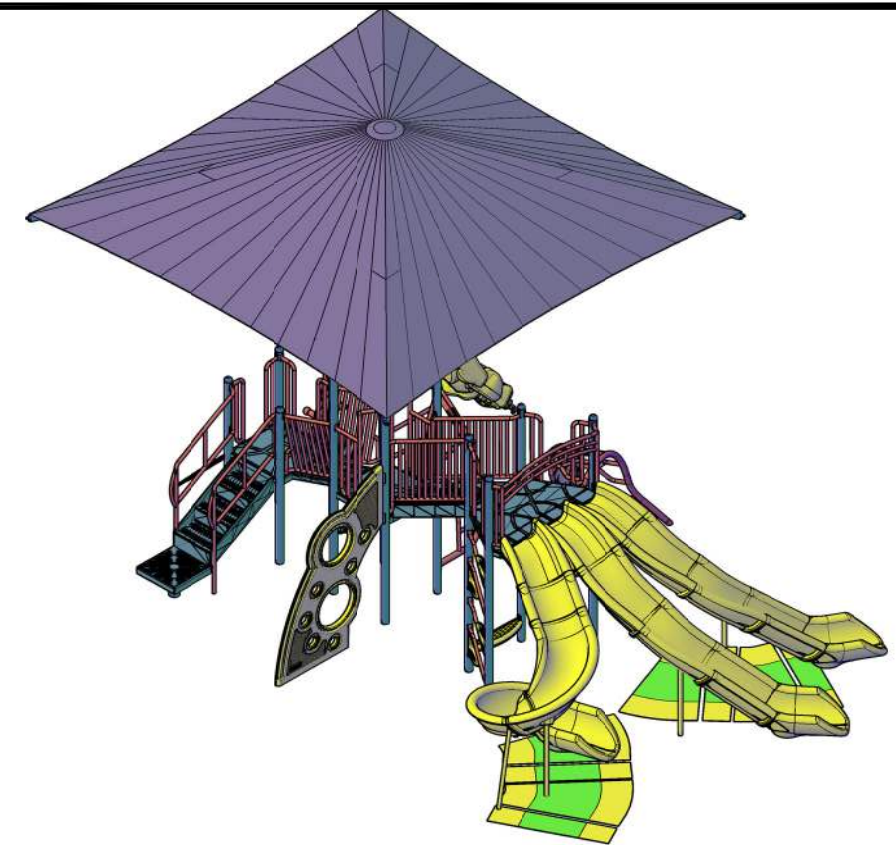This drawing can be scaled only when in an 18" x 24" format
IMPORTANT: Soft resilient surfacing should be placed in the use zones of all equipment, as specified for each type of equipment, and at depths to meet the critical fall heights as specified by the U.S. consumer Product Safety Commission, ASTM standard F 1487 and Canadian Standard CAN/CSA-Z-614
Drawn By: SC
Date: 03/31/2022
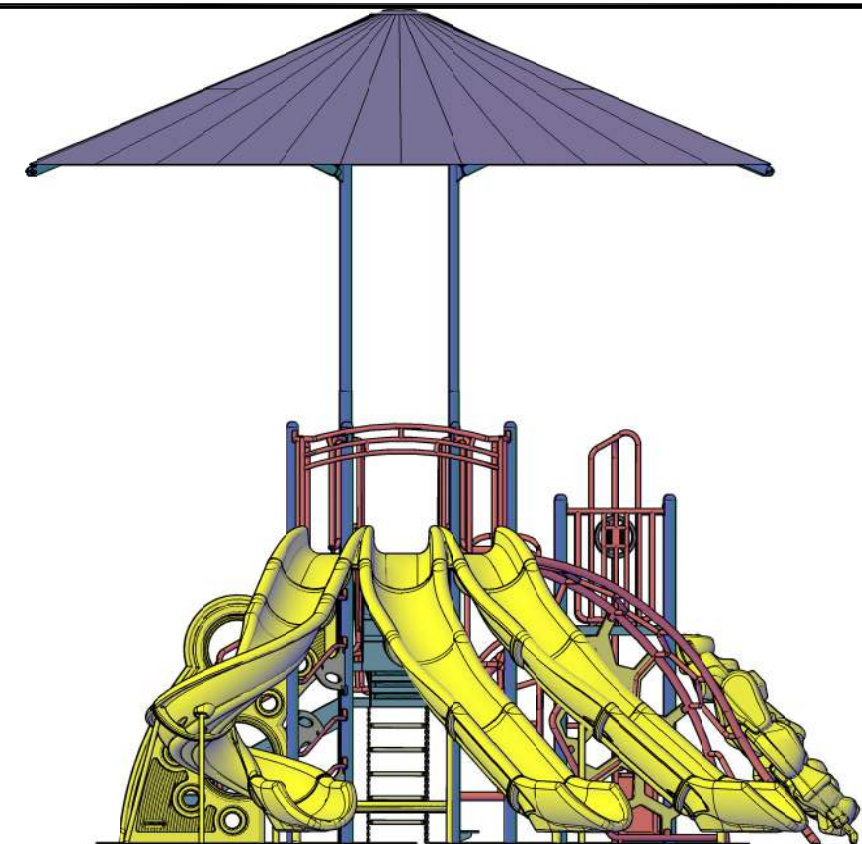Drawing Name: BELMONT (FOOTERS)

Highest Point

Highest Critical Fal Height

Highest Deck

23'-3"

9'-0"

8'-0"

TOP VIEW

ISO VIEW

FRONT VIEW

RIGHT SIDE VIEW

Belmont Academy Charter School
Lake City, FL

Representative
DRP

This play equipment is recommended for children ages

5-12

Minimum Area Required:

Scale: NTS
This drawing can be scaled only when in an 11" x 17" format

IMPORTANT: Soft resilient surfacing should be placed in the use zones of all equipment, as specified for each type of equipment, and at depths to meet the critical fall heights as specified by the U.S. consumer Product Safety Commission, ASTM standard F 1487 and Canadian Standard CAN/CSA-Z-614
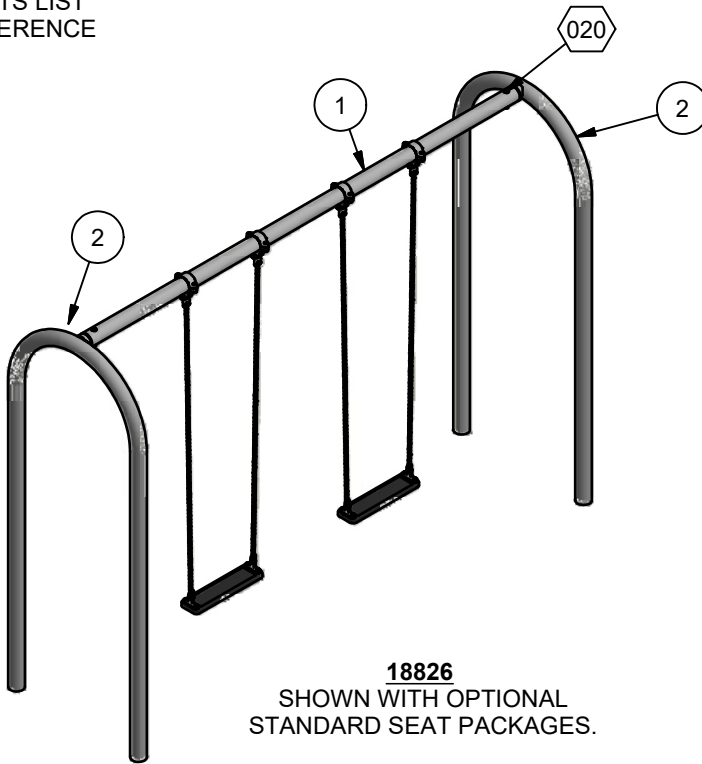
Drawn By:
SC
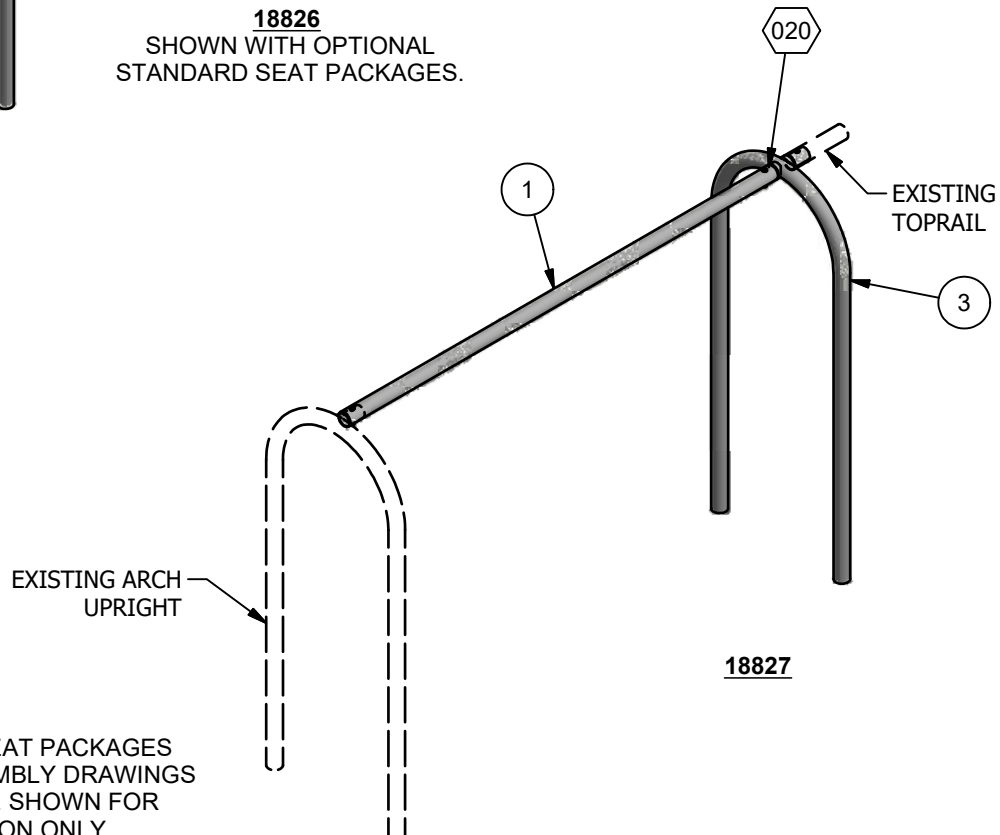Date:
04/01/2022
Drawing Name:
Belmont (4View)

PRIME TIME®

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A PLAYCORE Company

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ISSUED/REVISED: 6/5/2019

18826
ARCH
SWING

⬡ = INSTALLATION DETAIL

⬤ = PARTS LIST REFERENCE

FREESTANDING   18826
ADD-A-BAY   18827

ASSEMBLY DRAWINGS

18826
SHOWN WITH OPTIONAL
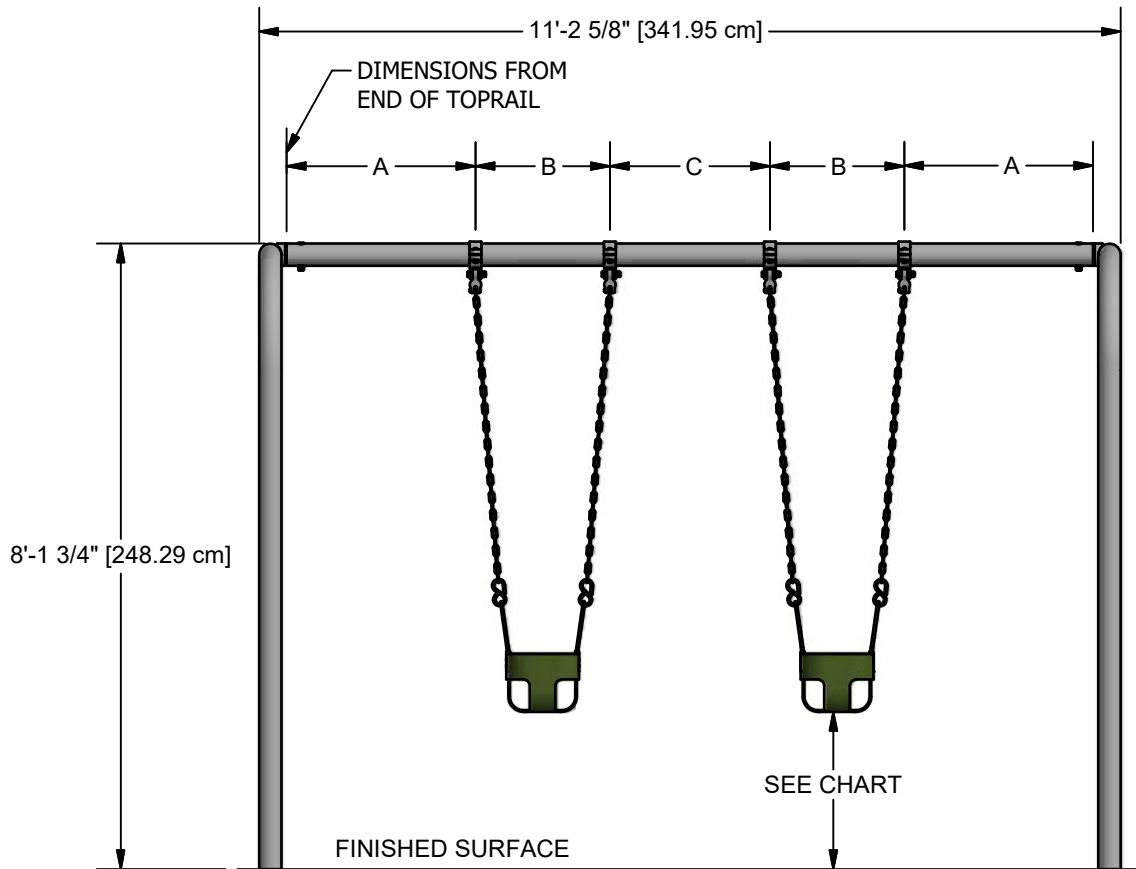STANDARD SEAT PACKAGES.

EXISTING TOPRAIL

EXISTING ARCH UPRIGHT

18827

NOTE: SWING SEAT PACKAGES
SHOWN ON ASSEMBLY DRAWINGS
NOT INCLUDED. SHOWN FOR
ILLUSTRATION ONLY.

TOPRAIL DIMENSIONS	
DIM A	2'-5 1/2" [74.93 cm]
DIM B	1'-9" [53.34 cm]
DIM C	2'-1" [63.50 cm]

11'-2 5/8" [341.95 cm]

DIMENSIONS FROM
END OF TOPRAIL

A   B   C   B   A

8'-1 3/4" [248.29 cm]

SEE CHART

FINISHED SURFACE

18826 SHOWN (18827 SIMILAR)
WITH OPTIONAL ENCLOSED TOT
SEAT PACKAGES (NOT INCLUDED)

DIMENSION FROM UNDERSIDE OF SEAT TO PROTECTIVE SURFACING		
STANDARD	MIN.	MAX.
CANADIAN	BELT & SUPER SEAT - 300mm [11.81"] ENCLOSED TOT SEAT - 600mm [23.62"]	N/A
ASTM	BELT & SUPER SEAT - 12" [305mm] ENCLOSED TOT SEAT - 24" [610mm]	N/A
BS EN	350 mm [13.77"]	N/A
CPSC	BELT & SUPER SEAT - 12" [305mm] ENCLOSED TOT SEAT - 24" [610mm]	N/A

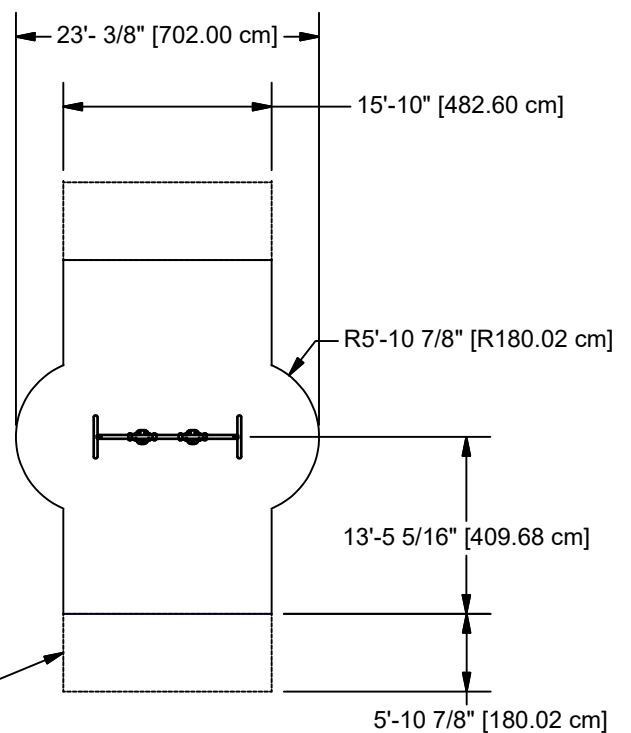MEASURED WHEN OCCUPIED BY MAXIMUM USERS

22'-10 15/16" [698.37 cm]

10'-11 1/8" [333.06 cm]

R6'-0" [182.88 cm]
TYP.

14'-2 7/16" [432.87 cm]

TOP VIEWS

15'-5 3/4" [471.81 cm]

18826

11'-2 5/8" [341.95 cm]

3'-3 1/2" [100.33 cm]

23'- 3/8" [702.00 cm]

15'-10" [482.60 cm]

R5'-10 7/8" [R180.02 cm]

13'-5 5/16" [409.68 cm]
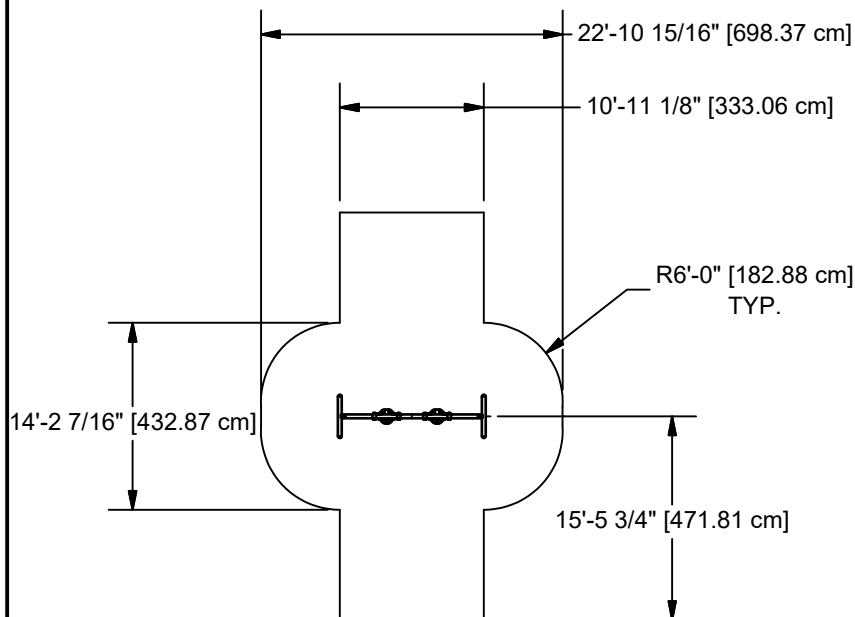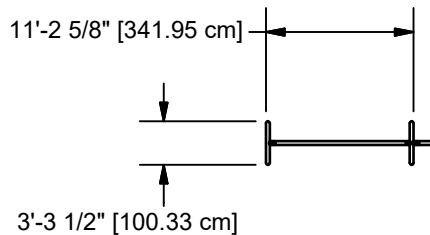
NO ENCROACHMENT ZONES
SHOWN W/ DASHED LINES

5'-10 7/8" [180.02 cm]

18826 (CSA ONLY)

NOTE:
1. OWNER/OPERATOR SHALL INSTALL AND MAINTAIN PROTECTIVE SURFACING WITHIN THE USE
ZONE (U.S.) OR PROTECTIVE SURFACING ZONE (CANADA) OF ALL PLAY EQUIPMENT TO COMPLY
WITH ASTM F-1292 AND ASTM F-1487 (U.S.) or CAN/CSA-Z-614 (CANADA).
2. SOLID OUTSIDE BORDER REPRESENTS MINIMUM REQUIRED ASTM USE ZONE AND CSA
PROTECTIVE SURFACING ZONE FOR SWING FRAME SHOWN.
3. DASHED LINES REPRESENT CSA *NO ENCROACHMENT* ZONE (CANADA ONLY).
4. *EACH ADDITIONAL CONNECTED SWING FRAME BAY INCREASES THE USE ZONE SURFACING,
AND *NO ENCROACHMENT* ZONE DIMENSIONS BY 10'-11 1/8" [3.33M].
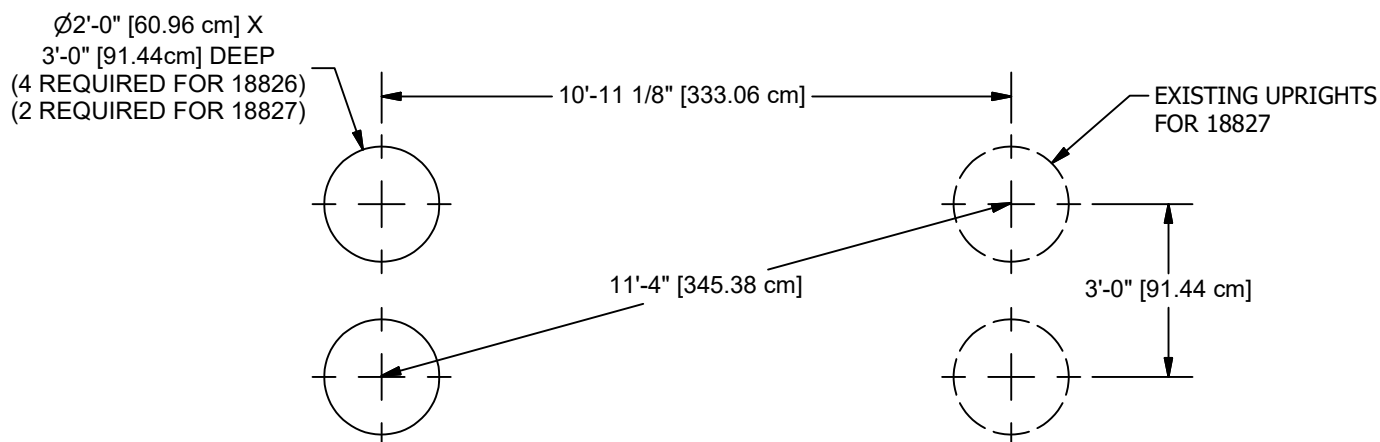
PAGE 4

SPECIFICATIONS

TOPRAIL AND ARCH: Shall be fabricated of 3-1/2" O.D. (11 Gauge) galvanized steel tubing. Arch includes a welded 3-1/8" O.D. galvanized steel sleeve to which the toprail is fastened.

FINISH: Shall be an electrostatically applied custom formula of TGIC polyester powder with baked finish. Specify color desired.

HARDWARE: All nuts, bolts, screws, inserts, and lockwashers used in the assembly of all play equipment, shall be stainless steel, yellow dichromate plated steel, blue-coat plated steel, mechanically galvanized or

powder coated/yellow dichromate plated steel. All primary fasteners shall be 300 series stainless steel. Fasteners with yellow dichromate treatment have an electro-deposited, 99.9% pure zinc substrate applied from a specially formulated solution sealed with a yellow dichromate top coat designed to work in conjunction with the zinc plating. Yellow dichromate has a 320% longer life to white corrosion and 275% longer to red corrosion than does hot-dip galvanizing.

SPECIFICATIONS: GAMETIME® has a policy of continuous improvement and reserves the right to change specifications without notice.

Ø2'-0" [60.96 cm] X
3'-0" [91.44cm] DEEP
(4 REQUIRED FOR 18826)
(2 REQUIRED FOR 18827)

10'-11 1/8" [333.06 cm]

EXISTING UPRIGHTS
FOR 18827

11'-4" [345.38 cm]

3'-0" [91.44 cm]

GROUND PLAN

NOTE: HOLE DEPTHS INDICATED ON ALL GROUND PLANS ARE MEASURED FROM THE FINISHED SURFACE. SEE DETAIL 005. ALL FOOTING DIMENSIONS ARE BASED ON LEVEL FINISHED SURFACE.

CONCRETE REQUIRED:
.23 CUBIC YARDS
.18 CUBIC METERS
(PER HOLE)

DETAILS -for-
18826 & 18827

*I*MPORTANT

To Reduce the Risk of Clothing Entanglement in Compliance with ASTM F1487, Any Bolt End
Protruding More Than Two Full Threads Beyond the Face of the Nut Shall Be Cut-Off Flush, Filed
Smooth and Treated to Prevent Corrosion.
Note: Loctite (Supplied by Others) Should be Used on All Threaded Hardware.
Note: After Assembly is Complete, Peen Tee-Nuts and Flatwashers to Match Radius of Pipe.
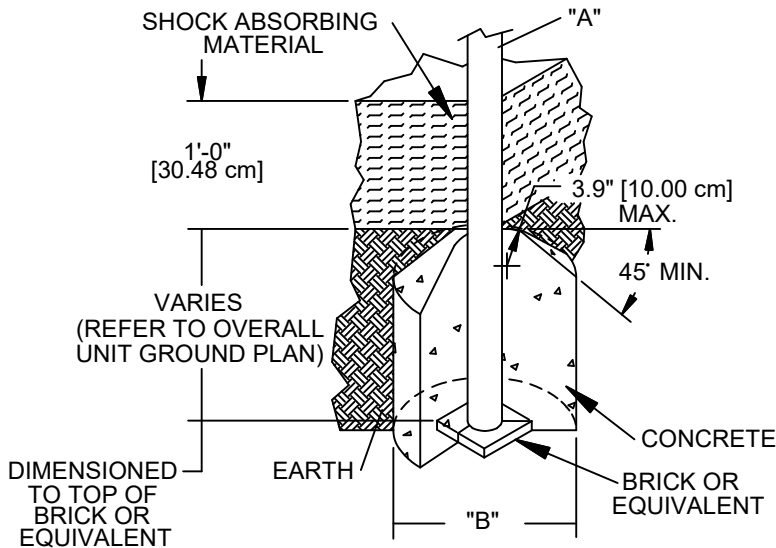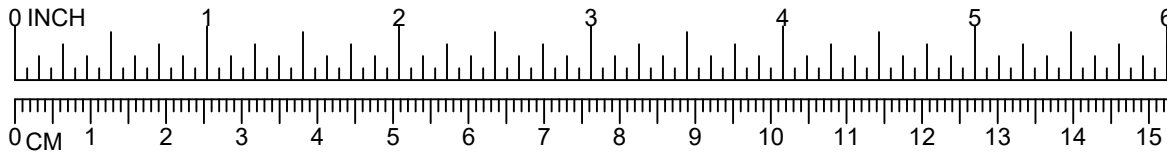
DIA. "A" (PIPE SIZE)	DIA. "B" (FOOTING SIZE)
1 1/16" [2.70 cm]	1'-2" [35.56 cm]
1 5/16" [3.33 cm]	1'-2" [35.56 cm]
1 5/8" [4.13 cm]	1'-2" [35.56 cm]
1 7/8" [4.83 cm]	1'-2" [35.56 cm]
2 3/8" [6.03 cm]	1'-2" [35.56 cm]
3 1/2" [8.89 cm]	1'-6" [45.72 cm]
ARCH SWING	
5" [12.70 cm]	2'-0" [60.96 cm]

NOTES:
 -SLOPED FOOTING IS A REQUIREMENT
 OF EUROPEAN STANDARD EN1176-1 ONLY
 -SUGGESTED MINIMUM CONCRETE
 RATING: 3000 PSI

⬡ 005

SHOCK ABSORBING PROPERTIES OF SURFACING
MATERIALS VARY. IF YOU DETERMINE THAT LESS
THAN 1'-0" [30.48cm] OF SURFACING IS REQUIRED,
MAKE UP THE DIFFERENCE IN ELEVATION WITH
EARTH, BEFORE APPLYING SURFACING.
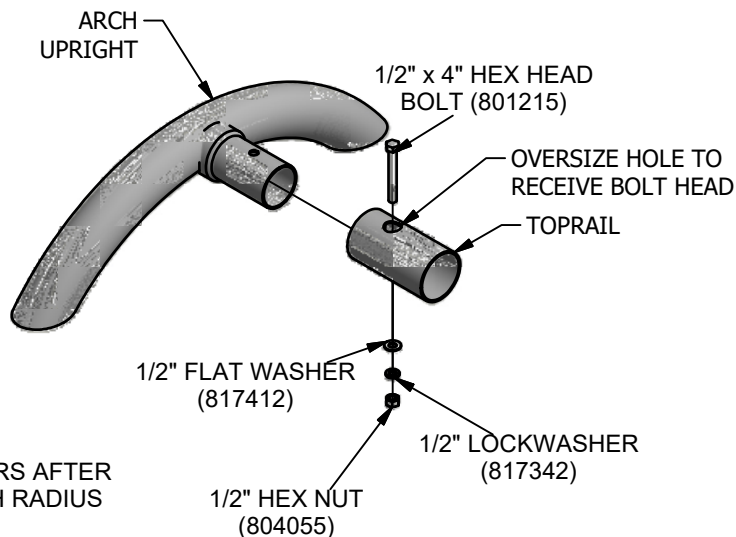
NOTE: PEEN FLATWASHERS AFTER
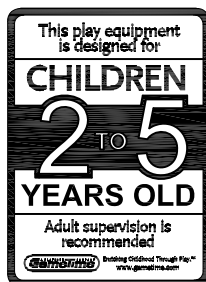INSTALLATION TO MATCH RADIUS
OF TOPRAIL.

⬡ 020

GameTime®
A PLAYCORE COMPANY
Enriching Childhood Through Play℠
1-800-235-2440

8691
SEAT

ISSUED/REVISED: 10/30/17

⬡ = INSTALLATION DETAIL

⬡ = PARTS LIST REFERENCE

This play equipment is designed for
CHILDREN 2 TO 5 YEARS OLD
Adult supervision is recommended

8695, 8696, 8914, SS8914, SS8695, SS8696

This play equipment is designed for
CHILDREN 5 TO 12 YEARS OLD
Adult supervision is recommended

8908, 8909, 8910, 8911, 8918, 8915, SS8918, SS8908, SS8910, SS8909, SS8911

BELT SEAT   **8691**
FULLY ENCLOSED SEAT   **8693**
8695, 8696, 8908, 8909, 8910, 8911, 8914, 8918, SS8914, SS8695, SS8696, SS8918, SS8908, SS8910, SS8909, SS8911
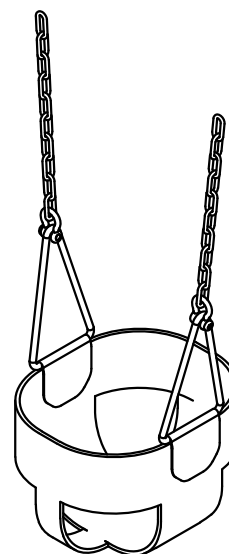**SEAT PACKAGES**

8691

8693
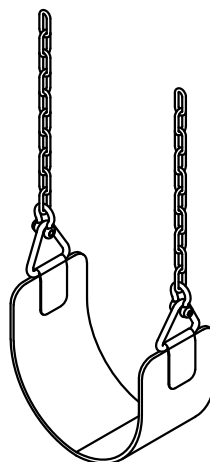
SPECIFICATIONS
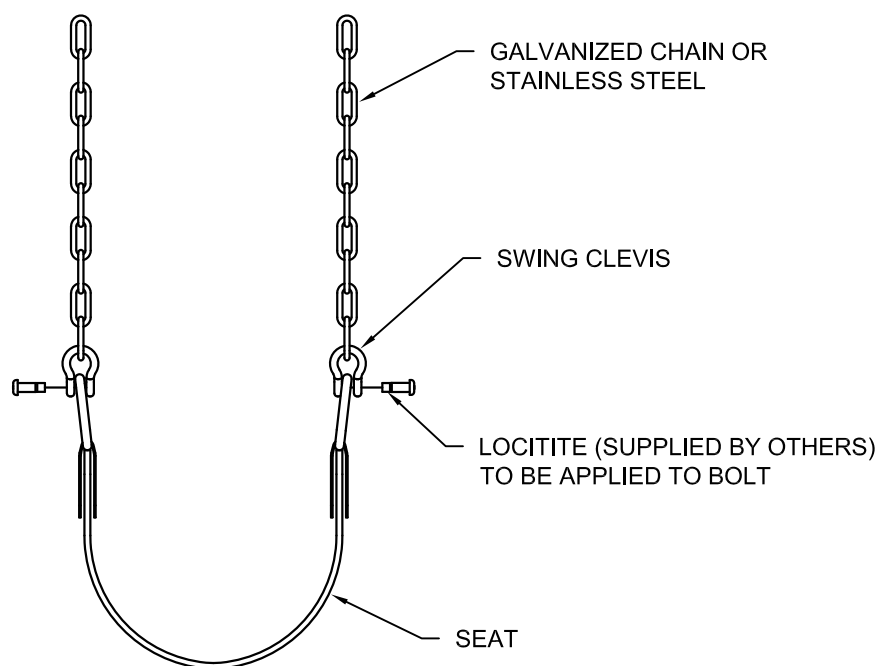*Rights are reserved to disontinue or change specifications without notice.
*Fully Enclosed Seats shall be fabricated with .025" thick stainless steel inserts covered by a dark green colored EPDM rubber.
*Commercial Belt Seat - an extra piece of fluted rubber at the front and back of seat gives it a cushion bumper.
***NOTE:** Weights are based on average comparisons of each part.

GALVANIZED CHAIN OR
STAINLESS STEEL

SWING CLEVIS

LOCITITE (SUPPLIED BY OTHERS)
TO BE APPLIED TO BOLT

SEAT

SEAT ASSEMBLY
(WITH GALVANIZED CHAIN
OR STAINLESS STEEL)

1461
SWING
HANGER

ISSUED/REVISED: 3/15/16

⬡ = INSTALLATION DETAIL

◯ = PARTS LIST REFERENCE

GALVANIZED 1461
GALVANIZED 1462
PAINTED 1463
PAINTED 1485
PAINTED 1486
GALVANIZED 1487

SPECIFICATIONS

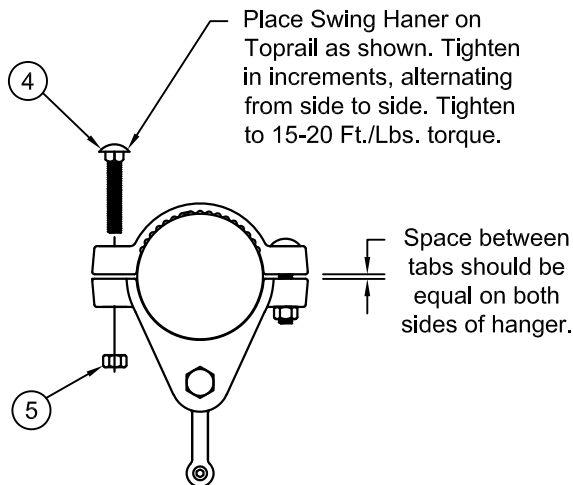**MATERIAL:** All swing hanger castings shall be cast of malleable iron.

HARDWARE: All Carriage bolts, lockwashers, hex nuts, and shoulder bolts shall be zinc plated with a clear chromate coating.

FINISH: All top and bottom clevis parts shall be galvanized or powder coated. The swing pendulum shall be galvanized only.
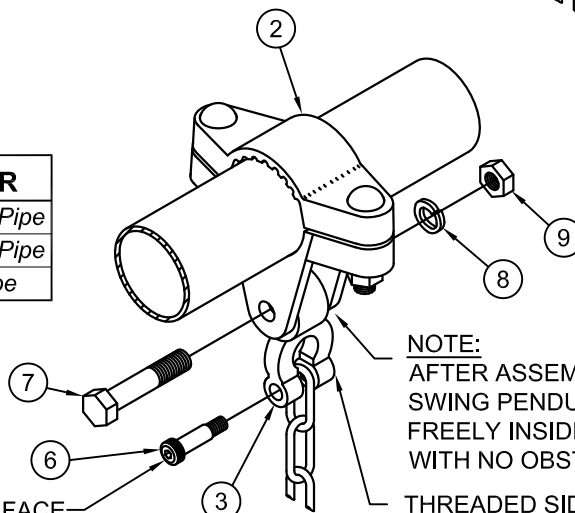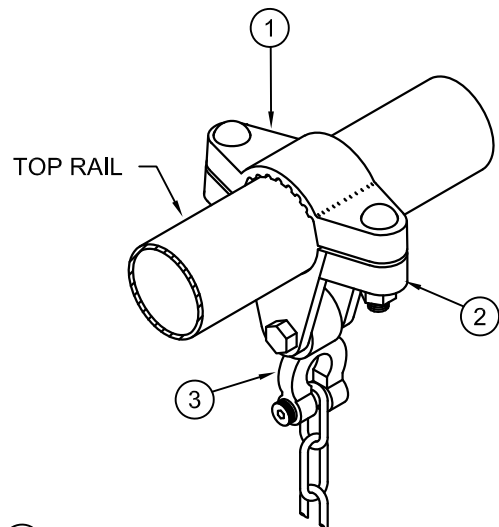
CONSTRUCTION: The swing hanger shall consist of a top clevis, bottom clevis, and swing pendulum. The top clevis shall have a non-slip-serrated surface. The pendulum shall incorporate a factory installed bronze bushing. The pendulum shall be attached to the bottom clevis with 1/2" x 2-1/2" hex bolt, 1/2" lockwasher, and 1/2" hex nut. The top and bottom clevis shall be attached with 3/8" carriage bolt and 3/8" lock nut.

SPECIFICATIONS: GAMETIME has a policy of continuous improvement and reserves the right to discontinue or change specifications without notice.

Place Swing Haner on Toprail as shown. Tighten in increments, alternating from side to side. Tighten to 15-20 Ft./Lbs. torque.

Space between tabs should be equal on both sides of hanger.

TOP RAIL

NOTE:
AFTER ASSEMBLY IS COMPLETE, SWING PENDULUM SHOULD PIVOT FREELY INSIDE OF BOTTOM CLEVIS WITH NO OBSTRUCTION.

NOTE: BOLT HEAD TO FACE INTERIOR OF SWING

THREADED SIDE OF PENDULUM

PAINTED	GALVANIZED	PIPE DIAMETER
1485	1461	2-3/8" [6.03cm] O.D. Pipe
1486	1462	3-1/2" [8.89cm] O.D. Pipe
1463	1487	5" [12.70cm] O.D. Pipe

GameTime
A PLAYCORE COMPANY

Enriching Childhood Through Play.™
1-800-235-2440

HEALTH LADDER

ISSUED/REVISED: 8/21/18

NOTE   53

⬡ = INSTALLATION DETAIL

◯ = PARTS LIST REFERENCE

This play equipment is designed for
CHILDREN 5 TO 12 YEARS OLD
Adult supervision is recommended
GameTime Enriching Childhood Through Play.™
www.gametime.com

SECURE WITH 3/8" x 1/2" SET SCREW

①

②

③

1'-2 1/8" [35.88cm]

1'-0" [30.48 cm] TOP OF RUNG

FINISHED SURFACE

6'-7-5/16" [201.45 cm]

FINISHED SURFACE
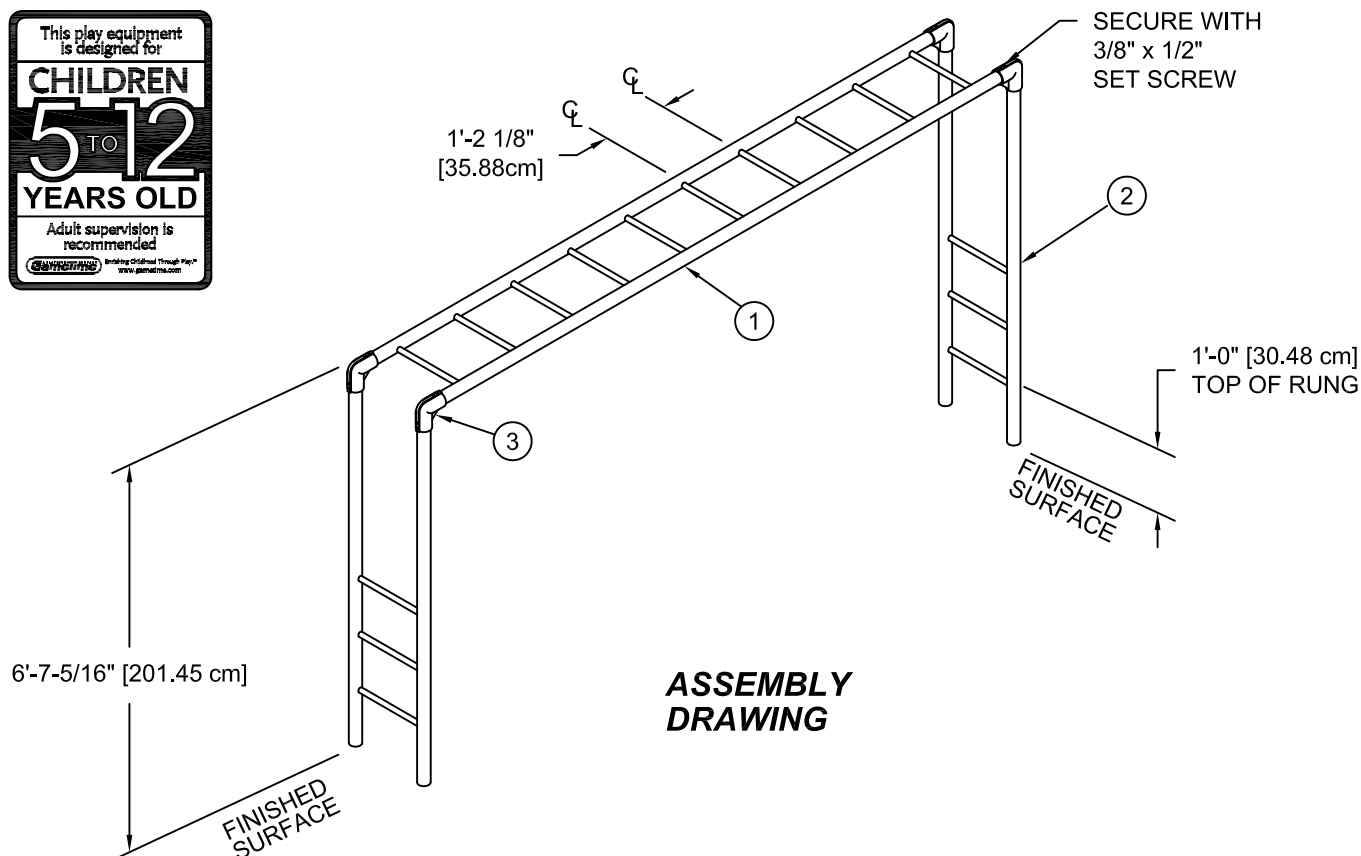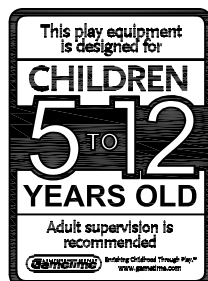
ASSEMBLY DRAWING

PARTS LIST

REF NO.	DESCRIPTION	NO. REQ'D	PART NUMBER
1	Top Ass'y	1	215532
2	End Ass'y	2	215534
3	Elbow	4	137352
	Hardware Complete	1	100301
	3/8" X 1/2" Set Screw	16	811550*

Unless Otherwise Specified, All Units of Measure are Each
* Included in Hardware

Warning: During Installation, Hardware And Small Parts Are Choking Hazards
For Young Children. Store Unused Parts Appropriately Until Assembly Is Completed.
Once Assembly Is Completed, Remove Any Unused Parts From The Play Environment
And Dispose/Save Them In A Secure Location.
Note: Loctite (supplied by others) should be used on all threaded hardware.

INSTALLATION INSTRUCTIONS

NOTE: THIS SPECIFICATION BOOKLET SHOULD BE KEPT IN CUSTOMER'S FILE FOR FUTURE REFERENCE.

NOTE: Do not overtighten bolts. To overtighten may cause buckling or dimpling of some parts.

NOTE: Read installation instructions thoroughly before starting assembly. Pour concrete only after final assembly is complete. Bracing material may be required during assembly.

NOTE: Do not tighten any nuts, bolts, rods, etc. until the unit is completely assembled.

STEP 1: IMPORTANT. Insert the four elbow castings on horizontal ladder top first; slide on until they rest against the back of the castings.

STEP 2: Lay horizontal ladder on ground with socket upward.

STEP 3: Position vertical ladders (2) in fittings. Tighten set screws.

**STEP 4:** Using assembled ladder as a template, mark hole locations.

STEP 5: Dig required holes and place a concrete slab, brick or stone, etc., in bottom of each to provide a solid foundation for each leg.

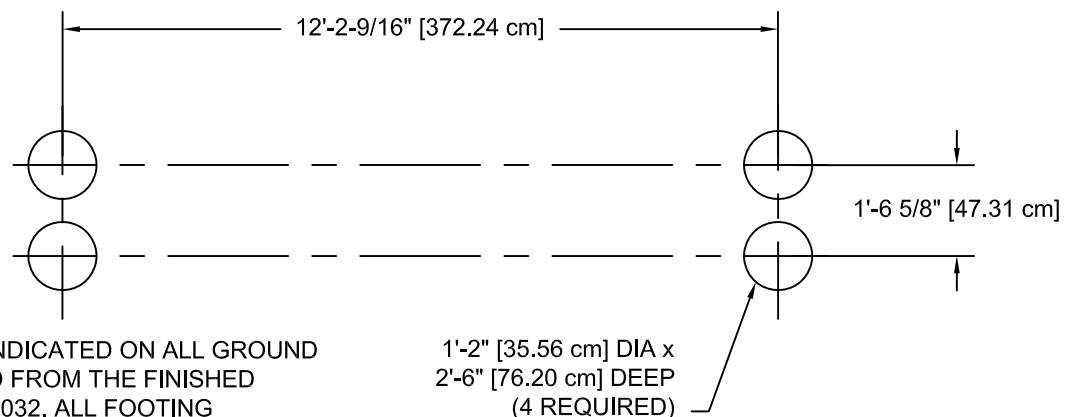**STEP 6:** Place assembled climber in holes. Level, be sure each leg is on the foundation blocks.

STEP 7: Pour concrete to match Detail 032. Allow concrete 72 hours to harden before using climber.

NOTE: Due to extremes in weather and soil conditions, hole sizes may have to be increased to meet local conditions.
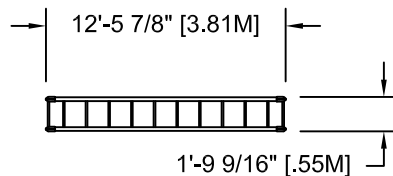
12'-5 7/8" [3.81M]

1'-9 9/16" [.55M]

TOP VIEW

12'-2-9/16" [372.24 cm]

1'-6 5/8" [47.31 cm]

NOTE: HOLE DEPTHS INDICATED ON ALL GROUND PLANS ARE MEASURED FROM THE FINISHED SURFACE. SEE DETAIL 032. ALL FOOTING DIMENSIONS ARE BASED ON LEVEL FINISHED SURFACE.

1'-2" [35.56 cm] DIA x
2'-6" [76.20 cm] DEEP
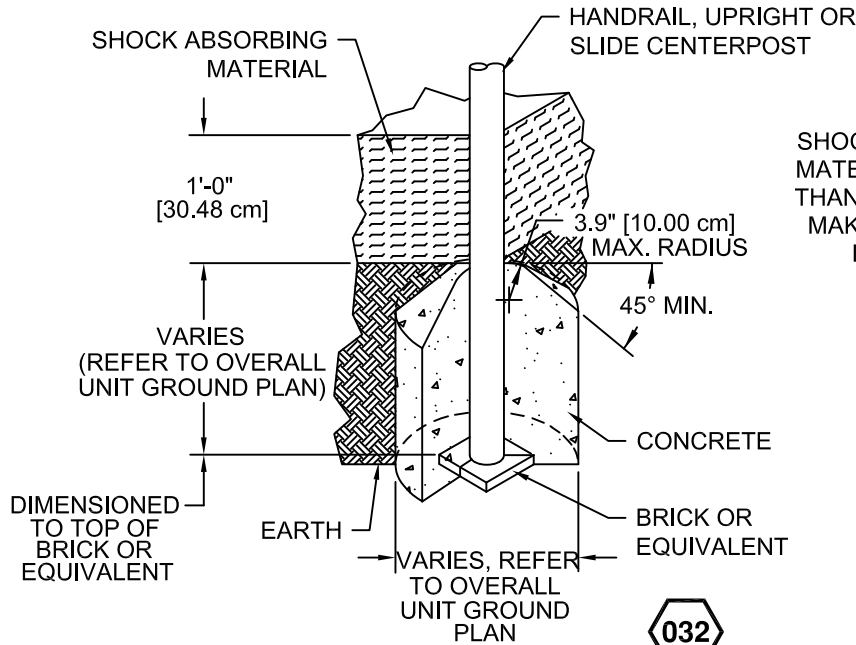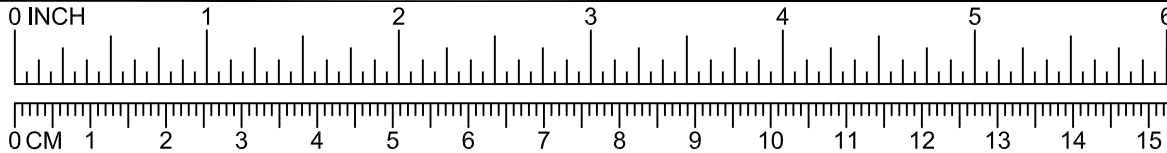(4 REQUIRED)

GROUND PLAN

DETAILS -for-
53

IMPORTANT

TO REDUCE THE RISK OF CLOTHING ENTANGLEMENT IN COMPLIANCE WITH ASTM F1487, ANY BOLT END PROTRUDING MORE THAN TWO FULL THREADS BEYOND THE FACE OF THE NUT SHALL BE CUT-OFF FLUSH, FILED SMOOTH AND TREATED TO PREVENT CORROSION.

NOTE: AFTER ASSEMBLY IS COMPLETE, PEEN TEE-NUTS AND FLATWASHERS TO MATCH RADIUS OF PIPE.

SHOCK ABSORBING MATERIAL

HANDRAIL, UPRIGHT OR SLIDE CENTERPOST

1'-0"
[30.48 cm]

3.9" [10.00 cm]
MAX. RADIUS

45° MIN.

VARIES
(REFER TO OVERALL
UNIT GROUND PLAN)

CONCRETE

DIMENSIONED
TO TOP OF
BRICK OR
EQUIVALENT

EARTH

BRICK OR
EQUIVALENT

VARIES, REFER
TO OVERALL
UNIT GROUND
PLAN

〈032〉

SHOCK ABSORBING PROPERTIES OF SURFACING MATERIALS VARY. IF YOU DETERMINE THAT LESS THAN 1'-0" [30.48cm] OF SURFACING IS REQUIRED, MAKE UP THE DIFFERENCE IN ELEVATION WITH EARTH, BEFORE APPLYING SURFACING.

NOTES:
-SLOPED FOOTING IS A REQUIREMENT
 OF EUROPEAN STANDARD EN1176-1
-SUGGESTED MINIMUM CONCRETE
 RATING: 3000 PSI